2019 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.

Another year has passed and those of us who deal in water resource issues never really know what to expect from one year to the next. For those of you who may enjoy winter activities, the winter of 2018 and 2019 provided us with a large amount of snow which allowed us considerable snowmobiling, snow skiing and other winter related opportunities. As we all know, the problem with a lot of snow cover it is usually followed by a whole host of problems that occur during spring runoff which clearly happened throughout the Red Lake Watershed District in the spring of 2019. There was a record runoff event which lead to all the impoundments in the District reaching record water elevations and caused considerable delays in spring planting. As if that wasn't enough, on September 20th upwards of 5.25 inches of rain that covered an overwhelming area of the District and continued well into October, causing devastating flooding in our communities just when harvest was hitting full tilt. The farming community was hit extremely hard and it took well into mid to late December before all the impoundments were drained down to winter levels.

In 2019, three members of the Red Lake Watershed Board of Managers were re-appointed by their respective counties to serve three-year terms. I, Dale Nelson rural Thief River Falls, was reappointed by the Pennington County Board of Commissioners to serve my 8th three-year term, Terry Sorenson, Mentor, was reappointed by the Polk County Board of Commissioners to serve his 2nd three-year term and Allan Page rural Red Lake Falls, was appointed by the Red Lake County Board of Commissioners to serve his 2nd three-year term. I am very pleased to join these two fine gentlemen and the remaining Board members in serving the communities of the Red Lake Watershed District to the best of our ability.

One other milestone that was recognized throughout the State of Minnesota was the 50th anniversary of the forming of the Red Lake Watershed District. It is a great honor to be part of the 50-year history of the District.

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.

Our 2019 Annual Audit is 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 .

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, water quality, and natural resource enhancement. 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 the Districts missions and it was a pleasure to serve as President of the Board in 2019.

Sincerely,

Dale M. Nelson, President

Board of Managers – 2019

Front Row *(left to right)*: Terry Sorenson, Treasurer; Dale M. Nelson, President; and Gene Tiedemann, Vice President. **Second Row** *(left to right)*: Brian Dwight, Les Torgerson; LeRoy Ose, Secretary; and Allan Page. Terry Sorenson, representing East Polk County; Allan Page, representing Red Lake County; and Dale M. Nelson, representing Pennington County, were re-appointed by their respective counties to serve an additional 3-year term for the years 2019-2021.

Staff – 2019

Front Row *(left to right)*: Marisa Newton, Christina Slowinski and Ashley Hitt.
Middle Row: Tammy Audette and Arlene Novak.
Back Row Nick Olson, Myron Jesme, Corey Hanson, and Loren Sanderson

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-three regularly scheduled board meetings in 2019. These regular meetings are normally held the 2nd and 4th Thursday of each month at the District office at 9:00 a.m. Seven additional meetings were held to allow the Board to participate in the RLWD Advisory Committee meeting, Red River Watershed Management Board meeting, various District project meetings and tours. 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 and minutes from board meetings are available by visiting our website at www.redlakewatershed.org/minutes.

The 2019 General Fund budget was set at $120,388. The General Fund Budget hearing was held on September 13, 2018. The Board voted to not levy the counties in 2019, instead using the reserves in the General Fund. Notice for the General Fund Budget hearing was published in at least one newspaper in each of the 10 counties within the District.

2019 Advisory Committee

Black River
Dan Schmitz, RLF
Curt Beyer, RLF
Greg Dyrdal, TRF

Moose River
Wayne Larson, Middle River
Elroy Aune, Gatzke

Upper Red Lake Area
Emmitt Weidneborner, Kelliher
John Ungerecht, Northome
Wayne Skoe, Northome
Shane Bowe, Red L. Band Chippewa Indians

Thief River Area
Lloyd Wiseth, Goodridge
Dave Rodahl, TRF
Trent Stanley, Grygla
Steve Holte, Grygla
Jim Sparby, Grygla

Clearwater River Area
Steve Linder, Oklee
John Gunvalson, Gonvick
Mark Larson

Lost River Area
Gary Mathis, Gonvick

Pine Lake Area
Dave Dalager, Gonvick

Red Lake River Area

Hill River Area
Jake Martell, Oklee

Walker Brook Area
John A. Nelson, Clearbrook

Grand Marais/Red Area
Jeep Mattson, EGF
Roger Love, EGF

Burnham Creek Area
Mary Ann Simmons, Crookston

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 on March 18, 2019. Fifteen advisory members and 6 individuals from SWCD offices, along with District Board members and staff were in attendance. Staff members from the District gave presentations on projects within the District and answered questions from the Advisory Committee members.

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 principle 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.

2019 District Projects

Petition to Establish Red Lake Watershed District No. 16 (RLWD Project No. 177)

On July 27, 2017, at the RLWD regularly scheduled Board meeting, a petition to establish a new drainage system project 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 make a preliminary survey.

On April 26, 2018, a preliminary hearing was held for the project. Upon completion of the hearing, the Board of Managers issued the order to proceed. The Board of Managers appointed viewers and directed the engineer to complete a detailed survey report.

On April 4, 2019, the final hearing for this project was held and on April 11, 2019 the Detailed Findings of Facts and Order was approved by the Board of Managers. On June 20, 2019 Notice to Proceed was issued to Burski Excavating, Inc. for their bid in the amount of $1,454,118.40. Prior to awarding the contract, it was brought to the District's attention that there was an error in the advertising of bids which lead the District and Burski Excavating to reach a settlement agreement in the amount of $118,078.30, thus changing the awarded bid to $1,572,196.70. However, due to delays in the permitting process and large fall rainfalls, construction was delayed until the spring of 2020.

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 for the improvement to Polk County Ditch #39 in Polk County and 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. It is hope of the District to hold a final hearing on this project late spring or early summer 2020.

Four-Legged Lake Watershed (RLWD Project No. 102A)

Four-Legged Lake is located in northwestern Minnesota within Clearwater County. The chain of lakes is part of the RLWD Judicial Ditch #5 system which was established in 1921. Over the years, most recently in 1999, the downstream basin's outlet culvert had been raised without Drainage Authority permission or legal actions. The results of the raising of the culvert from its historical elevation has caused increased concerns of flooding to major county roadways and properties of upstream landowners.

On January 4, 2011, a public informational meeting was held in Leonard, Minnesota, with Clearwater County commissioners and engineer, township officials, and local landowners to get a feel of how the public wanted to proceed to remedy this flooding situation. It was determined that most landowners were not opposed to the lake being re-established, but a proper elevation should be set on the lakes to assure that future flooding would not occur to the public roadways and upstream properties in the event of large runoff events. As a result of the meeting and due to the fact that the only ditch records available were an original viewers report and an old blue line set of plans dating back to early 1920's, it was determined by the RLWD Board of Managers that updated information had to be developed to better identify the alternatives as we move forward.

On May 8, 2014 and again May 14, 2015 informational landowner meetings were held, and it was determined that a petition for abandonment of the legal drainage system should be presented to the RLWD Board of Managers in conjunction with the Managers developing a Flood Damage Reduction Project (FDR) that would serve State, County, and local interests.

On July 23, 2015, a public hearing was held for the abandonment of the legal drainage system. After considerable discussion and testimony, the Board of Managers elected to table the proceedings until more information could be made available to the public.

On February 10, 2016, the District entered into an agreement with the Natural Resource Conservation District (NRCS) to complete a comprehensive watershed plan using the Regional Conservation Partnership Program (RCPP). This program encourages partners to join in efforts with producers to increase the restoration and sustainable use of soil, water, wildlife and related natural resources on regional or watershed scales. The District proceeded with the RCPP process through 2017 and hoped to complete the required step process late spring/early summer 2018. It is the hope of the District that upon completion of the comprehensive plan, we will have a clearer vision as to what projects can be completed in this watershed to assure all our goals in the report are addressed.

On June 14, 2018, the hearing for abandonment of Judicial #5 was continued. Upon testimony from the audience and recommendations by the engineer hired to review the project, the RLWD Board of Managers denied the petition for abandonment.

Late 2018, the RLWD Board of Managers decided to forego the remaining cost share on the RCPP agreement with the NRCS due to issues with the 103G designation by the DNR. It seemed because of the rules set forth under 103G, a permit required for the proposed Flood Damage Reduction Project which would require a fluctuation of water levels on the public waters would not be agreed to by a number of landowners adjacent to the public waters.

In 2019 the District was informed by the NRCS that the closeout of this project was approved. After considerable discussion, the Board decided to take no further action to develop this project unless landowners for the proposed project come forward with a request to proceed

Pine Lake Watershed (RLWD Project No. 26)

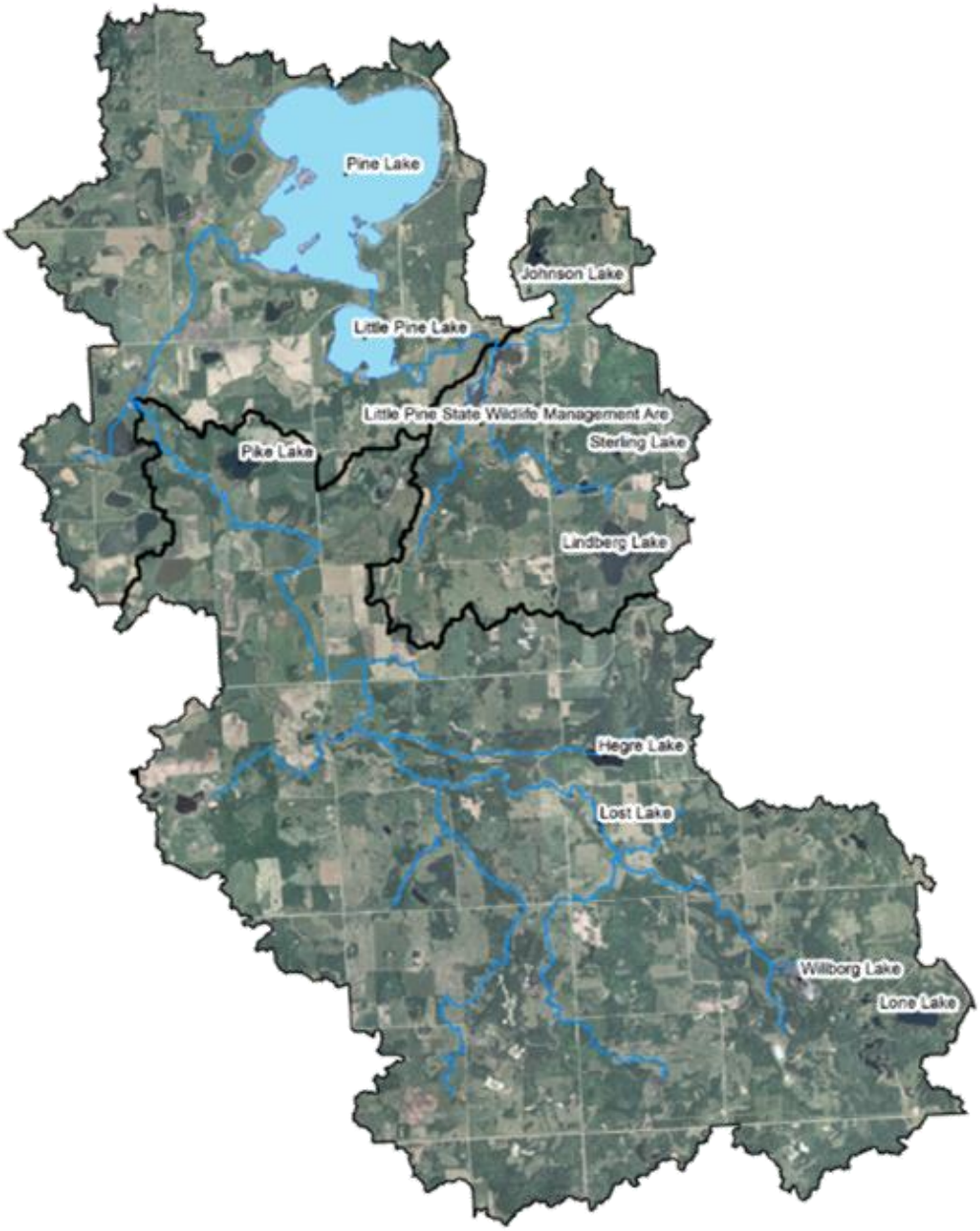
In 2013, at the request of the Property Owners of Pine Lake Association (POOPLA), the Board of Managers hired HDR Engineering, Inc. to investigate the Pine Lake Watershed, to not only come up with solutions and alternatives that could assist in frequent flooding on Pine Lake, but also investigate the opportunities for distributed storage sites which would assist the District in our long range plan to reduce flooding to the Red River of the North by implementing the Red Lake Watershed 20% Reduction Strategy.

After various landowner meetings held in 2014 and 2015, it was apparent that there was interest in looking at areas upstream of Pine Lake to determine if any Flood Damage Reduction (FDR) projects could be developed. This interest lead the RLWD to apply for and be approved for the Natural Resource Conservation Service PL566 grant which assisted in a study that could lead to the possibility of engineering and design of Flood Damage Reduction (FDR) projects in the Pine Lake Watershed

On January 11, 2016, the District entered into an agreement with the Natural Resource Conservation District to complete a comprehensive watershed plan using the Regional Conservation Partnership Program (RCPP). This program encourages partners to join in efforts with producers to increase the restoration and sustainable use of soil, water, wildlife and related natural resources on regional or watershed scales. The District proceeded with the RCPP process through 2017 and hoped to complete the required step process in 2018.

In 2019, after various road blocks in permitting were presented by the Minnesota Department of Natural Resources concerning the proposed project over the past two years, the Red Lake Watershed District Board of Managers made a request to the Natural Resource Conservation Service to move forward with a close-out agreement for this project, thus canceling the agreement. In August of 2019, the RLWD filed all the paperwork with the NRCS and hope to get final approval of closeout in early 2020. It should be noted that the RLWD is still working with the Pine Lake Project Team to develop a project that will satisfy the needs of the public as they have requested. We will move forward with a project purpose and need to better define the project that will assist the public in reaching their goals.

Flow and water quality monitoring was conducted in the Pine Lake drainage area in 2019 to inform the project planning and permitting process. More detail on that effort can be found in the water quality section of this report.



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 which was part of a multi-purpose flood control project completed in 1988 known as Burnham Creek Project No. 6 Impoundment, Project 43A. It was stated by staff that the outlet structure was in need of repair and per the agreement on 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 grant for the replacement of the outlet structure, through the MnDNR Division of Fish and Wildlife Conservation Partners Legacy Grant. On December 17, 2019, the District was informed that a grant in the amount of $168,420 was awarded to this project. It is the hope of the District that final plans will be completed early 2020 with construction occurring in the summer of 2020.

Erosion Control (RLWD Project No. 164)

This 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 2019, there were 5 cost share funding requests by Clearwater County SWCD, Beltrami County SWCD, Marshall County SWCD, East Polk SWCD and West Polk SWCD. Total requests for project cost share totaled $56,544.

Black River Impoundment (RLWD Project No. 176)

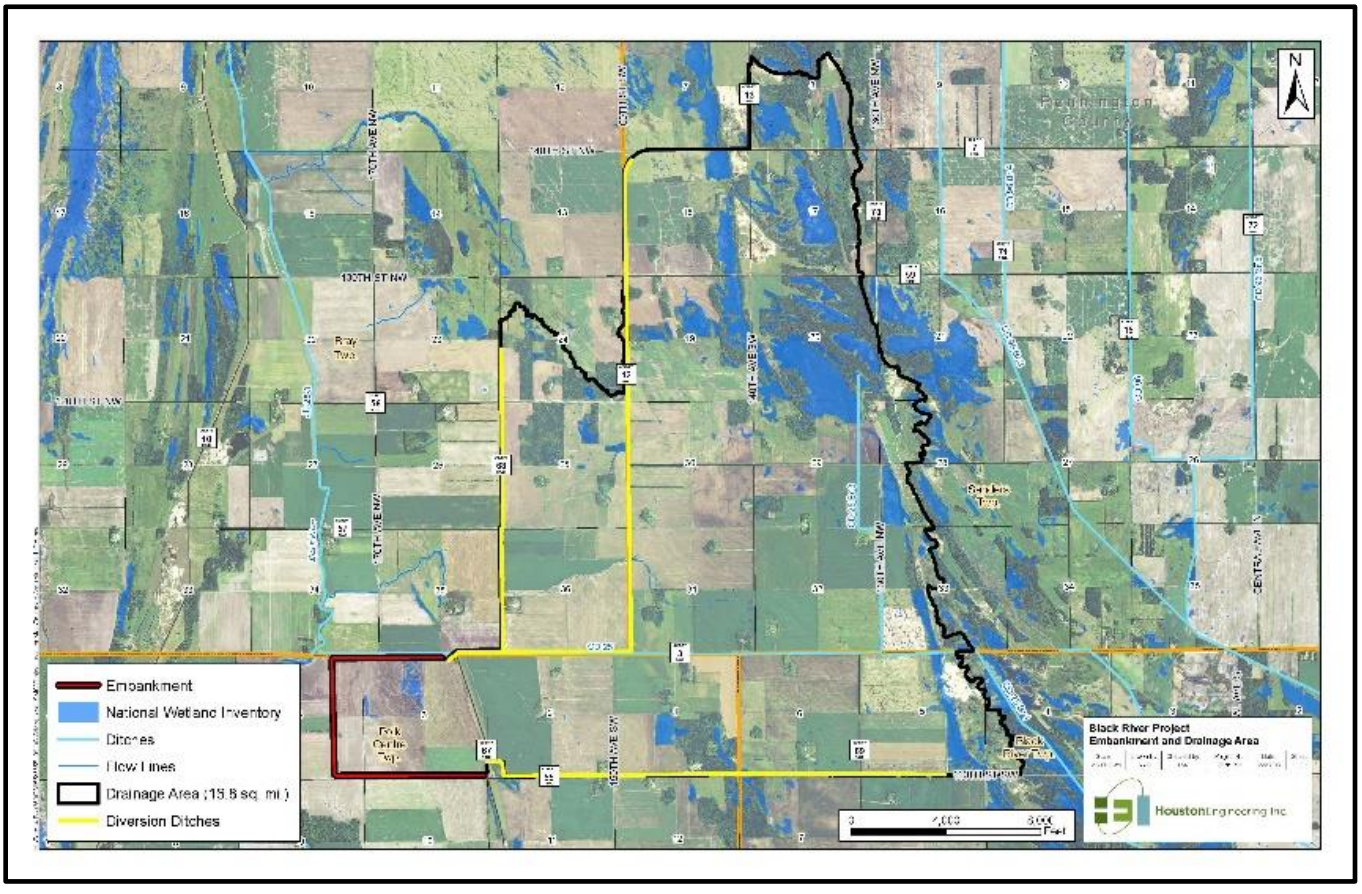
On November 10, 2016, the RLWD Board of Managers, by Board motion, initiated the Black River Impoundment Project.

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. To date the RLWD has been progressing in the development and design of the Black River Impoundment as well as securing lands required for construction of the project.

On April 18, 2017, the Step I submittal was presented to the Red River Watershed Management Board. Step II submittal for funding was presented to the same Board on 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.

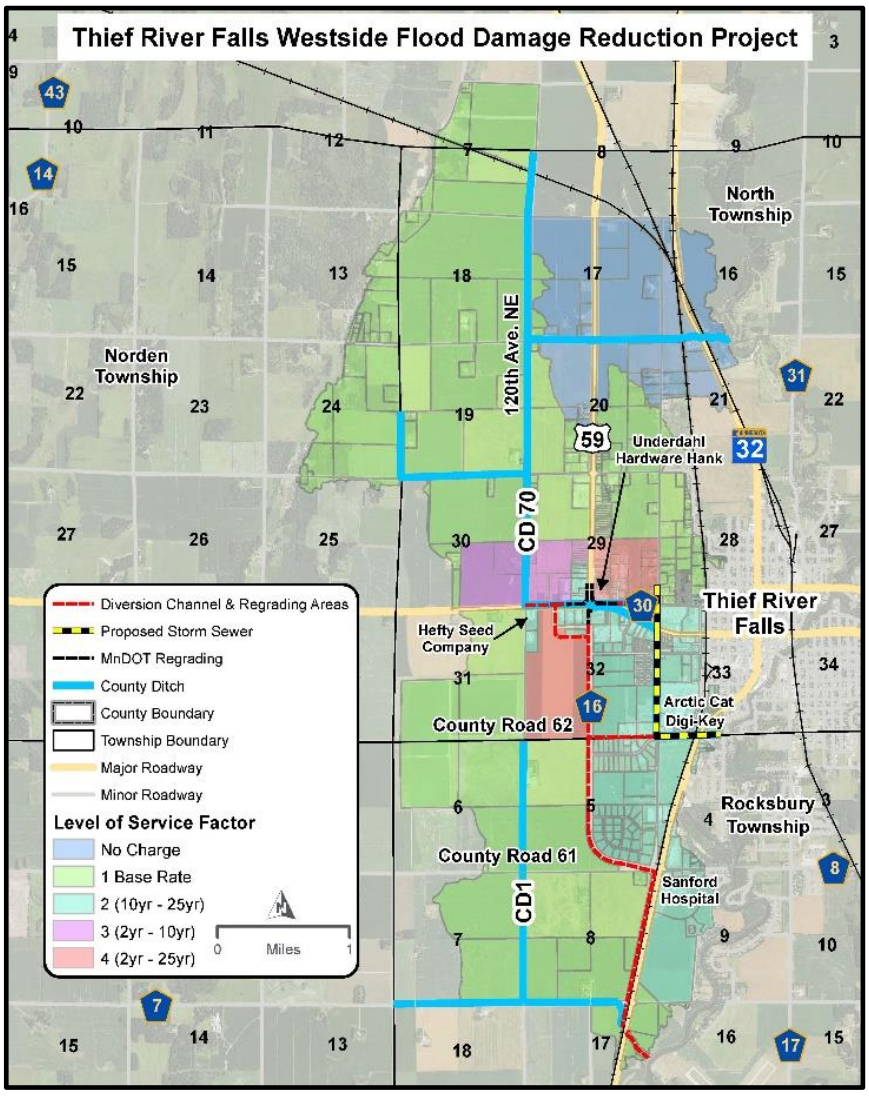
In 2019 the District, with the assistance of Houston Engineering Wetland Specialist, continued with the permitting application process with Wetland Conservation Act staff as well as the United States Army Corps of Engineers to review wetland impacts to the project. After nearly two years of meetings and review, the District completed an application for permitting wetland impacts for the project. It is the hopes of the District that permits and funding for this project will be completed in 2020 so we can move into the construction phase of the project.



Thief River Falls Westside Flood Damage Reduction Project (RLWD Project No. 178)

At their regular scheduled October 12, 2017 Board meeting, the RLWD Board of Managers received a petition from the City of Thief River Falls and Pennington County Commissioners that requested a project to divert waters from Pennington County Ditch #70 where it enters from the north and west of the City of Thief River Falls.

In 2018, the Red Lake Watershed District, Minnesota Department of Transportation (MnDOT), City of Thief River Falls and Pennington County developed a partnership to move forward with this project in conjunction with a project MnDOT was designing near the west side of the City. The District retained HDR Engineering Inc. to develop a plan for the proposed project. On February 24, 2018, an application for a $1,500,000 Flood Hazard Mitigation Grant was applied for through the Minnesota Department of Natural Resources. In May of 2018, the Red Lake Watershed District was informed that the grant application was approved and on September 7, 2018 the grant agreement in the amount of $1,500,000 was executed. To assist in the 50% cost share match required by the State, the District submitted a Step 1 submittal for a $1,000,000 funding request to the Red River Watershed Management Board. The District hopes to have all funding secured as well as to coordinate final planning with project partners which will allow Phase I construction of the project starting in July or August of 2019 with completion of the project occurring in 2020.



Red Lake River One Watershed One Plan (RLWD Project No. 149)

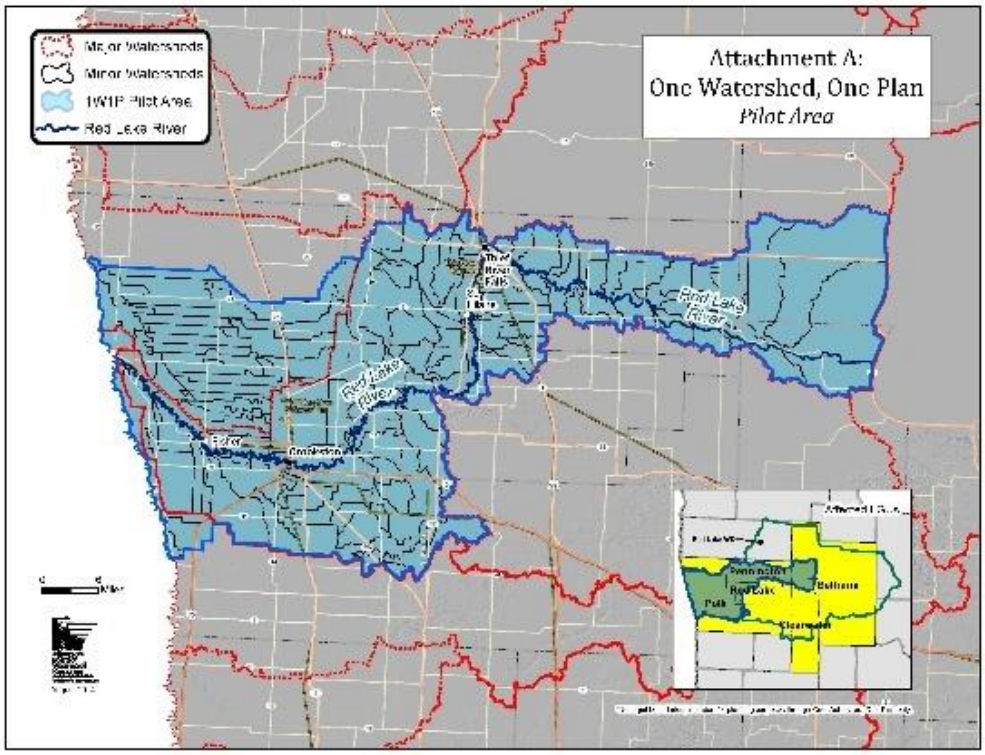
Minnesota has a long history of water management by local governments. One Watershed, One Plan is rooted in this history. In work initiated by the Local Government Water Roundtable (Association of Minnesota Counties, Minnesota Association of Watershed Districts, and Minnesota Association of Soil and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

In early 2014, the Red Lake Watershed District, Pennington, Red Lake County and West Polk Soil Conservation Districts, along with their respective Counties, partnered to apply for a grant through the Board of Water Resource One Watershed One Plan Pilot Project, to establish a Comprehensive Water Management Plan for the Red Lake River Watershed. The Red Lake River One Watershed One Plan was one of five pilot projects that were approved for funding in December of 2014.

In 2015, the project partners started the planning process outlined by the BWSR which ultimately resulted in the approval of the plan in January 2017.

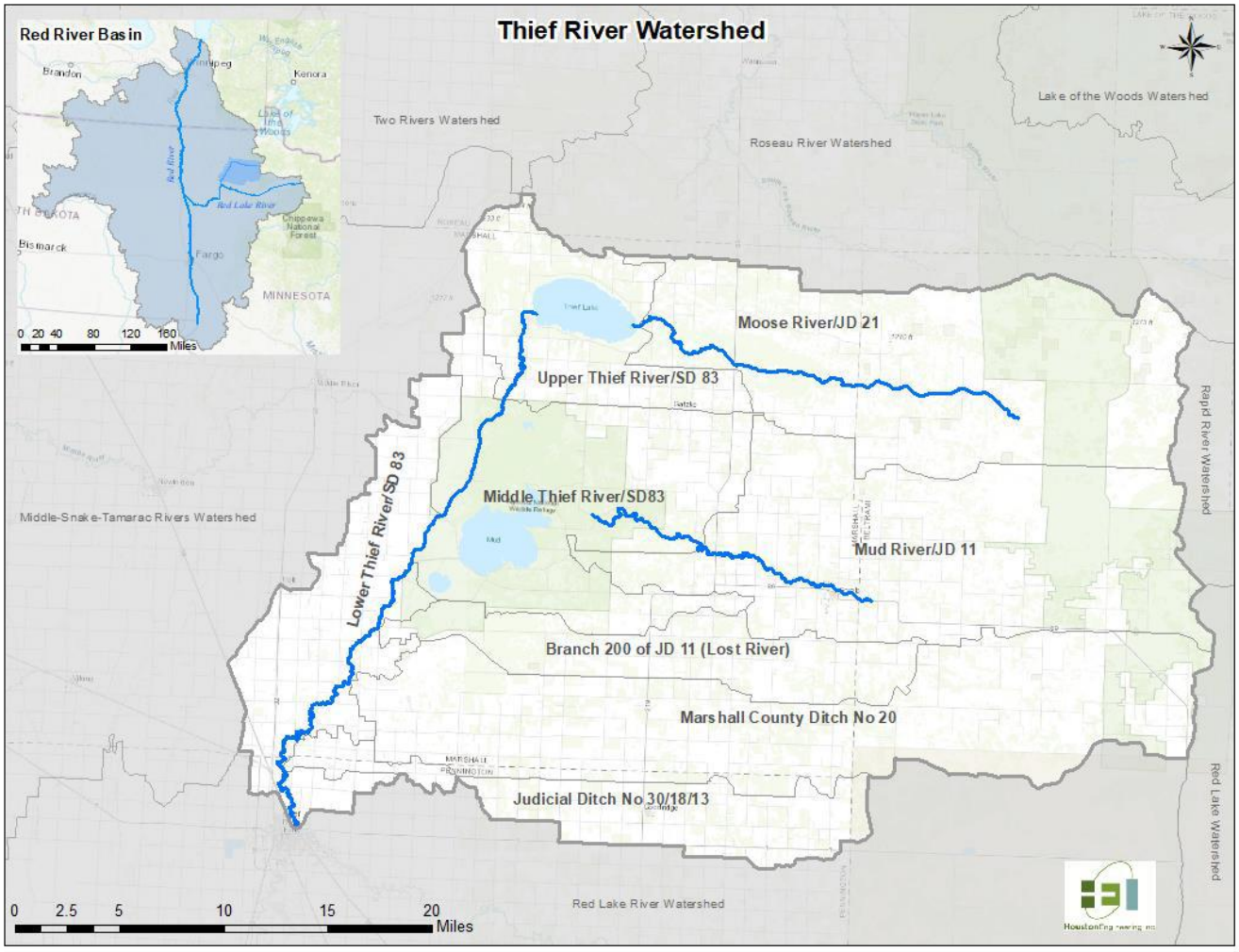
In 2018 the "Planning Work Group" for the Red Lake River One Watershed One Plan completed the required "Work Plan". Upon completion of the Plan and approval from the BWSR, a grant in the amount of $677,500 was awarded to complete various water quality projects highlighted in the plan.

In 2019, the implementation of the projects in the plan started slowly. Permitting delays and late rainfall events delayed construction on two of the District projects listed in the workplan. Permits have been received and construction will begin in the spring of 2020. As of November 30, 2019, there is a grant balance of $592,008.66 remaining from the first appropriation. In December of 2019, the Red Lake River 1W1P Biennial Work Plan for 2020-2021 was approved by BWSR. As a result of the approval, an additional $1,071,149 of Watershed Based Funding was awarded for projects identified in the Work Plan.



Thief River One Watershed One Plan (RLWD Project No. 149A

In June of 2016, the Red Lake Watershed District, Pennington, Marshall and Beltrami Soil Conservation Districts and their respective counties applied for and were approved to receive a grant from the Board of Water and Soil Resources (BWSR) through their One Watershed One Plan program, to develop a Ten Year Comprehensive Plan for the Thief River Watershed. On July 11, 2017, the grant was approved and executed by the BWSR. The plan development continued into 2018 and 2019 with the draft plan being approved by the Policy Committee and partners in late 2019. It is the hopes of the District and our partners that the draft plan will be approved by the BWSR in early 2020. In anticipation of the plan approval, the Planning Workgroup is moving forward in developing the required work plan with the hope of implementation starting in the fall of 2020.



Flood Control Impoundments

The 2019 spring melt was quite significant, recording the 8th highest crest on the Red River of The North at the East Grand Forks monitoring site.

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

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 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**
Top of Dam (total Storage)	908.0	2,443 (2.68 in. runoff)
Gated Storage (Secondary Spillway)	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
October 9, 2019

In 2019, District staff and the local gate tender performed gate operation during the spring melt and the fall flood. A new record crest was recorded April 22nd at elevation 905.4', it was then surpassed October 13th at elevation 905.9'.

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 2019, District staff and the local gate tender performed gate operation during the spring melt and the fall flood. A new record crest was recorded April 22nd at elevation 914.7', it was then surpassed October 13th at elevation 915.45'.

FUNCTIONAL DESIGN DATA

	Elevation (ft.-msl)	Storage
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		

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 was 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 held 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.


West Pool Outlet Structure

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
Top of Dam (total Storage)	943.0	4,000 (3.2 in. runoff)
Emergency Spillway	939.5	3,000 (2.4 in. runoff)
April 17, 2019 was recorded as the highest pool elevation at 940.1		

In 2019, District staff and the local gate tender performed gate operation during the spring melt and the fall flood. A new record crest was recorded April 17th at elevation 940.1', October 15th recorded the second highest crest at elevation 939.9'.

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: The Sections 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**
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.

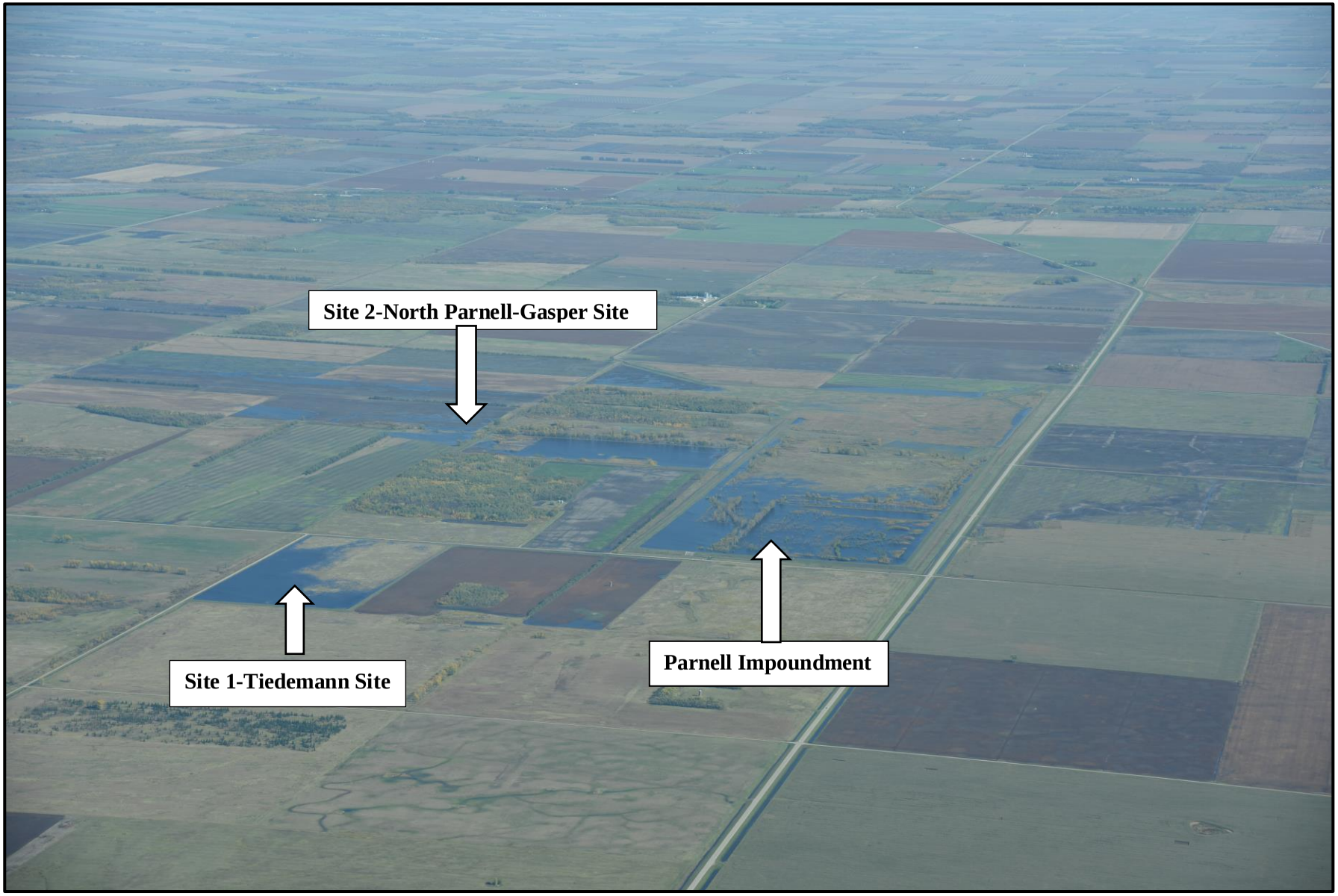
PROJECT COMPONENTS: The project is directly upstream and adjacent to the Parnell Impoundment. The embankment is constructed of approximately 1.0 miles of earthen clay embankment, a grass lined emergency spillway, 1 – line of 36" concrete pipe with a gated outlet structure.

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**
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

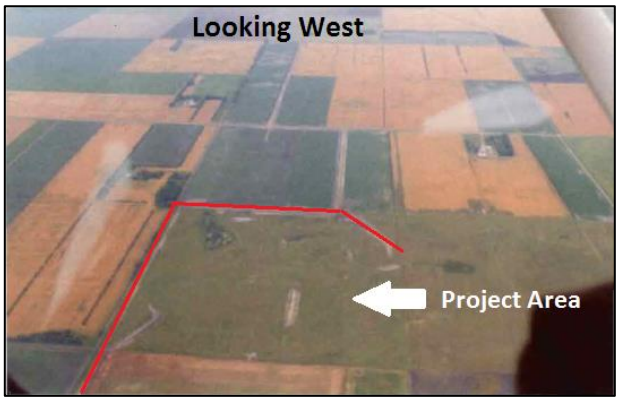


Louisville/Parnell Project (RLWD Project No. 121)

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 north east 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 principle 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. Gate operation will be coordinated with operation of the Black River Dam, RWLD #25.

Pine Lake (RLWD Project No. 35)

GENERAL: In 1980, the Clearwater County Board of Commissioners petitioned the District for an improvement of the Pine Lake outlet. Constructed in 1981, a sheet pile dam with two adjustable stop log bays was built about 800 feet north of the lake on the Lost River.

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)
2nd Stage-top of dam	1284.5
1st Stage-top of dam	1284.0
Typical summer-top of stop logs	1283.5
Typical winter	1282.5
April 11, 2009 was recorded as the highest pool elevation at 1286.0	

The Pine Lake control structure is a sheet pile dam with two – 4' wide adjustable stop-log bays. The stop-logs can be adjusted between elevations 1281.5 to 1283.5. There is also 26 feet of fixed crest weir at elevation 1284.0, and 65 feet of fixed crest weir at elevation 1284.5. The project has a drainage area of 45 square miles.

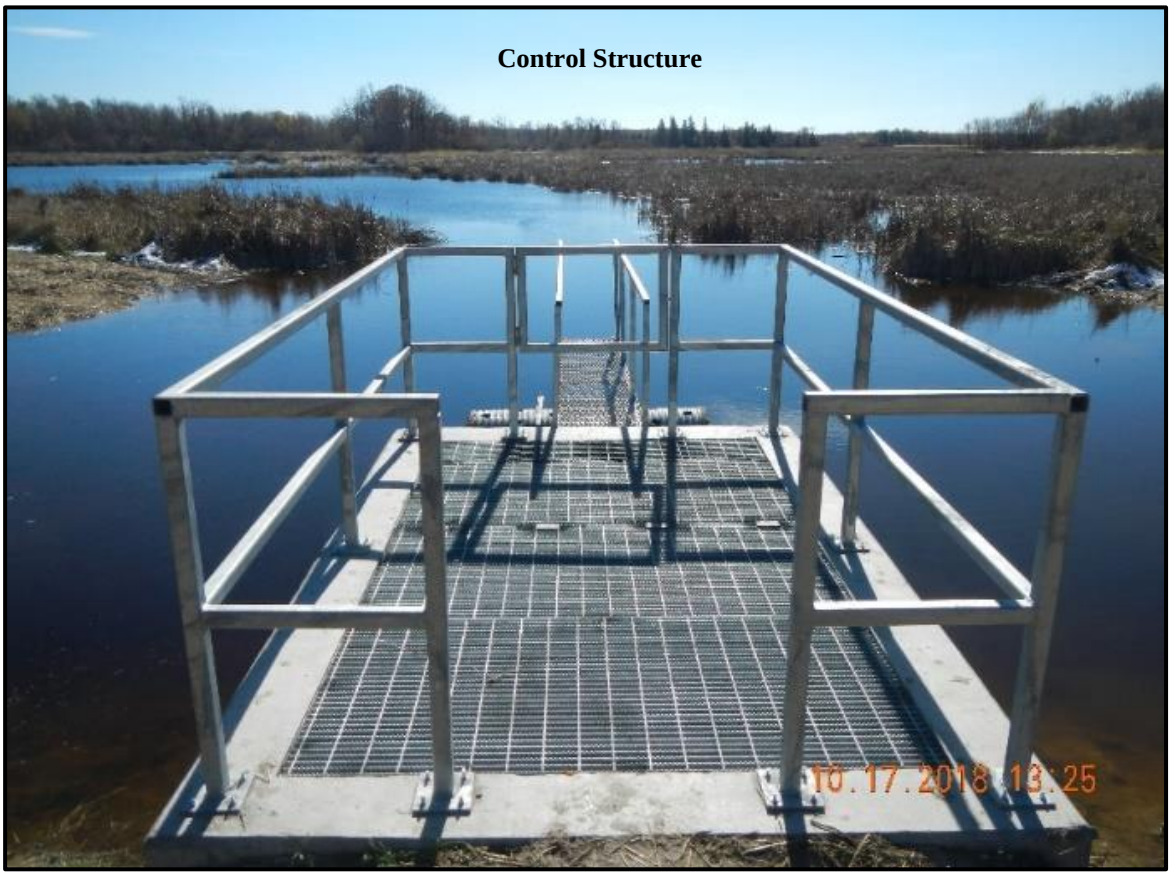

Typical fall drawdown with stoplogs removed

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 small fixed crest weir at elevation 1282.5, which is one foot lower than the normal summer stop-log elevation. This was an innovative design in the early 1980's and allows for minor outflows that provides stream flow maintenance. 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 2019, the local Sportsman's Club operated the aeration system from February 2nd to April 17th. Stoplogs were installed on May 21st to the typical summer elevation of 1283.5. Pine Lake crested at elevation 1285.48 on April 25th. On October 1st, stop-logs were removed to begin the normal fall drawdown and continued until November 27th at which time two stop-logs were installed in each of the two stop-log bays to elevation 1282.5. This installation is to be done by December 1st of every year, as per the Minnesota Department of Natural Resources requirements.

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, 2019, 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 had 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.

Gated Principal Outlet Structure

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.

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.

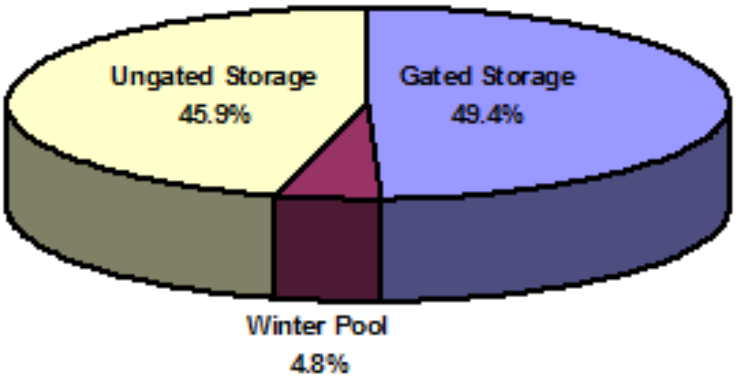
PURPOSE: Multi-purpose; designed to provide flood control, streamflow maintenance, increase wildlife values, and benefit fire control.

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

2019 Operation: The maximum North Pool elevation for 2019 was 1213.0 (4,150 ac/ft) which occurred on April 24th. Only one summer rain event required gate operation, however, the fall proved to be intensive. Gates were closed September 22, releases began October 18th, drawdown was complete November 27th. The fall flood resulted in the 5th highest crest of the north pool.

The Minnesota Department of Natural Resources (MnDNR) performed spotted knapweed control at various locations of the project. The watershed performed other routine maintenance (dike mowing, stream gage repair, and debris removal). The normal 'fall drawdown' was achieved in late November.

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.

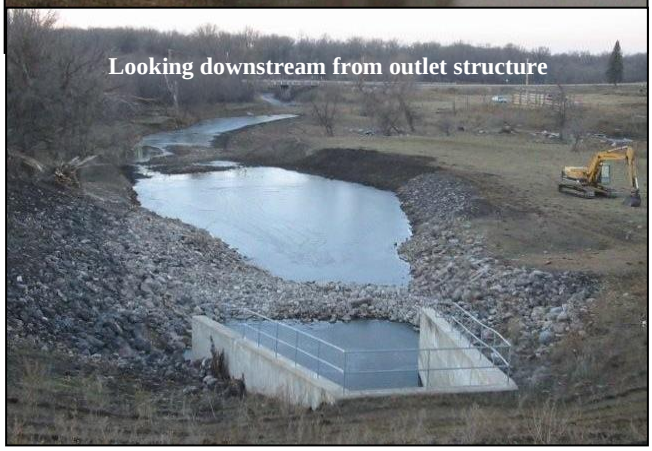
South Pool - Gated Principal Outlet Structure

2019 Operation The maximum South Pool elevation for 2019 was 121530 (8,888 ac/ft) which occurred on April 24th. One summer rain event required gate operation, however, the fall proved to be intensive. Gates were closed September 22, releases began October 9th, drawdown was complete November 29th. The fall flood resulted in the 9th highest crest of the south pool.

The Minnesota Department of Natural Resources performed spotted knapweed control at various locations of the project. The watershed performed other routine maintenance (dike mowing, stream gage repair, and debris removal). The normal 'fall drawdown' was achieved in late November.

Schirrick Dam (RLWD Project No. 25)


Principal outlet structure hydraulic gate operation


Looking downstream from outlet structure

GENERAL: The Schirrick Dam 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		

In 2019, the spring runoff event, was large enough to raise downstream river levels to the operating plan "trigger point" elevations, therefore gate operation was required. In late August and early September, yearly routine maintenance was performed on the two hydraulic gates and lifting mechanism. The gates were also test operated (closed and opened) to make sure that they function properly. This is done to be prepared in the event of a severe 2020 spring flood which would require closure. Both hydraulic motors had new gaskets installed, new hydraulic hoses were installed, and O-rings were replaced at the connection points. A dam inspection was conducted with Widseth Smith Nolting of Crookston, MN & RLWD Staff. This dam and the timing of closure are vitally important for the flood protection for city of Crookston.


Aerial view of Schirrick Dam looking south


April 16, 2019
Elevation 987.9' - 0.9' Above Weir

Water Quality Program

The District and other 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 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 and trends. Sampling activities can also be conducted to find the locations of pollutant sources.

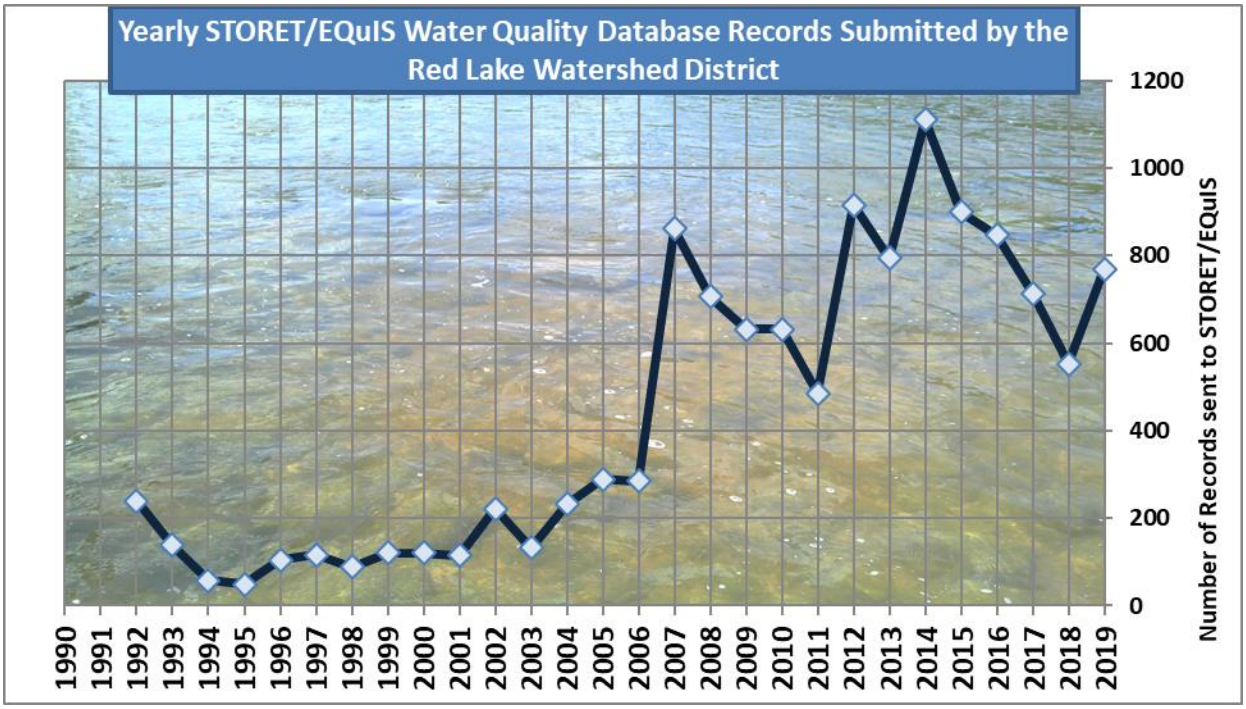
Thanks to the Clean Water Land and Legacy Act, the MPCA has been able to provide the District with funding for four watershed restoration and protection strategy (WRAPS) projects (Thief River, Red Lake River, Grand Marais Creek, and Clearwater River watersheds). A fifth WRAPS project within the District is being conducted for the Upper/Lower Red Lakes watershed by the Red Lake Department of Natural Resources. In 2019, much time was spent by District staff on the Clearwater WRAPS project and revisions of Total Maximum Daily Load (TMDL) and WRAPS reports for the Red Lake River and Clearwater River watersheds. In addition to the District's long-term monitoring program, water quality staff deployed and maintained dissolved oxygen and water level loggers. Some of the water level and dissolved oxygen logger deployments were conducted for intensive studies near Pine Lake and Thief River Falls.

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 that the District collects needs to be interpreted and shared for it to be most beneficial. Therefore, the District generates regular (monthly and annual) water quality reports, holds open house events, and participates in other educational events like water festivals. All information is shared online on the District's website and Facebook page. The creation of informative maps using GIS software is also used to attain a better understanding of water resources and watersheds.

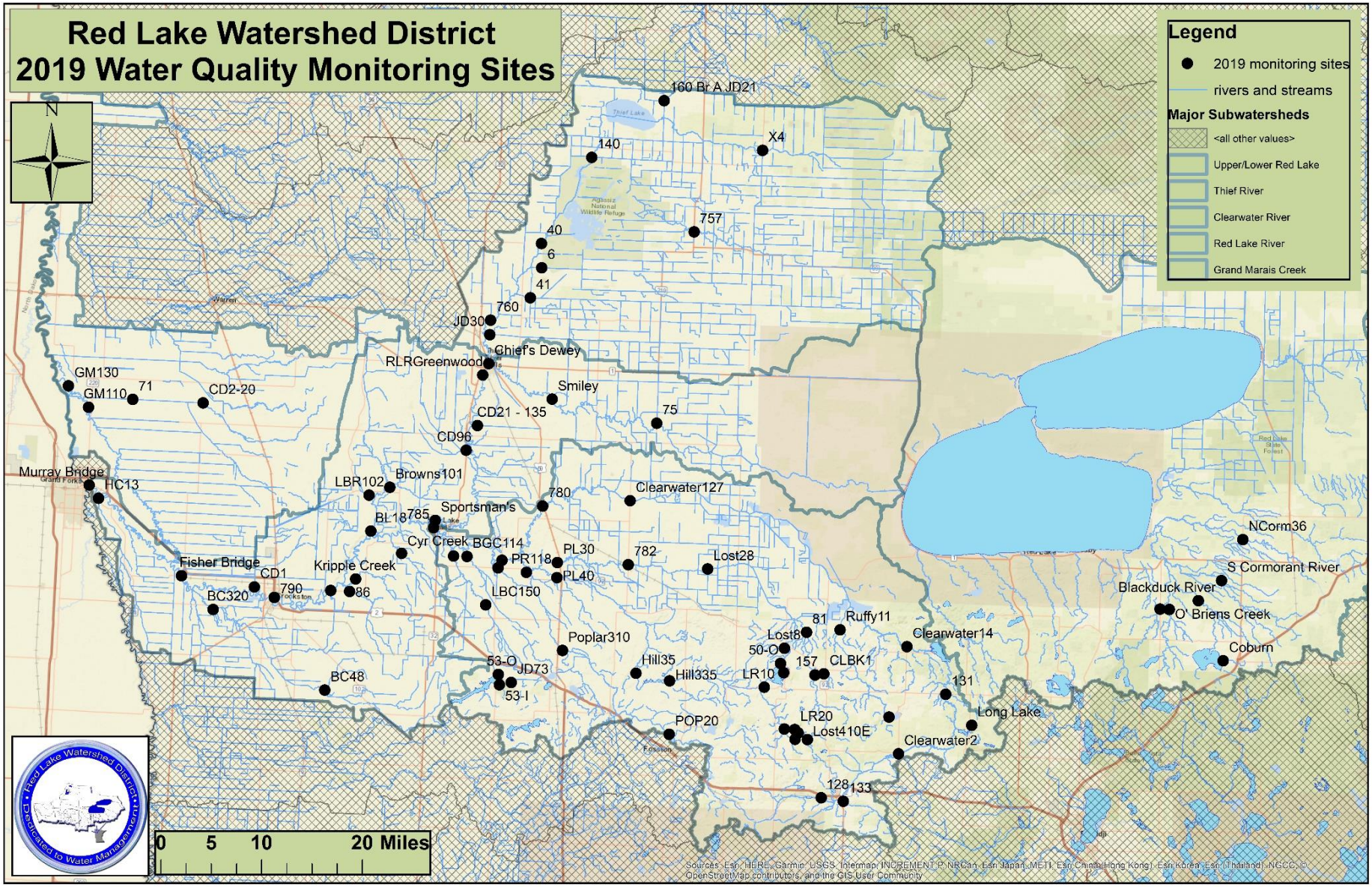
The knowledge that is gained through the District's water quality program is also used for the planning of projects that will improve water quality conditions and comprehensive watershed planning efforts (1W1P). The District has identified sources of pollutants that can be addressed through large and small projects. The Board of Managers provides 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 80 sites as part of the District's regular monitoring program in 2019. Seven of those sites were sampled for short-term monitoring efforts and included 3 lakes (Pine Lake, Lost Lake, and Long Lake). 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. The four 2019 rounds of sampling occurred in May, July, August, and October.



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.


Red Lake Watershed District
2019 Water Quality Monitoring Sites
Legend
2019 monitoring sites
rivers and streams
Major Subwatersheds
<all other values>
Upper/Lower Red Lake
Thief River
Clearwater River
Red Lake River
Grand Marais Creek
N
160 Br A JD21
X4
140
757
40
6
41
760
JD30
Chief's Dewey
RLRGreenwood
GM130
GM110
71
CD2-20
Smiley
75
CD21 - 135
CD96
Murray Bridge
HC13
LBR102
Browns101
780
Clearwater127
785
Sportsman's
BL18
Cyr Creek
BGC114
PR118
PL30
PL40
782
Lost28
Fisher Bridge
CD1
Kripple Creek
790
86
BC320
LBC150
NCorm36
S Cormorant River
Blackduck River
O' Briens Creek
Coburn
81
Ruffy11
Lost8
Clearwater14
50-O
157
CLBK1
LR10
131
Long Lake
Poplar310
53-O
JD73
53-I
Hill35
Hill335
BC48
POP20
LR20
Lost410E
Clearwater2
128
133
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

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. High E. coli concentrations (>126 MPN/100ml) occurred in 2019 in the following waters (alphabetical order).

1. Beau Gerlot Creek at CR 114
2. Blackduck River
3. Branch A of Judicial Ditch 21
4. Browns Creek at County Road 101
5. Burnham Creek
    a. CR 48
    b. 320th Ave SW
6. Clearwater River
    - CSAH 2
    - CR 127
7. Chief's Coulee at Dewey Avenue in Thief River Falls
8. Coburn Creek near the inlet to Blackduck Lake
9. Cyr Creek at 220th St. SW
10. Darrigan's Creek at CSAH 23
11. Cyr Creek at 220th Street SW
12. Gentilly River at CSAH 11
13. Grand Marais Creek
    - 110th St. NW
    - 130th St. NW
14. Heartsville Coulee at 13th Street in East Grand Forks
15. Hill River
    - 335th Ave SE
    - CSAH 35
    - CR 119, north of Brooks
16. Judicial Ditch 30 at 140th Ave NE, north of Thief River Falls
17. Judicial Ditch 73
    a. 343rd St. NE
    b. CSAH 10 Maple Lake inlet
18. Kripple Creek at 180th Ave SW
19. Little Black River at County Road 102
20. Lost River
    a. South crossing of 141st Ave, upstream of Lost Lake
    b. North crossing of 141st Ave, downstream of Lost Lake
    c. 109th Ave, upstream of Pine Lake
    d. 486th St. near the Pine Lake outlet
    e. CSAH 8
    f. CSAH 28
    g. Oklee
21. Lost River tributary at 410th St., upstream of Lost Lake
22. Lower Badger Creek
    a. 150th Ave SE
    b. County Road 114
23. Marshall County Ditch 20 at 180th Ave NE
24. Moose River at CSAH 54
25. Mud River
    - Grygla City Park
    - Highway 89
26. Nassett Brook
27. North Cormorant River at CSAH 36

28. O' Briens Creek at Harvest Rd. NE
29. Pennington County Ditch 96 at Highway 32
30. Polk County Ditch 1
31. Polk County Ditch 2 at County Road 62
32. Polk County Ditch 14 near the Maple Lake outlet
33. Poplar River
    a. CSAH 30
    b. 310th St SE
34. Red Lake River
    a. CSAH 7 (Smiley Bridge)
    b. Greenwood Street Bridge in Thief River Falls
    c. CSAH 11 near Gentilly
    d. Crookston
    e. Fisher
    f. Murray Bridge in East Grand Forks
35. Ruffy Brook at CSAH 11
36. Silver Creek at 159th Ave, west of Clearbrook
37. South Cormorant River at CSAH 37
38. Terrebonne Creek at Hwy 92
39. Thief River
    - 380th St NE (northern boundary of Agassiz National Wildlife Refuge)
    - 140th Ave NE (Hillyer Bridge) near Thief River Falls

The highest concentration of *E. coli* bacteria recorded in the District in 2019 was >2,419.6 (more than the lab could accurately measure) and that level was recorded at multiple locations

1. Co-op elevator discharge to Chief's Coulee (9,800 MPN/100mL)
2. Chief's Coulee at Dewey Ave
3. Darrigan's Creek at CSAH 23
4. Lost River
    - CSAH 28
5. Lost River tributary at 410th St., upstream of Lost Lake
6. West Four-Legged Lake outlet

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. Relatively few instances of high total suspended solids concentrations (>65 mg/l, >30 mg/l, or >15 mg/l, depending on the site's location) were found during 2019 sampling efforts for the District's long-term monitoring program:

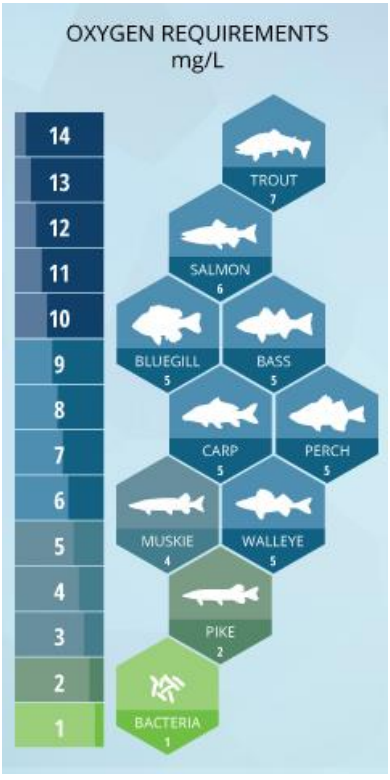
- >65 mg/L – Violated applicable South (65 mg/L), Central, and North River Nutrient Region standards in 2019
    1. Red Lake River at CSAH 11, near Gentilly
    2. Red Lake River in Crookston
    3. Red Lake River at Fisher
- >30 mg/L – Violated applicable Central (30 mg/L) and North River Nutrient Region standards
    1. Chief's Coulee at Dewey Ave
    2. Darrigan's Creek at CSAH 23
- >10 mg/L – Violated the 10 mg/L standard for trout streams
    1. Lost River tributary at 410th St., upstream of Lost Lake
    2. Nassett Brook

The MPCA's Watershed Pollutant Load Monitoring Program intensively samples rivers at USGS gauges and other important locations. That intensive monitoring effort captured high TSS concentrations above 30 mg/L

in the Clearwater River at Red Lake Falls during spring runoff, a July runoff event, and the October runoff and high flow event. The Red Lake River at Red Lake Falls also exceeded the 30 mg/L during those runoff events and also exceeded the standard during the mid-September runoff event. The Clearwater River at Plummer met the 30 mg/L standard during spring runoff, but registered violations of the standard during the July and October runoff events. The Red Lake River at Fisher exceeded the 65 mg/L standard during spring runoff, the July runoff event, and the mid-to-late September runoff event. The Red Lake River at Fisher met the TSS standard in October, even though flows remained high throughout the watershed. The Lost River, near brooks, only exceeded the 30 mg/L standard in one sample collected during spring runoff. All of the TSS samples collected from the Red Lake River at Highlanding (upstream of Thief River Falls) met the 30 mg/L TSS standard and only one sample was higher 15 mg/L. The Thief River only exceeded the 30 mg/L TSS standard once at the monitoring station near Thief River Falls (during the September runoff event), which is an improvement compared to past years. A similar 2019 exceedance rate of the TSS standard was found at the CSAH 7 crossing of the Thief River, though that location exceeded the 30 mg/L standard during the July runoff event in addition to nearly exceeding the standard during the September runoff event. Compared to the station near Thief River Falls, TSS concentrations between runoff events were generally lower at the CSAH 7 crossing than they were near Thief River Falls. The Mud river exceeded the 30 mg/L standard once, during the September runoff event. In addition to that one high September runoff concentration (103 m/L), it had concentrations above 15 mg/L during spring runoff and the October high flows. All 4 of the August TSS samples collected by the MPCA's program in August were lower than the 1 mg/L minimum reporting limit.

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. Low dissolved oxygen levels (<5 mg/l) were found in the following rivers and streams during 2019 monitoring for the District's long-term monitoring program (alphabetical order).

1. Branch 200 of JD 11
2. Chiefs Coulee at Dewey Ave in Thief River Falls
3. Clear Brook at CSAH 92
4. Clearwater River
    a. CSAH 25 near Bagley
    b. 370th Ave SE
5. Grand Marais Creek at 110th St. NW
6. Grand Marais Creek at 130th St. NW
7. Heartsville Coulee at 13th Street in East Grand Forks
8. Hill River
    a. 340th Street SE
    b. 380th Ave SE
    c. CSAH 35
9. Judicial Ditch 23 Main and Lat
10. Judicial Ditch 30 at 140th Ave NE
11. Judicial Ditch 73 at 343rd Street SE near Rydell NWR
12. Lost Lake
13. Lost River
    a. South crossing of 141st Ave, upstream of Lost Lake
    b. North crossing of 141st Ave, downstream of Lost Lake
    c. 109th Ave, upstream of Pine Lake
    d. 530th Street
    e. CSAH 28
14. Marshall County Ditch 20 at 180th Ave NE
15. Mud River at Highway 89
16. Polk County Ditch 2 at CR 62
17. Polk County Ditch 66 at 110th Street NW



18. Poplar River at CSAH 35
19. RLWD Ditch 15
    a. 260th Ave SW
    b. Highway 75
    c. CSAH 20
20. Thief River at CSAH 7
21. Walker Brook at CSAH 19
22. West Four-Legged Lake outlet

The two highest (best) dissolved oxygen concentrations recorded for the District's long-term monitoring program in 2019 were both (24.83 mg/L and 16.25 mg/L) recorded at the 135th crossing of Pennington County Ditch 21. Those very high levels were an indication of supersaturation in stagnant water. Dissolved oxygen concentrations of zero mg/L were recorded in the Lost River at 141st Ave (due to a beaver dam) and Chief's Coulee at Dewey Ave (due to pollutants).

The state's water quality standard for total phosphorous varies by river nutrient region. Rivers and tributaries in the western part of the District must meet a 0.150 mg/l standard in the South River Nutrient Region. Rivers and tributaries assigned to the Central River Nutrient region must meet a 0.100 mg/l standard. Rivers and tributaries in the eastern part of the District must meet a more protective standard of 0.050 mg/l in the North River Nutrient Region. High total phosphorus concentrations relative to the State of Minnesota's new regionalized river eutrophication nutrient criteria were recorded in samples collected at the following sites.

1. North River Nutrient Region (>0.05 mg/L), where applicable:
    - Blackduck River at Deer Trail Rd
    - Coburn Creek
    - Darrigan's Creek at CSAH 23
    - Lost River tributary at 410th St., upstream of Lost Lake
    - Nassett Creek
    - North Cormorant River at CSAH 36
    - O' Briens Creek at Harvest Rd.
    - Silver Creek at CR 111
    - South Cormorant River at CSAH 37
2. Central River Nutrient Region (>0.1 mg/L), where applicable:
    - Beau Gerlot Creek at CR 114
    - Chiefs Coulee at Dewey Ave in Thief River Falls (0.632 mg/L - 5.32 mg/L)
    - Clearwater River
        - CSAH 2
        - North of Plummer
        - CSAH 12 crossing near Terrebonne
        - Red Lake Falls
    - Hill River
        - CSAH 35
        - 335th Ave SE
    - Judicial Ditch 30 at 140th Ave NE
    - Lost River
        - 109th Ave, upstream of Pine Lake
        - South crossing of 141st Ave, upstream of Lost Lake
        - North crossing of 141st Ave, downstream of Lost Lake
    - Lower Badger Creek at CR 114
    - Marshall County Ditch 20 at 180th Ave NE
    - Moose River at CSAH 54
    - Mud River at Highway 89
    - Pennington County Ditch 21 at 135th Ave NE

- Pennington County Ditch 96 at highway 32
- Poplar River
    - CSAH 30 near Fosston
    - 310th St SE
    - CR 118
- Red Lake River
    - CSAH 7
    - Greenwood Street Bridge in Thief River Falls
- Thief River
    - 380th St NE (north boundary of Agassiz National Wildlife Refuge)
    - CSAH 7
    - 140th Ave NE (Hillyer Bridge)

3. South River Nutrient Region (>0.15 mg/L), where applicable:
    - Black River at CSAH 18
    - Brown's Creek at County Road 101
    - Burnham Creek
        - CSAH 48
        - 320th Ave SW
    - Cyr Creek at 220th St. SW
    - Grand Marais Creek
        - 110th St. NW
        - 130th St. NW
    - Heartsville Coulee at 13th Street, in East Grand Forks
    - Little Black River at CR 102
    - Polk County Ditch 1
    - Polk County Ditch 2
        - CSAH 20
        - CR 62
    - Red Lake River
        - CSAH 11, near Gentilly
        - Crookston
        - Fisher
        - Murray Bridge in East Grand Forks
    - RLWD Ditch 15 at CSAH 20

High biochemical oxygen demand (BOD) concentrations (>3.5 in the South or >2.0 in the Central River Nutrient Region) were found in the following streams. Most of these streams were also on the 2016 list.

- Blackduck River at Deer Trail Road NE
- Chiefs Coulee at Dewey Ave in Thief River Falls
- Thief River at 140th Ave NE (Hillyer Bridge)

July nitrate and nitrite concentrations were notably high in the Moose River, Mud River, and upper Thief River. Though nitrate concentrations were relatively high in rivers that flowed into Agassiz Pool, nitrate concentrations were low in the Thief River downstream of the pool. Wetlands can be very effective for nitrate removal.

Longitudinal E. coli samples were collected along Grand Marais Creek, Polk County Ditch 2 and RLWD Ditch 15. Much of the Polk County Ditch 2 and RLWD Ditch 15 drainage system upstream of the County Road 62 crossing of Polk County Ditch 2 had *E. coli* concentrations that were lower than the 126 MPN/100ml standard. *E. coli* concentrations were high in RLWD Ditch 15 at the Brandt impoundment outlet (but lower downstream), Grand Marais Creek at 110th St. NW and 130th St. NW, and Polk County Ditch 2 at County Road 62.

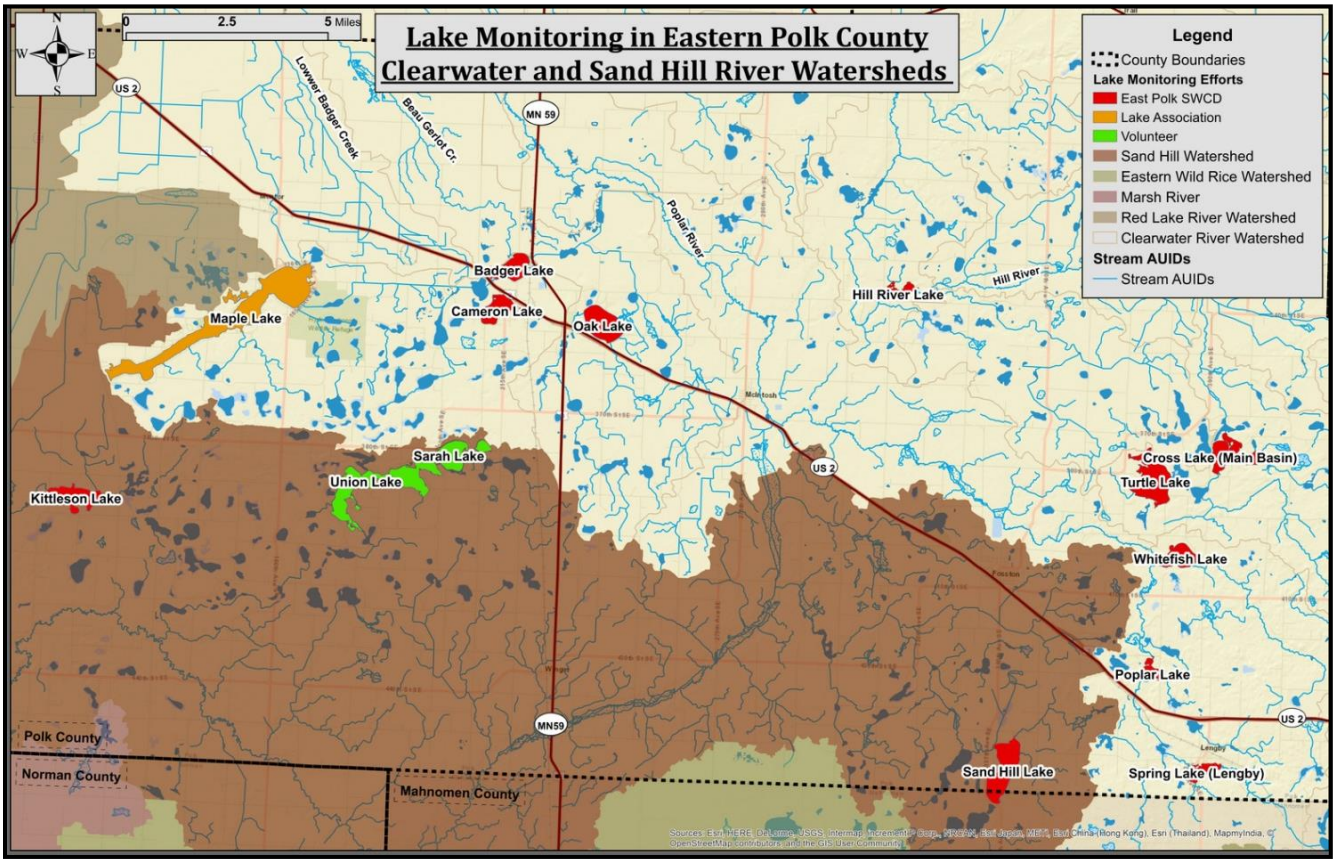
Microbial source tracking samples were collected from Chief's Coulee at Dewey Avenue in northern Thief River Falls and from Polk County Ditch 2 at County Road 62. Bird fecal DNA markers were found in Polk County Ditch 2 (human, ruminant, and goose fecal markers were not found). Bird and dog (indicator of stormwater runoff pollution) fecal DNA markers were found in Chief's Coulee. Human fecal DNA markers were not found in Chief's Coulee, which indicates that efforts by the Pennington SWCD and the city to find and fix failing septic systems (or connect them to the city sewer) may have been successful.

Extremely high concentrations of nearly all measured pollutants were found in Chief's Coulee. In addition to the high *E. coli*, total phosphorus, and total suspended solids noted in the preceding lists, Chief's Coulee also had high concentrations of biochemical oxygen demand, ammonia nitrogen, nitrates, and total Kjeldahl (ammonia plus organic) nitrogen.

Data from 2019 water quality monitoring was entered into the District's database, transferred to an EQuIS submittal template, reviewed for accuracy, then submitted to the MPCA for storage in the EQuIS database. A total of 769 records were submitted to the MPCA. More than 308 of those records involved the collection of water quality samples. Data collected by the East Polk SWCD staff from additional locations within eastern Polk County were entered into the MPCA data submittal template, reviewed, and submitted to the MPCA.

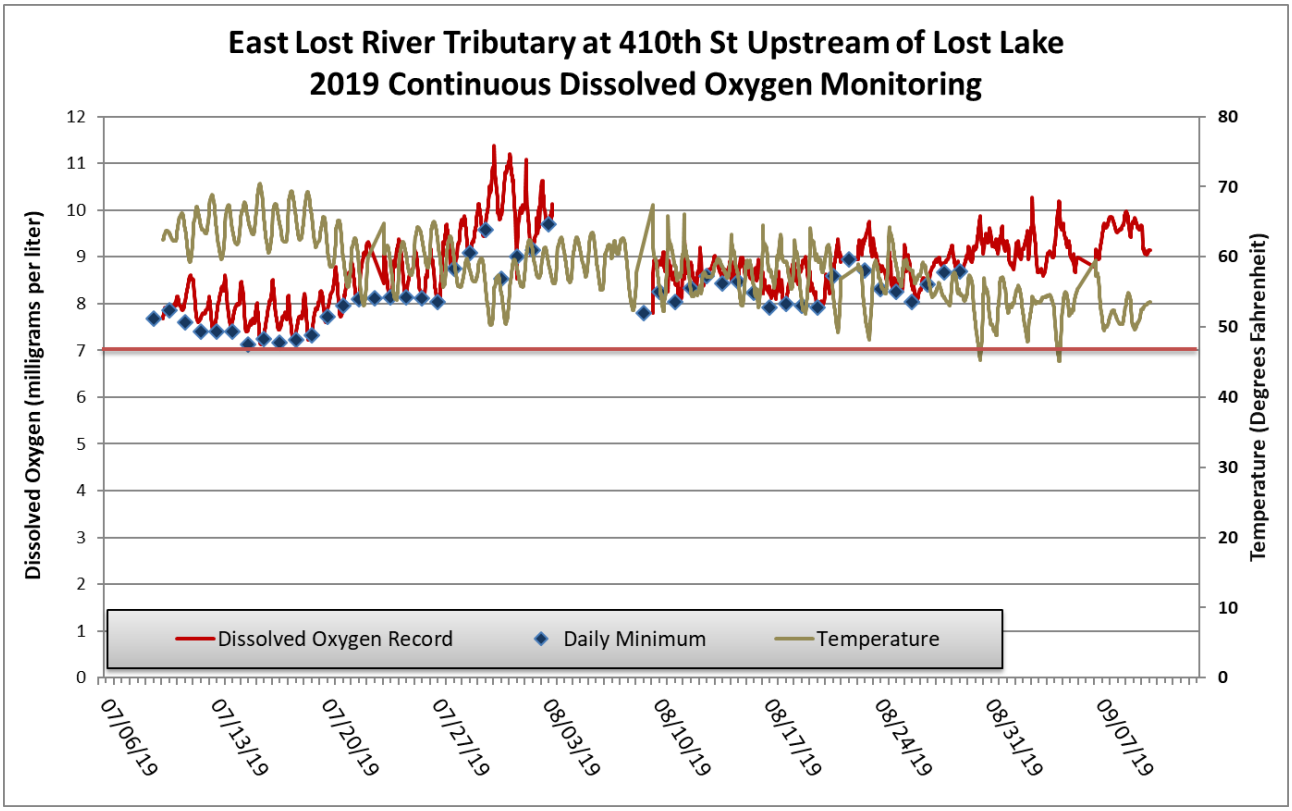
The district partnered with the East Polk SWCD and the Maple Lake Improvement District to collect water quality samples from lakes in the Clearwater River watershed. District staff collected samples from Pine Lake, Long Lake (near Pinewood), and Lost Lake during the summer of 2019. There were some positive results. All the samples collected by District staff (including Long Lake, which is on the 303(d) List of Impaired Waters) met applicable water quality standards. The summer average total phosphorus concentration in the impaired Cameron Lake was slightly below the state's water quality standard, which is an improvement over past condition. The East Polk Soil and Water Conservation District's sampling effort has discovered very high total phosphorus concentrations in Oak Lake, Hill River Lake and Turtle Lake. Those lakes will likely be listed as new impairments on the 2028 List of Impaired Waters.

2019 Lake Sampling Summary – June through September Summer Averages						
Lake	Summer Average Total Phosphorus (µg/L)	Summer Average Chlorophyll-a (µg/L)	Summer Average Secchi Depth (m)	Applicable Total Phosphorus Standard (µg/L)	Applicable Chlorophyll-a Standard (µg/L)	Applicable Secchi Transparency Standard (m)
Maple Lake	38.89	13.01	1.22	<60	<20	<1
Cameron Lake	56.50	21.68	0.75	<60	<20	<1
Badger Lake	18.25	2.37	2.45	<60	<20	<1
Oak Lake	116.00	5.91	1.52	<60	<20	<1
Poplar Lake	25.00	7.35	2.44	<40	<14	<1.4
Hill River Lake	81.00	36.85	1.60	<40	<14	<1.4
Cross Lake	29.25	8.23	1.32	<40	<14	<1.4
Whitefish Lake	29.75	12.70	1.30	<40	<14	<1.4
Spring Lake	24.00	6.68	2.10	<40	<14	<1.4
Turtle Lake	87.50	58.70	1.41	<60	<20	<1
Long Lake	23.00	4.90	3.25	<30	<9	<2.0
Pine Lake	21.00	7.80	>2.60	<60	<20	<1
Lost Lake	50.00	6.88	>2.00	<60	<20	<1



Dissolved Oxygen Logger Deployments

Dissolved oxygen loggers were deployed at 17 sites throughout the District in 2019. These sites were monitored to provide a better understanding of conditions in streams that are 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. Some of the 2019 deployments were based on a schedule for dissolved oxygen logger deployments throughout the District and was compiled to plan the collection of continuous dissolved oxygen data in preparation for the next formal water quality assessments. Some deployments were conducted for intensive studies in the Pine Lake watershed and the rivers that contribute to the city of Thief River Falls drinking water.



Mud River in Grygla (Station S008-122 on Assessment Unit 09020304-507): There was a high level of daily fluctuation in the Mud River near Grygla, but nearly all measurements were greater than the 5 mg/L standard.

Grand Marais Creek at 130th St. NW (Station S008-904 on Assessment Unit 09020306-513): There was a high level of daily fluctuation, some signs of supersaturation (high level of plant and algae growth), and some days when dissolved oxygen levels fell below 5 mg/L.

Grand Marais Creek at 110th St. NW (Station S008-902 on Assessment Unit 09020306-507): Dissolved oxygen levels were consistently low at this site. Water levels dropped during the deployment and the logger went dry for part of the early August deployment.

RLWD Ditch 15 at Highway 75 (Station S004-132 on Assessment Unit 09020306-509): All the dissolved oxygen levels in late July were low, and then the channel went dry. There was a beaver dam upstream, within the railroad culverts.

RLWD Ditch 15 near the Brandt Impoundment outlet (Station S003-276 on Assessment Unit 09020306-509): Dissolved oxygen levels were regularly low at the Highway 75 crossing and the channel stopped flowing during the deployment at that site. There was a beaver dam upstream at the railroad bridge.

Hill River at 340th St. SE, between Cross Lake and Hill River Lake (Station S014-936 on Assessment Unit 09020305-655): Despite clear water, cool temperatures, and decent flow during the early part of the deployment, dissolved oxygen levels at this site were consistently low.

Darrigan's Creek at CSAH 23 (Station S004-832 on Assessment Unit 09020302-508): Dissolved oxygen levels dropped below 5 mg/L on multiple days and daily fluctuation was high.

Lost River at 109th Ave, upstream of Pine Lake (S005-283 on Assessment Unit 09020305-529): All dissolved oxygen measurements were below the 5 mg/L standard, despite consistent flow. Some daily minimums fell below 1 mg/L.

Hill River at 335th Ave SE (Station S007-847 on Assessment Unit 656): All dissolved oxygen measurements were greater than the 5 mg/L standard.

Lost River at 530th St., downstream of Anderson Lake (Station S001-005 on Assessment Unit 09020305-645): Despite clean water and consistent flow, daily minimums routinely dropped below 5 mg/L.

Clearwater River at 400th Ave SE (Station S009-370 on Assessment Unit 09020305-647): Dissolved oxygen level met the 5 mg/L standard throughout the late August and early September deployment. Dissolved oxygen levels remained above 5 mg/L until some low daily minimums were recorded during increased flows from a September 20th runoff event.

Lost River at 486th St., downstream of Pine Lake (Station S001-007 on Assessment Unit 09020305-512): All dissolved oxygen readings were higher than the 5 mg/L warm water standard throughout July and August.

Lost River at 141st Ave, north crossing, downstream of Lost Lake (Station S004-206 on Assessment Unit 09020305-530): Dissolved oxygen levels were very low and rarely reached 5 mg/L due to ponding from a beaver dam. While the beaver dam impounded water at the site, dissolved oxygen levels were near zero for an extended period of time.

Lost River at 141st Ave, south crossing, upstream of Lost Lake (Station S016-267 on Assessment Unit 09020305-621): Dissolved oxygen levels dropped below 5 mg/L daily and there was a high level of fluctuation throughout each day. During the day, dissolved oxygen levels would be higher than the 7 mg/L standard for trout streams. During the night, however, daily minimums consistently fell below the 7 mg/L standard.

Pennington County Ditch 21 at 135th Ave NE (Station S008-889 on Assessment Unit 09020303-541): Dissolved oxygen levels in this ditch fluctuated wildly each day with supersaturated daily maximums (10-20 mg/L) and daily minimums below 2 mg/L.

Tributary to the Lost River at 410th St., upstream of Lost Lake (Station S016-266): Dissolved oxygen levels occasionally dropped below 7 mg/L (cold water trout stream standard), but all dissolved oxygen levels were higher than 5 mg/L (warm water standard). There was relatively low amount of daily dissolved oxygen fluctuation.

Thief River at 140th Ave NE (Hillyer Bridge, Station S002-079 on Assessment Unit 09020304-501): A spike in turbidity concentrations was observed from September 10th through 13 as flows peaked and began to recede. Water treatment problems for the city of Thief River Falls reportedly occurred during that time. Turbidity levels remained elevated, compared to levels from early September during late September. Flows sharply began to increase on September 20. Dissolved oxygen levels decreased, and turbidity levels remained somewhat elevated during that period of high flow.

Red Lake River east of LaFave Park: Dissolved oxygen levels remained steady (very little daily fluctuation) and higher than 8 mg/L.

Chief's Coulee

A homeowner in northern Thief River Falls complained of foul-smelling discharge from grain elevator buildings into a ditch in his backyard. District staff investigated the problem, sent a sample to the laboratory (high *E. coli* concentration) and contacted the MPCA. The city of Thief River Falls had also been contacted by the homeowner and had also contacted the MPCA about the issue. A sample was collected from a small ditch that was filled with discharge from the grain elevator. The discharge was being routed from the elevator building(s) to the ditch, which then flowed into Chief's Coulee. The smell (septic, rotten grain) was very bad and it was understandable that the homeowner would be upset about having foul smelling water in his

backyard. Extreme concentrations of ammonia nitrogen (424 mg/L), total Kjeldahl nitrogen (194 mg/L), total phosphorus (211 mg/L), orthophosphorus (199 mg/L), and total suspended solids (340 mg/L) were found in the sample that was collected from the water in the ditch. *E. coli* bacteria was the only pollutant that was not found. The discharge was coming from sump pumps that were draining basements of elevator buildings. The elevator has worked with the MPCA to develop a strategy for collecting and disposing of the water that is pumped from the elevator basements.


Polluted water draining to Chief's Coulee

2019 Intensive Monitoring of the Lost Lake and Pine Lake Area


Pine Lake

The RLWD Board of Managers and a Pine Lake Project Team are exploring the possibility of flood damage reduction projects within the watershed of Pine Lake. One project idea involved storing water at Lost Lake, a small lake along a headwaters portion of the Lost River. That portion of the Lost River, however, is designated

as a trout stream by the Minnesota Department of Natural Resources, which has raised issues in the permitting of an on-channel impoundment.

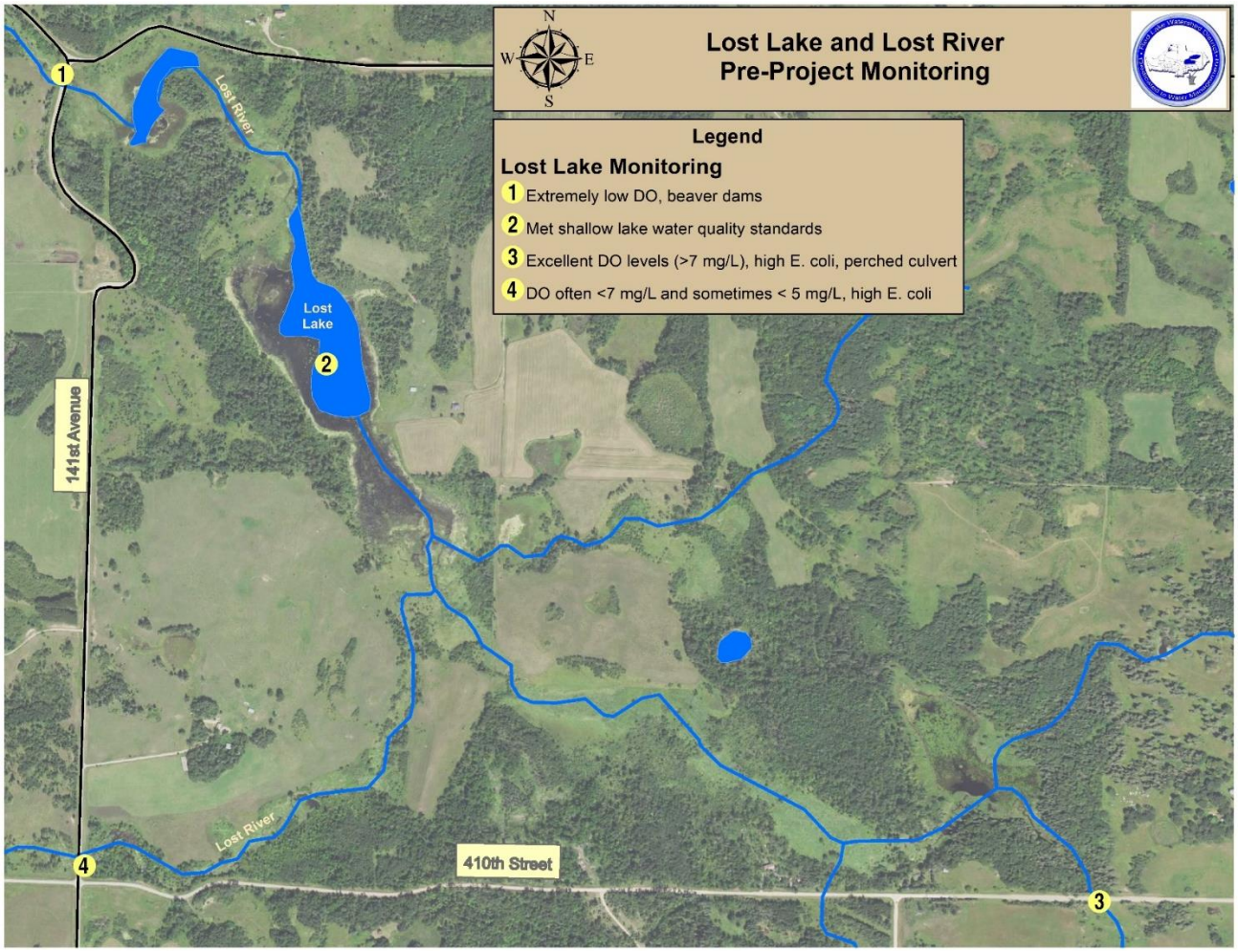
Despite the trout stream designation, water quality conditions of the stream are not supportive of trout or cold-water species and the river is not stocked for trout. The Minnesota Pollution Control Agency (MPCA) collected biological samples and deployed temperature loggers during the Clearwater River Watershed Intensive Watershed Monitoring effort and found that the portion of the Lost River downstream of Lost Lake (Waterbody ID 09020305-530) did not meet habitat and water quality requirements of a trout stream and proposed reclassification of the channel as a warm water channel, not a cold water trout stream.

To help answer questions about the current conditions in the lakes and streams, the District conducted intensive water quality monitoring in the Pine Lake and Lost Lake area to characterize the current conditions of Lost Lake, Pine Lake, and the Lost River. District staff created a 2019 monitoring plan for the Lost Lake and Pine Lake area and presented the plan at the May 17, 2019 Project Team meeting. The presentation included information on current monitoring efforts, water quality standards, current water quality conditions, and a proposed monitoring plan. The presentation was shared on the District's Clearwater River Watershed website: http://www.redlakewatershed.org/Presentations/Pine%20Lake%20Area%20Water%20Quality%20Monitoring.pdf.

Lost Lake was sampled twice each month and monthly samples were collected from Pine Lake. A total of five stream sites were sampled twice each month to evaluate conditions upstream and downstream of both lakes.

- Lost River, downstream of Lost Lake, at the north crossing of 141st Avenue
- Lost River, upstream of Lost Lake, at the South crossing of 141st Avenue
- Lost River tributary, upstream of Lost Lake, at 410th Street (eastern branch, shown on the map below)
- Lost River, upstream of Pine Lake at 109th Avenue
- Lost River, downstream of Pine Lake at 486th Street

Stream samples were analyzed for E. coli, total suspended solids, total phosphorus, orthophosphorus, ammonia nitrogen, nitrate + nitrite, total Kjeldahl nitrogen. HOBO water level loggers and HOBO dissolved oxygen loggers were deployed at each of the stream sites. Temperature monitoring was conducted at all water level logger deployment sites and within Lost Lake. Flow was measured at stream sites to create flow rating curves. A beaver dam altered the stage/flow relationship at the Lost River site downstream of Lost Lake and prevented the development of a flow rating curve for that site.



Water quality in both Lost Lake and Pine Lake met water quality standards for shallow lakes. Pine Lake water quality was excellent. The water in Pine Lake was usually so clear that Secchi disk readings were limited by the depth of the lake. The disk was still visible when resting on the lake bottom. Lost Lake water was cloudier than the water in Pine Lake and seemed to have some suspended sediment or organic matter contributing to the cloudiness.

Beaver activity was prevalent along the Lost River. There has been a tremendous amount of beaver activity and dam construction upstream and downstream of Lost Lake. The water level in Lost lake dropped significantly, just prior to monitoring, and continued to gradually drop throughout the summer. A hole had developed in the beaver dam that was holding back water in Lost Lake. The lowered water level also created a head differential near the lake's inlet and significant erosion as water skirted around upstream beaver dams. There was significant sedimentation near the inlet to Lost Lake. Lost Lake is providing habitat for swans and other waterfowl. There was wild rice growing along the margins of the lake. There were minnows and possibly some fish in Lost Lake. Surfacing/ jumping fish were observed at a distance but not close enough to identify. The eastern shore of the lake remained wet and tricky to navigate due to ground water seepage and springs. The discovery of springs along the shore of the lake ultimately ended the discussion of constructing a flood damage reduction project at Lost Lake due to restrictions on creating impoundments where there are springs.

Total suspended solids concentrations at the stream monitoring sites were consistently low and none of the samples exceeded the 30 mg/L standard for warm water streams. There were several exceedances of the 10 mg/L standard that is applied to cold water trout streams, though, at sites along the Lost River.

The portion of the Lost River that crosses 141st Avenue, upstream of Lost Lake (Site 4 on the map), is designated as a trout stream by the MN DNR but failed to meet expectations for dissolved oxygen levels in cold or warm water streams. To support trout, it should exceed the 7 mg/L dissolved oxygen standard in >90% of summer days in which it was monitored. Instead, it failed to meet the 5 mg/L warm water standard in 62.5% of the days in which dissolved oxygen loggers were deployed. The average temperature may have been

suitable for trout, however, as its average temperature of 18.9°C. was lower than 20°C. High concentrations of *E. coli* bacteria were also found, likely due to upstream pasture.

Tributary creeks converge with the Lost River before it flows into Lost Lake. The largest of those tributaries was sampled where it crosses 410th Street (Site 3 on the map) upstream of Lost Lake. The water quality in this stream met the requirements for supporting cold water species. Dissolved oxygen levels consistently exceeded the 7 mg/L standard and exhibited only a low level of fluctuation. Water temperatures were low (14.4°C average). Pasturing along this stream has caused some damage to stream banks and contributed to consistently high concentrations of *E. coli* bacteria during the months of July, August, and September. A perched culvert at 410th Street is a fish passage barrier. Despite the small size of the stream and contributing watershed, flow was continuous throughout the summer. The range of discrete stage measurements throughout the summer was only 0.18 feet, so flow levels were very steady, regardless of rainfall events or dry spells.

Pasture along Lost River tributary upstream of 410th Street, looking upstream

The Lost River was monitored downstream of Lost Lake at the north crossing of 141st Avenue (Site 1 on the map). The dissolved oxygen measurements at this site confirmed that water quality conditions are not suitable for trout in this portion of the river. The dissolved oxygen readings were negatively affected by a downstream beaver dam. All readings were lower than 7 mg/L and all daily minimum dissolved oxygen concentrations recorded by deployed instruments were lower than the 5 mg/L warm water standard. High total phosphorus and *E. coli* concentrations were also recorded at this site. After a beaver dam was constructed downstream, dissolved oxygen levels crashed and remained near 0 mg/L. The data from this site will likely trigger a dissolved oxygen impairment during the 2026 state water quality assessment.

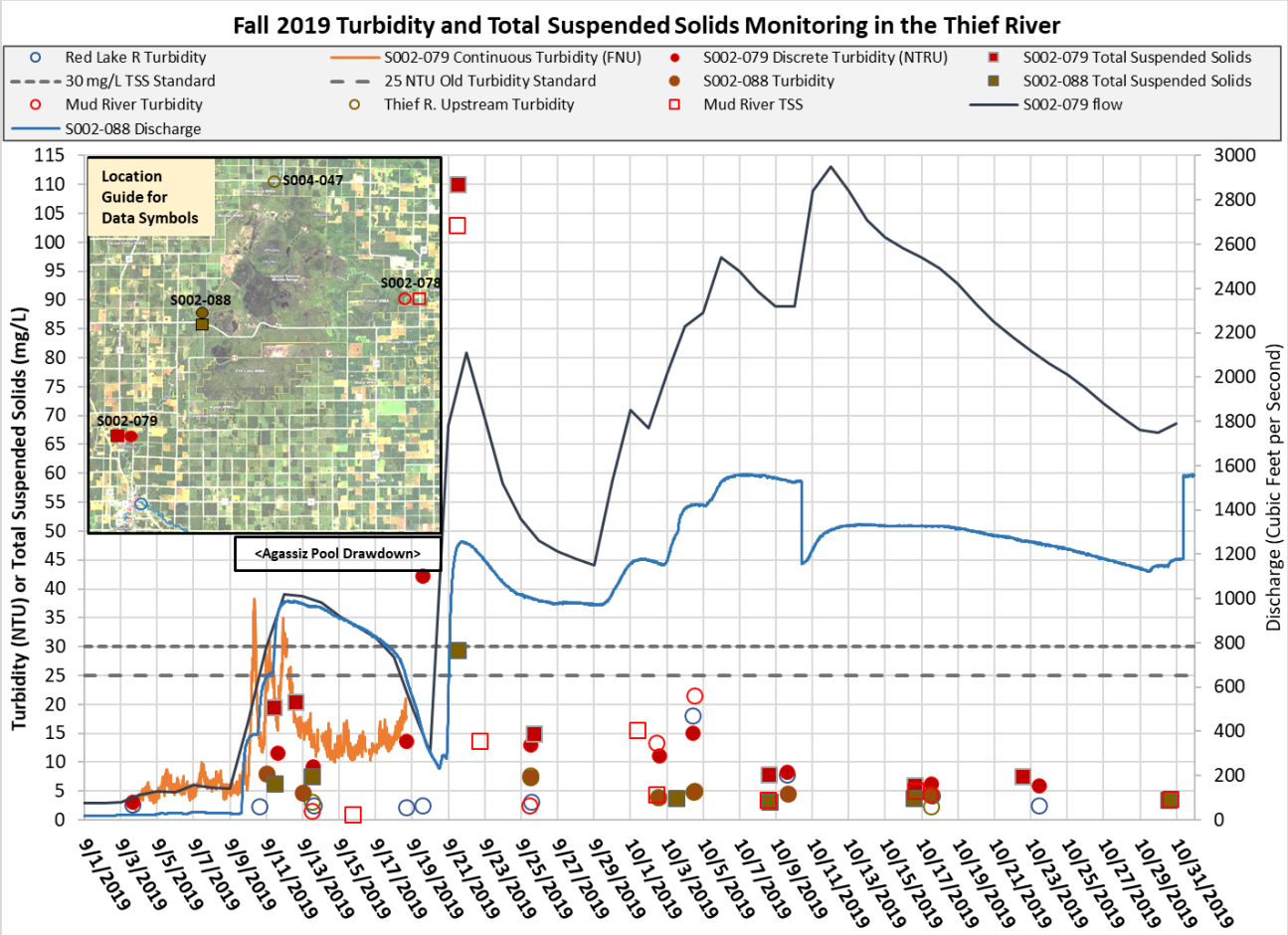
The Lost River was monitored and sampled upstream of Pine Lake at 109th Avenue. Dissolved oxygen logger deployments had been completed at this site in recent years, so fewer deployments were needed in 2019. Though the 2014 results also showed a high frequency of low DO readings, the 2019 results were worse because 2019 DO readings failed to rise above 5 mg/L throughout much of the summer. Because all readings from the DO loggers were below 5 mg/L, 100% of the daily minimums were below 5 mg/L. The low dissolved oxygen levels at this site have been difficult to explain because water is clear, cool, and consistently flowing. The river flows through some wetlands upstream that may be consuming oxygen and causing the low levels.

The Lost River was monitored and sampled at the first road crossing downstream of Pine Lake at 486th Street (near the outlet). Dissolved oxygen levels at 486th Street exceeded the 5 mg/L standard and were much better

downstream of Pine Lake than they were upstream. The average temperature downstream of Pine Lake was higher than the average temperatures that were found at upstream portions of the Lost River. High *E. coli* concentrations were found during July, August, and September sampling events.

Intensive monitoring of the Thief River and Red Lake River Upstream of Thief River Falls

The Thief River and Red Lake River were intensively monitored, with a focus on turbidity levels, upstream of the city of Thief River Falls drinking water intake. The monitoring was completed to provide additional data to help the Minnesota Department of Health and the City of Thief River Falls evaluate the effect of high-turbidity discharge from Agassiz Pool upon the city's wastewater treatment process. The Thief River and Mud River upstream of Agassiz NWR were also regularly monitored to characterize water quality upstream of Agassiz Pool. The monitoring included sonde deployments in the Red Lake River near LaFave Park/Merriam Avenue and the Thief River at the Hillyer Bridge (140th Ave NE).



The deployed sonde and discrete measurements recorded an increase in turbidity in the Thief River upstream of Thief River Falls that coincided with water treatment challenges that were experienced at the city's water treatment plant. The monitoring captured a period of changes in flow (sharp decrease followed by a sharp increase during a runoff event) during which high total suspended solids and turbidity levels were recorded. Water quality from the Thief River watershed was more volatile than water quality in the Red Lake River at Thief River Falls, in which turbidity levels were relatively steady. There typically was at least a small increase in turbidity between the CSAH 7 (near Agassiz Pool) and 140th Ave NE (near Thief River Falls) crossings of the Thief River due to erosion along the channel. The amount of erosion occurring throughout the watershed during and after the September runoff event (>5 inches of rain on September 20) was characterized by high total suspended solids concentrations in the Mud River and Thief River. High flow rates and runoff seemed to be the dominant cause of increases in turbidity or total suspended solids concentrations during this monitoring

effort. A finding of the fluvial geomorphology study was that channel-forming, bank full flows (above which the river is most effective at moving sediment, eroding streambanks, and forming/removing sediment bars) was approximately 1,100 CFS. That level of flow was exceeded for much of September and all of October 2019.

Turbidity and total suspended solids levels were elevated in the Thief River below Agassiz Pool during the early September drawdown compared to upstream sites while flows were increasing. During the latter part of the falling limb of the drawdown (just prior to the start of the runoff events), turbidity and total suspended solids levels rose to levels of concern (near or above the water quality standards). A 2012 report from the USFWS explained how the head differential between water in the JD 11 channel and water standing in the pool develops during drawdowns causes in-pool erosion and causes vegetation disturbance. That is a situation that would occur near the end of a drawdown process when flow is concentrated within the JD 11 channel and the gullies that emanate from the spoil bank breaches along the JD 11 channel. During the early part of the drawdown and during the late September through October runoff events when the pool was mostly full, turbidity levels were relatively low (dilution and lower velocity of water movement throughout the pool).

The full characterization of the latter stages of a pool drawdown was cut short by a large rainfall event and sustained high flows. During the drawdown, flow in the Thief River was dominated by discharge from Agassiz Pool and its watershed (flow at 140th Ave was similar to flow at CSAH 7). During the runoff event, the inputs from other tributaries downstream of Agassiz Pool is visualized by the difference between the two discharge plots in the preceding chart.

The rise in water levels and flows after rainfall events prevented the retrieval of the Minnesota Department of Health's Hydrolab HS4 sonde. The water coming from Agassiz Pool (full and ponded) after a large rainfall event had relatively low turbidity levels throughout October. There was some erosion occurring along the Thief River and its tributaries during the high flows, but turbidity and total suspended solids levels were okay (well below the impairment threshold) throughout October.

Blue Green Algae Sampling

The District continues testing water in the Mud River 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. Regular samples were collected from the Mud River at the Grygla city park and water was tested for blue-green algae from July through September. No positive test results for blue-green algae have been discovered in the Mud River since regular monitoring began.

Due to the discovery of blue-green algae or algal toxins in lakes and reservoirs during the summer of 2018, regular sampling and monitoring was planned for 2019 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 public beach) and deployed a temperature logger (at Trinity Point). Fortunately, no samples from Maple Lake had measurable concentrations of algal toxins in 2019. Results of the algal toxin tests were shared with the Maple Lake Improvement District and a Maple Lake, Mentor MN Facebook Group. If measurable concentrations were found in Maple Lake, other shallow eutrophic lakes would have been sampled to find other cases of measurable or high algal toxins.

After receiving a report of a cow that died from a suspected blue-green algal toxin poisoning while grazing along the Hill River downstream of Hill River Lake, a sample was collected from the lake and tested for algal toxins. Algal toxins were not present in the sample.

Bartlett Lake

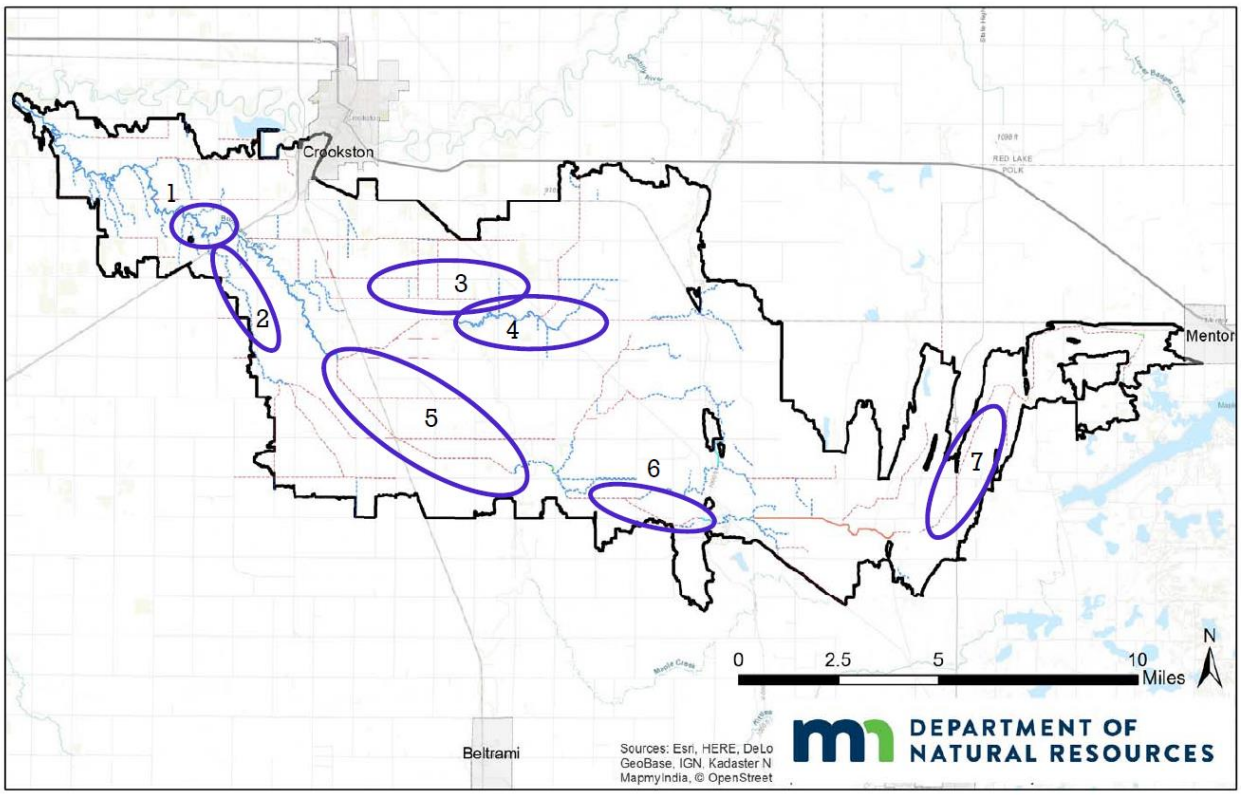
Bartlett Lake is a shallow lake by Northome that has been affected by historical pollution from sanitary sewer discharge into the lake, logging operations along the shore, and pollution from a creamery that operated from 1916 to 1974. Excess nutrients have caused the lake to become eutrophic. The lake is impaired and has suffered from high levels of nutrients, high concentrations of chlorophyll-a, low water clarity, and winter fish kills. Sediment cores were collected from the lake and analyzed for geochemical and biological clues that provide information about the lake and its history. The lake has been slowly recovering since the creamery was closed and a new wastewater treatment system was constructed.

The District began working with local staff from the City of Northome, local residents, MN DNR staff, MPCA staff, Koochiching SWCD staff, Koochiching County staff and others to create a management plan for the lake. District staff helped plan and put together an agenda for a September 25, 2019 meeting for a Bartlett Lake Management Plan. It was a great meeting with much enthusiasm from the group. Attendees included city staff, local residents, SWCD staff, county staff, DNR staff, and MPCA staff. Previous studies and other existing information were discussed. Some of the discussion topics included geese, stormwater, in-lake treatment, public water access/park, vegetation, fisheries, aquatic invasive species, monitoring, history, educational materials, and water quality conditions.

Fishing pier on Bartlett Lake

An open house style event was held on December 5, 2019 at the Northome Community Center. MPCA staff brought posters about the studies that have been completed on the lake. DNR staff brought information about the fishery and waterfowl. Red Lake DNR staff attended and provided information about the upcoming Upper/Lower Red Lakes WRAPS meeting. District staff put together a water quality summary handout for the meeting. The city of Northome and the District provided a variety of snacks and beverages for attendees.

Burnham Creek Intensive Geomorphic Study



DNR and RLWD staff continued work on a geomorphic study of the Burnham Creek watershed. The areas in the map above were targeted for Bank Erosion Hazard Index (BEHI) ratings. Some of the areas on the map were assessed in 2018. Areas 1 and 2 were assessed during the summer of 2019. The goal of the work will be to find answers to some questions about the watershed:

- Where is the channel actively eroding excessive sediment into the system?
    - If eroding, where is the channel in the evolutionary process? What can be done to guide the channel into a more stable form?
    - If not eroding, what factors are critical for stability? What protection steps can be taken to maintain stability?
- Where is longitudinal connectivity creating poor connectivity conditions?
- Where is lateral connectivity in poor condition, resulting in potentially decreased habitat and increased instability?
- Where is the channel efficiently transporting sediment?
- Where is the channel unable to transport the supplied quantity of sediment?
- What channel management practices and land uses are contributing to sediment yield and river impairment?
- How are the cumulative effects of various watershed processes affecting water resources?

Watershed Restoration and Protection Strategy (WRAPS) Projects

The Federal Clean Water Act (1972) required each State to develop plans for the identification and restoration of waterbodies that were deemed impaired by state regulations. A TMDL was required by the U.S. Environmental Protection Agency (USEPA) to address water quality impairments as a stipulation of the Clean Water Act. A TMDL identifies the pollutant sources causing the impairment. It is a calculation of the maximum amount of pollutant that can enter a waterbody without causing the concentration of the pollutant within the waterbody to exceed water quality standards.

The State of Minnesota adopted a “watershed approach” to address the state’s 80 major watersheds (denoted by 8-digit hydrologic unit code or HUC). This watershed approach incorporated water quality assessment, watershed analysis, civic engagement, planning, implementation, and measurement of results into a 10-year cycle that addressed both restoration and protection. The watershed-based strategy recognized the connectivity

of the watershed better than the reach-by-reach system. An impairment may extend over multiple assessment units. Impairments for different parameters may be linked by common stressors and/or pollutants. There was an increased emphasis on civic engagement to engage stakeholders and the watershed-based process also reduced redundancy that could occur when addressing TMDLs with a reach-by-reach strategy. The watershed-based, comprehensive implementation plan addressed pollutant sources and stressors throughout each major watershed. The process was designed to reduce the complexity of incorporating TMDL implementation plans into watershed management plans.

Thief River Watershed Restoration and Protection Strategy (WRAPS)

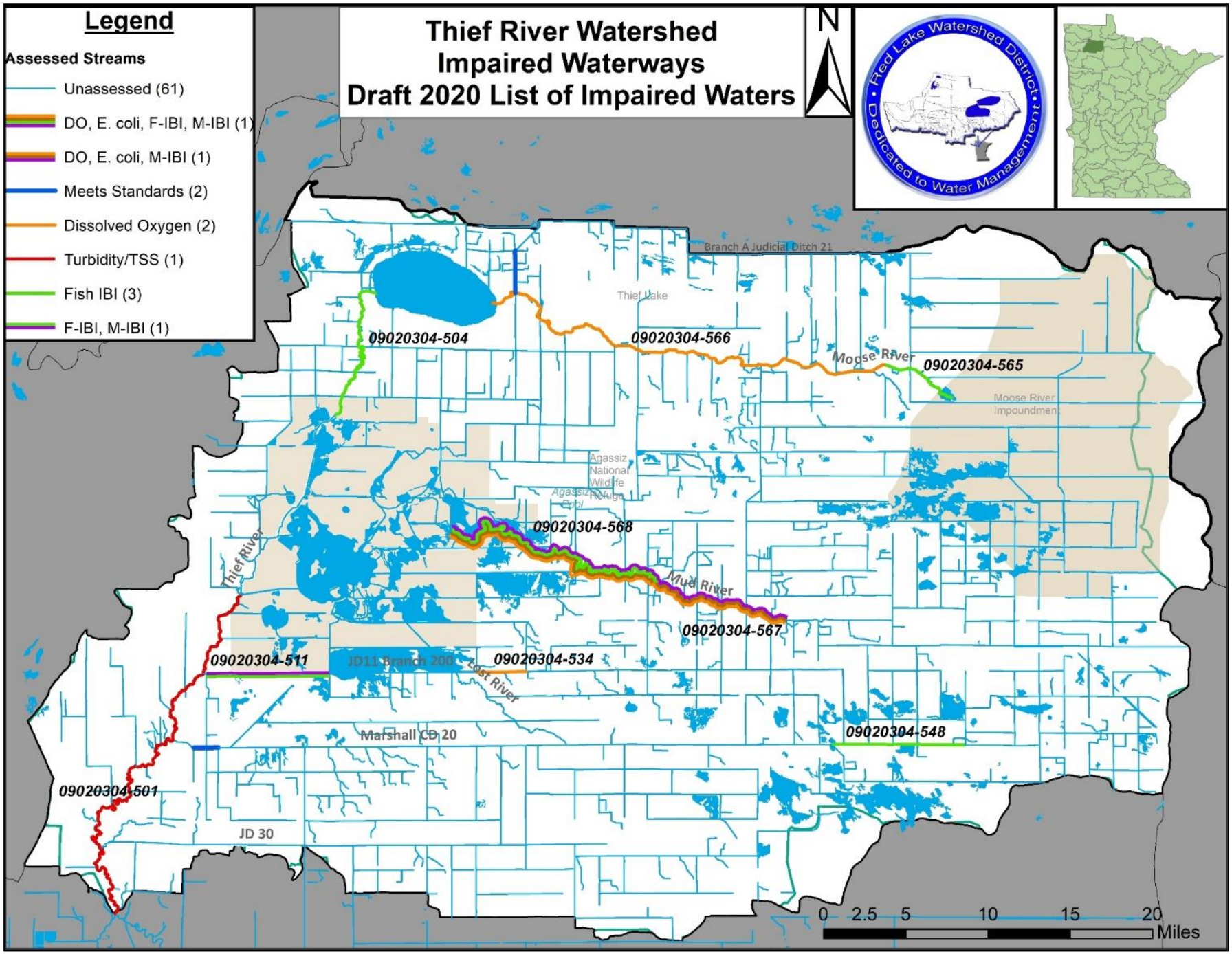
The Thief River TMDL Report, WRAPS report, and other technical reports are publicly available on the MPCA website for the Thief River watershed: https://www.pca.state.mn.us/water/watersheds/thief-river. These and other documents can also be found on watershed-based web pages created for the Thief River: https://www.rlwdwatersheds.org/tr-watershed-info. The Thief River TMDL was completed (in draft form) in 2018, went through a public comment period in 2018, and was officially approved by the EPA in April 2019.

Thief River Aquatic Life Use Assessment and the 2020 Draft List of Impaired Waters

When water quality conditions in the Thief River Watershed were formally assessed by the MPCA in 2013, tiered aquatic life use (TALU) standards were not yet in place. The TALU standards allow for the variation of water quality and biological standards throughout the state based on location, channel morphology, the known conditions that have been achieved by the waterway. In 2019, the MPCA began the process of applying current aquatic life standards (using TALU) to the data that was collected within the Thief River Watershed prior to the 2013 assessment (especially biological data – so that it didn't go to waste) and sought local input on the classification of ditches and channelized streams in the watershed so that those waters could be held to appropriate biological standards. District staff reviewed use attainment analysis information from the MPCA. A Thief River Watershed Use Attainment Analysis meeting was held at the RLWD office on January 15, 2019. There are two main types of use classifications that will be used for this watershed:
2Bg (General Use) = the designated aquatic life use code for a general warm water stream. Aquatic life in these systems should meet the interim clean water act goal of fishable and swimmable waters

2Bm (Modified Use) = the designated aquatic life use code for a modified warm water stream. These are altered waterbodies that have been compromised by legal ditching practices and the aquatic life in them reflect that fact. These systems currently have a reduced biological potential as a result of reduced habitat complexity.

The MPCA recommended a "modified" use designation for most of the channels, except for portions of the Moose River, Mud River, Marshall County Ditch 20, and some scattered ditch segments that yielded good index of biological integrity scores. Antidegradation is an important factor in the use attainment analysis. Some ditches and channelized streams, despite being artificial or modified watercourses, met the general use standards and will be required to meet those higher standards if/when sampled prior to future assessments. During the discussion, state and local staff agreed to assign a modified use designation to the channelized portion of the Moose River and assign a general use designation to the Mud River downstream of Grygla. There was discussion about the sampling of intermittently flowing ditches like the Main and Lateral channels of Judicial Ditch 23. The RLWD recorded stage and flow data from three questionable ditch channels in 2019 to characterize the duration of flow and help determine whether the reaches should be assessed for biological integrity.


Legend
Assessed Streams
Unassessed (61)
DO, E. coli, F-IBI, M-IBI (1)
DO, E. coli, M-IBI (1)
Meets Standards (2)
Dissolved Oxygen (2)
Turbidity/TSS (1)
Fish IBI (3)
F-IBI, M-IBI (1)
Thief River Watershed
Impaired Waterways
Draft 2020 List of Impaired Waters
N
Red Lake Watershed District
Dedicated to Water Management
Branch A Judicial Ditch 21
Thief Lake
09020304-504
09020304-566
Moose River
09020304-565
Moose River Impoundment
Agassiz National Wildlife Refuge
09020304-568
Thief River
Mud River
09020304-567
09020304-511
JD11 Branch 200
09020304-534
Lost River
Marshall CD 20
09020304-548
09020304-501
JD 30
0 2.5 5 10 15 20
Miles

Fish communities in many reaches resembled small headwaters streams due to connectivity problems. Portions of the Mud River had good channel development, okay index of biological integrity scores, and okay habitat. Good minnow species were found in the upper portion of the Thief River between Thief Lake and Agassiz National Wildlife Refuge, but some species were missing. A very good fish index of biological integrity core was recorded in a small ditch along Benville Road, northeast of Grygla (numerous sensitive species like finescale dace, northern redbelly dace, and pearl dace). The pristine water quality at that location had been documented when the water quality sampling site (S004-059 at the intersection of Wildlife Road NW and Benville Road NW) was used as a natural background sampling site during a previous study. Sensitive dace species were also found in an artificial watercourse near the northeast corner of Agassiz National Wildlife Refuge (a channel diverting water from Webster Creek into the Mud River Pool).

District staff worked with MPCA staff to schedule a July 10, 2019 Professional Judgement Group meeting to review the water quality and biological assessment results for deferred streams (ditches that were not assessed in 2013) in the Thief River Watershed. The MPCA has completed a preliminary assessment of 22 channelized streams and ditches. Seven of those reaches were not meeting biological standards and were included on the Draft 2020 List of Impaired Waters.

- The Draft 2020 List of Impaired Waters was released by the MPCA in November 2019. The Thief River Watershed biological and aquatic life use impairments that were discussed at the professional judgement group meeting were included in that list. Changes to impaired waters listings within the Red Lake Watershed District
    1. Thief River from Agassiz Pool to the Red Lake River, 09020304-501: TMDL plan approved; EPA category changed from 5 to 4A
    2. Mud River assessment unit 09020304-507 (headwaters to JD 11) was split into two new assessment units (09020304-567 and 09020304-568) at a point (-95.694, 48.318) NW of the St. Petri Lutheran Church. The dissolved oxygen and *E. coli* impairments of 09020304-507 were both carried forward to both new assessment units.
- New impairment listings within the Red Lake Watershed District
    1. Marshall County Ditch 20 (09020304-548), Clifford Lane NW to an unnamed ditch upstream of Sharon Road, impaired due to poor fish bioassessment results
    2. Moose River (09020304-565), outlet of Moose River Impoundment to Morel Road NW, impaired by poor fish bioassessment results
    3. Mud River (09020304-567), headwaters to -95.694 48.318, impaired due to poor benthic macroinvertebrate assessment results
    4. Mud River (09020304-568), -95.694 48.318 to JD 11, impaired due to poor benthic macroinvertebrate assessment results
    5. Mud River (09020304-568), -95.694 48.318 to JD 11, impaired due to poor fish bioassessment results
    6. Thief River (09020304-504), Thief Lake to Agassiz Pool, impaired due to poor fish bioassessment results
    7. Branch 183 of JD 11 (09020304-534), CSAH 219 to 290th Ave NE, impaired by low dissolved oxygen
    8. Branch 200 of JD 11 (09020304-511), 270th Street NE crossing near the Lost River Pool outlet to 180th Ave NE, impaired due to poor benthic macroinvertebrate assessment results
    9. Branch 200 of JD 11 (09020304-511), 270th Street NE crossing near the Lost River Pool outlet to 180th Ave NE, impaired due to poor fish bioassessment results

Red Lake River Watershed Restoration and Protection Strategy (WRAPS)

The District completed the Red Lake River WRAPS project in 2016, which produced a draft Red Lake River Watershed Total Maximum Daily Load and Red Lake River Watershed Restoration and Protection Strategy documents. The District entered into a contract in 2017 to revise the documents before and after the public

comment period. Final review and revisions of the Red Lake River WRAPS and TMDL reports were made in early 2019.

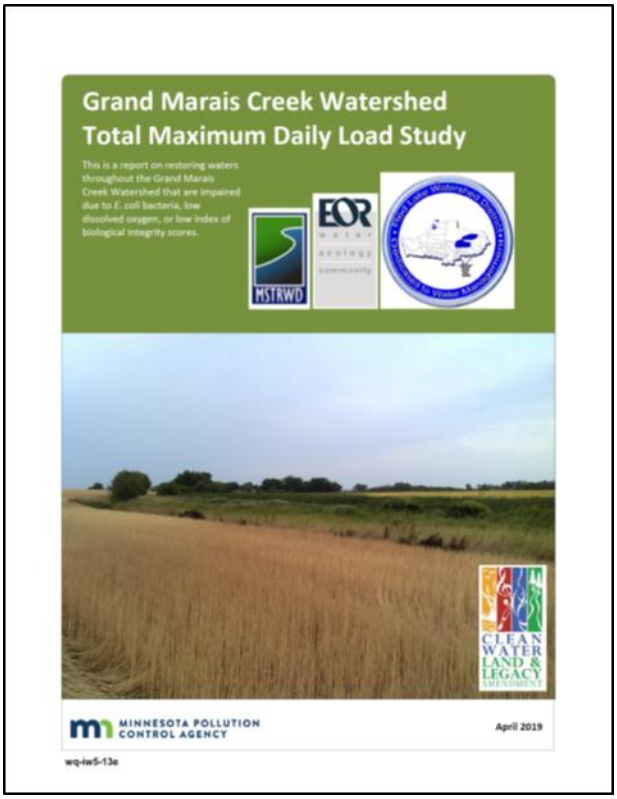
The Red Lake River Watershed Total Maximum Daily Load and Watershed Restoration and Protection Strategy documents were released for public notice in July 2019. The public notice and links to the draft reports were forwarded to contact lists that were compiled during the Red Lake River WRAPS civic engagement efforts.

News Release from the MPCA: https://content.govdelivery.com/accounts/MNPCA/bulletins/251e3e0

Red Lake River Watershed Total Maximum Daily Load and Watershed Restoration and Protection Strategy documents, along with other reports, can be found on the MPCA's webpage for the Red Lake River watershed: https://www.pca.state.mn.us/water/watersheds/red-lake-river.

Grand Marais Creek Watershed Restoration and Protection Strategy (WRAPS)

The public notice period for the Grand Marais Creek Watershed Total Maximum Daily Load and Grand Marais Creek Watershed Restoration and Protection Strategy reports began on January 8, 2019 and comments were due by January 26, 2019. District staff helped publicize the reports and the public comment period. The public notice period for the Grand Marais Creek TMDL and WRAPS ended on February 6, 2019. Most of the comments were minor questions/comments from the EPA. Most of the comments were clarification-related questions and some issues with rounding issues in TMDL tables.

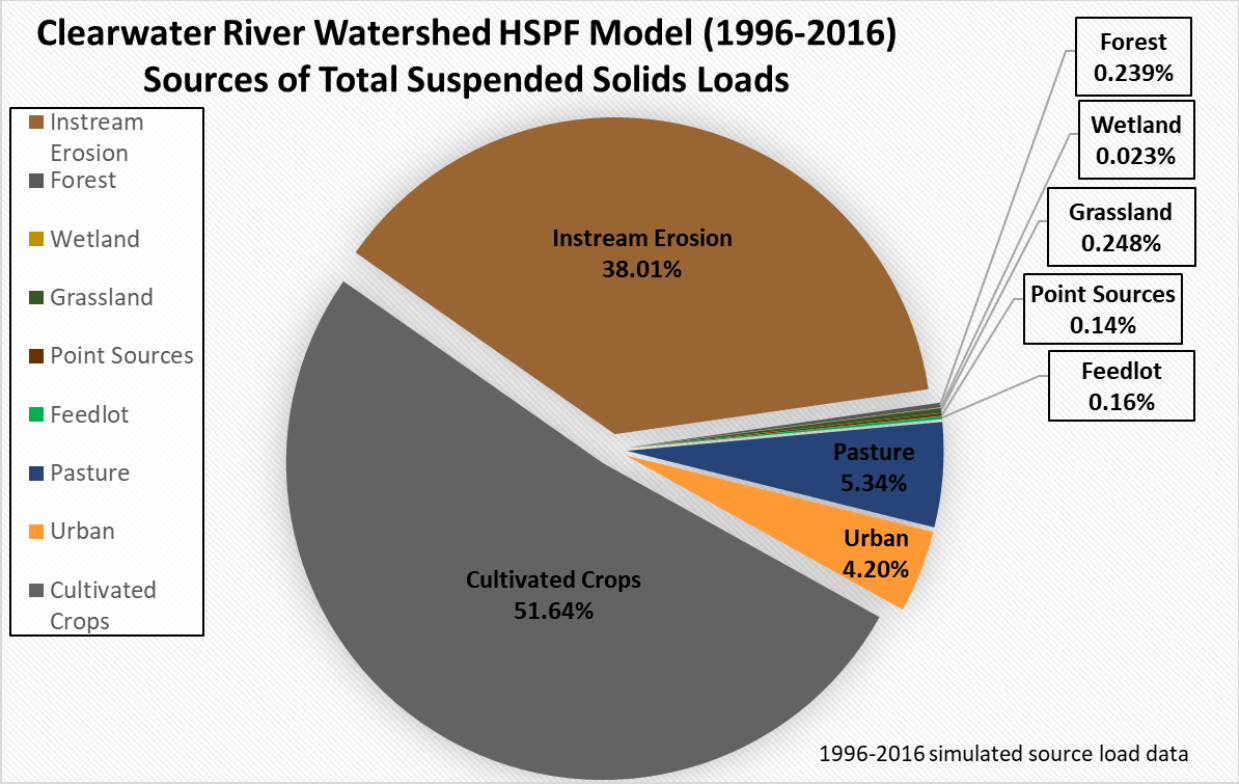


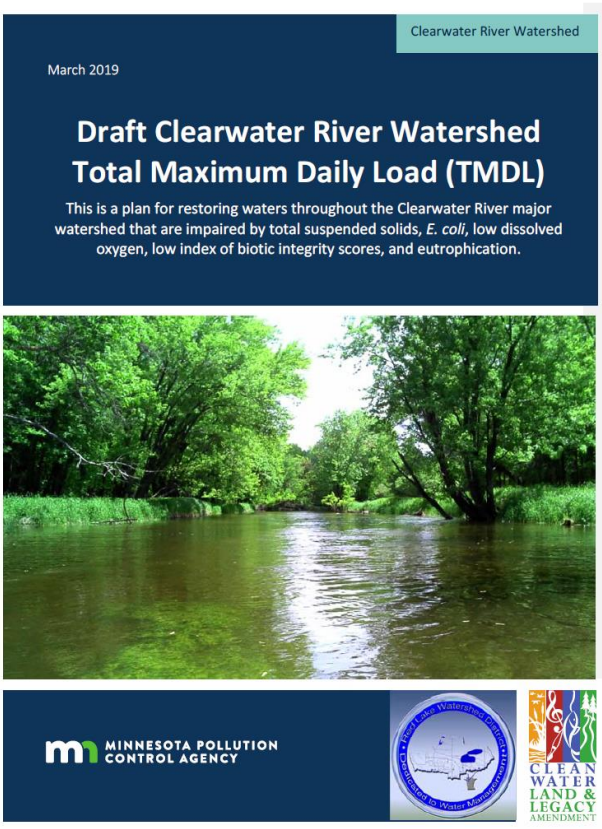
Grand Marais Creek WRAPS Summary: https://www.pca.state.mn.us/sites/default/files/wq-ws4-56b.pdf
Grand Marais Creek Watershed Restoration and Protection Strategy: https://www.pca.state.mn.us/sites/default/files/wq-ws4-56a.pdf
Grand Marais Creek Watershed Total Maximum Daily Load: https://www.pca.state.mn.us/sites/default/files/wq-iw5-13e.pdf

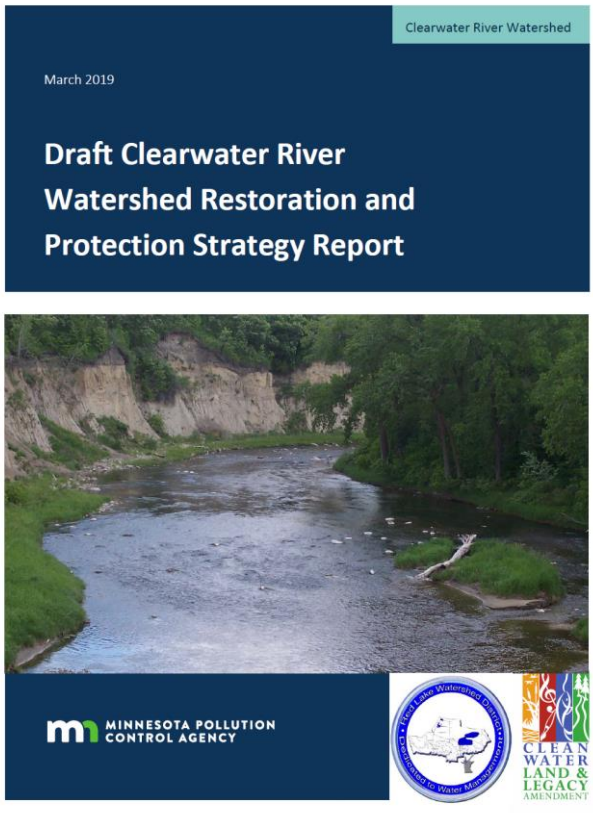
Clearwater River Watershed Restoration and Protection Strategy (WRAPS)

District staff completed draft Clearwater River Watershed Total Maximum Daily Load (TMDL) and Clearwater River Watershed Restoration and Protection Strategy (WRAPS) reports in early 2019. The TMDL was reviewed by MPCA staff and edited by District staff under a new contract for the Clearwater River Watershed Restoration and Protection Strategy Public Notice that was executed in July 2019. The Clearwater River WRAPS will be edited, and the Clearwater River WRAPS and TMDL documents will be available for public comment in 2020.

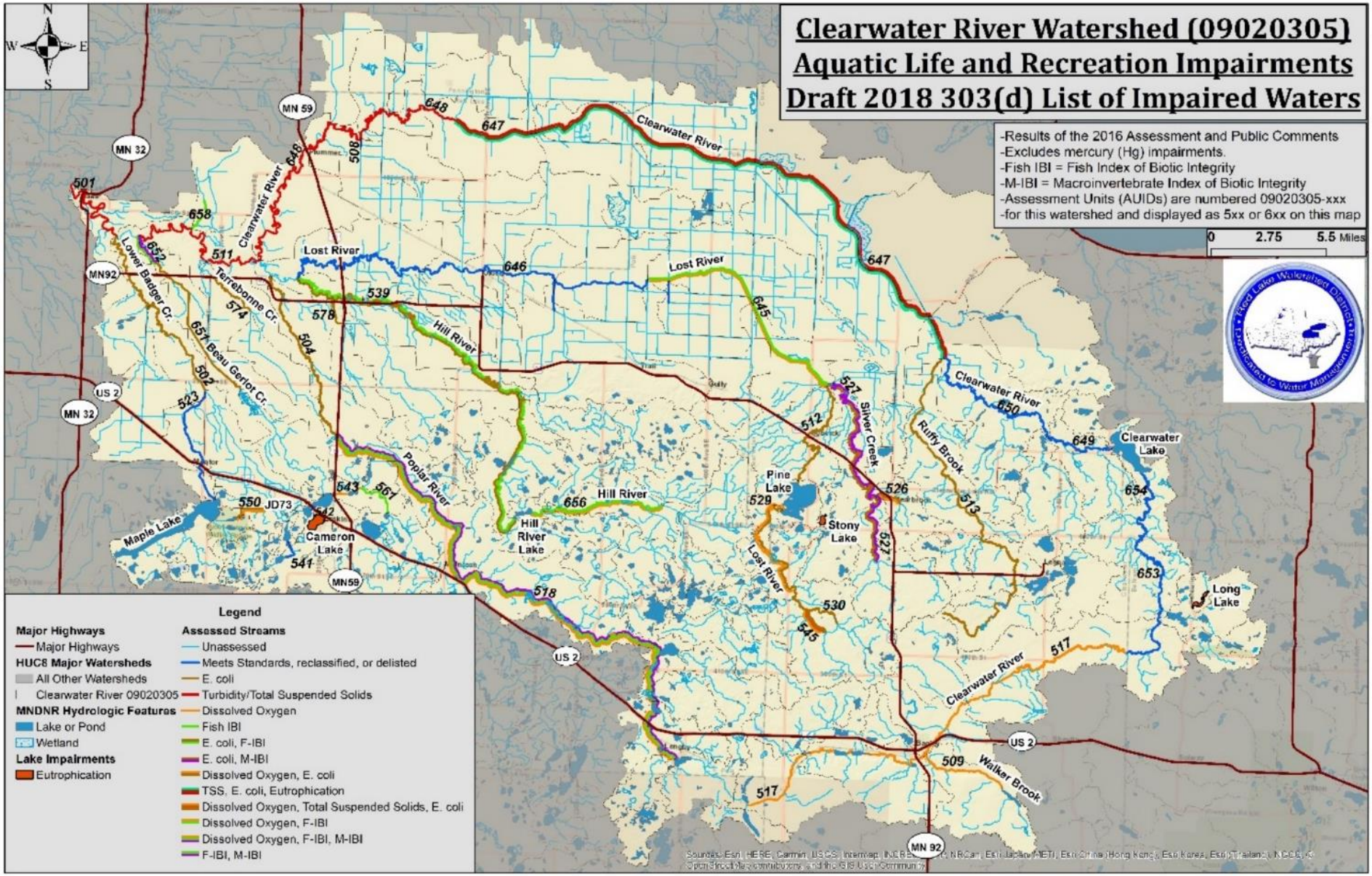
Some of the revised figures, maps, and a newly created table are included on the following pages.

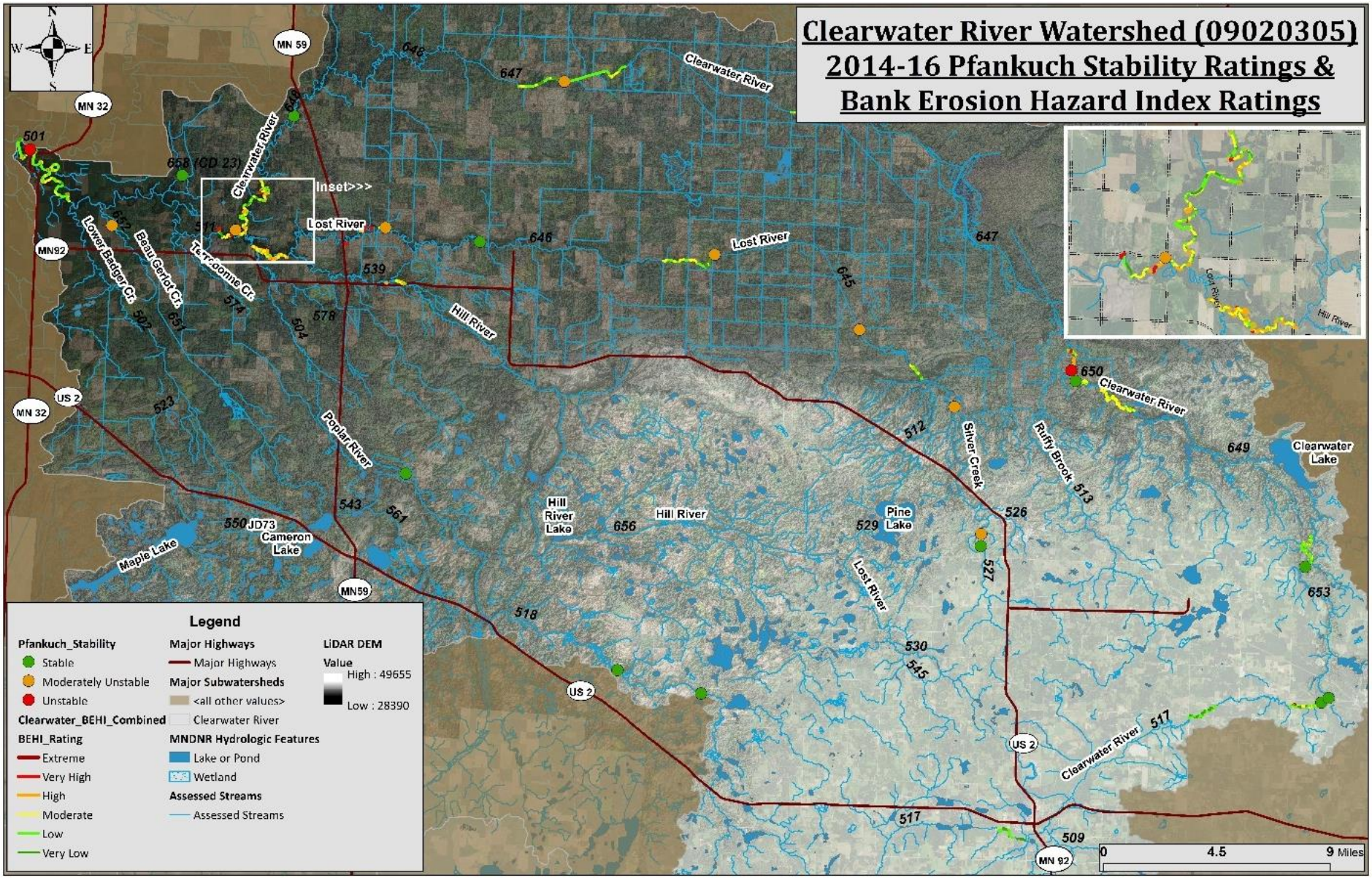






The following figures show the locations of impairments within the Clearwater River watershed and results of geomorphological assessments (a revised version of that map). The table shows the prioritization of streams for restoration efforts based on the amounts of load reductions that will be needed to meet water quality standards.

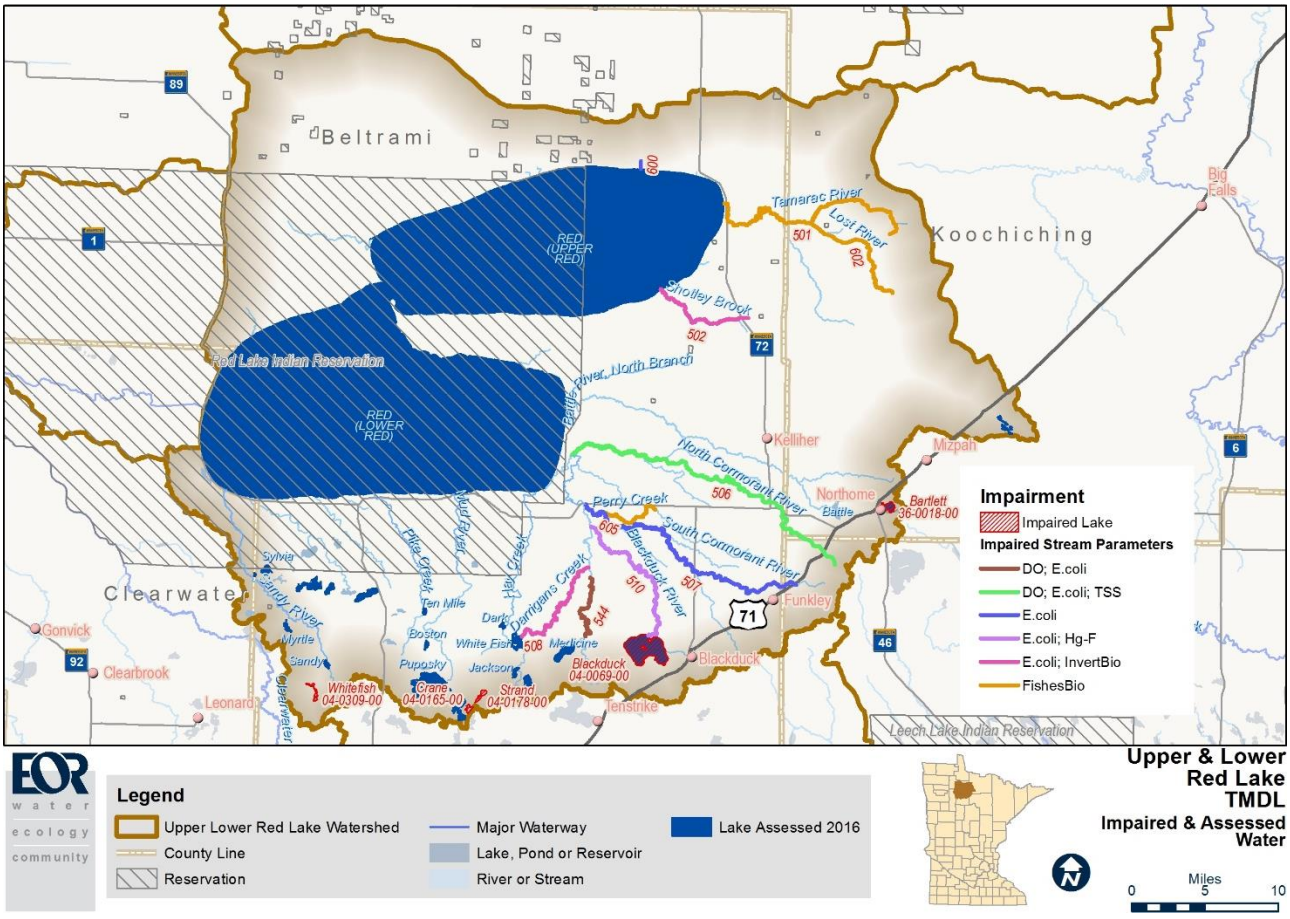

Clearwater River Watershed (09020305)
Aquatic Life and Recreation Impairments
Draft 2018 303(d) List of Impaired Waters
-Results of the 2016 Assessment and Public Comments
-Excludes mercury (Hg) impairments.
-Fish IBI = Fish Index of Biotic Integrity
-M-IBI = Macroinvertebrate Index of Biotic Integrity
-Assessment Units (AUIDs) are numbered 09020305-xxx
-for this watershed and displayed as 5xx or 6xx on this map
0 2.75 5.5 Miles
Legend
Major Highways
Major Highways
HUC8 Major Watersheds
All Other Watersheds
Clearwater River 09020305
MNDNR Hydrologic Features
Lake or Pond
Wetland
Lake Impairments
Eutrophication
Assessed Streams
Unassessed
Meets Standards, reclassified, or delisted
E. coli
Turbidity/Total Suspended Solids
Dissolved Oxygen
Fish IBI
E. coli, F-IBI
E. coli, M-IBI
Dissolved Oxygen, E. coli
TSS, E. coli, Eutrophication
Dissolved Oxygen, Total Suspended Solids, E. coli
Dissolved Oxygen, F-IBI
Dissolved Oxygen, F-IBI, M-IBI
F-IBI, M-IBI
Clearwater River
Lost River
Hill River
Poplar River
Lower Badger Cr.
Terrebonne Cr.
Beau Geriot Cr.
Silver Creek
Ruffy Brook
Walker Brook
Maple Lake
Cameron Lake
Hill River Lake
Pine Lake
Stony Lake
Clearwater Lake
Long Lake
MN 59
MN 32
MN92
US 2
MN 92
JD73


Clearwater River Watershed (09020305)
2014-16 Pfankuch Stability Ratings &
Bank Erosion Hazard Index Ratings
Inset>>>
Legend
Pfankuch_Stability
Stable
Moderately Unstable
Unstable
Clearwater_BEHI_Combined
BEHI_Rating
Extreme
Very High
High
Moderate
Low
Very Low
Major Highways
Major Highways
Major Subwatersheds
<all other values>
Clearwater River
MNDNR Hydrologic Features
Lake or Pond
Wetland
Assessed Streams
Assessed Streams
LiDAR DEM
Value
High : 49655
Low : 28390
0
4.5
9 Miles

This table was added to the TMDL to prioritize streams and lakes for restoration efforts based on the load reductions that will be required to allow the waters to meet water quality standards. Waters that will require a lower level effort (lower load reductions) to restore were given higher priority.

Stream Name	Assessment Unit	Drainage Area	TSS Annual Load Reduction Estimate (Tons/Year)	TSS Reduction (Tons/Acre)	TSS Percent Reduction	Total TSS Rank	TSS/ acre Rank	TP Annual Load Reduction Estimate (lbs/Year)	TP Reduction (lbs/Acre)	TP Percent Reduction	Total TP Rank	TP/ acre Rank	*E. coli* Annual Load Reduction Estimate (billion orgs./year)	E. coli Reduction /Acre (billion orgs/year)	*E. coli* Percent Reduction	*Total E. coli* Rank	*E. coli* /acre Rank	Average rank
Silver Creek	09020305-527	34.37											43.96	1.3	1.59%	1	1	1.00
Long Lake	04-0295	20.78						217.36	10.5	45.75%	1	1						1.00
Clearwater River	09020305-648	569.42	950	1.7	23.70%	2	1											1.50
Clear Brook	09020305-526	6.24											367.92	59.0	22.40%	2	4	3.00
Cameron Lake	60-0189	3.6						1,053.13	292.5	65.16%	3	3						3.00
Stony Lake	15-0156	2.52						767.21	304.4	83.94%	2	4						3.00
Clearwater River	09020305-647	488.81	873	1.8	21.92%	1	2	28,238.23	57.8	56.55%	4	2	4031.79	8.2	4.06%	9	2	3.33
Clearwater River	09020305-501	1358.19	2,471	1.8	33.73%	4	3											3.50
Clearwater River	09020305-511	1198.3	7,123	5.9	53.96%	5	4											4.50
Terrebonne Creek	09020305-574	14.94											1191.73	79.8	52.35%	4	6	5.00
Nassett Creek	09020305-545	6.15	1,385	225.2	35%	3	5						911.04	148.1	35.42%	3	11	5.50
Hill River	09020305-539	177.23											6050.32	34.1	21.06%	10	3	6.50
Lost River	09020305-529	30.62											2823.64	92.2	18.61%	6	7	6.50
Lost River	09020305-530	20.5											2027.58	98.9	34.07%	5	8	6.50
Poplar River	09020305-504	116.82											8622.76	73.8	29.91%	11	5	8.00
Beau Gerlot Creek	09020305-651	24.06											3364.94	139.9	21.64%	7	9	8.00
Brooks Creek	09020305-578	23.56											3477.72	147.6	42.37%	8	10	9.00
Lost River	09020305-512	60.13											9913.4	164.9	48.56%	12	12	12.00
Lower Badger Creek	09020305-502	122.2											20220.27	165.5	50.13%	13	13	13.00
JD 73	09020305-550	49.99											27523.36	550.6	51.37%	14	14	14.00
Ruffy Brook	09020305-513	54.05											60888.82	1,126.5	74.60%	15	15	15.00

Upper/Lower Red Lakes Watershed Restoration and Protection Strategy (WRAPS)



The effort to complete a WRAPS project for the Upper and Lower Red Lakes major watershed is being led by the Red Lake Department of Natural Resources. They have been collecting flow data, sampling data, and continuous dissolved oxygen data. Draft Upper/Lower Red Lakes Watershed TMDL and WRAPS reports will be completed in early 2020. District staff attended the December 12, 2019 public open house event for the Upper/Lower Red Lakes WRAPS project in Kelliher. An information display board was assembled for the meeting.

Updates on the WRAPS project and links to completed reports can be found on the Red Lake DNR's website: http://www.redlakednr.org/wraps

The MPCA has completed a watershed monitoring assessment report and a stressor identification report for the watershed. A fluvial geomorphology report has also been completed for the watershed.

- https://www.pca.state.mn.us/water/watersheds/upperlower-red-lake
- The Upper/Lower Red Lakes Fluvial Geomorphology Report is now available online at https://wrl.mnpals.net/islandora/object/WRLrepository%3A2957. Some highlights and recommendations from the report include.
- The Upper/Lower Red Lake Watershed Monitoring and Assessment Report is available online at https://wrl.mnpals.net/islandora/object/WRLrepository%3A740.

December 12, 2019 Upper/Lower Red Lakes WRAPS public open house event in Kelliher

Zebra Mussels Found

On March 11, 2019, online and newspaper articles notified the public that zebra mussel veligers had been found in Upper Red Lake. Red Lake Department of Natural Resources staff suggest that zebra mussels came to the lake as adults on a dock or other structure that was transported from an infested lake. If zebra mussels move downstream to the Red Lake River, they could affect the District's monitoring program and could affect water intake pipes for the City of Thief River Falls' water supply. Monitoring equipment will be deployed in the Red Lake River near the border of the reservation.

https://www.bemidjipioneer.com/sports/4583184-dnr-finds-zebra-mussel-larvae-upper-red-lake

MPR News Article about zebra mussels in Red Lake: "Red Lake Nation confronts a new invader: zebra mussels. The threat to the reservations' economic and spiritual core – and its massive walleye fishery – has left tribal leaders frustrated and angry." https://www.mprnews.org/story/2019/09/03/red-lake-nation-confronts-a-new-invader-zebra-mussels

Zebra Mussels were found in Lake Lomond in Bagley. That lake drains to the Clearwater River. Water flows from the lake outlet, into one of the city's stormwater retention ponds, then into the Clearwater River. This is a concern for the Clearwater River and Clearwater Lake.
https://www.bemidjipioneer.com/sports/outdoors/4742803-Zebra-mussel-larvae-found-in-Lomond-Lake-in-Clearwater-County

No zebra mussels were found on the zebra mussel samplers that were deployed in the Red Lake river east of Thief River Falls. The District will work with the Pennington SWCD to collect early detection samples from the Red Lake River in eastern Pennington County in 2020.

Public Education

- District staff helped judge the Franklin Middle School Science Fair in January 2019.
- District staff presented on water quality parameters at the 16th Annual Red River Basin Water Quality Monitoring Training Session.
- The District continued to support the River Watch program, which is described in more detail in its own section of this report.
- District staff participated in the Pennington County Outdoor Education Day in September 2019.
- District staff participated in the Northwest Minnesota Water Festival (Warren and Fertile) in September 2019.
- District staff attended Maple Lake Improvement District meetings to discuss the protection and improvement of water quality within the lake.
- Monthly water quality reports are available online at http://www.redlakewatershed.org/monthwq.html.
- Information about the Red Lake Watershed District, programs, and contacts is available at the www.redlakewatershed.org.
- 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: https://www.facebook.com/Red-Lake-Watershed-District-266521753412008/.

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 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 planning) meetings.

- The Red Lake River Corridor Enhancement Joint Powers Group has been revived and has successfully applied for funding to improve and create accesses along the Red Lake River.
- The Red Lake River Planning Work Group meets regularly to discuss progress on the current work plan and plan for the next annual work plan.
- 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 a 3-year agreement to pay for the collection of samples by the East Polk SWCD in 9 lakes within the Clearwater River watershed.
- The Board approved a contribution of up to $10,000 to the East Polk SWCD for the construction of a water and sediment project in Section 35 of Hill River Township in Polk County. The project will reduce erosion of sediment and nutrients into the Hill River.
- The District submitted and applied for a Conservation Partnership Grant in partnership with Agassiz National Wildlife Refuge and was awarded a $50,000 for the removal of sediment in Judicial Ditch 11 Main.
- The Board donated $300 each to the Pennington SWCD and West Polk SWCD for the Area I Envirothon events to promote education and awareness of water quality issues.
- The Board voted to approve $15,000 of cost-share for the West Polk Soil and Water Conservation District for a grade stabilization project in the Burnham Creek area. This was one of the first projects to be funded in part with the One Watershed One Plan funds.
- The Board approved cost share funding in the amount of $10,000 to Beltrami County for new aerial imagery of Beltrami County.
- The Board approved a cost share of $3,000 from the RLWD Erosion Control Funds to the Beltrami SWCD for the installation of six side water inlets along the Moose River in Northwood Township.
- The District, with assistance from HDR and MnDNR staff, submitted a grant from the Conservation Legacy Funding for repairs to the outlet structure of the BR6 Wildlife Habitat Pool along the east side of the Burnham Creek Impoundment. The District was informed that a Conservation Partners Legacy (CPL) Grant in the amount of $168,420 was received for the Burnham Creek Wildlife Habitat Structure Repair.
- The Board approved up to $7,750 in cost share for the Clearwater SWCD, from the 2019 RLWD Erosion Control Funds, for the Pine Lake Township Road Ditch Stabilization Project. Silver Creek is head cutting where water enters into the system from a local ditch. The proposal includes the installation of a rock chute structure and streambank regrading to mitigate erosion.
- The Board approved $12,500 from the 2019 RLWD Erosion Control Funds for the Marshall County SWCD to assist in the design of the structures and installation of SWI culverts located within the District's boundary.

2020 Plans

- Final edits to the Clearwater River Watershed Restoration and Protection Strategy to prepare the document for the public review process. District staff will assist the MPCA with publicizing the public comment period and will assist the MCPA with any edits that are needed after the public comment period.
- Clearwater River Watershed PTMApp development, after the completion of a culvert inventory and hydrologic condition of the LiDAR digital elevation model (DEM).
- Work with SWCDs and counties in the Clearwater River Watershed to begin the Clearwater River One Watershed One Plan process.
- Sampling for the District's long-term monitoring program in April, May, July, and September
- Continuous dissolved oxygen monitoring at several locations.
- Blue-green algae monitoring
    - Monitoring the Mud River and Maple Lake for algal toxins

    - Watching for blue-green algae blooms on the Thief River
    - Temperature logging in the Thief River
    - Possible late-summer screening for algal toxins in eutrophic lakes
- Stage and flow monitoring
- Completion of the Thief River 1W1P process, work plan development with other Planning Work Group members, and implementation of projects in the annual work plan.
- Implementation of projects in the Red Lake River and Thief River Comprehensive Watershed Management Plans
- Public education
- River Watch
- Assist SWCDs with grant-writing
- Lake sampling at Long Lake
- Bartlett Lake Management Plan
- Collection of early detection zebra mussel samples from the Red Lake River and the waters between Lake Lomond and the Clearwater River.

River Watch

In 2019, seven schools located within Red Lake Watershed District's boundaries participated in River Watch by collecting water quality data from their local rivers and streams. Five of which received direct support from RLWD staff, they included: Win-E-Mac, Red Lake County Central, Red Lake Falls Clearbrook-Gonvick and Thief River Falls which began sampling in fall of 2019. International Water Institute (IWI) led the remaining school groups in the watershed which included: Fisher High School and Sacred Heart of East Grand Forks. River Watch water quality monitoring began mid-April and ended late October. Approximately 35 different sites were sampled three or more times in 2019 by River Watch schools within RLWD boundaries.

River Watch water quality data is part of a data set used by the Minnesota Pollution Control Agency to conduct use assessment. There are some areas within the watershed where River Watch data is some of the only data collected, making River Watch a very beneficial program for collecting water quality data within the watershed district.

River Watch Kick Off

September 2018, IWI held three separate River Watch Kick Offs. Schools were presented with their winter project to be completed by the spring 2019 River Watch Forum. This year's assignment was 'Data Driven Watershed Problem Solving'.

For this year's project, River Watch teams were challenged to examine their watershed, identify an issue, and propose a solution based on data (quantitative, observational, expert interviews, etc.). Schools collaborated and presented their issues and solutions to local water or community-affiliated groups, teams incorporated feedback from local experts and compiled an ArcGIS StoryMap for their final submission.

During the kickoff students were given a worksheet to fill out to help brainstorm possible issues within their watersheds. Kickoff attendees were also treated to a paddle on the Thief and Red Lake Rivers, in large 10-person voyager canoes, and participated in a team building game.

River Watch Forum

The 24th annual River Watch Forum was held February 27th, 2019 at the Alerus Center in Grand Forks, ND, where schools from North Dakota and Minnesota were represented. Keynote speaker Natalie Warren detailed the adventure of a friend and hers 2,000-mile canoe trip from Minneapolis to Hudson Bay, Canada, in 2011. Students participated in a collaborative art project, Jeopardy contest, college fair, and a River Watch escape room-inspired team challenge. The collaborative art project consisted of each school receiving a square canvas that had been previously outlined as water or land. Each school painted their version of water and land, when all canvases were put together, they created a large river with many forks, with each school's version of

land and water being represented. In the River Watch escape room students had to answer questions and solve River Watch related problems to get the key to unlock the 'door' to escape.

Five RLWD schools attended the River Watch forum. Three RLWD schools participated in the forum project: Red Lake County Central, Red Lake Falls, and Sacred Heart East Grand Forks. Red Lake Falls created a story map helping local farmers understand the Buffer Law. Sacred Heart's story map details the students trying to reduce waste from fishing in the form of biodegradable bags and containers.

Red Lake County Central (RLCC) won gold, beating out 16 other participating schools. RLCC students found a source of pollution while invertebrate sampling, students contacted local agencies looking for more information about the pollution source and if this was a known problem. After learning the pollution was coming from an old tile line draining into the river and comparing water quality data taken from the pollution source vs. data collected up stream, the students took action. The students came up with 2 different solutions and budgets for fixing the problem. Students presented the problem and solutions to the RWLD and the Red Lake County Environmental Officer. An ArcGIS StoryMap was created to describe the problem, research conducted, and solution proposals.

To see all the story maps created by River Watch teams go to: https://iwinst.org/mesmerize/watershed-education/river-watch/forum-resources/2019-river-watch-forum/

River Watch – Macro Invertebrate Sampling

The Red Lake County Central River Watch Team sampled for macroinvertebrates in the Hill River, half a mile northwest of Brooks, MN on September 19th, 2019. 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 identify invertebrates using a key. Students also learned which invertebrates are indicators of good and bad water quality.


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 visualize their watershed during a classroom visit by RLWD and IWI staff. The students decorate a trackable, 14" cedar canoe and write a dream for its river journey. Canoes are launched into the local river students learned about during the classroom visit. A web page is created for each canoe which includes the date and location of launch along with a picture of the canoe and "dream" story. Canoes found by area residents can be logged into the database by following instructions and recording the unique ID number which accompany each canoe. View decorated canoes, read dream stories, and see where canoes are discovered at www.riverofdreams.org

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


Other Watershed Activities

Permits (RLWD Project No. 90)

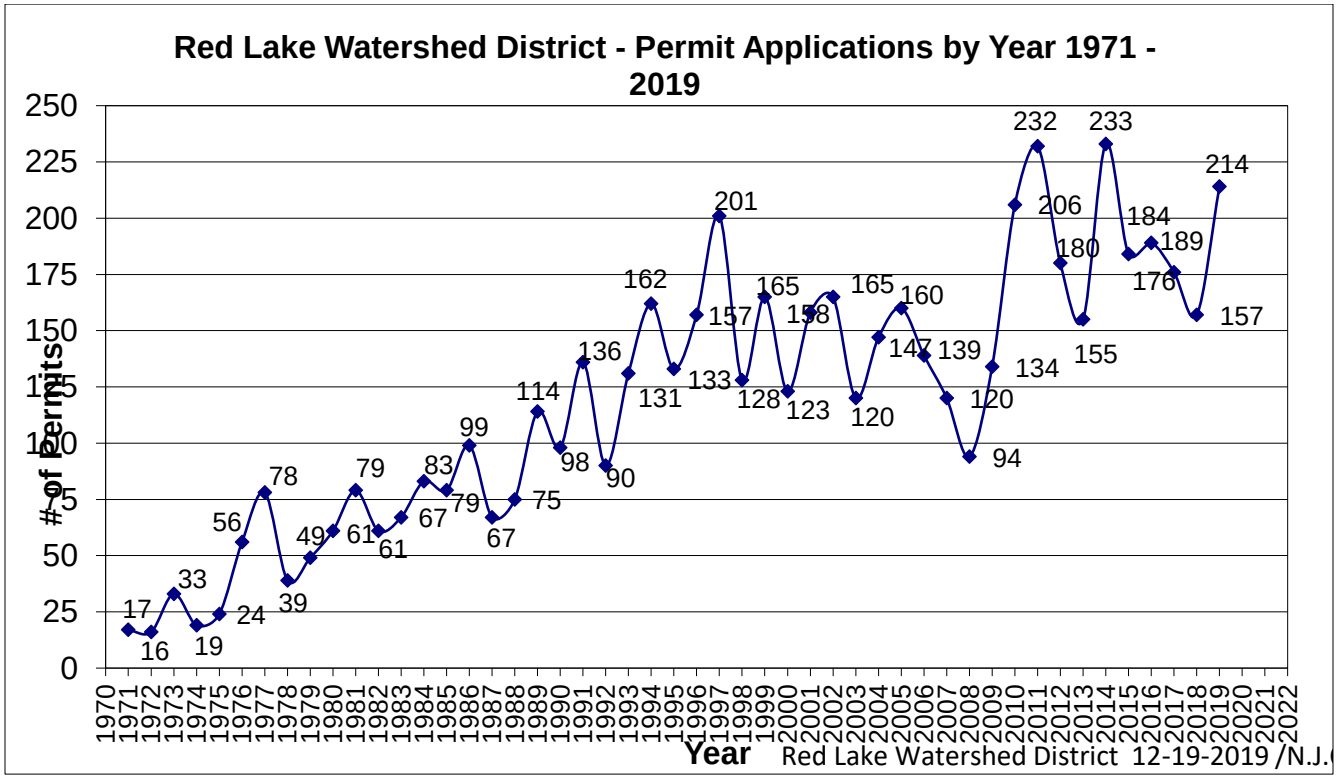
In 2019, a total of 214 permit applications were received, 37 were for subsurface tile projects. This year was the fourth full year of the District's subsurface drain tile permitting policy. The numbers listed below indicate the permits and how they are categorized within our rules for permitting:

- 3 utility
- 7 re-grade
- 149 culvert/bridge
- 15 drainage
- 37 drain tile
- 3 dike

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.

1990 – 2019 Total Permits per year (30 yr. average = 156 per yr.)
(In most recent 10 years = 193 per year)



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 largest issue relating to un-permitted/unauthorized work was installing subsurface drain tile without permits and draining non-benefitted tiled land to a ditch or a legal ditch system.

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.

During most of 2019, flows in the Clearwater River were above the minimum that would initiate allocation. Allocation was necessary for a short time in April in the spring and also in September and October 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

Stream Flow & Pool Elevation Monitoring (RLWD Project No. 21)

Stream flow monitoring is a vital on-going activity. The District has an active stream gauging program and local volunteers assist us in recording gauge readings and monitoring river conditions during runoff events. Approximately 160 gauges of various types (staff, wire weight, automated) are located throughout the District. Many automated river level gauges within the district can be accessed via the internet and are extremely valuable to obtain "real time" data.

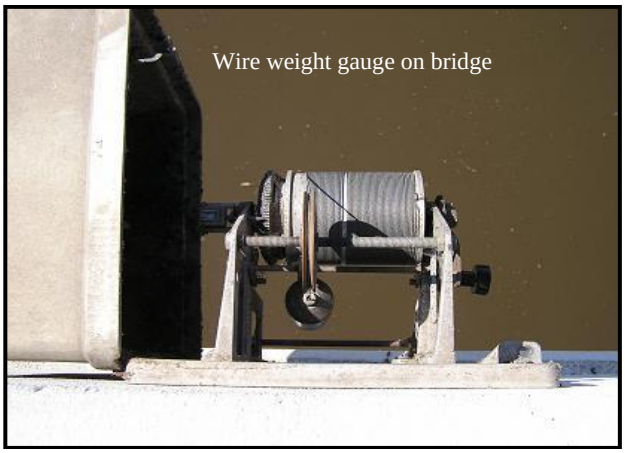
High-water staff gauge – Moose River at Marshall County Highway #54

The District deploys autonomous water level loggers in tributary streams and other important locations that are not gauged by state or federal flow monitoring stations. HOBO water level loggers were deployed at 34 sites in 2019. Flow monitoring results can be viewed within monthly water quality reports.

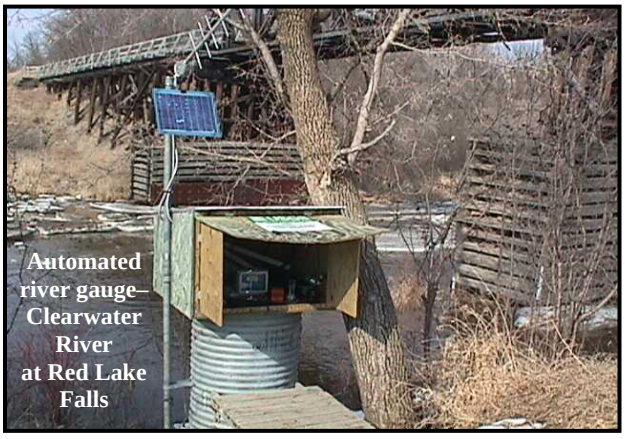
District staff performs flow measurements and continues to develop stage (gauge height) and discharge (flow in cubic feet per second) curves at many locations. This data, in conjunction with records and cooperative efforts from other agencies such as the U. S. Geological Survey (USGS), National Weather Service, and the MnDNR will help everyone better understand drainage and runoff characteristics within the District.

With several years of recorded data, it is increasingly valuable for the Board of Managers and staff, in the operation and maintenance of existing projects and also for the development of potential projects.

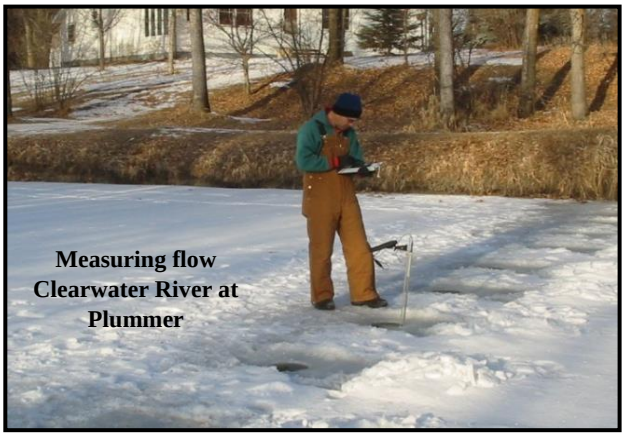
Typical staff gage at structure



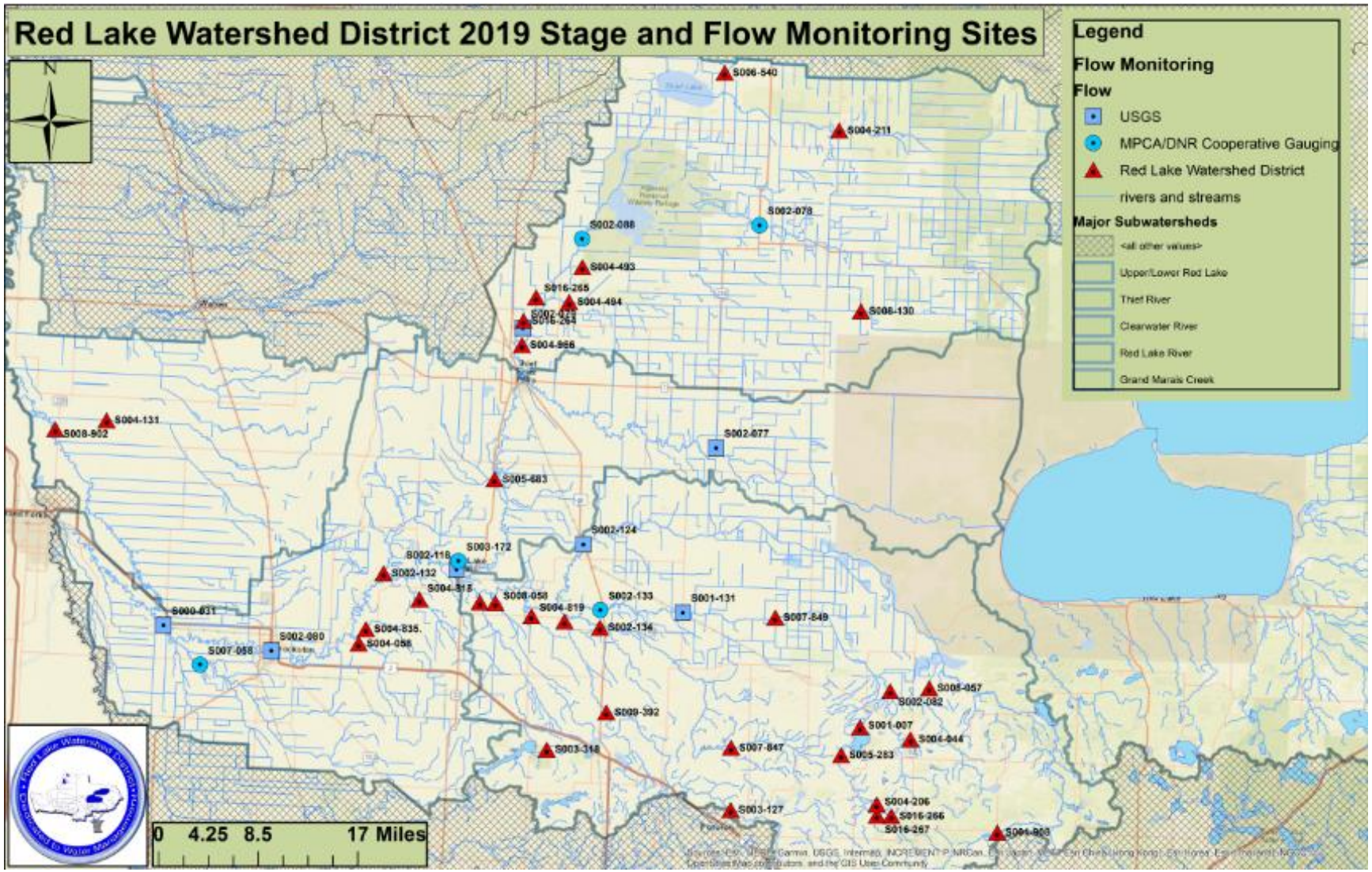
Wire weight gauge on bridge



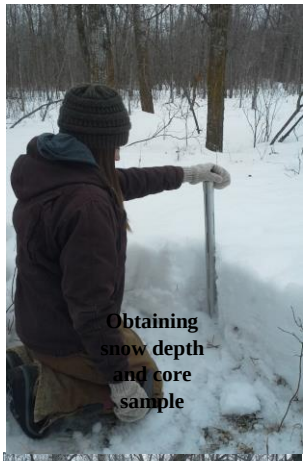
Automated river gauge– Clearwater River at Red Lake Falls



Measuring flow Clearwater River at Plummer


Red Lake Watershed District 2019 Stage and Flow Monitoring Sites
Legend
Flow Monitoring
Flow
USGS
MPCA/DNR Cooperative Gauging
Red Lake Watershed District
rivers and streams
Major Subwatersheds
<all other values>
Upper/Lower Red Lake
Thief River
Clearwater River
Red Lake River
Grand Marais Creek
S006-540
S004-211
S002-078
S002-088
S004-493
S016-265
S004-494
S008-130
S004-866
S004-131
S008-902
S002-077
S005-683
S002-124
S003-172
S002-118
S002-132
S004-315
S008-050
S004-819
S002-133
S001-131
S007-849
S000-631
S004-835
S004-058
S002-080
S007-058
S002-134
S005-057
S002-082
S009-392
S001-007
S004-844
S003-318
S007-847
S025-283
S004-206
S016-266
S016-267
S003-127
S004-903
0 4.25 8.5 17 Miles

Snow Surveys


Obtaining snow depth and core sample


Establishing weight of snow sample to calculate water content

Each year, the District performs snow surveys which usually begin in mid-January 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 2019, due to the existing weather and snowpack conditions, three snow surveys were obtained. In early March, the average depth of the snow at our sampling sites was 23.3 inches and the water equivalent (moisture content) was 4.68 inches. This was the first year out of the last eight that spring flooding has occurred.

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.

Geographic Information Systems-GIS (RLWD Project No. 145)

Mapping: Maps are created as needed to accommodate requests by District staff. It should be noted that maps created are not to be used as legal survey maps, they are for reference use only.

A live working ArcGIS map that was created for tracking parcel splits for the Thief River Falls Water Management District, RLWD project 171A, is updated as new parcel splits occur.

Maintenance of Drainage Systems

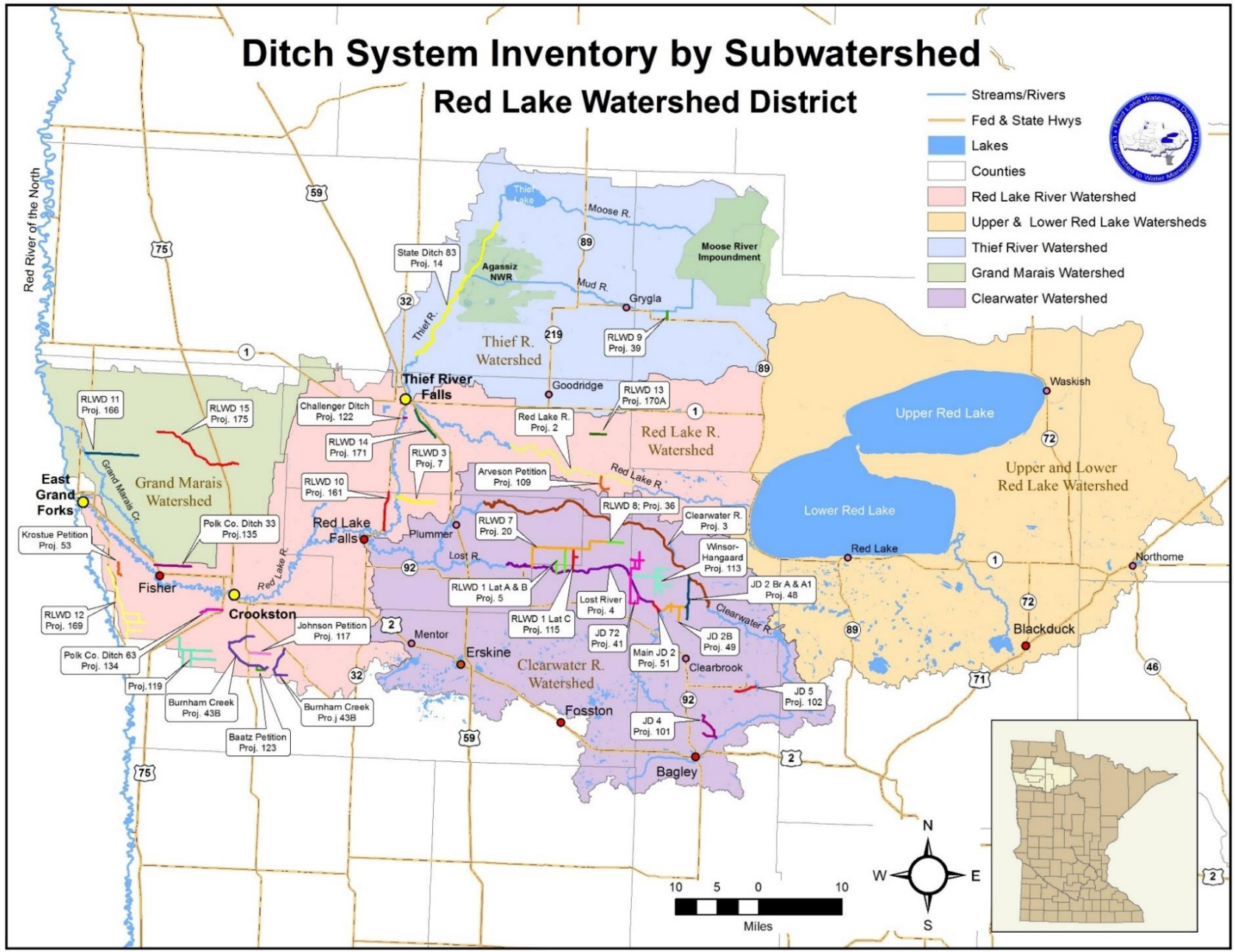
One of the many tasks of the staff at the Red Lake Watershed District is to inspect the legal drainage ditch systems that are under the jurisdiction of the District. Semi-annual or annual inspections are conducted on these legal drainage systems to determine what type of repairs or any maintenance work that may be needed to keep these ditches functioning in good working order. Some of the many things that the District are looking for: erosion around culverts, runoff event water damage to slopes or scouring of the ditch bottom, violation to the rights-of-way or buffer strips, and cattails or other weeds that may need to be sprayed.

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. Very limited cattail control was needed on the District ditches and other projects this year. There was only a total of 34.77 miles of ditch that needed to be sprayed for cattails out of the 273.51 miles of ditch that are under the 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 162 miles of ditches that have ditch right-of-way.

In 2018 the Board approved the installation of culvert markers on every Side Water Inlet (SWI) culvert in each drainage system. Listed are the system where all markers have been installed:

- RLWD #1 Lateral A & B, Project 5
- RLWD #3, Project 7
- RLWD #9, Project 39
- RLWD #1 Lateral C, Project 115
- Project 117
- Baatz Petition, Project 123
- Polk County Ditch #63, Project 134
- RLWD #10 Project 161
- RLWD #11, Project 166
- RLWD #13, Project 170A
- RLWD #14, Project 171


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

2019 Ditch Mowing		
Project #	**System**	**Contractor**
5	RLWD #1 Lat A & B	Olson Construction
7	RLWD #3	Garry Gravel
14	State Ditch #83	Don Lunke
20	RLWD #7	Olson Construction
36	RLWD #8	Olson Construction
39	RLWD #9	Todd Stanley
41	JD #72	Olson Construction
43B	Burnham Creek	Garry Gravel
48	JD #2 Br A & A1	Olson Construction
49	JD #2B	Olson Construction
51	Main JD #2	Olson Construction
53	Krostue Petition	David Shane
109	Arveson Petition	Olson Construction
113	Winsor Hangaard	Olson Construction
115	RLWD #1 Lat C	Olson Construction
117	Kenneth Johnson Petition	Garry Gravel
119	Polk Co Ditch Improvement	Garry Gravel
122	Challenger Ditch	Olson Construction
123	Baatz Petition	Garry Gravel
134	Polk Co Ditch #63	David Shane
135	Polk Co Ditch #33	David Shane
161	RLWD #10	Garry Gravel
166	RLWD #11	Shane Vanosek
169	RLWD #12	David Shane
170A	RLWD #13	Olson Construction
171	RLWD #14	Les Cota/Andy Anderson
175	RLWD #15	Shane Vanosek

2019 Ditch Spraying by Larson Helicopters, LLC		
Project Number	System	Miles Sprayed
7	RLWD #3	2.2
20	RLWD #7	4.37
41	JD #72	1.14
43B	Burnham Creek	1.34
49	JD #2B	2.07
109	Arveson Petition	2.00
113	Winsor-Hangaard	8.54
115	RLWD #1 Lat C	.32
119	Polk Co Ditch 104, 61, 47, 94 Improvement	3.72
123	Baatz Petition	.6
134	PCD #63	2.01
135	PCD #33	.5
166	RLWD #11	5.96
169	PCD #108/ PCD #53	3.74
171	RLWD #14	.75
175	RLWD #15	6.17

RLWD No. 1 Lateral A & B (RLWD Project No. 5)

An 18" culvert under the township road along Lateral B was found damaged at the inlet and outlet. The inlet to the pipe has rusted out, exposing about 2 to 4 feet of pipe, causing part of the road slope to cave in. The outlet end, pictured, had been significantly smashed, constricting the amount of flow out of the pipe. Equality Township was informed of the culvert and they have replaced it with a new 18" corrugated steel pipe.

State Ditch No. 83 (RLWD Project No. 14)

This past year, Lunke Construction Inc. did not perform any work on the system except for mowing, due to it being such a wet year. The mowing was completed in mid-July. The staff at RLWD cut down trees that were blocking the ROW trail. It was noted during inspection that there are areas along the system where the plunge pools need to be armored with rip rap.

About 880 feet downstream from the intersection of SD#83 and County Road 12 is an area where a lot of erosion is occurring on the north side of the ditch. There is a 15" CSP under a field crossing and a 30" CSP under CR 117 that are leading to this eroded area. The 15" CSP needs rip rap to be placed at the outlet. The area will need to be surveyed, and work will need to be done in the summer of 2020.

In the Fall, the drainage area for SD #83 experienced large rain events, which caused the ditch to run full throughout the fall and winter. In November, Marshall County became eligible for State Disaster Declaration for damages relating to this event. The State Disaster Declaration will reimburse 75% of all local government's eligible costs. At this point in time, the damages to the system are unknown because of the high-water levels and snow/ice cover. The ditch system will be inspected for damages in the spring or when water elevations are lower.

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
Total	100	$ 451,303.00

Burnham Creek (RLWD Project No. 43B)

A 36” CSP outlet snapped off and part of the ditch slope was collapsing and eroding. Brault Construction cut the broken pipe off, cut the ends of the pipe straight and banded the culvert together. Part of the pipe was buried with dirt and rock was placed at the outlet.

The inlet to one of three pipes under township road 340th St SW had been bent in on itself, restricting the amount of flow through the pipe. In the late fall, Brault Construction straightened out the culvert.

Judicial Ditch No. 2B (RLWD Project No. 49)

A 36" CSP culvert was replaced under 520th St and about 400 feet of the ditch upstream and downstream were cleaned out. There was a plunge pool upstream of the culvert that was filled in with rock. Triple D completed the work mid-August.

Triple D also removed a beaver dam that was causing water to cut into the south ditch slope, the dam was not active, so no beavers were trapped. Triple D also removed a 15” concrete culvert side water inlet that had collapsed and replaced it with an 18” CSP.

In mid-November, another beaver dam was removed by Brady Dyrdahl and one beaver was trapped.

Judicial Ditch No. 5, Clearwater County (RLWD Project No. 102)

RLWD and Clearwater County have been continuously battling beavers building dams on the inlet end of the culvert under the ATV trail, north of CR 23. Clearwater County has placed a critter barrier around the inlet of the pipe to discourage the beavers from building. In September, a total of seven beavers were trapped. The District is looking to clean the channel south of CR 23 in the coming year.

Polk County Ditch Improvement, (RLWD Project No. 119)

Brault Construction reattached an apron to a centerline culvert in section 6 Hammond Township along 340th St SW.

Challenger Ditch (RLWD Project No. 122)

RLWD staff reattached a flap gate to a side water inlet at station 393+47. Brush was also removed with a brush saw at the outlet of many side water inlets. The District held a hearing February 28th, 2019 and carried the motion to approve the petition to re-align and modify of a portion of the existing drainageway and outlet. The construction is planned for the Summer of 2020.

Polk County Ditch No. 63, Polk County (RLWD Project No. 134)

A damaged 18” CSP SWI outlet was cut back and a new gate was attached.

Polk County Ditch No. 33 (RLWD Project No. 135)

Upon inspection with HDR Engineering, it was determined that the bridge at STA 369+60 is not structurally sound and needs to be replaced. The existing structure is a cast-in-place bridge with the base of the walls having integral footings that extend approximately a foot into the waterway, which is exposed on both sides due to erosion. The northern bridge wall is tilting inwards 3-5 degrees while cracking on the inlet wings are showing several inches of movement. About one foot of the concrete is deteriorating substantially and there is significant evidence of piping erosion along the structure. HDR Engineering is working on finding a solution to replacing this bridge.

RLWD Ditch No. 10, Red Lake County (RLWD Project No. 161)

There are two 15" flap gates that are to be reattached to SWI's by Triple D in the Spring of 2020. Brush has been removed, with a brush saw, in front of many SWI's and at the top of the outlet structure. Due to the larger spring melt event, the outlet structure received a significant amount of damage. The District is working through a process with FEMA, trying to get funding to improve the outlet structure. There is evidence that water is traveling under the concrete structure, starting near the top, and is reentering into the system in a different location towards the bottom of the structure. There are many cracks that are multiple feet deep and holes along the edge of the structure that are multiple feet deep and wide. Houston Engineering is developing a new design for the outlet structure.

RLWD Ditch No. 11 (RLWD Project No. 166)

Most of the SWIs needed work done, with replacing or fixing flap gates. RLWD staff fixed gates with an exception to a couple that Paul Zavoral cut some of the pipe back and reattached flap gates.

RLWD Ditch No. 12, Polk County, (RLWD Project No. 169)

Upon inspection, the ditch system was found to be in rough shape. Many SWI outlets and gates are damaged and will be repaired in 2020 by Paul Zavoral. There is a lot of brush that has been removed, but there will be more to be done in 2020.

In the late fall, Paul Zavoral placed an 18" washed out pipe, back into place and placed dirt over it. It will be watched carefully in early spring of 2020.

In the late fall, Paul Zavoral also replaced an 18" CSP pipe that was damaged beyond repair.

RLWD Ditch No. 14 (RLWD Project No. 171)

District staff did some work fixing flap gates on a few SWIs in the system. Late in the summer, a landowner notified the district that Cocklebur was becoming an issue along system. The system was mowed in the late summer, in hopes to prevent the plant from going to seed. This problem will be continuously monitored in 2020 and if needed, the District will try other ideas for controlling the issue.

RLWD District 15, Polk County (RLWD Project No. 175)

Two 18" flap gates were replaced and installed by RJ Zavoral & Sons.

Acronyms

The following is a list of common acronyms used by the Red Lake Watershed District.

State, Regional, and Local Government	
BWSR	Board of Water and Soil Resources
DNR	Department of Natural Resources
JPB	Joint Powers Board
LCMR	Legislative Commission on Minnesota Rivers
LGU	Local Governmental Unit
MnDOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
MSTRWD	Middle Snake Tamarac Watershed District
RLWD	Red Lake Watershed District
SWCD	Soil and Water Conservation District
TAC	Technical Advisory Committee
Federal Agencies	
Corps	U.S. Army Corps of Engineers
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FSA	Farm Services Administration
NRCS	Natural Resources Conservation Service
USF&WS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
Organizations	
MAWD	Minnesota Association of Watershed Districts
Programs	
CLWP	Comprehensive Local Water Planning
CRP	Conservation Reserve Program
EQIP	Environmental Quality Incentive Program
FDR	Flood Damage Reduction
RIM	Reinvest in Minnesota Program
WCA	Wetland Conservation Act
SWAG	Surface Water Assessment Grant
WRAP	Watershed Restoration and Protection
WRAPS	Watershed Restoration and Protection Strategy
Terms	
CP	Conservation Practice
BMP	Best Management Practice
GIS	Geographic Information System
GPS	Geographic Positioning System
LIDAR	Laser Imaging Detection and Ranging
NPS	Nonpoint Source Pollution
TMDL	Total Maximum Daily Load
PTMApp	Prioritize Target Measure Application

RED LAKE WATERSHED DISTRICT
THIEF RIVER FALLS, MINNESOTA

AUDITED FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2019

TABLE OF CONTENTS

RED LAKE WATERSHED DISTRICT
OFFICIAL DIRECTORY
DECEMBER 31, 2019

Board of Managers

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

BradyMartz

INDEPENDENT AUDITOR'S REPORT

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

Report on the Financial Statements

We have audited the accompanying modified 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, 2019, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the modified cash basis of accounting described in Note 1; this includes determining that the modified 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 Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes

evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective modified 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, 2019, and the respective changes in modified cash basis financial position for the year then ended in conformity with the basis of accounting described in Note 1.

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 modified 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 the matter.

Other Matters

Other 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 official directory, management's discussion and analysis, budgetary comparison schedule, statement of receipts and disbursements and changes in fund balance, and statement of direct expenditures by classification as shown in the table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The budgetary comparison schedule, statement of receipts and disbursements and changes in fund balance, and the statement of direct expenditures by classification are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such 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 and the supplementary statements are fairly stated in all material respects in relation to the financial statements as described in the basis of accounting described in Note 1.

The official directory and the management's discussion and analysis section have 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.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated March 4, 2020 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 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

March 4, 2020

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, 2019, within the limitations of the District's modified cash basis of accounting. Please read it in conjunction with the District's financial statements that begin on page 14.

FINANCIAL HIGHLIGHTS

- The District's governmental funds total revenues exceeded total expenditures, on the modified cash basis of accounting, by $2,659,802 for the year ended December 31, 2019.
- The general fund showed a decrease on the modified cash basis fund balance in the amount of $90,688.
- The District's General Fund ended the year with a fund balance of $152,122.
- The District's combined fund balance at the close of the current year was $7,399,653.

Overview of the Financial Statements

This annual report is presented in a format consistent with the presentation requirements of the Governmental Accounting Standards Board (GASB) Statement No. 34, as applicable to the District's modified cash basis of accounting.

Report Components

This annual report consists of five parts as follows:

Government—Wide Financial Statements: The Statement of Net Cash Position and the Statement of Activities Arising from Cash Transactions on pages 14 and 15 provide information about the activities of the District government-wide (or "as a whole") and present a longer-term view of the District's finances.

Fund Financial Statements: Fund financial statements (starting on page 16) focus on the individual parts of the District government. Fund financial statements also report the District's operations in more detail than the governmental-wide statements by providing information about the District's most significant ("major") funds. For governmental activities, these statements tell how these services were financed in the short term as well as what remains for future spending.

Notes to the Basic Financial Statements: The notes to the basic financial statements are an integral part of the government-wide and fund financial statements and provide expanded explanation and detail regarding the information reported in the statements.

Other Supplementary Information: This Management's Discussion and Analysis and the General Fund Budgetary Comparison Schedule (starting on page 33) represent other financial information. Such information provides users of this report with additional data that supplements the government-wide statements, fund financial statements, and notes (referred to as "the basic financial statements").

Other Supplementary Statements: This part of the annual report (starting on page 35) includes other supplemental financial information which is provided to address certain specific needs of various users of the District's annual report. These statements and schedules include individual Fund Statements for Governmental units.

Basis of Accounting

The District has elected to present its financial statements on a modified cash basis of accounting. This modified cash basis of accounting is a basis of accounting other than accounting principles generally accepted in the United States of America. 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 modified cash basis of accounting, revenues and expenses and related assets and liabilities are recorded when they result from cash transactions, except for the recording of depreciation expense on the capital assets in the government-wide financial statements.

As a result of the use of this cash basis of accounting, certain assets and their related revenues (such as accounts receivable and revenue for billed or provided services not yet collected) and certain liabilities and their related expenses (such as accounts payable and expenses for goods or services received but not yet paid, and accrued expenses and liabilities) are not recorded in the basic 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 modified cash basis of accounting.

Reporting the District as a Whole

The District's Reporting Entity Presentation

This annual report includes all activities for which the Red Lake Watershed District Board of Managers is fiscally responsible. These activities, defined as the District's reporting entity, are operated within separate legal entities that make up the primary government. The District has no reportable component units.

The Government-Wide Statement of Net Cash Position and the Statement of Activities Arising from Cash Transactions

Our financial analysis of the District as a whole begins on page 7. The government-wide financial statements are presented on pages 14 and 15. One of the most important questions asked about the District's finances is, "Is the District as a whole better off or worse off as a result of the year's activities?" The Statement of Net Cash Position and the Statement of Activities Arising from Cash Transactions report information about the District as a whole and about its activities in a way that helps answer this question. These statements include all of the District's assets and liabilities resulting from the use of the modified cash basis of accounting.

These two statements report the District's net cash position and changes in them. Keeping in mind the limitations of the modified cash basis of accounting, you can think of the District's net cash position—the difference between assets and liabilities—as one way to measure the District's financial health or financial position. Over time, increases or decreases in the District's net cash position are one indicator of whether its financial health is improving or deteriorating. You will need to consider other nonfinancial factors, however, such as changes in the District's property tax base and the condition of the District's infrastructure, to assess the overall health of the District.

In the Statement of Net Cash Position and the Statement of Activities Arising from Cash Transactions, the District has one type of activity:

Government Activities - The District's basic services are reported here, including the general administration and capital projects. Property taxes, state aids, and state and federal grants finance most of these activities.

The Fund Financial Statements

The fund financial statements begin on page 16 and provide detailed information about the most significant funds. Some funds are required to be established by state law and by bond covenants.

However, the Board of Managers establishes certain other funds to help it control and manage money for particular purposes or to show that it is meeting legal responsibilities for using certain taxes, grants, and other money. The District's two kinds of funds—governmental and fiduciary—use different accounting approaches.

Governmental funds— Most of the District's basic services are reported as governmental funds, which focus on how money flows into and out of those funds and the balances left at year-end that are available for spending. These funds report the acquisition of capital assets and payments for debt principal as a detailed short-term view of the District's general government operations and the basic services it provides. Governmental fund information helps you to determine (through a review of changes to fund balance) whether there are more or fewer financial resources that can be spent in the near future to finance the District's programs.

The District considers the General Fund, the Special Revenue Fund, and the Capital Project Fund as significant or major governmental funds. There are no other funds.

Fiduciary funds— These fund types are often used to account for assets that are held in a trustee or fiduciary capacity such as pension plan assets, assets held per trust agreements, and similar arrangements.

A FINANCIAL ANALYSIS OF THE DISTRICT AS A WHOLE

Net Cash Position

The District's combined government-wide Net Position, resulting from modified cash basis transactions increased by $2,358,162 between fiscal years 2019 and 2018. As noted earlier, net position - modified cash basis may serve over time as a useful indicator of a government's financial position. In the case of Red Lake Watershed District, assets exceeded liabilities by $22,404,172 at December 31, 2019, which is an increase of $2,358,162 over the year ended December 31, 2018; which is more than a 11.76% increase over the prior year.

A portion of Red Lake Watershed District's net position ($15,004,519 or 66.97%) reflects its investment in capital assets. Red Lake Watershed District uses these capital assets to provide services to citizens; consequently, these are not available for future spending.

A portion of Red Lake Watershed District's net position ($2,242,072) reflects a portion of net position that is restricted for ditch maintenance.

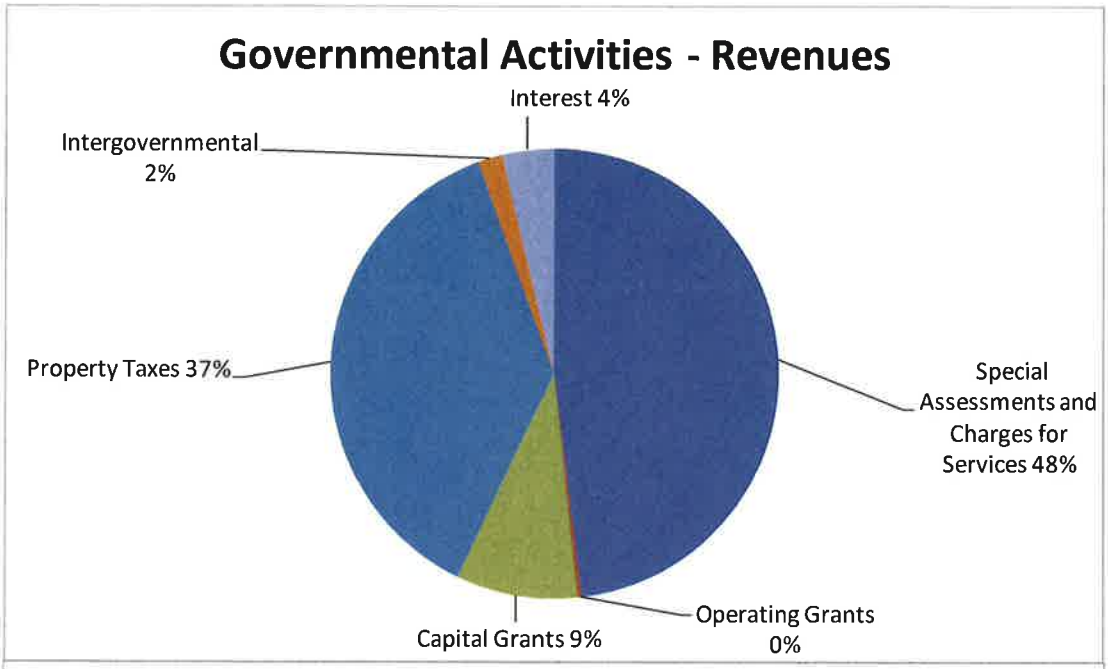
	Governmental Activities		Change
	2019	2018	18-19
ASSETS			
Total Current Assets	$ 7,399,653	$ 4,739,851	$ 2,659,802
Net Capital Assets	15,004,519	15,306,159	(301,640)
Total Assets	$ 22,404,172	$ 20,046,010	$ 2,358,162
Net Position	$ 22,404,172	$ 20,046,010	$ 2,358,162

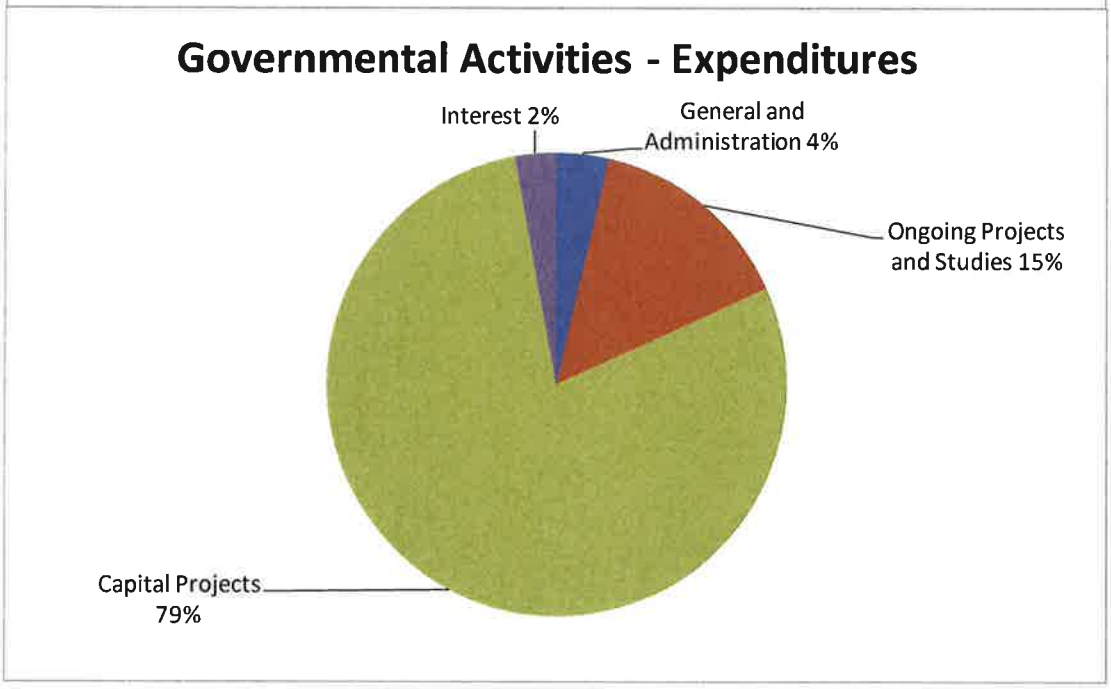
Changes in Net Cash Position

For the years ended December 31, 2019 and 2018, Net Position of the primary government (resulting from modified cash basis transaction) changed as follows:

	Governmental Activities		Change
	2019	2018	18-19
Revenues			
Program Revenues			
Special Assessments and Charges for Services	$ 2,570,200	$ 222,944	$ 2,347,256
Operating Grants	16,000	16,060	(60)
Capital Grants	468,487	1,025,877	(557,390)
General Revenues			
Property Taxes	2,005,618	1,939,947	65,671
Intergovernmental	94,095	1,805	92,290
Interest	200,099	104,215	95,884
Total Revenues	5,354,499	3,310,848	2,043,651
Expenses			
General and Administration	108,749	98,473	10,276
Ongoing Projects and Studies	436,769	158,237	278,532
Capital Projects	2,365,454	2,139,851	225,603
Allocated Interest	85,365	51,399	33,966
Total Expenses	2,996,337	2,447,960	548,377
Increase in Net Position	2,358,162	862,888	1,495,274
Net Position - January 1	20,046,010	19,183,122	862,888
Net Position - December 31	$ 22,404,172	$ 20,046,010	$ 2,358,162

Below are specific graphs which provide comparisons of the governmental activities revenues and expenditures for the year ended December 31, 2019:





Governmental Activities

To aid in the understanding of the Statement of Activities Arising from Cash Transactions on page 15, 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, 2019, General Fund expenditures were $11,676 under final budget. The budget was not amended during the year.

CAPITAL ASSET AND DEBT ADMINISTRATION

Capital Assets—Modified Cash Basis

At December 31, 2019, the District had approximately $15,004,519 (net of accumulated depreciation) invested in capital assets. This investment in capital assets consists of building, equipment, and infrastructure assets necessary for the District to carryout watershed and conservation management within its service area.

	2019			2018
	Cost	Accumulated Depreciation	Cost - Less Accumulated Depreciation	Cost - Less Accumulated Depreciation
Building and Improvements	$ 775,594	$ 341,816	$ 433,778	$ 456,284
Infrastructure Improvements	12,601,966	3,862,143	8,739,823	9,239,967
Engineering Equipment	438,363	379,285	59,078	46,341
Office Equipment	173,843	134,543	39,300	34,637
Land and Permanent Easements	3,726,959	-	3,726,959	3,681,959
Construction in Progress	2,005,581	-	2,005,581	1,846,971
	$ 19,722,306	$ 4,717,787	$ 15,004,519	$ 15,306,159

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

Water Quality grants from the State of Minnesota and Minnesota Pollution Control Agency for Surface Water Assessment Grants, Watershed Assessment Projects (watershed based TMDL), are ongoing for Clearwater River, Red Lake River, Thief River, and Grand Marais Creek. Expenses over and above the grants are expended from the Capital Projects Fund.

Pine Lake Watershed

Red Lake Watershed District entered into a grant agreement with the Natural Resource Conservation Service for the study of projects which qualify for the Regional Conservation Partnership Programs (RCPP). The grant for the Pine Lake Watershed funded 70% of the cost of the study, not to exceed $500,000, which included a study for the completion of a Watershed Protection Plan. Development of the plan continued into 2018 but due to various concerns with permitting agencies and costs associated with delays in moving forward, all funds earmarked for the plan were spent without a final plan being developed. It was estimated that an additional $200,000 was needed to complete the plan. The District staff and consultant met with the Red River Retention Authority requesting additional cost share but was denied. The Board directed staff to gather additional information from the permitting agencies to determine if a final plan could be completed and what timeline it would take.

After various hurdles were presented by the Minnesota Department of Natural Resources concerning permitting the proposed Pine Lake Watershed Project the District had been working on over the past two years, the Red Lake Watershed District Board of Managers made a request to the Natural Resource Conservation Service to move forward with a close-out agreement for this project thus canceling the agreement. In August of 2019, the RLWD filed all the paperwork with the NRCS and hope to get final approval of closeout in early 2020. It should be noted that the RLWD is still working with the Pine Lake Project Team to develop a project that will satisfy the needs of the public as they have requested.

Four-Legged Lake Watershed

Red Lake Watershed District entered into a second grant agreement with the Natural Resource Conservation Service for the study of projects which qualify for the Regional Conservation Partnership Programs (RCPP). The grant for the Four-Legged Lake Watershed funded 70% of the planning process, not to exceed $265,088, which will include a study for the completion of a Watershed Protection Plan. After various efforts to get the plan completed with obvious issues moving forward, the Red Lake Watershed District ended this grant without completing the plan. In May of 2019 the RLWD met with Red River Basin Commission to ask for their support in canceling the RCPP agreement with NRCS. Upon a favorable letter of recommendation to cancel the agreement, the grant was closed out late in 2019.

Red Lake River One Watershed One Plan (1W1P)

Red Lake Watershed District and local partners entered into a grant agreement with the Board of Water and Soil Resources (BWSR) to complete a Pilot Project referred to the public as "*Red Lake River One Watershed One Plan*". The grant, administered by Pennington Soil and Water Conservation District in the amount of $127,266, was for the development of a comprehensive ten-year plan for the Red Lake River Watershed. The planning and writing of the grant were completed in 2016 with final approval by the BWSR Board in July of 2017. 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.

Thief River One Watershed One Plan (1W1P)
Red Lake Watershed District and local partners entered into a grant agreement with the Board of Water and Soil Resources (BWSR) to complete a Comprehensive Watershed Management Plan for the Thief River Watershed referred to the public as "*Thief River One Watershed One Plan*". The memorandum of agreement was signed by all partners in March of 2017 with planning process starting in late 2017. The draft plan was completed late 2019 with final approval by the Board of Water and Soil Resources expected in early 2020. The Red Lake Watershed District acted as the fiscal agent for the grant approved by BWSR in the amount of $254,680 which was used for the development of the plan.

Drainage Database Grant
As part of a $38,700 grant agreement applied for and approved by the Board of Water and Soil Resources, the Red Lake Watershed District developed a Drainage Database which allowed for better record maintenance with Inspection Plans and Reports. This project was finalized by December 31, 2018 and was reconciled by BWSR in early 2019.

Black River Impoundment
Red Lake Watershed District approved by motion to proceed with the investigation of developing a flood damage reduction project referred to as the Black River Impoundment. In late 2016, the RLWD has entered into agreements with three landowners and preliminary engineering was ordered. In June of 2017, options with landowners were exercised with land purchases and easements completed. In 2018, final engineering was completed and permitting was started along with an investigation of creating Wetland Banking credits within the template of the proposed project. In early 2018, the District was informed that no State funding was earmarked for this project. The Board of Managers decided that even though no funding was obtained, the RLWD would proceed with exercising the step submittals to the Red River Watershed Management Board to secure their funding for the project. The Board also elected to proceed with a public hearing which was held August 8, 2018. 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. It is the hopes of the District that permits and funding for this project will be completed in 2020 so we can move into the construction phase of the project.

Thief River Falls Westside Flood Damage Reduction Project
Late 2017, the Red Lake Watershed District was petitioned by the City of Thief River Falls and Pennington County to investigate the drainage issues along the westside of the City. HDR Engineering, Inc. was hired to complete an analysis for the "Thief River Falls Westside Flood Damage Reduction Project". In 2018, the District held various landowner meetings as well as coordination with the City of Thief River Falls, Pennington County and Minnesota Department of Transportation to complete a preliminary design for the proposed project. The District officially labeled this project "Thief River Falls Westside Flood Damage Reduction Project No. 178." On September 8, 2018, the District signed a grant agreement with the State of Minnesota in the amount of $1,500,000 to assist with 50% of the cost for this project. On December 10, 2018, the RLWD was informed that the District was approved for a $400,000 Local Partnership Grant from the MnDOT. This was very good news as the Watershed District moves forward in completing the funding package for this project.

On May 23, 2019 the public hearing was held for this project. Upon completion of the hearing, the Board of Managers for the Red Lake Watershed District approved moving forward with the project but refrained assessing Water Management charges for the project until additional information could be gathered. On June 13, 2019 the District held a continuation hearing to establish charges for the Water Management District. As a result of the hearing and the fact an appraiser's report for damages had not been completed by the consultant hired by the District, final determination for damages could not be had. On July 11, 2019 a continuation hearing was once again held and final damages and fees were discussed. On September 26, 2019, the final order determining and awarding damages for the establishment of The Thief River Falls Westside Flood Damage Project, RLWD Project #178 was approved by the RLWD Board of Managers. Due to permitting delays, finalizing the agreement with the Minnesota Department of Transportation and starting of construction on this project had to be moved to early summer of 2020.

RLWD/West Polk SWCD grant
March of 2017, the Red Lake Watershed District and West Polk Soil and Water Conservation District partnered in a $103,000 Board of Water and Soil Resource Conservation Legacy Grant. The grant was used to complete various items that would stabilize the outlet channel for a public drainage system referred to the RLWD as Polk County Ditch 63 Improvement, Project 134. The project was substantially completed the fall of 2017 with minor revisions to the project completed in 2018. In 2019 final payment was made to contractor and the grant was closed.

Agassiz National Wildlife Refuge Partnership Grant
In March of 2018, the Red Lake Watershed District and Agassiz National Wildlife Refuge applied for and received a $242,000 MnDNR Conservation Partnership Grant. This grant will assist Agassiz National Wildlife Refuge in completing a three-phase project, designed to establish and enhance native wildlife habitat and increase biodiversity in portions of the refuge. Phase I of the grant, which included cattail spraying to approximately 1,700 acres of wetland complex, was completed in August of 2018. Phase II which included the rehabilitation of the Thief Bay Water Control Structure was completed in September of 2018. Due to abnormally large rainfall events in late 2019, the completion of the granted projects had to be extended to fall of 2020.

Agassiz National Wildlife Refuge Partnership Grant
On February 26, 2019, a Conservation Legacy Grant in the amount of $50,000 was executed on the behalf of Agassiz National Wildlife Refuge, for the removal of sediment in the outlet channel of Agassiz Pool which is commonly known as Judicial Ditch #11 Main Branch. This project was intended to be completed late fall of 2019 but due to abnormal rainfall events, this project was extended to late fall of 2020.

Legal Drainage Petitions
It should also be noted that in 2017 the District received two legal drainage petitions in Polk County. One petition was for the establishment of a public drainage system referred to as Red Lake Watershed District Ditch #16, Project No. 177 and the other petition was for the improvement to Polk County Ditch #39, Project No. 179. In 2018, a preliminary hearing was held on Project No. 177 at which time viewers were appointed. On April 4, 2019, the final hearing for this project was held. On April 11, 2019 the Detailed Findings of Facts and Order was approved by the Board of Managers. On June 20, 2019 Notice to Proceed was issued to Burski Excavating, Inc. for their bid in the amount of $1,454,118.40. Prior to awarding the contract, It was brought to the District's attention that there was an error in the advertising of bids which lead the District and Burski Excavating to reach a settlement agreement in the amount of $118,078.30, thus changing the awarded bid to $1,572,196.70. Due to permitting delays and large rainfall events in late September, the start of construction on this project was moved out to late spring 2020. 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. It is hope of the District to hold a final hearing on this project in early spring 2020.

Burnham Creek Wildlife Habitat Project

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 project which was part of a multi-purpose flood control project completed in 1988 known as Burnham Creek Project No. 6 Impoundment, Project 43A. It was stated by staff that the outlet structure was in need of repair and per the agreement on 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 grant for the replacement of the outlet structure, through the MnDNR Division of Fish and Wildlife Conservation Partners Legacy Grant. On December 17, 2019 the District was informed that a grant in the amount of $168,420 was awarded to this project. It is the hopes of the District that final plans will be completed early 2020 with construction occurring in the summer of 2020.

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, 2019

	Total
Assets	
Current Assets:	
Petty Cash	$ 100
Pooled Cash and Investments	7,399,553
Total Current Assets	7,399,653
Capital Assets:	
Property and Equipment	19,722,306
Less: Accumulated Depreciation	(4,717,787)
Net Capital Assets	15,004,519
Total Assets	22,404,172
Net Position	
Investment in Capital Assets	15,004,519
Restricted for Ditch Maintenance	2,242,072
Unrestricted	5,157,581
Total Net Position	$ 22,404,172

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF ACTIVITIES ARISING FROM CASH TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2019

Functions/Programs	Expenses			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	$ (856,742)	$ 747,993	$ (108,749)	$ 11,998	$ -	$ -	$ (96,751)
Ongoing Projects and Studies	(354,525)	(82,244)	(436,769)	2,507,446	16,000	-	2,086,677
Capital Projects	(1,699,705)	(665,749)	(2,365,454)	50,756	-	468,487	(1,846,211)
Allocated Interest	(85,365)	-	(85,365)	-	-	-	(85,365)
Total Governmental Activities	$ (2,996,337)	$ -	$ (2,996,337)	$ 2,570,200	$ 16,000	$ 468,487	$ 58,350
General Receipts:							
Tax Levies							$ 2,005,618
Intergovernmental (not restricted to specific programs)							
State MV, Disparity Reduction Credits, and PERA Aid							94,095
Allocated Interest							200,099
Total General Receipts							2,299,812
Change in Net Position							2,358,162
Net Position - Beginning							20,046,010
Net Position - Ending							$ 22,404,172

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF BALANCES ARISING FROM CASH TRANSACTIONS – GOVERNMENTAL FUNDS
DECEMBER 31, 2019

ASSETS	General Fund	Special Revenue Fund	Capital Project Fund	Total Governmental Funds
Petty Cash	$ 100	$ -	$ -	$ 100
Pooled Cash and Investments	152,022	2,242,072	5,005,459	7,399,553
Total Assets	$ 152,122	$ 2,242,072	$ 5,005,459	$ 7,399,653
Fund Balances:				
Restricted for Ditch Maintenance	$ -	$ 2,242,072	$ -	$ 2,242,072
Committed for Capital Projects	-	-	5,005,459	5,005,459
Unassigned	152,122	-	-	152,122
Total Fund Balances	$ 152,122	$ 2,242,072	$ 5,005,459	$ 7,399,653

Amounts reported from governmental activities in the Statement of Net Cash Position are different because:

Total Fund Balance per Statement of Balances Arising from Cash Transactions, from above		$ 7,399,653
When capital assets (land, building, equipment and infrastructure) that are to be used in governmental activities are purchased or constructed, the cost of those assets are reported as expenditures in governmental funds. However, the statement of net cash position includes those capital assets among the assets of the District as a whole.		
	Cost of Capital Assets	19,722,306
	Accumulated Depreciation	(4,717,787)
Total Net Position		$ 22,404,172

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, 2019

RECEIPTS	General Fund	Special Revenue Fund	Capital Project Fund	Total Governmental Funds
Property Taxes	$ -	$ -	$ 2,005,618	$ 2,005,618
Special Assessments	-	2,507,348	-	2,507,348
Intergovernmental:				
State	1,805	16,000	343,971	361,776
Local	-	-	216,806	216,806
Other:				
Miscellaneous	11,998	98	50,756	62,852
Allocated Interest	11,221	27,471	161,407	200,099
Total Receipts	25,024	2,550,917	2,778,558	5,354,499
DISBURSEMENTS				
General and Administrative	108,748	-	-	108,748
Ongoing Projects and Studies	-	436,769	-	436,769
Capital Projects	-	-	2,063,814	2,063,814
Allocated Interest	6,964	1,374	77,028	85,366
Total Disbursements	115,712	438,143	2,140,842	2,694,697
Net Change in Fund Balances	(90,688)	2,112,774	637,716	2,659,802
FUND BALANCE JANUARY 1	242,810	129,298	4,367,743	4,739,851
FUND BALANCE DECEMBER 31	$ 152,122	$ 2,242,072	$ 5,005,459	$ 7,399,653

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
RECONCILIATION OF CHANGES IN FUND BALANCES OF GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED DECEMBER 31, 2019

Net Change in Fund Balances - Total Governmental Funds	$	2,659,802
Governmental funds report capital outlay as expenditures, while governmental activities report depreciation expense allocating those expenditures over the life of the asset:		
Capital Additions Less Net Book Value of Assets Disposed		257,359
Depreciation Expense		(558,999)
Change in Net Position - Governmental Activities	$	2,358,162

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF NET CASH POSITION – FIDUCIARY FUNDS
DECEMBER 31, 2019

	Custodial Fund
ASSETS	
Cash	$ -
Total Assets	$ -
LIABILITIES AND FUND BALANCES	
Due To Red River Watershed Management Board	$ -
Total Liabilities	$ -

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF CHANGES IN NET CASH POSITION – FIDUCIARY FUNDS
FOR THE YEAR ENDED DECEMBER 31, 2019

	Custodial Fund
ADDITIONS	
Property Taxes	
Beltrami County	$ 114,092
Clearwater County	283,093
Itasca County	847
Koochiching County	17,715
Mahnomen County	2,364
Marshall County	73,448
Pennington County	380,458
Polk County	946,207
Red Lake County	186,222
Roseau County	170
State - MV	87,269
TOTAL ADDITIONS	2,091,885
DEDUCTIONS	
Red River Watershed Management Board	2,091,885
TOTAL DEDUCTIONS	2,091,885
CHANGE IN NET POSITION	-
NET POSITION - BEGINNING	-
NET 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.

As discussed further in Note 1C, these financial statements are presented on a modified cash basis of accounting. 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.

A. FINANCIAL 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 for 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. In addition, there are no component units as defined in Governmental Accounting Standards Board Statement 61 which are included in the District's reporting entity.

B. 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 as a whole. They include all funds of the reporting entity except for fiduciary funds. The statements distinguish between governmental and business-type activities. The District has only governmental activities which are generally financed through taxes, intergovernmental revenues, and other non-exchange revenues; because of this, all of the District's activities are reported as governmental activities.

FUND FINANCIAL STATEMENTS

Fund financial statements of the reporting entity 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 constitutes its assets, liabilities, fund equity, revenues, and expenditures/expenses. 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/expenses of the individual governmental or enterprise fund are at least 10% of the corresponding total for all funds of that category or type, AND
b. Total assets, liabilities, revenues, or expenditures/expenses of the individual governmental fund or enterprise fund are at least 5% of the corresponding total for all governmental and enterprise funds combined.

The funds of the financial reporting entity are described below and are all considered major programs for financial statement purposes.

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.

C. MEASUREMENT FOCUS AND BASIS OF ACCOUNTING

Measurement focus is a term used to describe "how" transactions are recorded 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 Statement of Activities Arising from Cash Transactions, governmental activities are presented using the economic resources measurement focus, within the limitations of the modified 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 modified cash basis of accounting, is used as appropriate.

All governmental funds and the custodial fund 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 and the fund financial statements, governmental activities are presented using a modified cash basis of accounting. This basis recognized assets, liabilities, net position/fund equity, revenues, and expenditures/expenses when they result from cash transactions with the provisions for capital assets, deferred inflows of resources, deferred outflows of resources, and debt and depreciation in the government wide statements. This basis is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

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

D. ASSETS, LIABILITIES, AND EQUITY

CASH AND CASH EQUIVALENTS

For the purpose of financial reporting, "cash and cash equivalents" includes all demand and savings accounts and certificates of deposit or short-term investments with an original maturity of one year or less. Cash balances from all funds are pooled and invested to the extent available in authorized investments authorized by Minnesota statutes. Earnings from such investments are allocated to the respective funds on the basis of average cash balance participation by each fund. Funds with deficit averages are charged with the investment earnings lost in financing the deficits.

CAPITAL ASSETS

The District's modified cash basis of accounting reports capital assets resulting from cash transactions and reports depreciation where appropriate.

All capital assets are valued at historical cost, or if donated, recorded at its estimated fair value. Infrastructure assets acquired prior to January 1, 2004 are not capitalized, but subsequent acquisitions are recorded at cost. Costs associated with infrastructure on property not owned by the District are immediately expensed.

In the government-wide financial statements, capital assets arising from cash transactions are accounted for as an expense in the Statement of Net Cash Position, with accumulated depreciation reflected in the Statement of Net Cash Position. Depreciation is provided over the assets' estimated useful lives using the straight-line method of depreciation. Capitalization thresholds of $500 for equipment and building improvements of $10,000 for infrastructure are used to report capital assets. Estimated useful lives being used are summarized below:

Building and Improvements	19-40 years
Equipment, Furniture and Fixtures	3-15 years

In governmental fund financial statements, capital assets arising from cash transactions acquired for use in governmental fund operations are accounted for as capital outlay expenditures of the governmental fund upon acquisition.

DEFERRED OUTFLOWS/INFLOWS OF RESOURCES

In addition to assets, the statement of net cash position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resource (expense/expenditure) until then. In addition to liabilities, the statement of net cash position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources*, represents an acquisition of net position that applies to a future period(s) and so will *not* be recognized as an inflow of resources (revenue) until that time. The District does not have any items that qualify for reporting in these categories.

LONG-TERM DEBT

All long-term debt arising from cash transactions to be repaid from governmental fund resources is reported as a liability only in the government-wide statements.

Long-term debt arising from cash basis transactions of governmental funds is not reported as liabilities in the fund financial statements. The debt proceeds are reported as other financing sources and the payment of principal and interest are reported as expenditures.

Currently the District does not have long-term debt.

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

Government-Wide Statements

Equity is classified as Net Position and displayed in three components:

a. Restricted Net Position – Consists of Net Position 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.
b. Unrestricted Net Position – All other Net Position that does not meet the definition of "restricted" or "invested in capital assets, net of related debt."

c. Investment in Capital Assets – Consists of capital assets including restricted capital assets, net of accumulated depreciation.

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.

EQUITY CLASSIFICATION

Fund Financial Statements

Governmental fund equity is classified as fund balance.

E. REVENUES, EXPENDITURES AND EXPENSES

PROGRAM REVENUES

In the Statement of Activities Arising from Cash Transactions, modified 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 are reported as general revenue. All taxes are classified as general revenue even if restricted for a specific purpose.

F. USE OF ESTIMATES

The preparation of financial statements in conformity with the other comprehensive basis of accounting (OCBOA) used by the District required management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

G. FUND BALANCE CLASSIFICATIONS

In the fund financial statements, governmental funds report fund balance in classifications that disclose constraints for which amounts in those funds can be spent. These classifications are as follows:

Nonspendable – consists of amounts that are not in spendable form, such as inventory and prepaid items.

Restricted – consists of amounts related to externally imposed constraints established by creditors, grantors or contributors; or constraints imposed by state statutory provisions.

Committed – consists of internally imposed constraints. These constraints are established by the Board of Managers.

Assigned – consists of internally imposed constraints. These constraints reflect specific purpose for which it is the District's intended use. These constraints are established by the Board of Managers and/or management.

Unassigned – is the residual classification for the general fund and also reflects negative residual amounts in other funds.

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.

H. NET POSITION

Net position represents the difference between (a) assets and deferred outflows of resources and (b) liabilities and deferred inflows of resources in the District's financial statements. Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any long-term debt attributable to the acquisition, construction, or improvement of those assets. Restricted net position consists of restricted assets reduced by liabilities and deferred inflows of resources related to those assets. Unrestricted net position is the net amount of assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

NOTE 2 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 3 DETAIL NOTES-TRANSACTION CLASSES/ACCOUNTS

The District maintains a cash account at its depository bank. Investments are carried at fair value. The District considers Certificates of Deposit to be cash.

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 may invest idle funds as authorized in Minnesota Statutes, as follows:

a. Direct obligations or obligations guaranteed by the United States or its agencies.
b. Shares of investment companies registered under the Federal Investment Company Act of 1940 and whose only investments are in securities described in (a) above.
c. General obligations of the State of Minnesota or any of its municipalities.
d. Bankers Acceptance of United States banks eligible for purchases by the Federal Reserve System.
e. Commercial paper issued by United States corporations or their Canadian subsidiaries, of the highest quality, and maturing in 270 days or less.

f. Repurchase or reverse repurchase agreements 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.
g. Futures contracts sold under authority of Minnesota Statutes 471.56, Subd. 5.

The District has no investment policy that would further limit its investment choices.

Concentration of Credit Risk

The District places no limit on the amount the District may invest in any one issuer.

Custodial Credit Risk - Deposits

In accordance with Minnesota Statutes, the District maintains deposits at those depository banks authorized by the District's Board, all of which are members of the Federal Reserve System.

Minnesota Statutes require that all District deposits be protected by insurance, surety bond, or collateral. The market value of collateral pledged must equal 110% of the deposits not covered by insurance or bonds.

At December 31, 2019, the carrying amount of the District's deposits was $7,399,653 and the bank balance was $8,415,311. The bank balance was covered by Federal Depository Insurance and by collateral held by the District's agent in the District's name at December 31, 2019.

Related-Party Investments

As of December 31, 2019, the District held no related-party investments.

NOTE 4 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 modified 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.

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. The accrual rates for former MERF members is 2.0% for each of the first 10 years of service and 2.5% for each additional year. 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. The Red Lake Watershed District makes annual contributions to the pension plans equal to the amount required by state statutes. General Employees Basic Plan members and Coordinated Plan members were required to contribute 9.1 percent and 6.5 percent, respectively, of their annual covered salary in 2019. In 2019, the Red Lake Watershed District was required to contribute the following percentages of annual covered payroll: 11.78 percent for Basic Plan members, 7.5 percent for Coordinated Plan members. The Red Lake Watershed District's contributions to the General Employees Fund for the years ended December 31, 2019, 2018 and 2017 were $36,113, $33,961, and $30,223, 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 CAPITAL ASSETS

Capital assets activity resulting from modified cash basis transactions for the year ended December 31, 2019 was as follows:

	Beginning Balance	Additions	Deletions	Ending Balance
Capital Assets				
Building and Improvements	$ 775,594	$ -	$ -	$ 775,594
Infrastructure Improvements	12,601,966	-	-	12,601,966
Engineering Equipment	400,130	38,233	-	438,363
Office Equipment	179,004	17,341	22,502	173,843
Land and Permanent Easements	3,681,959	45,000	-	3,726,959
Construction in Progress	1,846,971	158,610	-	2,005,581
Total	$ 19,485,624	$ 259,184	$ 22,502	$ 19,722,306

	Beginning Balance	Additions	Deletions	Ending Balance
Accumulated Depreciation				
Building and Improvements	$ 319,310	$ 22,506	$ -	$ 341,816
Infrastructure Improvements	3,361,999	500,144	-	3,862,143
Engineering Equipment	353,789	25,496	-	379,285
Office Equipment	144,367	10,853	20,677	134,543
Total	4,179,465	558,999	20,677	4,717,787
	$ 15,306,159	$ (299,815)	$ 1,825	$ 15,004,519

Depreciation expense of $558,999 for the year ended December 31, 2019 is included in general and administrative program costs.

NOTE 8 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 2019 was $747,993.

NOTE 9 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, 2019, 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.

NOTE 10 CONSTRUCTION COMMITMENTS

The District had approximately $1.7 million in construction commitments for capital projects as of December 31, 2019.

NOTE 11 NEW PRONOUNCEMENTS

GASB Statement No. 87, *Leases*, establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. This Statement requires recognition of certain lease assets and liabilities for leases that were previously classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. This Statement is effective for reporting periods beginning after December 15, 2019. Earlier application is encouraged.

GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*, establishes accounting requirements for interest cost incurred before the end of a construction period. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Earlier application is encouraged.

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, 2020. Earlier application is encouraged.

GASB Statement No. 92, *Omnibus 2020*, provides additional guidance to improve consistency of authoritative literature by addressing practice issues identified during the application of certain GASB statements. This statement provides accounting and financial reporting requirements for specific issues related to leases, intra-entity transfers of assets, postemployment benefits, government acquisitions, risk financing and insurance-related activity of public entity risk pools, fair value measurements and derivative instruments. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Earlier application is encouraged.

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

NOTE 12 SUBSEQUENT EVENTS

No significant events occurred subsequent to the District's year end. Subsequent events have been evaluated through March 4, 2020, which is the date these financial statements were available to be issued.

SUPPLEMENTARY INFORMATION

RED LAKE WATERSHED DISTRICT
BUDGETARY COMPARISON SCHEDULE - GENERAL FUND
FOR THE YEAR ENDED DECEMBER 31, 2019

	Original and Final Budget	Actual 2019	Variance
REVENUES			
Intergovernmental			
State	$ -	$ 1,805	$ 1,805
Miscellaneous	7,000	11,998	4,998
Allocated Interest	-	11,221	11,221
Total Revenues	7,000	25,024	18,024
EXPENDITURES			
General and Administrative	127,388	108,748	(18,640)
Interest	-	6,964	6,964
Total Expenditures	127,388	115,712	(11,676)
Expenditures Exceed Revenues	(120,388)	(90,688)	29,700
FUND BALANCE JANUARY 1	242,810	242,810	
FUND BALANCE DECEMBER 31	$ 122,422	$ 152,122	

See Note to the Budgetary Comparison Schedule

RED LAKE WATERSHED DISTRICT
NOTE TO THE BUDGETARY COMPARISON SCHEDULE
FOR THE YEAR ENDED DECEMBER 31, 2019

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 2019 at $7,000. All appropriations lapse at year-end.

RED LAKE WATERSHED DISTRICT
STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE – ALL FUNDS – MODIFIED CASH BASIS
FOR THE YEAR ENDED DECEMBER 31, 2019

		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	$ 242,810	$ 11,998	$ 1,805	$ 11,221	$ -	$ 856,742	$ 6,963	$ (747,993)	$ -	$ 152,122
SPECIAL REVENUE FUND JOBS:										
Red Lake River Project	57,874	5,661	-	1,113	-	-	-	655	-	63,993
Clearwater River Project	20,601	12,032	-	512	-	300	-	319	-	32,526
Lost River Project	6,833	3,712	-	174	-	-	-	200	-	10,519
RLWD Ditch #1	3,318	723	-	17	-	3,025	-	1,563	-	(530)
RLWD Ditch #3	3,113	1,227	-	22	-	3,981	-	967	-	(586)
State Ditch #83	19,191	28,976	16,000	576	-	3,016	-	1,411	-	60,316
RLWD Ditch #7	3,875	8,419	-	37	-	7,430	-	1,963	-	2,938
Pine Lake Maintenance	(3,237)	4,192	-	-	-	35	76	5,360	-	(4,516)
RLWD Ditch #8	3,028	906	-	51	-	840	-	167	-	2,978
RLWD Ditch #9	(178)	115	-	-	-	75	5	518	-	(661)
J.D. Ditch #72	(33,881)	43,218	-	-	-	4,254	(110)	1,842	-	3,351
Clearwater/Wild Rice River	6,869	142	-	117	-	-	-	499	-	6,629
Branch A & 1, J.D. #2	1,519	3,351	-	55	-	-	-	656	-	4,269
Main J.D. #2 and Branch B&C	3,864	3,864	-	60	-	5,004	-	2,041	-	743
Main J.D. 2C. Eck	1,637	2,370	-	37	-	720	-	147	-	3,177
Krostue Petition	(7,287)	2,717	-	-	-	1,920	120	281	-	(6,891)
Clearwater County Joint Ditch #4	1,803	2,305	-	57	-	-	-	170	-	3,995
Clearwater County Joint Ditch #5	(8,616)	3,349	-	-	-	4,648	177	1,096	-	(11,188)
Clearwater County Ditch #1	354	2,352	-	18	-	-	-	930	-	1,794
Clifford Arveson Ditch	6,256	556	-	63	-	4,000	-	622	-	2,253
Winsor/Hangaard/Clearwater County Petition	13,192	5,951	-	218	-	7,489	-	566	-	11,306
Equality RLWD Ditch #1, lat C	(2,069)	2,001	-	-	-	2,370	57	568	-	(3,063)
K. Johnson Petition	1,916	2,266	-	31	-	1,201	-	950	-	2,062
Polk County Ditch #'s 104, 61, 47, 94	(3,053)	6,887	-	-	-	7,403	58	2,984	-	(6,611)
TRF Drainage Ditch (Challenger Ditch)	552	111	-	-	-	930	18	1,081	-	(1,366)
Scott Baatz Petition	543	1,187	-	13	-	716	-	355	-	672
Polk County Ditch #63 Improvement	1,330	20,233	-	53	-	3,852	-	764	-	17,000
Polk County Ditch #33 Improvement	231	8,255	-	3	-	3,825	-	1,258	-	3,406
RLWD Ditch #10	3,299	6,625	-	57	-	2,582	-	3,652	-	3,747
RLWD Ditch #11	23,776	821	-	374	-	5,360	-	4,244	-	15,367
RLWD Ditch #12	4,099	9,838	-	24	-	16,174	-	4,492	-	(6,705)
RLWD Ditch #14	(4,387)	6,184	-	-	-	3,504	111	3,448	-	(5,266)
RLWD Ditch #15	73,537	3,684	-	1,234	-	14,404	-	1,936	-	62,115
Burnham Creek Channel	19,642	2,209	-	290	-	12,501	-	2,208	-	7,432
RLWD Ditch #13	2,167	515	-	16	-	1,659	-	1,592	-	(553)
Thief River Falls Flood Damage Reduction Project	3,416	465	-	38	-	1,119	-	1,650	-	1,150
RLWD Ditch #16	(69,997)	2,300,000	-	22,211	-	204,061	-	18,728	-	2,029,425
Improv to Polk Co. #39	(25,832)	27	-	-	-	26,127	862	10,361	-	(63,155)
TOTAL SPECIAL REVENUE	129,298	2,507,446	16,000	27,471	-	354,525	1,374	82,244	-	2,242,072

RED LAKE WATERSHED DISTRICT
STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE – ALL FUNDS – MODIFIED CASH BASIS – CONTINUED
FOR THE YEAR ENDED DECEMBER 31, 2019

		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:										
Moose River Project	$ -	$ -	$ -	$ -	$ -	$ 13,141	$ 200	$ 9,192	$ 22,533	$ -
Baird Beyer Dam	-	-	-	-	-	-	-	84	84	-
Lost River Impoundment	-	-	-	-	-	-	2	286	288	-
Stream Gauging	-	-	-	-	-	12,974	524	34,604	48,102	-
Culvert Sizing	-	-	-	-	-	-	69	7,187	7,256	-
Schirrick Dam	-	-	-	-	-	6,738	145	9,799	16,682	-
Pine Lake PWT	(351,879)	-	2,592	-	-	24,009	6,789	10,770	-	(390,855)
Little Pine Lake WMA	-	-	-	-	-	480	8	483	971	-
Hydrologic Analysis	-	-	-	-	-	420	272	33,422	34,114	-
Benchmarks	-	-	-	-	-	-	6	812	818	-
Emergency Maintenance	112,230	-	-	2,050	-	-	-	-	-	114,280
RRWMB - Technical Com	-	189	571	-	-	1,164	207	17,532	18,143	-
Water Quality	-	-	-	-	-	52,805	1,536	122,472	176,813	-
Maintenance Dams	-	-	-	-	-	-	23	3,018	3,041	-
Odney Flaat Dam	-	-	-	-	-	-	3	505	508	-
Latundresse Dam	-	-	-	-	-	-	-	31	31	-
Miller Dam	-	-	-	-	-	-	1	61	62	-
Seeger Dam	-	-	-	-	-	-	-	162	162	-
Blackduck Lake Structure	-	-	-	-	-	1,568	37	880	2,485	-
Elm Lake	-	-	-	-	-	211	12	1,155	1,378	-
Klongerbo Lake Project	-	-	-	-	-	-	-	184	184	-
Red Lake Res./Good Lake	-	-	-	-	-	-	-	86	86	-
Parnell Impoundment	-	4,244	-	-	-	20,113	311	11,041	27,221	-
Permits	-	-	-	-	-	8,752	909	110,082	119,743	-
Project Development	-	-	-	-	-	5,015	759	27,293	33,067	-
Louisville/Parnell Project	-	11,847	-	74	-	2,327	-	237	(9,357)	-
Challenger Ditch Realign	-	-	-	-	-	537	28	1,258	1,823	-
Ring Dike Program - General	-	-	-	-	-	-	34	3,841	994	(2,881)
Ring Dike Program - Shaumburg	-	1,006	-	-	-	4,423	11	653	-	(4,081)
Ring Dike Program - Threat	-	-	-	-	-	6,632	29	200	-	(6,861)
G.I.S.	-	-	-	-	-	1,135	261	29,257	30,653	-
Wetland Banking	-	3,500	-	-	-	447	18	2,150	(885)	-
Ten Year Overall Plan	337,858	-	-	5,609	-	80,993	-	12,652	-	249,822
Thief River 1W1P	(19,630)	-	-	-	-	41,184	1,039	18,033	-	(79,886)
PTMAPP Grant	(28,849)	-	-	-	-	17,727	753	2,628	-	(49,957)
North Parnell Storage Site	-	-	-	-	-	920	17	156	1,093	-
Clearwater River - TMDL	-	-	-	-	-	-	4	1,304	1,308	-
Red River Corridor	-	-	-	-	-	91	7	329	427	-
Erosion Control Projects	-	-	72,416	1,064	-	20,037	-	3,090	(50,353)	-
WS Ditch System Inventory & Mapping	-	-	-	-	-	-	1	57	58	-
Drainage- Inv & Insp	(21,081)	-	3,870	-	-	4,000	477	8,305	29,993	-
FEMA D-Firm Grant	-	-	-	-	-	-	1	109	110	-

RED LAKE WATERSHED DISTRICT
STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE – ALL FUNDS–
MODIFIED CASH BASIS – CONTINUED
FOR THE YEAR ENDED DECEMBER 31, 2019

		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
Black River Impoundment	$ (686,012)	$ 28,575	$ 10,077	$ -	$ -	$ 150,029	$ 13,958	$ 9,437	$ -	$ (820,784)
Web Page Development	(1,457)	-	1,456	-	-	1,493	29	2,209	2,230	(1,502)
Administrative Construction	7,413,114	-	86,268	152,610	2,005,618	-	-	-	(813,788)	8,843,822
Burnham Creek - BR6	-	-	-	-	-	859	48	5,540	6,447	-
Burnham Creek - Erosion Control	-	-	-	-	-	-	2	164	166	-
Burnham Creek - Fish Habitat	-	-	-	-	-	-	4	273	277	-
Euclid East Impoundment	-	1,293	-	-	-	14,927	228	9,375	23,237	-
Brandt Impoundment	-	102	-	-	-	5,666	154	14,350	20,068	-
Brandt Channel Restoration	-	-	-	-	-	9,239	83	428	9,750	-
Grand Marais - Restoration	-	-	-	-	-	8,105	104	6,555	14,764	-
Grand Marais Cut Channel Stabilization	-	-	-	-	-	1,542	22	1,017	2,581	-
Clearwater Public Education (River Watch)	-	-	-	-	-	5,932	327	28,963	35,222	-
Red River Basin Long Term Flood Control	(1,810,414)	-	-	-	-	680	33,095	2,405	-	(1,846,594)
Four Legged Lake PWT	(165,917)	-	-	-	-	259	3,039	537	169,752	-
BWSR Flood Storage Pilot Project	-	-	-	-	-	2,081	46	1,415	3,542	-
Thief River TMDL	-	-	-	-	-	-	30	2,098	2,128	-
Red Lake River Watershed Assessment	(6,056)	-	8,037	-	-	-	33	4,024	2,076	-
Grand Marais WRAP	(1,045)	-	1,010	-	-	-	24	1,241	1,300	-
Clearwater River WRAP	(7,040)	-	24,043	-	-	600	253	38,386	-	(22,236)
TRF Westside FDR	(370,309)	-	324,235	-	-	868,810	10,856	46,008	-	(971,748)
State/Local/Federal Grants	-	-	-	-	-	-	10	602	612	-
Agassiz NWR Wetland	(25,770)	-	24,959	-	-	-	171	2,709	-	(3,691)
Agassiz Grant SILT	-	-	1,243	-	-	-	19	2,613	-	(1,389)
Total Capital Projects	4,367,743	50,756	560,777	161,407	2,005,618	1,398,065	77,028	665,749	-	5,005,459
Total All Funds	$ 4,739,851	$ 2,570,200	$ 578,582	$ 200,099	$ 2,005,618	$ 2,609,332	$ 85,365	$ -	$ -	$ 7,399,653

RED LAKE WATERSHED DISTRICT
STATEMENT OF DIRECT EXPENDITURES BY CLASSIFICATION –
GOVERNMENTAL FUNDS - MODIFIED CASH BASIS
FOR THE YEAR ENDED DECEMBER 31, 2019

DIRECT EXPENDITURES:	2019
Salaries -	
Inspection	$ 25,493
Survey - Preliminary	463
Survey - Construction	225
Drafting	17,861
Engineering	54,905
Project Administration	291,651
Field Work - Water Programs	44,641
Other	39,503
Compensated Absences	55,409
Payroll Taxes and Benefits	104,587
Manager's Expense	30,398
Travel, Mileage, Meetings and Per Diems	7,875
Audit	9,000
Legal	44,470
Appraisal and Viewers	22,665
Other Professional Fees	161,780
Office Supplies	19,842
Office Equipment	17,342
Dues and Subscriptions	9,794
Insurance and Bonds	25,773
Repairs and Maintenance	12,564
Utilities	9,731
Telephone	10,684
Advertising and Publications	8,618
Truck Expense	16,264
Land Acquisition and Easements	45,000
Construction	489,758
Engineering Costs and Fees	12,735
Engineering Fees	982,068
Engineering Equipment	38,233
Total Expenditures	$ 2,609,332

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 modified 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, 2019 and the related notes to the financial statements, and have issued our report thereon dated March 4, 2020.

Legal Compliance

The *Minnesota Legal Compliance Audit Guide for Other Political Subdivisions*, promulgated by the State Auditor Pursuant to Minn. § Stat. 6.65 contains six categories of compliance to be tested: contracting and bidding, deposits and investments, conflicts of interest, claims and disbursements, miscellaneous provisions, and tax increment financing. Our study included all of the listed categories, except for tax increment financing.

In connection with our audit, nothing came to our attention that caused us to believe that Red Lake Watershed District failed to comply with the provisions of the *Minnesota Legal Compliance Audit Guide for Other Political Subdivisions*, except as described in the schedule of findings and responses as item 2019-002. 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.

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

March 4, 2020

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 modified 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, 2019, 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 March 4, 2020.

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) to determine the 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 2019-001 that we consider to be a significant deficiency.

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 determination of financial statement amounts. 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

Red Lake Watershed District's response to the finding identified in our audit is described in the accompanying schedule of findings and responses. The District's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Purpose of this Report

This 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

March 4, 2020

RED LAKE WATERSHED DISTRICT
SCHEDULE OF FINDINGS AND RESPONSES
FOR THE YEAR ENDED DECEMBER 31, 2019

2019-001 Finding – Significant Deficiency

Criteria

An appropriate system of internal controls requires that a District make a determination that financial statements and the underlying general ledger accounts are properly stated on the modified cash basis of accounting. This requires the District's personnel to maintain a working knowledge of current accounting principles generally accepted in the United States of America and required financial statement disclosures.

Condition

The District's auditors prepared the financial statements as of December 31, 2019. An appropriate system of internal controls requires that a District must make a determination that financial statements and the underlying general ledger accounts are properly stated on the modified cash basis of accounting. This requires the District's personnel to maintain a working knowledge of current modified cash basis accounting principles and required financial statement disclosures.

Cause

The District could put together the financial statements on the modified cash basis of accounting; however, they have requested assistance in ensuring all required disclosures are properly included and changes made by GASB are implemented.

Effect

The District requested that the auditors prepare the financial statements.

Recommendation

Compensating controls could be provided through client preparation of the financial statement preparation and/or review function.

Views of Responsible Officials and Planned Corrective Actions

The District will continue to have the auditor prepare the financial statements; however, the District has established an internal control policy to document the annual review of the financial statements.

2019-002 Finding – Legal Compliance Finding

Criteria

Minnesota Statute 16C.285 requires the District to obtain a verification of compliance signed under oath by an officer verifying compliance with each of the minimum criteria in subdivision 3 for construction contracts in excess of $50,000.

Condition

The District did not obtain a verification of compliance document from one contractor.

Cause

Oversight by the District staff.

Effect

The District was not in compliance with Minnesota statutes.

Recommendation

The District should obtain a verification of compliance for all contractors over $50,000.

Views of Responsible Officials and Planned Corrective Actions

The District agrees with the recommendation and will correct immediately.

RED LAKE WATERSHED DISTRICT
CORRECTIVE ACTION PLAN
DECEMBER 31, 2019

2019-001 Finding

Contact Person – Myron Jesme, Administrator

Corrective Action Plan – Will obtain internal expertise to handle all aspects of external financial when it becomes economically feasible.

Completion Date – Ongoing

2019-002 Finding

Contact Person – Myron Jesme, Administrator

Corrective Action Plan – The District will obtain a verification of compliance for all contractors over $50,000.

Completion Date – Immediately