Red Lake Watershed District

2022

Annual Report

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Letter from the President

Greetings to all the citizens of the Red Lake Watershed District and other interested parties.

Please take some time to look through the 2022 Annuel Report to get a first-hand glance at how much good work the Red Lake Watershed District has completed this year. During the construction season of 2020 and 2021, the district has started and has completed construction on various projects which have totaled over $18,000,000. The construction and completion of Thief River Falls Westside Flood Damage Reduction Project, the establishment of RLWD Ditch #16 and various projects listed in our Red Lake and Thief River One Watershed One Plans highlight some of the projects in this report. There are also projects in various stages of construction which include the Black River Impoundment and Pine Lake Outlet Structure. These projects were scheduled for completion in early 2022 but due to the spring flood event, which I will address later, both projects were completed in late summer of 2022.

In 2022, we had two members of the Red Lake Watershed Board of Managers who were re-appointed by their respective counties. I, Dale Nelson, Thief River Falls, was reappointed to a three-year term by the Pennington County Board of Commissioners to serve my 9th three-year term. Terry Sorenson, Mentor, was appointed by Polk County Commissioners to serve his 3rd three-year term. It is a pleasure to be able to serve Pennington County on the Red Lake Watershed District Board and welcome back Terry, assisting him in serving the citizens of East Polk County.

We did have some staff changes in 2022 starting with the resignation of Nick Olson, our Engineering Senior. We were very sad to see Nick move onto another chapter of his life and wish him all the best in the future. We replaced Nick's position internally by moving Tony Olson, the District Ditch Inspector, to the Engineering Senior position. Tony has proved to be very valuable in his short time with us and feel he will do a great job in his new position. As a result of Tony's position switch, it resulted in the District advertising for the Ditch Inspector position which resulted in us hiring Erick Huseth, Thief River Falls. We welcome Erich to the Red Lake Watershed District Team and if you see him around our District, feel free to reach out to him.

Now the bad news in terms of spring flooding. Snowfall events throughout the winter left us with considerable snow cover throughout the watershed district which caused us some flooding concerns. With the assistance of a slow thaw, we witnessed a very controlled spring runoff event which occurred near the second week of April. However as is the case in the watershed world, you never can predict what Mother Nature will give us which resulted with several rainfall mid to late April leading to a total of 5.96 inches of rainfall during the month of April. These rainfall events, along with another 5 inches in May caused watershed wide flooding which has never been witnessed in my lifetime. We saw our every Flood Damage Reduction Impoundment fill up in record time and in some cases running over the emergency spillways. Considerable flood damage occurred over our entire watershed which led to a disaster declaration by the State of Minnesota and FEMA. Let's hope for a better 2023.

Please find our 2022 Annual Audit included in this report in an abbreviated form. A complete copy of the Annual Audit may be obtained at the district office at 1000 Pennington Avenue South, Thief River Falls, as well as on our website www.redlakewatershed.org .

The Watershed District office is located at 1000 Pennington Avenue South, Thief River Falls, MN. Feel free to stop in and have a cup of coffee, but if you do not have time, please go to our website http://www.redlakewatershed.org and take a virtual tour of our facility, as well as get updates of projects throughout the year.

In closing, I would like to remind the citizens that the goals of a watershed district are to manage water in the areas of flood control, drainage, and water quality. We continue to hold our meetings on the second and fourth Thursday of each month and welcome public interest and/or attendance at these meetings.

I would like to thank the citizens of the district for being supportive of our mission and it was a pleasure to serve as President of the Board in 2022.

Sincerely,

Dale M. Nelson, President

Board of Managers – 2022

Front Row *(left to right)*: Terry Sorenson, Treasurer; Dale M. Nelson, President; and Gene Tiedemann, Vice President. **Second Row** *(left to right)*: Tom Anderson, Brian Dwight, Allan Page; and LeRoy Ose, Secretary. Dale Nelson, representing Pennington County; Allan Page, representing Red Lake County; and Terry Sorenson, representing East Polk County, were all reappointed to serve an additional 3-year term for the years 2022-2024.

Staff – 2022

Front Row *(left to right)*: Tony Olson, Arlene Novak, Tammy Audette, Ann Joppru and Christina Slowinski.
Back Row *(left to right):* Nate Koland, Myron Jesme, Nick Olson, Corey Hanson.

Red Lake Watershed District Office

1000 Pennington Avenue South
Thief River Falls, MN 56701
Office Hours: Monday – Friday 8:00 a.m.– 4:30 p.m.
Phone: 218-681-5800 ~ Fax: 218-681-5839
Website: redlakewatershed.org
E-Mail: RLWD@redlakewatershed.org

Meetings

The Board of Managers held twenty-four regularly scheduled board meetings and one Special Meetings in 2022. These regular meetings are normally held the 2nd and 4th Thursday of each month at the District office at 9:00 a.m. Notice of these meetings are mailed or e-mailed to the Advisory Committees, county auditors, county commissioners, and SWCD/NRCS offices and by request. The agenda, minutes and Board meeting packet from board meetings are available by visiting our website at www.redlakewatershed.org/minutes.

The 2021 General Fund budget was set at $163,025.50. The General Fund Budget hearing for 2022 was held on September 9, 2021. Notice for the General Fund Budget hearing was published in at least one newspaper in each of the 10 counties within the District.

2022 Advisory Committee

Black River
Dan Schmitz
Curt Beyer
Greg Dyrdal

Moose River
Wayne Larson
Elroy Aune

Upper Red Lake Area
John Ungerecht
Wayne Skoe
Shane Bowe
Robin Dwight

Thief River Area
Dave Rodahl
Trent Stanley
Steve Holte,
Jim Sparby
Loiell Dyrud

Clearwater River Area
Steve Linder
John Gunvalson

Lost River Area
Gary Mathis
Mark Larson

Pine Lake Area
Dave Dalager

Red Lake River Area

Hill River Area
Jake Martell

Walker Brook Area
John A. Nelson

Grand Marais/Red Area
Roger Love
Eugene "Jeep" Mattson

Burnham Creek Area

Poplar River Area

Clearwater Lake Area

Sportsman Clubs
Jim Counter
Larry Peterson

Members of the local SWCD's offices are also asked to participate on the Advisory Committee.

Members of the Advisory Committees met at the District office on March 21, 2022.

History of the Red Lake Watershed District

The Red Lake Watershed District (District) covers an area of approximately 5,990 square miles in northwestern Minnesota and includes all Red Lake County, most of Pennington County, and parts of Mahnomen, Polk, Itasca, Marshall, Clearwater, Beltrami, Roseau, and Koochiching Counties.

A governmental unit known as the Red Lake Drainage and Conservancy District preceded the District, whose territory included approximately the same land. Under the Conservancy District, three major improvement projects were completed: dredging of the Clearwater, Red Lake, and Lost Rivers.

The Board of Directors of the Red Lake Drainage and Conservancy District felt the District could better function under the Minnesota Watershed Act. The Board petitioned the District Court for the right to operate under Chapter 112, the Minnesota Watershed Act. A hearing was held in Thief River Falls on January 25, 1969, and the Conservancy District was authorized to operate under and exercise all the rights and authorities contained in the Minnesota Watershed Act.

The Board petitioned the Minnesota Water Resources Board (now the Board of Water and Soil Resources) on July 24, 1969, amended January 20, 1970, for a change of name, review of boundary, and distribution of managers of the District. A hearing on the matter was held at Thief River Falls on March 31, 1970, and at Kelliher on April 2, 1970. In their Order, the Water Resources Board stated that the principal place of business shall be at Thief River Falls; that a description of the land within the District be written; specified that the Board of Managers be seven members, the procedure by which county boards shall appoint managers and terms of office for the Managers.

On March 25, 1975, the District adopted the Rules and Regulations pursuant to Minnesota Statutes. They were amended on May 12, 1978; December 14, 1978; August 10, 1989; and reviewed and updated on June 24, 1993, and again in 2015 to be entitled “Permit and Drainage Rules of the Red Lake Watershed District.”

In 1977, the District signed a Joint Powers Agreement with other watershed districts in the Red River Basin to form the Lower Red River Watershed Management Board. In 1991, the name was changed to the Red River Watershed Management Board. This organization currently consists of eight watershed districts in the Red River Basin and provides funding to member districts, primarily for floodwater detention structures, which benefit more than one-member district. The levy collected is used for funding the development, construction, and maintenance of projects of common benefit to the Red River Basin.

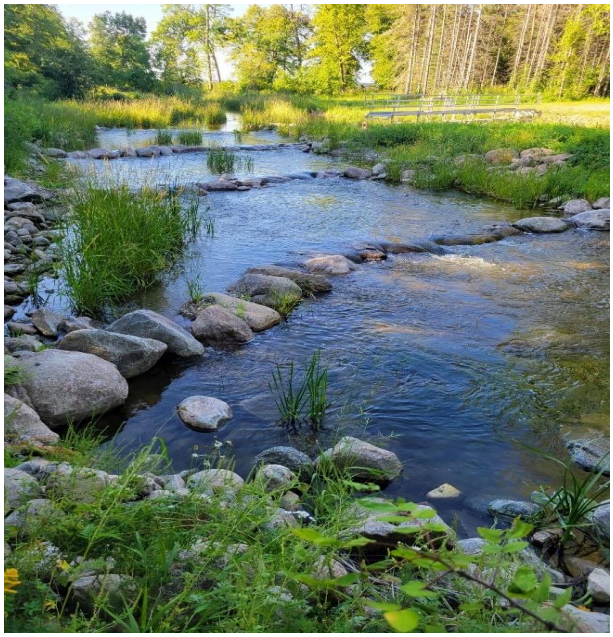
The District currently is governed by Minnesota Statutes 103D, which provides a broader scope for a local unit of government to manage quantity and quality of water within the hydrological boundaries.

2022 District Projects

Pine Lake Flood Damage Reduction and Habitat Project (RLWD Project No. 26B)

As a result of the comprehensive study that was completed on the Pine Lake Watershed, RLWD Project No. 26 in 2019, it was determined there may be a few components of the RCPP study that could be used to capture a few of the goals listed in the report. The Project Work Group continued to work on portions of the study they could reach a consensus on. One item agreed on was the replacement of the old sheet piling stoplog structure at the outlet of Pine Lake and replacing it with a more operational structure to better reduce lake elevations in the fall thus capturing additional FDR benefits in the spring. There was also interest in designing a fish passage structure to allow migration of fish to and from Pine Lake. At a hearing held on March 11, 2021, the Red Lake Watershed District Board of Managers approve the establishment of the Pine Lake Flood Damage Reduction and Fish Habitat, RLWD Project 26B. On July 22, 2021, bids were opened with the low bid being awarded to Wright Construction of Thief River Falls upon final audit by Engineering staff, RLWD staff and legal counsel. Upon completion of the audit, there were various issues of concern with the bid. On August 5, 2021, the Board of Managers held a special hearing to discuss concerns with the bid. Upon considerable discussion, the bid was awarded to Davidson Construction, Inc. in the amount of $342,162.00. Construction of the project was substantially completed in the fall of 2021, with the Final Payment Hearing to Davidson Construction, Inc., held on August 25, 2022.

Looking North at the outlet channel



Fish Passage Structures

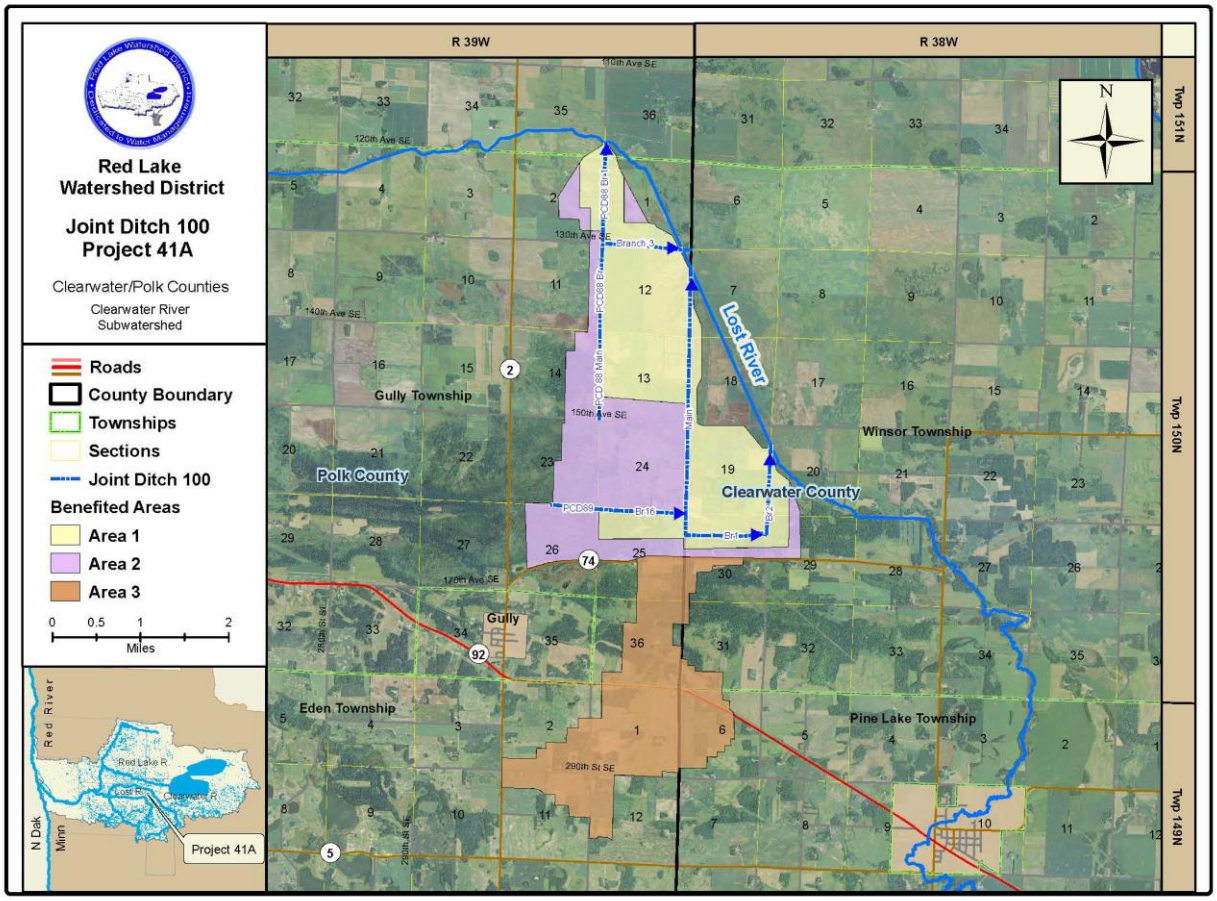
Outlet Structure without steel gates and catwalk

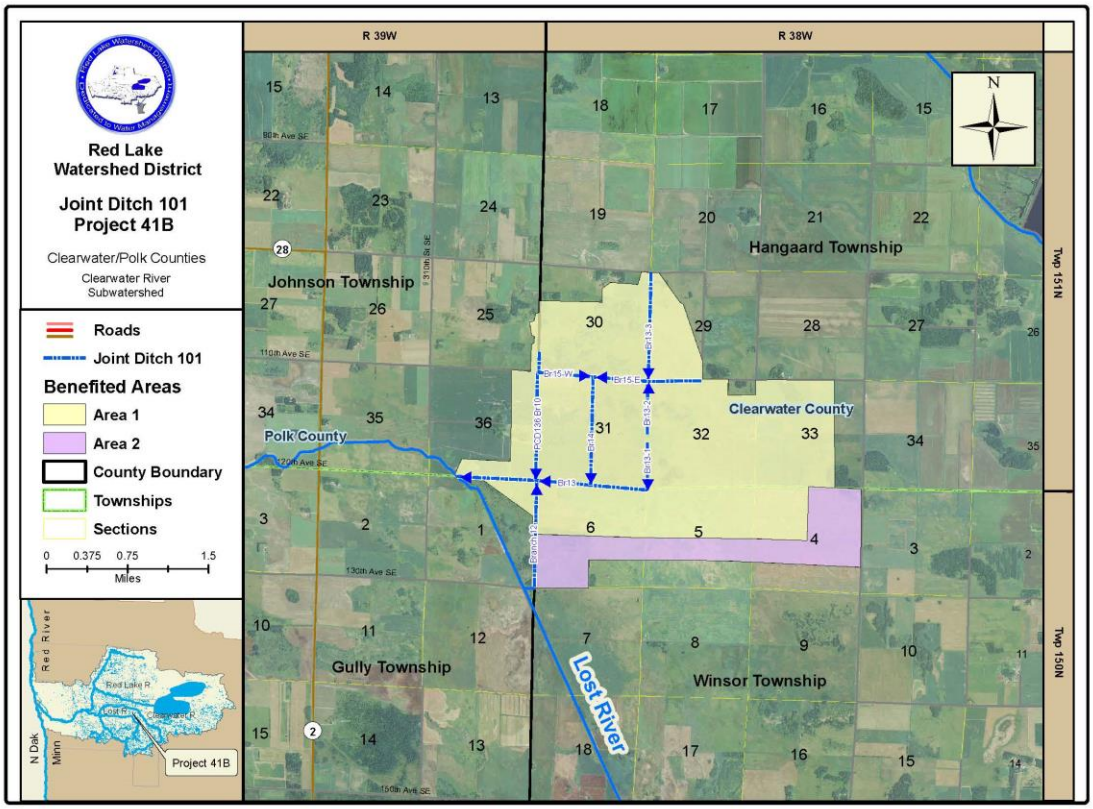
Redetermination of Judicial Ditch 72 (RLWD Project No. 41)

On July 31, 2017, the Joint Board for Judicial Ditch 72 held a public meeting at the McIntosh Community Center for the consideration to complete a "Redetermination of Benefits and Damages" to the public drainage system per Minnesota Statutes 103E.351. After considerable discussion by landowners and the Joint Board, it was determined by the Board to move forward with the redetermination of benefits and damages. At their meeting held August 22, 2017, the Joint Board approved by unanimous motion to appoint three viewers to complete the redetermination process as stated under statutes.

Due to the complexity of completing a redetermination on upwards of 6 public drainage systems as well as a delay in hearing for COVID 19, the project continued into 2021. After the Viewers Report was filed with the Joint Board, a public hearing was set for 2:00 pm April 6, 2021, at the McIntosh Community Center. As a result of the public hearing and questions by the public, it was determined by the Joint Board that the Viewers should review some of the areas in question and meet with landowners to clear up some of the issues that arose. Upon the Viewers completing the tasks directed by the Joint Board, a continuation of the hearing was scheduled and held at 2:00 pm June 24, 2021, at the McIntosh Community Center. After the Viewers completed their amended report, the Joint Board approved by motion the Redetermination of Judicial Ditch 72 and ordered legal counsel to draft the Finding of Facts and Order Approving the Redetermination of Benefits Pursuant to Minnesota Statutes 103E.351.

On September 28, 2021 at 11:00 am, a public hearing was held under Minnesota Statutes 103E.801 for the "Consolidating or dividing drainage systems" which included but not limited to Judicial Ditch 72 (Branch 1) (Branch 2) (Branch 3) and County Ditch 88 (Branch 1), County Ditch 136 (Branch 10), County Ditch 88 (Main), Judicial Ditch 72 (Branch 12) (Branch 13) (Branch 13-1) Branch 13-2) (Branch 13-3) (Branch 14) (Branch 15E) (Branch 15W) (Branch 16). During the public hearing, it was requested by landowners that due to the fact there were two distinct outlets for the remaining Judicial Ditch #72 system, that remaining portion be separated into two legal drainage systems with one being located west of the Lost River and one being located east of the Lost. River. Upon considerable discussion by the Board, a motion was made and approved to separate the remaining Judicial Ditch #72 into two systems and that the portion located west of the Lost River be named Joint Ditch 100 and the portion east of the Lost River be named Joint Ditch 101.





Burnham Creek Wildlife Habitat Project (RLWD Project No. 43A)

During the summer of 2019, the District was contacted by the Minnesota Department of Natural Resource Wildlife staff concerning the outlet structure for the Burnham Creek Wildlife Habitat portion of the project which was a component of a multi-purpose flood control project completed in 1988 known as Burnham Creek Project No. 6 Impoundment, Project 43A. Upon inspection of the structure, it was confirmed that the outlet structure needed repair and based on the signed agreement of the project, the RLWD and the MnDNR were jointly responsible for maintenance and repair of the structure. In August of 2019, the RLWD and the MnDNR applied for a Conservation Partnership Legacy Grant through the MnDNR Division of Fish and Wildlife Conservation Partners Legacy Grant to remove and replace the structure. December 17, 2019, the District was informed that a grant in the amount of $168,420 was awarded for the project. September 9, 2020, a contract for the construction to replace the outlet structure was awarded to Swingen Construction in the amount of $148,400.00. Notice to Proceed was given October 6, 2020, with construction continuing into late November 2020. Due to delays in getting stoplogs and catwalk material, construction was suspended. On Monday July 19, 2022 a final hearing was held for making final payment to Swingen Construction Company. In December of 2022 the CPL Grant was closed and the project was completed.

Erosion Control (RLWD Project No. 164)

This project program was established in 2004 and is used on a yearly basis to provide cost share funding for various erosion control projects usually initiated and developed by local Soil and Water Conservation Districts (SWCD). In 2022, there were ten cost share funding requests from local SWCD offices. Total requests match for project cost share totaled $26,725.


Outlet to Red Lake County Ditch 62

Black River Impoundment (RLWD Project No. 176)

November 10, 2016 the RLWD Board of Managers, by Board motion, initiated the Black River Impoundment Project.

On January 12, 2017, the Board appointed two members of their Board to sit on a Project Work Team to assist in the development of a flood damage reduction project near the Black River.

On April 18, 2017, a Step I submittal was presented to the Red River Watershed Management Board with the Step II submittal for funding presented to their board October 17, 2017.

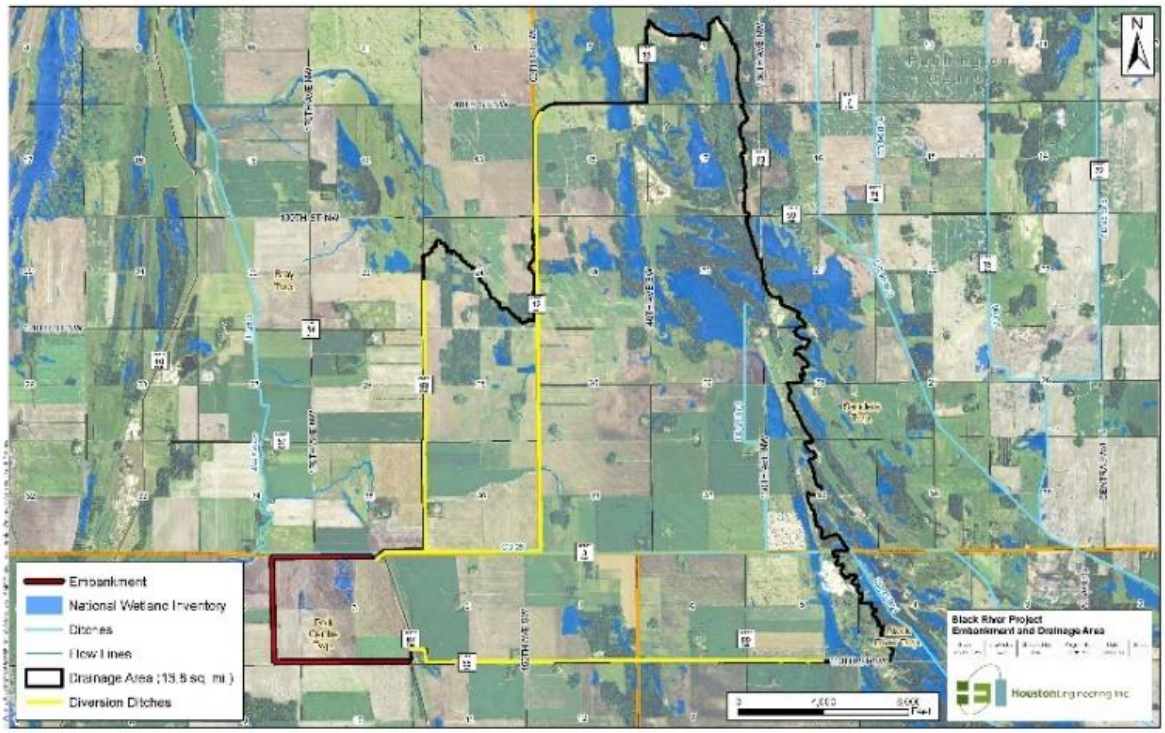
On August 9, 2018, a public hearing was held for the Black River Impoundment with an estimated cost of 7.8 million dollars. Also, in 2018 the District tried to secure funding through Minnesota Flood Hazard Mitigation Funding which was not successful. The District will continue with the development of the project, as well as trying to secure State funding for construction.

In 2019, the District, with the assistance of Houston Engineering Wetland Specialist, continued with the permitting application process with Wetland Conservation Act staff as well as United States Army Corps of Engineers to review wetland impacts to the project. After nearly two years of meetings and review, the District completed an application for permitting wetland impacts for the project.

On July 21, 2020, the Red Lake WD presented the RRWMB with a Step III Submittal for funding the Black River Impoundment Project with a revised estimated cost of $8,883,000. Three funding alternatives were presented which included: (A) No outside cost-share from federal or state agencies; (B) Fifty percent funding cost-share from the State of Minnesota Flood Hazard Mitigation Program; and (C) $3 million cost-share from a grant request through the USDA's Natural Resources

Conservation Service (NRCS) FY 2020 Regional Conservation Partnership Program (RCPP) Alternative Funding Arrangements.

At the July 21, 2020, RRWMB meeting and due to the fact, there would be no State Flood Hazard Mitigation funding available for the project, the RRWMB of Managers approved funding the Black River Impoundment Project in the amount of $5,922,000. It was also agreement between the Red Lake Watershed and the RRWMB to proceed with bids and specifications to start construction on this project as soon as possible. On September 24, 2020, the RLWD Board of Managers awarded the contract for construction to RJ Zavoral & Sons, Inc. in the amount of $4,374,457.66 with notice to proceed being given on October 22, 2020. Construction started almost immediately and with the great working conditions, nearly half the project was completed in the fall of 2020. Construction started early summer of 2021 and continued late in the fall. Due to the spring flooding of 2022, construction and damage repairs could not be completed until early fall of 2022. Final payment hearing for RJ Zavoral & Sons, Inc. of East Grand Forks, MN was held December 8, 2022.



Project Location Map

County Road #66 Spring Flood Damage

County Road #66 Spring Flood Damage

Petition for the Improvement to Polk County Ditch No. 39 (RLWD Project No. 179)

On October 26, 2017, at the RLWD regularly scheduled Board meeting, a petition was received for the improvement to Polk County Ditch #39 in Polk County was presented to the RLWD Board of Managers. Upon review of the petition and receipt of the bond, the RLWD Board of Managers, by order, appointed Pribula Engineering to complete a preliminary survey. April 11, 2019 a Preliminary Hearing for the Improvement of Polk County Ditch #39, RLWD Ditch No. 17, Project 179 was held. Upon completion of the hearing, the Board of Managers by motion, approved moving forward with the appointment of viewers and instructed the engineer to proceed with the final detailed survey report.

The final hearing was held July 24, 2020, at the Red Lake Watershed District. At their regular board meeting held August 24, 2020, the Red Lake Watershed District Board of Managers approved the Finding and Order for the improvement petition. The construction of the project is presently being delayed for various legal appeals. The first appeal was filed by various landowners (appellants) to the Ninth Judicial District Court State of Minnesota. On July 22, 2022 the District Court submitted the Order Granting Summary Judgement in favor of the appellants on July 22, 2022. The second appeal delaying this project was filed with the Minnesota Court of Appeals and was heard by the appellant court on January 19, 2023. The project is on hold pending the Minnesota Court of Appeals ruling.

Sorum Ring Dike (RLWD Project No. 129AW)

In June 2021, a request for ring dike funding was received by Jacob & Alex Sorum located in the NW1/4, Section 35, of Keystone Township, Polk County, Minnesota. Fifty percent of the project funding came from the Red River Watershed Management Board (RRWMB), the RLWD paying 37.5% and landowner paying 12.5%. Due to additional land acquisition issues and design constraints, the project did not commence during the 2021 construction season. After final design review and acceptance, bids were opened July 28, 2022, with the low bid being awarded to Paul Zavoral (Higher Ground) in the amount of $129,214.40. Construction started in mid-September of 2022. Work completed included levees built to specified elevation, centerline culverts with waterman gates installed, interior & exterior drainage, topsoil spreading, and turf establishment.

West dike (Looking South)

North dike (Looking South)

Nelson Ring Dike (RLWD Project No. 129AU)

Trent Stanley completed the remaining work in the summer of 2022, which included erosion repairs, final levee shaping, topsoil spreading and turf establishment.

Southeast corner of dike (Looking North)

Larson Ring Dike (RLWD Project No. 129AV)

Bertils Gravel Excavating LLC completed the remaining work in the summer of 2022, which included final levee shaping, topsoil spreading and turf establishment.

Southeast corner of dike (Looking West)

Ditch 10 Repair (RLWD Project No. 161)

In April 2022, it was discovered by RLWD field staff that substantial erosion was occurring along Ditch 10 due to the severity of the spring runoff. The area of concern was directly upstream of the Ditch 10 project from 2021. With the assistance of Houston Engineering, a set of repair plans was created to correct the issue. Work began in late June of 2022 and was completed in mid-July. The project consisted of reestablishing the ditch bottom, 3:1 side slopes, a series of new rock checks, repairing existing rock checks, erosion blanket and seeding. Andy Anderson (Anderson Excavating/Quality Spray Foam) performed the work. Funding for this project was provided through Red Lake River 1W1P.

April runoff

Reestablishing the ditch bottom (Looking South)

Installing rock check (Looking North)

Repaired ditch (Looking North)

Schirrick Dam Outlet Repair (RLWD Project No. 25)

Schirrick Dam, located along the Black River, was originally constructed in 1984 and has been vital in assisting with flood control efforts on the Red Lake River. After years of operation, the outlet channel was in need of repair. RLWD staff performed the preliminary survey and construction inspection. Houston Engineering provided a set of repair plans, which consisted of reshaping the east bank, rip rap and restoring the outlet channel. Bids were opened on November 10, 2021, with the low bid being awarded to Anderson Excavating in the amount of $76,800.25. Construction started in late July 2022 and was completed in mid-August.

Outlet channel (Looking South)

Outlet channel (Looking North)

Demarais-Hanson Outlet (RLWD Project No. 149)

Demarais-Hanson outlet project, located in Louisville Township, Red Lake County, was started in late fall of 2021. Due to weather conditions, the project was delayed until the Spring of 2022. Gladen Construction was awarded the contract in the amount of $147,350.00. Construction consisted of reestablishing the outlet channel, armoring the outlet channel with riprap and reshaping the side slopes for grade stabilization. Construction started in mid-May of 2022 and was completed in mid-June. Funding for this project was provided through Red Lake River 1W1P.

Excavating the outlet channel and installing riprap (Looking South)

Project site (Looking North)

In July of 2022, RLWD was notified of a soil failure at the recently completed Demarais-Hanson project site. RLWD staff inspected the site, and it was later determined that a repair project would be required. In coordination with Houston Engineering, a preliminary survey was conducted, and a set of plans was developed to repair the failed areas. The project consisted of removing the failed material,

placing geogrid and backfilling with compaction. Bids were accepted and Anderson Excavating was awarded the contract in the amount of $92,619.00. The repair work started in early October of 2022 and was completed the same month.

West side failure area (looking east)

West repair site (Looking West)

Completed West repair site (Looking West)

East repair site (Looking East)

2022 FLOODING

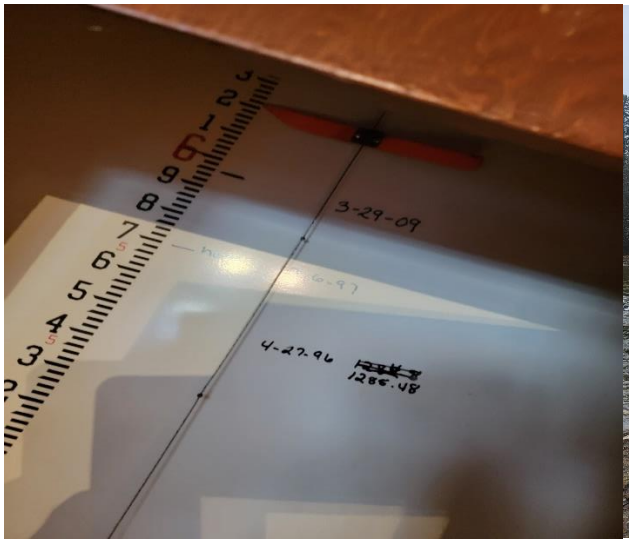
Throughout the Watershed District we experienced significant rainfall in the spring of 2022. In April of 2022, we measured 5.96" of rainfall here at the office, which most of it came the last full weekend of the month. Almost 5" above our monthly average. Which caused significant damage to our impoundments and infrastructure. We had so much damage system wide that a FEMA declaration was established. All the data has been collected and organized for FEMA and we will be completed with our FEMA declaration in early 2023. Below are just some of the pictures of areas that were affected by high water.

150th Ave just South of Immanuel Cemetery

Ditch 10 Project #161

Pine Lake Structure w/o the catwalk.

Pine Lake Public Access



Pine Lake gauge at Sportsman's Lodge

Removing Temporary stoplogs

Schirrick Dam Structure

Schirrick Dam Outlet

Flood Control Impoundments

The 2022 spring melt and runoff was basically a "non-event" in the basin. By the middle of April, the landscape was void of measurable snow cover and the surface water was also gone. Although we made it through the spring melt relatively unscathed did not mean we were out of the woods. In the month of April, after most of the snow had melted, we received just under 6" of rain which led to significant flooding episodes throughout our entire district. Which led to us operating all our impoundment gates to hold water as long as we could to help downstream flooding.

Impoundments operated by the District are quite diverse and actual project operations are based on available flood storage, outlet structure facilities, and outlet channel capacity. Each impoundment is designed, based on upstream drainage area, topography, and runoff conditions. Some of the flood storage facilities are operated with adjustable stop-logs, adjustable flood gates, and some are non-gated fixed crest weir structures.

Non-gated – Fixed Crest Weir Type Structures

"Fixed crest" structures store water to the specific elevation of a weir. When the water surface raises above the weir elevation, outflows occur automatically. Most of the non-gated projects were constructed in the 1970's and early 1980's by the former Soil Conservation Service (SCS), known today as the Natural Resource Conservation Service (NRCS).

Latendresse Dam located in Red Lake Falls Township, Red Lake County

Odney Flaat Dam located in Onstad Township, Polk County

Storage Volume & Operations

Water storage is calculated in acre feet, which is a volume measurement that is one acre in area by one foot deep. Storage capacity in impoundments varies depending on the size in acres and depth of the storage area. One foot of water depth in an impoundment can be many thousands of acre feet of storage. Some impoundments are considered "dry" which means that the pool is drained dry after stored flood waters are released. Other impoundments are operated with a small permanent pool throughout the year.

Operation and maintenance vary, depending on the specific project. Some are operated solely by the District, and others are operated cooperatively with the Minnesota Department of Natural Resources, U.S. Fish and Wildlife Service, Natural Resource Conservation Service, and local Soil and Water Conservation Districts.

Routine inspections are performed, and the condition of the embankment and control structures are evaluated. Typical maintenance includes flood damage repairs, debris removal, removal of beaver dams/debris, nuisance beaver, and vegetation control.

Gated /Stop-log Type Structures

Projects with ‘adjustable flood gates and/or stop-logs’ have more flexibility for storage and for controlling outflows from flood events. During large runoff events, flood waters are stored within the impoundments and as downstream conditions allow, the stored water is released in a controlled manner. This is done by operating flood gates or by adjusting stop-logs, depending on the respective flood storage facility. Water levels are typically lowered during the fall season. This ‘fall drawdown’ is performed to create additional flood storage for the next spring’s runoff.

Example of a “Dry” Impoundment. Stored flood water is released as soon as downstream channel conditions are acceptable to pass flows.

Example of an Impoundment with a permanent pool

Miller Dam (RLWD Project No. 50C)

GENERAL: Miller Dam was constructed in 1976. It was part of a group of dams that were constructed in Red Lake and Polk Counties to help slow water down by holding it back until it reaches a set elevation. Once the water has reached that elevation, it will flow into a vertical pipe down into the outlet pipe and discharge out to the water tributary that will take the water away, usually a river or stream.

LOCATION: The project is in Section 26, Gervais Township, in Red Lake County, approximately 7 miles East of Red Lake Falls.

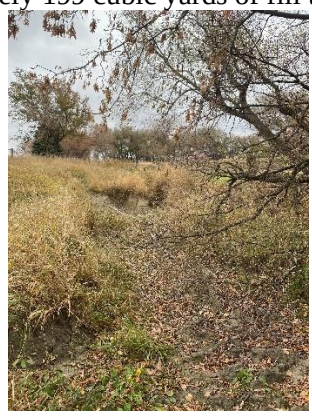
PURPOSE: The project stores runoff and reduces flooding on downstream agricultural lands and urban areas by retaining up to approximately 155 acre-feet of floodwater storage.

PROJECT COMPONENTS: The project has a drainage area of 4.4 square miles. The embankment and reservoir are constructed of earthen clay with a vertical riser with a debris catch that will allow water to pass once the water has reached a set elevation to flow into the vertical pipe. The operable components are the structure which releases water from the impoundment into an outlet channel. This water then flows northwesterly through ditch systems and eventually to the Red River of the North.

FUNCTIONAL DESIGN DATA

	Elevation (ft.-msl)	**Storage (ac.ft.)**
Top of Dam (Total Storage)	1086.0	155 ac. ft. (.5" in runoff)
Gated Storage (Perm. Pool)	1076.0	32 ac. ft.
Ungated Storage to Emergency Spillway	1082.5	123 ac. ft.

During the 2022 Spring flood event, high flows passed through the emergency spillway which caused erosion damage. The spillway got repaired to 'pre' disaster condition. There were three different areas that we targeted for repair that needed approximately 199 cubic yards of fill to repair.



Knutson Dam (RLWD Project No. 50F)

GENERAL: Knutson Dam was constructed in 1980. It was part of a group of dams that were constructed in Red Lake and Polk Counties to help slow water down by holding it back until it reaches a set elevation. Once the water has reached that elevation, it will flow into a vertical pipe down into the outlet pipe and discharge out to the water tributary that will take the water away, usually a river or stream.

LOCATION: The project is in Section 26, Red Lake Falls Township, in Red Lake County, approximately 1 mile South and East of Red Lake Falls.

PURPOSE: The project stores runoff and reduces flooding on downstream agricultural lands and urban areas by retaining up to approximately 55 acre-feet of floodwater storage.

PROJECT COMPONENTS: The project has a drainage area of 2.7 square miles. The embankment and reservoir are constructed of earthen clay with a vertical riser with a debris catch that will allow water to pass once the water has reached a set elevation to flow into the vertical pipe. The operable components are the structure which releases water from the impoundment into an outlet channel. This water then flows northwesterly through ditch systems and eventually to the Red River of the North.

Euclid East Impoundment (RLWD Project No. 60C)

GENERAL: Construction of the Euclid East Impoundment began on June 15, 2006. Due to excellent working conditions, it was substantially completed by the middle of November. The project became functional for operation in the spring of 2007. This project is funded jointly between the State of Minnesota, Red River Watershed Management Board, and the Red Lake Watershed District.

LOCATION: The project is in Section 24, Euclid Township, and Section 19, Belgium Township, Polk County, approximately 12 miles north of Crookston.

PURPOSE: The project stores runoff and reduces flooding on downstream agricultural lands and urban areas by retaining up to approximately 2,443 acre-feet of floodwater. The storage of water in the reservoir will reduce peak discharges on downstream legal ditch systems, Branch C of County Ditch #66, County Ditch #66 (Main), and County Ditch #2.

PROJECT COMPONENTS: The project has a drainage area of 17.1 square miles. The embankment and reservoir are constructed of approximately 3.6 miles of earthen clay embankment (332,681 cubic yards and approximately 12 feet at highest point), a grass lined emergency spillway, 2.4 miles of inlet channels and culvert work, 0.8 mile of outlet channel, and a gated concrete outlet structure. The operable components are the gated structure which releases water from the impoundment into an outlet channel. This water then flows northwesterly through legal ditch systems and eventually to the Red River of the North.

FUNCTIONAL DESIGN DATA

	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam (Total Storage)	908.0	2,443 (2.68 in. runoff)
Gated Storage (Structure Crest)	905.0	1,878 (2.06 in. runoff)
Ungated Storage to Emergency Spillway	906.0	565 (0.62 in. runoff)
October 13, 2019 was recorded as the highest pool elevation at 905.90'		

Principal Outlet Structure
April 9, 2020

In 2022, flood gate operation was required during the spring flood. The highest recorded level was 903.8' which was first recorded on May 1st, 2023. The outlet channel had received some damage from this same flood event, which needed some reshaping and cleaning done to it. There will be a berm added in 2023 to the south side of the outlet ditch that will continue to the train tracks along Hwy 75.

Euclid Outlet Chanel
May 24th, 2022

Euclid Outlet Chanel
May 24th, 2022

Debris inside Impoundment
May 24th, 2022

Euclid Outlet Chanel
May 2nd, 2023

Brandt Impoundment (RLWD Project No. 60D)

GENERAL: Construction of the Brandt Impoundment began on July 31, 2006, and was substantially completed by the middle of November and functional for operation in the spring of 2008. The project is funded by the State of Minnesota, Red River Watershed Management Board, and the District.

LOCATION: Section 7, Belgium Township, Polk County, approximately 14 miles north of Crookston, or 1 ½ miles east and 1 mile north of Euclid.

PURPOSE: The project stores runoff and reduces flooding on downstream agricultural lands and urban areas by retaining up to approximately 3,912 acre-feet of floodwater. The storage of water in the reservoir also reduces peak discharges on the downstream "Brandt Channel," RLWD Ditch 15 and Polk County Ditch #2 system.

PROJECT COMPONENTS:

The project has a drainage area of 23.6 square miles. The embankment and reservoir are constructed of approximately 3.5 miles of earthen clay embankment (492,579 cubic yards & approx. 19 feet at highest point), a grass lined emergency spillway, 2 – lines of 6 x 8 concrete box culverts and a gated concrete outlet structure.
Operable components are the gated structure which releases water from the impoundment into an outlet channel. This water then flows west - northwest through the "Brandt Channel" legal County Ditch #2 system and eventually to the Red River of the North.

In 2022, flood gate operation was required during the flood event of '22. The Highest recorded level was 913.5' which was observed on May 3rd, 2022. There as some debris left on the dike banks that needed to be piled and burned, so it would not kill the grass that it was covering.

FUNCTIONAL DESIGN DATA

	Elevation (ft.-msl)	**Storage (ac.ft.)**
Top of Dam (total Storage)	918.0	3,912 (3.1 in. runoff)
Gated Storage (Secondary Spillway)	914.5	3,126 (2.48 in. runoff)
Ungated Storage to Emergency Spillway	916.0	786 (0.62 in. runoff)
October 13, 2019 was recorded as the highest pool elevation at 915.45		


Debris in Brandt Impoundment
May 24th, 2022


Debris in Brandt Impoundment
May 24th, 2022

Parnell Impoundment (RLWD Project No. 81)

GENERAL: Construction of the Parnell Impoundment began in 1997 and was completed in 1999. In 2004, modifications were made to the original design by lowering the emergency spillway 1.5 feet, expanding the inter-pool connecting channel, and installing an operable screw gate on the weir structure in the JD #60 outlet. The impoundment is now better utilized to store floodwaters by operating control gates. In 2009, excavation of an east pool interior channel, along with an inter-pool structure, consisting of 2-48" diameter culverts with operable gates were installed. The channel enhances flow conveyance to J.D. #60 and the inter-pool structure will be beneficial in managing west pool water levels and help reduce flooding in County Ditch #126.

LOCATION: Sections 3 and 4, Parnell Township, Polk County, approximately 12 miles northeast of Crookston.

PURPOSE: The project will reduce flooding on downstream agricultural lands and urban areas by retaining up to approximately 4,000 acre-feet of floodwater. The storage of water in the reservoir will also reduce peak discharges on four legal ditch systems, County Ditch #126, Judicial Ditch #60, County Ditch #66, and County Ditch #2.

PROJECT COMPONENTS: The project has a drainage area of 23 square miles. The impoundment incorporates a two-pool design (no permanent pool), with two separate outlets, and an inter-pool connecting channel. The embankment and reservoir are constructed of approximately 5 miles of earthen embankment (approx. 18 feet at highest point), a concrete emergency spillway and two gated concrete outlet structures.

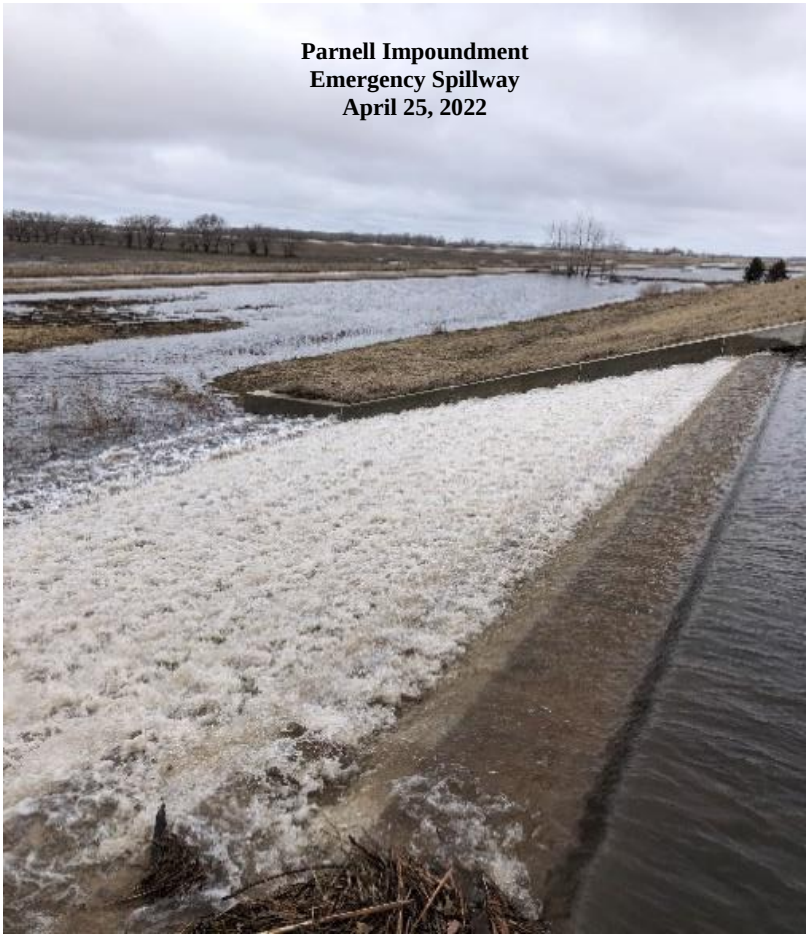
Operable components are the two gated structures which release water from the impoundment into two separate outlet channels. One of these channels is JD #60, which flows south to the Red Lake River and the other is CD #126, which flows west and eventually to the Red River of the North.

FUNCTIONAL DESIGN DATA:

	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam (total Storage)	943.0	4,000 (3.2 in. runoff)
Emergency Spillway	939.5	3,000 (2.4 in. runoff)
April 8, 2020 was recorded as the highest pool elevation at 940.6		

In 2022, flood gate operation was required during the spring flood. The highest recorded level was 923.2', which was observed on April 25th, 2022. There was erosion on the interior side of the dike that had happened while we stored water in the impoundment from wind/waves. There was also debris that was left after we completed storing water. The debris and erosion were fixed in 2022 and will be reimbursed with FEMA dollars.

Parnell Impoundment
Emergency Spillway
April 25, 2022



Parnell Impoundment
Debris
May 24, 2022

Parnell Impoundment
Erosion and Debris
May 24, 2022

BWSR Flood Storage Easement Pilot Site 1 "Tiedemann Site" (RLWD Project No. 133C)

GENERAL: Construction of the "Tiedemann Site" began in the spring of 2002 and was substantially completed by the summer of 2002 and functional for operation in the spring of 2003. The project is funded by the Minnesota Board of Water & Soil Resources (BWSR) and the District.

LOCATION: Section 5, Parnell Township, Polk County, approximately 12 miles northeast of Crookston.

PURPOSE: The project stores runoff and reduces flooding on downstream agricultural lands and urban areas by retaining up to 247 acre-feet of floodwater. The storage of water in the reservoir also reduces peak discharges on the downstream ditches; Polk County Ditch 126 and the Grand Marais.

PROJECT COMPONENTS: The project is directly downstream of the Parnell West Pool outlet and the North Parnell Site 2 outlet. The embankment is constructed of approximately 0.75 miles of earthen clay embankment, 0.63 miles of raised township road, a grass lined emergency spillway, 1 – line of 6 x 5 concrete box culvert with a gated outlet structure.

Operable components are the gated structure which releases water from the impoundment into Polk County Ditch 126. This water then flows west to the Grand Marais Coulee eventually to the Red River of the North.

FUNCTIONAL DESIGN DATA

	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam (total Storage)	925.5	324
Emergency Spillway	924.5	247 (1.6 in. runoff)

North Parnell Site 2 "Gasper Site" (RLWD Project No. 154)

GENERAL: Construction of the "Gasper Site" began in the spring of 2003 and was substantially completed by the summer of 2003 and functional for operation in the spring of 2004. The project is funded by the Minnesota Board of Water & Soil Resources (BWSR), Red River Management Board (RRWMD), and the District.

LOCATION: The Sections 3&4, Parnell Township, Polk County, approximately 12 miles northeast of Crookston.

PURPOSE: The project stores runoff and reduces flooding on downstream agricultural lands and urban areas by retaining up to 324 acre-feet of floodwater. The storage of water in the reservoir also reduces peak discharges on the downstream ditches; Polk County Ditch 126 and the Grand Marais.

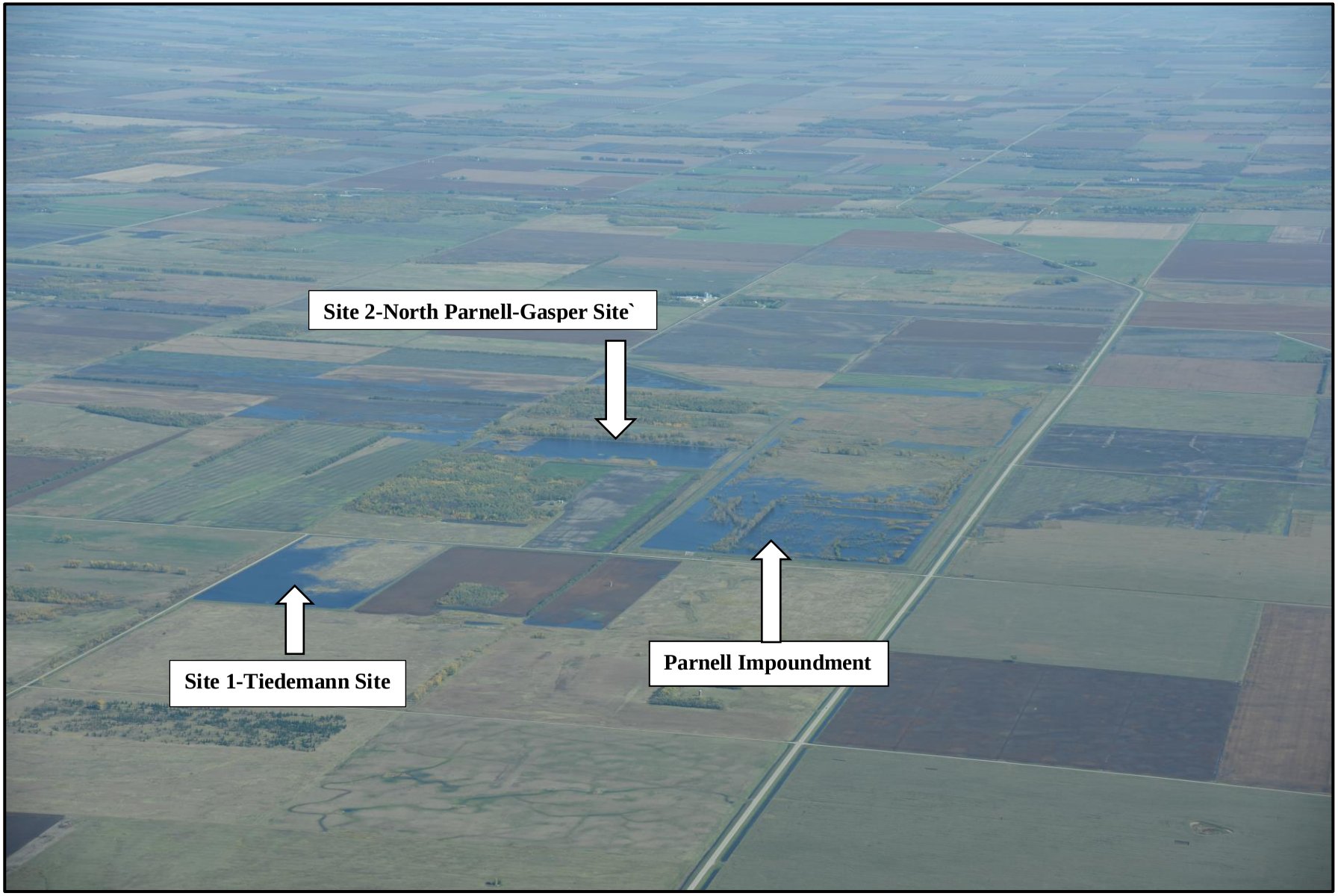
PROJECT COMPONENTS: The project is directly upstream and adjacent to the Parnell Impoundment. The embankment is constructed of approximately 1.0 miles of earthen clay embankment, a grass lined emergency spillway, 1 – line of 36" concrete pipe with a gated outlet structure.

Operable components are the gated structure which releases water from the impoundment into an outlet ditch which then goes into RLWD project 133C, from there the water flows into Polk County Ditch 126. This water then flows west to the Grand Marais Coulee eventually to the Red River of the North.

FUNCTIONAL DESIGN DATA

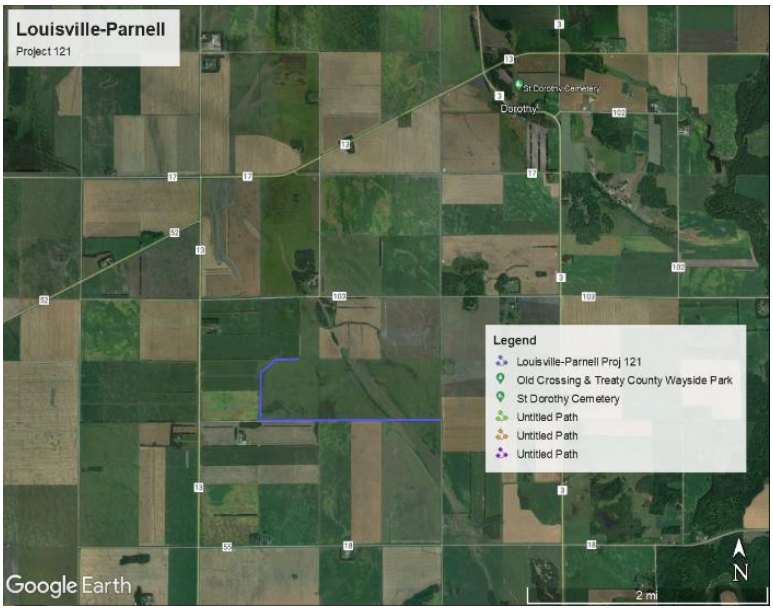
	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam (total Storage)	938.0	324
Emergency Spillway	937.0	247 (2.7 in. runoff)

Parnell Impoundment – Site 1 Tiedemann Site – Site 2 North Parnell Gasper Site
Looking Northeast



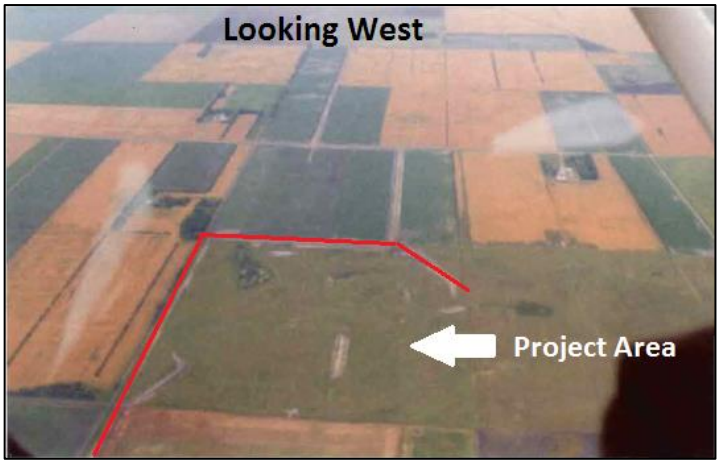
Louisville/Parnell Project (RLWD Project No. 121)

GENERAL: Construction of the Louisville/Parnell Impoundment began in mid-1998 and was substantially completed by the end of July 1998 and functional for operation in the fall of 1998. The District and HDR Engineering of Thief River Falls jointly performed construction surveying and inspection duties. The project is funded by the Red River Watershed Management Board, Department of Natural Resources, Minnesota Department of Transportation, and the District.



LOCATION: The project is located, approximately 12 miles northeast of Crookston, in Section 13 and 14 of Parnell Township in Polk County and Section 18 of Louisville Township in Red Lake County, Minnesota.

PURPOSE: The project will store runoff and reduce flooding on downstream agricultural lands and urban areas by retaining up to ten percent more storage (400 acre-ft) to the JD-60 Watershed. The storage of water will reduce peak discharges by .2 % in Crookston and .02% East Grand Forks. The project also created 37 acres of wetland banking.



PROJECT COMPONENTS: The drainage area above (upstream) of the impoundment is 5.1 square miles. The project controls break out flows from Lateral 2 of JD-60. It is designed to provide up to 25-yr flow control to the immediate drainage systems downstream of the project. The embankment is approximately 2,900 ft long along the west edge of the southeast quarter of Section 13. The project utilizes four gated outlet structures consisting of one principal outlet (STA 19+50) and three secondary outlets. Each control structure and storage site are designed to operate using passive detention. The sluice gates are 18-inch diameter, Waterman Model C-20-C-Y and operated through a gate wheel. As well as providing local and regional flood mitigation, this project provides wetland banking for the Minnesota Department of Transportation. The project consists of five pools each designed to provide specific functions and benefits.

Louisville/Parnell Impoundment and Wetland Bank
100 Year 30 Hour Summer Flood
Stage and Storage Summary

Storage Site	Peak Elevation (ft-MSL)	Total Storage at Peak (ac-ft)	100-Year Bounce (ft)	Gated Storage Available (ac-ft)
A	965.19	89.9	2.8	15
B	954.16	24.2	2.2	0
D	952.21	47.6	1.7	47.6
C/E	949.21	207	5.3 (C) 1.3 (E)	190

FUNCTIONAL DESIGN DATA

	Elevation (ft.-msl)
Top of earthen embankment	951.0/952.0
Top of Spillway	949.0

Gate operation will be the responsibility of the Red Lake Watershed District, and gate operation will be coordinated with downstream elevation trigger points to help us determine when to operate the gate for storage or release of water.

Pine Lake (RLWD Project No. 35)

GENERAL: In 2021, the RLWD replaced the existing sheet pile dam with a concrete structure along with a rock riffle fish passage. Please see the Project #26B for further information, which was a Capitol Improvement Project. Final Payment Hearing was held on Thursday, August 25th, 2022, and Project #26B was completed on that date.

LOCATION: The site is near the south center of section 21, Pine Lake Township, Clearwater County.

PURPOSE: This multi-purpose project is designed to provide the public with flood control and wildlife benefits. The Gonvick Area Lions Club has donated hundreds of man-hours and when necessary, members operate the aeration system, install, and maintain aeration signage.

FUNCTIONAL DESIGN DATA:

	Elevation (ft.-msl)
Top of Dam	1285.0
Bottom of Bay	1281.0
Fish Passage Notch	1281.0
Typical summer-top of stop logs	1282.5
Typical winter	1282.5
April 26, 2022, was recorded as the highest pool elevation at 1286.22	

The new concrete structure has two - 5' X 4' bays. One bay has an adjustable sluicegate, the other is controlled by "stop-logs". A rock-riffle fish passage was also installed as part of the project. The stop-logs can be adjusted between elevations 1281.0 to 1285.0. The project has a drainage area of 45 square miles. Based primarily on lake elevation, stop-logs may be removed from the dam to allow additional outflow until the lake recedes, and then they are replaced to the typical summer or winter elevation. The dam is also designed with a fish passage notch at elevation 1282.5, which is one foot lower than the normal summer lake elevation. This is very important for keeping some flow in the Lost River especially during periods of low flow. Factors to consider when adjusting the stop-logs are monitoring "inflows" to the lake, existing lake elevation, downstream conditions, and predicted runoff. Staff personnel at the Sportsman's Lodge are very helpful in reading the lake elevation gauge located inside the business and a local resident records rainfall data at the lake.

In 2022, the local Sportsman's Club operated the aeration system from January 24th to March 23rd. Temporary stoplogs were installed on March 24th to the typical summer elevation of 1283.5. Pine Lake crested at elevation 1286.22' on April 26th. Which was the highest recorded level at the lodge. On September 15th, we began the normal fall drawdown and have continued throughout the winter to collect data and understand how the new structure is going to maintain the winter and summer targets that are described in the operating plan.

New structure without gates and catwalk

Riprap riffles downstream of concrete structure

Looking up-stream at fish passage

Catwalk Installation

Catwalk Installation

Completed Project

Little Pine Lake (RLWD Project No. 26A)

As a result of the RCPP Project Work Team meetings for Pine Lake, it was identified that the Minnesota Department of Natural Resources agreed to store an additional 250 acre-feet of water on Little Pine Wildlife Management Area (WMA) to assist in reducing flood flows to Pine Lake during flood events. Upon further discussion with the RLWD Board of Managers, the District agreed to construct a new outlet structure on the WMA to allow better operation for regulating water surface elevations. The District and MNDNR entered into a Joint Powers Agreement as well as drafting an operating plan which gives the MNDNR the responsibility for all operation and maintenance of the water control structure. Quotes for the project were opened at the District office on June 14, 2018, with the low quote awarded to Red Lake Builders in the amount of $119,220. Project construction was completed November 14, 2018

Control Structure

Elm Lake-Farmes Pool (RLWD Project No. 52)

GENERAL: Elm Lake was drained around 1920 by the construction of Branch #200 of Judicial Ditch #11. The Elm Lake project is a cooperative effort of the U.S. Fish and Wildlife Service, MN Department of Natural Resources, Red Lake Watershed District, and Ducks Unlimited. Majority of funding for the project was provided by Ducks Unlimited and at the time Elm Lake was created, it was the largest Ducks Unlimited project in the lower 48 states.

Stop-log Outlet Structure with operable screw gate

LOCATION: Marshall County, approximately 17 miles northeast of Thief River Falls. The drainage area of Ditch 200 above Elm Lake is 63 square miles.

PURPOSE: Multi-purpose – designed to meet three major objectives: Flood control, increase wildlife values, and upstream drainage improvement.

PROJECT COMPONENTS: Approximately 9 miles of earthen embankment, an outlet control structure, rock lined emergency spillway, and an enlargement of a portion of Ditch 200.

FUNCTIONAL DESIGN DATA:

	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam	1145.0	19,700
Emergency Spillway	1142.0	11,000 (8.9 in. runoff)
Max Summer	1141.0	7,500 (6.11 in. runoff)
Typical Summer	1140.0	5,500 (4.48 in. runoff)
Typical Winter	1139.0	3,500
Project Drainage Area 63.0 sq.mi.		
*Highest recorded pool elevation was 1143.30 on April 23, 1997		

OPERATIONAL: 1991

In 2009, repairs were made to the principal outlet structure. Work consisted of repairing stop-log bays and channels, removal of corroded stop-logs, and installation of new handrails and safety grates.

Agassiz National Wildlife Refuge staff performs the actual operation of the outlet structure with cooperation from the District.

Lost River Impoundment (RLWD Project No. 17)

GENERAL: In the mid-1970's, the project was constructed by the Minnesota Department of Natural Resources to improve waterfowl habitat. On December 14, 1978, the District entered into a formal agreement with the Minnesota Department of Natural Resources to modify the original impoundment by raising the elevation of the dike and emergency spillway. Four - 48" diameter gated pipes and a spillway from Ditch 200 of JD #11 supply water to the impoundment which is an "off channel" reservoir.

LOCATION: Marshall County, Grand Plain Township, proximately 20 miles northeast of Thief River Falls. The drainage area above the impoundment is 53 square miles.

PURPOSE: Multi-purpose – designed to increase wildlife values and provide flood control.

PROJECT COMPONENTS:
Approximately 10 miles of earthen embankment, an outlet control structure, and an emergency spillway into Ditch 200.

FUNCTIONAL DESIGN DATA:

	Elevation (ft.msl)	Storage
Top of Dam	1150.2	14,600
Emergency Spillway	1148.2	10,000 (4.7 in.runoff
Typical Summer	1146.2	5,500 2.6 in. runoff)
Typical Winter	1145.2	3700
Drainage Area 53.0 sq.mi.		
Highest recorded pool elevation (RLWD) was 1147.80 on April 14, 1999		

OPERATIONAL: 1978

In 2014, the MNDNR obtained funding to make repairs on the outlet end of the control structure. Most of the work consisted of sediment removal, re-shaping of the plunge pool and ditch banks, plus installing rock riprap. The Watershed District helped with the design, cost estimate, and partial funding. The work was completed late in the year.

The Minnesota Department of Natural Resources (MNDNR) staff perform the actual operation of the outlet structure with cooperation from the District.

Good Lake Impoundment (RLWD Project No. 67)

GENERAL: The Good Lake Project was a cooperative effort between the Red Lake Band of Chippewa Indians and the District.

LOCATION: The project area lies entirely within the Red Lake Indian Reservation. The impoundment is approximately 30 miles east of Thief River Falls, in Clearwater and Beltrami Counties. The drainage area above the dam is 73 square miles.

PURPOSE: Multi-purpose project to provide wetland habitat, flood water retention, and potential irrigation water supply. Enhanced wetland habitat for waterfowl, furbearers, and other wetland species. The reservoir also has the potential for seasonal rearing of northern pike. The project reduces flood peaks on both the Red Lake River and the Red River of the North. The dam stores runoff from the 73 square mile drainage area. Spring storage capacity is 11,300 acre-feet and is equal to 2.6 inches of runoff from the drainage area. The project will also reduce flooding on approximately 4,000 acres of private land immediately west of the project, by intercepting overland flows. The reservoir may be used as a water source for irrigation of wild rice paddies. Paddies have not been built, but there is potential for paddy development in adjacent areas.

PROJECT COMPONENTS: Approximately 9 miles of earthen embankment, 7.5 miles of inlet channels, a reinforced concrete outlet structure, and 2 miles of outlet channel. Water released from the impoundment, enters the Red Lake River approximately 2.5 miles downstream (south easterly) from the outlet control structure. The project was operational in 1996.

FUNCTIONAL DESIGN DATA:

	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam	1178.5	27,500
Flood Pool (Emergency Spillway)	1176.1	13,100 (4.8 in. runoff)
Normal Summer Pool	1173.0	3,250 (1.2 in. runoff)
Normal Winter Pool	1172.0	1,800
Drainage Area – 73 sq.mi.		
Highest recorded pool elevation was 1176.80 on May 25, 1999		

On April 12, 2011, the Red Lake Tribal Council approved a new 5-year Special Land Permit (Resolution No. 61-11) granted to the District. The original permit expired on January 12, 2010. In part, the permit states "The purpose of this permit is to facilitate cooperative management of the Good Lake Impoundment, where the District and the Red Lake Band will cooperatively inspect, supervise, and conduct necessary maintenance at the Good Lake Flood Control project site. Activities will be coordinated with the Red Lake Department of Natural Resources." Also, as part of the land use permit, the District is granted a right of access to the land described for a period of five years, starting on the date the permit commenced. It was signed by the Tribal Chairman and Secretary on April 13, 2011, and expired on April 13, 2016.

On July 12, 2016, two District Board Managers and two Staff members met before the Red Lake Tribal Council to discuss and ask for a renewal of the Special Land Permit. On August 24, 2016, the office received a new 2-year Special Land Permit (Resolution No. 138-16) signed by the Tribal Chairman and Secretary and dated July 12, 2016 (expires on July 12, 2018). The Special Land Permit (Resolution No. 138-16) with the Red Lake Nation expired on July 12, 2018. RLWD personnel have not been able to access the project since that time.

Gated Principal Outlet Structure

Moose River Impoundment (RLWD Project No. 13)

GENERAL: The project, which is a two-pool design, is the largest impoundment operated by the District. It was a cooperative effort of the District, Red River Watershed Management Board, and the Minnesota Department of Natural Resources for flood control and wildlife management. Flood damages will be reduced by storing floodwaters in the upper reaches of the watershed. Wildlife and associated recreational benefits will be enhanced by water retained in the two pools. The project is constructed on lands managed by the Minnesota Department of Natural Resources.

LOCATION: The project is located at the headwaters of the Moose and Mud Rivers in northwestern Beltrami County, approximately 15 miles northeast of Grygla, MN.

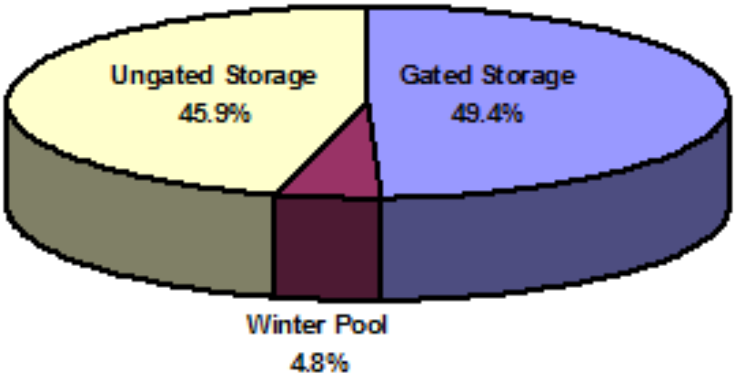
PURPOSE: Multi-purpose; designed to provide flood control, streamflow maintenance, increase wildlife values, and benefit fire control.

OPERATIONAL: 1988

FUNCTIONAL DESIGN DATA:

	North Pool	South Pool	Total
Top of Dam Elevation (ft.msl.)	1218.0	1220.0	
Freeboard Flood Elevation (ft.-msl)	1217.2	1219.3	
Freeboard Flood Storage (ac.ft.)	16,250	38,250	54,500
Emergency Spillway Elevation (ft.-msl)	1216.0	1218.0	
Emergency Spillway Storage (ac.ft.)	12,000	24,250	36,250 (5.4 in. runoff)
Gated Pool Elevation (ft.-msl)	1215.3	1217.4	
Gated Pool Storage (ac.ft.)	9,750	19,750	29,500 (4.4 in. runoff)
Typical Summer Elevation (ft.-msl)	1211.7	1213.6	
Typical Summer Storage (ac.ft.)	2,000	4,000	6,000 (2.1 in. runoff)
Typical Winter Elevation (ft.-msl)	1210.5	1212.4	
Typical Winter Storage (ac.ft.)	800	1,800	2,600
Max No-Flood Elevation (ft.-msl)	1212.5	1214.5	
Max No-Flood Storage (ac.ft.)	3,000	6,000	9,000
Project Drainage Area (sq.mi.)	41.7	83.3	125.0
*Highest Recorded Pool Elevation May 16, 1999	*1215.90	*1218.05	

This impoundment has a small permanent winter pool to allow for maximum storage capacity as indicated on the graph shown to the right.



Moose River Impoundment – North Pool

The North Pool outlets into the Moose River (JD #21). The major components of the north pool are: 5 miles of diversion ditch, 4 miles of earthen dike with a top elevation of 1218.0, one gated outlet structure, one rock lined emergency spillway at an elevation of 1216.0. Approximately 1/3 (41.7 sq. mi.) of the total project drainage area (125.0 sq. mi.) drains to the Moose River.

North Pool – Gated Principal Outlet Structure

2021 Operation: The maximum North Pool elevation for 2022 was 1215.95'. Which is approximately 12,000 ac/ft of water stored, which occurred on May 14th. The gate(s) was/were operated throughout the year during periods of rain. Fall releases began October 12th, drawdown was complete October 16th.

The Minnesota Department of Natural Resources (MNDNR) performed spotted knapweed control at various locations of the project. The watershed performed other routine maintenance. Which included beaver dam removal & debris removal, along with mowing in selected areas that didn't have spotted knapweed present.

Moose River Impoundment – South Pool

The South Pool outlets into the Mud River (JD #11 Main Branch). The major components of the south pool are: 3 miles of diversion ditch, 9 miles of earthen dike with a top elevation of 1220.0, 4 miles of earthen dike between the north and south pools, one gated outlet structure, two rock lined emergency spillways at an elevation of 1218.0. Between the North and South pools is an inter-pool structure which may be used to pass water between the pools. Approximately 2/3 (83.3 sq. mi.) of the total project drainage area (125.0 sq. mi.) drains to the Mud River.

South Pool - Gated Principal Outlet Structure

2022 Operation: The maximum South Pool elevation for 2022 was 1218.15'. Which is approximately 24,250 ac/ft of water stored, which occurred on May 12th. The gate(s) was/were operated throughout the year during periods of rain. Fall releases began October 12th and drawdown was complete October 21st.

The Minnesota Department of Natural Resources performed spotted knapweed control at various locations of the project. The watershed performed other routine maintenance (beaver dam removal & debris removal, along with some mowing done in areas the Department of Natural Resources was not actively spraying for spotted knapweed).

Schirrick Dam (RLWD Project No. 25)


Principal outlet structure hydraulic gate operation


Looking downstream on outlet structure

GENERAL: The Schirrick Dam Project was constructed on the Black River in 1984 and was operational in 1985.

LOCATION: Section 35, Wylie Township, Red Lake County, approximately 20 miles northeast of Crookston. The drainage area above the dam is 107.7 square miles.

PURPOSE: The primary purpose is to provide flood relief on the Red Lake River and the Red River of the North by controlling the flow contribution from the Black River. A small permanent pool is also provided.

PROJECT COMPONENTS: An earthen embankment (38 feet at highest point) and a gated concrete outlet structure. The reservoir has the capacity to detain up to 4,800 acre-feet of water. Operable components are stop-log bays to control the elevation of the permanent pool and hydraulic flood gates to control the flow contribution of the Black River during floods. The gates will normally be open and will only close in the event of severe mainstem flooding.

FUNCTIONAL DESIGN DATA:

	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam	992.5	6,000
Gated Storage	987.0	4,000
Emergency Spillway	989.3	4,800
Permanent Pool	962.0	70
Drainage Area 107.7 sq.mi.		
Highest recorded pool elevation was 988.75 on April 17, 1997		

Downstream river levels did trigger a gate closure in 2022. In late November, annual gate operation occurred. Both hydraulic gates were test operated (closed and opened) to make sure that they function properly. This is done to be prepared in the event of a severe flood which would require closure. This dam and the timing of closure are vitally important for the flood protection for the city of Crookston. After the flood waters receded, there was some damage on the outlet and on the outlet channel of the structure that required some re-shaping and armoring.

Black River Impoundment (RLWD Project No. 176)

GENERAL: Construction of the Black River Impoundment began October of 2020 and with the great working conditions, nearly half of the project was completed in the fall of 2020. Construction resumed in the early summer of 2021 and continued to the late fall. The project was substantially completed and was completed by mid-summer of 2022. Black River Impoundment received damages from the flood of '22 that cost $218,907.10 that was turned into FEMA for reimbursement. Most of the damage was located on the inlet ditches that flow into the impoundment, however there was some re-shaping and re-seeding that needed to take place on the levee itself.

LOCATION: Section 3 & 4, Polk Centre Township, Pennington County, approximately 9 miles west of St. Hilaire.

PURPOSE: The project stores runoff and reduces flooding on downstream agricultural lands and urban areas by retaining up to approximately 4,064 acre-feet of floodwater. The storage of water in the impoundment will reduce downstream river levels on the Black River, Red Lake River & Red River of the North.

PROJECT COMPONENTS: The project has a drainage area of 16.9 square miles. The embankment and reservoir are constructed of approximately 3.12 miles of earthen clay embankment 557,799 cubic yards and approximately 14 feet at highest point), a grass lined emergency spillway, 11.7 miles of inlet channels and culvert work, 0.53 miles of outlet channel, and a gated concrete outlet structure. The operable components are the gated structure which releases water from the impoundment into an outlet channel. This water then flows westerly into the Black River.

FUNCTIONAL DESIGN DATA:

	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam	1023.50'	
Gated Storage	1019.00'	3,162
Emergency Spillway	1020.50'	4,064
Drainage Area 16.9 sq.mi.		

Downstream triggers did require Red Lake Watershed District staff to operate the gate in the spring of 2022. It reached a level of 1017.50' which is around 2300-acre feet of water that was stored at Black River Impoundment. Had this impoundment not been operated to store water, we most likely would have gone over the emergency spill way at Schirrick Dam.

Water Quality Program

The District and other local organizations are working to protect and restore water quality in rivers, streams and lakes in the five major watersheds within the District's boundary. To protect water quality, it is important to have a confident understanding of current water quality conditions. District staff monitor water quality and flow conditions. Monitoring involves regular sample collection, investigative sampling, and event monitoring with autonomous sensors. The data is used to assess water quality conditions by comparing statistics to water quality standards that are established by the State of Minnesota. The results of data assessment and analysis are used to identify problem areas, trends, pollutant sources, and priority areas for implementation of projects that will improve water quality. In addition to the District's long-term monitoring program, water quality staff deployed and maintained dissolved oxygen and water level loggers.

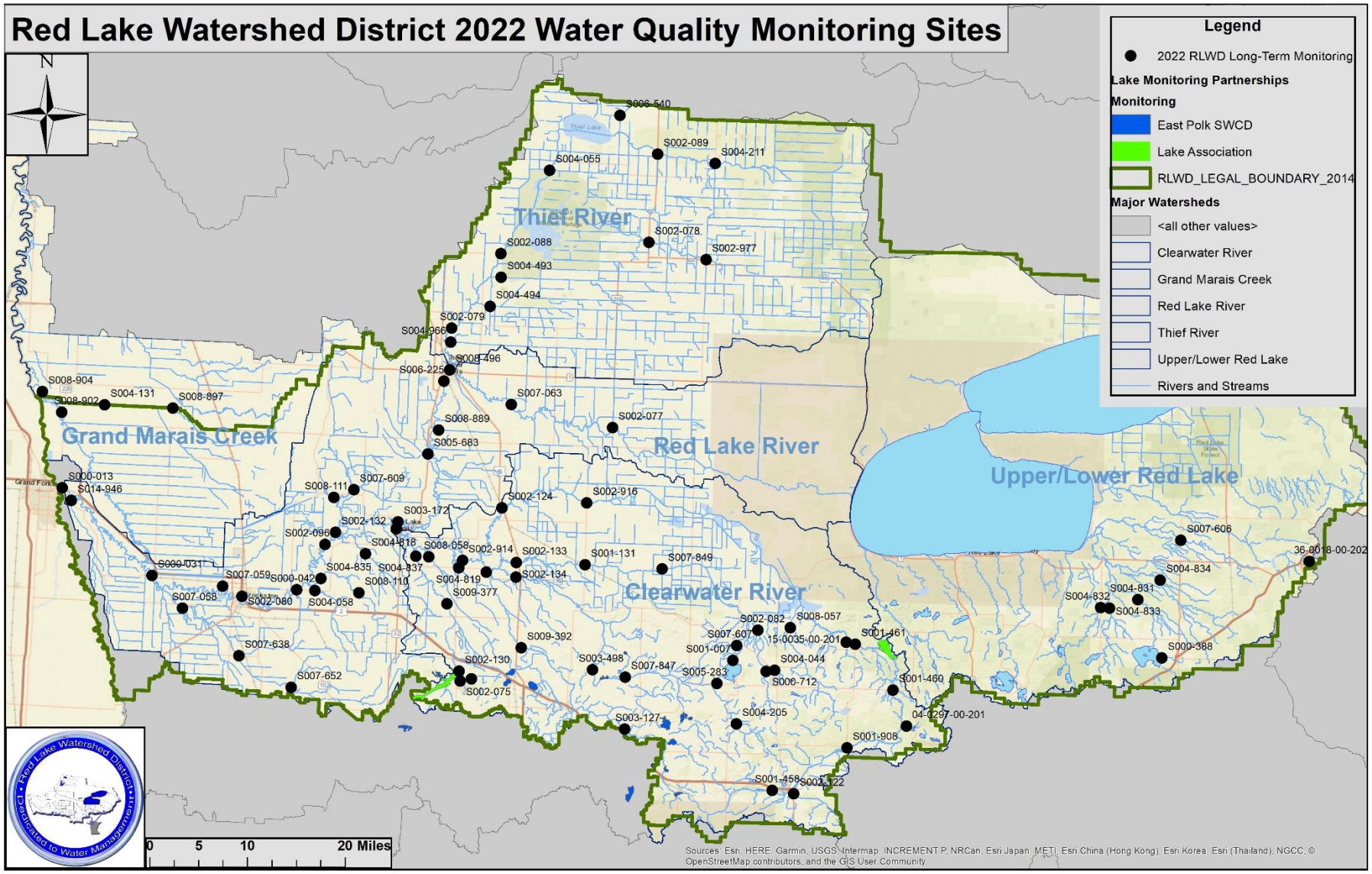
Thanks to the Clean Water Land and Legacy Act, the Minnesota Pollution Control Agency (MPCA) has been able to provide the District with funding for four watershed restoration and protection strategy (WRAPS) projects (Thief River, Red Lake River, Grand Marais Creek, and Clearwater River watersheds). Another WRAPS project, for the Upper/Lower Red Lakes Watershed, was completed by the Red Lake Department of Natural Resources. The WRAPS process and stakeholder involvement informed the 1W1P process, which has provided much funding for the implementation of on-the-groun projects that protect and improve water quality. Surface Water Assessment Grants (SWAG) from the MPCA help fund intensive monitoring of targeted watersheds.

An important part of the District's water quality program is public education. The District supports River Watch programs at schools that monitor water quality in streams within its boundaries. The information collected by the District and others needs to be interpreted and shared for it to be most beneficial. Therefore, the District generates regular (monthly and annual) water quality reports, hosts or helps plan public events, and participates in other educational events like water festivals. Information is shared online. The creation of informative maps using GIS software is also used to attain a better understanding of water resources and watersheds.

The knowledge that is gained through the District's water quality program is also used for the planning of projects that will improve water quality conditions and comprehensive watershed planning efforts (1W1P). The District has identified sources of pollutants that can be addressed through large and small projects. The Board of Managers has approved financial support to projects and programs that will improve water quality. The success of those projects can also be monitored through the District's water quality program.

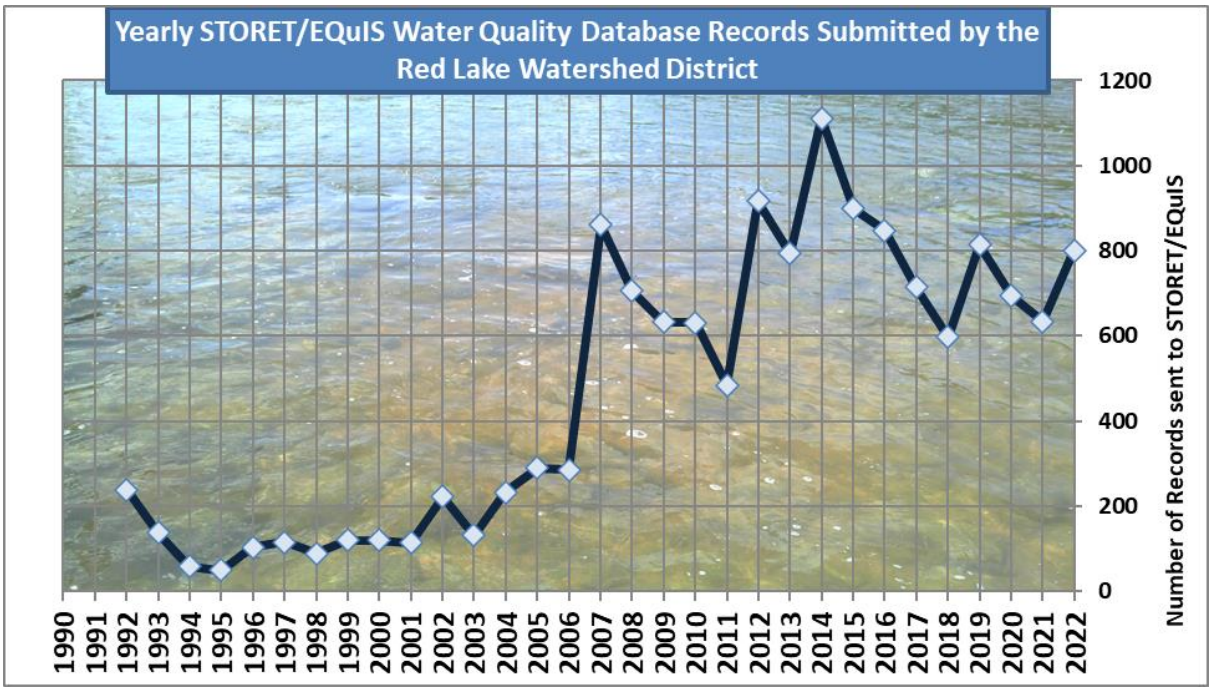
Long-Term Water Quality Monitoring Program

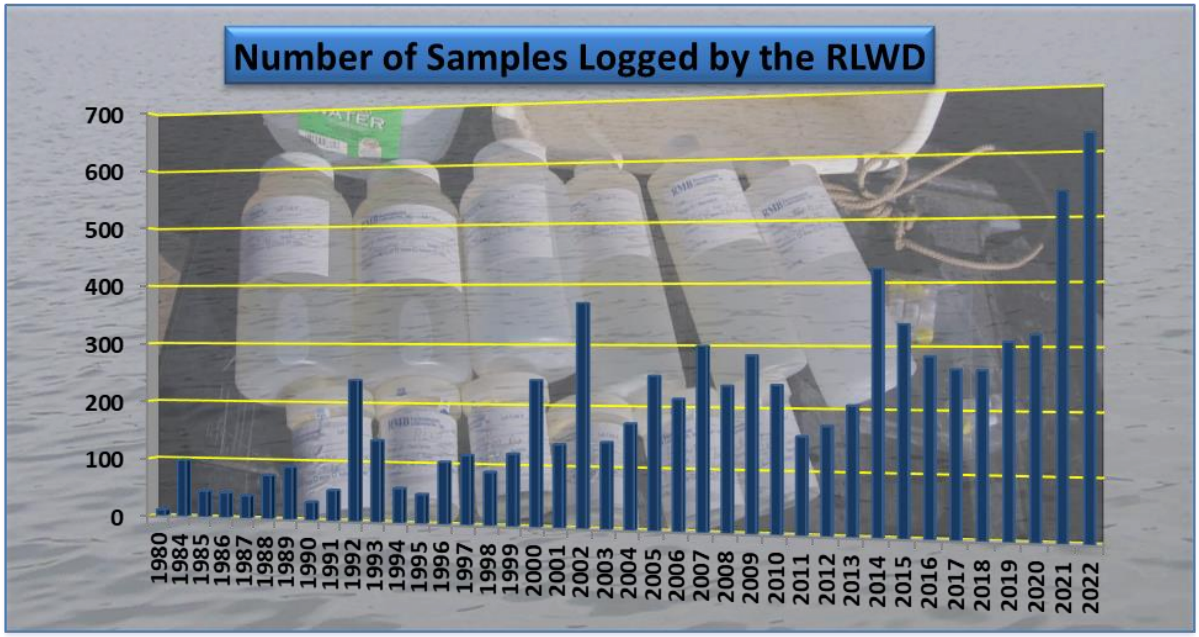
The District's long-term district monitoring program has collected water quality data throughout the district since 1980. Water quality monitoring was conducted at 78 stream crossings and two lakes as part of the District's regular monitoring program in 2022. The District partnered with other local organizations and volunteers to collect additional lake and stream data. Monitoring sites were selected so that data could be strategically collected from as many assessment units (reaches of rivers, streams, and ditches – delineated by the MPCA for assessment purposes) as possible. Generally, monitoring sites are located near the pour points (downstream ends) of rivers, streams, and ditches. Monitoring station locations can be changed to adapt to changes in MPCA assessment units. The four 2022 rounds of sampling occurred in May, June, August, and September. Locations of long-term monitoring stations are shown on the maps on the following page. The 2022 monitoring season featured both extreme spring flooding and dry channels in the later summer/fall.


Red Lake Watershed District 2022 Water Quality Monitoring Sites
Legend
2022 RLWD Long-Term Monitoring
Lake Monitoring Partnerships
Monitoring
East Polk SWCD
Lake Association
RLWD_LEGAL_BOUNDARY_2014
Major Watersheds
<all other values>
Clearwater River
Grand Marais Creek
Red Lake River
Thief River
Upper/Lower Red Lake
Rivers and Streams
Thief River
Grand Marais Creek
Red Lake River
Upper/Lower Red Lake
Clearwater River
S006-540
S002-089
S004-211
S004-055
S002-078
S002-977
S002-088
S004-493
S004-494
S002-079
S004-966
S008-496
S006-225
S007-063
S008-889
S002-077
S005-683
S008-904
S008-902
S004-131
S008-897
S000-013
S014-946
S008-111
S007-609
S002-124
S002-916
S003-172
S002-132
S002-096
S004-818
S008-058
S002-914
S002-133
S001-131
S007-849
S000-031
S007-059
S000-042
S004-835
S004-837
S008-110
S004-819
S002-134
S009-377
S007-058
S002-080
S004-058
S007-638
S007-652
S009-392
S002-130
S002-075
S003-498
S007-847
S005-283
S002-082
S008-057
S007-607
15-0035-00-201
S001-461
S001-007
S004-044
S000-712
S001-460
S004-205
04-0297-00-201
S003-127
S001-908
S001-458
S002-122
S007-606
36-0018-00-202
S004-834
S004-831
S004-832
S004-833
S000-388
0 5 10 20 Miles
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Field measurements of dissolved oxygen, temperature, turbidity, specific conductivity, pH, and stage were collected during each site visit if there was flowing water. Four rounds of samples were also collected and analyzed for total phosphorus, orthophosphorus, total suspended solids, total Kjeldahl nitrogen, ammonia nitrogen, nitrates + nitrites, and E. coli. Biochemical oxygen demand analysis was performed on samples from rivers and streams that were impaired by low dissolved oxygen levels or have high total phosphorus concentrations.

Field measurement data from 2022 water quality monitoring (including the Thief River SWAG) was entered into an EQuIS submittal template, reviewed for accuracy, then submitted to the MPCA for storage in the EQuIS database. Data from RMB Environmental Laboratories was electronically submitted directly to the MPCA. Data collected by the East Polk SWCD staff from additional locations within eastern Polk County were also submitted to the MPCA. A total of 801 records were submitted to the MPCA. Of those records, 627 involved the collection of water quality samples.





The lowest concentration of E. coli bacteria recorded in the District in 2022 was <1 MPN/100ml (less than the lab could accurately measure), in samples collected on May 26 in Polk County Ditch 14 at CSAH 10 (near the outlet of Maple Lake) and Lower Badger Creek at 150th Avenue SE. The highest concentration of E. coli bacteria recorded in the District in 2022 was >2,419.6 MPN/100ml, at multiple locations.

- Mud River at MN Hwy 89
- Chiefs Coulee at Dewey Avenue and 11th St. E in Thief River Falls
- Kripple Creek at 180th Avenue SW

High biochemical oxygen demand (BOD) concentrations (>3.5 in the South or more than the laboratory's 2 mg/L minimum reporting limit in the Central or North River Nutrient Regions) were found in the following streams.

1. Mud River at MN Hwy 89
2. Chiefs Coulee at Dewey Ave in Thief River Falls
3. Clearwater River at CR 127
4. Thief River at 140th Ave NE
5. Clearwater River at CSAH 12 near Terrebonne
6. Clearwater River in Red Lake Falls

Nearly half of nitrate and nitrite (inorganic nitrogen) concentrations measured in 2022 were lower than the laboratory's minimum reporting limit of 0.03 mg/L (lower percentage than 2021), a lower limit that is based on the accuracy of the laboratory method/equipment. Very high nitrate and nitrite concentrations (>10 mg/L) were found in Beau Gerlot Creek at CR 114 and Terrebonne Creek at CSAH 92. Other relatively high (>1 mg/L) concentrations were found in the Mud River, Chief's Coulee (Thief River Falls stormwater), Lower Badger Creek, Lost River, Clearwater River, Cyr Creek, Judicial Ditch 30, Browns Creek, Heartsville Coulee, and Burnham Creek – mostly in May and June.

The district partnered with the East Polk SWCD and the Maple Lake Improvement District to collect water quality samples from lakes in the Clearwater River watershed. Arrangements were also made to equip and train a volunteer for sampling of Bartlett Lake, near Northome. Those organizations and volunteers collect samples and send them to RMB Environmental Laboratories, and the District reimburses them for the laboratory analysis expenses. This was the fourth year of sampling for the East Polk SWCD partnership with watershed districts for lake monitoring (the SWCD also samples some lakes for the Sand Hill Watershed District). The East Polk SWCD's lake monitoring effort has found some nearly impaired and impaired lakes that weren't known at the time of the state's most recent water quality assessment but were able to be prioritized in the Clearwater River 1W1P.


Clearwater River near Plummer, May 10, 2022

Data from the District's long-term monitoring program sites, East Polk SWCD monitoring sites, the state's Watershed Polutant Load Monitoring Network, and dissolved oxygen deployments were compared to state water quality standards to create the following maps.

Red Lake Watershed District 2022 Water Quality Monitoring Results - Total Suspended Solids

Legend

2022 High TSS Concentrations
- Met TSS Standard
- Exceeded 10 mg/L Standard
- Exceeded 30 mg/L Standard
- Exceeded 30 mg/L and 65 mg/L Standards
- Exceeded 65 mg/L Standard
- Multiple Exceedances of 65 mg/L Standard; 65x, 30x
- RLWD Legal Boundary (2014)
- Cities

Assessed Streams
- TSS Impairments

Regional TSS Standards
- Trout (10 mg/L)
- North (15 mg/L)
- Central (30 mg/L)
- South (65 mg/L)
- Other Watersheds
- RLWD Major Watersheds
- Rivers and Streams
- World Street Map

S006-540, S002-089, S004-211, S004-055, S002-078, S002-977, S002-088, S004-493, S004-494, S002-079, S004-966, S008-496, S006-225, S007-063, S002-077, S008-889, S005-683, S008-904, S008-902, S004-131, S008-897, S000-013, S014-946, S008-111, S007-609, S003-172, S002-132, S002-096, S004-818, S006-058, S000-031, S007-059, S004-835, S004-837, S008-110, S004-819, S007-608, S002-080, S000-042, S004-058, S007-058, S009-377, S007-638, S007-652, S002-124, S002-916, S002-133, S001-131, S007-849, S002-134, S009-392, S002-130, S003-318, S002-075, S003-498, S007-847, S003-127, S002-082, S008-057, S007-607, 15-0035-00-201, S001-461, S001-007, S004-044, S005-283, S000-712, S001-460, S004-205, 04-0297-00-201, S001-908, S001-458, S002-422, S007-606, S004-834, S004-832, S004-831, S004-833, S000-388

Grand Marais Creek

Red Lake River

Thief River

Clearwater River

Upper/Lower Red Lake

Pike Creek

Mud River

North Cormorant River

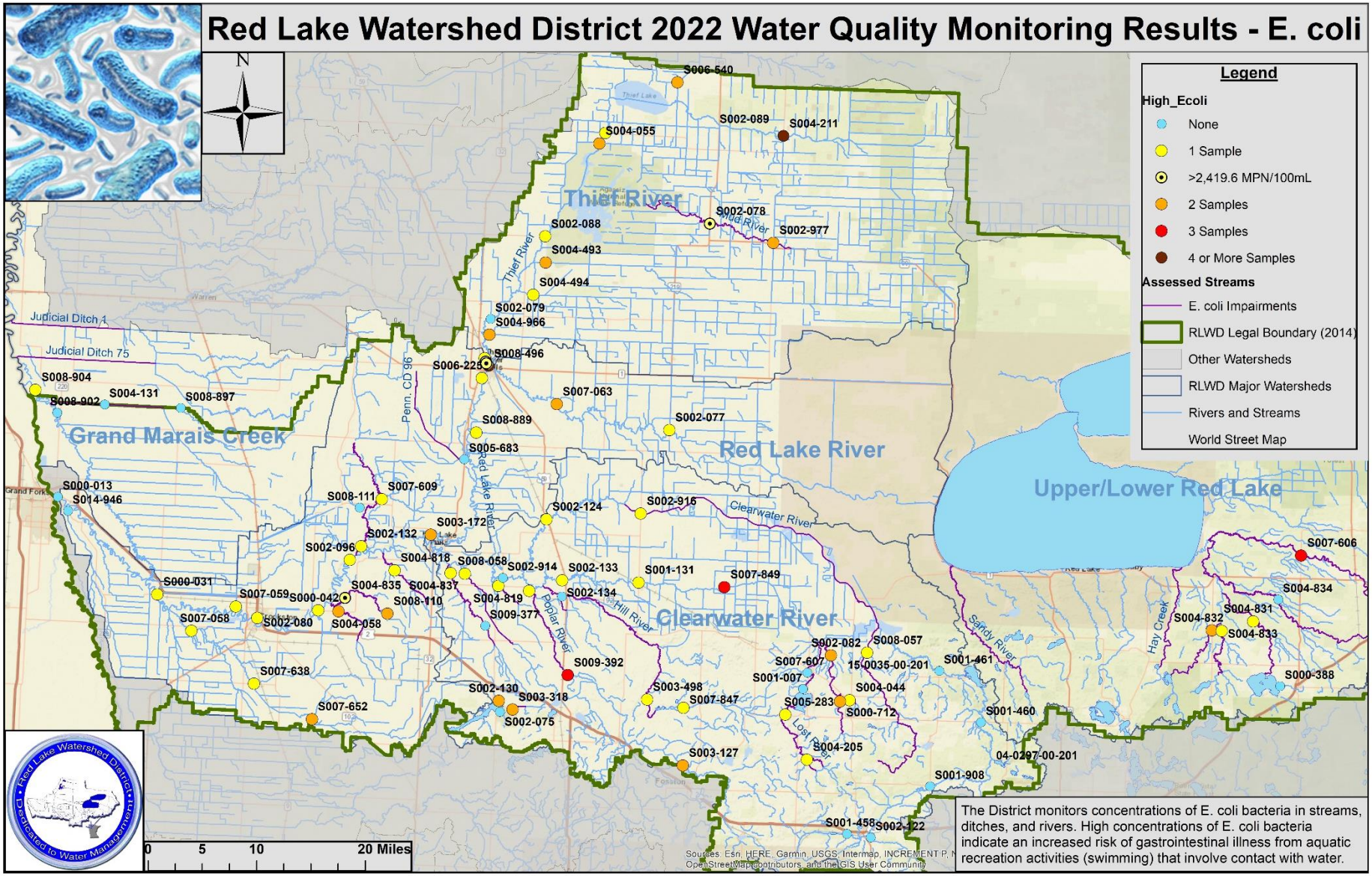
Red Lake Watershed District • Dedicated to Water Management •

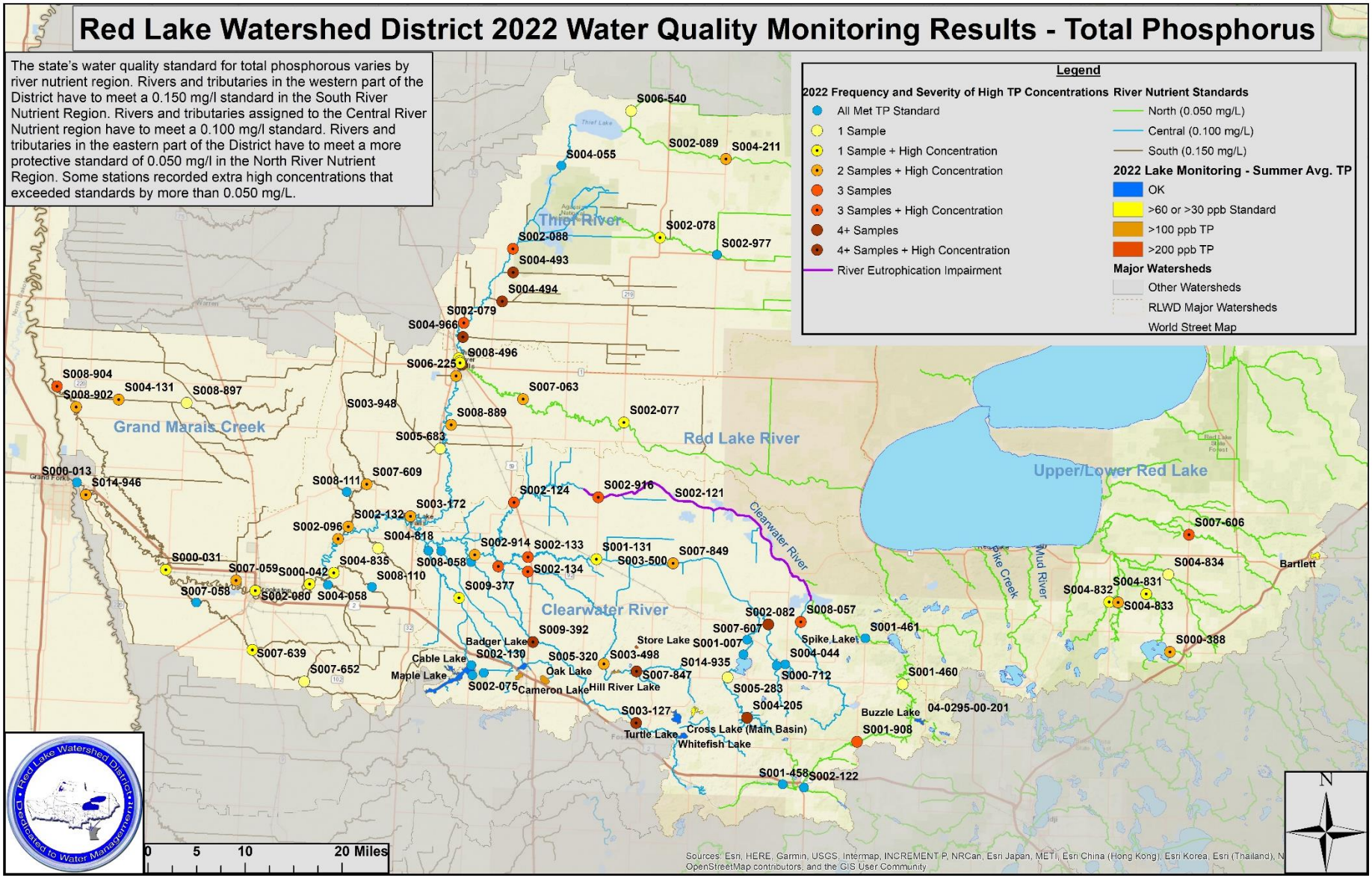
N

0 5 10 20 Miles

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, OpenStreetMap contributors, and the GIS User Community

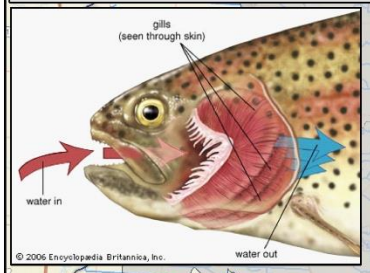
The amount of sediment that is carried by a stream is measured by collecting and analyzing samples for total suspended solids. Fish and aquatic macroinvertebrates (bugs, worms, crustaceans, etc.) are harmed by high concentrations of total suspended solids.


Red Lake Watershed District 2022 Water Quality Monitoring Results - E. coli
N
Legend
High_Ecoli
None
1 Sample
>2,419.6 MPN/100mL
2 Samples
3 Samples
4 or More Samples
Assessed Streams
E. coli Impairments
RLWD Legal Boundary (2014)
Other Watersheds
RLWD Major Watersheds
Rivers and Streams
World Street Map
Thief River
Grand Marais Creek
Red Lake River
Upper/Lower Red Lake
Clearwater River
Judicial Ditch 1
Judicial Ditch 75
Penn. CD 96
Red Lake River
Thief River
Clearwater River
Poplar River
Hill River
Sandy River
Hay Creek
Lost River
S006-540
S002-089
S004-211
S004-055
S002-078
S002-977
S002-088
S004-493
S004-494
S002-079
S004-966
S008-496
S006-225
S007-063
S002-077
S008-889
S005-683
S008-904
S008-902
S004-131
S008-897
S000-013
S014-946
S008-111
S007-609
S002-124
S002-916
S003-172
S002-132
S002-096
S004-818
S008-058
S002-914
S002-133
S001-131
S007-849
S000-031
S007-059
S000-042
S004-835
S004-837
S008-110
S004-819
S009-377
S002-134
S007-058
S002-080
S004-058
S007-638
S009-392
S002-130
S003-318
S007-652
S002-075
S003-498
S007-847
S003-127
S002-082
S008-057
S007-607
15-0035-00-201
S001-461
S001-007
S004-044
S005-283
S000-712
S001-460
S004-205
04-0297-00-201
S001-908
S001-458
S002-122
S007-606
S004-834
S004-831
S004-832
S004-833
S000-388
0 5 10 20 Miles
Red Lake Watershed District
Dedicated to Water Management
The District monitors concentrations of E. coli bacteria in streams, ditches, and rivers. High concentrations of E. coli bacteria indicate an increased risk of gastrointestinal illness from aquatic recreation activities (swimming) that involve contact with water.


Red Lake Watershed District 2022 Water Quality Monitoring Results - Total Phosphorus
The state's water quality standard for total phosphorous varies by river nutrient region. Rivers and tributaries in the western part of the District have to meet a 0.150 mg/l standard in the South River Nutrient Region. Rivers and tributaries assigned to the Central River Nutrient region have to meet a 0.100 mg/l standard. Rivers and tributaries in the eastern part of the District have to meet a more protective standard of 0.050 mg/l in the North River Nutrient Region. Some stations recorded extra high concentrations that exceeded standards by more than 0.050 mg/L.
Legend
2022 Frequency and Severity of High TP Concentrations
All Met TP Standard
1 Sample
1 Sample + High Concentration
2 Samples + High Concentration
3 Samples
3 Samples + High Concentration
4+ Samples
4+ Samples + High Concentration
River Eutrophication Impairment
River Nutrient Standards
North (0.050 mg/L)
Central (0.100 mg/L)
South (0.150 mg/L)
2022 Lake Monitoring - Summer Avg. TP
OK
>60 or >30 ppb Standard
>100 ppb TP
>200 ppb TP
Major Watersheds
Other Watersheds
RLWD Major Watersheds
World Street Map
Thief River
Grand Marais Creek
Red Lake River
Upper/Lower Red Lake
Clearwater River
Clearwater River
Pike Creek
Mud River
Bartlett
Badger Lake
Store Lake
Spike Lake
Cable Lake
Maple Lake
Oak Lake
Cameron Lake
Hill River Lake
Buzzle Lake
Cross Lake (Main Basin)
Turtle Lake
Whitefish Lake
S006-540
S002-089
S004-211
S004-055
S002-078
S002-977
S002-088
S004-493
S004-494
S002-079
S004-966
S008-496
S006-225
S008-904
S008-902
S004-131
S008-897
S007-063
S003-948
S008-889
S002-077
S005-683
S000-013
S014-946
S008-111
S007-609
S002-124
S002-916
S002-121
S003-172
S002-132
S002-096
S004-818
S002-914
S002-133
S001-131
S007-849
S000-031
S007-059
S000-042
S004-835
S008-058
S003-500
S002-134
S008-110
S007-058
S002-080
S004-058
S009-377
S009-392
S002-082
S008-057
S007-607
S001-461
S007-639
S002-130
S005-320
S003-498
S001-007
S004-044
S007-652
S002-075
S014-935
S007-847
S000-712
S001-460
S005-283
S004-205
S003-127
04-0295-00-201
S001-908
S001-458
S002-122
S007-606
S004-834
S004-831
S004-832
S004-833
S000-388
0 5 10 20 Miles
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), N
OpenStreetMap contributors, and the GIS User Community
N

Red Lake Watershed District 2022 Water Quality Monitoring Results - Dissolved Oxygen

This map shows the number of low dissolved oxygen levels that were recorded by the RLWD long-term monitoring program (4 site visits per year), investigative sampling, dissolved oxygen logger deployments (approximately 2 months at each site), and the East Polk SWCD monitoring effort.



Legend

2022 Low DO Concentrations
- 0
- 1 Day
- 2 Days
- 3 Days
- 4-10 Days
- >10 Days

Assessed Streams
- Low D.O. Impairments
- Cities
- RLWD Legal Boundary (2014)
- Other Watersheds
- RLWD Major Watersheds
- Rivers and Streams
- World Street Map

Thief River
Grand Marais Creek
Red Lake River
Clearwater River
Upper/Lower Red Lake
Mud River
Poplar River

S006-540, S002-089, S004-211, S004-055, S002-078, S002-977, S002-088, S004-493, S004-494, S002-079, S004-966, S008-496, S006-225, S008-904, S008-902, S004-131, S008-897, S003-948, S007-063, S008-889, S002-077, S005-683, S009-013, S014-946, S008-111, S007-609, S002-124, S002-916, S002-121, S003-172, S002-132, S002-096, S004-818, S002-914, S002-133, S000-031, S007-059, S004-835, S008-058, S003-500, S007-849, S000-042, S008-110, S002-134, S007-058, S002-080, S004-058, S009-377, S002-082, S008-057, S009-392, S007-607, S001-461, S001-007, S007-639, S002-130, S005-320, S007-847, S014-935, S004-044, S003-318, S003-498, S000-712, S007-652, S002-075, S005-283, S001-460, S003-127, S004-205, 04-0295-00-201, S001-908, S001-458, S002-122, S007-606, S004-834, S004-833, S004-831, S000-388

0 5 10 20 Miles

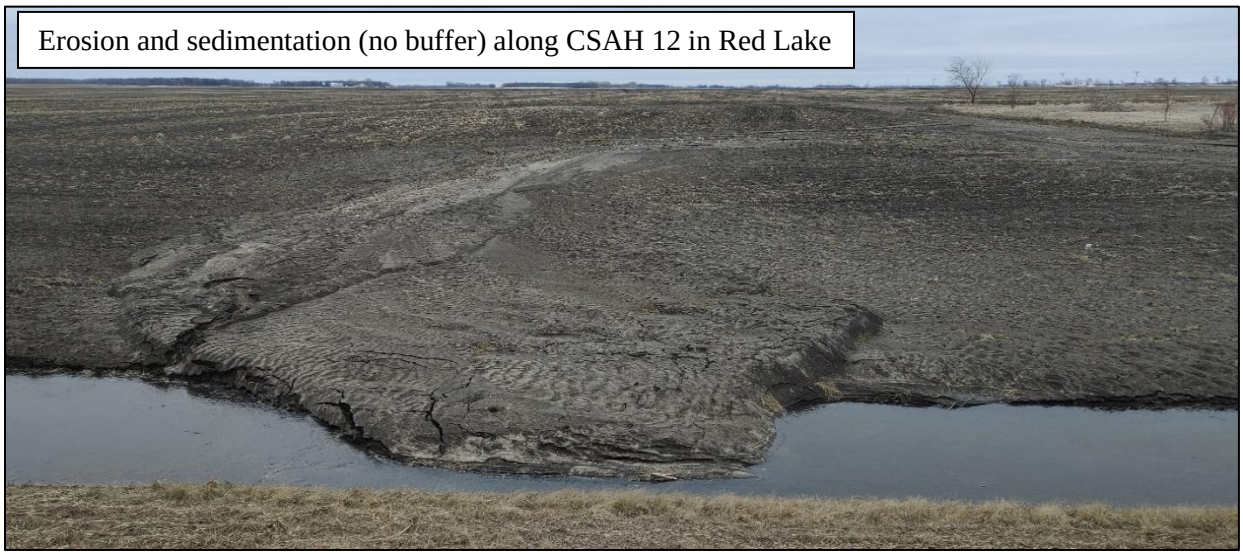
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, OpenStreetMap contributors, and the GIS User Community

Aquatic fish and macroinvertebrates rely on dissolved oxygen in water for survival. Dissolved oxygen can enter the water through mechanical means (splashing over rocks, wave action) or through the photosynthesis process of aquatic vegetation.

2022 Spring Flood and Water Quality

District water quality staff assisted with the inspection of projects for damage after the 2022 spring runoff and April-May flood. The extreme flows overwhelmed road crossings, dikes, drainage systems, and even best management practices that have been installed to protect water quality. The torrid runoff brought extremely muddy water into our rivers. District staff encountered washed-out road crossings at some water quality monitoring stations, especially in the Lost River subwatershed. Though BMPs were often overwhelmed and couldn't hold back all the overland erosion, the consequences of not having BMPs were much more pronounced. Where buffers or side water inlets were lacking, runoff created large gullies. Large piles of sediment were deposited into ditch channels. Staff photographed erosion and flooding problems throughout the district at the end of April and beginning of May. That inventory of photos helped highlight many areas that can be addressed with BMPs and other projects.

Erosion and sedimentation (no buffer) along CSAH 12 in Red Lake

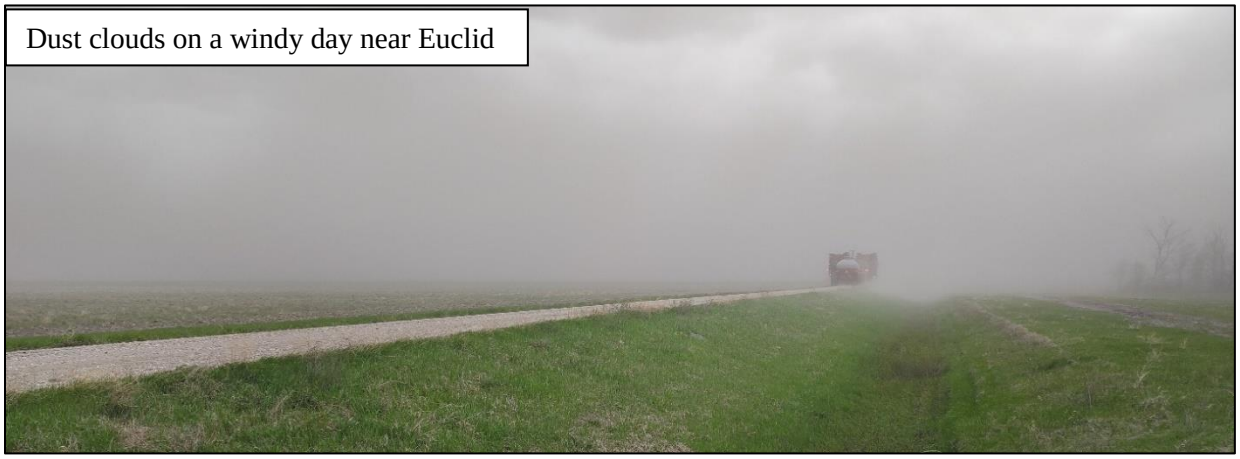


Lost River at 109th Ave, upstream of Pine Lake

Flooded 130th St NW crossing of Grand Marais

The extreme weather of 2022 has not limited to the spring flood. Extreme winds filled the air with dust in May. Then, dry conditions in the late summer and fall caused many streams to go dry or become stagnant.

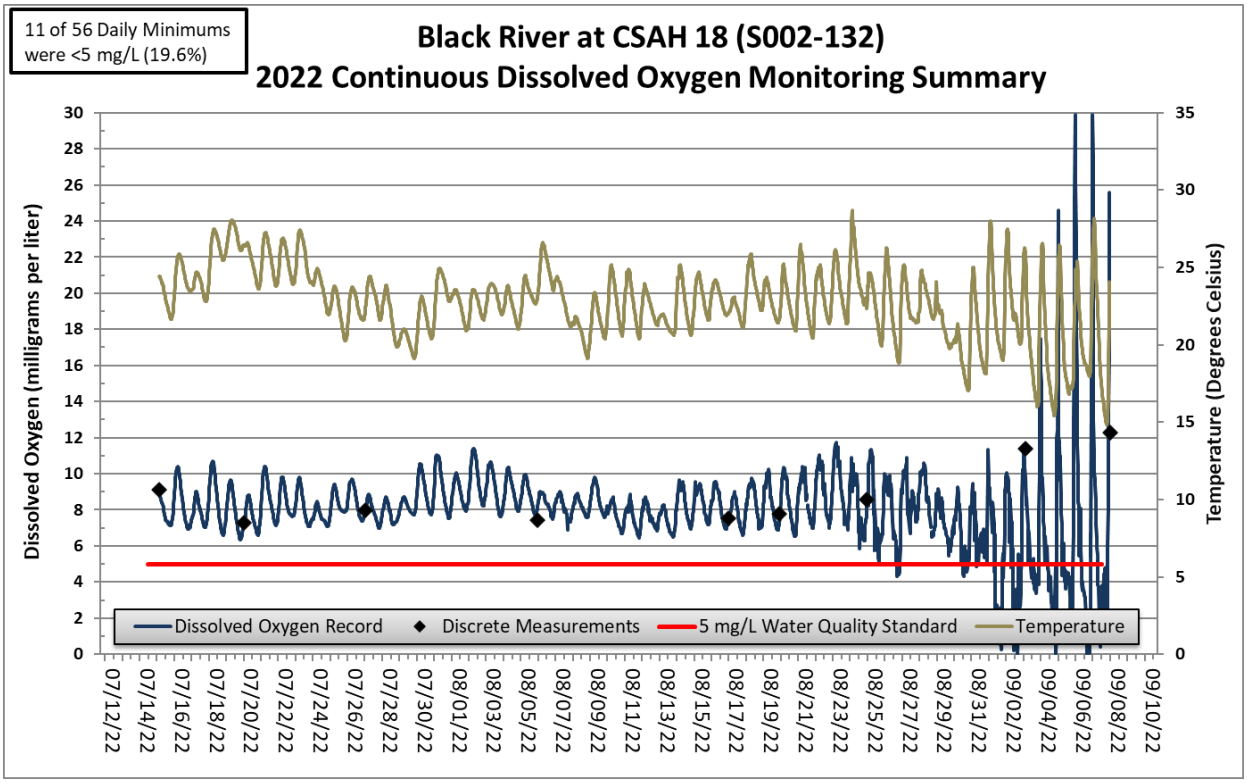
Dust clouds on a windy day near Euclid



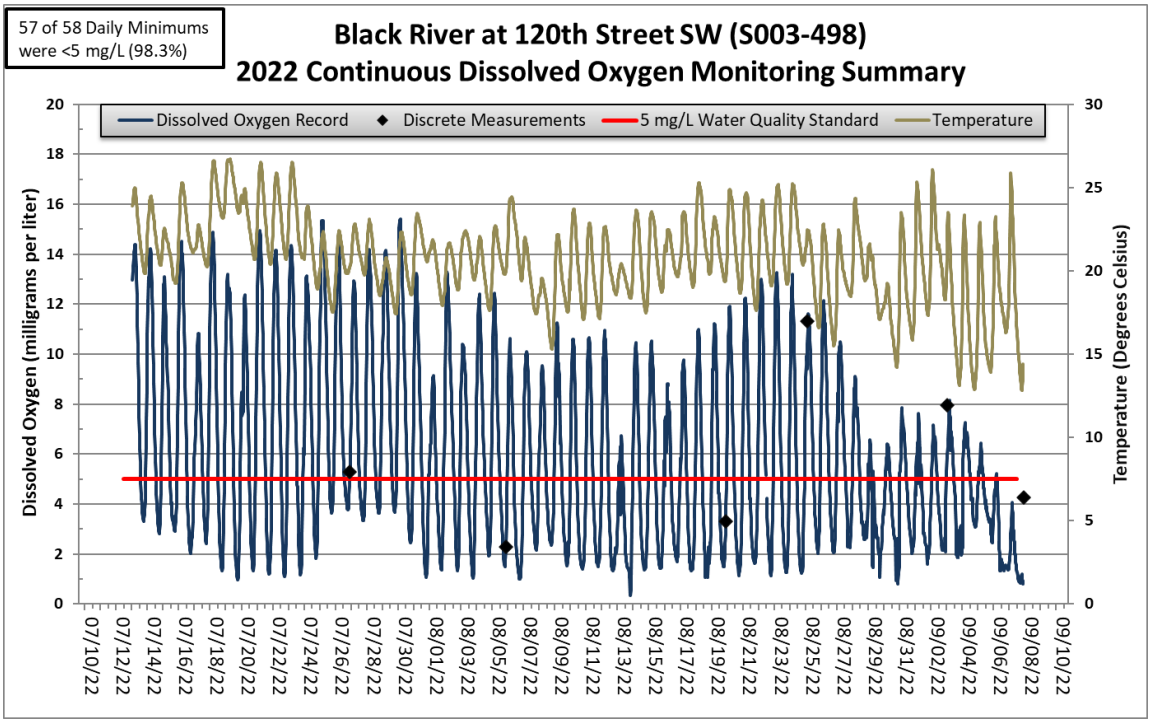
Dissolved Oxygen Logger Deployments

Dissolved oxygen loggers were deployed at seven sites throughout the District in 2022. These sites were monitored to provide a better understanding of conditions in streams that could be impaired by low dissolved oxygen, learn more about the conditions for aquatic life, measure the amount of daily fluctuation in dissolved oxygen levels, and have more confidence in dissolved oxygen data assessments. Sites selections for logger deployments are typically based on a 10-year schedule that was created to make sure that the District collected sufficient data for future water quality assessments. The Black River subwatershed was scheduled to be the focus of 2021 deployments, but the streams in that watershed went dry early in the summer. Though the Black River and Browns Creek channels eventually stopped flowing later in the summer of 2022, they flowed long enough to complete some dissolved oxygen logger deployments. Deployments were also completed at monitoring stations along Burnham Creek. Discrete field measurements (dissolved oxygen, temperature, pH, specific conductivity, and stage) were recorded at the beginning, middle (approximately), and end of each deployment to aid the data review and correction process. The DO loggers were retrieved, cleaned, re-calibrated, and re-deployed after each two-week deployment.

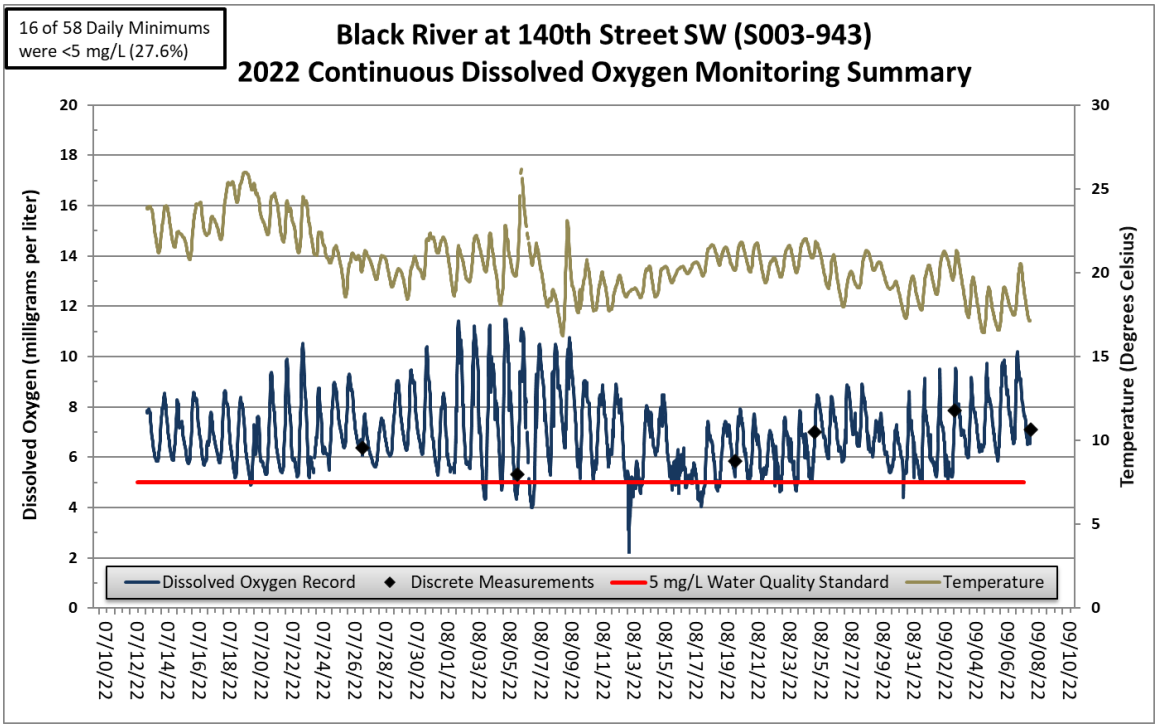
Black River, at CSAH 18 (Station S002-132 on Assessment Unit 09020303-529): This logger was deployed in the riffle (relatively shallow, faster moving section of the stream) downstream of the road crossing. Dissolved oxygen levels were good (>5 mg/L) until flow slowed to a trickle in late August and early September.



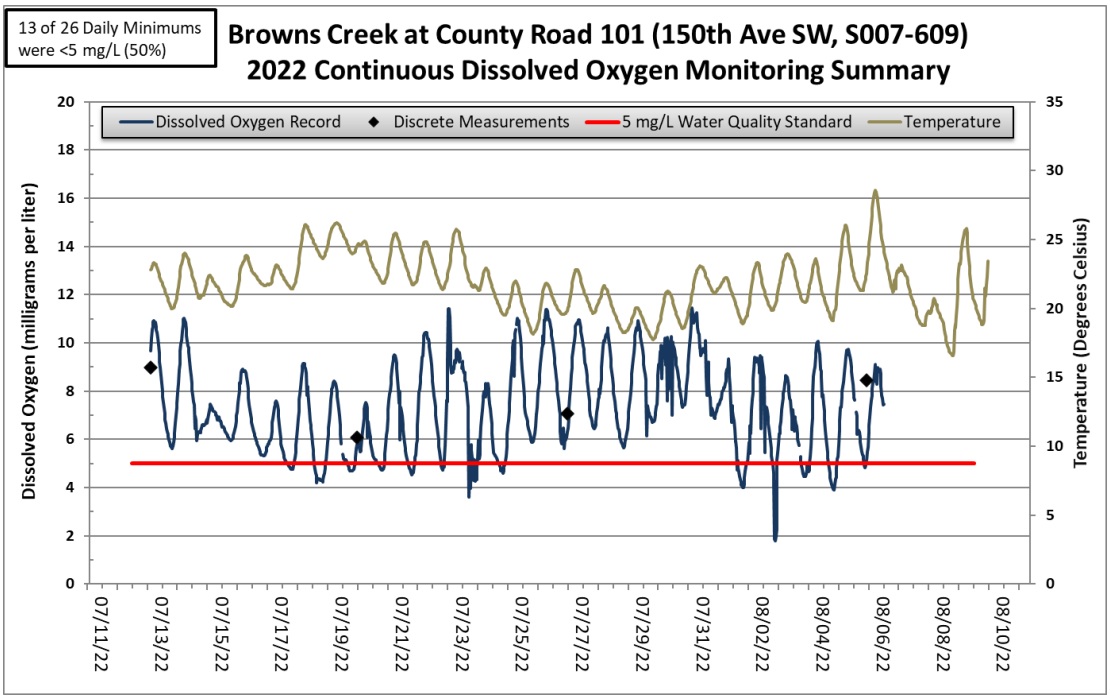
Black River ("Black River North" monitoring site along JD 25), at 120th Street SW (Station S003-498 on Assessment Unit 09020303-557): This station experienced large fluctuations in dissolved oxygen levels throughout the day, which are signs of stagnation and eutrophication (excess nutrients and algae growth). Dissolved oxygen levels dropped below the 5 mg/L water quality standard every day during the deployments. This is a channelized reach, so it lacks riparian cover and shading.



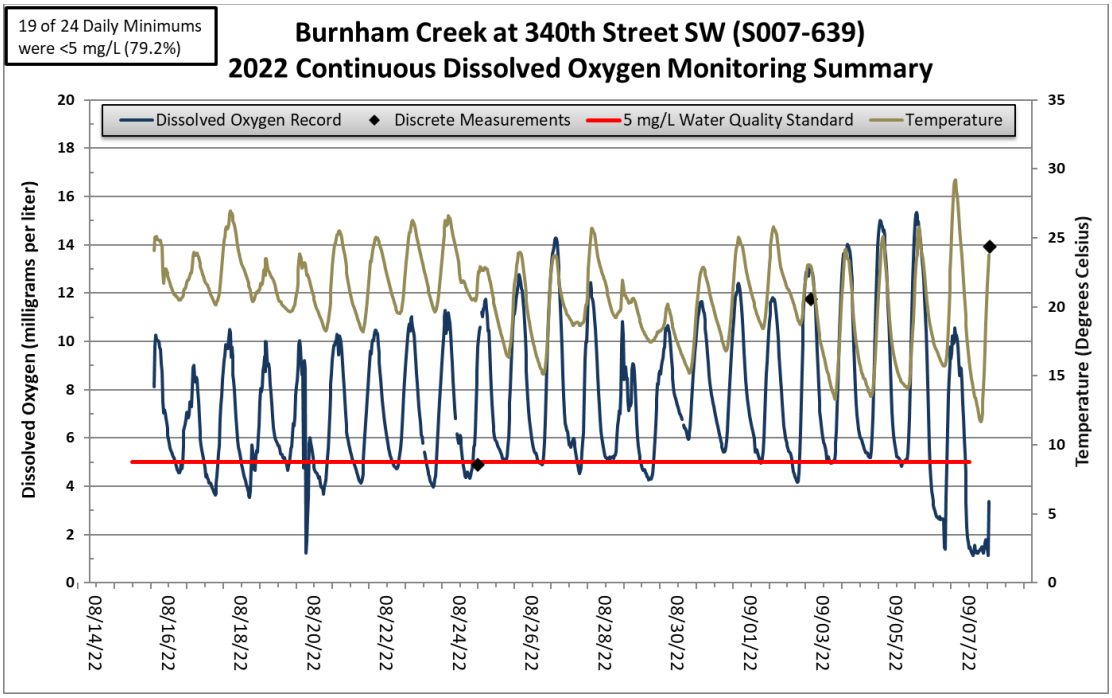
Black River ("Black River South" monitoring site), at 140th Street SW (Station S003-943 on Assessment Unit 09020303-558): Located along a meandering portion of the Black River, with a forested riparian area, this location recorded more days (compared to the upstream site) that stayed above 5 mg/L, but still experienced occasional low dissolved oxygen concentrations. Flow is somewhat ponded at this road crossing. Though the pool below the road continued to hold water, flow eventually ceased at the nearest downstream riffle.



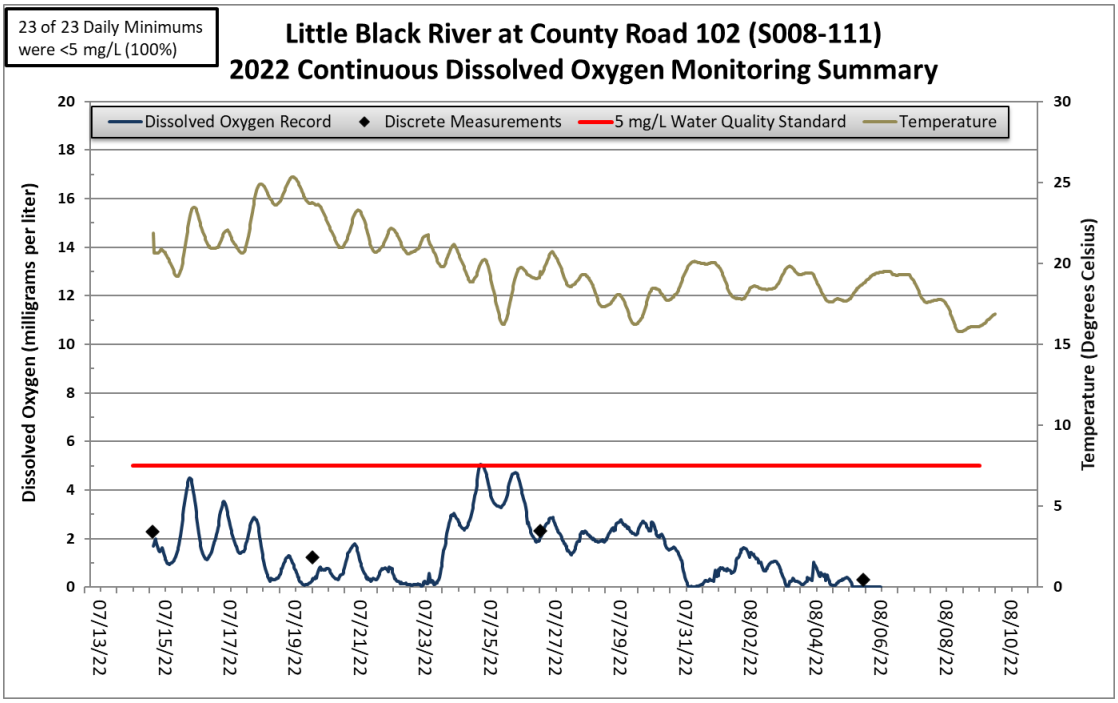
Browns Creek, at County Road 101, 150th Avenue SW (Station S007-609 on Assessment Unit 09020303-539): Browns Creek dissolved oxygen levels dropped below 5 mg/L during half of the days that a logger was deployed in moving water. The stream stopped flowing during the second deployment. That period was deleted during the data correction process.



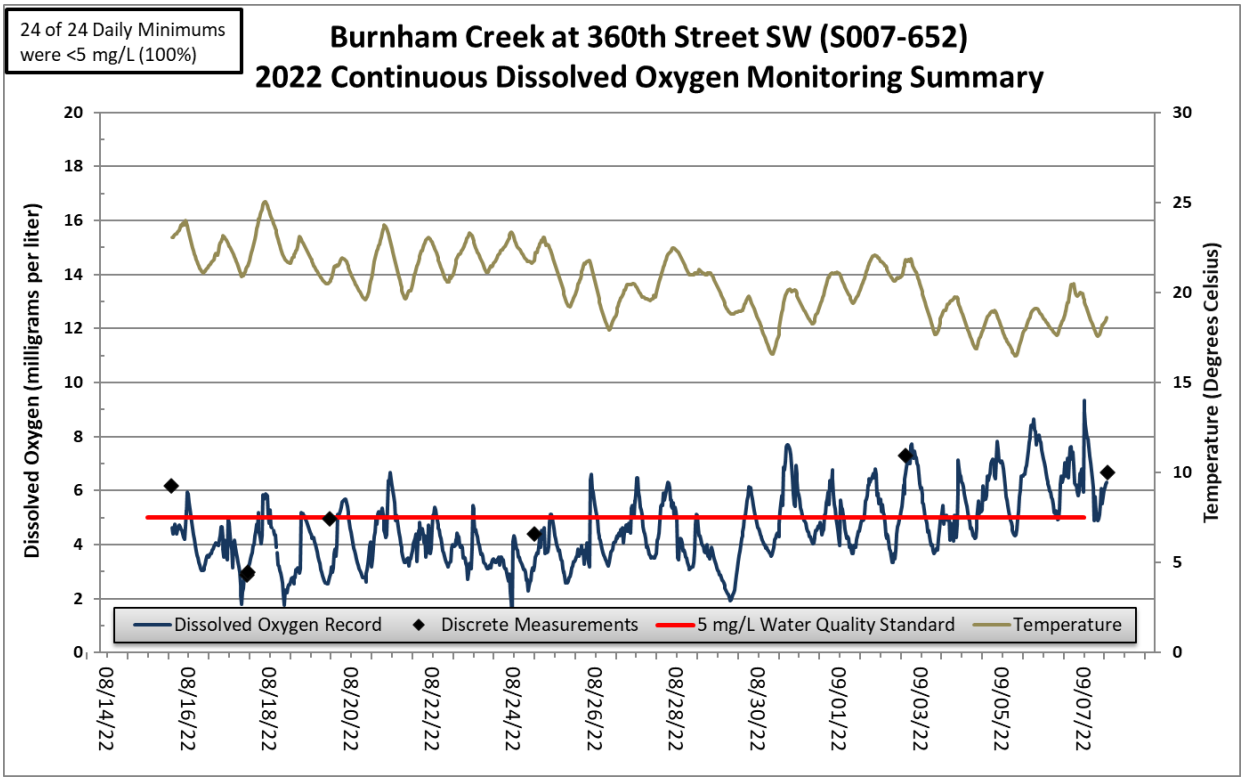
Burnham Creek (Project 43B) at 340th Street SW (Station S007-639 on Assessment Unit 09020303-551): Located 1.2 miles upstream of CSAH 45, the DO levels at this crossing were affected by low flows during the late summer logger deployments. A lack of riparian shading also likely affected DO levels along this legal ditch channel.



Little Black River at County Road 102 (Station S008-111 on Assessment Unit 09020303-528): This cattail-choked, relatively stagnant channel had some of the worst dissolved oxygen levels that we have recorded. The daily maximum dissolved oxygen concentration only reached 5 mg/L on one day. Flow ceased sometime between the August 5th site visit and the end of the last deployment on August 9, 2022.

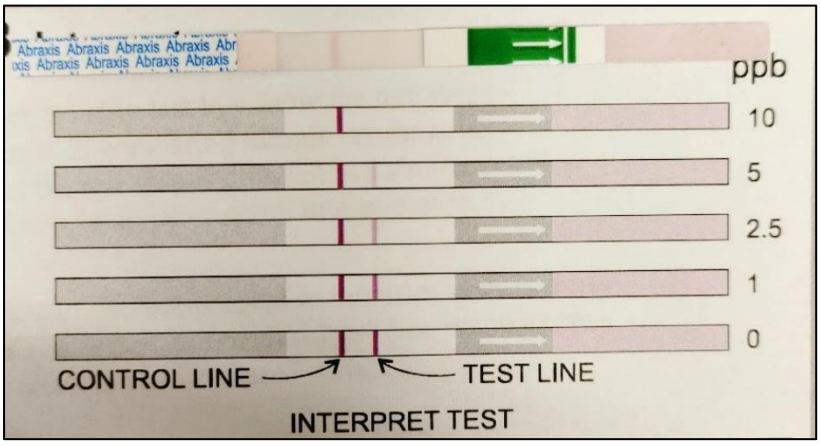


Burnham Creek (CD 79) at 360th Street SW (Station S007-652 on Assessment Unit 09020303-552): This station, located along the Polk CD 79 portion of Burnham Creek, upstream of the confluence with Polk CD 106, had lower dissolved oxygen levels than anticipated. The channel is stagnant downstream, at the CSAH 48 crossing, but is more freely flowing at the 360th St. SW crossing. Flow also passes over a series of rock riffle structures upstream of this location that should theoretically provide some mechanical aeration of the water. The watershed upstream of this site should be examined for additional erosion control opportunities. There was a very thick layer of sand on the channel bottom at this crossing.



Blue Green Algae Sampling

The District began testing water in the Mud River and other lakes/rivers for blue-green algal toxins (microcystins and cyanotoxins) in response to dog deaths that were caused by ingesting blue-green algae. The District uses Abraxis kits to test the water for algal toxins. Previous blooms have been connected to high water temperatures and high concentrations of nutrients.



Since the discovery of blue-green algae or algal toxins in lakes and reservoirs during the summer of 2018, regular sampling and monitoring has been conducted to discover algal blooms/toxins and learn more about the conditions that may lead to algal blooms. District staff regularly sampled for algal toxins in Maple Lake (once every two weeks at the Polk County Park marina) because a visible blue-green algae bloom was found there in 2020. If measurable concentrations are found in Maple Lake, the district is prepared to sample other shallow eutrophic lakes to find other cases of measurable or high algal toxins.

District staff began summer 2022 sampling for algal toxins (from blue-green algae blooms) in mid-July. A July 15th water sample collected from the Polk County Park Marina on Maple Lake, where some potential blue-green algae had accumulated, tested positive for algal toxins (>10 mg/L). A "jar test" revealed a relatively large amount of visible blue-green algae.

Due to the July 15th positive test, additional samples were collected on Monday July 18th at the Polk County Park beach and from additional lakes in the area. There was less visual evidence of blue-green algae in Maple Lake at the Polk County Park marina and no evidence at the beach. No algal toxins were found in the sample collected at the beach. The jar test sample from the beach looked very clear, with no visible evidence of blue-green algae. Hill River Lake and Badger Lake had no visual evidence of blue-green algae proliferation on July 18th. The water in Cameron Lake was green, but it was mostly green algae (sank to the bottom of the "jar test" rather than floating to the top). No toxins were measured in that sample. Oak Lake had some accumulation of blue-green algae near the shore on July 18th and had a positive test for algal toxins (1-2.5 parts per billion). There clearly was some blue-green algae present in the sample after completion of a "jar test," but much less than what was in the July 15th sample from Maple Lake. No algal toxins were present in samples collected from Maple Lake on July 29 and August 5, 2022.

Available information from the EPA and WHO indicates that concentrations above 8-10 ppb create a moderate risk during recreational exposure. Measurable concentrations below that level would be classified as "low risk." It is advisable to recommend keeping animals away from the water with a measurable concentration because they could drink from an area where the blue-green algae may accumulate along the shoreline and they could also end up licking blue-green algae from their fur. Nutrients, light intensity, and temperature are the drivers behind blue-green algae blooms.

Information about the confirmed blue-green algae blooms can be shared with MPCA staff that track Harmful Algal Blooms (HAB). The MPCA staff has a water quality hotline number (651-757-2822) and MN_MPCA_algae inbox (algae.mpca@state.mn.us) that can be contacted report blue-green algae blooms. Results of the algal toxin tests are shared with the Maple Lake Improvement District and a Maple Lake, Mentor MN Facebook Group. A website was created in order to have a central location for sharing updates on the District's blue-green algae monitoring efforts and results.

Public Education

BWSR tour stop at the West Side Outlet Stabilization Project

- The District continued to support the River Watch and River of Dreams programs, which are described in more detail in another section of this report.
- District staff participated in annual Northwest Minnesota Water Festivals (Warren and Fertile) and the Pennington County Outdoor Education Day.
- Information about the Red Lake Watershed District, programs, and contacts is available on the District's website.
- Watershed-based information (reports, photos, projects, contacts) for the Red Lake River, Upper/Lower Red Lakes, Clearwater River, Thief River, and Grand Marais Creek major watersheds can be found online at: www.rlwdwatersheds.org.
- The District maintains and posts to a Facebook page.
- District and SWCD staff hosted a tour of completed projects for BWSR staff.

Northwest Minnesota Water Festival in Warren, MN

One Watershed One Plan (1W1P) Projects

Minnesota has a long history of water management by local governments. One Watershed, One Plan is rooted in this history. In work initiated by the Local Government Water Roundtable (Association of Minnesota

Counties, Minnesota Association of Watershed Districts, and Minnesota Association of Soil and Water Conservation Districts) in 2011, it was recommended that the local governments charged with water management responsibility should organize and develop focused implementation plans on watershed boundaries. The recommendation was followed by legislation that permits BWSR to adopt methods to allow comprehensive plans, local water management plans, or watershed management plans to serve as substitutes for one another; or to be replaced with one comprehensive watershed management plan. This legislation, and the associated BWSR program, is referred to as One Watershed, One Plan. Further Legislation was passed in 2015, defining purposes and outlining additional structure for the program.

Red Lake River 1W1P

The Red Lake River Watershed 1W1P was developed in 2015-18 through the intensive efforts of the Planning Work Group (resource professionals from local government units, or LGUs), official approval of plan components by the Policy Committee (representatives appointed by participating LGUs), and input from an Advisory Committee (citizens and experts from state agencies). Upon completion of the Plan and approval from the Board of Water and Soil Resources, a grant in the amount of $677,500 was awarded to complete various water quality projects highlighted in the 2018-19 annual work plan.

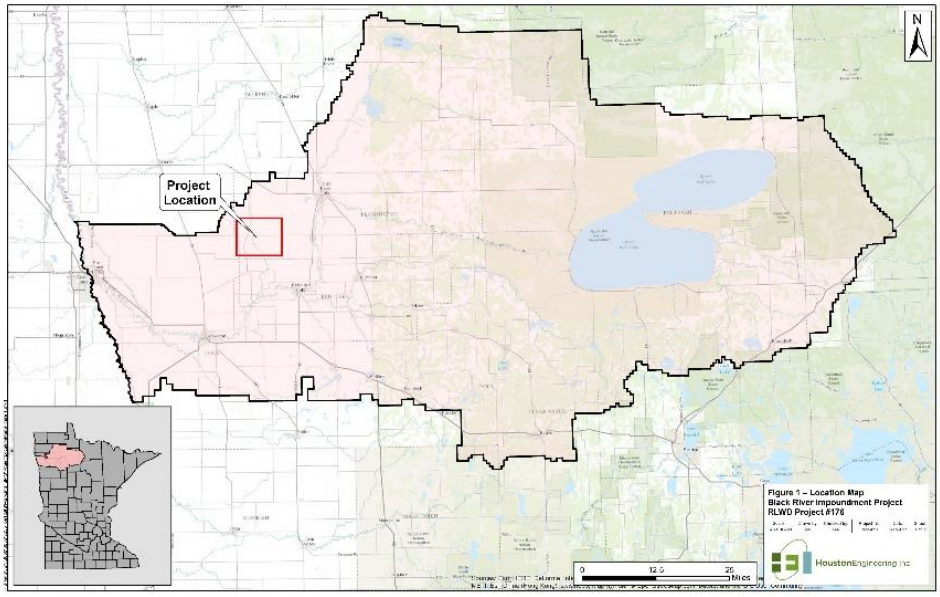
In early 2020, the Red Lake River 1W1P received $1,071,149 in watershed-based implementation funding (WBIF) from the Minnesota Board of Water and Soil Resources (BWSR). With the required matching funds, this work plan had a total budget of $1,178,264. Near the end of 2022, the project partners finished spending this grant and the required matching funds. Priority projects and actions completed with that grant included.

- Technical & engineering (design), project development, and administration
- A portion of the cost of grade stabilization projects (side water inlets and rock-drop structures) in the Black River subwatershed and repair of structures damaged during the 2022 flood.
- Stabilization of the RLWD Ditch 10 outlet, repair of damage from the 2022 flood, and upstream expansion of the stabilization project
- A portion of the cost of the Voyageur's View streambank stabilization project
- A portion of Phase I of the Pennington County Ditch 96 Outlet Stabilization Project
- Grade stabilization (structural agricultural BMPs) along Browns Creek
- Grade stabilization (Ag BMPs) project along Cyr Creek
- Grade stabilization (Ag BMPs) project along the Black River
- Grade stabilization (Ag BMPs) project along the Red Lake River
- Grade stabilization in the Burnham Creek subwatershed
- Grade stabilization of a large erosion problem near the Red Lake River (Demarais-Hanson Project) west of Red Lake Falls, as well as the feasibility study and design
- Demarais-Hanson

Project summaries for the Black River subwatershed grade stabilization structures and the Demarais-Hanson Project are provided on the following two pages.

Water Quality Features of the Black River Impoundment Project

The construction of side water inlets and rock-check grade stabilization structures along ditches in the Black River Impoundment drainage area was completed in 2022. The vast majority of the construction was completed in 2021. The flood of 2022 revealed additional locations where grade stabilization structures were needed and damaged two previously installed structures. These structures are installed to protect/improve water quality (115 tons/year total sediment load reduction) in a significant portion of the Black River subwatershed. The 52 side water inlet grade stabilization structures will reduce soil loss and gully erosion on land along the diversion ditches. The 39 in-channel rock-drop structures will prevent channel degradation.



The Black River Impoundment can store up to 4,000 acre-feet of runoff. The flood damage reduction (FDR) project included the construction of ditches to convey drainage into the impoundment. The FDR and water quality components were funded with a mosaic of different funding sources. The Red Lake Watershed District (RLWD), State of Minnesota FDR Program, and the Red River Watershed Management Board (RRWMB) funded the FDR components. The water quality components were funded by the 2018 Red Lake River One Watershed One Plan (1W1P) Watershed-Based Implementation Funding (WBIF), 2020 Red Lake River 1W1P WBIF, RRWMB, 319 Grant (from the United States Environmental Protection Agency via the Minnesota Pollution Control Agency), and the RLWD.

Rock-drop channel stabilization structure along the Black River Impoundment outlet

Demarais-Hanson Project

Demarais Hanson Project, before 2022 construction

Demarais Hanson Project, after 2022 construction

Problem:

- Extreme erosion and large gully formation along a steep gradient downstream of a drainage system outlet near the Red Lake River, west of Red Lake Falls.

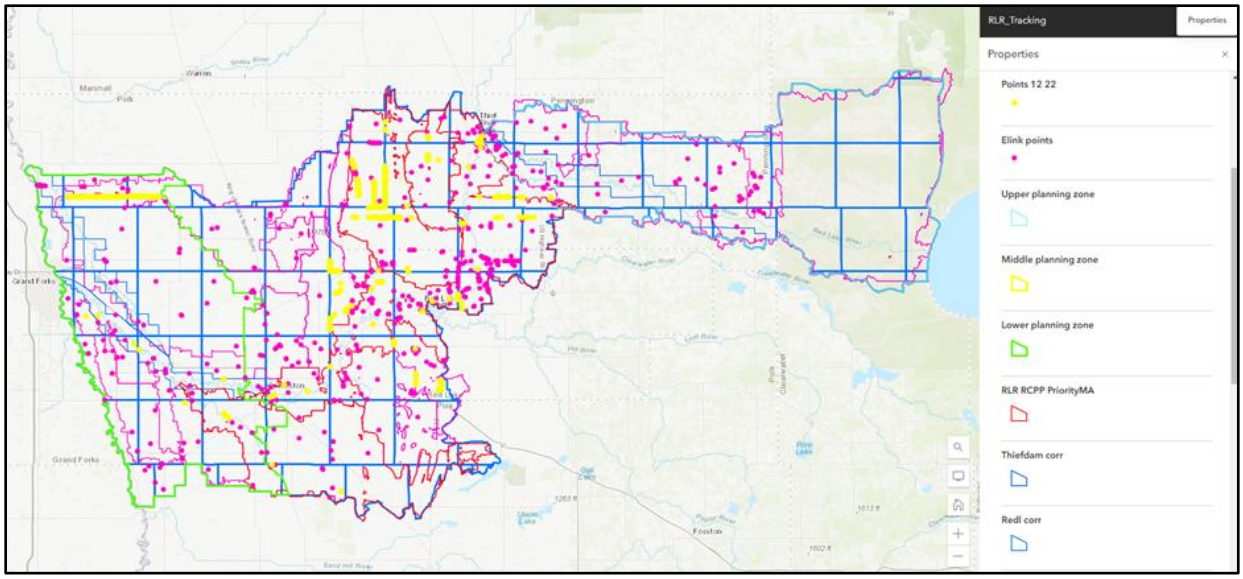
Costs:

- $15,222.10 for a feasibility study
- $147,350 bid for construction

Progress:

- Project development, surveying and engineering were completed in 2021.
- Construction began in fall 2021, but was postponed due to the arrival of winter weather.
- Construction resumed and was mostly completed in May 2022.
- Seeding will be completed in June 2022.

Project partners are tracking progress with ArcOnline map in which project locations can be mapped and corresponding information (load reductions, costs, funding sources, etc.) can be recorded.



The next round of 1W1P watershed-based funding (2022) was approved by BWSR in 2021 and the grant was executed on February 24, 2022. The Red Lake River 1W1P project partners focused on closing-out the second grant (2020) before spending funds from the 2022 grant.

In the 2022 Annual Work Plan, the WPG applied lessons learned from previous grants to simplify budget and to add flexibility for funding beneficial projects throughout the watershed. Instead of creating an itemized budget for individual projects, the funding for constructed projects will be split into two "buckets" for "ag practices" and for "streambank and shoreline stabilization." Funding has been reserved, until the rest of the implementation funding has been spent (at least 80% of funds will be targeted in priority areas), 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. Project development and technical/engineering efforts were ramped-up in 2022, so the projects that should be

ready for 2023 construction will use-up the 2022 grant as well as a significant portion of the next grant (2024 – available sometime in 2023). Construction projects that are being planned and could be funded with the 2022 WBIF Grant include:

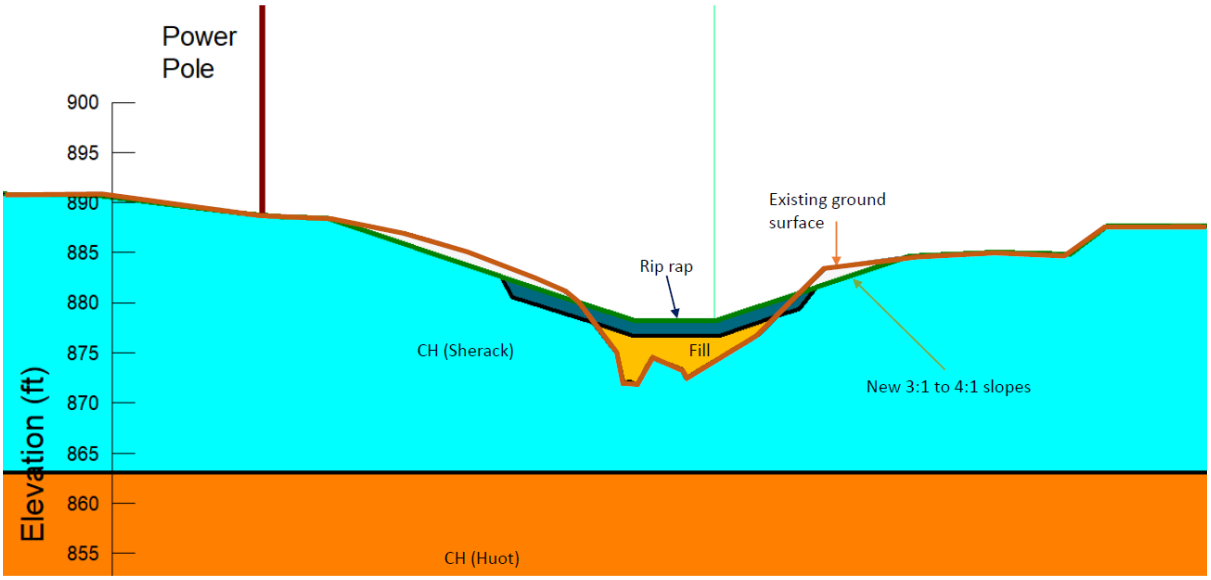
- A portion of the cost of the Voyageur's View streambank stabilization project
- Stabilization of the outlet of Red Lake County Ditch 62
- Stabilization of the outlet of JCD 15, along the Red Lake and Pennington County border.
- Design and stabilization of the outlet of Polk County Ditch 99, east of Crookston
- Design and stabilization of an eroding streambank near Crescent Avenue, in Crookston
- Design of water quality components of the Chief's Coulee stormwater project
- Grade stabilization (Ag BMPs) project along the Black River
- Grade stabilization (Ag BMPs) project along the Red Lake River
- Grade stabilization (Ag BMPs) project along Burnham Creek
- Grade stabilization (Ag BMPs) project along Polk County Ditch 1
- Grade stabilization (Ag BMPs) project along Pennington County Ditch 96
- Streambank stabilization along the Red Lake River in Thief River Falls
- Stabilization of a large gully between CSAH 19 and the Red Lake River, north of Red Lake Falls
- Ditch outlet stabilization at the intersection of Polk County Road 61 and 300th Ave SW

Polk County Ditch 99 Outlet Stabilization

The severity, visibility (along a paved road near the City of Crookston) of erosion along the outlet of Polk County Ditch 99 caused the issue to be specifically mentioned in annual work plans for the Red Lake River 1W1P. Meetings with landowners began in early 2022. A consultant, HDR Engineering, was hired to investigate the problem and design a solution. Landowners have been very supportive of a project, especially where the steep, eroding ditch banks create a safety concern along the yard of a home near the ditch. The steep gradient and steep, unstable banks are a problem along approximately 1,000 feet of channel downstream (south) of 265th Street SW. Due to the potential influence of water levels upon slope stability,

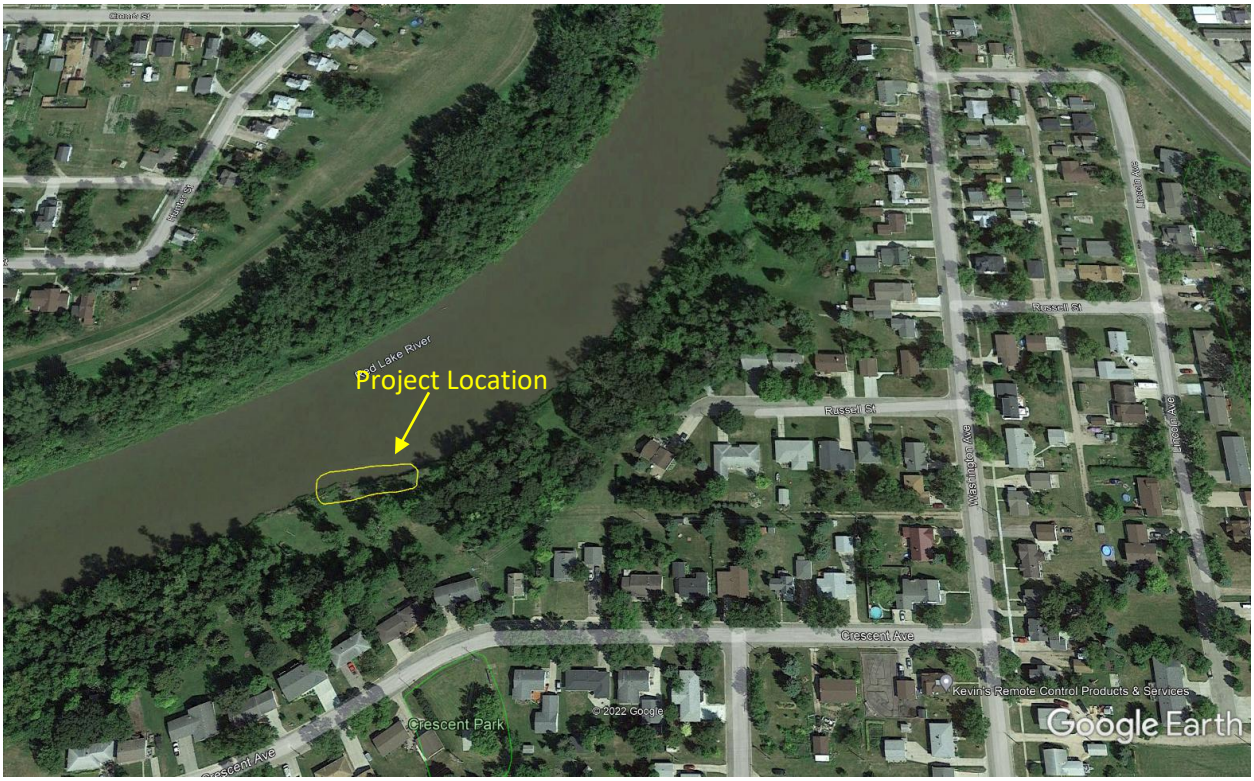
HDR recommended the installation of monitoring wells in the project area. Three 50-foot-deep monitoring wells were installed along the channel. Staff from the District and the West Polk SWCD monitored water levels in the wells. District staff installed HOBO water level loggers in the wells.

Five alternatives were proposed by HDR Engineering and reviewed by project partners (Polk County, West Polk SWCD, and the District). The preferred alternative will raise the channel along the residential property and install rip-rap slope stabilization south of that property. Rock chutes and side water inlets will be a part of the design. The downstream stabilization work is being coordinated with the county's plans to replace a culvert at the highway as well as plans to address flooding in the upstream portions of the ditch's drainage area. Construction for this project is anticipated to be completed in 2023.



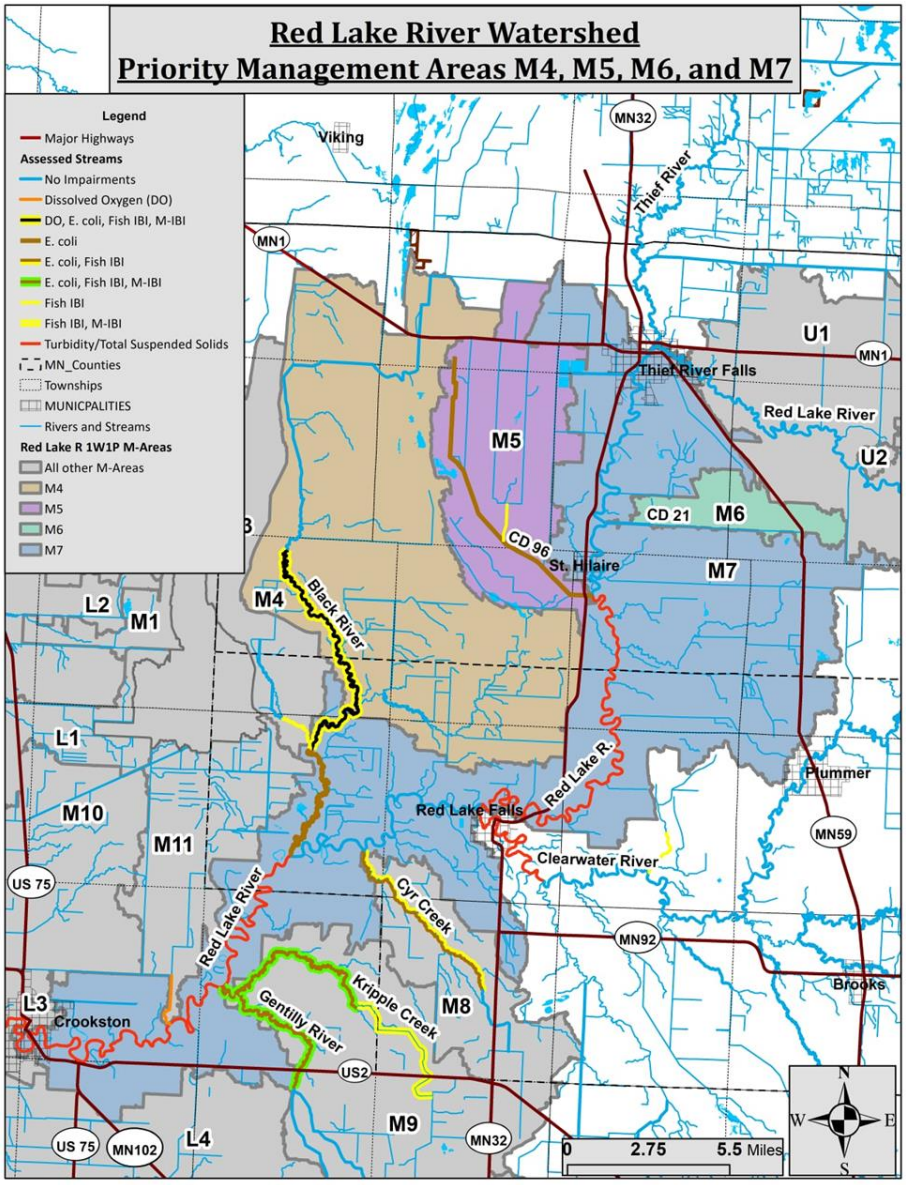
Crescent Avenue Streambank Stabilization Project

While inquiring about actively eroding streambanks within the City of Crookston, District staff were informed of a streambank erosion problem near Crescent Avenue that was located approximately 0.7 miles downstream of the Highway 2 bridge. A landowner was concerned about a large section of streambank that was slumping into the river. A large chunk of streambank had already washed-out along a neighboring property. The width of the new slump is approximately 15 feet. The height of the bank is approximately 9 feet, at the toe. The total length of the new erosion issue was approximately 80 feet (roughly paced-out during a site visit). The bank had sloughed down approximately 2 feet as of July 15, 2022 and slumped several feet further by the end of the summer. This project “checks multiple boxes” for priority streambank stabilization projects. It is actively eroding at a high rate. The feasibility of the project is benefitted by willing landowners and a relatively low bank height, though the weak Huot formation soils increase the cost of fixing the problem (more rock). It is also located within a Red Lake River 1W1P priority area. One potential impediment identified during a site visit was a lack of space for accessing the riverbank with large equipment. A solution involving cooperation with neighboring landowners for access and rock staging is being developed.



Red Lake River Small Watersheds Focus 319 Grant

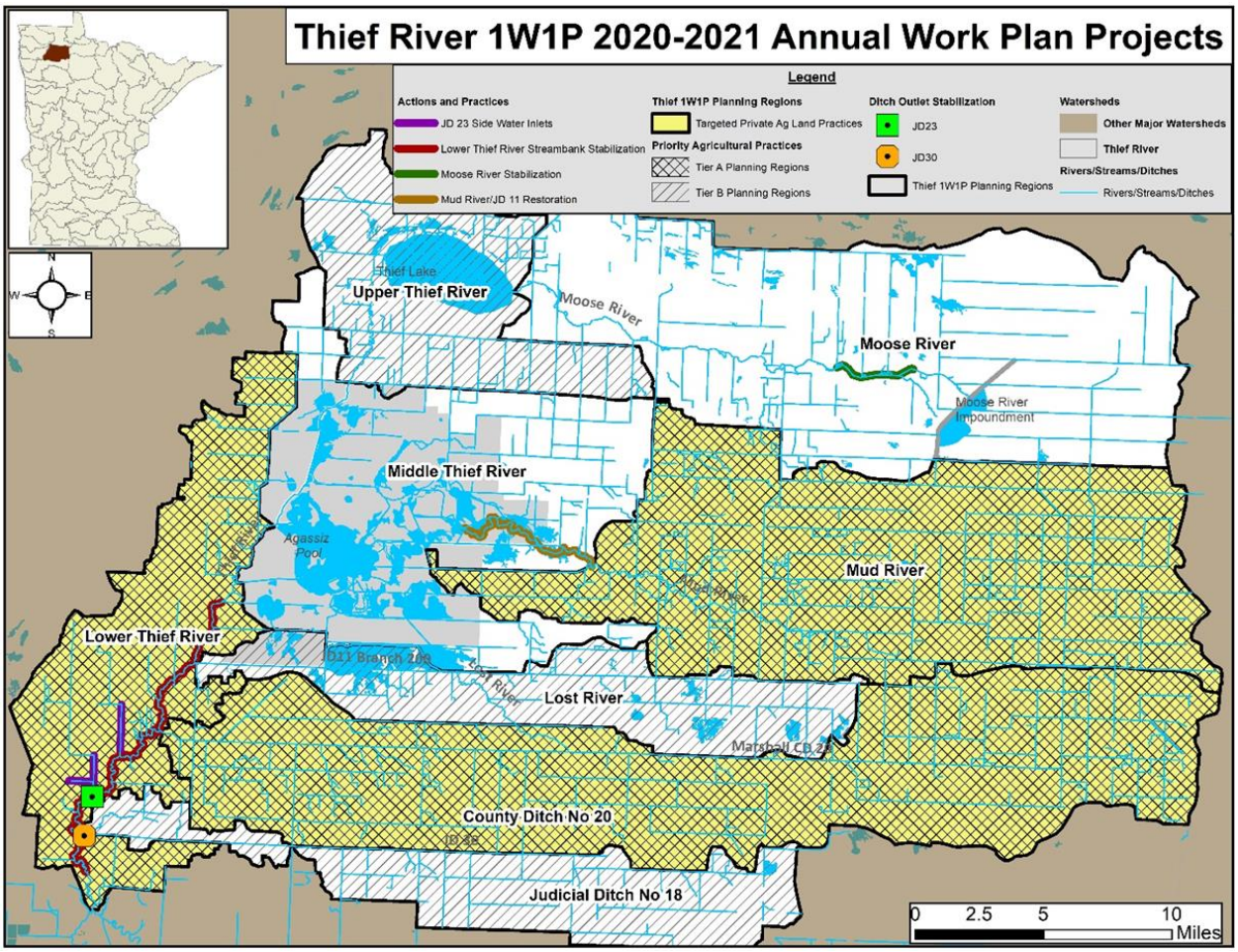
In November 2018, ten watersheds were selected to be prioritized for funding in federal fiscal year 2020. The selections were part of the transition in the federal Clean Water Act Section 319 program from one-time grants to more reliable funding focused on small watersheds. The goal of the program is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



Red Lake River watershed was chosen to be one of the first 10 watersheds (Group A) to be eligible for this funding. On August 6, 2020, MPCA staff announced that the Red Lake River proposal for a Fiscal Year 2020 Section 319 Small Watersheds Focus grant was approved for funding in the amount for $284,275. The projects and activities of the Red Lake River (Thief River Falls-Crookston) and Black River EPA NKE Plan will be targeted within priority management areas of CD 96, Black River, and the middle reach of the Red Lake River between Thief River Falls and Crookston. The projects will reduce the transport of eroded sediment (sediment loading) to the Red Lake River by an estimated 1,148 tons/year. The funds have been used to fund a portion of the side water inlets that were installed in the drainage area of the Black River Impoundment in 2021. In 2022, the grant helped fund the design and construction of a streambank stabilization project along the Voyageur's View campground in Red Lake Falls, MN.

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). Because it will be "shovel-ready" in the summer of 2022, Phase II of the Pennington County Ditch 96 Stabilization Project was chosen by the Red Lake River 1W1P PWG to be the primary project to be funded with the additional 319 grant funding.

Thief River 1W1P



The Thief River 1W1P was developed in 2017-2020 through the intensive efforts of the Planning Work Group (resource professionals from local government units, or LGUs), official approval of plan components by the Policy Committee (representatives appointed by participating LGUs), and an Advisory Committee (citizens and experts from state agencies). The first round of funding for Thief River 1W1P from BWSR Watershed-Based Implementation Funding (WBIF) was $529,892 ($52,989 match requirement). The 2020-2021 WBIF grant work plan projects included:

- $150,000 from WBIF for Stabilization of the JD 23 outlet in Marshall County (completed in 2021)
- $12,000 from WBIF to install 6 side water inlet grade stabilization structures within the JD 23 portion of the Lower Thief River subwatershed (partially completed in 2021)
- $128,925 from WBIF to stabilize 1000 feet of streambank along the Lower Thief River (completed in 2021, with some funding remaining)
- $20,000 from EQIP/CSP to implement 640 acres of cover crop in the Lower Thief River subwatershed
- $5,000 from WBIF to conduct an education and outreach workshop (planned for 2021, but postponed until 2022 when harvest began sooner than anticipated)
- $30,000 from BWSR Accelerated Implementation Grant funding to conduct a watershed-wide inventory for side water inlets and buffers
- $75,000 from WBIF to implement priority agricultural practices within Tier A and Tier B priority planning area subwatersheds
- $30,000 from an MPCA SSTS Upgrade Grant for septic system upgrades, watershed-wide
- $256,666 from a Clean Water Fund grant (awarded to the Pennington SWCD) to implement grade stabilization and cover crops within the Lower Thief River and JD 30 subwatersheds

- Several Technical and Engineering Projects, as funding allows:
    - Priority 1: Feasibility study, survey, and design work on the Mud River/JD11 – USFWS been looking for money for this project. Most of the project lies within Agassiz National Wildlife Refuge (completed in 2021).
    - Priority 2: Survey and design work on the outlet of JD30 with the intent to stabilize the outlet pending future funding.
    - Priority 3: Moose River Streambank Project: Feasibility study with potential for survey and design work.

Priority stream bank stabilization sites were chosen where relatively high bank erosion hazard index (BEHI) ratings from the Thief River Watershed Fluvial Geomorphology study overlapped with State Ditch 83 jurisdiction (access easements) and priority stream bank stabilization sites identified by the Red Lake Watershed District ditch inspectors. Several streambank and gully erosion problems were stabilized in 2021. In 2022, two additional stretches of streambank were stabilized along the SD 83 portion of the Thief River (left photo, below). Additional streambank stabilization work is being planned for 2023.

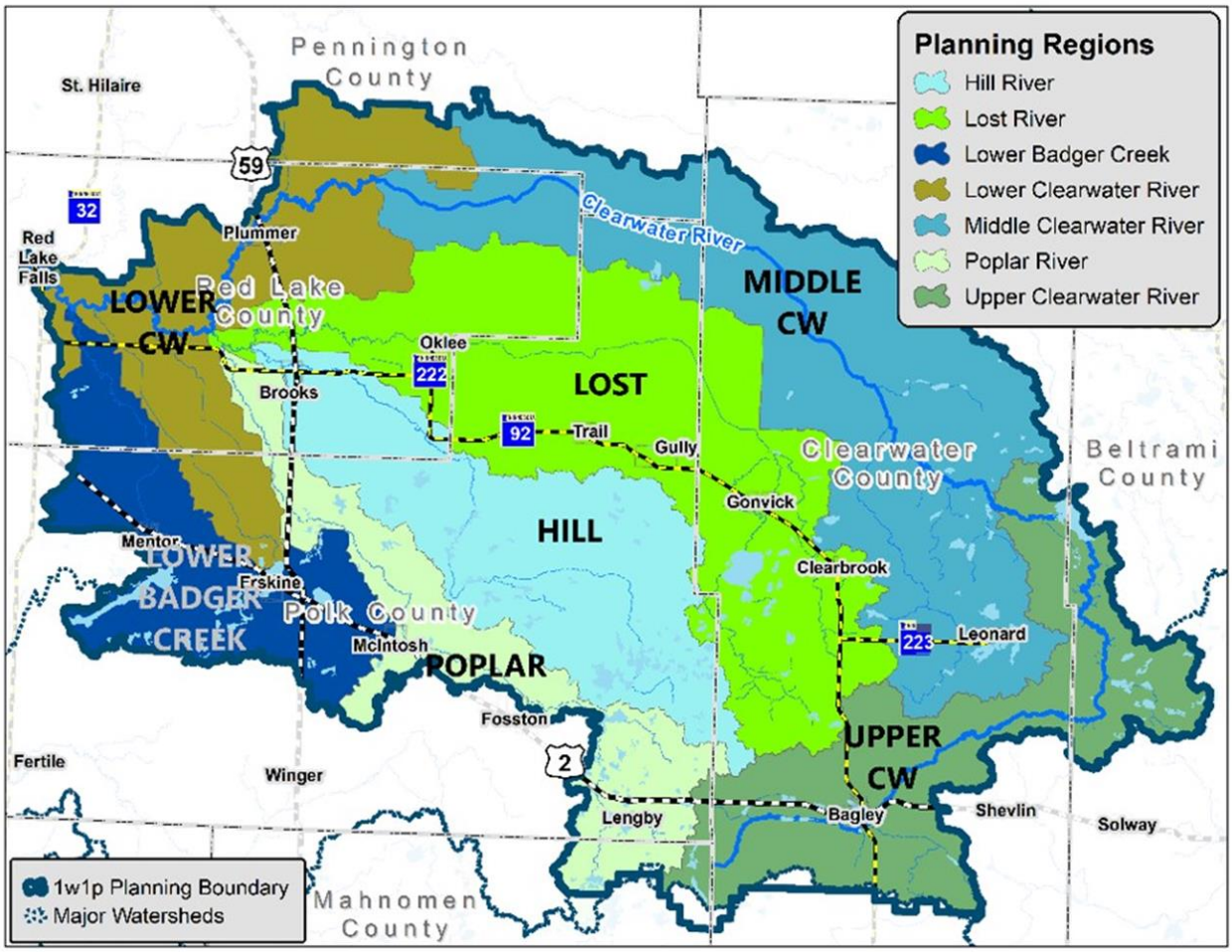
Judicial Ditch 23 outlet stabilization construction was nearly completed in 2021, but some touch-up work on the slopes and buffer planting was completed in 2022.

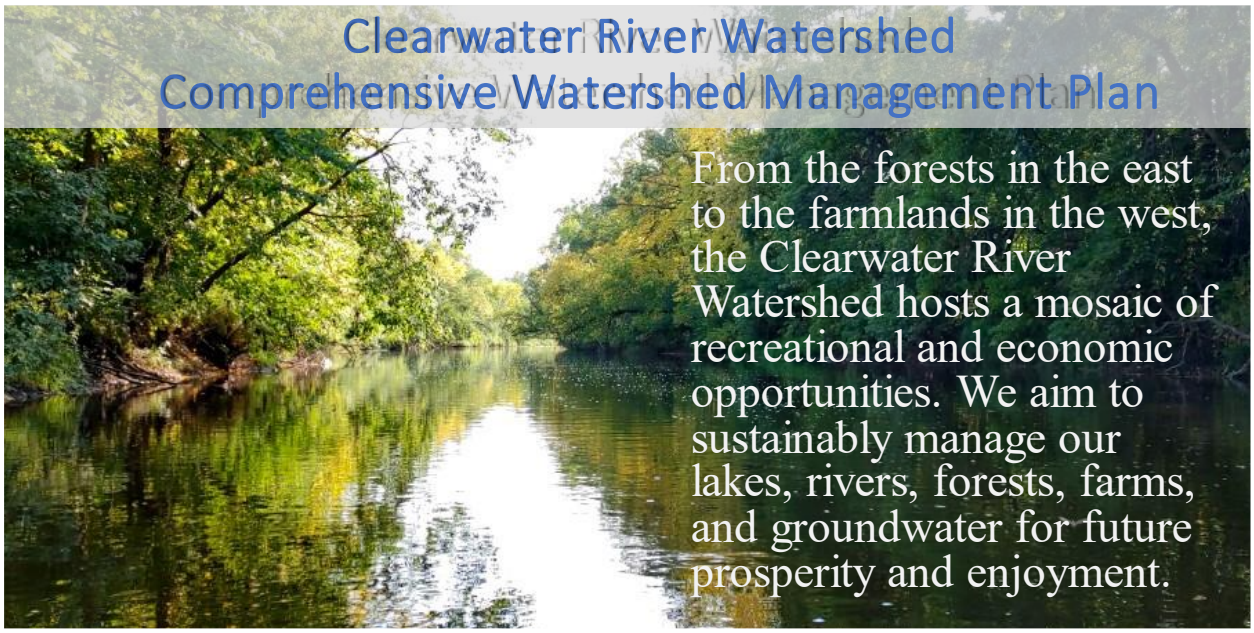
District staff worked with United States Fish and wildlife staff and HDR Engineering to begin the feasibility study for a potential Mud River Restoration Project in 2021. From late 2021 through the present, the planning process has been in the hands of a flood damage reduction project work team. The project work team is getting closer to narrowing-down options for the project and evaluating the feasibility of a project (in consultation with DNR geomorphology staff). District and HDR Engineering staff successfully located an old river channel beneath approximately 5 feet of peat (right photo, above).

With assistance from Houston Engineering, Inc., the District began working on a feasibility study for stabilizing the Moose River Streambank Project. Drone data was collected and maps were drafted to show locations of potential streambank stabilization and channel restoration projects. Site visits, additional in-channel surveying, and landowner contacts for project development are planned for 2023.

Clearwater River 1W1P

The Clearwater River Watershed Comprehensive Watershed Management Plan was completed in 2022 through the efforts of the Planning Work Group (LGU staff), Houston Engineering (consultant), Policy Committee, Advisory Committee and BWSR staff. Project partners include the Clearwater SWCD, Clearwater County, Pennington SWCD, Pennington County, East Polk SWCD, Polk County, Red Lake SWCD, Red Lake County, and the RLWD.





The plan prioritizes projects that will improve the quality of surface water, drinking water, land stewardship, and habitat. The Clearwater River Watershed Comprehensive Water Management Plan has been approved by the Minnesota Board of Water and Soil Resources, along with the first round of Watershed-Based Implementation Funding. The plan and other resources can be found on the District's webpage and the

dedicated Clearwater River 1W1P webpage that was developed by the Clearwater River SWCD during the latter stages of the planning process.

The planning process was completed under-budget. With the remaining funds, the planning partners opted for the development of planning tools (developed by Houston Engineering) and also and accelerated project planning effort for a Clearwater River stabilization project in Greenwood Township.

A work plan and a list of priority projects with projected costs was compiled. Projects identified for the first round(s) of WBIF funding include:

- Streambank stabilization along the Clearwater River
  - Greenwood Township
  - Red Lake Falls
  - CR 120
- Grade stabilization of the Clearwater River in Greenwood Township
- Structural agricultural practices (WASCOBs and SWIs)
- Non-structural agricultural practices
- Livestock exclusion
- Forest stewardship plans
- Stabilization of the outlet of Judicial Ditch 2, Branch A
- Stabilization/restoration project along the channelized portion of the Lost River
- Technical & engineering work, project development, and administration

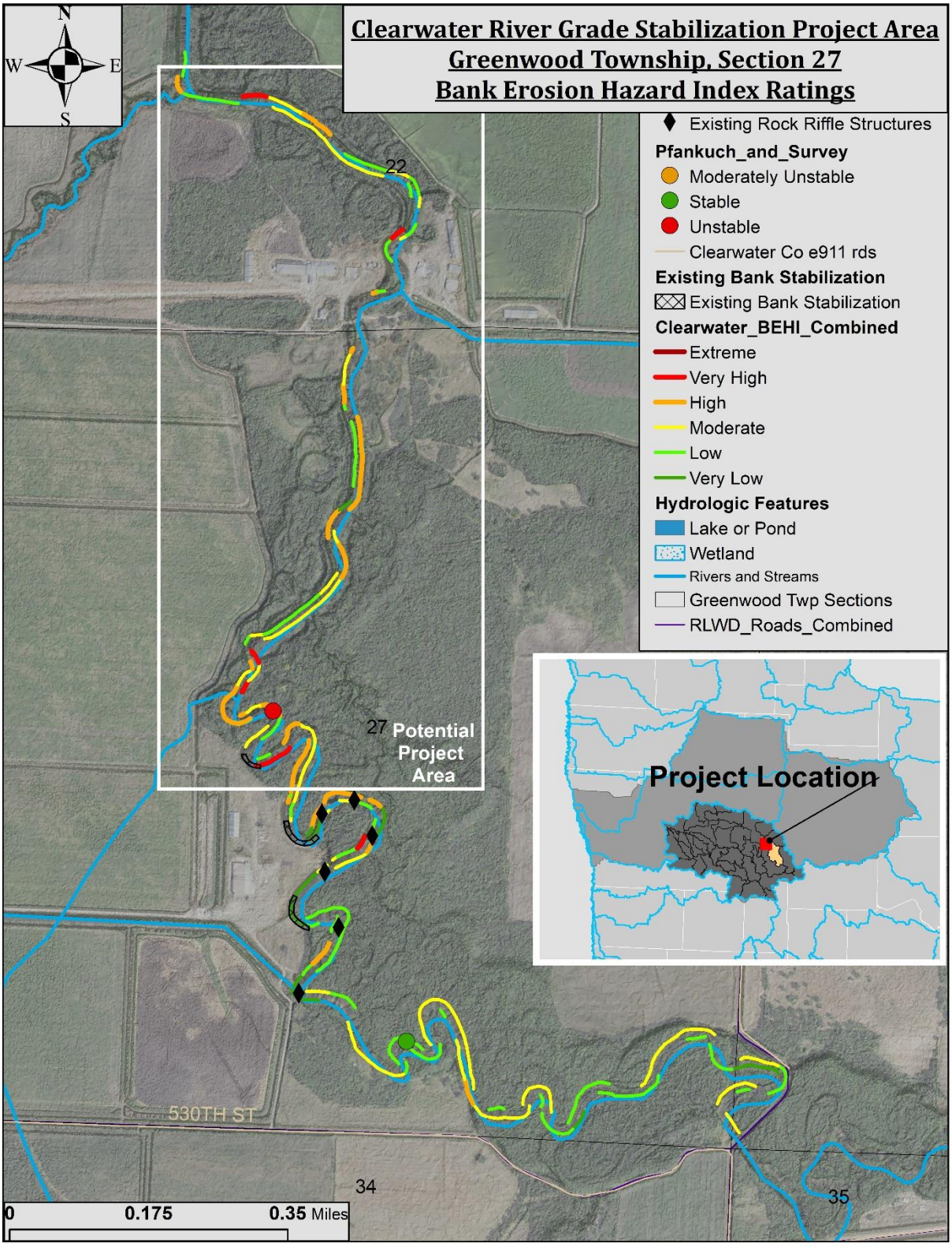
Clearwater River Grade Stabilization – Greenwood 27 Phase III

Previous Clearwater River grade stabilization work in Section 27 of Greenwood Township installed 5 rock riffle and cross-vane weir structures along the upstream extent of channel degradation caused by the transition in slope between the channelized section of the river and the natural channel upstream. The previous work (completed two phases in 2001-2003) also involved streambank stabilization and the installation of structures to slow the development of cross-floodplain channels and restore the floodplain.

Though the previously completed project has been successful, channel/streambed degradation has alarmingly continued downstream of the extent of the Greenwood 27 project. Geomorphology reconnaissance and detailed Bank Erosion Hazard Index (BEHI) assessments identified a striking contrast between channel and bank stability indicators recorded upstream and downstream of the installed structures. There is a section of channel that has evidence of headcutting along with rapidly eroding banks between the existing grade stabilization structures and the confluence with Ruffy Brook. Evidence of channel degradation can be seen in layers of shell fragments and pebbles that have been revealed in eroded banks, 3-5 feet above the current streambed. Deep gouges in the channel bottom were discovered during the geomorphology reconnaissance effort, a short distance downstream of the last cross-vein weir rock structure. The channel degradation in the project area needs to be addressed to ensure success of any bank stabilization projects. The landowner in the project area is in favor of the project if the grade stabilization structures do not impact drainage.

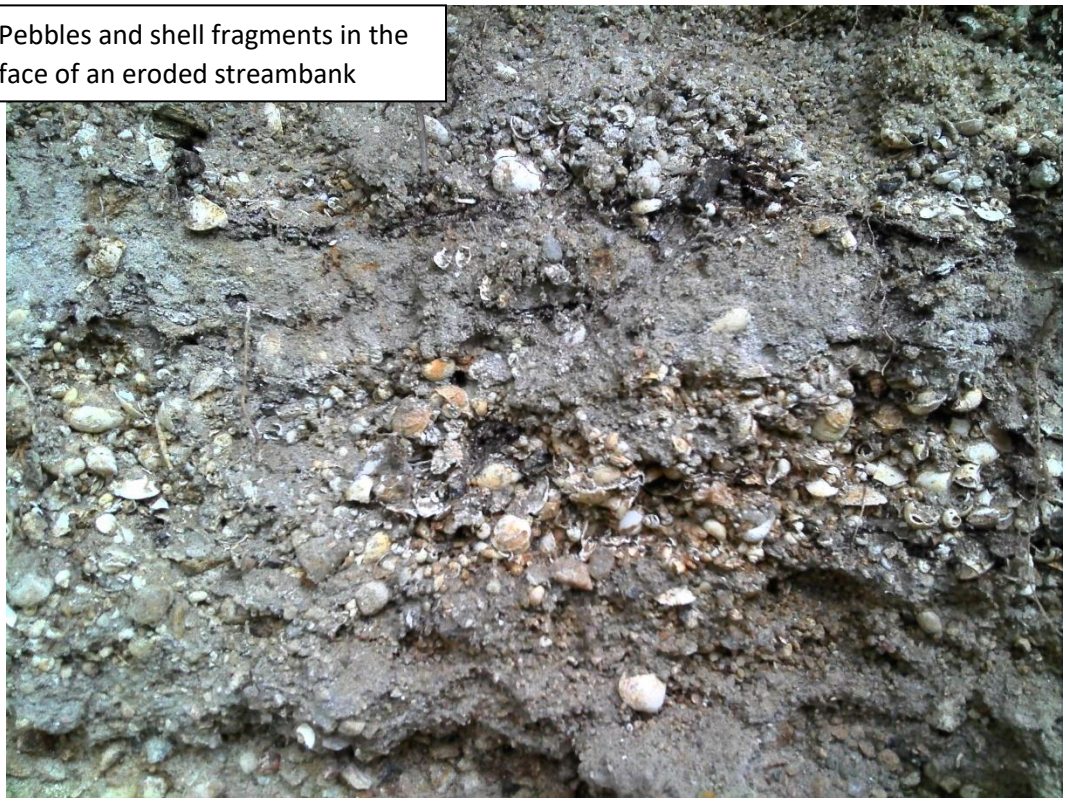
The primary focus of this stabilization project will be addressing the underlying cause of erosion by halting channel degradation and establishing a stable gradient through the natural-to-channelized transitional area. Additional streambank stabilization and floodplain restoration work may be needed, as recommended by project engineers after a detailed study of the project area. Disturbance of well-vegetated, stable streambanks during construction should be minimized. LiDAR data shows some evidence of channel formation across the floodplain in this area, so the need for restoration/stabilization of the floodplain could be examined.

Previously installed cross-vane weir grade stabilization structure


Clearwater River Grade Stabilization Project Area
Greenwood Township, Section 27
Bank Erosion Hazard Index Ratings
N
W
E
S
Existing Rock Riffle Structures
Pfankuch_and_Survey
Moderately Unstable
Stable
Unstable
Clearwater Co e911 rds
Existing Bank Stabilization
Existing Bank Stabilization
Clearwater_BEHI_Combined
Extreme
Very High
High
Moderate
Low
Very Low
Hydrologic Features
Lake or Pond
Wetland
Rivers and Streams
Greenwood Twp Sections
RLWD_Roads_Combined
22
27
Potential
Project
Area
Project Location
530TH ST
34
35
0
0.175
0.35 Miles

Scouring and channel degradation

Pebbles and shell fragments in the face of an eroded streambank



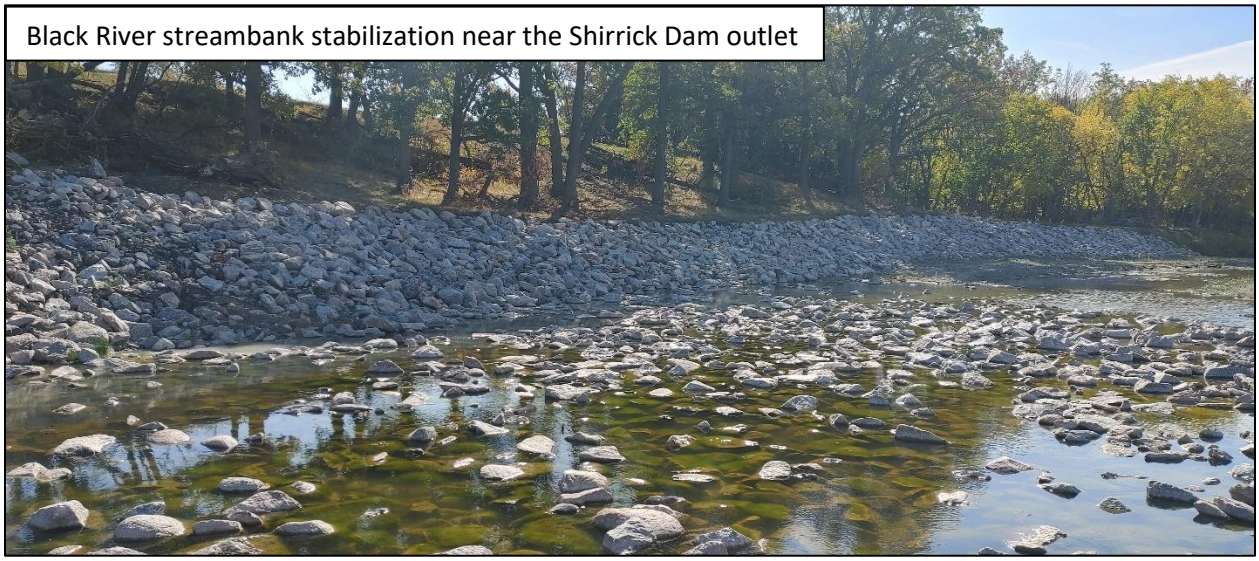
Red River Watershed Management Board Water Quality Funding

The Red River Watershed Management Board (RRWMB) approved funding to encourage and financially support water quality projects implemented by member watershed districts. In 2020-2022, each member watershed district could apply for up to $100,000 of water quality base funding to fund a wide variety of water quality projects. The District utilized its share of 2022 base water quality funding to stabilize a section of

streambank along the Black River, downstream of the Shirrick Dam outlet and to help fund the a streambank stabilization project within the city of Thief River Falls that was being completed by the Pennington SWCD.

Streambank stabilization in Thief River Falls, across the river from Oakland Park

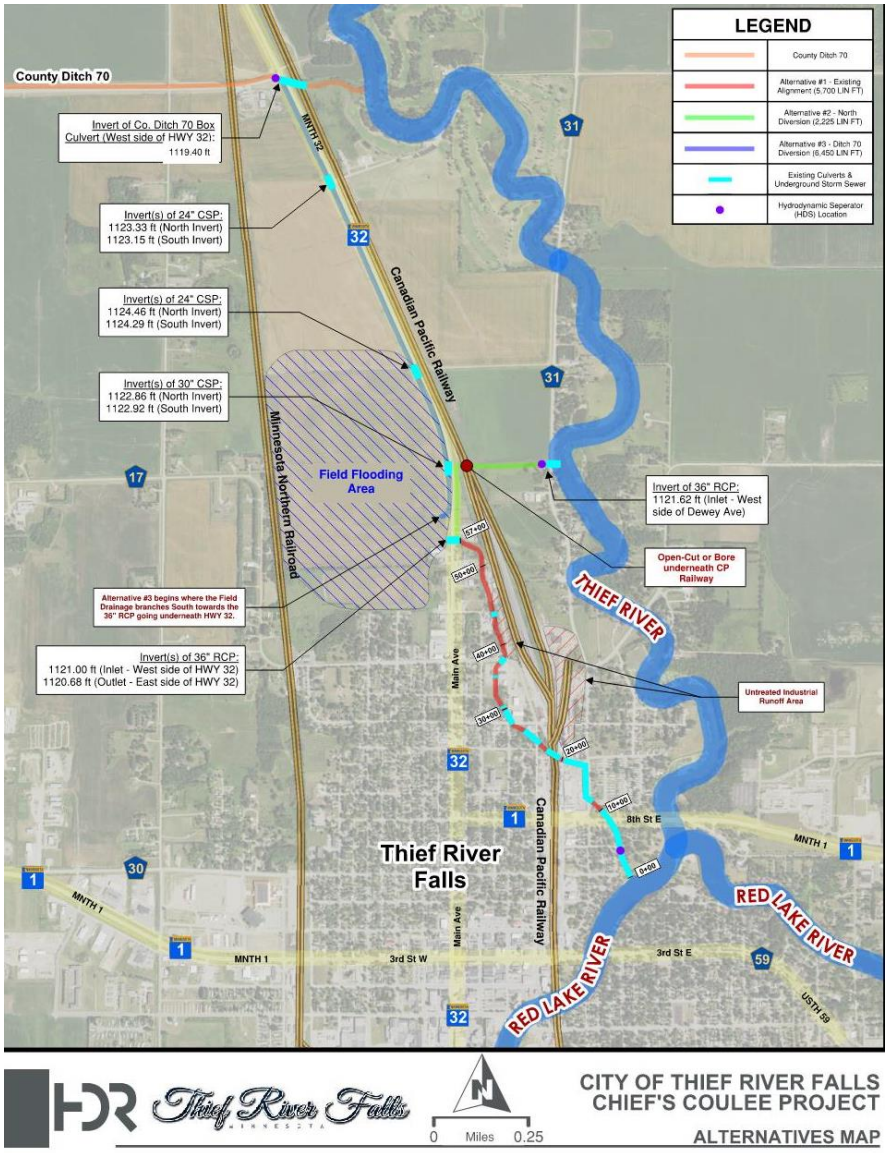
Black River streambank stabilization near the Shirrick Dam outlet



BWSR Clean Water Fund Grants Awarded to the RLWD and Local SWCDs

At the end of 2022, the Minnesota Board of Water and Soil Resources (BWSR) awarded multiple competitive Clean Water Fund Grants to local agencies for projects that will improve water quality within the District. A total of $747,350 in fiscal year 2023 Competitive Clean Water Fund Grant funding has been awarded to projects within the Red Lake Watershed District.

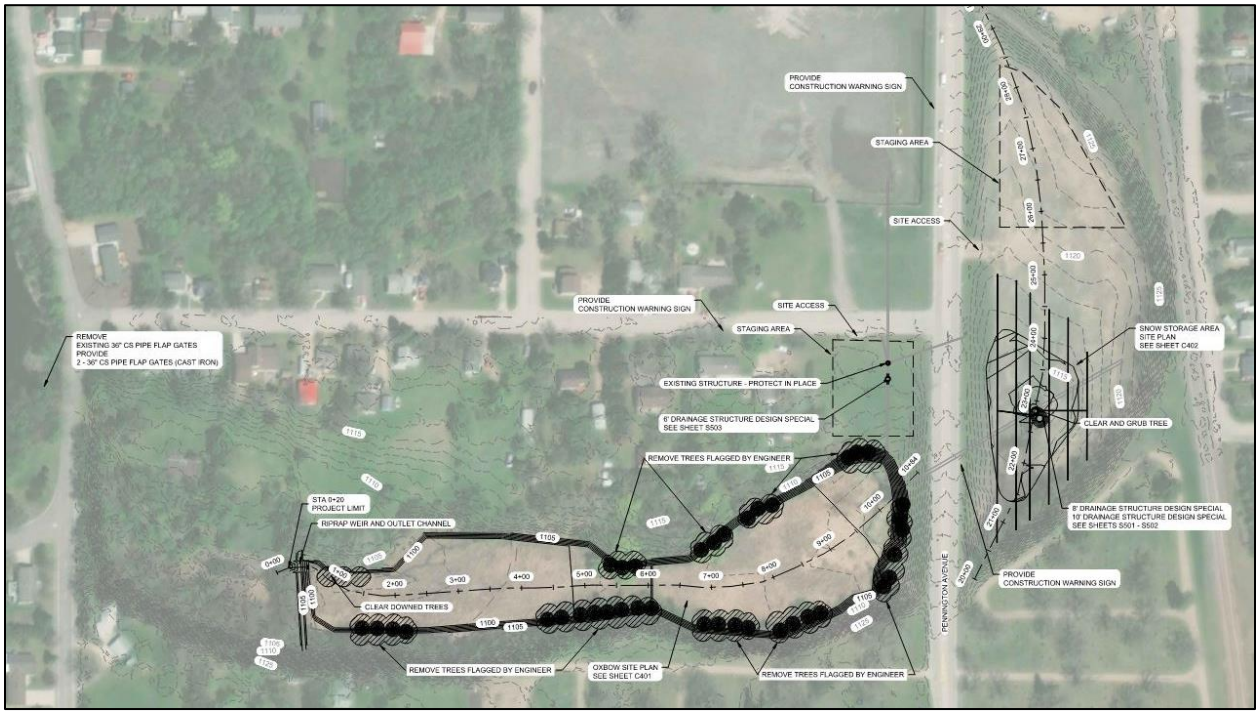
The Red Lake Watershed District (RLWD) was awarded a $428,750 Projects and Practices – Drinking Water grant from BWSR competitive Clean Water Funds for the Chief's Coulee Stormwater Project. Peter Nelson of the Pennington SWCD assisted with the submittal of the application. The SWCD will be working with landowners to install agricultural practices in the upstream portion of the Chief's Coulee drainage area. This proposal for the Chief's Coulee project aims to achieve improved water quality for waters entering the source area of the city's drinking water intake. The Chief's Coulee drainage area, in northern Thief River Falls, has been identified as a source of flooding and water quality concerns through inspection and water quality sampling. The proposed project will reduce 16.5 tons of sediment/year and 126.08 pounds of phosphorus/year.



The Red Lake SWCD was awarded a $318,600 Fiscal Year 2023 Clean Water Fund Projects and Practices Grant for 2023 Lower Clearwater Planning Region Water Quality Improvement Projects. "Red Lake County SWCD has targeted twelve sites for installation of structural agricultural practices in the Lower Clearwater Planning Region. Practices include, but are not limited to, grade stabilization structures, grassed waterways, and water & sediment basins. The implementation of these practices is estimated to reduce sediment loading in the Lower Clearwater River by 318 tons per year (catchment outlet), which would achieve 25% progress towards the 10-year Plan goal."

A BWSR Snapshots article was published in April 2022 to spotlight the Red Lake SWCD's efforts in the Clearwater River Watershed.

Thief River Falls Oxbow Restoration Project



This project was identified as a priority stormwater treatment project in the Thief River Falls Water Quality Study. It was a cooperative project between the city and the watershed district. A website and Facebook post were created to provide public information about the project. Construction of the project began in the last week of August 2021 and was mostly completed by October 2021. Final landscaping and seeding were completed in early summer 2022.

Features

- 3 acres of restored oxbow wetland
- 27,770 cubic yards of accumulated sediment removed from the oxbow wetland
- Rock structure at the oxbow wetland outlet for stabilization, detention, and oxygenation
- 2 hydrodynamic separator structures to trap pollutants and trash from stormwater runoff
- Settling pond created on the east side of Pennington Ave
- 2,056 feet of drain tile under the east settling pond to allow seepage and filtering
- Bypass structure in the east HDS structure to maintain the effectiveness of the structure
- 4.4 tons/year reduction in sediment loading
- 29.03 pounds/year reduction in phosphorus loading

Funding

- $250,000 from the Red River Watershed Management Board
- $250,000 from the Minnesota Board of Water and Soil Resources
- $85,000 from the City of Thief River Falls
- >$90,000 from the Red Lake Watershed District

Nearly all of the construction was completed before the end of 2021, with the exception of some landscaping touch up work and seeding on the west side of Pennington Ave. The area on the west side of Pennington Ave was smoothed and seeded in 2022. The settling pond on the east side of Pennington Ave did a tremendous job of keeping sediment from snowmelt out of the oxbow wetland and the Red Lake River. After the snowmelt, however, the pond remained even though the underground tile was supposed to allow the pond to eventually drain. The tile was examined and found to be undamaged. Staff at HDR Engineering suspected that an impermeable layer somehow formed near the surface of the ground during the snowmelt. The surface was cultivated to break up that impermeable layer.

Relatively clear water was observed flowing from the east hydrodynamic separator structure. There was an extensive amount of filamentous algae in the pond, at times, which indicates that there was an abundance of phosphorus available in the water – either from stormwater or sediment disturbance from the relatively recent construction. Dissolved phosphorus likely wouldn't be filtered out by any structure, but the uptake of that phosphorus by plants and algae likely helped keep some of it out of the river.

Sediment from the city's snow dumping area is trapped by a settling pond created by a hydrodynamic separator structure on the east side of Pennington Ave.

Landscaping work completed in 2022

Stormwater outlet from eastern drainage area

Water Quality Partnerships

The District provides support to other organizations that are working on projects that will improve water quality and habitat within the District's boundaries. That support can come in the form of one watershed one plan collaboration, technical advice/information, financial support, and project administration support. The District considers collaborations to be very important and encourage local governmental units to continue their request for assistance from the District wherever possible.

- The District continued to support the River Watch program.
- District staff participate in Water Resource Advisory Committee (SWCD water planning) meetings.
- One Watershed One Plan committees (Planning Work Groups, Steering Committees, Policy Committees) meet regularly to discuss progress on the current work plans.
- Staff from the District, Pennington SWCD, city of Thief River Falls, and HDR Engineering are working together to plan the Chief's Coulee Stormwater Project.
- District staff participates in the Polk County AIS Task Force that meets several times each year to discuss appropriation of AIS funds.
- The Board approved the reimbursement of analysis expenses for water quality samples that were collected in Maple Lake by the Maple Lake Improvement District.
- The Board approved continuation of financial support for the analysis of lake samples collected by the East Polk SWCD. The East Polk SWCD will collect water quality samples on nine lakes within the District for a monitoring period of three years (2021-2023).
- The Board approved financial support for analysis of lake samples on Bartlett Lake, near Northome, MN.
- The District will be cooperating with the Pennington SWCD for the sampling of Pennington County sites for Surface Water Assessment Grant sampling of the Red Lake River Watershed.
- District staff assisted International Water Institute staff with a study of water quality at the Brandt Impoundment by deploying HOBO water level loggers at the inlet and outlet, measuring flows, and developing flow rating curves.
- The Board approved $5,400 in cost-share funding to the Beltrami Soil and Water Conservation District to help fund Forest Stewardship Plans
- The Board approved $40,425 of 2021 Erosion Control Fund cost-share requests from SWCDs.

2022 RLWD Erosion Control Cost-Share for SWCD Projects

Cost Share From RLWD	Total Project Cost	SWCD	River/ Watershed	Township	Section	Nearby Landmark
$ 1,000.00	$ 7,800.00	Red Lake	Clearwater River	Gervais	35	Terrebonne
$ 1,800.00	$ 12,240.00	Red Lake	Clearwater River	Terrebonne	2	Terrebonne
$ 1,800.00	$ 115,000.00	Red Lake	Red Lake River	Gervais	8	Red Lake Falls
$ 7,000.00	$ 94,000.00	Red Lake	Cyr Creek	Lake Pleasant	15	Red Lake Falls
$ 10,000.00	$ 174,000.00	Red Lake	Red Lake River	River/ Gervais	32/5	JCD 15 outlet @ Penn/Red Lake Co. Boundary
$ 2,000.00	$ 38,671.00	Red Lake	Red Lake River	Red Lake Falls	21	Red Lake Falls
$ 925.00	$ 9,150.00	Red Lake	Clearwater River	Gervais	34	1.5 mi. W of CSAH 12
$ 600.00	$ 9,110.50	Red Lake	Clearwater River	Gervais	28	2 mi. W of CSAH 12
$ 1,200.00	$ 8,307.20	Red Lake	Clearwater River	Emardville	33	Plummer
$ 400.00	$ 97,979.50	Red Lake	Clearwater River	Red Lake Falls	25, 35, 36	Red Lake Falls
$ 7,350.00	$ 9,800.00	West Polk	Heartsville Coulee	Huntsville	29	East Grand Forks
$ 6,350.00	$ 8,500.00	West Polk	Red Lake River	Huntsville	28	East Grand Forks
$ 40,425.00	**$ 584,558.20**	**Totals**				

- The Board approved funding to support the Upper/Lower Red Lake Keep It Clean campaign. 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.
- The District will be working with the MNDNR and landowners on the Turtle Lake, Connection Lake, and Cross Lake Project, which has potential to provide habitat, flood damage reduction, and water quality benefits.

2023 Plans

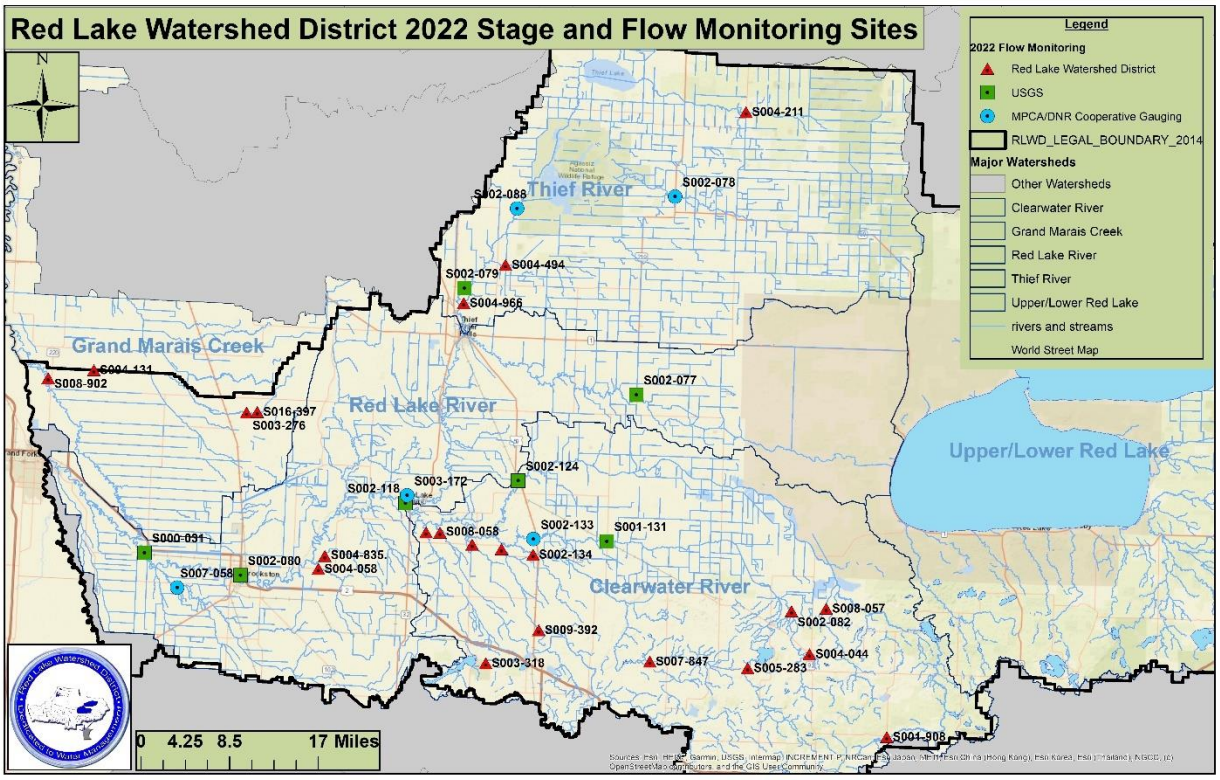
- Work with SWCDs and counties in the Clearwater River Watershed to complete the Clearwater River One Watershed One Plan process and then develop a workplan for the first round of WBIF for the watershed.
- Sampling for the District's long-term monitoring program during the months of May, June, August, and September
- Continuous dissolved oxygen monitoring at a minimum of 5 locations.
- Collection of water quality samples and other data for the Thief River Surface Water Assessment Grant
- Blue-green algae monitoring
    - Monitoring Maple Lake for algal blooms and toxins
    - Watching for blue-green algae blooms on the Thief River during low flows
    - Temperature logging in the Thief River during low flows
    - Possible late-summer screening for algal toxins in shallow, eutrophic lakes
- Stage and flow monitoring
- Plan installation of real-time water level monitoring at two locations along the Clearwater River to assist water allocations for wild rice production.
- Implementation of projects in the Thief River 1W1P annual work plan (finishing the Judicial Ditch 23 outlet stabilization and additional streambank stabilization within the Lower Thief River subwatershed.
- Work with Thief River 1W1P partners to develop a work plan for Fiscal Year 2022 WBIF.
- Implementation of projects in the Red Lake River 1W1P annual work plans (grade stabilization projects, Demarais-Hanson gully stabilization construction, streambank stabilization prioritization/development/design/construction for the 2022 Red Lake River 1W1P Annual Work Plan).
- Partially funding the Phase II of the Pennington County Ditch 96 outlet stabilization project with 319 Grant funding
- Streambank stabilization project construction for the Red Lake River Small Watershed Focus 319 Grant.
- Public education
- River Watch
- Lake sampling at Long Lake, if recommended by the MPCA. Inform the MPCA that the lake has met water quality standards through another year of sampling and could still be eligible for delisting.
- Bartlett Lake: Work with the current volunteer sampler, and possibly find an additional volunteer to assist with 2022 sample collection.
- Work with the MPCA and other LGU stakeholders to identify sampling locations for the 2023-24 Red Lake River Intensive Watershed Monitoring and Surface Water Assessment Grant.

- Interim water quality assessment and prioritization/classification of waters in the Red Lake River and Grand Marais Creek watersheds.
- Detailed survey and feasibility study of the Moose River along the Moose River to identify feasible grade stabilization and erosion prevention projects.
- Work with the West Polk SWCD and/or Polk County to plan a stabilization project for the outlet of Polk County Ditch 99. Stabilization of that eroding outlet will likely be eligible for funding by the Red Lake River 1W1P and other sources (RRWMB water quality funding, 319 Grant).

Stream Gauging (information to add if it's not there already)

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

HOBO water level loggers were deployed at 22 locations on smaller, previously ungauged streams to fill in gaps not filled by USGS or state gaging stations. The District's HOBO water level loggers were all retrieved in November as streams began to freeze. The loggers were cleaned, and data was downloaded from each logger.


Red Lake Watershed District 2022 Stage and Flow Monitoring Sites
Legend
2022 Flow Monitoring
Red Lake Watershed District
USGS
MPCA/DNR Cooperative Gauging
RLWD_LEGAL_BOUNDARY_2014
Major Watersheds
Other Watersheds
Clearwater River
Grand Marais Creek
Red Lake River
Thief River
Upper/Lower Red Lake
rivers and streams
World Street Map
N
Thief River
Grand Marais Creek
Red Lake River
Upper/Lower Red Lake
Clearwater River
S004-211
S002-088
S002-078
S004-494
S002-079
S004-966
S004-131
S008-902
S016-397
S003-276
S002-077
S002-124
S003-172
S002-118
S008-058
S002-133
S001-131
S002-134
S000-031
S002-080
S004-835
S004-058
S007-058
S008-057
S002-082
S009-392
S004-044
S003-318
S007-847
S005-283
S004-908
0 4.25 8.5 17 Miles

River Watch

The year leading up to the 27th Annual River Watch Forum began fall of 2021. Due to high COVID-19 cases, the International Water Institute (IWI) and Red Lake Watershed District (RLWD) decided not to have a large gathering for a fall kickoff. However, each advisor was willing to hold a small fall forum with each school that wanted to do a kickoff activity for the school year. A virtual escape room was designed to get the students thinking about things such as water sampling, watersheds, and macroinvertebrates. Advisors gave prizes to those that completed the escape room the quickest and had some other team building exercises.

Minto River Watch team at the River Watch Forum accepting their first-place plaque.

The 27th Annual River Watch Forum was held March 30th, 2022, at the Alerus Center in Grand Forks, ND for the first time since 2019. River Watch Teams competed against each other by hosting a River Watch event in their community. Each project was judged on marketing materials, a video summary, and a written report detailing planning, hosting, and evaluating their event.

Multiple River Watch teams competing against each other, at the Kickoff Event, to be the first teams to swing the disc into the secchi tube.

Clearbrook-Gonvick River Watch Team sampling September 21, 2022, at one of their many sites along the Lost River.

Hank Kohler kicked the forum off by recounting his journeys to Hudson Bay in 1979 and to the Gulf of Mexico in 2021- both from the same lake! The students then spent the rest of the day learning from three different natural resource professionals who spoke about their careers and how they interact with water. The day ended with an ice cream social and four awards. For the 2022 Forum Project first place was awarded to the Minto River Watch team. Second place was awarded to Sacred Heart- East Grand Forks River Watch team and third place was awarded to West Fargo- Liberty Middle School River Watch team. The 2022 Manager's Choice was awarded to Hawley River Watch team.

Most schools within RLWD are very active in the program. Each month, each school goes to an average of nine sites. Students become very familiar with their sites and learn observation skills as well as sampling skills. At each site they collect water samples and test for stage, water clarity, temperature, pH, conductivity, turbidity, and dissolved oxygen. With the school year quickly coming to an end in the Spring of 2022 and the long season of flooding, schools didn't have a lot of opportunities to sample. In the spring of 2022, only a couple schools managed to get out and sample once before school was out of session.

RLCC River Watch teams canoeing with Wilderness Inquiry at the Kickoff Event.

When schools reconvened fall of 2022, IWI and RLWD held 3 River Watch Kickoff Events through out the basin. They were held in Moorhead, East Grand Forks, and Thief River Falls. The Kickoff in Thief Rivers Falls was held at the RLWD office! At each kickoff event all the students got to participate in fun team building activities or small contests testing their note taking and sampling abilities. There were some class room portions throughout the day teaching them about topics related to their Forum assignment for the 2023 year. With the help from Wilderness Inquiry, students also had the opportunity to go canoeing in 10-person canoes. It was a very chilly day, but the students agreed that they would do it all again! It was a fun filled week throughout the basin and it was nice to have these kickoff events in larger groups again.

RLF students looking for macroinvertebrates using equipment supplied by RLWD.

RLCC students observing macroinvertebrates they caught in their net using equipment supplied by RLWD.

Once the school year started up in the fall of 2022, Red Lake Falls Lafayette High School and Red Lake County Central High School students were able to go macroinvertebrate sampling. Red Lake Falls sampled on the Clearwater River while Red Lake County Central sampled on the Hill River. During macroinvertebrate sampling, River Watch students learned how to follow invertebrate sampling protocol, identify different habitat types within a river/stream system, proper use of equipment for collecting, and sorting and identifying invertebrates using a dichotomous key. Students also learn which invertebrates are indicators of good and bad water quality. At the end of the day, they were able to calculate the pollution tolerance rating for the stream/river.

Participating schools that are located within the RLWD boundary include: Red Lake Falls, Red Lake County Central, Win-E-Mac, and Clearbrook-Gonvick.

River of Dreams

The River of Dreams program engages elementary age students to better understand their watershed through reading, writing, art, and geography. River of Dreams is inspired by "Paddle-to-the-Sea" a 1941 children's novel by Holling Clancy Holling that follows the journey of a wooden canoe through the Great Lakes, down the St. Lawrence Seaway and out to the Atlantic Ocean. River of Dreams students experience virtual tours of their watershed, see where their local rivers flow, and learn watershed terminology during the classroom visit by RLWD and/or IWI staff. The students decorate a trackable 14" cedar canoe and write a dream for its river journey. Canoes are then launched into the local river students learned about during the classroom visit. A webpage is created for each canoe which includes the date and location of launch along with a picture of the canoe and its "dream". Area residents can report canoe sightings into a database by following instructions and recording the unique ID number that accompanies each canoe. Anyone can view decorated canoes, read dream stories, and see where canoes are discovered at www.riverofdreams.org.

Students from Clearbrook-Gonvick getting ready to launch their canoes at the Clearwater Lake dam.

Student from Grygla launching her canoe into the Mud River.

Participating schools that are located within the RLWD boundary include: Red Lake County Central, Win-E-Mac, Red Lake Falls, Clearbrook-Gonvick, Grygla, East Grand Forks, Sacred Heart (East Grand Forks), Thief River Falls, St. Bernards (Thief River Falls), Crookston, and Fisher.

The River of Dreams classroom portion were completed in person in February and March of 2022. Canoe launches were held in person after spring melt in May of 2022.

Aquatic Invasive Species (AIS)

Red Lake Watershed is a member of the Polk County Aquatic Invasive Species Taskforce. It was formed in 2015 to help fight against aquatic species with the County and consists of members from all around the County, representing several different entities. The Taskforce works on many different projects, but the focus of the group is on education and public awareness. Billboards, public access signs, and some promotional items have been utilized to spread knowledge and awareness of AIS in Polk County and around the state.

CD3 Station purchased by Polk County.

In 2022, the task force hired three seasonal inspectors. The inspectors continued to promote and maintain the county's CD3 watercraft cleaning station during the boating season. The unit consists of tools that aid with cleaning prior to and after launching in access sites throughout Polk County. The cleaning system is equipped with a wet-dry vacuum, air hose for drying, grabber tools, and a brush to scrub off watercrafts. All of this is available for the public to use for free. It moved daily and has been seen at many different lakes throughout the County. The unit had been used almost 1000 times with the brush tool being used the most followed by the air hose, grabber tool, vacuum and the lights. The capacity of the unit's water reservoir was only at about 15% by mid-August, so capacity seems to not be an issue. The inspectors are also responsible for watching the Ilids, which are video footage from launching sites that can show in detail if people are removing plants from boats or not. This equipment allows for the county to ask a sheriff to issue a citation if necessary. Since these have been installed, citations have declined and there were no citations issued in 2022.

In June of 2022, the taskforce provided $15,000 to the Union Lake Sarah Improvement District to assist with a special project request to spray Curly Leaf Pondweed. Only 52 acres were sprayed, focusing on the far east side of Union Lake that had the highest densities of Curly Leaf Pondweed. At the next meeting, the results from the survey completed in August should be provided to the taskforce explaining how effective the June spraying was.

For more information on Polk County's AIS Taskforce, please visit https://www.co.polk.mn.us/282/Aquatic-Invasive-Species-AIS-in-Polk-Cou. Also check out and "Follow" the new Polk County Environmental Services Facebook page for more AIS information.

Within the Red Lake Watershed District a few lakes have been listed on the MN DNR's Infested Waters List as of December 16, 2022. The Upper Red Lake has been listed for starry stonewort and zebra mussels, Lake Lomond has been listed for zebra mussels, Union Lake has been listed for Eurasian watermilfoil and Blackduck Lake has been listed for faucet snail. The Red Lake Watershed District and Pennington SWCD deployed stationary zebra mussel samplers in the Red Lake River upstream of Thief River Falls. The Watershed District also collect early detection zebra mussel veliger samples from the Red Lake River at 420th Ave SE during the months of August and September. No zebra mussels have been detected in the Red Lake River via the stationary samplers nor the water samples.

Website

The Red Lake Watershed District is always making improvements to their website, making it more user friendly and easier for viewers to access information. The public now has easier access to One Watershed One Plan information. Hovering over "Admin" and then clicking on 1W1P is the easiest way to get there! Some more information that a lot of people don't know we have is a record of rainfall data. We compare the amount of rainfall measured at the RLWD office to the regions average high and low rainfall amounts. To find this information, go the home page. Looking on the right hand side of the screen, scroll down until you see the "NEW DOCUMENTS" section. Click on RLWD Office Rainfall Data. Here you can look at charts that were created back to 2016! Please visit our website at http://redlakewatershed.org/default.html. Let us know if you would like to see certain information added!

Project 60F Grand Marais Restoration Project

The Red Lake Watershed District has RIM property along the Grand Marais Restoration project (Project 60F) in which RLWD does not own the land but is responsible for the management of RIM on the properties. Every year these properties are to be inspected by four-wheeler for prohibited noxious weeds according to the Minnesota Department of Agriculture Noxious Weed List. If any are found, RLWD must manage or eradicate the infestations accordingly.

Overlooking area of the Grand Marais Restoration placed in RIM easements.

During the inspection of 2022, it was a pleasant surprise to see that areas that use to be large swaths of Canadian Thistle no longer exists. While some Canadian Thistle was identified on higher grounds, a lot of native plants were identified as well.

Native plants found during RIM inspection: Prairie Clover, Goldenrod, Wild Petunia, Common Milkweed, Swamp Milkweed, Big Blue Stem, Black-eyes Susan, Yarrow, False Aster, Panicle Aster, Canadian anemone,

and Maximilian Sunflower. Overall, the Common Milkweed is spreading nicely throughout the RIM properties.

During inspection a lot of Native weeds and Non-native weeds were identified. These, while being a nuisance are not plants identified by the Department of Agriculture to manage. Some of these types of plants identified were: Perennial Sowthistle, Devil's Beggartick, Swamp Smartweed, Lambsquarters, Amaranth, Curly Dock, Cocklebur, Ragweed, Giant Ragweed, Wild Cucumber and Bird's foot trefoil.

Most of the weeds are located along or in the banks of the Grand Marais River. Please see maps.

Two plants were identified during inspection that are in the Prohibited Control group, meaning that they must be controlled to prevent the maturation and spread of propagating parts. These plants are Canadian Thistle and Leafy Spurge. A plan was recommended and passed by the RLWD Board of Managers to do an herbicide application in the fall of 2022 and spring of 2023 and see what is found during the inspection in July/August of 2023.

Area within the Grand Marais restoration RIM area that is infested with Leafy Spurge.

Maintenance of Drainage Systems

One of the many tasks of the Ditch Inspector at the Red Lake Watershed District (RLWD) is to inspect the legal drainage ditch systems that are under the jurisdiction of the district. Semi-annual or annual inspections are conducted on these legal drainage systems to determine what type of repairs or any maintenance work that may be needed to keep these ditches functioning in good working order. Some of the things that the Ditch Inspector looks for: erosion around culverts, damage to slopes or scouring of the ditch bottom, violations to the right-of-way or buffer strips, and cattails or other weeds that may need to be managed.

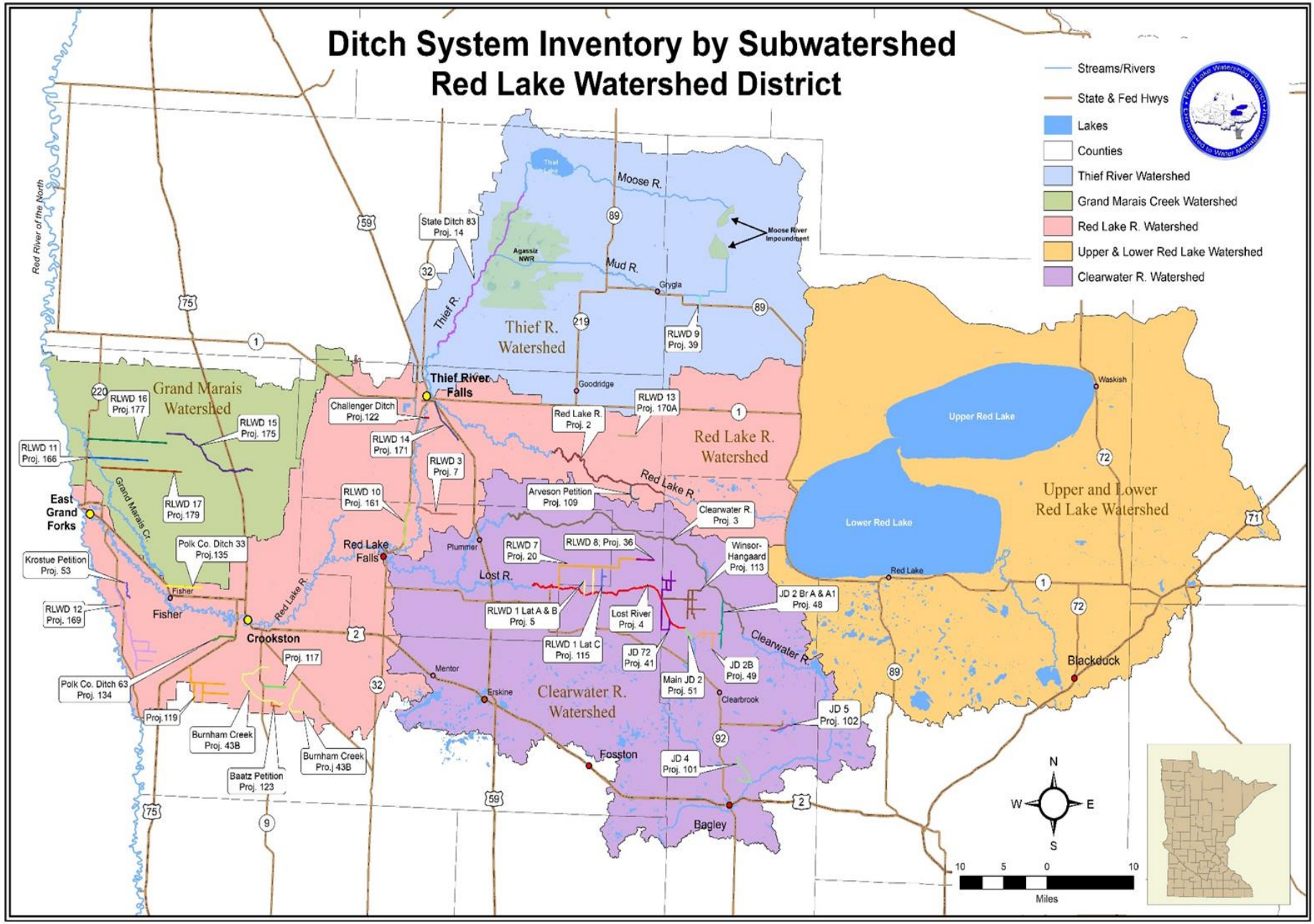
Larson Helicopters from Perham, Minnesota was contracted this year to spray the district's ditches. A helicopter is used because a lot of our ditches are not accessible to a ground sprayer due to fences, wet ground, and some of the ditches go cross country with no right of way to drive on. Due to a relatively dry summer there were only 12 total miles of ditch sprayed out of the 320.44 miles that are under jurisdiction of the Red Lake Watershed District.

Most of the District's ditches have a permanent grass buffer strip on one or both sides. By state law the buffer strip is required to be a minimum of 16 ½ feet wide but is wider on some ditches. The district is required to inspect these grass strips and maintain them. Maintenance of these buffer strips will consist of mowing the ditch and its right-of-way at least once a year, starting around July 1st, and spraying for any noxious weeds. Four to five contractors are hired each year to mow the many watershed projects and the approximately 170 miles of accessible ditch right-of-way.

Legal Drainage Systems under jurisdiction of Red Lake Watershed District

The District at present has jurisdiction of approximately 288.21 miles of legal drainage systems throughout the Watershed. The list of all the systems is shown below:

Ditch #	County	Length (mi.)
Red Lake River	Pennington	18.88
Clearwater River	Clearwater, Polk, Pennington, Red Lake	38.24
Lost River	Clearwater, Polk, Red Lake	23.32
RLWD Ditch #9	Beltrami	1.0
State Ditch #83	Marshall, Beltrami	23.36
Clifford Arveson Ditch	Pennington	2.2
RLWD Ditch 13	Pennington	2.04
RLWD Ditch 14	Pennington	4.42
TRF Flood Damage Reduction	Pennington	1.84
Challenger Ditch	Pennington	.44
RLWD Ditch #10	Red Lake	4.59
Equality/RLWD Ditch #1	Red Lake	2.95
RLWD Ditch #3	Red Lake	4.98
RLWD Ditch #1, Lat A, B	Red Lake, Polk	4.0
RLWD Ditch #7	Red Lake, Polk	12.27
Main Judicial Ditch #2	Clearwater	1.6 (e)
Judicial Ditch #2A	Clearwater	5.44
Judicial Ditch #4	Clearwater	5.39
Judicial Ditch #5	Clearwater	2.72
County Ditch #1	Clearwater	5.5
Judicial Ditch 2B & C	Clearwater	5.52
Winsor-Hangaard	Clearwater, Polk	13.9
Judicial Ditch #72	Clearwater, Polk	14.51
RLWD Ditch #8	Polk	2.01
RLWD Ditch #11	Polk	6.36
RLWD Ditch #12	Polk	17.34
Polk County Ditch #63	Polk	2.91
Polk County Ditch #33	Polk	4.42
Polk County Ditch Improvement	Polk	13.42
Burnham Creek	Polk	14.43
Krostue Petition	Polk	1.7
Kenneth Johnson Petition	Polk	2.58
Scott Baatz Petition	Polk	1.47
RLWD Ditch #15	Polk	13.26
RLWD Ditch #16	Polk	9.2
Total Mile of Ditches	Polk	288.21


Ditch System Inventory by Subwatershed
Red Lake Watershed District
Streams/Rivers
State & Fed Hwys
Lakes
Counties
Thief River Watershed
Grand Marais Creek Watershed
Red Lake R. Watershed
Upper & Lower Red Lake Watershed
Clearwater R. Watershed
Red River of the North
Moose R.
Moose River Impoundment
Agassiz NWR
Mud R.
Thief R.
Thief Lake
Thief R. Watershed
Grand Marais Watershed
Red Lake R. Watershed
Upper and Lower Red Lake Watershed
Clearwater R. Watershed
Upper Red Lake
Lower Red Lake
Thief River Falls
Goodridge
Ghygla
Waskish
Red Lake
Red Lake Falls
Plummer
Lost R.
Red Lake R.
Grand Marais Cr.
Clearwater R.
East Grand Forks
Fisher
Crookston
Mentor
Erskine
Fosston
Bagley
Clearbrook
Blackduck
State Ditch 83 Proj. 14
RLWD 9 Proj. 39
RLWD 13 Proj. 170A
Challenger Ditch Proj.122
Red Lake R. Proj. 2
RLWD 14 Proj. 171
RLWD 3 Proj. 7
RLWD 16 Proj.177
RLWD 15 Proj. 175
RLWD 11 Proj. 166
RLWD 17 Proj. 179
RLWD 10 Proj. 161
Arveson Petition Proj. 109
Clearwater R. Proj. 3
Polk Co. Ditch 33 Proj.135
RLWD 7 Proj. 20
RLWD 8; Proj. 36
Winsor-Hangaard Proj. 113
Krostue Petition Proj. 53
RLWD 12 Proj. 169
RLWD 1 Lat A & B Proj. 5
Lost River Proj. 4
JD 2 Br A & A1 Proj. 48
RLWD 1 Lat C Proj. 115
JD 72 Proj. 41
JD 2B Proj. 49
Main JD 2 Proj. 51
JD 5 Proj. 102
Polk Co. Ditch 63 Proj. 134
Proj. 117
Proj.119
Burnham Creek Proj. 43B
Burnham Creek Pro.j 43B
Baatz Petition Proj. 123
JD 4 Proj. 101
N
W
E
S
10 5 0 10
Miles

Due to the dry conditions in Summer of 2022, there was very little cattail spraying done.

2021 Ditch Spraying by Larson Helicopters, LLC		
Project Number	System	Miles Sprayed
5	RLWD #1 Lat A & B	0
20	RLWD #7	0
36	RLWD #8	0
41	JD #72	0
43B	Burnham Creek	0
48	JD #2A & A of 1	0
49	JD #2B	0
115	Equality/RLWD #1	0
117	Johnson Petition	0
119	Polk Co. Ditch Improvement #'s 104, 61, 47, 94	0
135	Polk Co. Ditch #33	0
161	RLWD #10	0
166	RLWD #11	4.23
169	RLWD #12	0
170A	RLWD #13	0
171	RLWD #14	0
175	RLWD #15	7.77
177	RLWD #16	0

RLWD Project #14, State Ditch 83, Marshall County

During inspection, it was noted that a lot of erosion is occurring around most of the side water inlets. Rip rap is to be placed at these outlets in the Spring/Summer of 2023. In the Summer of 2022, Lunke Construction Inc. was hired to do the annual mowing and maintenance along the right of away. A portion of the ditch was reshaped the slopes and leveled the ditch bank in the SW ¼ of section 13 of Excel township. After the reshaping was completed, all said areas were seeded. District staff also had Lunke Construction clean out a small ditch leading to the side water inlet at STA 899+71. District staff also spent some time cutting up and clearing downed trees along the ROW.

In the recent years, sloughing along the system has increasingly gotten worse. There were 2 locations that had sloughing fixed on the system that was paid by one watershed one plan (1W1P). Both locations had toe wood sod mat installed to help prevent undercutting and sloughing. There are pictures of this installation on the next page below the chart. See also 1W1P projects for more information.

These photos are areas along State Ditch #83 that were part of the Toe Wood Sod Mat Installation It was installed to protect the integrity of the ditch bank and stop or slow down bank sloughing and erosion.

Construction of SD #83 Costs Since 2003		
Year	**Sites Completed**	**Construction Cost**
2003	5	$ 17,924.00
2004	High water levels	$ 0.00
2005	7	$ 39,033.00
2006	11	$ 36,004.00
2007	16	$ 42,144.00
2008	11	$ 34,450.00
2009	7	$ 41,574.00
2010	High water levels	$ 0.00
2011	6	$ 41,400.00
2012	11	$ 80,480.00
2013	5	$ 30,096.00
2014	High water levels	$ 0.00
2015	4	$ 16,040.00
2016	1	$ 2,615.00
2017	12	$ 55,330.00
2018	4	$ 14,213.00
2019	High water levels	$ 0.00
2020	0	$ 0.00
2021	12	$ 19,897.40
2022	2	$ 4,616.00
Total	102	$ 475,816.00

RLWD Project 36, RLWD #8

In the late fall of 2021, the District received a request from a landowner to remove sediment along ¼ mile of the ditch along the NW1/4NE1/4, Section 23, Johnson Township, Clearwater County. They also requested to have the downed trees cut and chipped along the NE1/4NE1/4, Sec 23, Johnson Township. There is a lack of plans in the office for this ditch system, so in the spring of 2023, a survey and a few soil borings will be done to create and establish ditch plans. Once plans are reestablished, the district will consider the requests.

RLWD Project #49, JD #2A

In mid-summer a beaver dam was found in the middle of Section 25 of Winsor Township, Clearwater County. One beaver was trapped, and the dam was removed.

Section 25- Winsor Township

RLWD Project #175, Ditch 15

The system overall is functioning properly, but in the spring flood of 2022 there were 2 sites identified by RLWD staff that are in need of repair. The 2 sites were submitted to FEMA and will be repaired after spring runoff in the spring/ summer of 2023 (Pictures of sites below). Berault Construction was contacted to fix some flap gates in Angus township that were damaged by the mowers. Larson helicopter completed 7.77 miles of cattail spraying on this system late Summer of 2022.

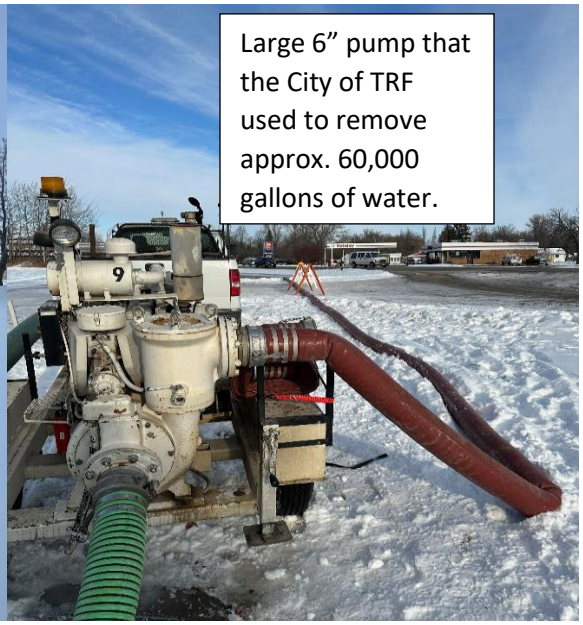
RLWD Project #134, Polk County Ditch 63

During spring inspection, a large gully was found in the SW4NW4NW4 section 10 of Andover Township near STA 184+00. The gully is about twenty feet long, eleven feet wide and six feet deep. Due to the topography of the area, the best fix is to shape the gully and place rip rap to stabilize the slopes. This work will be done in 2023. In addition to adding the rip rap, this system also has been submitted to FEMA to get sediment removed and a blowout fixed at STA 177+00, that were a result of the Spring 2022 flood.

Facing north, large gully 20' long x 11' wide x 6' deep.

RLWD Project #171, Ditch 14

The Spring flood of 2022 brought heavy amounts sediment to the water quality sediment traps that are built into this system. RLWD staff hired Greenway Solutions to vacuum excavate the sediment from two traps, one at STA 41+51 which is located at Greenwood Street, and another at STA 29+29 along Dale Street in Thief River Falls. With help from the City of Thief River Falls water department, RLWD staff was able to remove water from the underground portion of the ditch to expose the sediment that was underneath the standing water. This item was submitted to FEMA as the water quality catch basins were not full of sediment prior to the flood. Les Cota did all the mowing on this system this summer. The system is operating as should.



RLWD Project #177, Ditch 16

The Spring flood of 2022 caused damage to this system from one end to the other. RLWD staff submitted over 80 sites of damage to FEMA. The types of damage that occurred on the ditch is small amounts of sediment deposit at the side water inlets, rilling, blowouts, cutting of the ditch bank, below the side water inlets. The sediment will be cleaned from the bottom of the ditch and cast on the ditch bank, the rills will be filled in, and ditch bank cutting will be repaired with rip rap where necessary. Paul Zavoral, with Higher Ground Construction has been hired to do the repair work. Repairs have been started on the west end of the ditch system in the Fall of 2022 and will continue to work east after spring runoff. Pictures on the right show the work completed so far.

RLWD Project 166, Ditch 11

This system is operating and functioning as should. Late Summer of 2022 cattail spraying was completed on 4.23 miles, starting at the outlet going east. Shane Vonasek completed the mowing on this system.

Other Watershed Activities

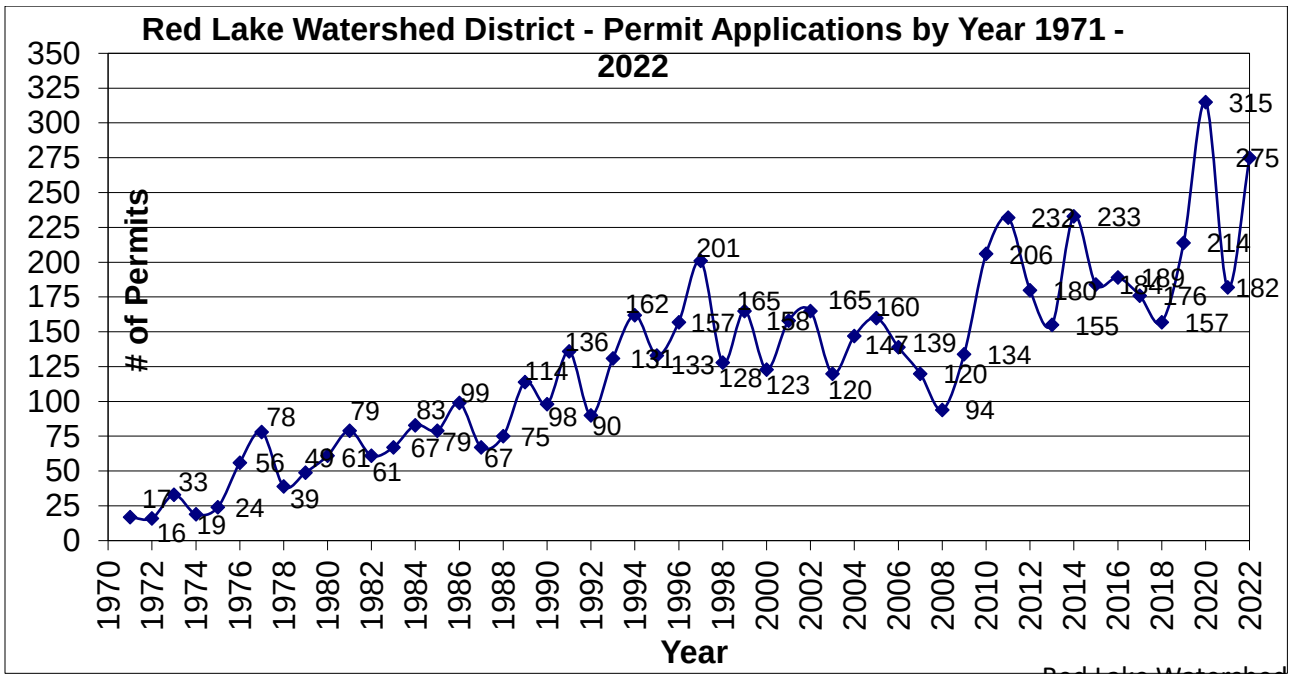
Permits (RLWD Project No. 90).

In 2022, a total of 275 permit applications were received , 31 were for subsurface tile projects. This year was the seventh full year of the District's subsurface drain tile permitting policy. The numbers listed below indicate the permits and how they are categorized within our rules for permitting:

- 2 utilities
- 215 culvert/bridge
- 18 drainages
- 31 drain tiles
- 1 grade Stabilization
- 1 bridge
- 2 flap gates
- 2 road
- 3 dikes

Applicants included state and county highway departments, railroads, townships, cities, utility & pipeline companies, State & Federal agencies, landowners, and private individuals. Permit applications are available on the District web site:www.redlakewatershed.org

Examples of permitted work consisted of road and bridge projects, wetland restorations, erosion control projects, culvert installations, and ditch cleaning. Work associated with permit review may involve, watershed delineations, detailed surveys, drainage area and culvert sizing recommendations, and meetings. Plan and profile surveys are provided at no cost to the applicant.



'72 - '81' 10 Year Average	'82- '91 10 Year Average	'92 - '01 10 Year Average	'02 - '11 10 Year Average	'12 - '21 10 Year Average
45	88	145	152	199

The District also dealt with permit violations relating to unpermitted/unauthorized work. In those cases, written warnings are sent explaining that if there is a second offense, the responsible person or entity could possibly be subject to an administrative fee, re-storing the work to the original condition, and paying for any engineering and attorney's fees incurred by the District.

The District, at times, may perform surveys and establish proposed grades/elevations when necessary. Final approval for the work will be discussed with the proper public road authorities, whether it is the state, county, or township.

Wild Rice Water Allocation (RLWD Project No. 45)

As a domesticated agricultural grain crop, wild rice is grown in paddies, flooded with water to an average depth of about 1 foot.

Wild rice production along the Clearwater River began in 1968. The water allocation project was petitioned by the growers in 1984. This involves the appropriation of water from the Clearwater River, for production of wild rice on approximately 12,000 acres of paddies. Spring flood storage capacity in the paddies is substantial, and amounts to about 23,000 acre-feet, which is equivalent to 1.1 inches of runoff. This storage helps to reduce downstream flood flows/peaks.

When there is substantial flow in the river, no water allocation is necessary. the growers may pump as needed. However, during periods of low flow, the District allocates water to the growers. The allocation program ensures that each grower receives their appropriate share of available flow and that the protected flow of 36 cubic feet per second (cfs) is maintained in the Clearwater River.

Paddies are typically drained during July and August to facilitate harvest. Some growers partially flood paddies in the fall season through freeze up. By doing this, it helps to reduce the need of pumping activity in the spring, at which time, water supplies may not be enough to meet all their needs.

For parts of 2022, flows in the Clearwater River were below the minimum flow that initiates allocation. Allocation was necessary for a period in March and then from September through November for fall flooding of the paddies. Normal duties include correspondence with growers and recording river levels at various sites. The growers also provide valuable information on river conditions and stream gage data.


Typical pumping station


Wild rice paddy


Harvesting wild rice

Snow Surveys

Each year, the District performs snow surveys which usually begin in mid-February and continues through the spring melt on an as needed basis if snow conditions change. Seven sampling sites are monitored throughout the District. The locations of these sites are near impoundment facilities which are designed and operated for floodwater retention.

In 2022, within the district we had a snow depth average of 19.06" with a 3.38" of moisture in the snow. This year we received virtually no spring runoff from the snow melt.

Measuring Procedure: The depth of the snowpack is measured and a 'core sample' is obtained. The tube and snow core are weighed, and the "water content" of the snow is calculated. Five samples are taken at each site and averaged for the data.

This information is forwarded to the National Weather Service, the North Central River Forecast Center, and local officials. This helps them to estimate the amount of runoff and make flood forecasting predictions.

The relationship between snowpack and the amount of snowmelt runoff is complex and depends on many factors.

Some of the criteria used to determine flood potential of spring snowmelt are:

- Depth of existing snow cover and snow moisture content
- Existing soil moisture (was it wet or dry the previous fall?)
- Depth of frost - or is there any frost?
- River ice and ice jams

Fast and slow thaws:

- Gradual or intermittent thawing may reduce the potential for serious flooding, especially in areas with minimal frost depths.
- Flood potential usually increases with late season melting when a rapid melt is more likely; and if additional precipitation occurs during the runoff event.

Financial Report

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BradyMartz

April 4, 2023

To the Board of Managers
Red Lake Watershed District
Thief River Falls, Minnesota

We have audited the cash basis financial statements of the governmental activities, each major fund, and the remaining fund information of the Red Lake Watershed District for the year ended December 31, 2022 and have issued our report thereon dated April 4, 2023. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our conversation with the President on April 3, 2023. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Red Lake Watershed District are described in Note 1 to the financial statements. As described in Note 2 to the financial statements, the District changed from the modified cash basis to the cash basis of accounting during 2022. We noted no transactions entered into by the District during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The District has no sensitive estimates.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. There were no material misstatements detected as a result of audit procedures either individually or in the aggregate, to each opinion unit's financial statements taken as a whole.

Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated April 4, 2023.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the District's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the District's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We were engaged to report on the budgetary comparison schedule, schedule of fund balances by project, and statement of direct expenditures by classification, which accompany the financial statements but are not required supplementary information. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with the cash basis of accounting, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the Officials Directory or the Management's Discussion and Analysis, which accompany the financial statements but are not required supplementary information. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Restriction on Use

This information is intended solely for the use of the Board of Managers and management of Red Lake Watershed District and is not intended to be and should not be, used by anyone other than these specified parties.

Very truly yours,

Brady Martz

BRADY, MARTZ & ASSOCIATES, P.C.
THIEF RIVER FALLS, MINNESOTA

RED LAKE WATERSHED DISTRICT
THIEF RIVER FALLS, MINNESOTA

AUDITED FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2022

TABLE OF CONTENTS

RED LAKE WATERSHED DISTRICT
OFFICIAL DIRECTORY
DECEMBER 31, 2022

Board of Managers

Manager	County	Position
Dale M. Nelson	Pennington	President
Gene Tiedemann	West Polk	Vice President
LeRoy Ose	Marshall	Secretary
Terry Sorenson	East Polk	Treasurer
Brian Dwight	Beltrami	Manager
Allan Page	Red Lake	Manager
Tom Anderson	Clearwater	Manager

BradyMartz

INDEPENDENT AUDITOR'S REPORT

Board of Managers
Red Lake Watershed District
Thief River Falls, Minnesota

Report on the Audit of the Financial Statements

Opinions

We have audited the accompanying cash basis financial statements of the governmental activities, each major fund, and the remaining fund information of the Red Lake Watershed District as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective cash basis financial position of the governmental activities, each major fund, and the remaining fund information of the Red Lake Watershed District, as of December 31, 2022, and the respective changes in cash basis financial position for the year then ended in conformity with the basis of accounting described in Note 1.

Basis of Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Red Lake Watershed District and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Basis of Accounting

We draw attention to Note 1 of the financial statements, which describes the basis of accounting. The financial statements are prepared on the cash basis of accounting, which is a basis of accounting other than accounting principles generally accepted in the United States of America. Our opinions are not modified with respect to this matter.

Emphasis of Matter

As discussed in Note 2 to the financial statements, the District adopted a change of accounting from modified cash basis to cash basis in the current year. Our opinions are not modified with respect to this matter.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the cash basis of accounting described in Note 1; this includes determining that the cash basis of accounting is an acceptable basis for the preparation of the financial statements in the circumstances. Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Red Lake Watershed District's basic financial statements. The budgetary comparison schedule, statement of fund balances by project, and the statement of direct expenditures by classification as listed in the table of contents as supplementary information are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the budgetary comparison schedule, statement of fund balances by project, and the statement of direct expenditures by classification are fairly stated in all material respects in relation to the basic financial statements as a whole as described in the basis of accounting described in Note 1.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the official directory and the management's discussion and analysis but does not include the basic financial statements and our auditor's report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 4, 2023 on our consideration of the Red Lake Watershed District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to solely describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Red Lake Watershed District's internal control over financial reporting and compliance.

Brady Martz

BRADY, MARTZ & ASSOCIATES, P.C.
THIEF RIVER FALLS, MINNESOTA

April 4, 2023

Our discussion and analysis of the Red Lake Watershed District's financial performance provides an overview of the District's financial activities for the fiscal year ended December 31, 2022, within the limitations of the District's cash basis of accounting. Please read it in conjunction with the District's financial statements following this section.

FINANCIAL HIGHLIGHTS

- The District's governmental funds total revenues exceeded total expenditures, on the cash basis of accounting, by $3,353,020 for the year ended December 31, 2022.
- The general fund showed an increase of cash basis fund balance in the amount of $29,406.
- The District's General Fund ended the year with a fund balance of $270,675.
- The District's combined fund balance at the close of the current year was $5,515,826.

Overview of the Financial Statements

The discussion and analysis is intended to serve as an introduction to the Red Lake Watershed District's basic financial statements. The District's basic financial statements comprise three components: 1) government-wide financial statements, 2) fund financial statements, and 3) notes to the financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

Basis of Accounting. The District has elected to present its financial statements on a cash basis of accounting. The cash basis of accounting is a basis of accounting other than generally accepted accounting principles. Basis of accounting is a reference to when financial events are recorded, such as the timing for recognizing revenues, expenses, and their related assets and liabilities. Under the District's cash basis of accounting, revenues and expenses are recognized when the cash transactions occur.

As a result of the use of the cash basis of accounting, certain assets and their related revenues (such as accounts and taxes receivable and related revenue not collected yet) and certain liabilities and their related expenses (such as accounts payable and expenses for goods or services received but not paid yet) are not recorded in these financial statements. Therefore when reviewing the financial information and discussion within this annual report, the reader should keep in mind the limitations resulting from the use of the cash basis of accounting.

Government-Wide Financial Statements. The government-wide financial statements are designed to display information about the Red Lake Watershed District taken as a whole.

Over time, increases or decreases in net position – cash basis may serve as a useful indicator of whether the financial cash position of the Red Lake Watershed District is improving or deteriorating.

The government-wide financial statements can be found on pages 12 and 13 of this report.

Fund Financial Statements. The fund financial statements focus on the individual parts of the District. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Red Lake Watershed District, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All the funds of Red Lake Watershed District are governmental funds.

All governmental funds utilize a "current financial resources" measurement focus. Only current financial assets and liabilities are generally included on their balance sheets. Their operating statements present sources and uses of available spendable financial resources during a given period. These funds use fund balance as their measure of available spendable financial resources at the end of the period.

Red Lake Watershed District maintains three major governmental funds. Information is presented separately in the governmental fund statement of balances arising from cash transactions and in the governmental fund statement of cash receipts, disbursements and changes in cash fund balance for the General Fund, Special Projects Fund, and Capital Projects Fund.

The basic government fund financial statements can be found on pages 14 through 15 of this report.

Notes to the Financial Statements. The notes provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements. The notes to the financial statements can be found on pages 17 through 27 of this report.

RED LAKE WATERSHED DISTRICT'S NET CASH POSITION

	2022	2021	Change 21-22
ASSETS			
Cash and Investments	$ 5,515,826	$ 2,162,806	$ 3,353,020
NET CASH POSITION			
Restricted for Ditch Maintenance	$ 589,247	$ 639,143	$ (49,896)
Unrestricted	4,926,579	1,523,663	3,402,916
	$ 5,515,826	$ 2,162,806	$ 3,353,020

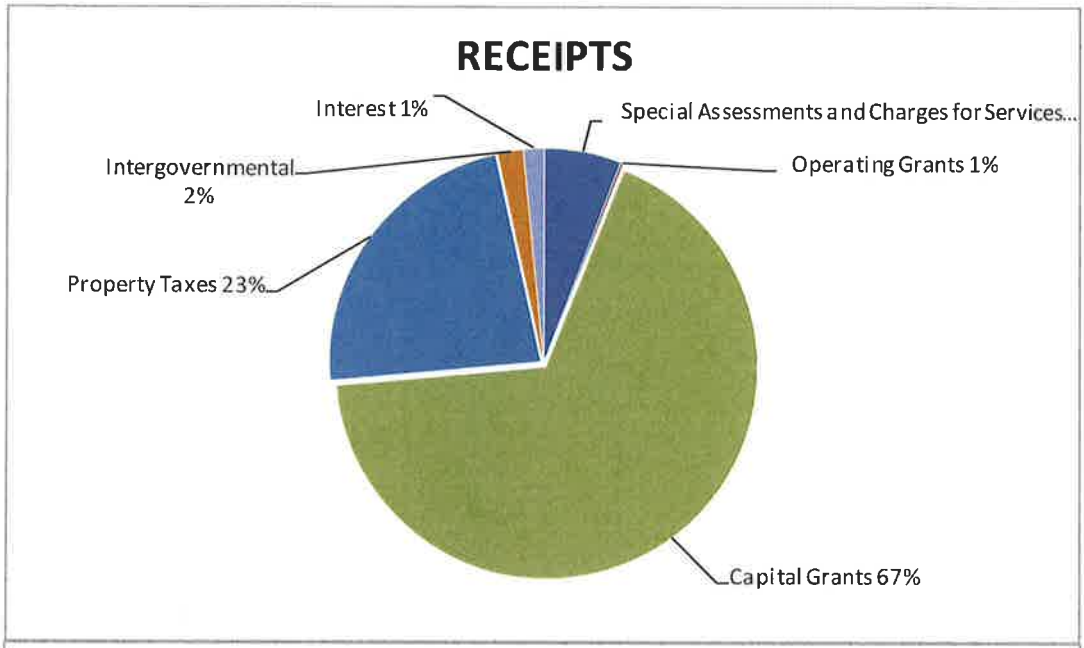
At the end of 2022 and 2021, the Red Lake Watershed District is able to report positive balances in net cash assets.

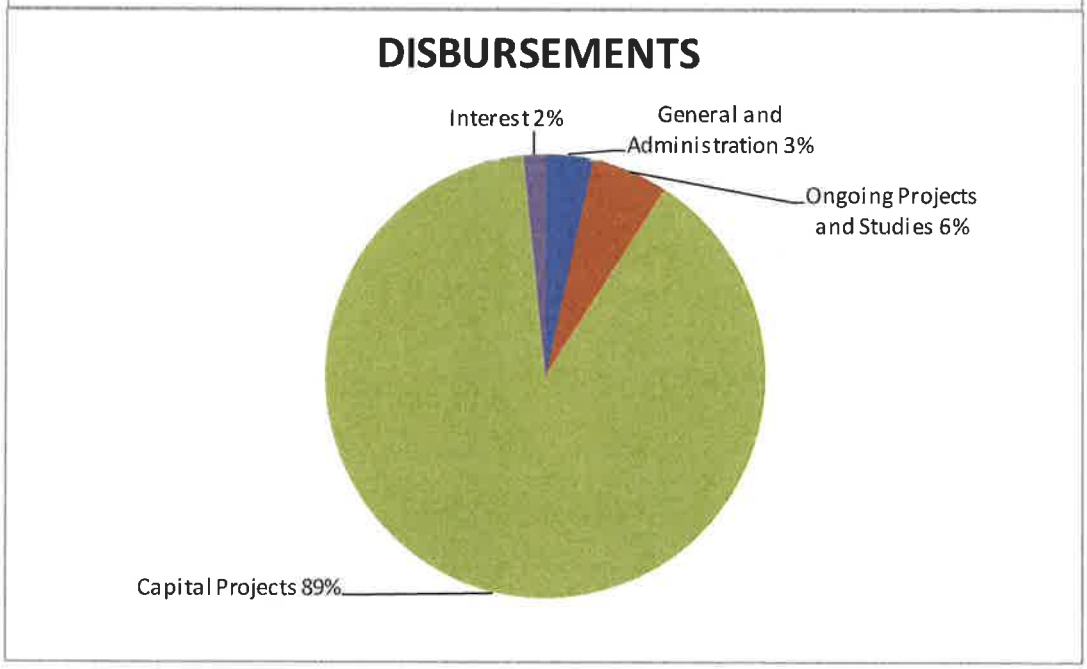
RED LAKE WATERSHED DISTRICT'S CHANGE IN NET CASH ASSETS

Governmental activities resulted in an increase of $3,353,020 of Red Lake Watershed District's net cash position from the fiscal year 2021 to the current fiscal year. The details of the changes are as follows:

	2022	2021	Change 21-22
Receipts			
Program Revenues			
Special Assessments and Charges for Services	$ 432,491	$ 263,544	$ 168,947
Operating Grants	13,171	77,015	(63,844)
Capital Grants	5,024,774	4,899,243	125,531
General Revenues			
Property Taxes	1,710,045	1,704,004	6,041
Intergovernmental	140,101	72,401	67,700
Interest	115,904	68,276	47,628
Total Receipts	7,436,486	7,084,483	352,003
Disbursements			
General and Administration	140,188	129,744	10,444
Ongoing Projects and Studies	231,632	413,773	(182,141)
Capital Projects	3,643,960	3,954,965	(311,005)
Allocated Interest	67,686	50,246	17,440
Total Disbursements	4,083,466	4,548,728	(465,262)
Increase (Decrease) in Net Position	3,353,020	2,535,755	817,265
Net Position - January 1	22,611,891	20,076,136	2,535,755
Net Position - December 31	$ 25,964,911	$ 22,611,891	$ 3,353,020

Below are specific graphs which provide comparisons of the receipts and disbursements for the year ended December 31, 2022:





Governmental Activities

To aid in the understanding of the Statement of Activities Arising from Cash Transactions on page 14, some additional explanation is given. Of particular interest is the format that is significantly different from a typical Statement of Revenues, Expenses, and Changes in Fund Balance. You will notice that expenses are listed in the first column, with revenues from that particular program reported to the right. The result is a Net (Expense)/Revenue. This type of format highlights the relative financial burden of each of the functions on the District's taxpayers. It also identifies how much each function draws from the general revenues or if it is self-financing through fees and grants or contributions. All other governmental revenues are reported as general. It is important to note that all taxes are classified as general revenue, even if restricted for a specific purpose.

A FINANCIAL ANALYSIS OF THE DISTRICT'S FUNDS

General Fund Budgetary Highlights

For the year ended December 31, 2022, General Fund expenditures were $20,050 under final budget. The budget was not amended during the year.

ECONOMIC FACTORS AND NEXT YEAR'S BUDGET

As noted below, construction will begin on several projects as well as work on several water quality grants, flow through-grants, cooperative projects and grants with other agencies.

OTHER ITEMS OF INTEREST

Water Quality Projects

Thanks to the Clean Water Land and Legacy Act (CWLLA), the Minnesota Pollution Control Agency (MPCA) has been able to provide the District with funding for four watershed restoration and protection strategy (WRAPS) projects (Thief River, Red Lake River, Grand Marais Creek, and Clearwater River watersheds). Another WRAPS project, for the Upper/Lower Red Lakes Watershed, was completed by the Red Lake Department of Natural Resources. The WRAPS process and stakeholder involvement informed the 1W1P process, which has provided much of the funding for the implementation of on-the-ground projects that protect and improve water quality. Surface Water Assessment Grants (SWAG) from the MPCA (also funded by the CWLLA) help fund intensive monitoring of targeted watersheds. The targeting and prioritization work completed during the WRAPS and 1W1P processes have aided the acquisition of additional grant funding. The United States Environmental Protection Agency awarded a Small Watersheds Focus 319 Grant to the Red Lake River that has been used to install structural agricultural best management practices and streambank stabilization projects. Because of the Red Lake River 1W1P partners' accomplishments and active development of shovel ready projects, the MPCA awarded additional 319 Grant funding (funding that was unspent in another area of the state) to the District in 2022 to help fund the construction of a bank stabilization project.

Pine Lake Outlet Structure

In 2021, the District's engineer completed the final plans and specifications for this project, solicited bids and started construction on a project which includes replacing the outlet structure of Pine Lake. Construction continued into the late fall of 2021 and was completed in August 2022 at a cost of $347,162.

Phase II of this project will include replacement of the existing arch pipe and replace it with a box culvert in the Lost River, downstream of the Pine Lake Outlet Structure. This structure is being designed by District engineering staff as well MnDNR staff to allow more flow capacity during flood events at the same time allowing proper fish passage on the Lost River. The District will advertise for bids in 2023 but due to the lack of construction materials, we expect the project to be completed in 2024.

Red Lake River One Watershed One Plan (1W1P)
In 2018, funding through the BWSR Clean Water Fund in the amount of $677,551 was awarded to this planning region to complete various projects identified in the workplan approved by the BWSR. It should be noted at the request of the Policy Committee formed to oversee the implementation of the plan the Red Lake Watershed District was appointed as the fiscal agent for the implementation of the plan. Implementation of the funds dispersed in the 2018 workplan started in 2019, continued into 2020 with 50% of the funds being spent. The reconciliation for the 2018 grant in the amount of $667,551 was completed, closed and the remaining 10% of the grant in the amount of $67,755 was dispersed in February 2022.

In 2020, funding through the BWSR Watershed Base Implementation Funding (WBIF) in the amount of $1,071,149 was awarded by BWSR for the implementation of various projects identified in the workplan. The Policy Committee appointed the Red Lake Watershed District as the fiscal agent for the implementation of the plan. Implementation of the funds dispersed in the 2020 workplan started in 2020, continued into 2021 with 50% of the funds being spent. In October 2022, BWSR dispersed 40% of the grant, in the amount of $428,460. The reconciliation for the 2020 grant in the amount of $1,071,149 was completed in December 2022, and the remaining funds will be dispersed in early 2023.

In 2022, another round of WBIF was awarded in the amount of $1,071,149. The District and their partners continued to complete water quality projects in accordance with the approved 2022 work plan. The Policy Committee formed to oversee the implementation of the plan appointed the Red Lake Watershed District as the fiscal agent for the implementation of the plan. BWSR dispersed 50% of the grant, in the amount of $535,575, in March 2022.

Thief River One Watershed One Plan (1W1P)
In 2020, funding through the BWSR Clean Water Fund in the amount of $529,892 was awarded to this planning region to complete various projects identified in the workplan approved by the BWSR. It should be noted at the request of the Policy Committee formed to oversee the implementation of the plan the Red Lake Watershed District was appointed as the fiscal agent for the implementation of the plan. Implementation of the funds dispersed in the 2020 workplan started in 2021, continued into 2022 with 50% of the funds dispersed in July 2022.

Clearwater River One Watershed One Plan (1W1P)
In 2022, BWSR approved the Clearwater River 1W1P Comprehensive Plan, along with the Implementation workplan approved by BWSR. At the request of the Policy Committee, the Red Lake Watershed District was appointed as the fiscal agent for the implementation of projects identified the workplan, with funds to be dispersed in 2023.

Black River Impoundment
Construction of the Black River Impoundment was completed in August 2022, with the final payment made to the contractor in November 2022. Final construction costs were $4,535,157.00. The project was funded in part by the Red River Watershed Management Board (RRWMB), Minnesota Pollution Control Agency (MPCA) 319 Grant, One Watershed One Plan Watershed Based Funding, and the Red Lake Watershed District. Total project expenditures were $7,822,934.12. During the 2022 spring flood event, extensive damage was done to the Black River Impoundment in the amount of $222,445.11. The Red Lake Watershed District applied for and was awarded funding for repairs to the project from the Federal Emergency Management Agency (FEMA). Funds will be dispersed in 2023.

Thief River Falls Westside Flood Damage Reduction Project
Construction of the Thief River Falls Westside Flood Damage Reduction Project was completed in 2021 at a total project cost of $9,363,381.74. Project partners included the Red Lake Watershed District, Minnesota Department of Transportation (MnDOT), City of Thief River Falls and Pennington County, with the final funding received from the partners in 2022.

Legal Drainage Petitions
During the 2022 spring flood event, extensive damage was done to Ditch 15, RLWD Project 161 and Ditch 16, RLWD Project 177. The Red Lake Watershed District applied for and was awarded funding for repairs to the project from the Federal Emergency Management Agency (FEMA). Repairs and funds will be completed and dispersed in 2023.

In 2022, the Red Lake Watershed District and petitioners, appealed a District Court decision for the Improvement of Polk County Ditch #39, RLWD, Project 179. The decision on the Appeal is expected in early 2023.

Thief River Falls Oxbow Restoration and Stormwater Treatment Project
Construction of the Thief River Falls Oxbow Restoration and Stormwater Treatment project was completed in 2022. The project included restoration of an existing oxbow located within the City of Thief River Falls with a construction cost of $599,072, and a total project cost of $767,804.52. The project was funded in cooperation with the Red Lake Watershed District, City of Thief River Falls, Red River Watershed Management Board (RRWMB) and Board of Water Soil Resources (BWSR). Funding for the project from the various partners was received in 2022.

CONTACTING THE DISTRICT'S FINANCIAL MANAGEMENT

This financial report is designed to provide a general overview of Red Lake Watershed District's finances for all those with an interest in the government's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Red Lake Watershed District, 1000 Pennington Avenue South, Thief River Falls, Minnesota 56701.

BASIC FINANCIAL STATEMENTS

RED LAKE WATERSHED DISTRICT
STATEMENT OF NET CASH POSITION
DECEMBER 31, 2022

	Total
Assets	
Petty Cash	$ 100
Pooled Cash and Investments	5,515,726
Total Assets	$ 5,515,826
Net Cash Position	
Restricted for Ditch Maintenance	$ 589,247
Unrestricted	4,926,579
Total Net Cash Position	$ 5,515,826

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF ACTIVITIES ARISING FROM CASH TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2022

Functions/Programs	Disbursements			Program Receipts and Sources			Net Cash Sources (Uses) and Changes in Net Cash Position
	Direct	Allocated Salaries and Overhead	Total	Special Assessments and Charges For Services	Operating Grants and Contributions	Capital Grants and Contributions	Governmental Activities
Governmental Activities:							
General and Administrative	$ (974,380)	$ 834,192	$ (140,188)	$ 21,724	$ -	$ -	$ (118,464)
Ongoing Projects and Studies	(182,030)	(49,602)	(231,632)	162,985	13,171	-	(55,476)
Capital Projects	(2,859,370)	(784,590)	(3,643,960)	247,782	-	5,024,774	1,628,596
Allocated Interest	(67,686)	-	(67,686)	-	-	-	(67,686)
Total Governmental Activities	$ (4,083,466)	$ -	$ (4,083,466)	$ 432,491	$ 13,171	$ 5,024,774	$ 1,386,970
General Receipts:							
Tax Levies							$ 1,710,045
Intergovernmental (not restricted to specific programs)							
State MV and Disparity Reduction Credits							140,101
Allocated Interest							115,904
Total General Receipts							1,966,050
Change in Net Cash Position							3,353,020
Net Cash Position - Beginning							22,611,891
Restatement - See Note 2							(20,449,085)
Net Cash Position - Beginning as Restated							2,162,806
Net Cash Position - Ending							$ 5,515,826

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF BALANCES ARISING FROM CASH TRANSACTIONS – GOVERNMENTAL FUNDS
DECEMBER 31, 2022

ASSETS	General Fund	Special Revenue Fund	Capital Project Fund	Total Governmental Funds
Petty Cash	$ 100	$ -	$ -	$ 100
Pooled Cash and Investments	270,575	589,247	4,655,904	5,515,726
Total Assets	$ 270,675	$ 589,247	$ 4,655,904	$ 5,515,826
CASH FUND BALANCE				
Restricted for Ditch Maintenance	$ -	$ 589,247	$ -	$ 589,247
Committed for Capital Projects	-	-	4,655,904	4,655,904
Unassigned	270,675	-	-	270,675
Total Cash Fund Balance	$ 270,675	$ 589,247	$ 4,655,904	$ 5,515,826

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF CASH RECEIPTS, DISBURSEMENTS, AND CHANGES IN CASH FUND BALANCES – GOVERNMENTAL FUNDS
FOR THE YEAR ENDED DECEMBER 31, 2022

RECEIPTS	General Fund	Special Revenue Fund	Capital Project Fund	Total Governmental Funds
Property Taxes	$ 145,986	$ -	$ 1,564,059	$ 1,710,045
Special Assessments	-	162,578	1,075	163,653
Intergovernmental:				
Federal	-	80	129,774	129,854
State	-	-	1,904,916	1,904,916
Local	-	13,091	3,130,185	3,143,276
Other:				
Miscellaneous	21,724	407	246,707	268,838
Allocated Interest	4,672	7,540	103,692	115,904
Total Receipts	172,382	183,696	7,080,408	7,436,486
DISBURSEMENTS				
General and Administrative	140,188	-	-	140,188
Ongoing Projects and Studies	-	231,632	-	231,632
Capital Projects	-	-	3,643,960	3,643,960
Allocated Interest	2,788	1,960	62,938	67,686
Total Disbursements	142,976	233,592	3,706,898	4,083,466
Net Change in Cash Fund Balance	29,406	(49,896)	3,373,510	3,353,020
CASH FUND BALANCE JANUARY 1	241,269	639,143	1,282,394	2,162,806
CASH FUND BALANCE DECEMBER 31	$ 270,675	$ 589,247	$ 4,655,904	$ 5,515,826

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF CHANGES IN NET CASH POSITION – FIDUCIARY FUND
FOR THE YEAR ENDED DECEMBER 31, 2022

	Custodial Fund
ADDITIONS	
Property Taxes	
Beltrami County	$ 106,795
Clearwater County	216,250
Itasca County	778
Koochiching County	8,781
Mahnomen County	2,561
Marshall County	58,545
Pennington County	288,631
Polk County	762,366
Red Lake County	136,003
Roseau County	113
State - MV	70,047
TOTAL ADDITIONS	1,650,870
DEDUCTIONS	
Red River Watershed Management Board	1,652,221
TOTAL DEDUCTIONS	1,652,221
CHANGE IN NET CASH POSITION	(1,351)
NET CASH POSITION - BEGINNING	1,351
NET CASH POSITION - ENDING	$ -

See Notes to the Basic Financial Statements

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Red Lake Watershed District, (the "District"), was established under the Minnesota Watershed Act as an agency of the State of Minnesota. The purpose of the District is to carry out conservation of the natural resources of the State of Minnesota through land utilization, flood control, and other needs, upon sound scientific principles for the protection of the public health and welfare and the provident use of natural resources. The District serves an area in Northwestern Minnesota and includes all of Red Lake County and parts of the following counties: Beltrami, Clearwater, Itasca, Koochiching, Mahnomen, Marshall, Pennington, Polk, and Roseau. The District is governed by the Board of Managers, which is composed of seven members appointed by the county boards in accordance with Minnesota Statutes.

Reporting Entity

The financial statements of the District include all organizations, funds and account groups over which the District's Board exercises significant influence over and/or is financially accountable or organizations for which the nature and significance of their relationship with the District is such that exclusion would cause the Red Lake Watershed District's financial statements to be misleading. Currently, the District does not have any component units.

Basis of Presentation

Government-Wide Financial Statements

The Statement of Net Cash Position and Statement of Activities Arising From Cash Transactions display information about the reporting government taken as a whole. They include all funds of the reporting entity except any fiduciary funds. The statements would distinguish between governmental and business-type activities (if any). The District displays all operations as governmental activities because governmental activities are generally financed through taxes, intergovernmental revenues and other non-exchange revenues.

Fund Financial Statements

Fund financial statements of the District are organized into funds, each of which is considered to be a separate accounting entity. Each fund is accounted for by providing a separate set of self-balancing accounts that constitute its assets, liabilities, fund equity, revenues and expenditures. Funds are typically organized into three major categories: governmental, fiduciary and proprietary. The District currently has no proprietary funds.

An emphasis is placed on major funds within the governmental categories. A fund is considered major if it is the primary operating fund of the District or meets the following criteria:

a. Total assets, liabilities, revenues or expenditures of that individual governmental fund are at least 10 percent of the corresponding total for all funds of that type, AND
b. Total assets, liabilities, revenues or expenditures of the individual governmental fund are at least 5% of the corresponding total for all governmental funds combined.

Governmental Funds

General Fund

The General Fund is the primary operating fund of the District and always classified as a major fund. It is used to account for all activities except those legally or administratively required to be accounted for in other funds.

Special Revenue Fund

The special revenue fund is used to account for the proceeds of specific revenue sources (other than capital projects) where the expenditures are legally restricted for purposes specified in the grant or project agreements. The reporting entity includes the special revenue fund as a major fund.

Capital Projects Fund

The Capital Projects Fund is used to account for resources committed for the acquisition, construction and maintenance of specific capital projects or items. The reporting entity includes the capital projects fund as a major fund.

Fiduciary Funds

Custodial Fund

The reporting entity includes one custodial fund and does not involve the measurement of results of operations. The custodial fund is as follows:

Fund	Brief Description
Red River Water Management Board	Property Taxes are levied by the District on behalf of the Board and submitted to the Management Board.

Measurement Focus and Basis of Accounting

Measurement focus is a term used to describe the recognition of revenues and expenditures within the various financial statements. Basis of accounting refers to "when" transactions are recorded regardless of the measurement focus applied.

Measurement Focus

In the government-wide Statement of Net Cash Position and the Statement of Activities Arising From Cash Transactions, governmental activities are presented using the economic resources measurement focus, within the limitations of the cash basis of accounting, as defined below.

In the fund financial statements, the "current financial resources" measurement focus or the "economic resources" measurement focus, as applied to the cash basis of accounting is used as appropriate:

All governmental funds utilize a "current financial resources" measurement focus. Only current financial assets and liabilities are generally included on their balance sheets. Their operating statements present sources and uses of available spendable financial resources during a given period. These funds use fund balance as their measure of available spendable financial resources at the end of the period.

Basis of Accounting

In the government-wide Statement of Net Cash Position and Statement of Activities Arising from Cash Transactions, governmental activities are presented using the cash basis of accounting. This basis recognizes assets, liabilities, net position, revenues and expenditures when they result from cash transactions. This basis is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

As a result of the use of the cash basis of accounting, certain assets and their related revenues (such as accounts receivable, property and related accumulated depreciation, and revenue for billed or unbilled services provided in current year) and certain liabilities and their related expense (such as accounts payables, unpaid goods or services received in the current year and accrued expenses) are not recorded in these financial statements.

If the District utilized the basis of accounting recognized as generally accepted, the fund financial statements for governmental funds would use the cash basis of accounting and the government-wide financials would be presented on the accrual basis of accounting.

Budgets

The budget is prepared using the same method of accounting as the financial statements. The annual adopted budget is not legally binding on the District, with the exception of the budget for the levy in the administrative fund, which is limited by state statute at $250,000 and set by the Board for 2022 at $163,026.

Revenues

In the Statement of Activities Arising from Cash Transactions, cash basis revenues that are derived directly from each activity or from parties outside the District's taxpayers are reported as program revenues. The District has the following program revenues; direct project cost reimbursements and project special assessments, rental income and operating and capital grants specific to projects. All other governmental revenues and general tax levies are classified as general revenue.

Property Taxes

The District levies property taxes on property owners within the District, which becomes an enforceable lien as of January 1. Taxes are levied in September and are payable to counties on May 15 and October 15 (November 15 for farm property) of the following year. The District levies the tax, while the respective counties collect and remit the tax collections to the District. Property taxes are recognized when received from the counties under the cash basis of accounting. The District also levies special assessments through the counties against property owners who obtain direct benefits from projects or property owners who request, through the petition process, to have a project undertaken. The special assessment collections are recorded in a manner similar to that for property taxes.

Compensated Absences

Full-time employees starting on the date of employment will accrue 80 hours per year of vacation for the first five years of employment. During the next five years of employment, an employee accrues 120 hours per year, after ten years of employment but less than twenty, an employee accrues 160 hours per year of vacation, and after 20 years of employment an employee accrues 200. Qualifying part-time employees are entitled to vacation based on the percentage of hours worked per pay period. The maximum accumulation of vacation leave is 200 hours. Unused vacation leave is paid only upon termination of employment.

Full-time employees employed with the District accrue eight hours of sick leave per month. Part-time employees who have worked 60% of the time for a period of nine months shall be entitled to sick leave based on the percentage of hours worked per pay period. The maximum accumulation of sick leave is 400 hours and does not vest upon termination of employment. As of January 1, 2014, half of the employee's remaining sick leave will be paid at the employee's current hourly rate to the employee upon retirement. If the employee quits or is terminated for any reason, no payment shall be made to the employee. District Office shall maintain leave records by posting leave earned and taken, and calculating a current balance for each employee. There will be no payment in lieu of sick leave, except when retirement of employment occurs. No vested or accumulated liability has been recorded for accumulated compensated absences.

Pensions

Plan contributions are recognized as of employer payroll paid dates and benefit payments and refunds are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Equity

In the government-wide financial statements, equity is classified as "net position" and displayed in two components:

1. Restricted Net Cash Position – Consists of net assets with constraints placed on the use either by (1) external groups such as creditors, grantors, contributors, or laws and regulations of other governments; or (2) law through constitutional provisions or enabling legislation.

2. Unrestricted Net Cash Position – All other net assets that do not meet the definition of "restricted" or "invested in capital assets, net of related debt."

It is the District's policy to first use restricted Net Position prior to the use of unrestricted Net Position when an expense is incurred for purposes for which both restricted and unrestricted Net Position are available.

Cash Fund Balance

In the governmental fund financial statements, cash fund balances are classified as nonspendable, restricted, committed, assigned or unassigned.

Nonspendable fund balance represents a portion of fund balance that includes amounts that cannot be spent because they are either (a) not in spendable form or (b) legally or contractually required to be maintained intact.

Restricted fund balance represents a portion of fund balance that reflects constraints placed on the use of resources (other than nonspendable items) that are either: (a) externally imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments; or (b) imposed by law through constitutional provisions or enabling legislation.

Committed fund balance includes amounts that can only be used for specific purposes pursuant to constraints imposed by formal action of the government's highest level of decision making authority which is the Board of Managers through an ordinance or resolution.

Assigned fund balance represents amounts constrained by the government's intent to be used for specific purposes, but neither restricted nor committed.

Unassigned fund balance represents residual classification for the general fund. This classification represents fund balance not assigned to other funds and not restricted, committed, or assigned to specific purposes within the general fund. The general fund should be the only fund that reports a positive unassigned fund balance amount. In other governmental funds, if expenditures incurred for specific purposes exceed the amounts restricted, committed, or assigned to those purposes, it would be necessary to report a negative unassigned fund balance.

When both restricted and unrestricted resources are available for use, it is the District's policy to first use restricted resources, and then use unrestricted resources as they are needed. When committed, assigned or unassigned resources are available for use, it is the District's policy to use resources in the following order: 1) committed, 2) assigned and 3) unassigned.

Interfund Balances

In the process of aggregating the fund information for the government-wide Statement of Net Cash Position and Statement of Activities Arising from Cash Transactions, some amounts reported as interfund activity and balances in the fund financial statements have been eliminated or reclassified.

Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

NOTE 2 CHANGE IN ACCOUNTING PRINCIPLE

In 2022, the District elected to change from a modified cash basis of accounting to a cash basis of accounting. These financial statements are presented on a cash basis of accounting with beginning balances restated to reflect this change. This basis of accounting differs from accounting principles generally accepted in the United States of America (GAAP). Generally accepted accounting principles include all relevant Governmental Accounting Standards Board (GASB) pronouncements.

This change to the cash basis of accounting resulted in the elimination of capital assets and accumulated depreciation of $20,449,085 as of January 1, 2022. Results for periods prior to December 31, 2021 continue to be reported in accordance with the District's historical accounting treatment.

NOTE 3 STEWARDSHIP, COMPLIANCE AND ACCOUNTABILITY

By its nature as a local government unit, the District is subject to various federal, state, and local laws and contractual regulations. There are no instances of noncompliance that are considered material to the financial statements.

NOTE 4 CASH

The District maintains cash accounts at its depository banks. Investments are carried at fair value and consist of Certificates of Deposit.

Minnesota Statutes require that all deposits with financial institutions be collateralized in an amount equal to 110% of deposits in excess of FDIC (140% if collateralized with notes secured by first mortgages).

At December 31, 2022, all deposits were covered by FDIC and pledged collateral as required by Minnesota Statute.

Interest Rate Risk

The District does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Credit Risk

The District is authorized by Minnesota Statutes to invest in the following: direct obligations or obligations guaranteed by the federal government or its agencies; share of investment companies registered under the Federal Investment Company Act of 1940 and is rated in one of the two highest rating categories by a statistical rating agency, and all of the investments have a final maturity of thirteen months or less; general obligations rated "A" or better; revenue obligations rated "AA" or better, general obligations of Minnesota Housing Finance Agency rated "A" or better; commercial paper issued by United States' corporations or their Canadian subsidiaries, of the highest quality category by at least two nationally recognized rating agencies, and maturing in 270 days or less; Guaranteed Investment Contracts guaranteed by a United States commercial bank or insurance company, domestic branch of a foreign bank and with a credit quality in one of the top two highest categories; repurchase or reverse repurchase agreements and securities lending agreements with financial institutions qualified as a "depository" by the government entity, with banks that are members of the Federal Reserve System with capitalization exceeding $10,000,000, a primary reporting dealer in U.S. government securities to the Federal Reserve Bank of New York, or certain Minnesota securities broker-dealers. The District has no investment policy that would further limit its investment choices.

Custodial Risk

The District does not have a formal policy which would limit the amount held by any one financial institution or investment type.

Related-Party Investments

As of December 31, 2022, the District held no related-party investments.

NOTE 5 DEFINED BENEFIT PENSION PLANS

Plan Description

All full-time and certain part-time employees of the Red Lake Watershed District are covered by defined benefit plans administered by the Public Employees Retirement Association of Minnesota (PERA). PERA administers the General Employees Retirement Plan (accounted for in the General Employees Fund), which is a cost-sharing, multiple-employer retirement plan. This plan is established and administered in accordance with *Minnesota Statutes*, Chapters 353 and 356.

General Employees Plan members belong to either the Coordinated Plan or the Basic Plan. Coordinated Plan members are covered by Social Security and Basic Plan members are not. All new members must participate in the Coordinated Plan.

PERA provides retirement benefits as well as disability benefits to members and survivor benefits upon death of eligible members. Benefits are established by state statute. Benefits for members of the General Employees Plan vest after five years of credited service.

Two methods are used to compute benefits for PERA's Coordinated Plan members. Members hired prior to July 1, 1989, receive the higher of Method 1 or Method 2 formulas. Only Method 2 is used for members hired after June 30, 1989. Under Method 1, the accrual rate for Coordinated members is 1.2% for each of the first 10 years of service and 1.7% for each additional year. The rates are 2.2% and 2.7%, respectively, for Basic members. Under Method 2, the accrual rate for Coordinated members is 1.7% for all years of service, and 2.7% for Basic members. For members hired prior to July 1, 1989 a full annuity is available when age plus years of service equal 90 and normal retirement age is 65. For members hired on or after July 1, 1989 normal retirement age is the age for unreduced Social Security benefits capped at 66.

For all General Employees Plan members hired prior to July 1, 1989 whose annuity is calculated using Method 1, a full annuity is available when age plus years of service equal 90. Method 2 provides for unreduced retirement benefits at age 65 for members first hired prior to July 1, 1989 or age 66 (the age for unreduced Social Security benefits), for those first hired on or after that date. Early retirement may begin at age 55 with an actuarial reduction (about six percent per year) for members retiring prior to full retirement age.

There are different types of annuities available to members upon retirement. A single-life annuity is a lifetime annuity that ceases upon the death of the retiree—no survivor annuity is payable. There are also various types of joint and survivor annuity options available which will be payable over joint lives. Members may also leave their contributions in the fund upon termination of public service in order to qualify for a deferred annuity at retirement age. Refunds

of contributions are available at any time to members who leave public service before retirement benefits begin.

The benefit provisions stated in the preceding paragraphs of this section are current provisions and apply to active plan participants.

PERA issues a publicly available financial report that includes financial statements and required supplementary information for the General Employees Plan. That report may be obtained on the PERA's website at www.mnpera.org/about/financial/.

Funding Policy

Minnesota Statutes Chapter 353 sets the rates for employer and employee contributions. These statutes are established and amended by the state Legislature. In 2022, Coordinated Plan members were required to contribute 6.5 percent of their annual covered salary.

The Red Lake Watershed District's contributions to the General Employees Fund for the years ended December 31, 2022, 2021, and 2020 were $38,336, $36,147, and $35,138 respectively.

NOTE 6 RISK MANAGEMENT

The District is exposed to various risks of loss related to torts; theft of, damage to, or destruction of assets; errors and omissions; injuries to employees; employees' health and life; and natural disasters. The District manages these various risks of loss with the purchase of insurance through commercial insurance providers. The District carries commercial insurance coverage on its commercial property and for liability, personal and advertising injury, non-owned auto and a miscellaneous floater.

Management believes such coverage is sufficient to preclude any significant uninsured losses to the District. Settled claims have not exceeded this insurance coverage in any of the past three fiscal years.

NOTE 7 OVERHEAD COST ALLOCATION

Overhead costs are allocated to all projects at 150% of direct salaries to projects. Overhead costs represent those costs incurred by the District for administration, employee benefits, engineering, and related operating expenditures, which are not charged directly to the project. The total overhead costs charged to projects in 2022 was $834,192.

NOTE 8 CONTINGENCIES

Grants

The District participates in state and federal grant programs, which are governed by various rules and regulations of the grantor agencies. Costs charged to the respective grant programs are subject to audit and adjustment by the grantor agencies; therefore, to the extent that the District has not complied with the rules and regulations governing the grants, refunds of money received may be required and the collectability of any related receivable at December 31, 2022, may be impaired. The District is not aware of any significant contingent liabilities relating to compliance with the rules and regulations governing the respective grants.

Claims and Litigation

The District is not presently involved in any legal actions relating to projects undertaken or attempted to be undertaken that are deemed to be material to the financial statements.

NOTE 9 NEW PRONOUNCEMENTS

GASB Statement No. 91, *Conduit Debt Obligations*, provides a single method of reporting conduit debt obligations by issuers and eliminates diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. This Statement clarifies the existing definition of a conduit debt obligation; establishes that a conduit debt obligation is not a liability of the issuer; establishes standards for accounting and financial reporting of additional commitments and voluntary commitments extended by issuers and arrangements associated with conduit debt obligations; and improves required note disclosures. This Statement also addresses arrangements—often characterized as leases—that are associated with conduit debt obligations. The requirements of this Statement are effective for reporting periods beginning after December 15, 2021. Earlier application is encouraged.

GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, improves financial reporting by addressing issues related to public-private and public-public partnership arrangements (PPPs) and also provides guidance for accounting and financial reporting for availability payment arrangements (APAs). The statement provides definitions of PPPs and APAs and provides uniform guidance on accounting and financial reporting for transactions that meet those definitions. A PPP is an arrangement in which a government (the transferor) contracts with an operator (a governmental or nongovernmental entity) to provide public services by conveying control of the right to operate or use a nonfinancial asset, such as infrastructure or other capital asset (the underlying PPP asset), for a period of time in an exchange or exchange-like transaction. An APA is an arrangement in which a government compensates an operator for services that may include designing, constructing, financing, maintaining, or operating an underlying nonfinancial asset for a period of time in an exchange or exchange-like transaction. The requirements of this Statement are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. Earlier application is encouraged.

GASB Statement No. 96, *Subscription-Based Information* Arrangements provides guidance on the accounting and financial reporting for subscription-based information technology arrangements (SBITAs). A SBITA is defined as a contract that conveys control of the right to use another party's (a SBITA vendor's) information technology (IT) software, alone or in combination with tangible capital assets (the underlying IT assets), as specified in the contract for a period of time in an exchange or exchange-like transaction. Under this Statement, a government generally should recognize a right-to use subscription asset—an intangible asset—and a corresponding subscription liability. The requirements of this Statement will improve financial reporting by establishing a definition for SBITAs and providing uniform guidance for accounting and financial reporting for transactions that meet that definition. The requirements of this Statement are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. Earlier application is encouraged.

GASB Statement No. 99, *Omnibus 2022,* provides guidance on the following accounting matters:

- Classification and reporting of derivative instruments within the scope of Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, that do not meet the definition of either an investment derivative instrument or a hedging derivative instrument.
- Clarification of provisions in Statement No. 87, *Leases*, as amended, related to the determination of the lease term, classification of a lease as a short-term lease, recognition and measurement of a lease liability and a lease asset, and identification of lease incentives.
- Clarification of provisions in Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, related to (a) the determination of the public-private and public-public partnership (PPP) term and (b) recognition and measurement of installment payments and the transfer of the underlying PPP asset.
- Clarification of provisions in Statement No. 96, *Subscription-Based Information Technology Arrangements*, related to the subscription-based information technology arrangement (SBITA) term, classification of a SBITA as a short-term SBITA, and recognition and measurement of a subscription liability.
- Extension of the period during which the London Interbank Offered Rate (LIBOR) is considered an appropriate benchmark interest rate for the qualitative evaluation of the effectiveness of an interest rate swap that hedges the interest rate risk of taxable debt.
- Accounting for the distribution of benefits as part of the Supplemental Nutrition Assistance Program (SNAP).
- Disclosures related to nonmonetary transactions.
- Pledges of future revenues when resources are not received by the pledging government.
- Clarification of provisions in Statement No. 34, *Basic Financial Statements— and Management's Discussion and Analysis—for State and Local Governments*, as amended, related to the focus of the government-wide financial statement.
- Terminology updates related to certain provisions of Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position*.
- Terminology used in Statement 53 to refer to resource flows statements.

The requirements of this statement are effective as follows:

- The requirements related to extension of the use of LIBOR, accounting for SNAP distributions, disclosures of nonmonetary transactions, pledges of future revenues by pledging governments, clarification of certain provisions in Statement 34, as amended, and terminology updates related to Statement 53 and Statement 63 are effective upon issuance.
- The requirements related to leases, PPPs, and SBITAs are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter.
- The requirements related to financial guarantees and the classification and reporting of derivative instruments within the scope of Statement 53 are effective for fiscal years beginning after June 15, 2023, and all reporting periods thereafter.

GASB Statement No. 100, *Accounting Changes and Error Corrections – An Amendment of GASB Statement No. 62,* provides guidance on accounting and financial reporting requirements for accounting changes and error corrections. Statement requires that (a) changes in accounting principles and error corrections be reported retroactively by restating prior periods, (b) changes to or within the financial reporting entity be reported by adjusting beginning balances of the current period, and (c) changes in accounting estimates be reported prospectively by recognizing the change in the current period. The requirements of this Statement for changes in accounting principles apply to the implementation of a new pronouncement in absence of specific transition provisions in the new pronouncement. This Statement also requires that the aggregate amount of adjustments to and restatements of beginning net position, fund balance, or fund net position, as applicable, be displayed by reporting unit in the financial statements.

This Statement requires disclosure in notes to financial statements of descriptive information about accounting changes and error corrections, such as their nature. In addition, information about the quantitative effects on beginning balances of each accounting change and error correction should be disclosed by reporting unit in a tabular format to reconcile beginning balances as previously reported to beginning balances as restated. The requirements of this Statement are effective for accounting changes and error corrections made in fiscal years beginning after June 15, 2023, and all reporting periods thereafter. Earlier application is encouraged.

GASB Statement No. 101, *Compensated Absences,* provides guidance on the recognition and measurement guidance for compensated absences. This Statement requires that liabilities for compensated absences be recognized for (1) leave that has not been used and (2) leave that has been used but not yet paid in cash or settled through noncash means. A liability should be recognized for leave that has not been used if (a) the leave is attributable to services already rendered, (b) the leave accumulates, and (c) the leave is more likely than not to be used for time off or otherwise paid in cash or settled through noncash means. This Statement also requires that a liability for specific types of compensated absences not be recognized until the leave is used. This Statement also establishes guidance for measuring a liability for leave that has not been used, generally using an employee's pay rate as of the date of the financial statements. A liability for leave that has been used but not yet paid or settled should be measured at the amount of the cash payment or noncash settlement to be made. Certain salary-related payments that are directly and incrementally associated with payments for leave also should be included in the measurement of the liabilities. This Statement amends the existing requirement to disclose the gross increases and decreases in a liability for compensated absences to allow governments to disclose only the net change in the liability (as long as they identify it as a net change). In addition, governments are no longer required to disclose which governmental funds typically have been used to liquidate the liability for compensated absences. The requirements of this Statement are effective for fiscal years beginning after December 15, 2023, and all reporting periods thereafter. Earlier application is encouraged.

Management has not yet determined what effect these statements will have on the District's financial statements.

NOTE 10 SUBSEQUENT EVENTS

No significant events occurred subsequent to the District's year end. Subsequent events have been evaluated through April 4, 2023, which is the date these financial statements were available to be issued.

SUPPLEMENTARY INFORMATION

RED LAKE WATERSHED DISTRICT
BUDGETARY COMPARISON SCHEDULE – CASH BASIS – GENERAL FUND
FOR THE YEAR ENDED DECEMBER 31, 2022

	Original and Final Budget	Actual 2022	Variance
REVENUES			
Tax Levies	$ 145,986	$ 145,986	$ -
Miscellaneous	5,000	21,724	16,724
Allocated Interest	-	4,672	4,672
Total Revenues	150,986	172,382	21,396
EXPENDITURES			
General and Administrative	163,026	140,188	(22,838)
Interest	-	2,788	2,788
Total Expenditures	163,026	142,976	(20,050)
Expenditures Exceed Revenues	(12,040)	29,406	41,446
FUND BALANCE JANUARY 1	241,269	241,269	
FUND BALANCE DECEMBER 31	$ 229,229	$ 270,675	

NOTE 1 – BUDGETARY COMPARISON

The budget is prepared using the same method of accounting as the financial statements. The annual adopted budget is not legally binding on the District, with the exception of the revenue budget for the general fund, which is limited by state statute at $250,000 and set by the Board for 2022 at $163,026. All appropriations lapse at year-end.

RED LAKE WATERSHED DISTRICT
SCHEDULE OF BALANCES BY PROJECT – CASH BASIS
FOR THE YEAR ENDED DECEMBER 31, 2022

			Revenues			Expenses			Transfer	
		Fund Balance (Deficit) January 1	Assessments and Other Charges for Services	Operating/ Capital Grants and Contribution	Allocated Interest Earned	Taxes	Direct	Allocated Interest Charged	Allocated Salary and Overhead	In (Out)	Fund Balance (Deficit) December 31
	GENERAL FUND	$ 241,269	$ 21,724	$ -	$ 4,672	$ 145,986	$ 974,380	$ 2,788	$ (834,192)	$ -	$ 270,675
Project	SPECIAL REVENUE FUND JOBS:										
002	Red Lake River Project	78,971	3,894	-	734	-	-	-	482	-	83,117
003	Clearwater River Project	44,607	6,705	-	449	-	-	-	-	-	51,761
004	Lost River Project	13,045	3,272	-	142	-	-	-	57	-	16,402
005	RLWD Ditch #1	4,107	4,688	-	64	-	-	-	59	-	8,800
007	RLWD Ditch #3	5,235	993	-	51	-	1,760	-	-	-	4,519
014	State Ditch #83	88,896	28,588	80	879	-	12,379	-	4,443	-	101,621
014D	County Ditch #20/State Ditch #83	-	-	-	-	-	-	1	416	-	(417)
020	RLWD Ditch #7	3,105	8,293	-	68	-	180	-	1,056	-	10,230
035	Pine Lake Maintenance	(5,994)	7,043	-	-	-	28	81	12,348	-	(11,408)
036	RLWD Ditch #8	1,868	1,891	-	22	-	-	-	59	-	3,722
039	RLWD Ditch #9	223	763	-	-	-	375	-	-	-	611
041	J.D. Ditch #72	3,346	-	-	31	-	-	-	-	-	3,377
041A	J.D. Ditch #100	695	1,079	-	-	-	9,394	48	882	-	(8,550)
041AA	J.D. Ditch #100 Maint.	-	858	-	2	-	150	-	58	-	652
041B	J.D. Ditch #101	554	2,890	-	-	-	8,410	22	1,799	-	(6,787)
041BB	J.D. Ditch #101 Maint.	-	1,632	-	4	-	-	-	135	-	1,501
043B	Burnam Creek Channel	3,981	-	13,091	-	-	37,112	99	586	-	(20,725)
045	Clearwater/Wild Rice River	89	965	-	-	-	-	-	2,403	-	(1,349)
048	Branch A & 1, J.D. #2	(2,770)	5,911	-	-	-	-	4	313	-	2,824
049	Main J.D. #2 and Branch B&C	4,259	984	-	35	-	1,485	-	762	-	3,031
051	Main J.D. 2C. Eck	3,348	282	-	27	-	-	-	1,222	-	2,435
053	Krostue Petition	(7,244)	15,181	-	4	-	1,560	-	210	-	6,171
101	Clearwater County Joint Ditch #4	4,801	924	-	47	-	-	-	-	-	5,772
102	Clearwater County Joint Ditch #5	(9,944)	2,578	-	-	-	-	81	118	-	(7,565)
103	Clearwater County Ditch #1	3,811	943	-	4	-	973	-	3,929	-	(144)
109	Clifford Arveson Ditch	7,216	2,934	-	69	-	170	-	118	-	9,931
113	Winsor/Hangaard/Clearwater County Petition	10,126	2,384	-	98	-	-	-	503	-	12,105
115	Equality RLWD Ditch #1, lat C	(401)	2,186	-	3	-	-	-	243	-	1,545
117	K. Johnson Petition	1,034	2,286	-	11	-	936	-	281	-	2,114
119	Polk County Ditch #'s 104, 61, 47, 94	(3,996)	15,654	-	24	-	-	-	300	-	11,382
122	TRF Drainage Ditch (Challenger Ditch)	1,089	1,544	-	11	-	9	-	88	-	2,547
123	Scott Baatz Petition	256	1,157	-	6	-	213	-	176	-	1,030
134	Polk County Ditch #63 Improvement	17,454	311	-	155	-	1,800	-	108	-	16,012
135	Polk County Ditch #33 Improvement	5,475	9,051	-	56	-	1,440	-	227	-	12,915
161	RLWD Ditch #10	82,655	2,084	-	746	-	2,996	-	3,435	-	79,054
166	RLWD Ditch #11	10,382	679	-	85	-	3,983	-	353	-	6,810
169	RLWD Ditch #12	(661)	11,940	-	17	-	5,076	-	1,273	-	4,947
170A	RLWD Ditch #13	596	1,861	-	7	-	-	-	118	-	2,346
171	RLWD Ditch #14	(3,591)	5,987	-	-	-	6,589	55	3,055	-	(7,303)
171A	TRF Damage Reduction Project	134	4,094	-	-	-	2,420	13	1,626	-	169

RED LAKE WATERSHED DISTRICT
SCHEDULE OF BALANCES BY PROJECT – CASH BASIS– CONTINUED
FOR THE YEAR ENDED DECEMBER 31, 2022

			Revenues				Expenses			Transfer	
		Fund Balance (Deficit) January 1	Assessments and Other Charges for Services	Operating/ Capital Grants and Contribution	Allocated Interest Earned	Taxes	Direct	Allocated Interest Charged	Allocated Salary and Overhead	In (Out)	Fund Balance (Deficit) December 31
	SPECIAL REVENUE FUND JOBS (Continued):										
175	RLWD Ditch #15	$ 42,147	$ (1,524)	$ -	$ 361	$ -	$ 11,297	$ -	$ 2,979	$ -	$ 26,708
176A	Black River Diversion Ditches	-	-	-	-	-	-	7	1,368	-	(1,375)
177	RLWD Ditch #16	379,161	-	-	3,328	-	25,401	-	467	-	356,621
178A	TRF Westside	-	-	-	-	-	11,011	39	767	-	(11,817)
179	Improv to Polk Co. #39	(148,922)	-	-	-	-	34,883	1,510	780	-	(186,095)
		639,143	162,985	13,171	7,540	-	182,030	1,960	49,602	-	589,247
	CAPITAL PROJECT FUND JOBS:										
009/015	Administrative Construction	10,055,167	-	71,540	99,483	1,564,059	3,053	-	-	(7,287,569)	4,499,627
001E	Web Page Development	-	-	-	-	-	182	22	3,512	4,916	1,200
013	Moose River Project	-	-	-	-	-	55,138	180	14,218	69,536	-
016	Baird Beyer Dam	-	-	-	-	-	-	3	655	658	-
021	Stream Gauging	-	-	-	-	-	966	88	16,932	17,986	-
024	Culvert Sizing	-	-	-	-	-	-	14	2,495	2,509	-
025	Schirrick Dam	-	-	34,027	-	-	91,759	328	16,147	74,207	-
026	Pine Lake PWT	-	-	-	-	-	5,809	25	2,408	8,242	-
026A	Little Pine Lake WMA	-	-	-	-	-	90	12	2,044	2,146	-
026B	Pine Lake FDR	(531,259)	-	-	-	-	151,440	5,624	3,397	691,720	-
031	Hydrologic Analysis	-	-	-	-	-	971	138	19,003	20,112	-
032	Flood Control Study	-	-	-	-	-	2,363	160	48,164	50,687	-
037	Emergency Maintenance	116,440	-	-	1,072	-	-	-	-	(117,512)	-
040	RRWMB - Technical Com	-	-	-	-	-	144	31	7,062	7,237	-
043A	Burnham Creek - BR6	(22,775)	-	-	-	-	3,043	231	3,258	29,307	-
043D	Burnham Creek - Fish Habitat	-	-	-	-	-	-	1	206	207	-
046	Water Quality	-	-	-	-	-	168,792	1,294	92,747	262,833	-
046Q	TRF Oxbow Restore	(561,166)	-	425,000	-	-	46,364	-	2,516	185,046	-
046R	Water Quality- RL River 319 Grant	-	-	129,774	-	-	175,446	213	3,505	49,390	-
050	Maintenance Dams	-	-	-	-	-	7,318	42	1,549	8,909	-
050A	Odney Flaat Dam	-	-	-	-	-	-	2	337	339	-
050B	Latundresse Dam	-	-	-	-	-	-	3	700	703	-
050C	Miller Dam	-	-	-	-	-	12,920	27	2,109	15,056	-
050D	Seeger Dam	-	-	-	-	-	-	3	373	376	-
050E	Blackduck Lake Structure	-	-	-	-	-	47	1	133	181	-
050F	Knutson Dam	-	-	105,625	-	-	222,388	536	5,355	122,654	-
050G	Thibert Dam	-	-	-	-	-	-	3	772	775	-
052	Elm Lake	-	-	-	-	-	7,928	49	4,414	12,391	-
060B	Grand Marais Creek Subwatershed	-	-	-	-	-	-	1	156	157	-
060C	Euclid East Impoundment	-	3,011	-	-	-	13,456	67	1,722	12,234	-
060D	Brandt Impoundment	-	-	-	-	-	7,025	43	3,430	10,608	110
060E	Brandt Channel Restoration	-	1,080	-	-	-	1,054	13	2,142	2,129	-
060F	Grand Marais - Restoration	-	-	-	-	-	1,426	14	4,000	5,440	-
060FF	Grand Marais Cut Channel Stabilization	-	-	-	-	-	508	2	117	627	-
067	Red Lake Res/Good Lake	-	-	-	-	-	211	2	575	788	-
081	Parnell Impoundment	-	4,244	-	-	-	15,654	67	5,113	18,240	1,650
082F	Clearwater Public Education (River Watch)	-	466	-	-	-	1,208	154	32,717	33,613	-
082G	Greenwood 27 Bank Stabilization	-	-	-	-	-	-	-	184	184	-

RED LAKE WATERSHED DISTRICT
SCHEDULE OF BALANCES BY PROJECT – CASH BASIS– CONTINUED
FOR THE YEAR ENDED DECEMBER 31, 2022

			Revenues				Expenses			Transfer	
		Fund Balance (Deficit) January 1	Assessments and Other Charges for Services	Operating/ Capital Grants and Contribution	Allocated Interest Earned	Taxes	Direct	Allocated Interest Charged	Allocated Salary and Overhead	In (Out)	Fund Balance (Deficit) December 31
	CAPITAL PROJECT FUND JOBS (continued):										
090	Permits	$ -	$ -	$ -	$ -	$ -	$ 826	$ 659	$ 148,953	$ 150,438	$ -
092	Project Development	-	-	-	-	-	7,239	247	78,110	85,596	-
092A	Red River Basin Long Term Flood Control	-	-	-	-	-	-	7	1,985	1,992	-
121	Louisville/Parnell Project	-	6,232	-	7	-	336	-	59	(5,844)	-
122A	Challenger Ditch Realign	-	1,075	-	-	-	1,075	1	296	297	-
129	Ring Dike Program - General	-	-	-	-	-	-	33	9,016	9,049	-
129AR	Ring Dike Program - Shaumburg	(3,225)	-	1,458	-	-	-	17	-	1,784	-
129AS	Ring Dike Program - Threat	(143,635)	-	80,778	-	-	-	641	-	63,498	-
129AT	Ring Dike Program - Ste Marie	(1,237)	-	-	-	-	-	11	-	1,248	-
129AU	Ring Dike Program - P Nelson	(17,871)	-	22,245	-	-	20,391	67	688	16,772	-
129AV	Ring Dike Program - Larson	(32,503)	-	24,036	-	-	8,737	158	862	18,224	-
129AW	Ring Dike Program - Sorum	(1,441)	17,767	67,467	-	-	127,615	210	6,314	50,346	-
145	G.I.S.	-	-	-	-	-	-	472	70,185	70,657	-
147	Wetland Banking	-	94,193	-	675	-	2,244	-	1,548	-	91,076
149	Ten Year Overall Plan	(74,693)	-	1,031,790	2,092	-	817,983	-	54,283	-	86,923
149A	Thief River 1W1P	(43,730)	-	264,946	363	-	226,403	-	20,074	-	(24,898)
149B	Clearwater River 1W1P	(17,676)	-	7,432	-	-	3,529	214	18,438	32,425	-
149C	Upper/Lower RL1W1P	-	-	-	-	-	68	-	1,368	1,652	216
157C	Red Lake River Watershed Assessment	-	-	-	-	-	-	1	108	109	-
157CC	RLRVR Grand Marais SWAGG	-	-	-	-	-	-	2	2,032	2,034	-
157D	Grand Marais SWAGG	-	-	-	-	-	-	3	332	335	-
164	Erosion Control Projects	-	-	-	-	-	26,005	62	2,070	28,137	-
167A	Drainage- Inv & Insp	-	-	-	-	-	4,000	30	352	4,382	-
168A	TR SWAGG	-	23	13,130	-	-	4,636	40	11,954	3,477	-
172	FEMA D- Firm Grant	-	-	-	-	-	-	-	116	116	-
176	Black River Impoundment	(4,204,749)	9,403	1,720,180	-	-	562,214	31,575	35,065	3,104,020	-
178	TRF Westside FDR	(3,223,766)	110,288	1,155,854	-	-	19,886	18,929	5,885	2,002,324	-
180A	Agassiz NWR Wetland		-	-	-	-	-	-	-	-	-
180B	Agassiz Grant SILT		-	-	-	-	-	-	-	-	-
180C	Mud River Project Work Team	(9,487)	-	9,593	-	-	29,480	166	10,330	39,870	-
	Total Capital Projects	1,282,394	247,782	5,164,875	103,692	1,564,059	2,859,370	62,938	784,590	-	4,655,904
	Total All Funds	$ 2,162,806	$ 432,491	$ 5,178,046	$ 115,904	$ 1,710,045	$ 4,015,780	$ 67,686	$ -	$ -	$ 5,515,826

RED LAKE WATERSHED DISTRICT
STATEMENT OF DIRECT EXPENDITURES BY CLASSIFICATION –
GOVERNMENTAL FUNDS - CASH BASIS
FOR THE YEAR ENDED DECEMBER 31, 2022

DIRECT EXPENDITURES:	2022
Salaries -	
Inspection	$ 50,923
Survey - Preliminary	5,248
Survey - Construction	1,542
Drafting	1,468
Engineering	22,734
Project Administration	273,131
Field Work - Water Programs	46,428
Other	106,695
Compensated Absences	25,520
Payroll Taxes and Benefits	116,825
Manager's Expense	62,970
Travel, Mileage, Meetings and Per Diems	12,348
Audit	9,450
Legal	49,195
Other Professional Fees	324,162
Office Supplies	14,263
Office Equipment	22,064
Dues and Subscriptions	14,449
Insurance and Bonds	46,622
Repairs and Maintenance	21,259
Utilities	9,001
Telephone	9,702
Advertising and Publications	10,824
Truck Expense	20,221
Miscellaneous	6,256
Land Acquisition and Easements	17,792
Construction	2,189,023
Engineering Costs and Fees	9,628
Engineering Fees	463,054
Engineering Equipment	52,983
Total Expenditures	$ 4,015,780

BradyMartz

INDEPENDENT AUDITOR'S REPORT ON MINNESOTA LEGAL COMPLIANCE

Board of Managers
Red Lake Watershed District
Thief River Falls, Minnesota

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to the financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the cash basis financial statements of the governmental activities, each major fund, and the remaining fund information of the Red Lake Watershed District of Thief River Falls, Minnesota as of and for the year ended December 31, 2022 and the related notes to the financial statements, and have issued our report thereon dated April 4, 2023.

Legal Compliance

In connection with our audit, nothing came to our attention that caused us to believe that the District failed to comply with the provisions of contracting and bidding, deposits and investments, conflicts of interest, claims and disbursements, and miscellaneous provisions of the *Minnesota Legal Compliance Audit Guide for Political Subdivisions,* promulgated by the State Auditor pursuant to Minn. Stat. § 6.65, insofar as they relate to accounting matters. However, our audit was not directed primarily toward obtaining knowledge of such noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding the District's noncompliance with the above referenced provisions insofar as they relate to accounting matters.

Purpose of the Report

The purpose of this report is solely to describe the scope of our testing of compliance and the result of that testing, and not to provide an opinion on compliance. Accordingly, this communication is not suitable for any other purpose.

Brady Martz

BRADY, MARTZ & ASSOCIATES, P.C.
THIEF RIVER FALLS, MINNESOTA

April 4, 2023

BradyMartz

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Board of Managers
Red Lake Watershed District
Thief River Falls, Minnesota

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the cash basis financial statements of the governmental activities, each major fund, and the remaining fund information of the Red Lake Watershed District, as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the Red Lake Watershed District's basic financial statements and have issued our report thereon dated April 4, 2023.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Red Lake Watershed District's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Red Lake Watershed District's internal control. Accordingly, we do not express an opinion on the effectiveness of the Red Lake Watershed District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify a certain deficiency in internal control, described in the accompanying schedule of findings and responses as item 2022-001 that we consider to be a significant deficiency.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether Red Lake Watershed District's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Red Lake Watershed District's Response to Finding

Government Auditing Standards requires the auditor to perform limited procedures on the District's responses to the finding identified in our audit and described in the accompanying schedule of findings and response. The District's response was not subjected to the other auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on the response.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the District's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Brady Martz

BRADY, MARTZ & ASSOCIATES, P.C.
THIEF RIVER FALLS, MINNESOTA

April 4, 2023

RED LAKE WATERSHED DISTRICT
SCHEDULE OF FINDINGS AND RESPONSES
FOR THE YEAR ENDED DECEMBER 31, 2022

2022-001 Finding – Significant Deficiency

Criteria

An appropriate system of internal control requires the District to prepare financial statements in compliance with the cash basis of accounting.

Condition

The District's personnel prepare periodic financial information for internal use that meets the needs of management and the Board. However, the District currently does not prepare the financial statements, including the accompanying note disclosures, as required by the cash basis of accounting. The District has elected to have the auditors assist in the preparation of the financial statements and notes.

Cause

The District elected to not allocate resources for the preparation of the financial statements.

Effect

There is an increased risk of material misstatement to the District's financial statements.

Recommendation

We recommend the District consider the additional risk of having the auditors assist in the preparation of the financial statements and note disclosures. As a compensating control, the District should establish an internal control policy to document the annual review of the financial statements and schedules and to review the financial statements disclosure checklist.

Views of Responsible Officials and Planned Corrective Actions

The District agrees with the recommendation and will review on an annual basis.

RED LAKE WATERSHED DISTRICT
CORRECTIVE ACTION PLAN
DECEMBER 31, 2022

2022-001 Finding

Contact Person – Myron Jesme, Administrator

Corrective Action Plan – Will establish a policy to document review of financial statements and notes.

Completion Date – Ongoing - December 31, 2023