Red Lake Watershed District Annual Report 2017

Small cover picture: Erskine Memorial Park

Large cover picture: Pine Lake Outlet Structure

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 who enjoy winter activities, the winter of 2016 and 2017 is one that may have tested your patience. It appeared with early snow and cool temperature in late October 2016 we would have an early winter. But as northern Minnesota often does, it threw us a curve ball in that we never saw any considerable winter weather until late December. January thru March were very uneventful in terms of snow fall or precipitation but changed slightly in April with total rain and snow fall totaling 1.31 inches. May started out very mild which allowed farmers to plant their early crops in a relatively timely manner. June started out very rocky in that we received 4.61 inches of rain over 12 rainfall events which delayed the soybean planting. July and August, we witnessed below normal precipitation which caused some concerns in the farming community. It seemed when we thought we should pray for rain, September came and proceeded to dump 5.35 inches of rain as we were completing our small grain harvest. According to our rainfall records in the Red Lake Watershed District office, a total of 15.95 inches of rain fell April thru October which overall turned into a very favorable summer.

I would like to start my next topic by saying that on behalf of the Red Lake Watershed District, we would like to welcome back Manager Leroy Ose, Marshall County representative, who was re-appointed to serve another three-year term. The staff and remaining Board members look forward in continuing to assist Leroy in serving Marshall County. I must also regretfully announce that Lee Coe, a resident of rural Tenstrike and representative of Beltrami County, chose not to seek reappointment after his term expired in January of 2017. Lee served on the citizens of Beltrami County admirably for 12 years and was a very strong member of the Red Lake Watershed District Board. During his tenure as a RLWD Board member, he also served as the Chair of the Minnesota Association of Watershed Districts, as well as various committees within the RLWD Board structure. In their replacement of Lee, the Beltrami County Board appointed a very familiar face to those in the water resource world by appointing Brian Dwight, Waskish, MN to our Board. Brian brings more than 30 years of experience in working with Watershed Districts and Soil Conservation Districts alike in project development and grant approvals. Brian will be a great addition to the Red Lake Watershed District team.

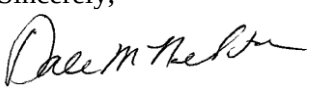
In closing, I would like to remind the citizens that the goals of a watershed district are to manage water in the areas of flood control, drainage, and water quality. We continue to hold our meetings on the second and fourth Thursday of each month and welcome public interests and/or attendance at these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

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 2017 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 .

Once again, it was a pleasure to serve as President of the Board in 2017.

Sincerely,

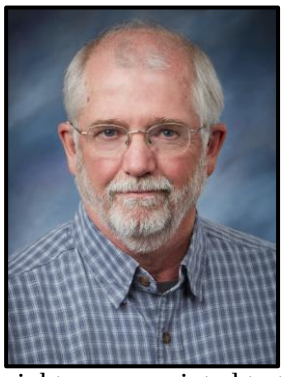


Dale M. Nelson, President

Board of Managers – 2017

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.

LeRoy Ose was re-appointed to the RLWD Board of Managers to serve a 3-year term. LeRoy will represent Marshall County for the years 2017-2019.



Brian Dwight was appointed to the RLWD Board of Managers for a 3-year term. Brian will represent Beltrami County for the years 2017-2019.

Lee Coe

After serving on the RLWD Board representing Beltrami County for 12 years, Lee Coe did not seek re-appointment. Lee represented the District on the Minnesota Association of Watershed District Board. Lee and his wife, Dottie, currently reside rural Tenstrike.

Staff -2017

Front Row *(left to right):* Tammy Audette-Office Manager; Marisa Newton-Summer Intern; Ashley Hitt-Natural Resources Technician; Arlene Novak-Accounting Officer/Office & Admin. Spec. Prin.
Back Row *(left to right):* Corey Hanson-Water Quality Coordinator; Nick Olson-Ditch Inspector/Technician II; Loren Sanderson-Engineering Specialist; and Myron Jesme-Administrator.

Left to right: Brady Stanley-Ditch Inspector/Techncian II and Christina Slowinski-Ditch Inspector/Techncian II joined the District staff in 2017.

Office

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

Meetings

The Board of Managers held twenty-four regularly scheduled board meetings in 2017. These regular meetings are normally held the 2nd and 4th Thursday of each month at the District office at 9:00 a.m. One additional meeting was held to allow the Board to participate in the Red Lake Watershed District Advisory Committee meeting. 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. The 2017 General Fund budget was set at $164,600. The Board voted at the July 28, 2016 Board meeting, to not levy the counties in 2017, instead using the reserves in the General Fund. The 2017 General Fund Budget hearing was held on August 25, 2016. Notice for the General Fund Budget hearing was published in at least one newspaper in each of the 10 counties within the District.

2017 Overall Advisory Committee

John A. Nelson, Walker Brook Area
Lloyd Wiseth, Marshall/Beltrami SWCD
Emmitt Weidenborner, Upper Red Lake Area
John Ungerecht, Upper Red Lake Area
John Gunvalson, Clearwater River Area
Steve Holte, Thief River Area
Dan Schmitz, Black River Area
Roger Love, Grand Marais Area
Dave Rodahl, Thief River Area
Shane Bowe, Red Lake Band of Chippewa Indians

2017 Subwatershed Advisory Committee Members

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

Thief River Area
*Dave Rodahl, TRF
Trent Stanley, Grygla
*Steve Holte, Grygla
Jim Sparby, Grygla

Walker Brook Area
*John A. Nelson, Clearbrook

Poplar River Area

Moose River
Wayne Larson, Middle River
Elroy Aune, Gatzke

Clearwater River Area
Steve Linder, Oklee
*John Gunvalson, Gonvick

Pine Lake Area
Dave Dalager, Gonvick

Grand Marais/Red Area
Jeep Mattson, EGF

Clearwater Lake Area

Upper Red Lake Area
*Emmitt Weidneborner, Kelliher
*John Ungerecht, Northome
Wayne Skoe, Northome

Lost River Area
Gary Mathis, Gonvick

Red Lake River Area
Keith Driscoll, EGF

Hill River Area
Jake Martell, Oklee

Burnham Creek Area
Mary Ann Simmons, Crookston

*Overall Advisory Committee Members

Members of the Overall Advisory and the Subwatershed Advisory Committees met on March 20, 2017. Fourteen advisory members, 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 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; 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.

2017 District Projects

Four-Legged Lake Watershed (RLWD Projects #102 & #102A)

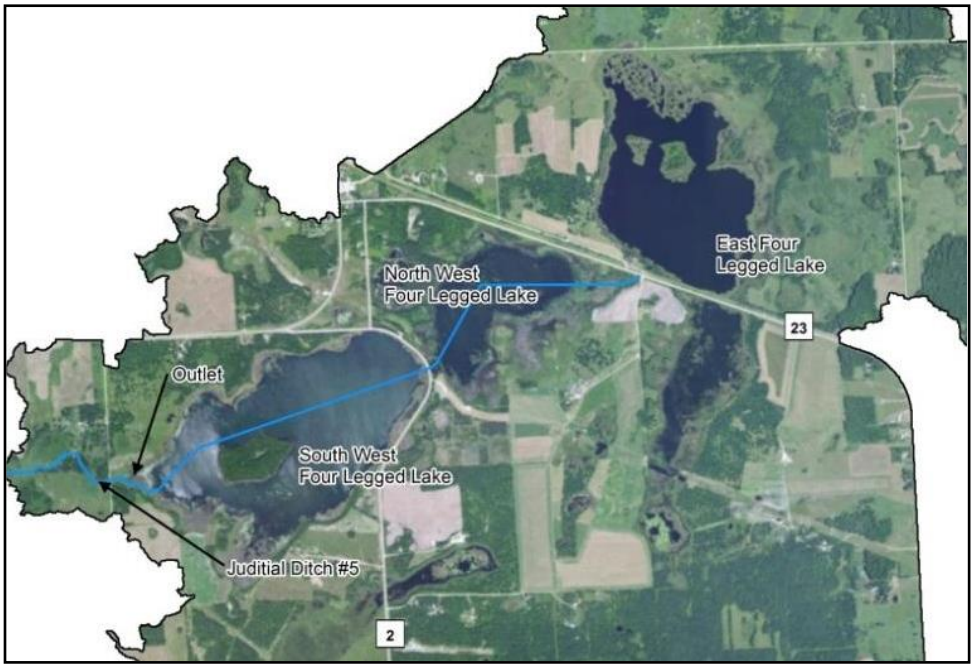
Four-Legged Lake is located in northwestern Minnesota within Clearwater County, near the town of Leonard. The chain of lakes is part of the RLWD Judicial Ditch #5 system which was established in 1921. Over the years, most recently in 1999, the downstream basin's outlet culvert had been raised without permission or legal actions from the drainage authority. 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 that a proper elevation should be set on the lakes to assure future flooding would not occur to the public roadways and upstream landowners in the event of large runoff events. As a result of the meeting and the fact that the only available ditch records were an original viewers report and an old blue line set of plans from the early 1920's, it was determined by the RLWD Board of Managers that updated information had to be developed to better identify the alternatives before proceeding.

Informational landowner meetings were held on May 8, 2014 and May 14, 2015. 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 satisfy 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 at such time more information could be made available to the public.

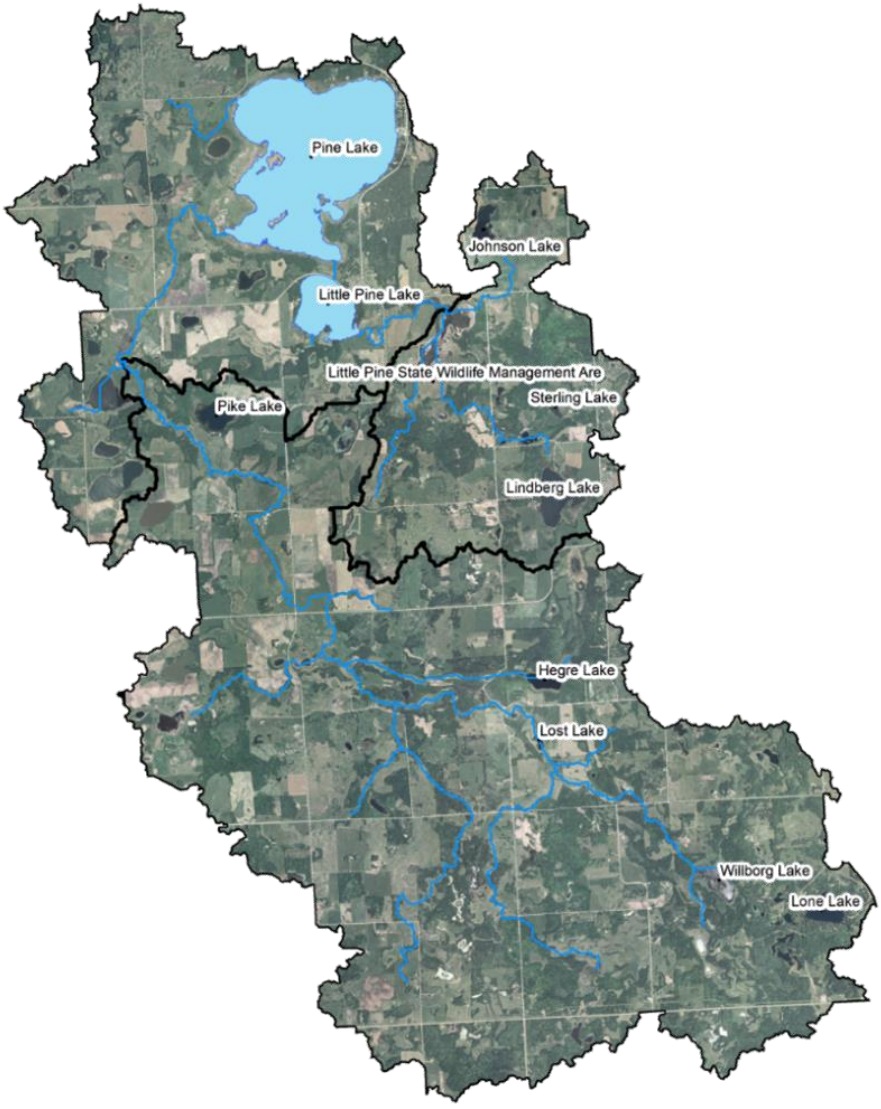
On February 10, 2016 the District entered into an agreement with the Natural Resource Conservation Service (NRCS) to complete a comprehensive watershed plan using the Regional Conservation Partnership Program (RCPP). This program encourages partners to join in efforts with producers to increase the restoration 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 hopes to complete the required steps of the 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 area are addressed.



Pine Lake Watershed (RLWD Projects #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. The consultant was hired 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 may 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.

Various landowner meetings held in 2014 and 2015 revealed local interest in examining areas upstream of Pine Lake to determine if any Flood Damage Reduction (FDR) projects could be developed. In response to this interest, the District successfully applied for a Natural Resource Conservation Service PL566 grant. The grant funded a comprehensive study to guide the development of projects that will reduce flood damages in the Pine Lake Watershed and downstream waters.



On January 11, 2016 the District entered into an agreement with the NRCS to complete a comprehensive watershed plan using the 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 hopes to complete the required steps of the 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.

Petition to Establish RLWD Ditch #16 (RLWD Project #177)

At the regularly scheduled Board meeting on July 27, 2017, 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. It is the hope of the District that the preliminary hearing will be held late spring/early summer 2018.

Petition to Improve Polk County Ditch #39 (RLWD Project #179)

On October 26, 2017, at our regularly scheduled Board meeting, a petition was presented to improve an established drainage system referred to as Polk County Ditch #39 was submitted. 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. It is the hope of the District that the preliminary hearing will be held late spring/early summer 2018.

Erosion Control (RLWD Project #164)

This project category was established in 2004 and is used on a yearly basis to fund various erosion control projects which are usually initiated by projects developed by local Soil and Water Conservation Districts (SWCD). In 2017, there were various project funding requests by SWCDs, but this year we would like to highlight a project referred to as Memorial Park Erskine.

City of Erskine Veteran's Memorial Park

The District cost shared with the East Polk SWCD, the City of Erskine, and the local American Legion Club to repair an existing levee located on the east side of Cameron Lake. The levee is approximately 500 feet in length, was constructed in 1977, and protects a public swimming area. In recent years, the levee top has been transformed into a veteran's memorial walkway, which includes flag poles, along with granite stones, and benches with the names of fallen soldiers.

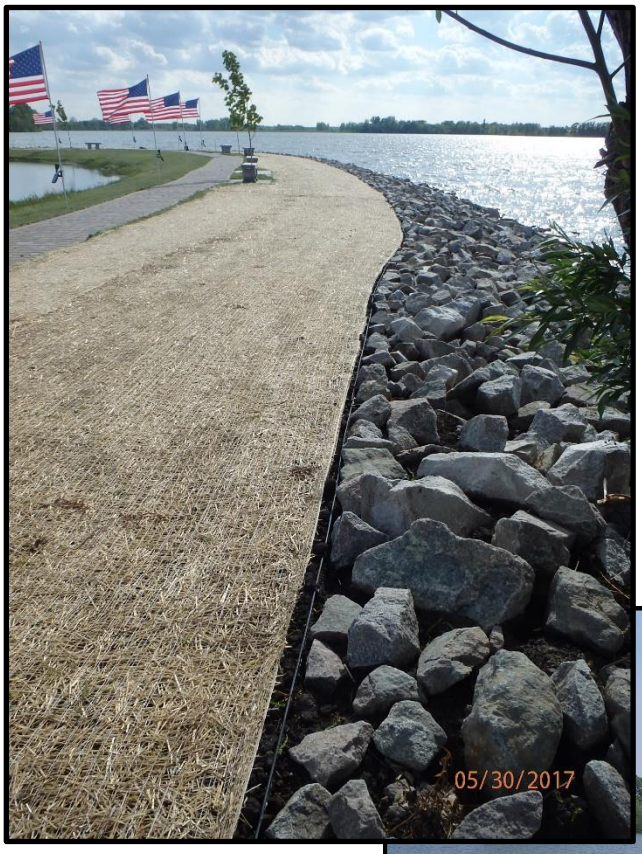
The 'lake side' of the levee has eroded over time and the rock rip rap had also 'slumped' from the original design. The repair mainly consisted of salvaging existing rip rap, adding clay fill to restore the eroded slope, and also placed additional quarry fractured rip rap on the slope. Special care had to be taken by the contractor to make sure the existing walkway area was not damaged. Davidson Construction of Middle River, MN, was the contractor for the project with an estimated total construction cost of $78,500.00

On June 8, 2017 at 9:30 am, final hearing was held for Davidson Construction of Middle River, MN in the amount of $17,310.00. Hearing no objection from the public, the Board by unanimous decision ordered the final payment be made for the project. Total construction cost for the project totaled $79,635.00 which included, $20,000 from City of Erskine, $12,500 dollars from East Polk Soil Conservation Service, $5,000 from the Erskine American Legion and the remaining balance of $42,135 being paid by the Red Lake Watershed District.

Pre – construction Levee

Fall Construction

Completed Project



Blackduck Lake Dam Modifications (RLWD Project #50E)

Blackduck Lake Dam serves as the outlet of Blackduck Lake which is the headwater of the Blackduck River. The dam is in Hines Township, in Beltrami County, and through Legislative action in the 1970's Hines Township acquired ownership.

The Red Lake Watershed District entered into an agreement with Hines Township to help modify the deterorating original structure. Constructed in 1938, the concrete bridge had a stop-log structure on the upstream side which regulated the statute run-out elevation of the lake. Over time, the stop-log structure had been damaged by ice formation & flows causing seperation and allowing water to pass underneath the stop-logs. The structure also acted as a barrier to aquatic species during most flows.

The modification project replaced the stop-log structure with a sheet pile weir structure on the upstream side of the bridge at the run-out elevation that was required by statute rock-arch rapids structures were constructed on the downstream side of the bridge to facilitate fish passage up to and through the new weir.

Houston Engineering of Thief river Falls, MN performed the design analysis and prepared the plans and specifications for the project.

New sheet pile weir structure on upstream (lake side) of bridge

Rock - arch rapids looking upstream towards the lake

Rock – arch rapids – Looking downstream

Final grading of approach to bridge.
All disturbed areas were seeded and mulched

Polk County Ditch 63 Improvement (RLWD Project #134)

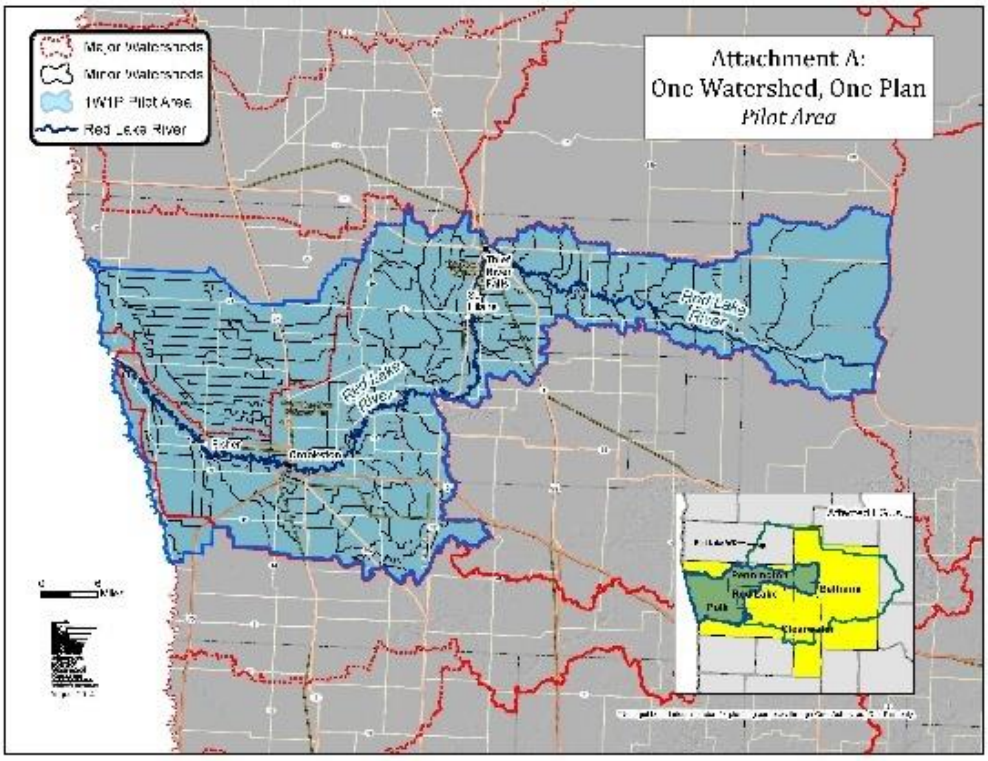
In 2015, during routine ditch inspection, District staff noticed head cutting occurring near the outlet of Polk County Ditch 63. During discussion with the District Board of Managers, it was determined to seek Clean Water Funds to assist with the repair. In 2016, the West Polk SWCD informed the District that funding was denied under the Clean Water Fund application but were there were other grant options that may work.

In December of 2016, West Polk SWCD informed that District Board of Managers that they were approved for a Clean Water Legacy Fiscal Year 2017 Project and Practices Grant through the Board of Water and Soil Resources (BWSR) for repairs to the outlet of Polk County Ditch 63, RLWD Project No. 134.

September 14, 2017 the District Board of Managers approved a 25% cost share of the grant and to proceed with the final engineer's report. On October 12, 2017, District Board of Managers approved the engineers report in the amount of $97,658 and ordered staff to proceed with the solicitation of quotes for the project. On October 26, 2017, the District awarded the low quote from RJ Zavoral & Sons in the amount of $67,435.00. Construction was substantially completed and will be finalized in spring of 2018.

Red Lake River 1W1P (RLWD Project #149)

Minnesota has a long history of water management by local government. One Watershed, One Plan is rooted in this history and in work initiated by the Local Government Water Round Table (Association of Minnesota Counties, Minnesota Association of Watershed Districts, and Minnesota Association of Soil and Water Conservation Districts) in 2011 which 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.

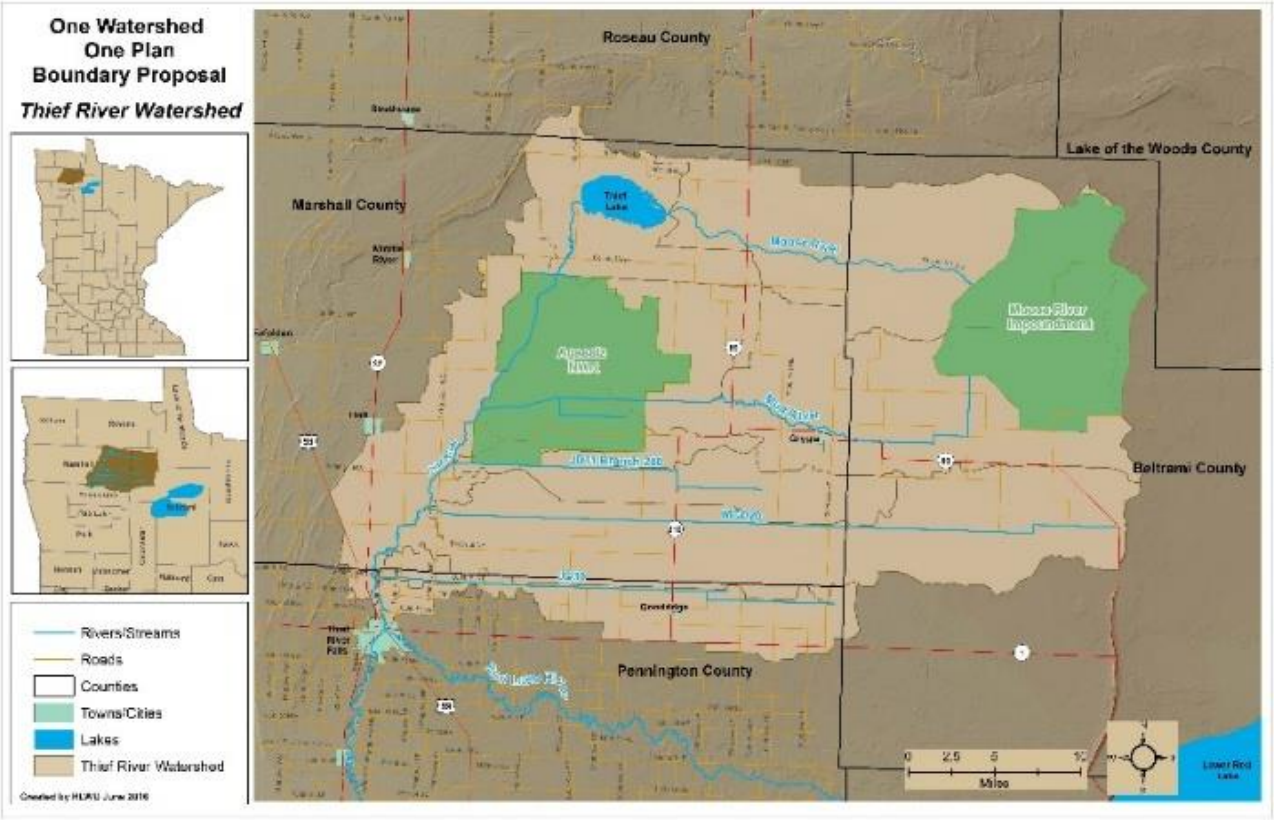


Early 2014 the Red Lake Watershed District, Pennington, Red Lake and West Polk Soil Conservation Districts, along with their respective Counties, partnered to apply for a grant through the Board of Water Resource One Watershed One Plan Pilot Project, to establish a Comprehensive Water Management Plan for the Red Lake River Watershed. The grant was one of five pilot projects that was 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. It is the hope of the District and its partners, that in early 2018 we will develop and get completed, a Work Plan which will allow us to start implementing projects throughout the Red Lake River Watershed.

Thief River 1W1P (RLWD Project #149A)

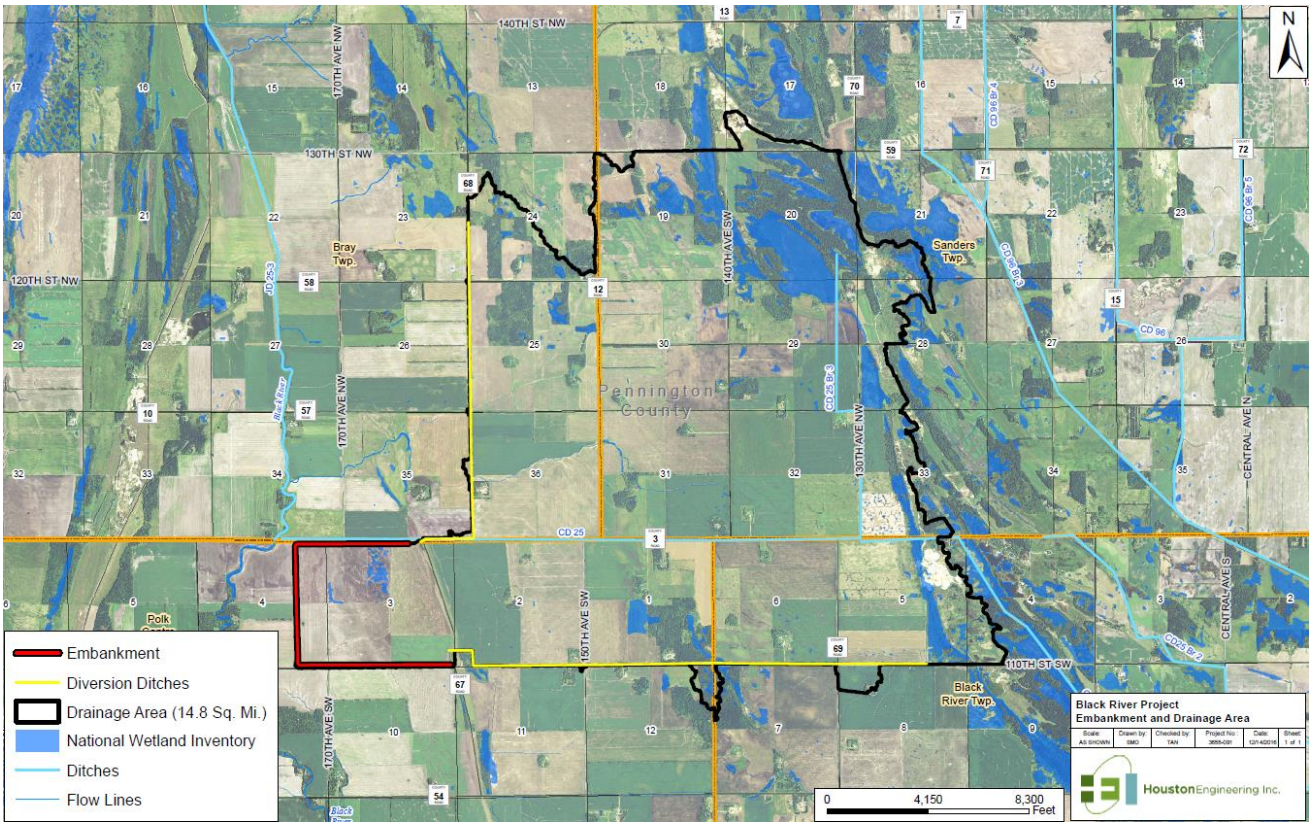
In June of 2016, the Red Lake Watershed District, Pennington, Marshall and Beltrami Soil Conservation Districts and their respective counties applied for and was approved to receive a One Watershed One Plan grant from the Board of Water and Soil Resources, to establish a Comprehensive Water Management Plan for the Thief River Watershed. This plan will be developed through 2018.



Black River Impoundment (RLWD Project #176)

November 10, 2016, the Board of Managers initiated the Black River Impoundment Project (RLWD #176). 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 District 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 a Step I submittal was presented to the Red River Watershed Management Board with the Step II submittal for funding presented to their board October 17, 2017.

In 2018, the District will continue with the development of the project, as well as try to secure State funding for construction.



Flood Control Impoundments

The 2017 spring melt and runoff was the 6th consecutive year with no significant flooding in the basin. By late February the landscape was nearly void of snow cover and many ditches and culverts were beginning to open and pass flows. The remainder of the year was relatively dry. Rainfall events were not large enough to generate significant runoff to require flood water storage.

Impoundments operated by the District are quite diverse. 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).

Typical 2017 Low water levels – well below the crest, of the 'normal pool level' control weir(s)

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 basically drained dry after stored flood waters are released. Other impoundments are operated with a small permanent pool throughout the year.

Operation and maintenance varies, depending on the specific project. Some are operated solely by the District, and others are cooperatively operated with the Red Lake Band of Chippewa Indians, Minnesota Department of Natural Resources, U.S. Fish and Wildlife Service, Natural Resource Conservation Service, and/or local Soil and Water Conservation Districts.

Routine inspections are performed, and the conditions 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.

The following pages describe some of the larger impoundment facilities that have gated and/or stop-log control flexibility.

Gated / Stop-log Type Structures

Projects with 'adjustable flood gates and/or stop-logs' have more flexibility for storing 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 #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 can store runoff and reduce 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 can also reduce peak discharges on 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 & approx. 12 feet at highest point), a grass lined emergency spillway, 2.4 miles of inlet channels and culvert works, 0.8 mile of outlet channel, and a gated concrete outlet structure. The operable component is a 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)
April 21, 2011 was recorded as the highest pool elevation at 903.10		

OPERATIONAL: 2007

District staff and a local gate tender performed occasional gate operation and short-term storage throughout 2017. This operation and storage was mainly as a precautionary measure in advance of predicted severe storms.


Principal Outlet Structure

Brandt Impoundment (RLWD Project #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 District and HDR Engineering of Thief River Falls jointly performed construction surveying and inspection duties. 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 will store runoff and reduce 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 will also reduce peak discharges on the downstream "Brandt Channel," RLWD Ditch 15 and legal 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.

The operable component is 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.

Principal Outlet Structure

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)
July 4, 2010 was recorded as the highest pool elevation at 912.5		

OPERATIONAL: 2008

District staff & local gate tender performed occasional gate operation and short-term storage throughout 2017. This operation and storage was mainly as a precautionary measure in advance of predicted severe storms.

Parnell Impoundment (RLWD Project #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 will enhance 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 2 – 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

The 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)
March 25, 2009 was recorded as the highest pool elevation at 939.75		

OPERATIONAL: 1999

District staff & local gate tender performed occasional gate operation and short-term storage throughout 2017. This operation and storage was mainly as a precautionary measure in advance of predicted severe storms.

Pine Lake (RLWD Project #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 designed to provide the public with flood control and wildlife benefits. The Gonvick Lions Club has donated hundreds of man-hours and, when necessary, members operate the aeration system and install/maintain 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 2–four-foot-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. Based primarily on lake elevation, stop-logs may be removed from the dam to allow additional outflow until the lake recedes. 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.

Typical fall drawdown with stop-logs

2017

The local Sportsman's Club operated the aeration system from February 7th to March 24th. Lake "ice out" occurred on about April 3rd, and on April 6th stop-logs were installed to the typical summer elevation of 1283.5. There was very little snow melt runoff or rainfall in the spring of 2017. Pine Lake crested at elevation 1283.9 in early April and in late June. Due to relatively dry conditions throughout the year, no stop-log operation was required until the normal fall drawdown. In early October, one half of the stop-logs were removed to begin the drawdown, and the remaining stop-logs were removed on October 18th. On November 29th two stop-logs were installed in each of the two stop-log bays to elevation 1282.5. This installation must be done by December 1st of every year, as per The Minnesota Department of Natural Resources requirements.

Elm Lake-Farmes Pool (RLWD Project #52)

GENERAL: Elm Lake was drained in about 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. The 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.

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.

2017

The District cost shared to help with repairs to the apron portion of outlet pipe along with additional rock riprap. Relatively dry conditions prevailed throughout the year.

Stop-log Outlet Structure with operable screw

Lost River Impoundment (RLWD Project #17)

GENERAL: Approximately 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 (4) 48 in. 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. Relatively dry conditions prevailed throughout the year.

Good Lake Impoundment (RLWD Project #67)

GENERAL: The Good Lake Project is 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.

Fish and Wildlife: Enhanced wetland habitat for waterfowl, furbearers, and other wetland species. The reservoir also has the potential for seasonal rearing of northern pike.

Gated Principal Outlet Structure

Flood Control: The project will reduce flood peaks on both the Red Lake River and the Red River of the North. The dam will store 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.

Water Supply: 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.

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		

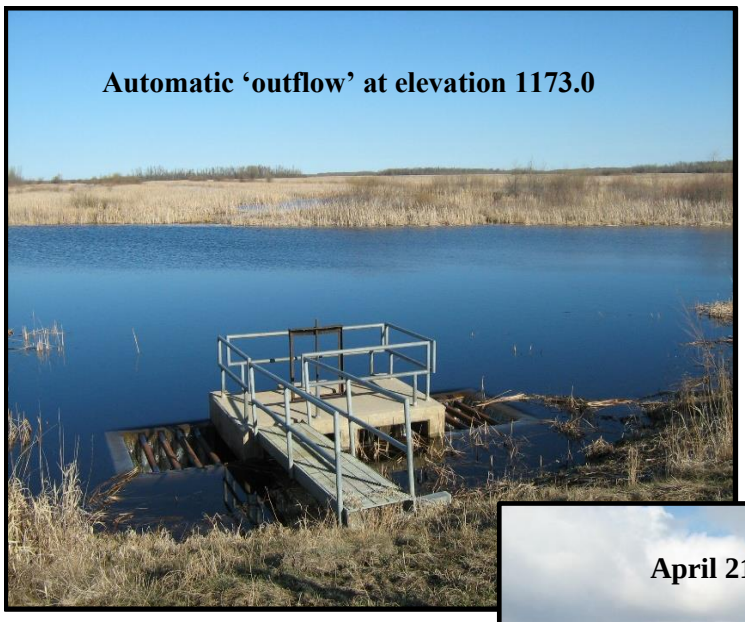
OPERATIONAL: 1996

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 after the date the permit commenced. It was signed by the Tribal Chairman and Secretary on April 13, 2011 and expired on April 13, 2016.

On July 12, 2016, two District Board Managers and two Staff members met before the Red Lake Tribal Council to discuss and ask for a renewal of the Special Land Permit. On August 24, 2016, the office received a new 2-year Special Land Permit (Resolution No. 138-16) signed by the Tribal Chairman and Secretary and dated July 12, 2016, which is set to expire on July 12, 2018.

2017

With relatively dry conditions throughout the year, no required stop-log or gate operation was necessary. District staff monitored water levels periodically throughout the year.



Automatic 'outflow' at elevation 1173.0

April 21, 2009 – Pool elevation at 1175.9

Moose River Impoundment (RLWD Project #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 are reduced by impounding 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 was 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.

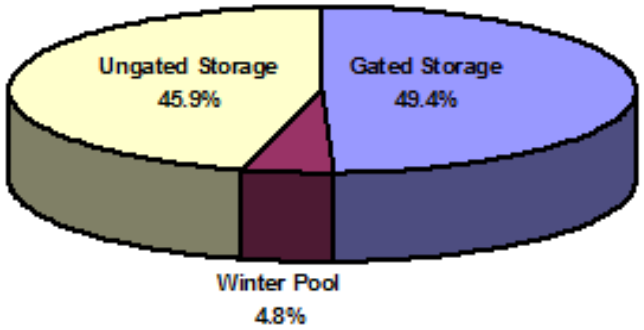
PURPOSE: Multi-purpose – designed to provide flood control, streamflow maintenance, increase wildlife values, and benefit fire control.

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.

2017 Operation: Flood water storage and gate operations occurred during the spring melt. The maximum North Pool elevation for 2017 was 1213.30 (4,772 ac/ft) which occurred on April 12th. Due to dry conditions, no gate operation was performed (which is extremely rare) until the October Fall drawdown.

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).

Normal 'fall drawdown' was performed in October.

North Pool – Gated Principal Outlet Structure

Moose River Impoundment – South Pool

The South Pool outlets into the Mud River (JD #11). 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.

2017 Operation: Flood water storage and gate operations occurred during the spring melt. The maximum South Pool elevation for 2017 was 1215.35 (9,098 ac/ft) which occurred on April 12th. Due to dry conditions, no gate operation was performed (which is extremely rare) until the October Fall drawdown.

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).

Normal 'fall drawdown' was performed in October.

South Pool - Gated Principal Outlet Structure

Schirrick Dam (RLWD Project #25)

GENERAL: The Schirrick Dam was constructed on the Black River in 1984. The project was constructed on property owned by Don Schirrick.

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. The operable components are stop-log bays that control the elevation of the permanent pool and hydraulic flood gates that 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.

Principal outlet structure hydraulic gate operation

Looking downstream from outlet structure

FUNCTIONAL DESIGN DATA:

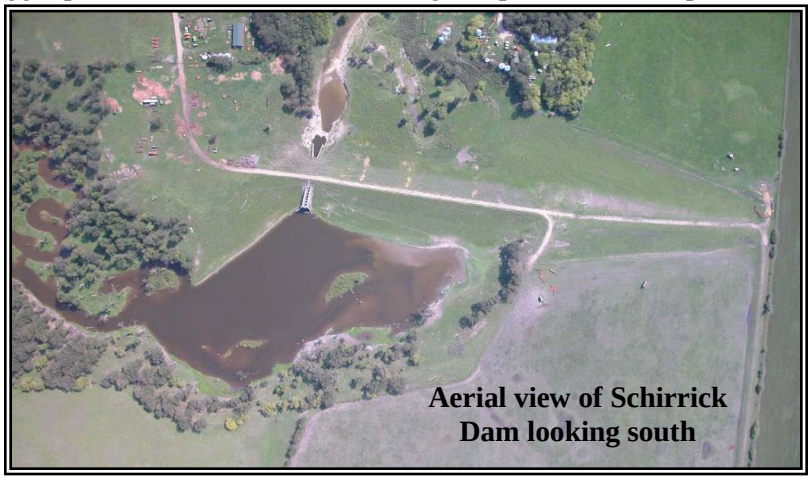
	Elevation (ft.-msl)	Storage (ac.ft.)
Top of Dam	992.5	6,000
Gated Storage	987.0	4,000
Emergency Spillway	989.3	4,800
Permanent Pool	962.0	70
Drainage Area 107.7 sq.mi.		
Highest recorded pool elevation was 988.75 on April 17, 1997		

OPERATIONAL: 1985

2017 Operation: Again, this year, the spring and summer runoff events, were not large enough to raise downstream river levels to the plan "trigger point" elevations, therefore no gate operation was required.

In October, 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 2018 spring flood which would require closure.

This dam and the timing of closure are vitally important for the flood protection for city of Crookston.



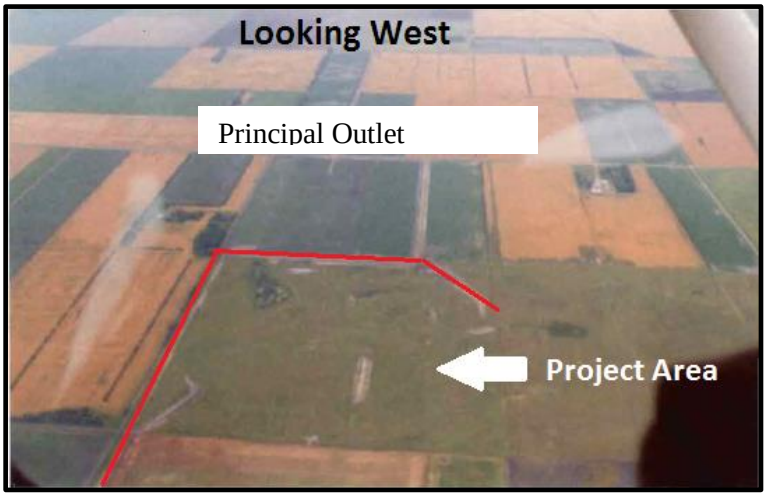
Aerial view of Schirrick Dam looking south

Louisville/Parnell Impoundment (RLWD Project #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 was funded by the Red River Watershed Management Board, Department of Natural Resources, 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 stores 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 can 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) 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 impoundment's 2,900-foot-long embankment was constructed along the west edge of the southeast quarter of Section 13. The project utilizes four gated outlet structures, which consist 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 Waterman Model C-20-C-Y sluice gates are 18-inches in diameter 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.

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 District and coordinated with operation of the Black River Dam, RLWD Project #25.

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 an understanding of current water quality conditions. District staff monitor water quality and flow conditions. Monitoring involves regular sample collection, investigative sampling, and event monitoring with autonomous sensors. The data is used to assess water quality conditions by comparing statistics to water quality standards that are established by the State of Minnesota. The results of data assessment and analysis are used to identify problem areas and trends. Sampling activities can also be conducted to find the locations of pollutant sources.

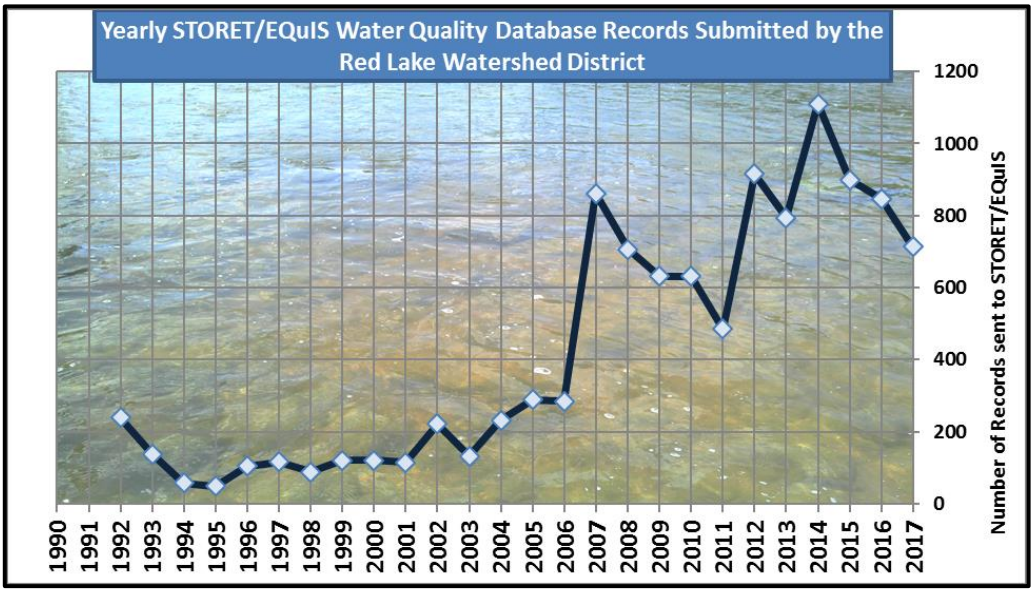
Thanks to the Clean Water Land and Legacy Act, the Minnesota Pollution Control Agency (MPCA) has been able to provide the District with funding for four watershed restoration and protection strategy (WRAPS) projects (Thief River, Red Lake River, Grand Marais Creek, and Clearwater River watersheds). A 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 2017, much time was spent by District staff on data analysis and technical writing for the Clearwater WRAPS project and revisions of Total Maximum Daily Load (TMDL) and WRAPS reports for the Red Lake River and Thief River watersheds. of. The District hired a summer Water Quality Assistant, Marisa Newton, for a second summer and she greatly helped with water quality monitoring in 2017. An intern, Bryanna Grefthen, also joined the staff for a portion of the summer to help with water quality monitoring. In addition to the District's long-term monitoring program, data was collected to investigate water quality problems in the Clearwater River watershed and to monitor the Mud River in Grygla for potential blue-green algae problems.

An important part of the District's water quality program is public education. 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, hosts open house events, and participates in other educational events like water festivals. The creation of informative maps using GIS software is also used to attain a better understanding of water resources and watersheds. The District supports River Watch programs at schools that allow students to monitor water quality in streams within its boundaries. Reports and other information is shared on the Watershed's websites (www.redlakewatershed.org and www.rlwdwatersheds.org).

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 overall 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.

The District also looks for opportunities to help other organizations by offering financial or monitoring assistance. In 2017, A YSI Pro ODO dissolved oxygen meter was purchased for use by the Pine Lake Sportsman Club, assembled, calibrated, and delivered to the club. The club will use it to monitor dissolved oxygen levels under the ice throughout the winter.

Also, in 2017, District staff assisted Red Lake County staff to investigate the source of the septic-smelling effluent that has been seeping into the Hill River (with high concentrations of sediment, nitrogen, phosphorus, and chloride) at the CR 119 crossing near Brooks. Red Lake County staff determined that the seepage was coming from the drain field of a nearby truck washing station.



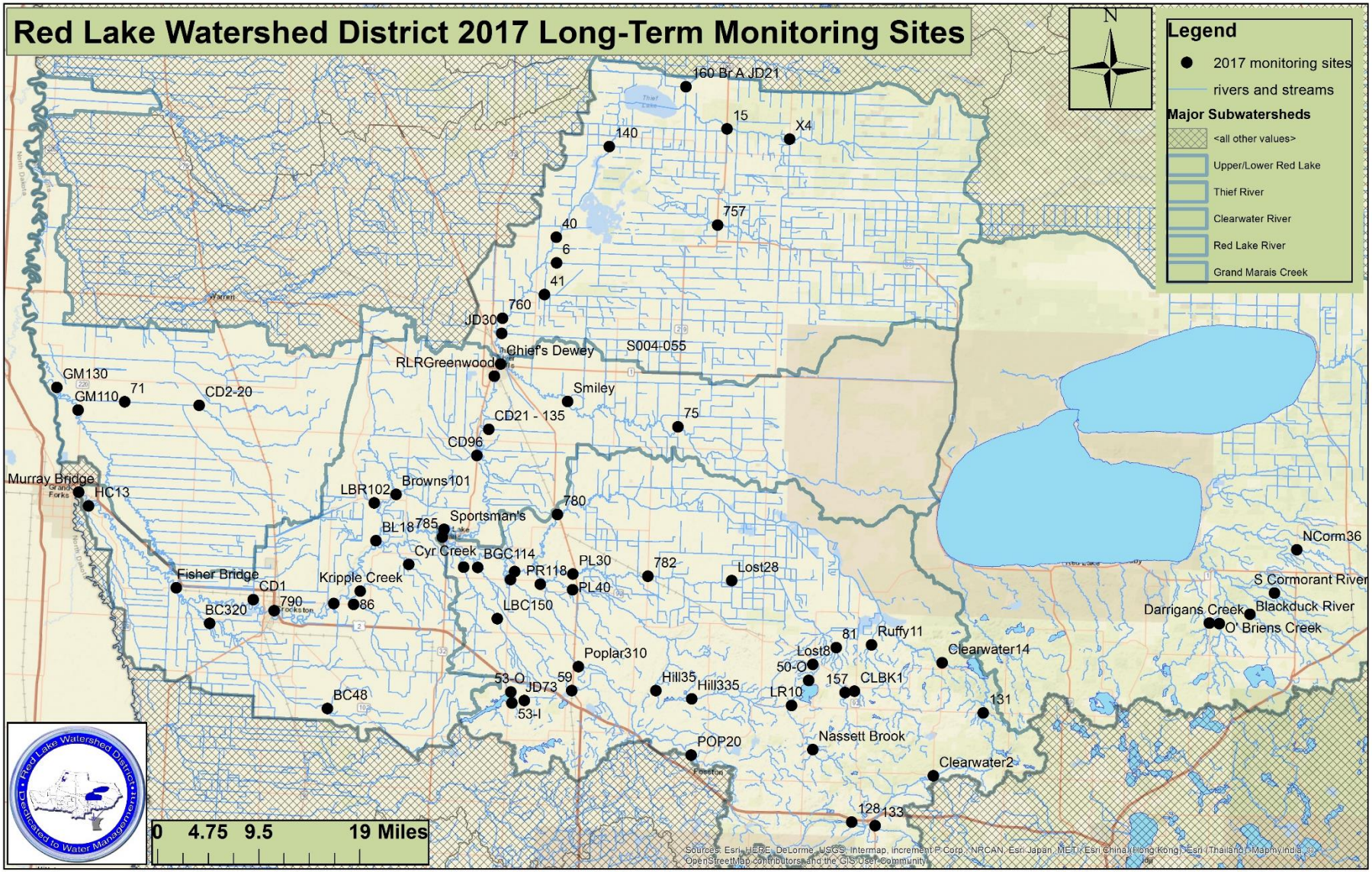
The District's long-term district monitoring program has collected water quality data throughout the district since 1980. Water quality monitoring was conducted at 73 sites as part of the District's regular monitoring program in 2017. Field measurements of dissolved oxygen, temperature, turbidity, specific conductivity, pH, and stage are collected during each site visit (if there is water/flow). Four rounds of samples are also collected and analyzed for total phosphorus, orthophosphorus, total suspended solids, total dissolved solids, total Kjeldahl nitrogen, ammonia nitrogen, nitrates + nitrites, and E. coli at seventy of the sites. Chemical/biochemical oxygen demand analysis is performed on samples from rivers and streams that are impaired by low dissolved oxygen levels. The four 2017 rounds of sampling began in April, June, August, and October.

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 Minnesota Pollution Control Agency has split some reaches into multiple assessment units so that channelized reaches can be assessed separately from natural reaches (particularly for the assessments of aquatic biology). For example, the Clearwater River from Ruffy Brook to the Lost River used to be assessed as a single unit. Now, the channelized portion between Ruffy Brook and Judicial Ditch 1 is assessed separately from the natural portion of that reach between JD 1 and the Lost River.

Some changes to the District's long-term monitoring program in 2017 include the Thief Lake outlet and the Badger-Mitchell Lake Channel were cut from the list of sites. The MPCA did not assess the Badger-Mitchell Lake channel portion of the Poplar River Diversion project because the site is essentially characterizing the quality of lake water instead of stream water. The Thief River between Thief Lake and Agassiz National Wildlife Refuge will continue to be monitored at the downstream end of the reach. An assessment that emphasizes the quality of water at the downstream end of that reach will provide more protection for the Thief River and Agassiz Pool than an assessment that combines the pollutant concentrations at the upstream (where water is relatively clean) and downstream (where water can be less clean) ends of the reach.

A site was added to monitor water quality within the channelized portion of Lower Badger Creek at 150th Ave. A biological impairment and low dissolved oxygen levels have been discovered at that location. The Heartsville Coulee monitoring location was changed from the 210th St. crossing that had been monitored upstream of the diversion structure to a site closer to the Red Lake River. The previously monitored location resembled a wetland more than it resembled a stream. Some flow to the new monitoring site will be intercepted by the diversion structure, but it can be assessed as a flowing stream using the MPCA's water quality standards.

Long-Term Water Quality Monitoring Program



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 2017 in the following waters (alphabetical order).

1. Beau Gerlot Creek at CR 114
2. Blackduck River
3. Browns Creek at County Road 101
4. Burnham Creek at CR 48
5. Burnham Creek at 180th Ave
6. Chief's Coulee at Dewey Avenue in Thief River Falls
7. Clear Brook
    - Hwy 92
    - CSAH 5 (longitudinal sampling)
    - Main Street (longitudinal sampling)
    - Railroad Ave NE (longitudinal sampling)
8. Clearwater River
    - CSAH 10
    - CSAH 2
9. Cyr Creek at CR 110
10. Darrigan's Creek
11. Gentilly River at CSAH 11
12. Grand Marais Creek
    - 130th St. NW
    - 110th St. NW
13. Heartsville Coulee at 210th St. SW
14. Hill River
    - CR 119, north of Brooks
    - CR 130 (longitudinal sampling)
    - CR 129 (longitudinal sampling)
    - 250th Ave SE (longitudinal sampling)
    - 290th Ave SE
    - 290th St. SE
    - CSAH 35
    - West crossing of 340th St. SE
    - 335th Ave SE
    - 345th Ave SE (longitudinal sampling)
    - 350th St. SE (longitudinal sampling)

15. Judicial Ditch 30 at 140th Ave NE, north of Thief River Falls
16. Kripple Creek
    - 180th Ave
    - 140th Ave SW
17. Lost River
    - In Oklee
    - CR 139 (north crossing, longitudinal sampling)
    - Lost River at 520th St. (longitudinal sampling)
    - CR 139 (south crossing, longitudinal sampling)
    - In Gonvick (longitudinal sampling)
    - CSAH 92 (longitudinal sampling)
    - CSAH 8
    - South crossing of CSAH 7, south of Gonvick (longitudinal sampling)
    - 490th St., downstream of Pine Lake
    - 486th St, near the Pine Lake outlet (longitudinal sampling)
    - Pine Lake inlet (longitudinal sampling)
    - 109th Ave, upstream of Pine Lake
    - Lindberg Lake Rd. (longitudinal sampling)
    - CSAH 20 (longitudinal sampling)
18. Lower Badger Creek at 150th Ave SE
19. Marshall County Ditch 20
20. Moose River at CSAH 54
21. Mud River
    - Highway 89
    - Grygla City Park
    - CSAH 54 (longitudinal sampling)
    - Dylan Rd. NW (longitudinal sampling)
    - Flintlock Rd. NW (longitudinal sampling)
22. Nassett Brook
23. North Cormorant River at CSAH 36
24. O' Briens Creek at Harvest Rd. NE
25. Pennington County Ditch 21 at 135th Ave NE
26. Pennington County Ditch 70 outlet (stormwater sampling)
27. Polk County Ditch 1
28. Polk County Ditch 2
    - County Road 62
    - CSAH 20
29. Polk County Ditch 14 near the Maple Lake outlet
30. Poplar River at CSAH 49
31. Red Lake River
    - Louis Murray Bridge in East Grand Forks
    - At Fisher
    - CSAH 13 near Red Lake Falls
    - Greenwood Street in Thief River Falls
32. Ruffy Brook at CSAH 11
33. Silver Creek

- 500th St. (longitudinal sampling)
- 159th Ave, west of Clearbrook
- CR 74 (longitudinal sampling)
- 161st Ave (longitudinal sampling)
- CSAH 18 (longitudinal sampling)

34. South Cormorant River at CSAH 37
35. Terrebonne Creek at Hwy 92
36. Thief River
    a. CSAH 6
    b. 380th St NE
    c. CSAH 7
    d. 140th Ave NE, north of Thief River Falls

The highest 2017 E. coli concentration for the District's long-term monitoring effort was 15,531 MPN/100ml (extremely high). It was discovered at the Dewey Avenue crossing of Chief's Coulee. The lowest 2017 E. coli concentration was <1 MPN/100ml (less than to the laboratory's minimum reporting limit) was found in:

- Clearwater River at CSAH 25 near Bagley (April)
- Maple Lake outlet (April)
- Polk County Ditch 2 at CSAH 20 (April)
- Red Lake River at Fisher (April)
- Hill River at CSAH 35 (April)
- Lower Badger Creek at CR 114 (August)

E. coli samples were collected from Kripple Creek where it nears 140th Ave SW and from where it crosses Highway 2. There are multiple cattle operations between those two sites. Cattle were spotted walking in the Kripple Creek channel near a gravel pit. The cattle are causing increases in E. coli concentrations along Kripple Creek. E. coli concentrations increased from just 31.5 MPN/100ml at Highway 2 to >2,419.6 MPN/100ml where the river reaches 140th Ave SW. This information and samples results were shared with Red Lake County and Polk County staff.

Kripple Creek near 140th Ave SW.

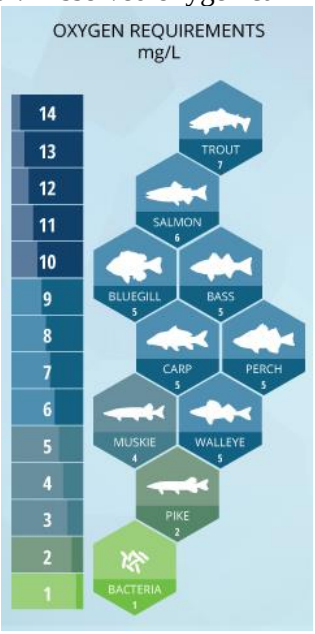
The amount of sediment that is carried by a stream is measured by collecting and analyzing samples for total suspended solids. Fish and aquatic macroinvertebrates (bugs, worms, crustaceans, etc.) are harmed by high concentrations of total suspended solids. Relatively few instances of high total suspended solids concentrations (>65 mg/l, >30 mg/l, or >15 mg/l, depending on the site's location) were found during 2017 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 2017
    - Grand Marais Creek at 130th St. NW (239 mg/L)
    - Red Lake River at Fisher (102 mg/L)
    - Red Lake River at the Murray Bridge in East Grand Forks
- >30 mg/L – Violated applicable Central (30 mg/L) and North River Nutrient Region standards
    - Burnham Creek at 180th Ave SW
    - Moose River at CSAH 54
    - Thief River at CSAH 7
    - Thief River at 140th Ave NE Thief River Falls
- >15 mg/L – Violated the North (15 mg/L) River Nutrient Region standard, where applicable
    - Mud River at Hwy 89 (local goal of meeting the 15 mg/L standard)

The highest total suspended solids concentration that was found during 2017 District long-term monitoring was 78 mg/L, at the 130th St NW crossing of Grand Marais Creek. The lowest possible total suspended solids (cleanest water) is a censored value of <1 mg/l (less than the laboratory's minimum reporting limit) and was found at these sites in 2017:

- Beau Gerlot Creek at CR 114
- Clear Brook at Railroad Ave NE (longitudinal sampling)
- Clearwater River at CSAH 11
- Clearwater River at CSAH 14
- Clearwater River at CSAH 25, upstream of Bagley
- Clearwater River in Red Lake Falls
- Hill River at CSAH 35
- Judicial Ditch 30 at 140th Ave NE, north of Thief River Falls
- Judicial Ditch 73
    - 343rd St. SE
    - CSAH 10 (Maple Lake inlet)
- Kripple Creek at US Hwy 2
- Little Black River at CR 102
- Lost River at CSAH 28
- Lost River at 109th Ave, upstream of Pine Lake
- Lower Badger Creek at CR 114
- Marshall County Ditch 20
- O' Briens Creek
- Pennington County Ditch 21 at 135th Ave NE
- Poplar River at CR 118, near the Lost River confluence northwest of Brooks
- Red Lake County Ditch 23
- Silver Creek at CR 111
- South Cormorant River
- Terrebonne Creek
- Thief River at CSAH 7

Fish and aquatic 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 2017 monitoring for the District's long-term monitoring program (alphabetical order).



1. Branch 200 of Judicial Ditch 11
2. Burnham Creek at CSAH 48
3. Chiefs Coulee at Dewey Ave in Thief River Falls
4. Clear Brook at CSAH 92
5. Clear Brook at CSAH 49
6. Clearwater River at CSAH 10
7. Grand Marais Creek at 110th St. NW
8. Hill River
    - 290th Ave SE*
    - 310th Ave SE (longitudinal sampling)
    - 320th St. SE (longitudinal sampling)
    - CSAH 35
    - Hill River Lake outlet (longitudinal sampling)
    - 345th Ave SE (longitudinal sampling)
    - CSAH 6 (longitudinal sampling)
    - 365th Ave SE (longitudinal sampling)
    - 380th Ave SE (longitudinal sampling)
    - 340th St. SE (east crossing, longitudinal sampling)
    - 350th St. SE (longitudinal sampling)
    - 355th St. SE (longitudinal sampling)
    - CSAH 3 (longitudinal sampling)
    - CSAH 29 (longitudinal sampling)
9. Judicial Ditch 73 (Poplar River Diversion ditch) at the Badger Lake Inlet
10. Little Black River at CR 102
11. Lost River
    a. CSAH 28
    b. CR 139
    c. 530th St.
    d. Pine Lake inlet
    e. 109th Ave, upstream of Pine Lake
    f. Lindberg Lake Rd.
    g. CSAH 20
12. Lower Badger Creek at CR 114
13. O' Briens Creek
14. Moose River at Hwy. 89
15. Polk County Ditch 14 near the Maple Lake outlet
16. Red Lake County Ditch 23
17. Silver Creek
    - CR 139 (Anderson Lake inlet, longitudinal sampling)
    - 161st Ave (longitudinal sampling)
    - CSAH 18 (longitudinal sampling)

18. Thief River at 380th St NE
19. Walker Brook at CSAH 19

The highest (best) dissolved oxygen concentration recorded for the District's long-term monitoring program in 2017 was 18.36 mg/L at the 150th Ave SE crossing of Lower Badger Creek. That may have been a case of supersaturation in stagnant water.

The lowest (worst) dissolved oxygen concentration found at a District long-term monitoring site was 0.01 mg/L in the Hill River at 380th Ave SE and JD 73 at the Badger Lake inlet.

The state's water quality standard for total phosphorous varies by river nutrient region. Rivers and tributaries in the western part of the District have to meet a 0.150 mg/l standard in the South River Nutrient Region. Rivers and tributaries assigned to the Central River Nutrient region have to meet a 0.100 mg/l standard. Rivers and tributaries in the eastern part of the District have to meet a more protective standard of 0.050 mg/l in the North River Nutrient Region. 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.
    - Clear Brook at Hwy 92 in Clearbrook
    - Clearwater River at CSAH 24, upstream of Clearwater Lake
    - Clearwater River at CSAH 2
    - Darrigan's Creek at CSAH 23
    - North Cormorant River at CSAH 36
    - O' Briens Creek at Harvest Rd.
    - Ruffy Brook at CSAH 11
    - Silver Creek at CR 111
    - South Cormorant River at CSAH 37

2. Central River Nutrient Region (>0.1 mg/L), where applicable:
    - Chiefs Coulee at Dewey Ave in Thief River Falls
    - Clearwater River at CSAH 10
    - Clearwater River, north of Plummer
    - Clearwater River at the CSAH 12 crossing near Terrebonne
    - Hill River at CR 119, north of Brooks
    - Judicial Ditch 30, north of Thief River Falls
    - Judicial Ditch 73 near Rydell National Wildlife Refuge
    - Lost River at 109th Ave, upstream of Pine Lake
    - Mud River at the city park in Grygla
    - Pennington County Ditch 21 at 135th Ave NE
    - Pennington County Ditch 70 outlet (1.9 mg/L)
    - Poplar River at CSAH 30 near Fosston
    - Poplar River at CR 118

3. South River Nutrient Region (>0.15 mg/L), where applicable:
    - Brown's Creek at County Road 101*
    - Burnham Creek at 320th Ave SW*
    - Chief's Coulee at Dewey Ave. in Thief River Falls *
    - Clear Brook at CSAH 49*

- Clearwater River at CSAH 10*
- Cyr Creek *
- Grand Marais Creek at 130th St. NW*
- Grand Marais Creek at 110th St. NW *
- Heartsville Coulee at 13th Street, in East Grand Forks*
- Hill River at CSAH 35*
- Hill River at 335th Ave SE*
- Lost River at the Pine Lake inlet *
- Lost River at 109th Ave, upstream of Pine Lake *
- North Cormorant River *
- Pennington County Ditch 21 *
- Pennington County Ditch 70 outlet *
- Polk County Ditch 2 at CSAH 20*
- Polk County Ditch 2 at CR 62 *
- Poplar River at CR 118 *
- Poplar River at 310th St SE *
- Red Lake County Ditch 23*
- Red Lake River at Fisher*
- Silver Creek at CR 111*
- Thief River at 380th St. NE*

The highest 2017 concentration of total phosphorus, 6.74 mg/L, was found in the Poplar River at CSAH 30 near Fosston while Fosston lagoons were (unlawfully) discharging into the river.

The lowest 2017 concentration of total phosphorus, 0.012 mg/L, was found in the Clearwater River at CSAH 2.

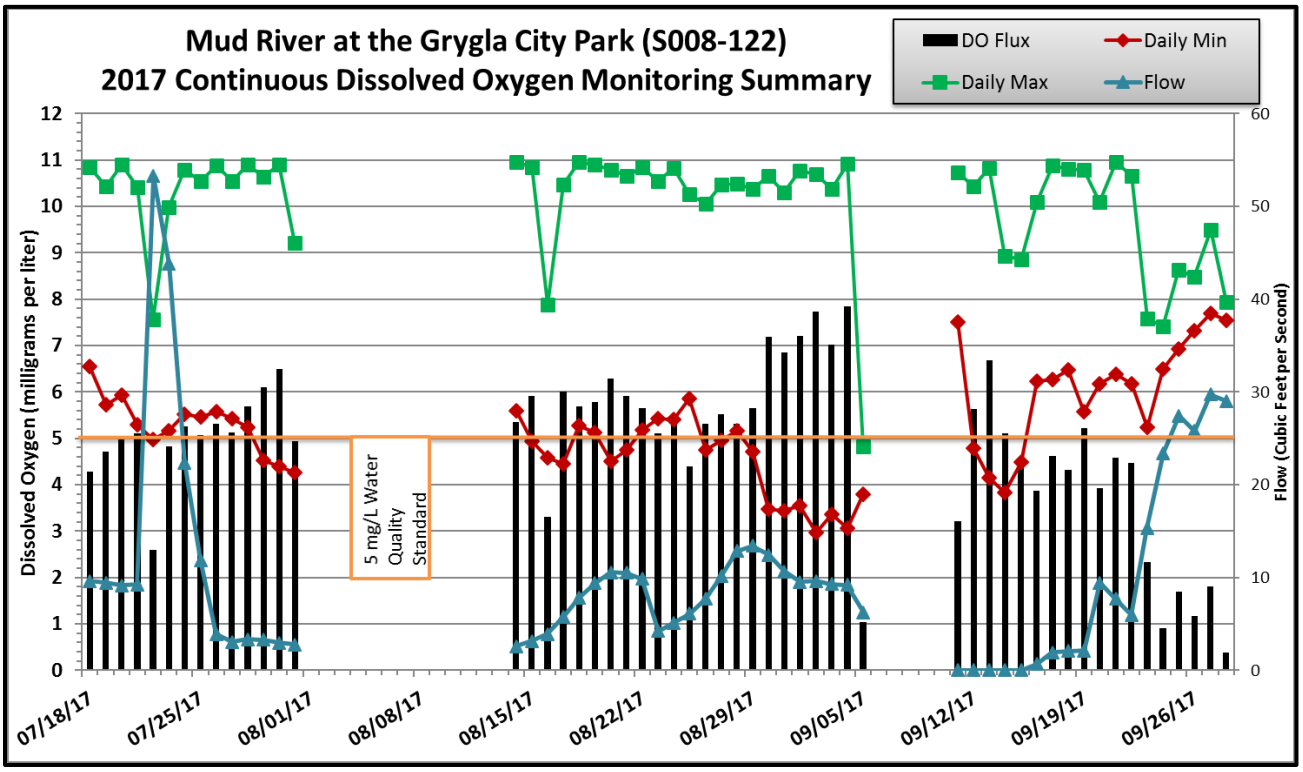
High biochemical oxygen demand (BOD) concentrations (>3.5 in the South or >2.0 in the Central River Nutrient Region) were found in the following streams. Most of these streams were also on the 2016 list.

- Clearwater River at CSAH 10*
- Heartsville Coulee at 13th St. SE in East Grand Forks (7.48 mg/L)*
- Poplar River
    - CR 118*
    - 310th St. SE
    - CSAH 30, north of Fosston*
- Mud River
    - Hwy 89*
    - Grygla *
- Red Lake River at CSAH 219 (Highlanding)*
- Thief River at 140th Ave NE

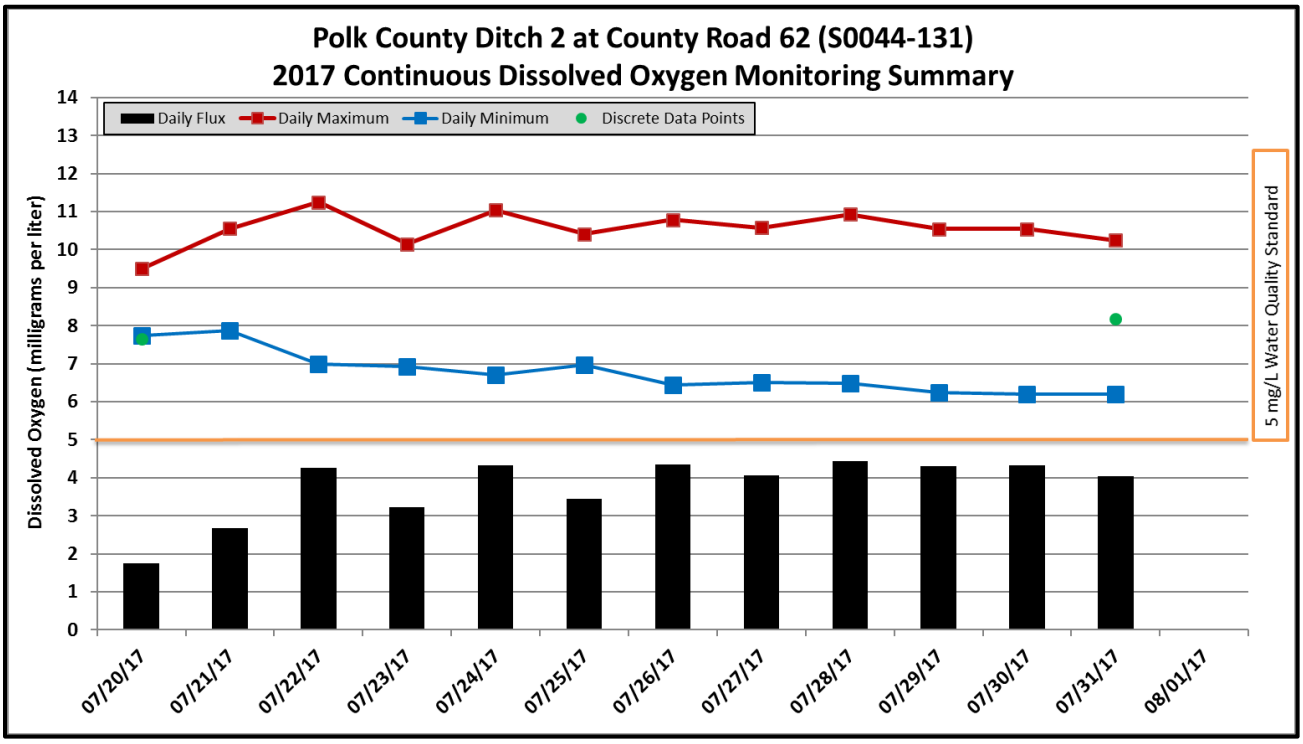
Data from 2017 water quality monitoring was entered into the District's database, transferred to an EQuIS submittal template, reviewed for accuracy, then submitted to the MPCA for storage in the EQuIS database. A total of 714 records were submitted to the MPCA. More than 265 of those records involved the collection of water quality samples. Data collected by the East Polk SWCD staff on the Mud River in Grygla and sites within East Polk County were entered into the MPCA data submittal template, reviewed and submitted to the MPCA.

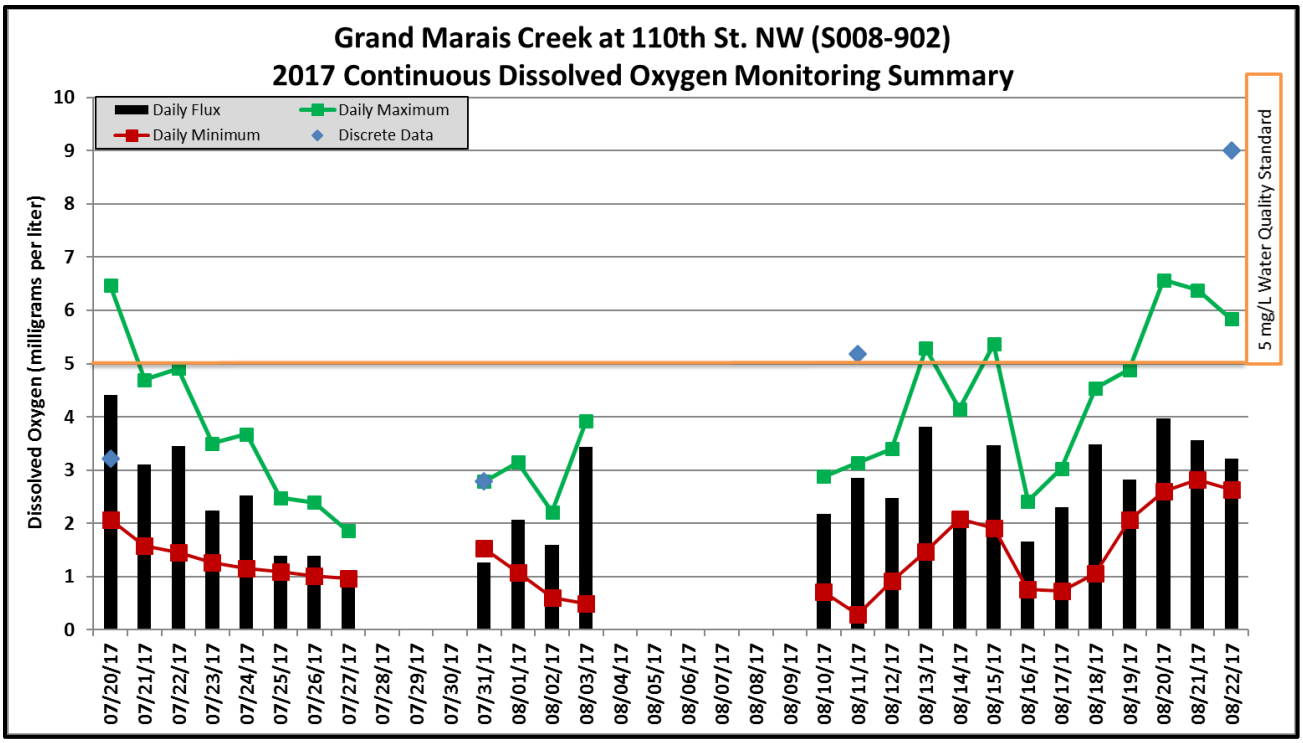
Dissolved Oxygen Logger Deployments

A dissolved oxygen logger was deployed in the Mud River near Grygla throughout the months of August and September 2017. Regular samples were collected from the Mud River at the Grygla city park. Water was also tested for blue-green algae. No positive test results for blue-green algae were discovered. Dissolved oxygen levels dropped below 5 mg/L more frequently in 2017 than they did in 2016, mostly due to periods of low flow.

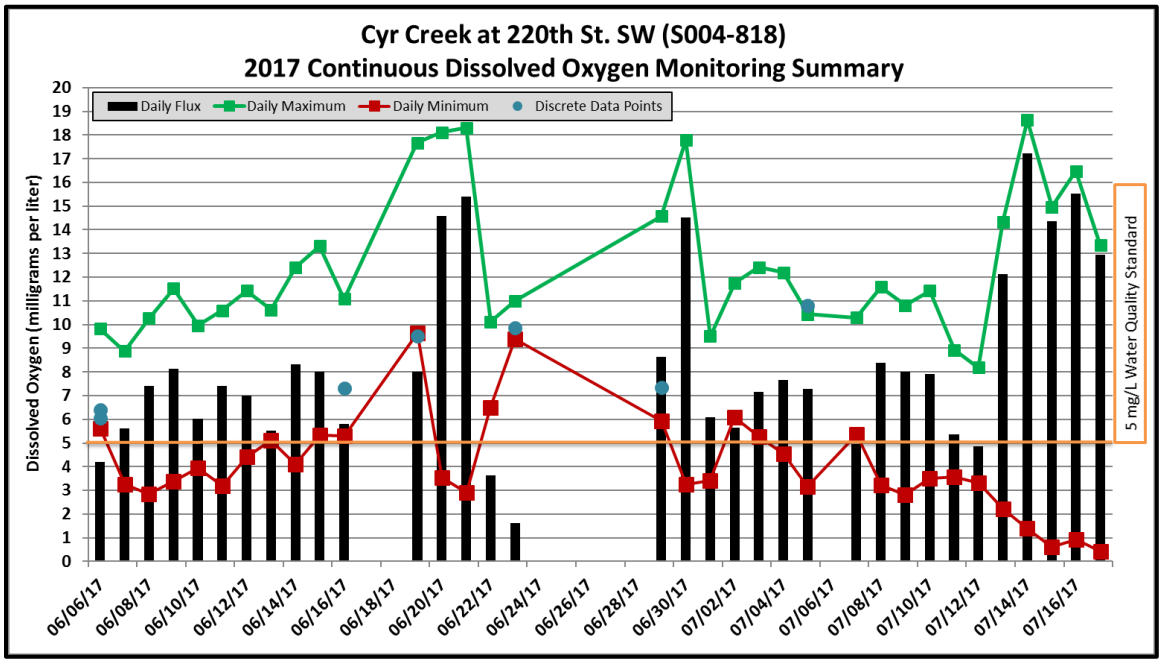


Dissolved oxygen loggers were installed in Polk County Ditch 2 and Grand Marais Creek during the summer of 2017 while there was flow in those channels. Polk County Ditch 2 went dry relatively quickly, so the data from that location was limited. The discrete and continuous DO data from Grand Marais Creek showed that the dissolved oxygen levels were very poor at that location during the summer of 2017. The maximum dissolved oxygen levels failed to reach 5 mg/L on some days.

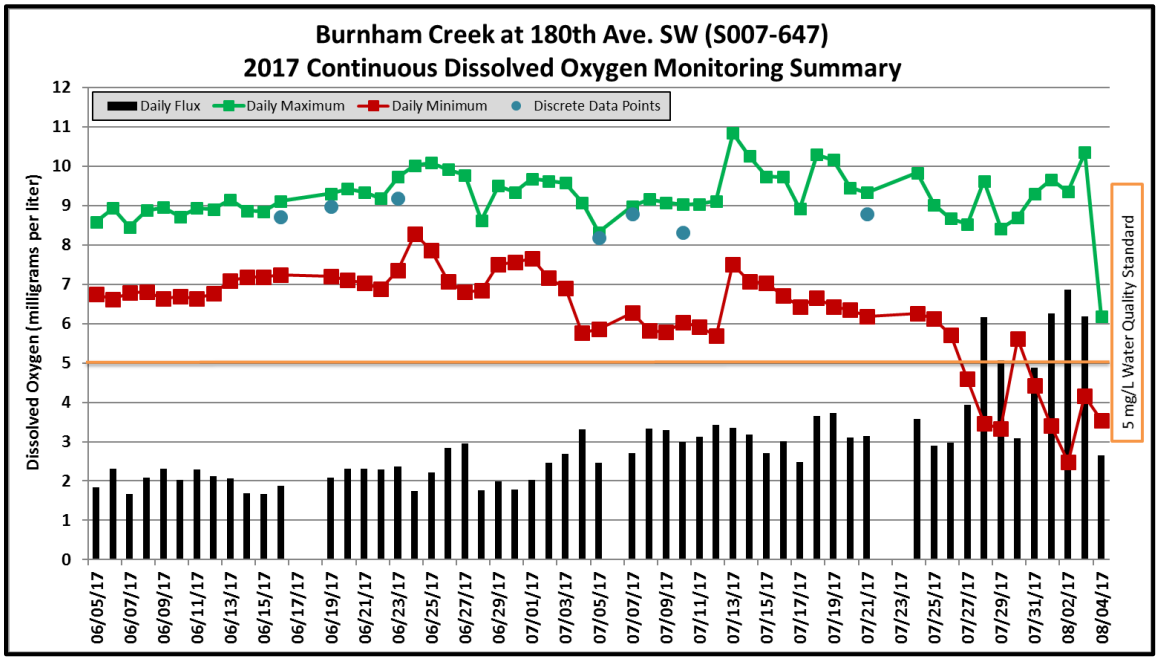




A dissolved oxygen logger was deployed in Cyr Creek in 2017. The District worked with the Minnesota Pollution Control Agency (MPCA) to conduct a special study on Cyr Creek and get a better understanding of what was causing low dissolved oxygen levels in the stream. Dissolved oxygen levels were frequently low while there was flow and the creek went dry by the end of June. Flow resumed in early July after a rainfall event, but the creek was dry, again, by mid-July.



A dissolved oxygen logger was deployed in Burnham Creek at 180th Ave SW, which is the crossing downstream of the Spring Gravel Dam stream restoration project. Dissolved oxygen levels were good while there was measurable flow at the site. Dissolved oxygen began dropping below 5 mg/L as flow decreased and ceased in late July and early August. The average amount of daily dissolved oxygen fluctuation (2.95 mg/L) met MPCA river eutrophication standards.



Dissolved oxygen loggers were also deployed at 5 sites in the Clearwater River Watershed. These sites were monitored to provide a better understanding of conditions in streams that are impaired by low dissolved oxygen.

- Red Lake County Ditch 23 at CSAH 1
- Clearwater River at CSAH 10
- Hill River at 290th Ave SE
- Nassett Creek
- Lost River at CSAH 2

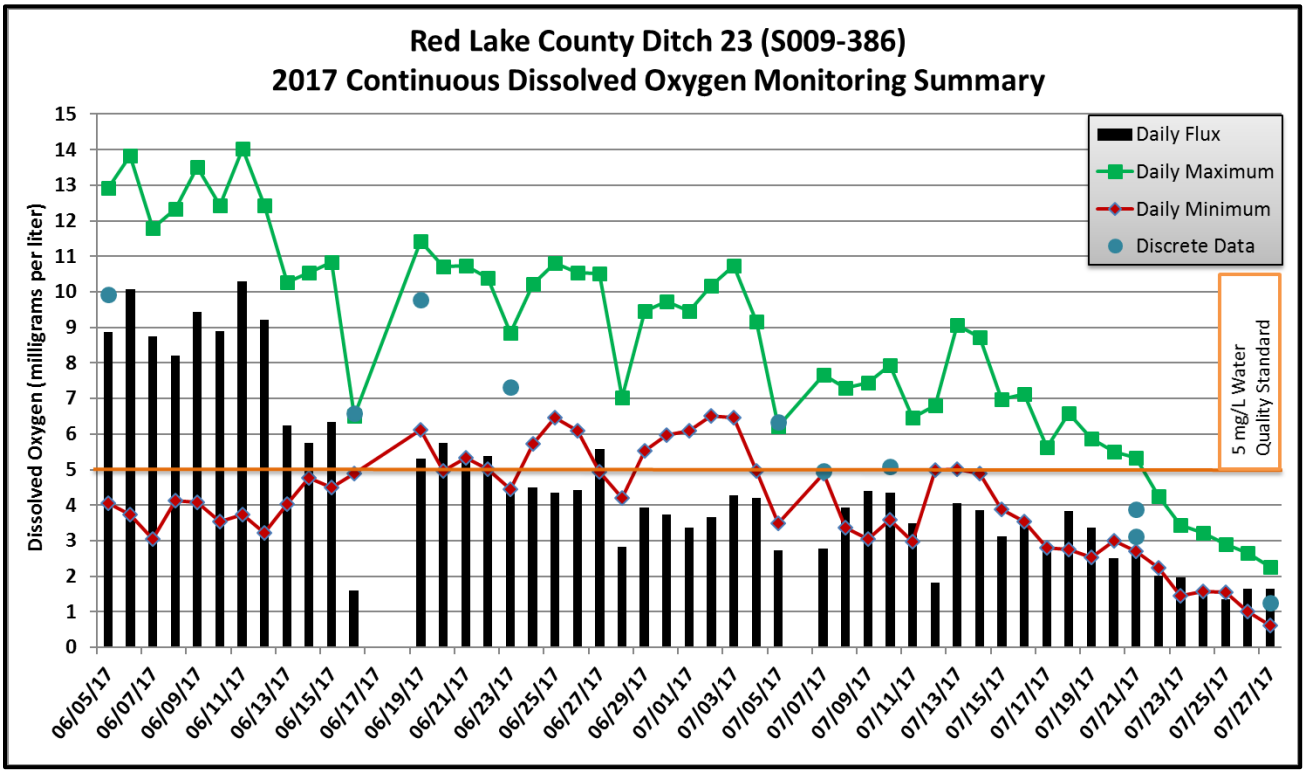
The dissolved oxygen logger deployments in Red Lake County Ditch 23 confirmed that low dissolved oxygen levels are a limiting factor (stressor) for aquatic life in the ditch. A lack of flow appears to be negatively affecting dissolved oxygen.

Dissolved oxygen levels in the channelized portion of the Clearwater River are still being negatively affected by late summer discharge from wild rice paddies. Dissolved oxygen levels at the CSAH 10 crossing were low for an extended period from mid-July through August. This site was monitored in response to a 2016 complaint about late-summer fish kills and swimmer's itch in the river.

Continuous dissolved oxygen monitoring had been conducted near the downstream end of the Hill River at CR 119 and near Hill River Lake at CSAH 35. The dissolved oxygen levels at those two sites were completely opposite. Dissolved oxygen levels were nearly always adequate at CR 119, but almost always dropped below the standard at CSAH 35. Downstream of where the Hill River flows out of Hill River Lake, the river flows north through an area with a relatively low gradient. Portions of the river resemble wetlands along this reach. After flowing north, the river turns west and the gradient increases. The Hill River was monitored at a location near the upper end of the westward-flowing portion of the river to test the hypothesis that dissolve oxygen levels improve as the river begins flowing west and to determine the extent of the dissolved oxygen problem. The dissolved oxygen levels at 290th Ave SE were much better than the levels that were found at CSAH 35, though not as good as the conditions at CR 119. Dissolved oxygen levels were good at 290th Ave SE until flows decreased and the channel began to fill with vegetation in the latter part of the summer.

Nassett Creek is a designated trout stream and is required to meet a higher standard for dissolved oxygen (7 mg/L). The MPCA determined that the creek was impaired by low dissolved oxygen during the 2016 water quality assessment. The 2017 dissolved oxygen logger deployment indicated that the creek is meeting the dissolved oxygen standard at the furthest downstream road crossing. An examination of discrete monitoring data from the site found that the next crossing upstream has had more problems with low dissolved oxygen levels, partially due to the influence of beaver dams.

Although the Lost River at CSAH 2 is a free-flowing stream with relatively clean water, the river frequently failed to meet the dissolved oxygen standard throughout 2017 dissolved oxygen logger deployments.


Red Lake County Ditch 23 (S009-386)
2017 Continuous Dissolved Oxygen Monitoring Summary
Dissolved Oxygen (milligrams per liter)
Daily Flux
Daily Maximum
Daily Minimum
Discrete Data
5 mg/L Water Quality Standard
06/05/17
06/07/17
06/09/17
06/11/17
06/13/17
06/15/17
06/17/17
06/19/17
06/21/17
06/23/17
06/25/17
06/27/17
06/29/17
07/01/17
07/03/17
07/05/17
07/07/17
07/09/17
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07/21/17
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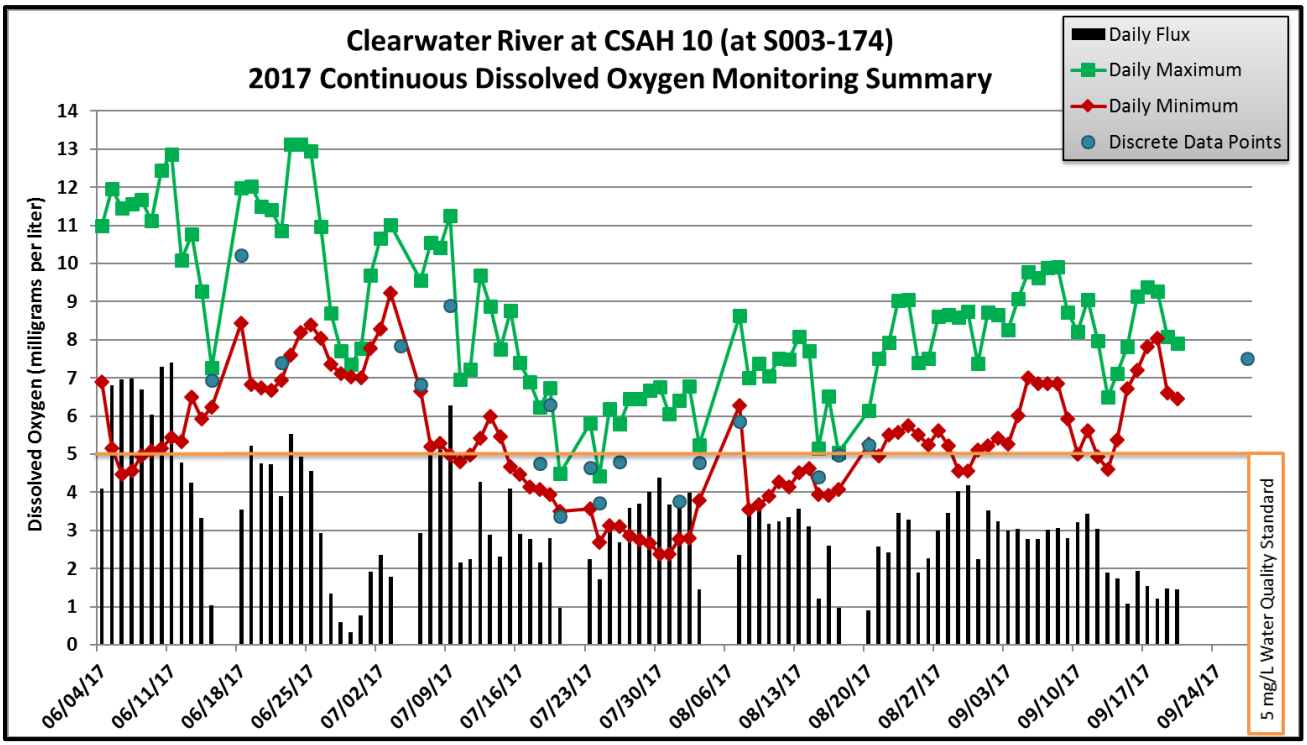
Clearwater River at CSAH 10 (at S003-174)
2017 Continuous Dissolved Oxygen Monitoring Summary
Dissolved Oxygen (milligrams per liter)
Daily Flux
Daily Maximum
Daily Minimum
Discrete Data Points
5 mg/L Water Quality Standard
06/04/17
06/11/17
06/18/17
06/25/17
07/02/17
07/09/17
07/16/17
07/23/17
07/30/17
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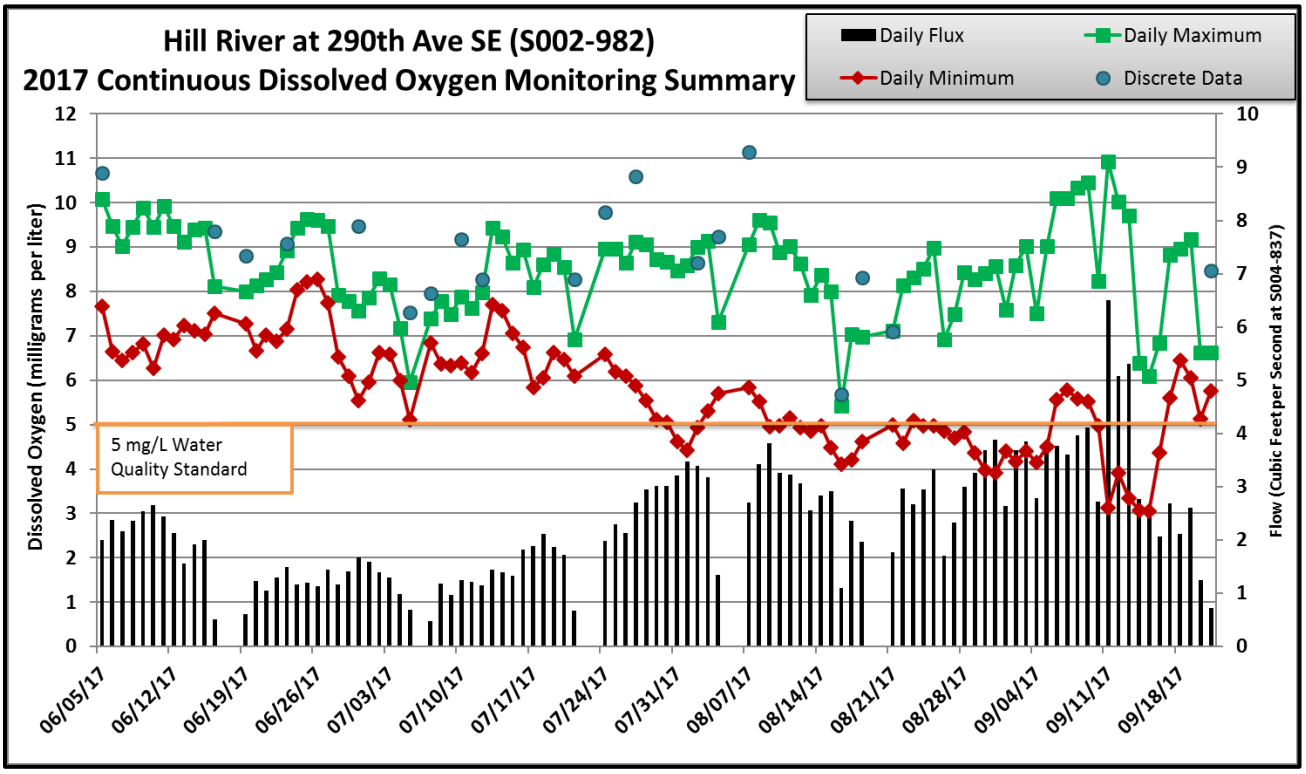
09/03/17
09/10/17
09/17/17
09/24/17


Hill River at 290th Ave SE (S002-982)
2017 Continuous Dissolved Oxygen Monitoring Summary
Daily Flux
Daily Maximum
Daily Minimum
Discrete Data
Dissolved Oxygen (milligrams per liter)
Flow (Cubic Feet per Second at S004-837)
5 mg/L Water Quality Standard
06/05/17
06/12/17
06/19/17
06/26/17
07/03/17
07/10/17
07/17/17
07/24/17
07/31/17
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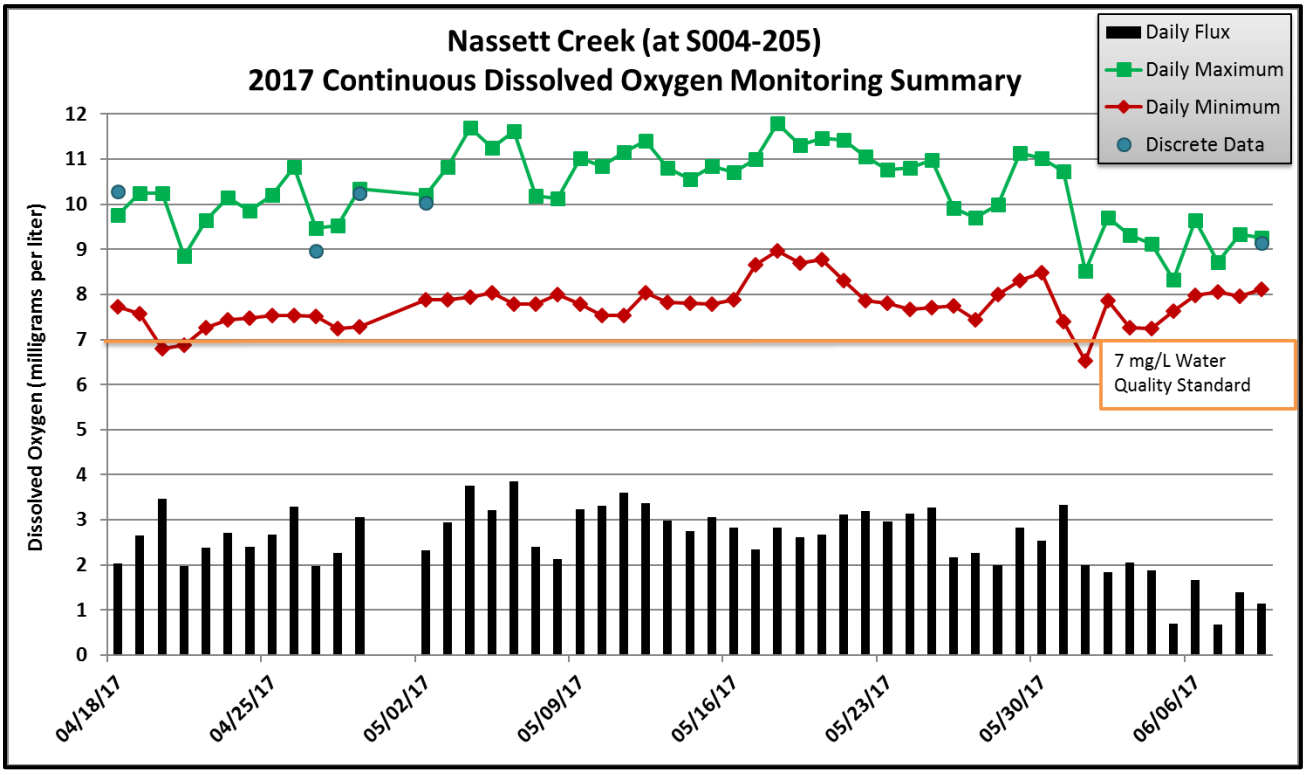
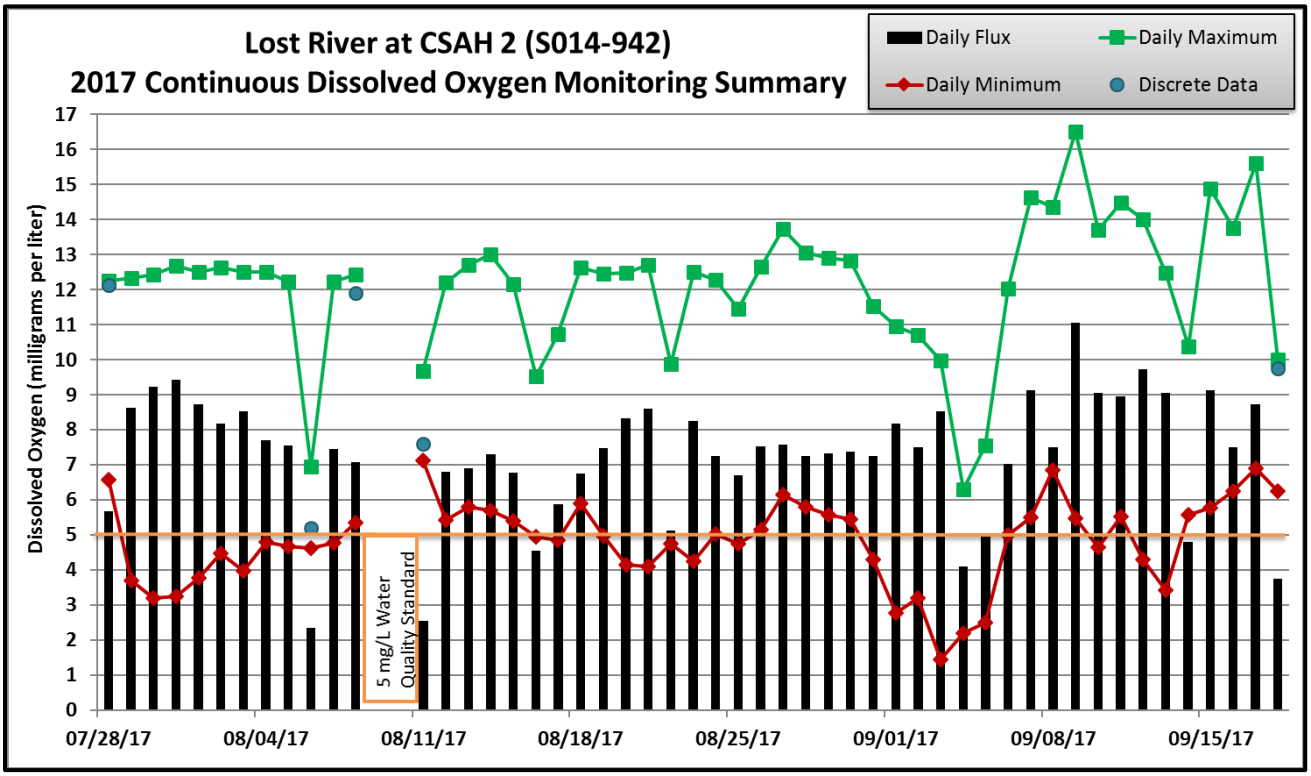
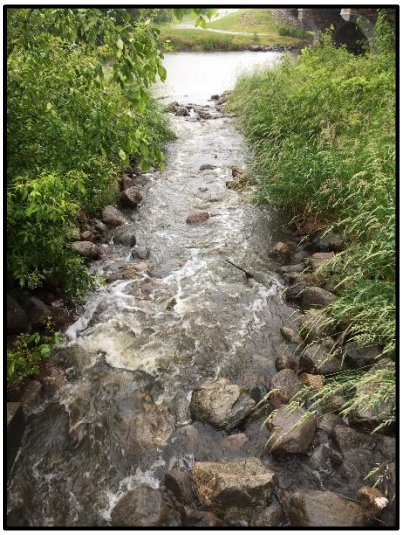
09/18/17


Nassett Creek (at S004-205)
2017 Continuous Dissolved Oxygen Monitoring Summary
Daily Flux
Daily Maximum
Daily Minimum
Discrete Data
Dissolved Oxygen (milligrams per liter)
7 mg/L Water Quality Standard
04/18/17
04/25/17
05/02/17
05/09/17
05/16/17
05/23/17
05/30/17
06/06/17



Thief River Falls Stormwater Sampling

The District conducted stormwater sampling in 2017 to help with the Thief River Falls Stormwater Assessment that is being conducted by the City of Thief River Falls, Pennington County Soil and Water Conservation District, and a consultant. District and city staff met to identify the locations of priority stormwater outlets. High concentrations of sediment, *E. coli* bacteria, and phosphorus were found at multiple stormwater outlets. The city and the SWCD have worked with a consultant to produce a final report for their stormwater study. The study identified fifteen potential stormwater projects throughout the city.



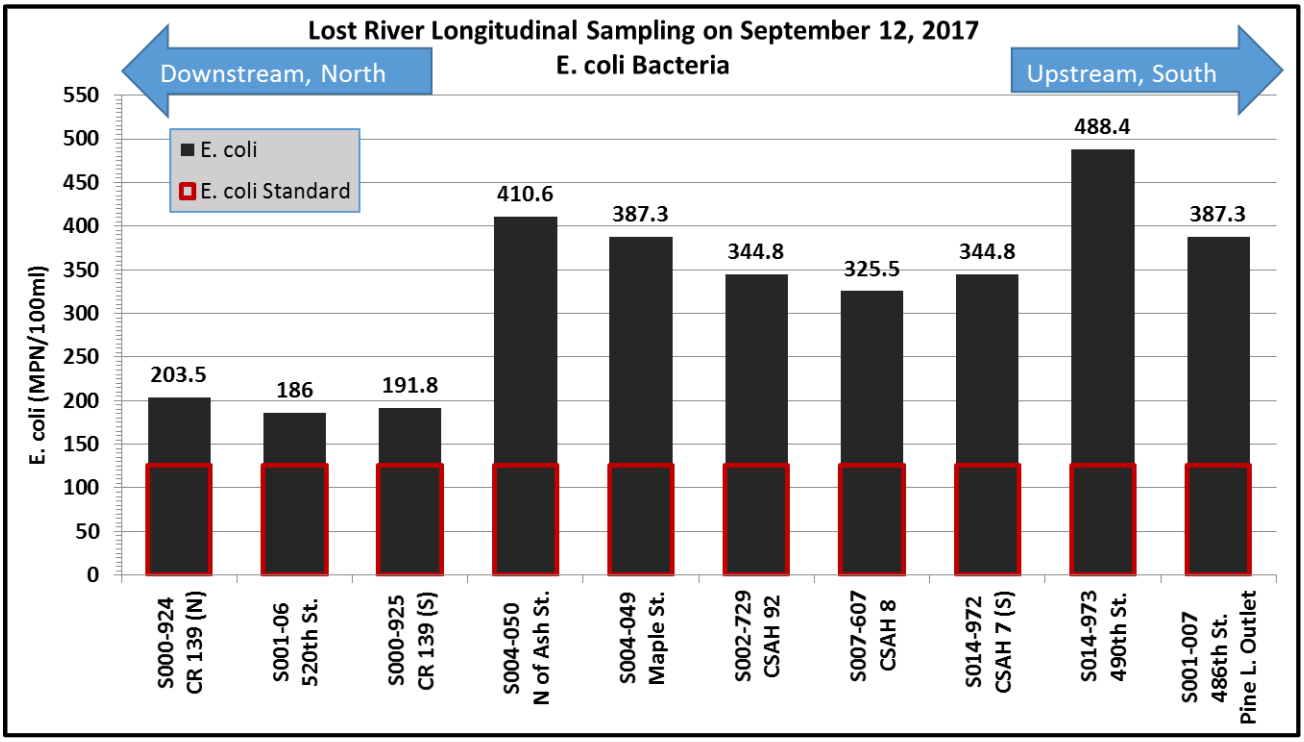
Tindolph Beach Closing and Sampling

The beach in LaFave Park in Thief River Falls (Tindolph Beach) was closed due to poor water quality in August of 2017. District staff collected water samples that were analyzed for *E. coli* bacteria and the presence of algal toxins. The water appeared green with algae and duckweed. The ground was covered with goose droppings. A representative of the KTRF radio station spoke with District staff while they were at the beach collecting samples and asked if the results could be shared. Test results were shared with local media and city staff. No algal toxins were found in the samples. *E. coli* concentrations, however, were very high. *E. coli* samples were collected from the west side, east side, and center of the beach area. The samples were collected at an approximate depth of 2 feet (knee-deep). Concentrations ranged from 1,413.6 MPN/100ml to 2,419.6 MPN/100ml and emphatically validated the city's decision to close the beach. The Minnesota Pollution Control Agency's acute standard for E. coli bacteria is 1,260 MPN/100ml and the chronic (monthly geometric mean) standard is 126 MPN/100ml. The situation was featured in most local news outlets in both video and print.

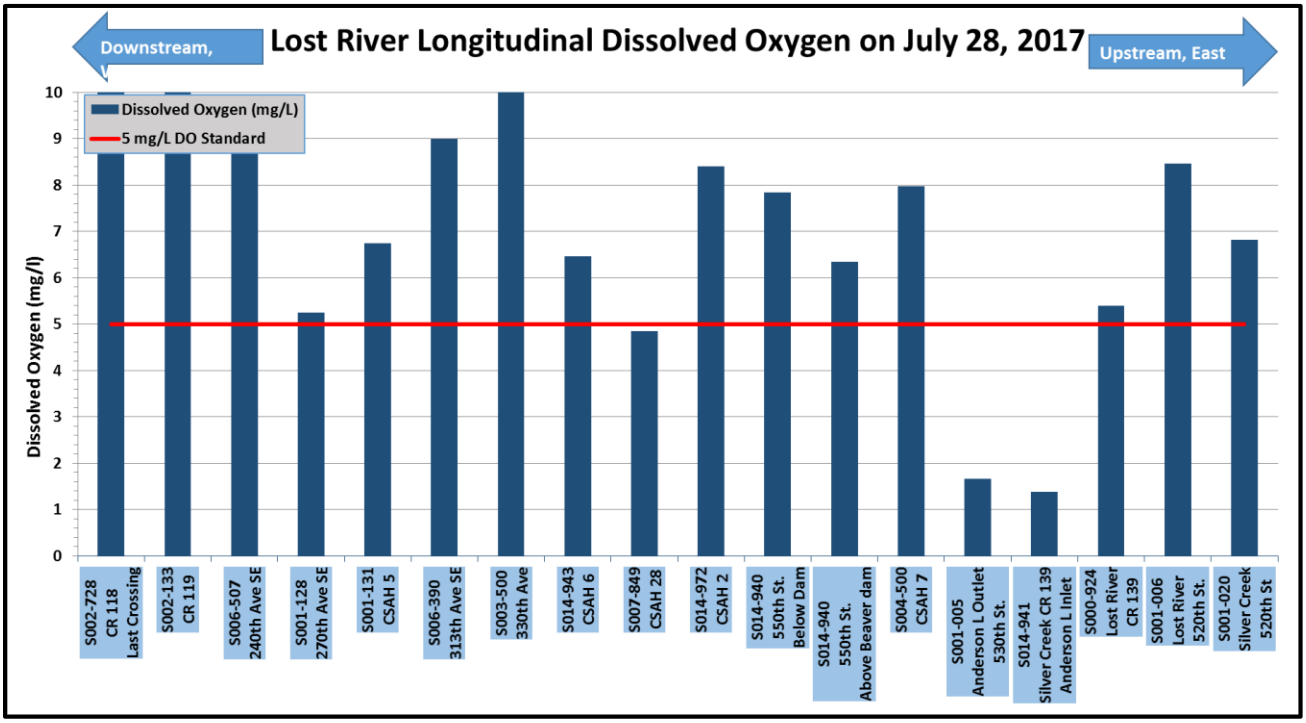
To answer a question about water quality in the open-water portion of the Thief River Falls Reservoir, *E. coli* samples were collected from the 1st Street Bridge. The results of those samples were relatively low and did not exceed any water quality standards. So, the E. coli problem at Tindolph Beach does not seem to be causing a problem downstream or within the open-water portion of the reservoir, most likely due to dilution.

Longitudinal Sampling

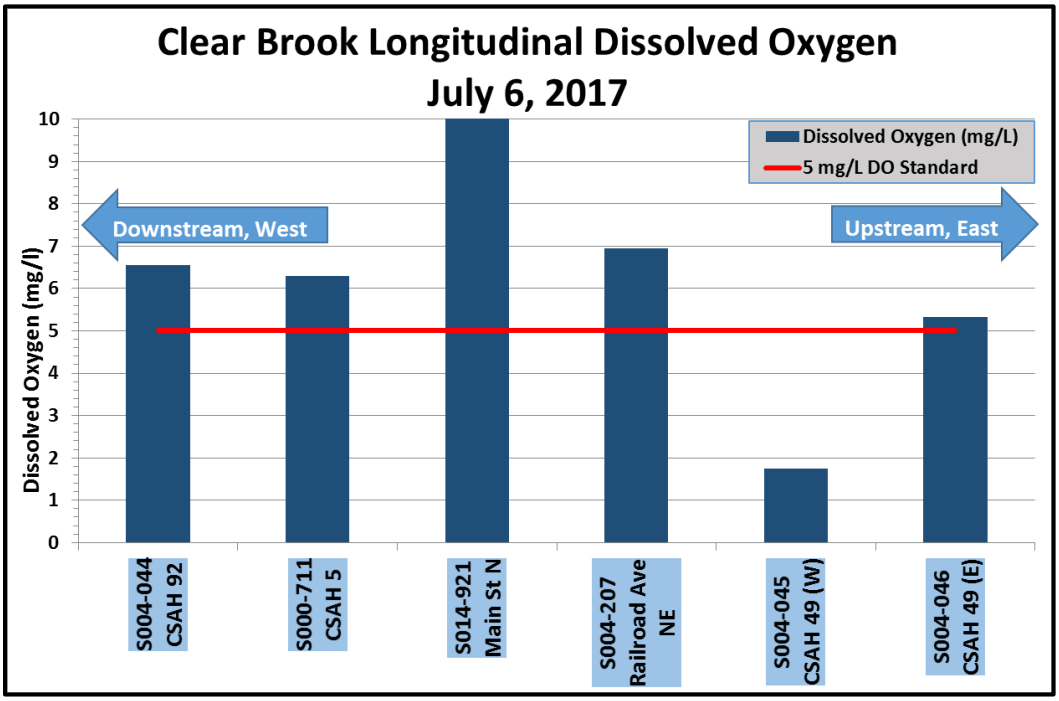
Longitudinal *E. coli* samples were collected along the *E. coli*-impaired reach of the Lost River between Pine Lake and Anderson Lake. *E. coli* concentrations were high throughout the entire reach.

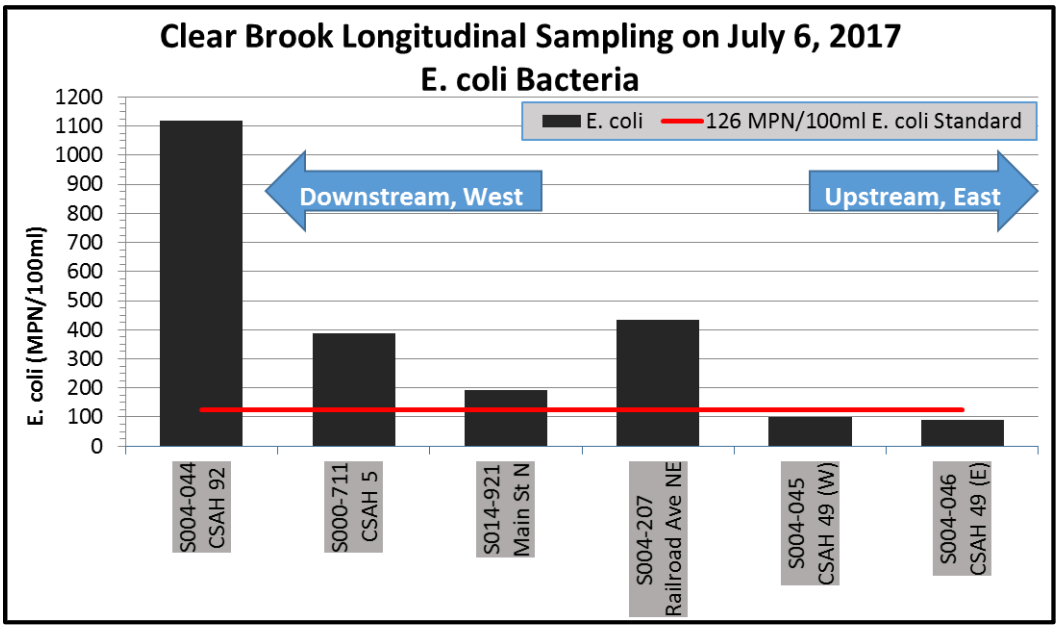


Longitudinal dissolved oxygen measurements along the Lost River revealed portions of the stream where dissolved oxygen levels are depressed. Some of the lower concentrations were found near areas where water is ponded (Anderson Lake and the CSAH 28 crossing).

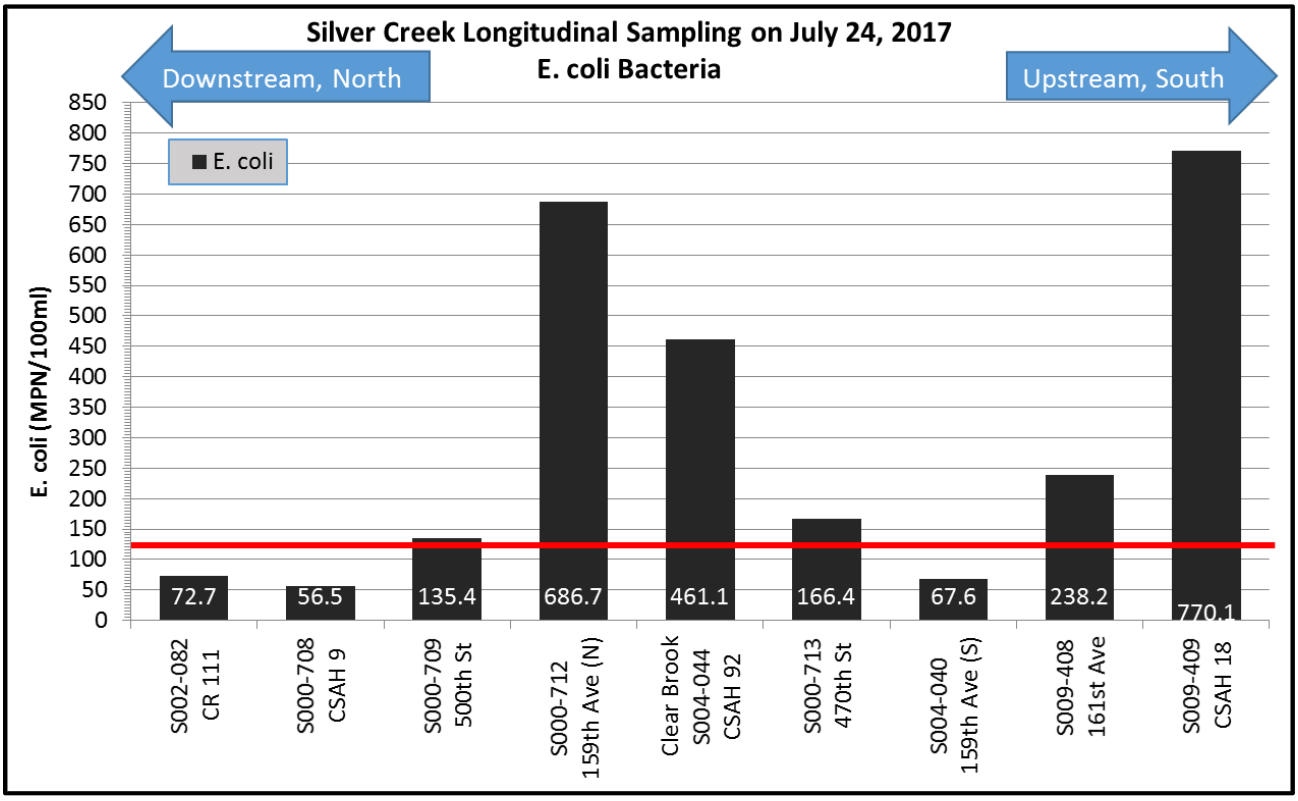


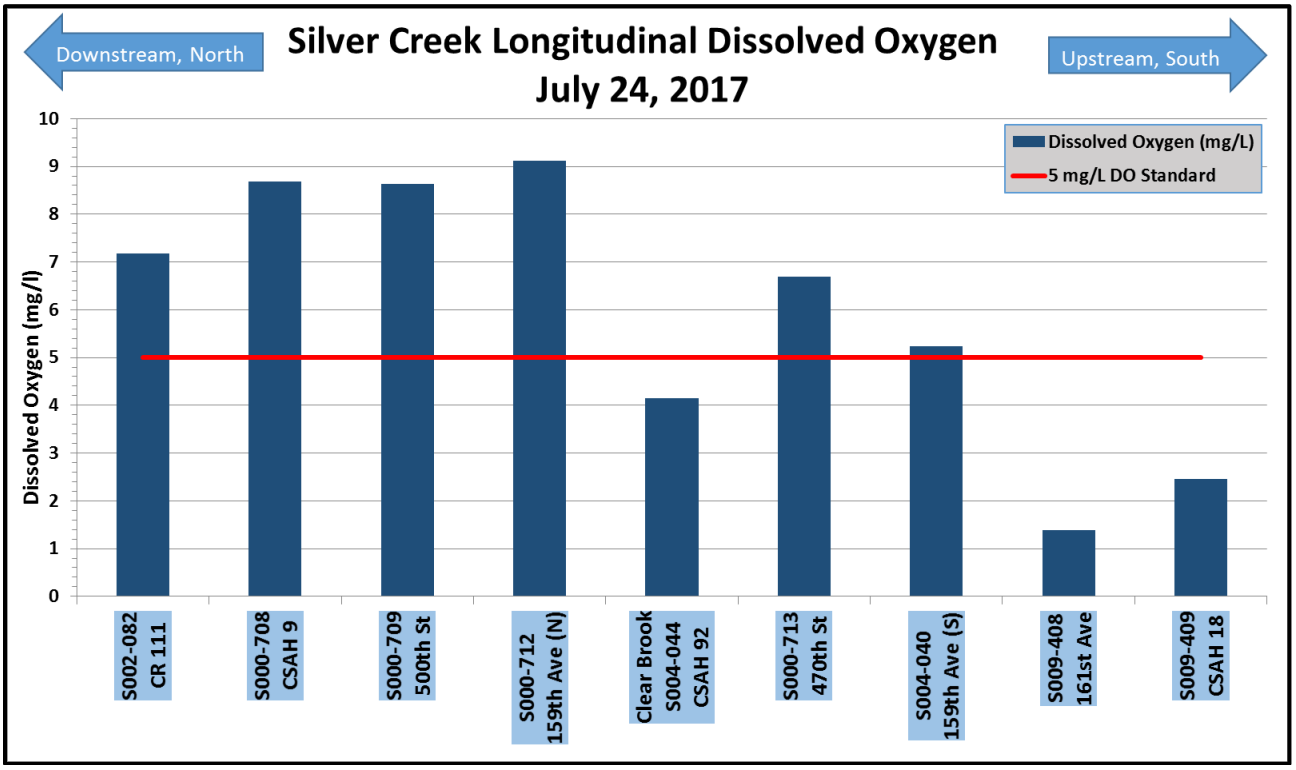
Dissolved oxygen measurements and *E. coli* samples were collected at all crossings of Clear Brook, a tributary of Silver Creek that flows through the town of Clearbrook, to learn more about what might be causing water quality problems in that stream.



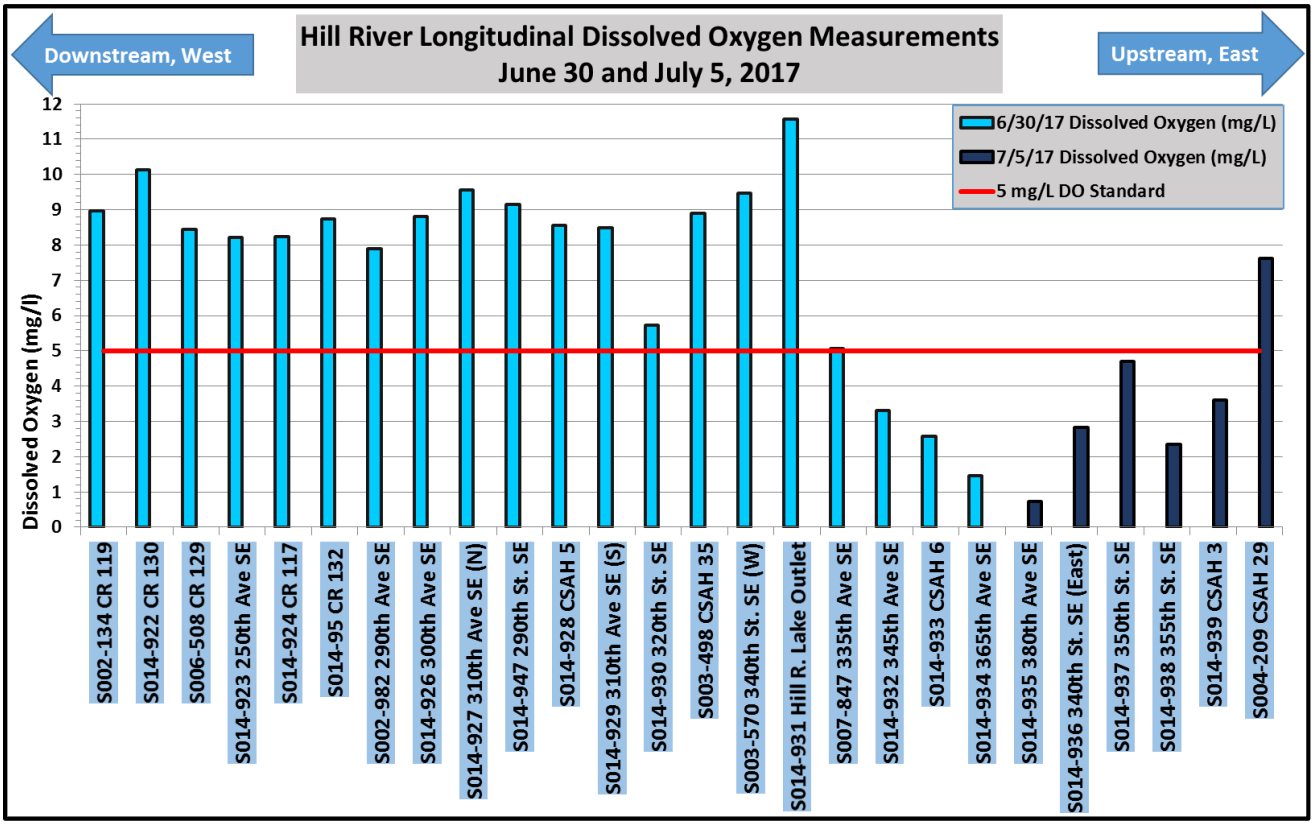


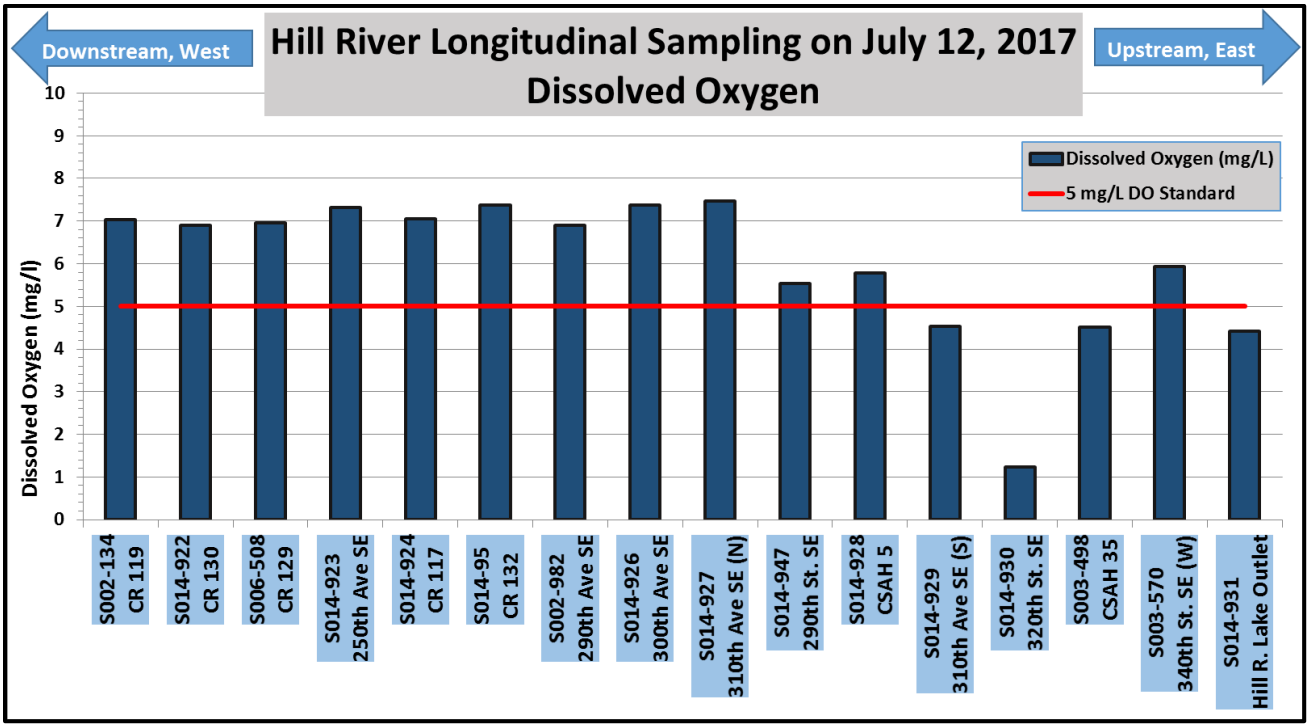
Longitudinal *E. coli* sampling along Silver Creek and its tributary Clear Brook showed that efforts to reduce bacterial contamination should focus on Clear Brook and the confluence of the two streams (where there is a livestock operation).

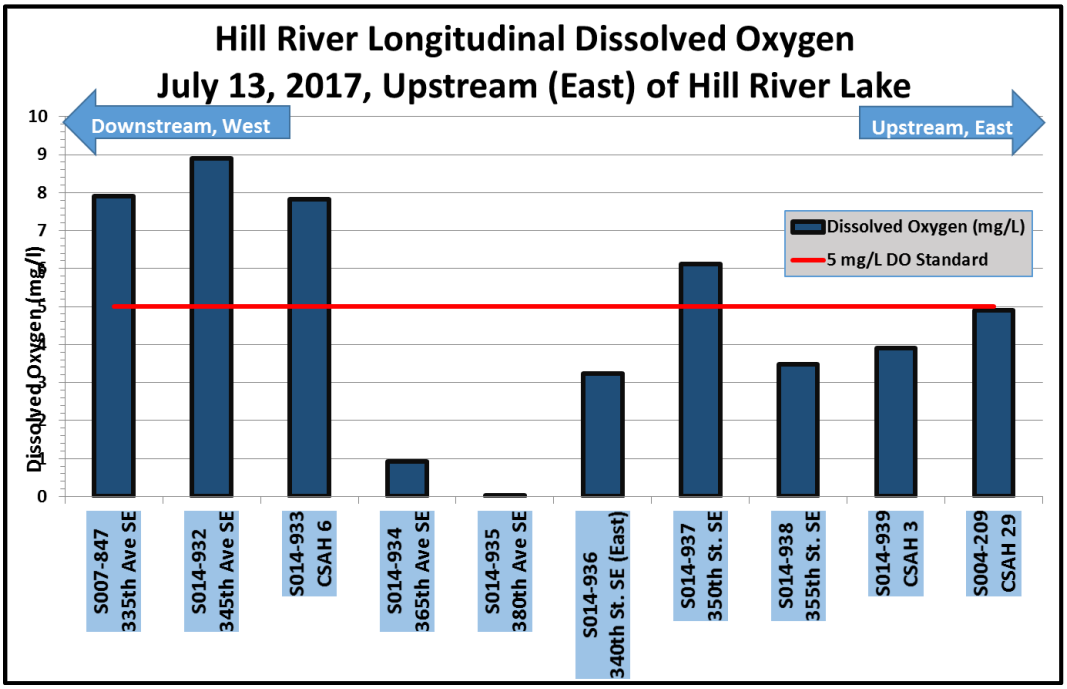




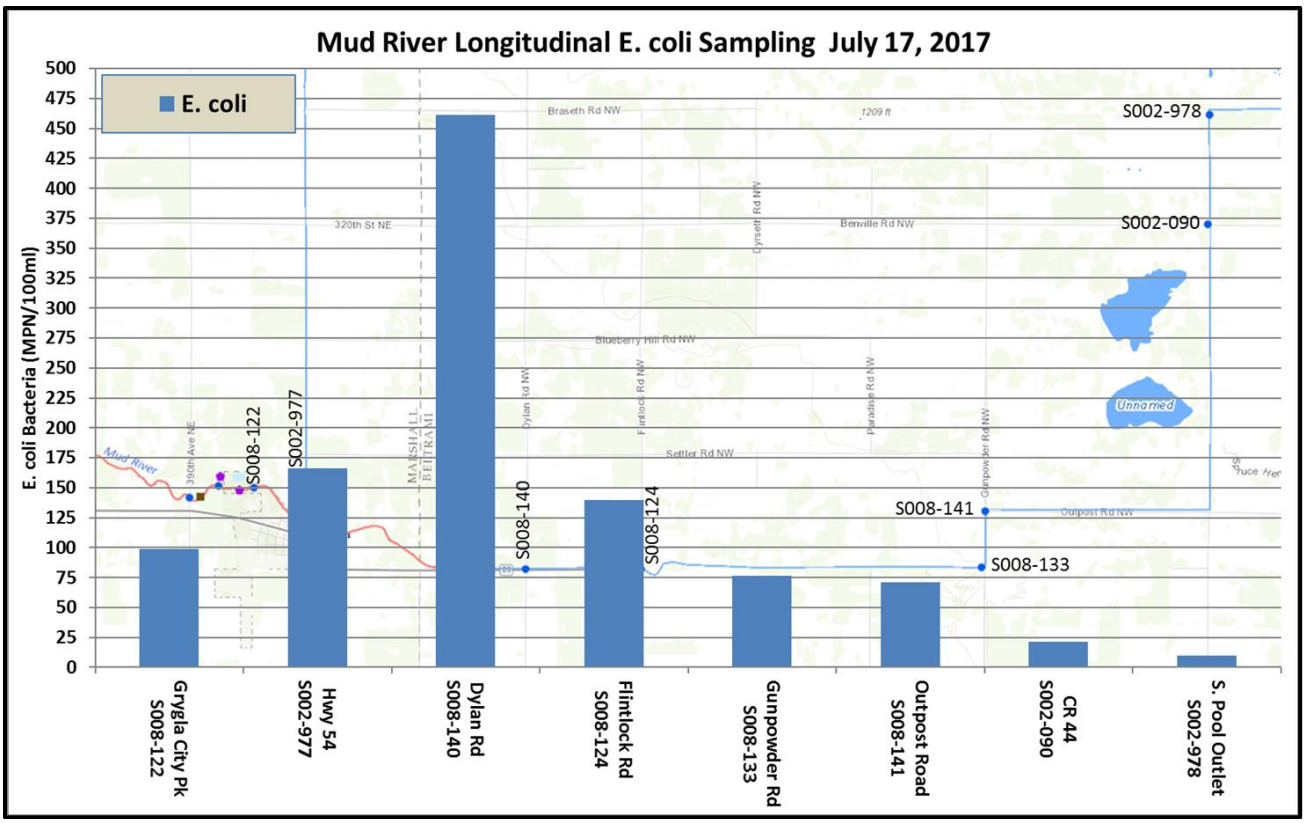
Longitudinal dissolved oxygen measurements were collected along the Hill River. Dissolved oxygen levels are reduced in the river as it flows from Cross Lake to the Olga area, but then begin to recover as it flows toward Hill River Lake. Dissolved oxygen levels are low in the portion of the Hill River that leaves Hill River Lake and flows north. Concentrations improve as the river flows west toward Brooks.



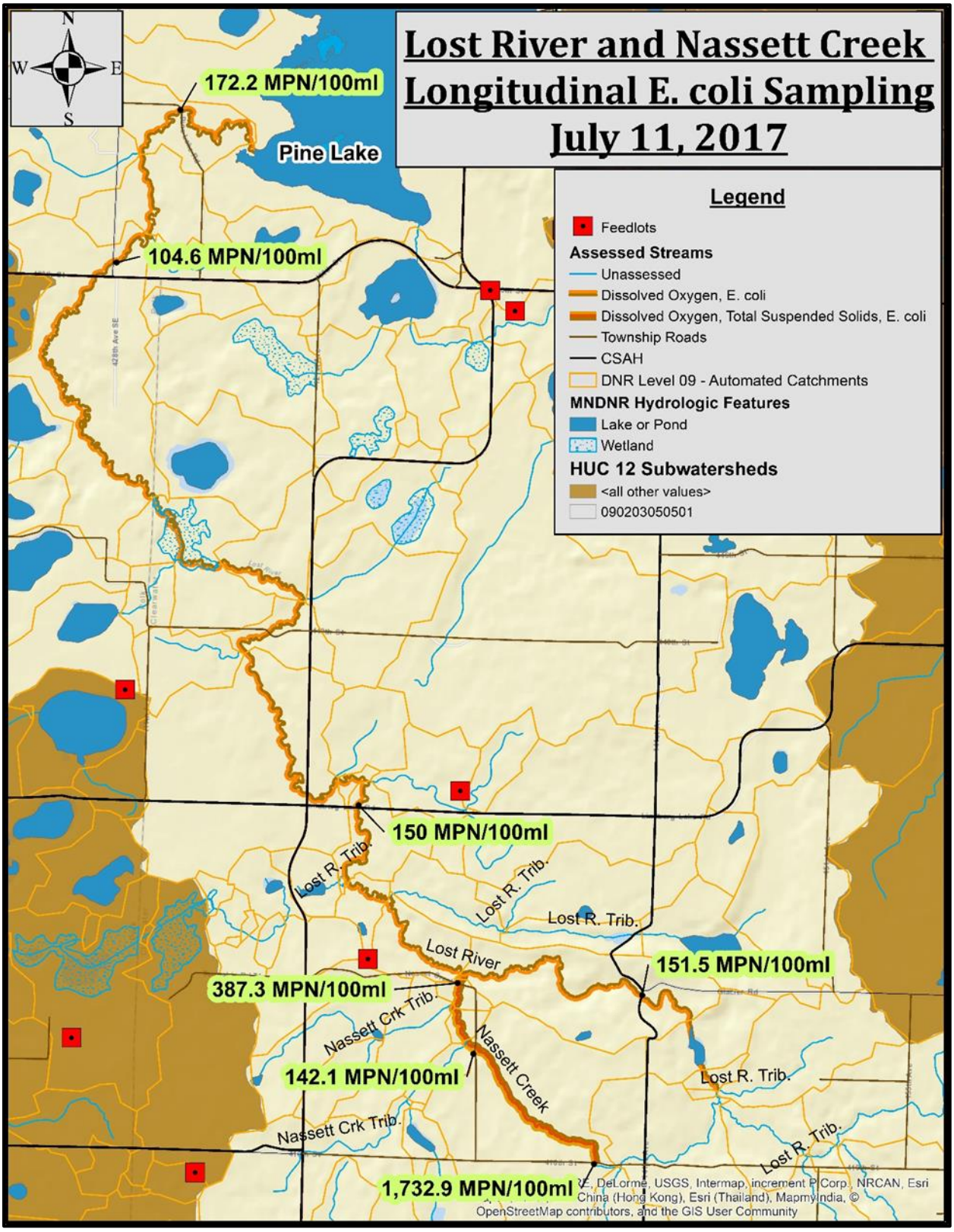




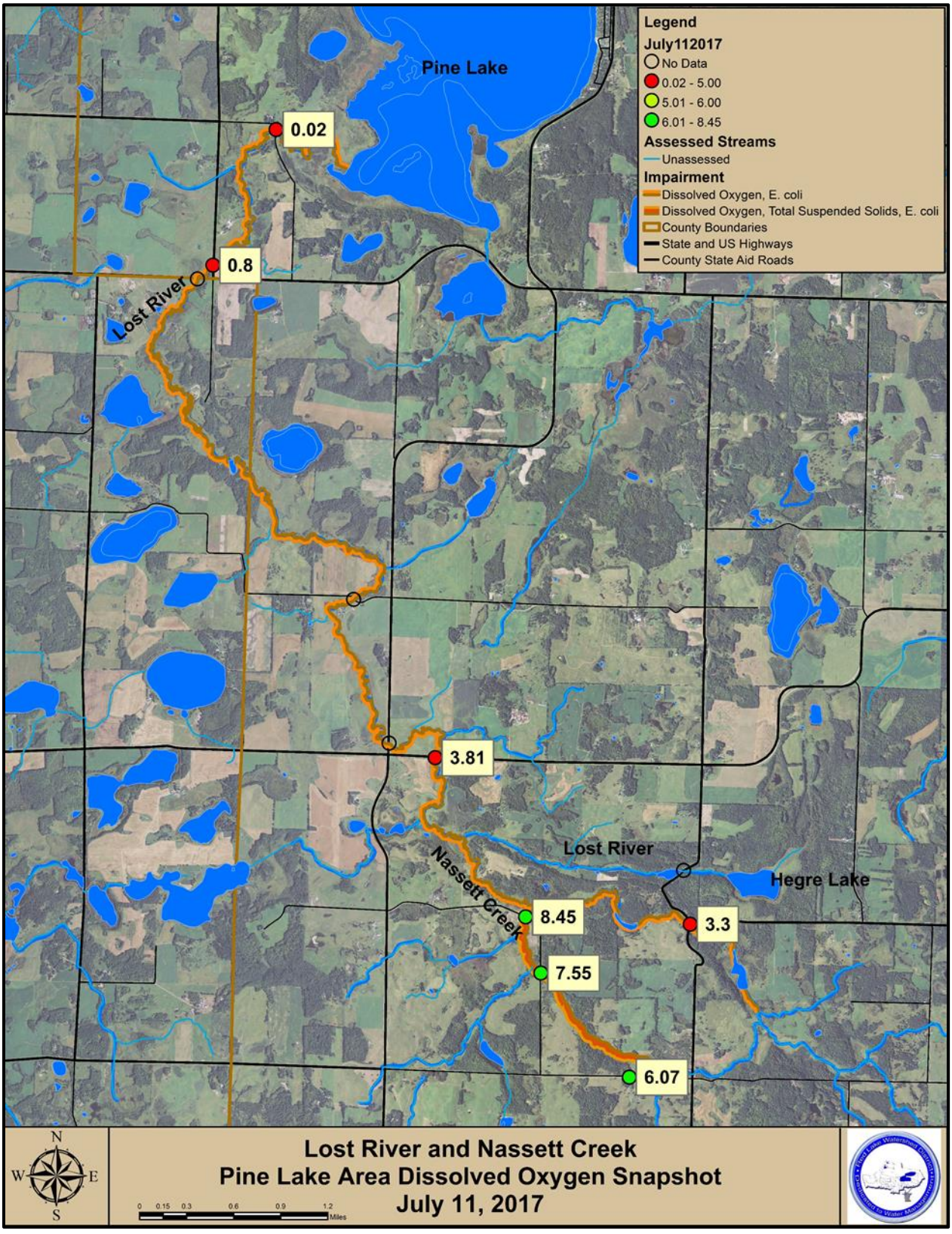
Longitudinal *E. coli* samples were collected along the Mud River. The concentration at the South Pool outlet of the Moose River Impoundment was low. Concentrations began exceeding the standard at Flintlock Road and peaked at Dylan Road. Fecal DNA analysis of samples collected in the Mud River (at the city park) found ruminant (livestock) and human fecal DNA markers.



Longitudinal *E. coli* samples and dissolved oxygen measurements were collected along the Lost River and Nassett Creek upstream of Pine Lake. There were multiple locations where *E. coli* concentrations increased to levels that exceeded the 126 MPN/100ml standard.



Dissolved oxygen levels within Nassett Creek improved from upstream to downstream and met the 7 mg/L standard at the two Nesset Creek Drive crossings. Dissolved oxygen levels in this portion of the Lost River were extremely low.



Watershed Restoration and Protection (WRAP) Projects

The Federal Clean Water Act (1972) requires each State to develop plans for the identification and restoration of waterbodies that are deemed impaired by state regulations. A TMDL is required by the U.S. Environmental Protection Agency (USEPA) 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.

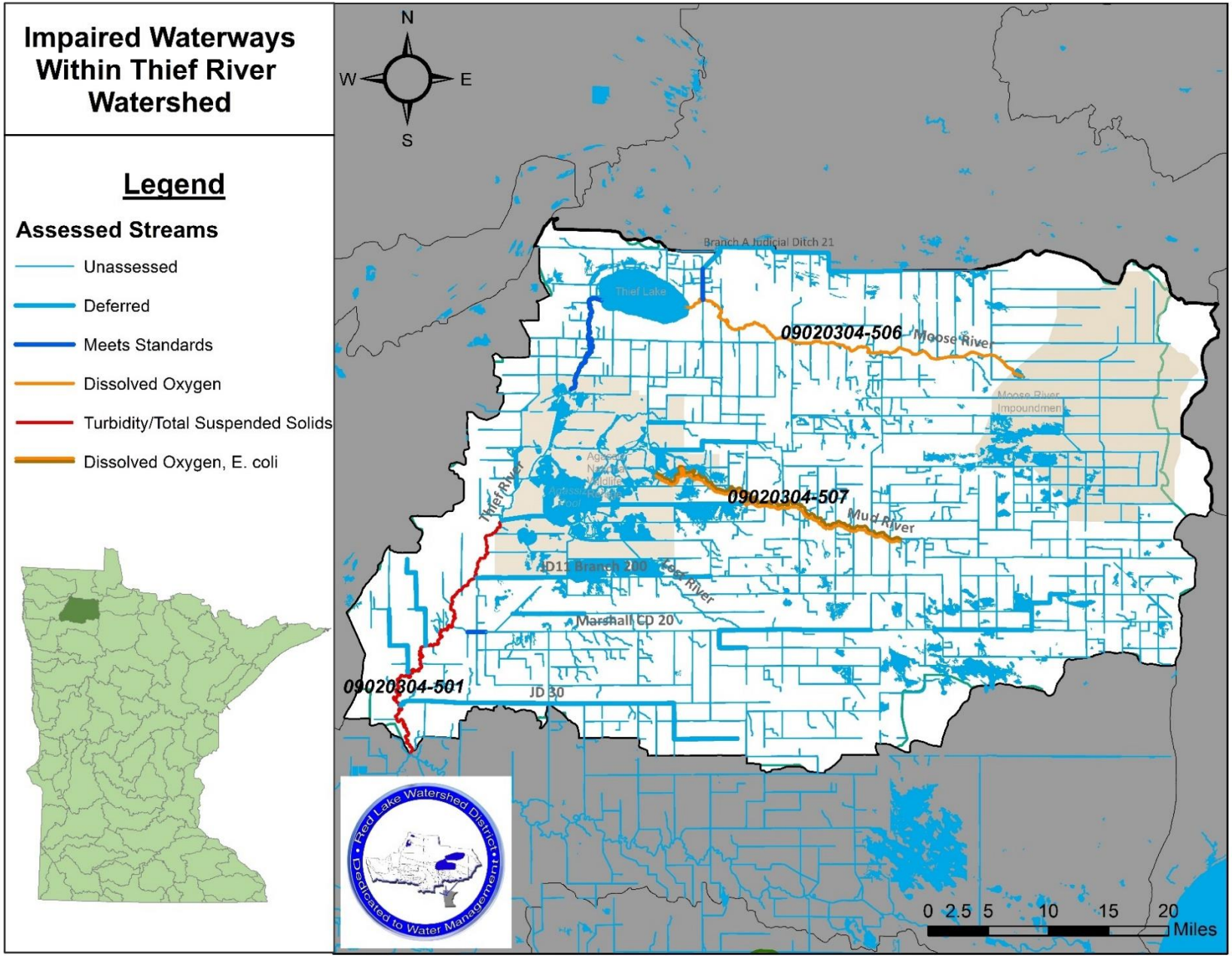
The State of Minnesota has adopted a "watershed approach" to address the state's 80 major watersheds (denoted by 8-digit hydrologic unit code or HUC). This watershed approach incorporates water quality assessment, watershed analysis, civic engagement, planning, implementation, and measurement of results into a 10-year cycle that addresses both restoration and protection. The watershed-based strategy recognizes 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. The stakeholder process will also be helped through this strategy. Not only is there an increased emphasis on civic engagement, but the process also avoids the redundancy that could occur when addressing TMDLs with a reach-by-reach strategy. The watershed-based, comprehensive implementation plan will be more useful and effective because it will address pollutant sources and stressors throughout the watershed. It will also reduce the complexity of incorporating TMDL implementation plans into watershed management plans.

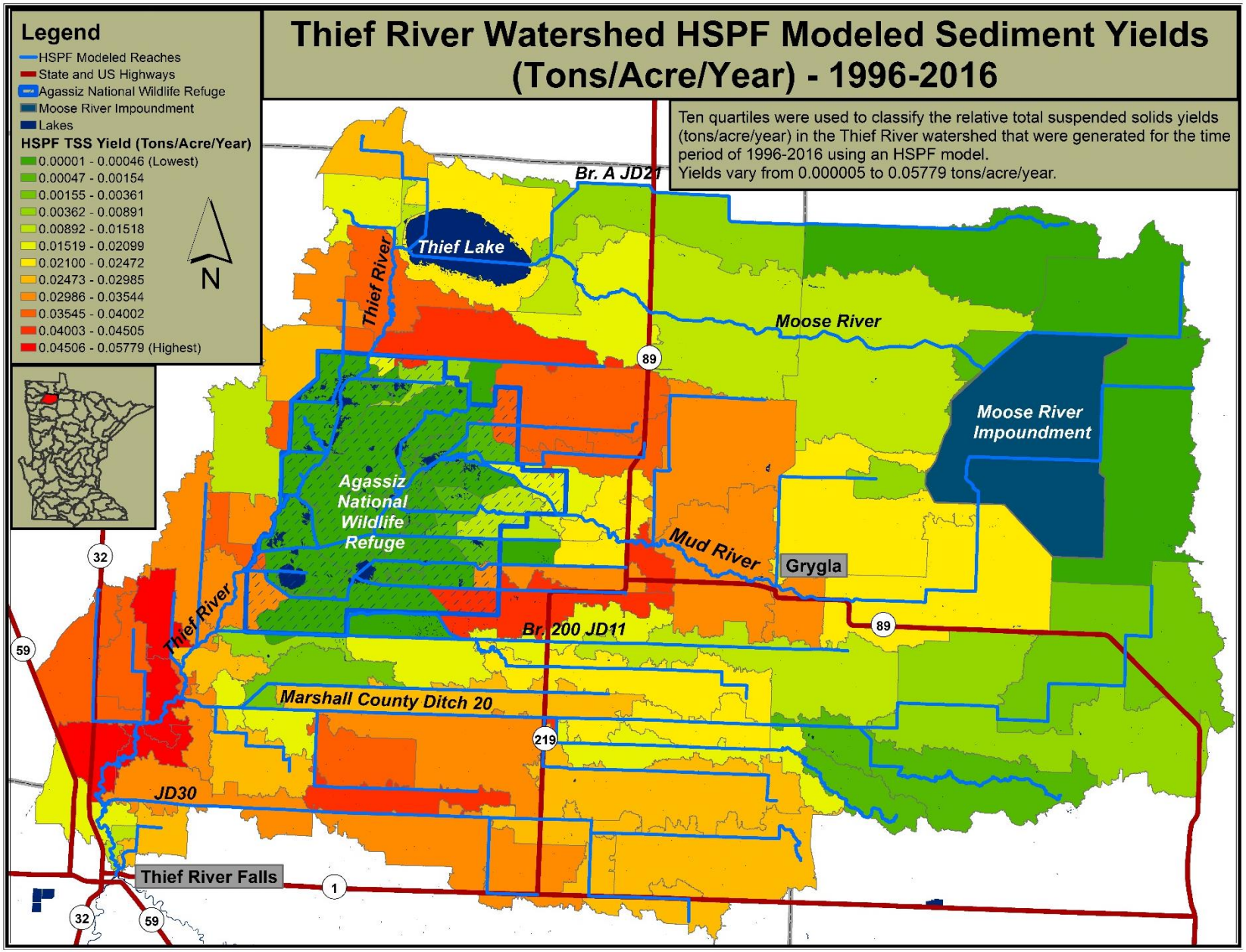
Thief River Watershed Restoration and Protection Strategy (WRAPS)

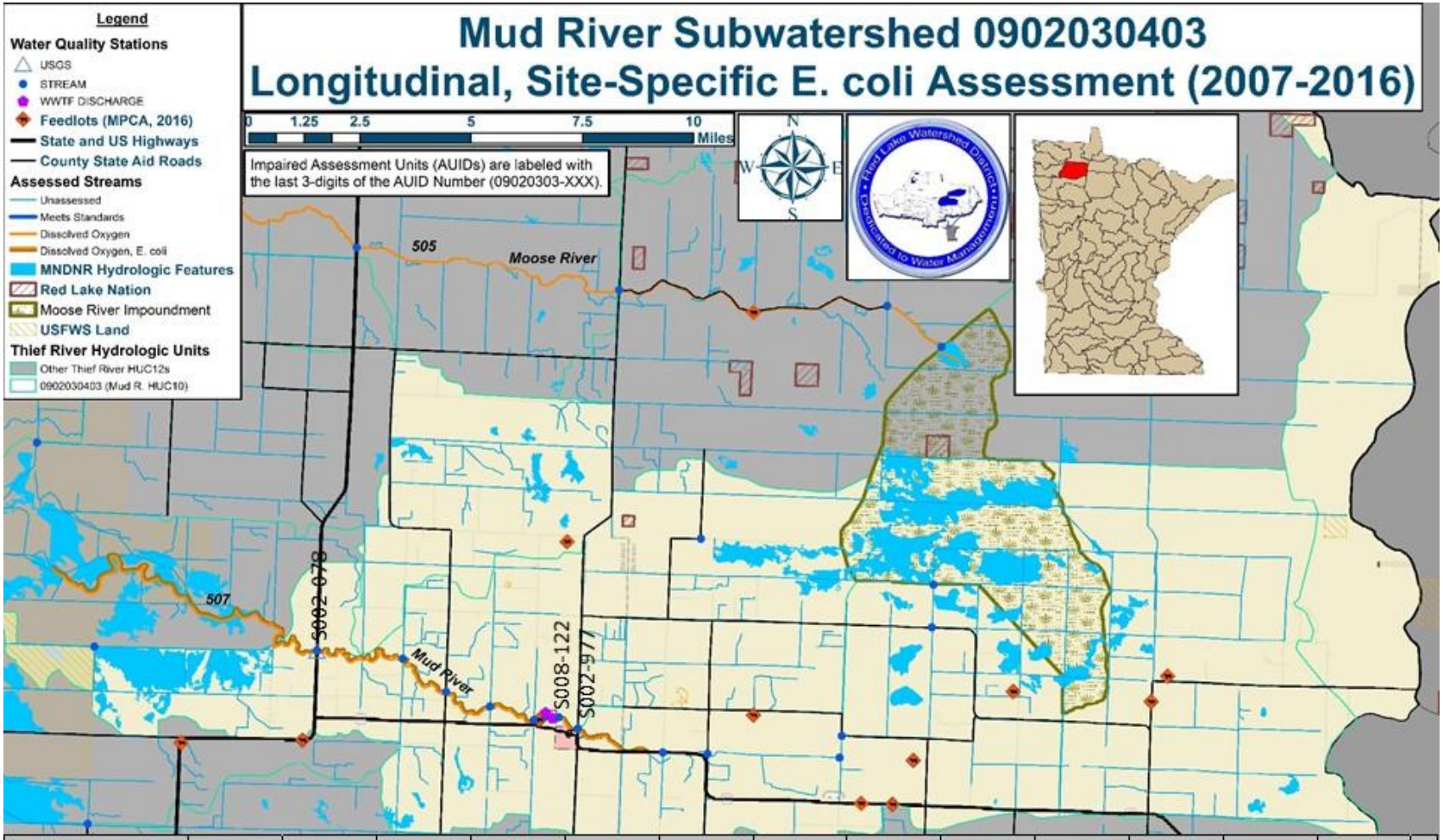
The District completed the Thief River WRAPS project in 2016. Draft Thief River Watershed TMDL and WRAPS Documents were completed in 2016 after multiple rounds of reviews and edits. In 2017, the District entered into a contract to add a TMDL for a Mud River *E. coli* impairment and to revise the Thief River documents before and after the public comment period. The documents were revised in late 2017 using feedback from the MPCA and the EPA. A lot of time was spent on editing and improving the nonpoint sediment sources section of the WRAPS in response to original and new comments from USFWS staff. Both reports will proceed through the public comment period in 2018.

The number of Thief River Watershed impairments on the 2014 USEPA's 303(d) list of impaired waters has been reduced to four after multiple reaches were recommended for delisting during the 2013 assessment. The Moose River and the Mud River remain impaired by low dissolved oxygen (DO). The Thief River downstream of Agassiz Pool is listed as impaired by high turbidity. The state's new 30 mg/l Central Nutrient Region total suspended solids (TSS) standard was used to develop a TMDL to address the turbidity impairment. *E. coli* levels have improved at the downstream end of the Mud River. The river meets the MPCA's standards when data from the whole 09020304-507 assessment unity is combined for an assessment. A delisting was anticipated. The Mud River is still listed as impaired by high *E. coli* because sites near Grygla still exceeded standards. A TMDL will be established for that impairment.

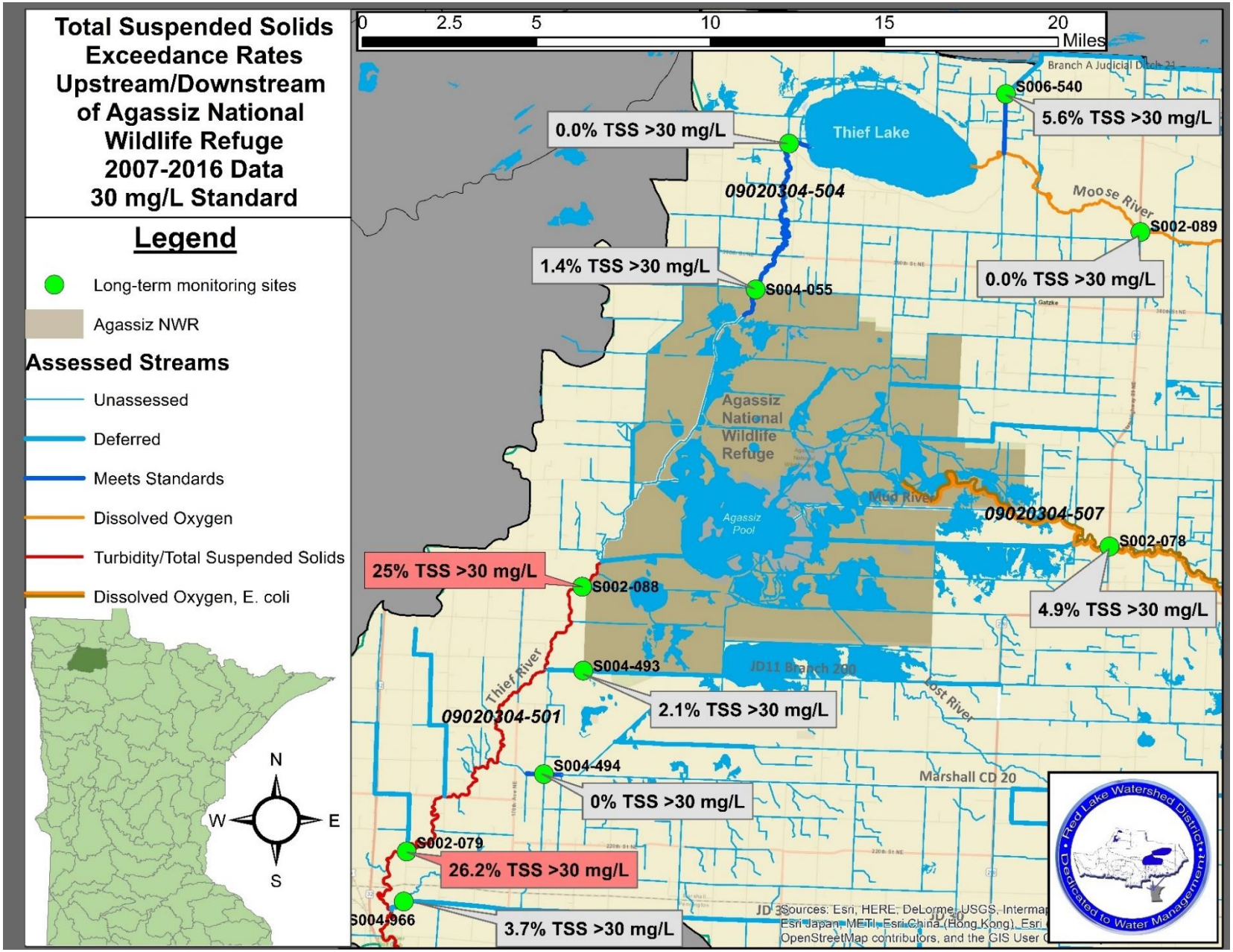
Following completion, the TMDL Report, the WRAPS report, and other technical reports referenced in this document will be publicly available on the MPCA website for the Thief River watershed: https://www.pca.state.mn.us/water/watersheds/thief-river. These and other documents can also be found on watershed-based web pages created for the Thief River: http://www.rlwdwatersheds.org/wraps-info.


Impaired Waterways Within Thief River Watershed
Legend
Assessed Streams
Unassessed
Deferred
Meets Standards
Dissolved Oxygen
Turbidity/Total Suspended Solids
Dissolved Oxygen, E. coli
N
W
E
S
Branch A Judicial Ditch 21
Thief Lake
09020304-506
Moose River
Moose River Impoundment
09020304-507
Mud River
Thief River
JD11 Branch 200
Red River
Marshall CD 20
09020304-501
JD 30
Red Lake Watershed District
Dedicated to Water Management
0 2.5 5 10 15 20
Miles


Thief River Watershed HSPF Modeled Sediment Yields (Tons/Acre/Year) - 1996-2016
Ten quartiles were used to classify the relative total suspended solids yields (tons/acre/year) in the Thief River watershed that were generated for the time period of 1996-2016 using an HSPF model.
Yields vary from 0.000005 to 0.05779 tons/acre/year.
Legend
HSPF Modeled Reaches
State and US Highways
Agassiz National Wildlife Refuge
Moose River Impoundment
Lakes
HSPF TSS Yield (Tons/Acre/Year)
0.00001 - 0.00046 (Lowest)
0.00047 - 0.00154
0.00155 - 0.00361
0.00362 - 0.00891
0.00892 - 0.01518
0.01519 - 0.02099
0.02100 - 0.02472
0.02473 - 0.02985
0.02986 - 0.03544
0.03545 - 0.04002
0.04003 - 0.04505
0.04506 - 0.05779 (Highest)
N
Br. A JD21
Thief Lake
Thief River
Moose River
Moose River Impoundment
Agassiz National Wildlife Refuge
Mud River
Grygla
Br. 200 JD11
Marshall County Ditch 20
JD30
Thief River Falls
89
32
59
219
1
32
59
89



Site ID:	S002-078	S008-123	S008-139	S008-132	S004-212	S008-122	S002-977	S008-140	S008-124	S008-133	S008-141	S002-090	S002-978	
AUID (09020305-XXX)	507	507	507	507	507	507	507	526	526	526	525	522	521	
Street/Road:	Hwy 89	360th Ave NE	CSAH 53 (370th Ave)	380th Ave NE	CSAH 10	Grygla City Park	CSAH 54	Dylan Rd NW	Flintlock Rd NW	Gunpowder Rd NW	Outpost Rd NW	CSAH 44	Moose R. Imp. Outlet	IF = <5 samples
May Geomean:	29.1	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	
June Geomean:	89.2	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	
July Geomean:	111.4	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	IF	
August Geomean:	57.1	IF	IF	IF	IF	183.0	271.4	IF	IF	IF	IF	IF	IF	
September Geomean:	36.1	IF	IF	IF	IF	141.8	421.5	IF	IF	IF	IF	IF	IF	
Total # of May-September Days with Samples:	68	1	1	1	6	16	16	2	2	2	1	2	2	


Total Suspended Solids Exceedance Rates Upstream/Downstream of Agassiz National Wildlife Refuge 2007-2016 Data 30 mg/L Standard
Legend
Long-term monitoring sites
Agassiz NWR
Assessed Streams
Unassessed
Deferred
Meets Standards
Dissolved Oxygen
Turbidity/Total Suspended Solids
Dissolved Oxygen, E. coli
N
W
E
S
0 2.5 5 10 15 20
Miles
S006-540
5.6% TSS >30 mg/L
0.0% TSS >30 mg/L
Thief Lake
09020304-504
Moose River
S002-089
0.0% TSS >30 mg/L
1.4% TSS >30 mg/L
S004-055
Agassiz National Wildlife Refuge
Agassiz Pool
Mud River
09020304-507
S002-078
4.9% TSS >30 mg/L
25% TSS >30 mg/L
S002-088
S004-493
2.1% TSS >30 mg/L
Thief River
09020304-501
JD11 Branch 200
Lost River
S004-494
0% TSS >30 mg/L
Marshall CD 20
S002-079
26.2% TSS >30 mg/L
S004-966
3.7% TSS >30 mg/L
Red Lake Watershed District
Dedicated to Water Management

Red Lake River Watershed Restoration and Protection Strategy (WRAPS)

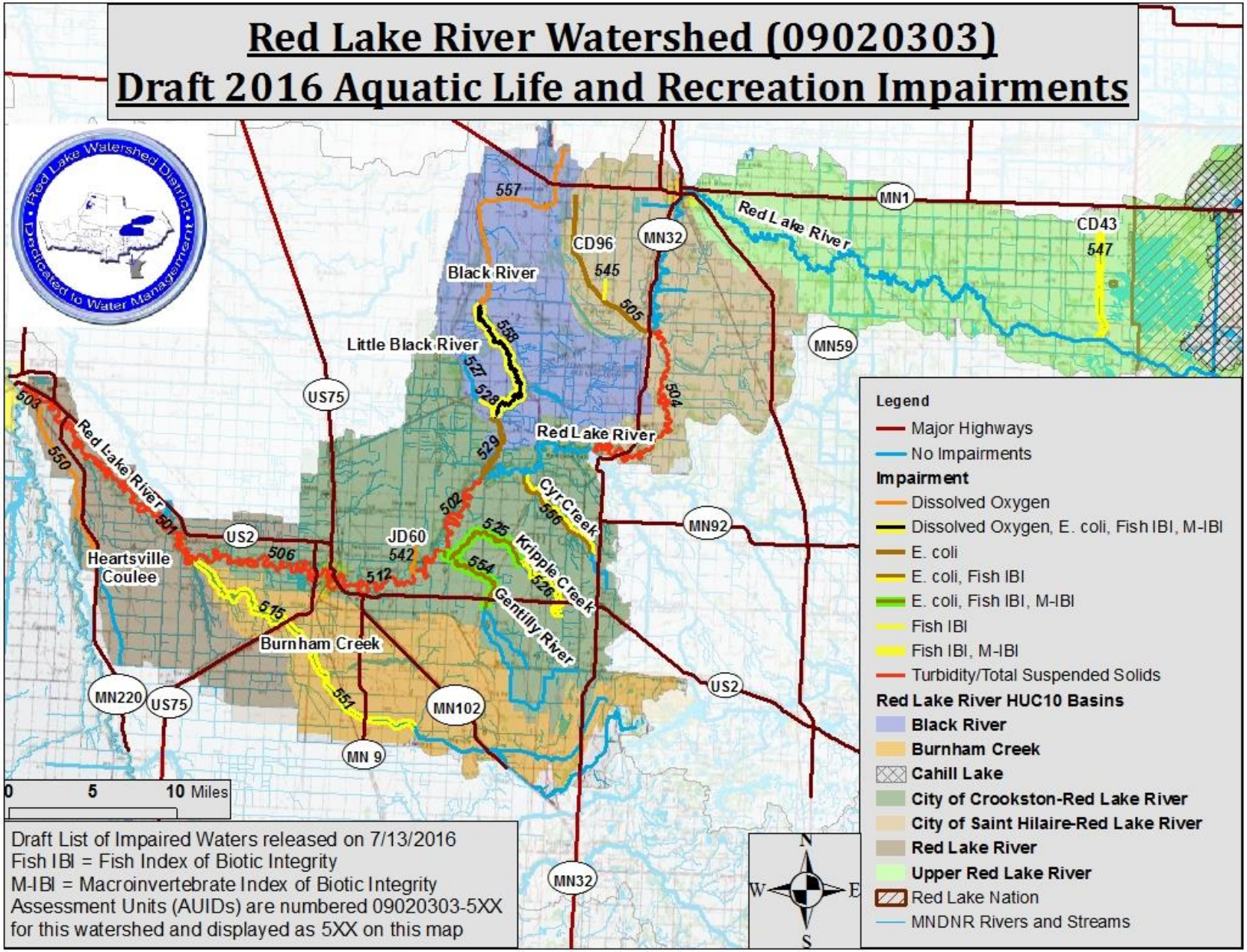
The District completed the Red Lake River WRAPS project in 2016. The District entered into a contract in 2017 to revise the documents before and after the public comment period. The TMDL and WRAPS reports were revised using feedback from the MPCA and should progress through the public comment period in 2018.

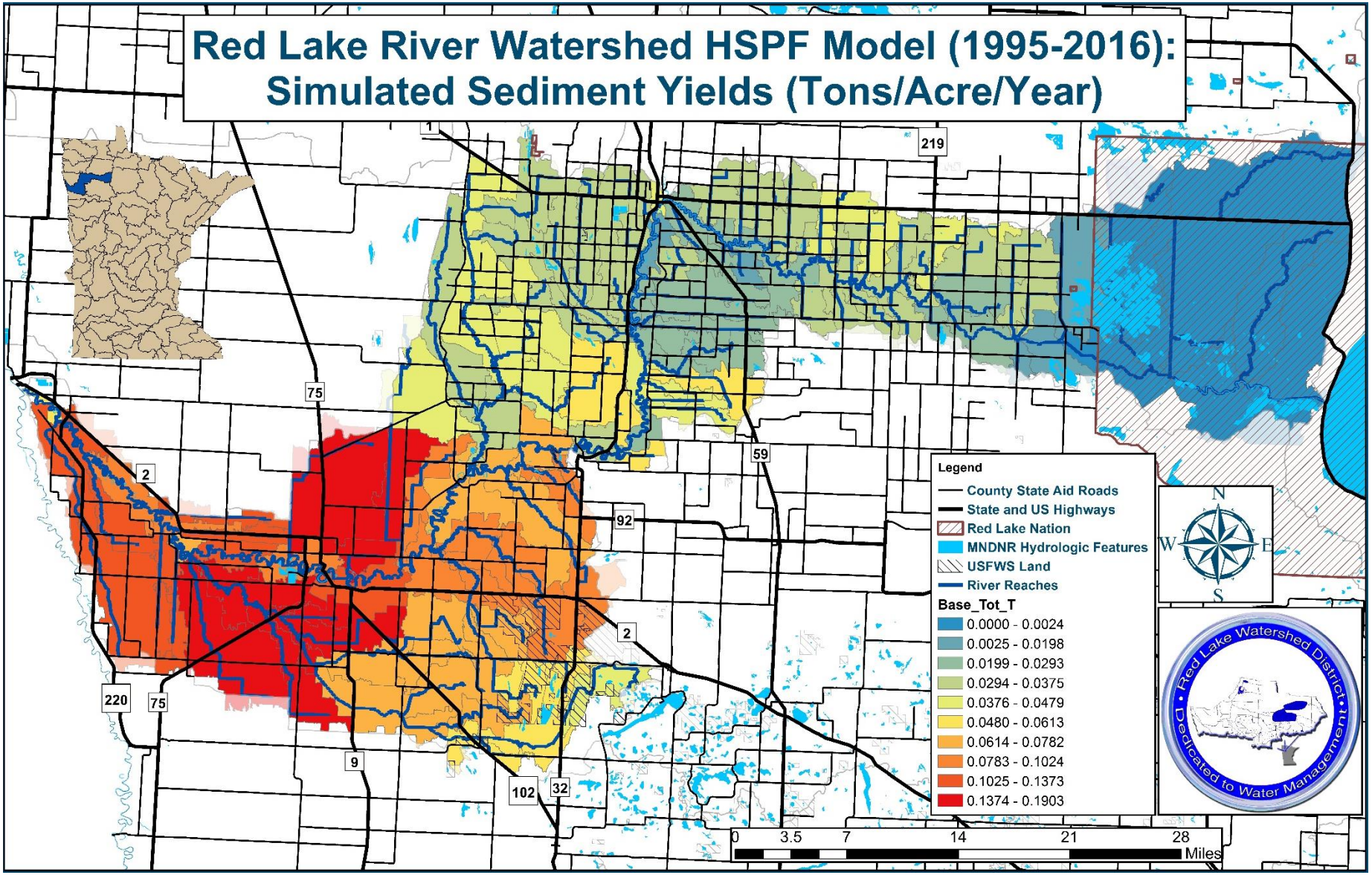
The Red Lake River Watershed TMDL addresses 31 impairments of aquatic life and/or recreation that have been found within 19 reaches of the Red Lake River and its tributaries. Turbidity and/or total suspended solids (TSS) impairments were found in five reaches of the Red Lake River between the Pennington County Ditch 96 confluence and the Red River of the North. Impairments due to chronically high concentrations of E. coli bacteria have been found along six reaches of Red Lake River tributaries. Impairments due to low dissolved oxygen (DO) levels have been identified in three reaches along tributaries of the Red Lake River. Low index of biotic integrity (IBI) scores have resulted in macroinvertebrate IBI (M-IBI) impairments for seven reaches and fish IBI (F-IBI) impairments for ten reaches along tributaries of the Red Lake River.

The TMDL and WRAPS reports recommend strategies for reducing nonpoint contributions of TSS using various erosion control strategies. Sources of pollution have been identified and described along with strategies for addressing those sources. Recommendations are also given for the improvement of DO levels and the quality of aquatic life. Insufficient base flow is the most common and impactful stressor for aquatic biology and DO within impaired Red Lake River tributaries. F-IBI scores are also limited by fish passage barriers in some reaches. No pollutant-based causes of DO or biological impairments are needed. The reports also include information about future monitoring plans, cost estimation, and civic engagement strategies. Restoration and protection strategies were compiled for application to the watershed, as a whole, and for each HUC 10 subwatershed.

The results of an updated HSPF modeling process were provided to the District by RESPEC. Maps and charts were updated with the new information. Some maps were improved. The Heartsville Coulee dissolved oxygen impairment was removed from the list of impaired waters by the MPCA (it was recategorized) because it is being caused by non-pollutant factors. Stressor and nonpoint pollutant source summary tables were added to the WRAPS.

District staff reviewed a draft version of the MPCA's Red Lake River Watershed Monitoring and Assessment Report and submitted comments to MPCA staff. Links to the monitoring and assessment report and other Red Lake River documents were added to the www.rlwdwatersheds.org website.

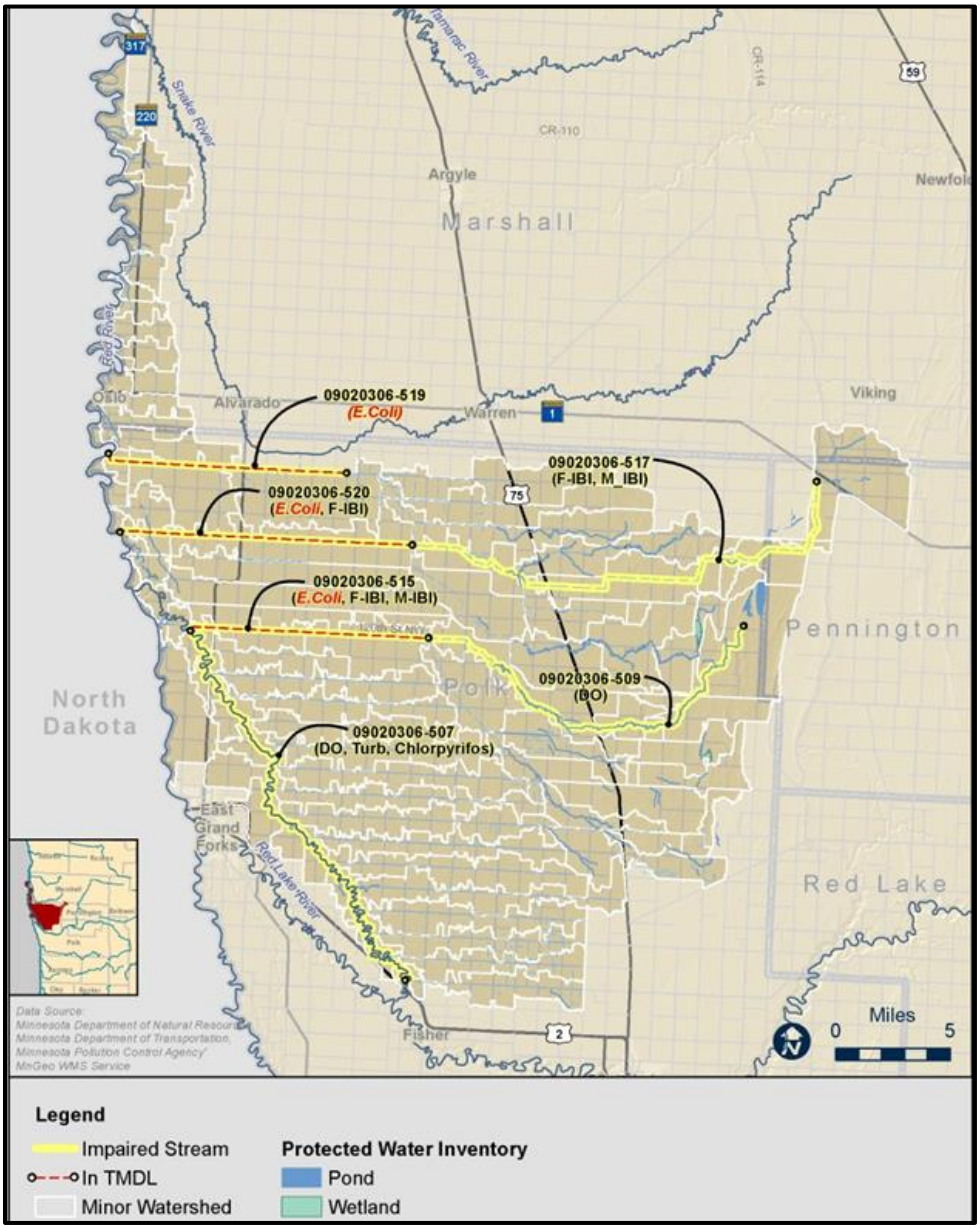

Red Lake River Watershed (09020303)
Draft 2016 Aquatic Life and Recreation Impairments
Red Lake Watershed District
Dedicated to Water Management
557
CD96
545
MN32
Red Lake River
MN1
CD43
547
Black River
505
558
Little Black River
527
528
MN59
US75
503
504
Red Lake River
529
550
Cyr Creek
566
502
525
Kripple Creek
526
MN92
US2
JD60
542
501
506
Heartsville
Coulee
554
512
Gentilly River
515
Burnham Creek
US2
MN220
US75
MN102
551
MN 9
MN32
0 5 10 Miles
Draft List of Impaired Waters released on 7/13/2016
Fish IBI = Fish Index of Biotic Integrity
M-IBI = Macroinvertebrate Index of Biotic Integrity
Assessment Units (AUIDs) are numbered 09020303-5XX
for this watershed and displayed as 5XX on this map
N
W
E
S
Legend
Major Highways
No Impairments
Impairment
Dissolved Oxygen
Dissolved Oxygen, E. coli, Fish IBI, M-IBI
E. coli
E. coli, Fish IBI
E. coli, Fish IBI, M-IBI
Fish IBI
Fish IBI, M-IBI
Turbidity/Total Suspended Solids
Red Lake River HUC10 Basins
Black River
Burnham Creek
Cahill Lake
City of Crookston-Red Lake River
City of Saint Hilaire-Red Lake River
Red Lake River
Upper Red Lake River
Red Lake Nation
MNDNR Rivers and Streams


Red Lake River Watershed HSPF Model (1995-2016):
Simulated Sediment Yields (Tons/Acre/Year)
Legend
County State Aid Roads
State and US Highways
Red Lake Nation
MNDNR Hydrologic Features
USFWS Land
River Reaches
Base_Tot_T
0.0000 - 0.0024
0.0025 - 0.0198
0.0199 - 0.0293
0.0294 - 0.0375
0.0376 - 0.0479
0.0480 - 0.0613
0.0614 - 0.0782
0.0783 - 0.1024
0.1025 - 0.1373
0.1374 - 0.1903
0 3.5 7 14 21 28
Miles
N
W
E
S
Red Lake Watershed District
Dedicated to Water Management
1
219
75
2
59
92
2
220
75
9
102
32

Grand Marais Creek Watershed Restoration and Protection Strategy (WRAPS)

Emmons and Olivier Resources, Inc. (EOR) staff and District staff worked to create a draft Grand Marais Creek Watershed TMDL report and a draft Grand Marais Creek WRAPS report that were completed in June 2017. District staff completed Mann-Kendall trend analysis for long-term monitoring sites in the Grand Marais Creek watershed. The reports will be revised by the District before and after the public comment period in 2018.

The TMDL report addresses *E. coli* impairments in three streams located in the Grand Marais Creek Watershed that are on Minnesota's Draft 2016 303(d) list of impaired waters. Following completion of the WRAPS process, the Grand Marais Creek WRAPS Report will be publicly available on the MPCA Grand Marais Creek Watershed website: https://www.pca.state.mn.us/water/watersheds/red-river-north-grand-marais-creek. Additional supporting information and reports can be found on the Red Lake Watershed District's watershed-based website: http://www.rlwdwatersheds.org.



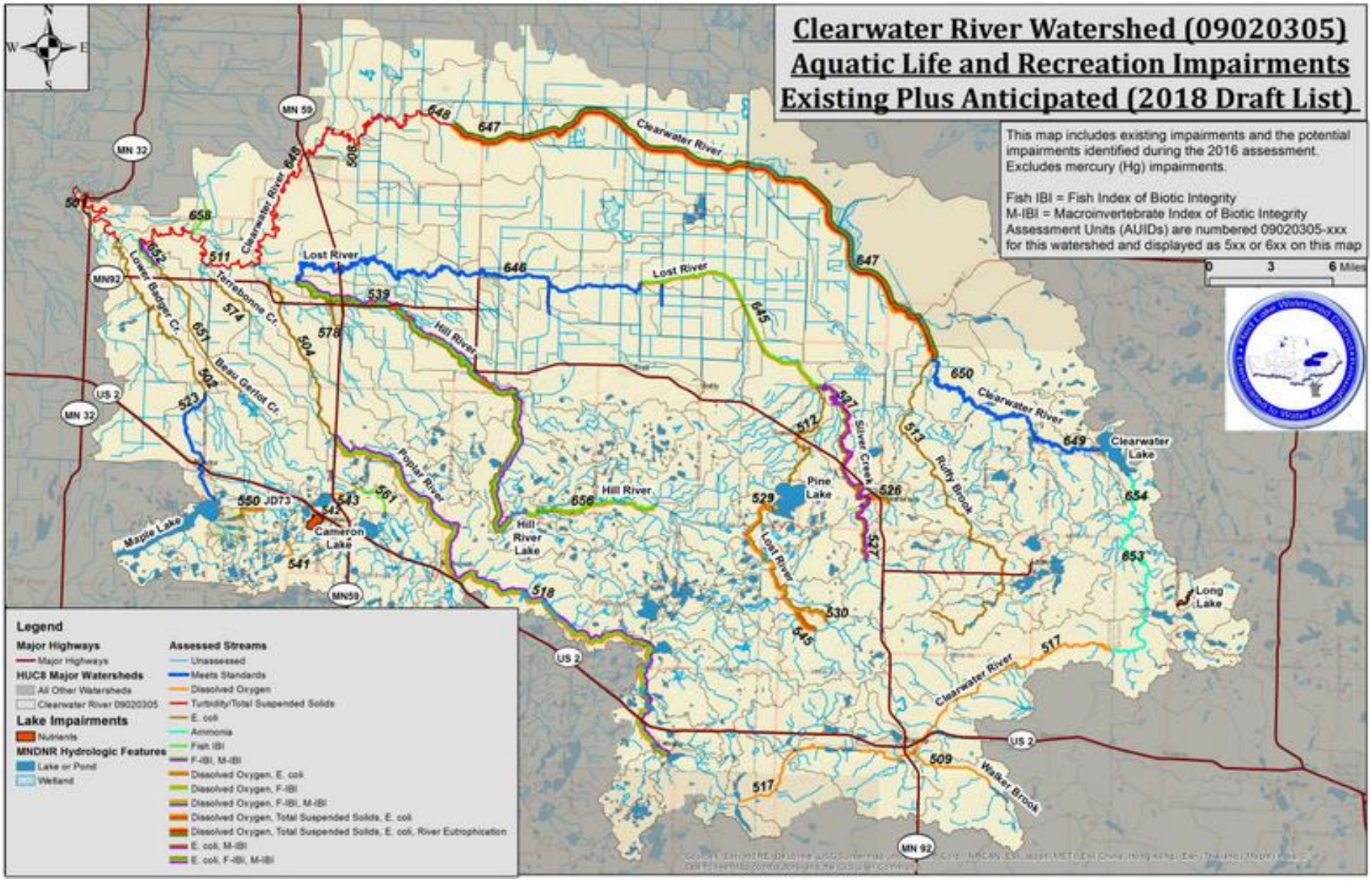
Clearwater River Watershed Restoration and Protection Strategy (WRAPS)

The District worked on writing the Clearwater River TMDL and WRAPS reports in 2017. TMDLs were calculated. Assessment statistics were updated by using more recent data that was collected from 2007 through 2016. Assessment statistics were ranked to prioritize the reaches of impaired streams and rivers that are closest to meeting water quality standards and the reaches of unimpaired waters that are closest to becoming impaired. The District assisted the MPCA with the stressor identification process and summarized the results of that process with the TMDL. The MPCA's completed watershed monitoring and assessment and stressor identification documents can be found on the MPCA website: https://www.pca.state.mn.us/water/watersheds/clearwater-river. Draft TMDL and WRAPS reports will be completed in 2018. Sections and features of the reports that were created in 2017 included:

- Trend analysis
- Project Overview
- Applicable standards
- Wasteload allocations
- Load duration curves
- Total maximum daily loads
- Recommended load reductions
- Description of wild rice production in the Clearwater River watershed.
- Loading capacity and load allocation methods
- Reserve capacity and margin of safety sections
- PTMApp description
- Longitudinal total suspended solids assessment for the Clearwater River.
- Revised Clearwater River HSPF sediment source pie chart
- Descriptions of biological stressors
- Permitted sources of total suspended solids
- Permitted and non-permitted *E. coli* sources
- Table of direct drainage areas for impaired streams and lakes
- Protection considerations
- Maps
    - Water quality impairments
    - HUC10 subwatersheds
    - Index of biotic integrity scores
    - Land Use
    - Pfankuch stream stability ratings

The Minnesota Pollution Control Agency sent a notice that they officially delisted dissolved oxygen impairments on two reaches of the Clearwater River (09020305-647 – Ruffy Brook to JD1 and 09020305-648 – JD1 to Lost River). The MPCA also officially removed the E. coli impairment on Branch A of JD 21 (09020304-555) from the Draft 2018 303(d) List of Impaired Waters. The recategorization of the dissolved oxygen impairment of Walker Brook (09020305-509 - Walker Brook Lake to Clearwater River), has also been officially reviewed and approved.

District staff met with lake associations to share information about the project and discuss potential projects. A newsletter was created and mailed to advertise a September public open house event that was held in Red Lake Falls. Short presentations were prepared for the event and were given on each 30-minute mark during the event. There was opportunity for small group or one-on-one discussion at informational booths. "Water Minute" scripts were created for the Clearwater River WRAPS, dissolved oxygen, *E. coli* bacteria, and turbidity/total suspended solids. The scripts were read and recorded by Joel Heitkamp and played as public service announcements on local radio stations. District staff wrote an article about the Clearwater River for the Polk County Newsletter.


Clearwater River Watershed (09020305)
Aquatic Life and Recreation Impairments
Existing Plus Anticipated (2018 Draft List)
This map includes existing impairments and the potential impairments identified during the 2016 assessment. 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 3 6 Miles
Legend
Major Highways
Major Highways
HUC8 Major Watersheds
All Other Watersheds
Clearwater River 09020305
Lake Impairments
Nutrients
MNDNR Hydrologic Features
Lake or Pond
Wetland
Assessed Streams
Unassessed
Meets Standards
Dissolved Oxygen
Turbidity/Total Suspended Solids
E. coli
Ammonia
Fish IBI
F-IBI, M-IBI
Dissolved Oxygen, E. coli
Dissolved Oxygen, F-IBI
Dissolved Oxygen, F-IBI, M-IBI
Dissolved Oxygen, Total Suspended Solids, E. coli
Dissolved Oxygen, Total Suspended Solids, E. coli, River Eutrophication
E. coli, M-IBI
E. coli, F-IBI, M-IBI
Clearwater River
Lost River
Hill River
Beau Gerlot Cr.
Lower Badger Cr.
Terrebonne Cr.
Poplar River
Silver Creek
Ruffy Brook
Lost River
Walker Brook
Maple Lake
Cameron Lake
Hill River Lake
Pine Lake
Clearwater Lake
Long Lake
JD73
MN 59
MN 32
MN92
US 2
MN59
MN 92

Impaired Waters in the Clearwater River (09020305) Watershed							
Assessment Unit ID	Waterbody Name	Description	Existing Impairments (2016)	New Impairments (2018)	Proposed Delistings, Corrections	HUC10	HUC10 Name
60-0189-00	Cameron Lake	226 acre lake near Erskine, MN	Nutrients			0902030506	Lower Badger Creek
04-0295-00	Long Lake	85 acre lake north of Little Buzzle Lake and Pinewood		Nutrients		0902030501	Upper Clearwater River
09020305-501	Clearwater River	Lower Badger Creek to Red Lake River	Turbidity/TSS			0902030507	Lower Clearwater River
09020305-502	Lower Badger Creek	CD14 to Clearwater River		*E. coli*		0902030506	Lower Badger Creek
09020305-504	Poplar River	Highway 59 to Lost River		*E. coli*		0902030504	Poplar River
09020305-508	County Ditch 57	Unnamed ditch to Clearwater River	DO		DO	0902030507	Lower Clearwater River
09020305-509	Walker Brook	Walker Brook Lake to Clearwater River	DO			0902030501	Upper Clearwater River
09020305-511	Clearwater River	Lost River to Beau Gerlot Creek	Turbidity/TSS			0902030507	Lower Clearwater River
09020305-512	Lost River	Pine Lake to Anderson Lake		*E. coli*		0902030505	Lost River
09020305-513	Ruffy Brook	Headwaters to Clearwater River	Fecal coliform *(E. coli)*			0902030502	Middle Clearwater River
09020305-517	Clearwater River	Headwaters to T148 R36W S36 east line	DO			0902030501	Upper Clearwater River
09020305-518	Poplar River	Spring Lake to Highway 59	DO	F-IBI, M-IBI		0902030504	Poplar River
09020305-526	Clear Brook	Headwater to Silver Creek		DO, *E. coli*		0902030505	Lost River
09020305-527	Silver Creek	Headwaters to Anderson Lake	Fecal coliform *(E. coli)*	M-IBI		0902030505	Lost River
09020305-529	Lost River	T148 R38W S17 south line to Pine Lake	DO	*E. coli*		0902030505	Lost River
09020305-530	Lost River	Unnamed cr to T148 R38W S20 north line		DO, *E. coli*		0902030505	Lost River
09020305-539	Hill River	Hill River Lake to Lost River		*E. coli*, F-IBI		0902030503	Hill River
09020305-541	Bee Lake Inlet	Eighteen Lake to Bee lake	DO		DO	0902030506	Lower Badger Creek
09020305-542	Poplar River Diversion	Badger Lake to Mitchell Lake	DO		DO	0902030506	Lower Badger Creek
09020305-543	Poplar River Diversion	Unnamed ditch to Badger lake	DO			0902030506	Lower Badger Creek
09020305-545	Nassett Creek	T148 R38W S28 south line to Lost River		TSS, DO, *E. coli*		0902030505	Lost River
09020305-550	Judicial Ditch 73	Unnamed ditch to Tamarack Lake		DO, *E. coli*		0902030506	Lower Badger Creek
09020305-561	Tributary to the Poplar River Diversion	Gerdin Lake to Poplar River Diversion		F-IBI		0902030506	Lower Badger Creek
09020305-574	Terrebonne Creek	CD4 to CD58	*E. coli*			0902030507	Lower Clearwater River
09020305-578	Brooks Creek	Unnamed cr to Hill River		*E. coli*		0902030503	Hill River
09020305-645	Lost River	Anderson Lake to Unnamed Cr (CSAH 28)		DO, F-IBI		0902030505	Lost River
09020305-647	Clearwater River	Ruffy Brook to JD1	Turbidity/TSS, DO	*E. coli*, Eutrophication	DO	0902030502	Middle Clearwater River
09020305-648	Clearwater River	JD1 to Lost River	Turbidity/TSS, DO		DO	0902030507	Lower Clearwater River
09020305-651	Beau Gerlot Creek	Upper Badger Creek to -96.1947 47.8413		*E. coli*		0902030507	Lower Clearwater River
09020305-652	Beau Gerlot Creek	-96.1947 47.8413 to Clearwater River		F-IBI, M-IBI		0902030507	Lower Clearwater River
09020305-653	Clearwater River	T148 R35W S31 west line to unnamed cr	Ammonia (un-ionized)		Ammonia	0902030501	Upper Clearwater River
09020305-654	Clearwater River	unnamed cr to Clearwater Lake	Ammonia (un-ionized)		Ammonia	0902030501	Upper Clearwater River
09020305-656	Hill River	Unnamed cr (Br4 CD 81 near Olga) to Hill River Lake		DO, F-IBI		0902030503	Hill River
09020305-658	County Ditch 23	-96.1479 47.8855 to Clearwater River		F-IBI		0902030507	Lower Clearwater River

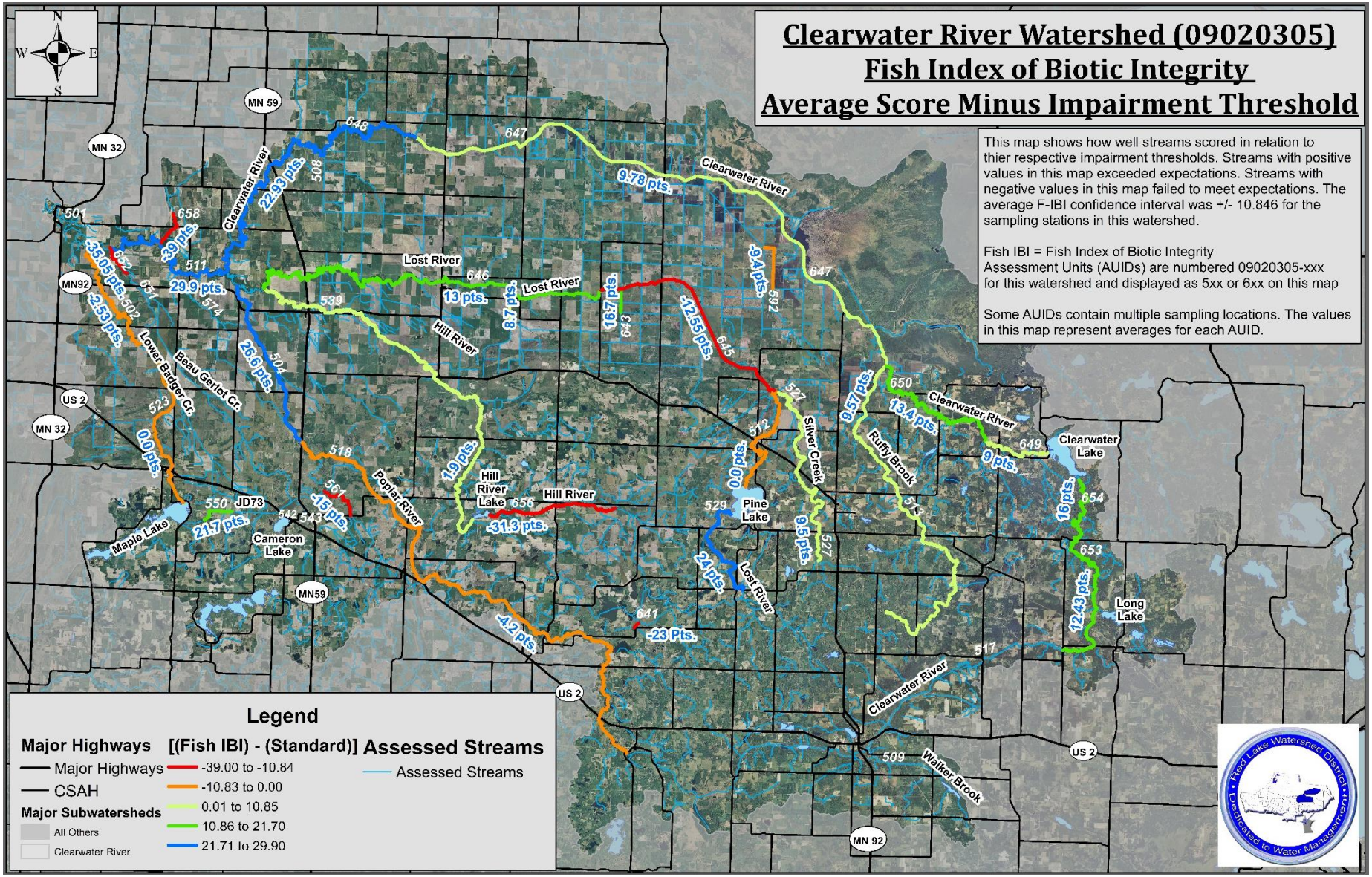
TSS = Total Suspended Solids

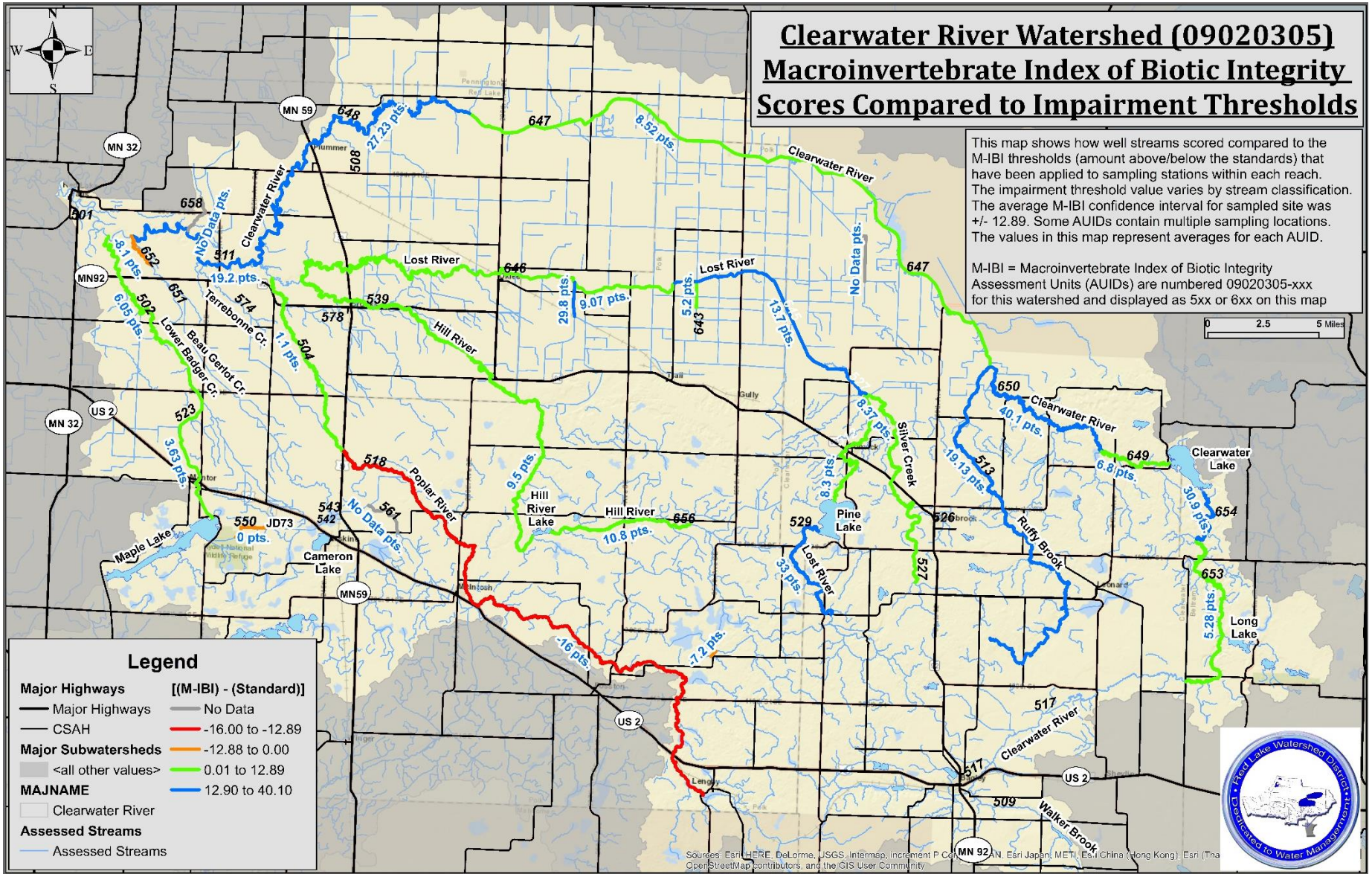
DO = Dissolved Oxygen

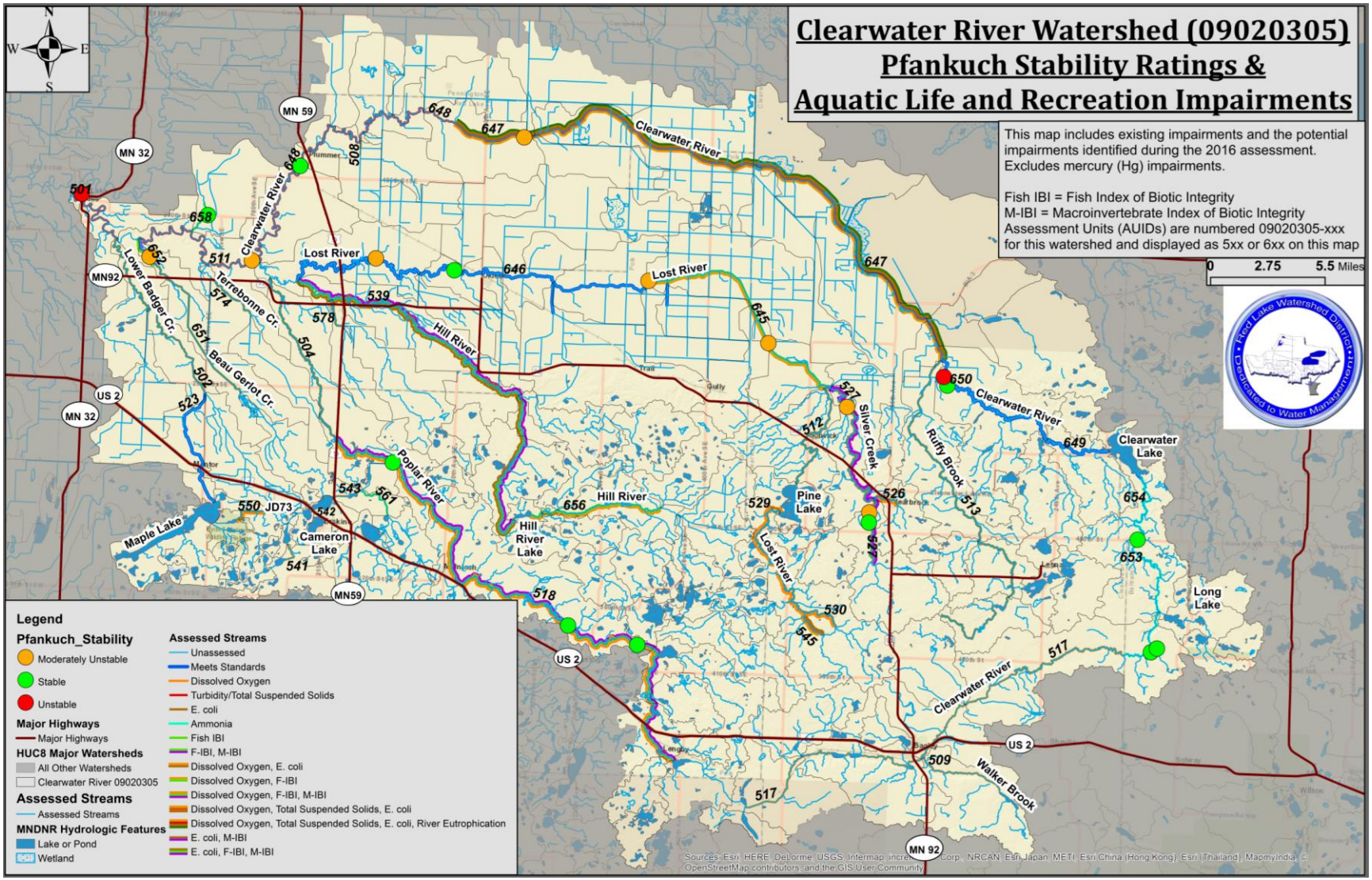
F-IBI = Fish Index of Biotic Integrity

M-IBI = Macroinvertebrate Index of Biotic Integrity

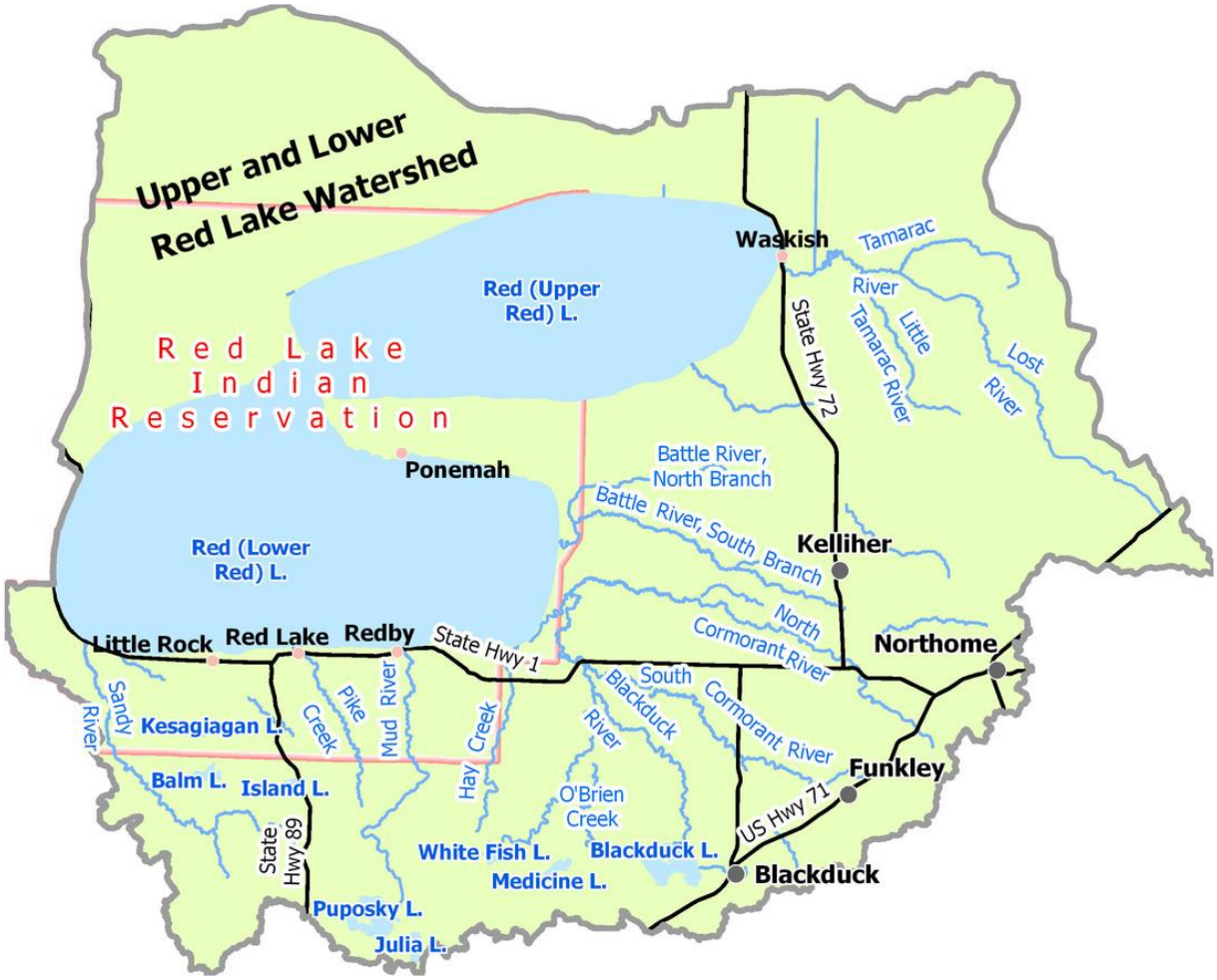
Fecal Coliform (*E. coli*) = The reach was found to be impaired for aquatic recreation by high fecal coliform concentrations and current *E. coli* data confirmed the impairment.


Clearwater River Watershed (09020305)
Fish Index of Biotic Integrity
Average Score Minus Impairment Threshold
This map shows how well streams scored in relation to thier respective impairment thresholds. Streams with positive values in this map exceeded expectations. Streams with negative values in this map failed to meet expectations. The average F-IBI confidence interval was +/- 10.846 for the sampling stations in this watershed.
Fish IBI = Fish Index of Biotic Integrity
Assessment Units (AUIDs) are numbered 09020305-xxx for this watershed and displayed as 5xx or 6xx on this map
Some AUIDs contain multiple sampling locations. The values in this map represent averages for each AUID.
Legend
Major Highways
Major Highways
CSAH
Major Subwatersheds
All Others
Clearwater River
[(Fish IBI) - (Standard)]
-39.00 to -10.84
-10.83 to 0.00
0.01 to 10.85
10.86 to 21.70
21.71 to 29.90
Assessed Streams
Assessed Streams
MN 59
MN 32
MN92
US 2
MN59
MN 92
Clearwater River
Lost River
Hill River
Beau Gerlot Cr.
Lower Badger Cr.
Poplar River
Silver Creek
Ruffy Brook
Walker Brook
Hill River Lake
Pine Lake
Maple Lake
Cameron Lake
Clearwater Lake
Long Lake
JD73
22.93 pts.
-39 pts.
-35.05 pts.
-2.53 pts.
29.9 pts.
26.6 pts.
0.0 pts.
21.7 pts.
-15 pts.
1.9 pts.
-31.3 pts.
-4.2 pts.
-23 Pts.
24 pts.
0.0 pts.
9.5 pts.
9.78 pts.
-9.4 pts.
-12.55 pts.
16.7 pts.
8.7 pts.
13 pts.
9.57 pts.
13.4 pts.
9 pts.
16 pts.
12.43 pts.
Fred Lake Watershed District
Dedicated to Water Management


Clearwater River Watershed (09020305)
Macroinvertebrate Index of Biotic Integrity
Scores Compared to Impairment Thresholds
This map shows how well streams scored compared to the M-IBI thresholds (amount above/below the standards) that have been applied to sampling stations within each reach. The impairment threshold value varies by stream classification. The average M-IBI confidence interval for sampled site was +/- 12.89. Some AUIDs contain multiple sampling locations. The values in this map represent averages for each AUID.
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 2.5 5 Miles
Legend
Major Highways
Major Highways
CSAH
Major Subwatersheds
<all other values>
MAJNAME
Clearwater River
Assessed Streams
Assessed Streams
[(M-IBI) - (Standard)]
No Data
-16.00 to -12.89
-12.88 to 0.00
0.01 to 12.89
12.90 to 40.10
MN 59
MN 32
MN92
US 2
MN59
MN 92
Clearwater River
Lost River
Hill River
Poplar River
Silver Creek
Ruffy Brook
Walker Brook
Terrebonne Cr.
Beau Gerlot Cr.
Lower Badger Cr.
Maple Lake
Cameron Lake
Hill River Lake
Pine Lake
Clearwater Lake
Long Lake
Plummer
Gully
Leonard
Lengby
Red Lake Watershed District
Dedicated to Water Management
Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Co... AN, Esri Japan, METI, Esri China (Hong Kong), Esri (Tha... OpenStreetMap contributors, and the GIS User Community


Clearwater River Watershed (09020305)
Pfankuch Stability Ratings &
Aquatic Life and Recreation Impairments
This map includes existing impairments and the potential impairments identified during the 2016 assessment.
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
Pfankuch_Stability
Moderately Unstable
Stable
Unstable
Major Highways
Major Highways
HUC8 Major Watersheds
All Other Watersheds
Clearwater River 09020305
Assessed Streams
Assessed Streams
MNDNR Hydrologic Features
Lake or Pond
Wetland
Assessed Streams
Unassessed
Meets Standards
Dissolved Oxygen
Turbidity/Total Suspended Solids
E. coli
Ammonia
Fish IBI
F-IBI, M-IBI
Dissolved Oxygen, E. coli
Dissolved Oxygen, F-IBI
Dissolved Oxygen, F-IBI, M-IBI
Dissolved Oxygen, Total Suspended Solids, E. coli
Dissolved Oxygen, Total Suspended Solids, E. coli, River Eutrophication
E. coli, M-IBI
E. coli, F-IBI, M-IBI
Clearwater River
Lost River
Hill River
Poplar River
Silver Creek
Ruffy Brook
Lost River
Clearwater River
Clearwater River
Walker Brook
Lower Badger Cr.
Terrebonne Cr.
Beau Gerlot Cr.
Maple Lake
Cameron Lake
Hill River Lake
Pine Lake
Clearwater Lake
Long Lake
MN 59
MN 32
MN92
US 2
MN 32
MN59
US 2
US 2
MN 92
501
658
652
511
574
578
504
502
523
651
539
646
648
647
508
645
650
649
654
653
527
512
526
529
656
543
561
542
550
JD73
541
518
530
545
517
509
517
Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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. The Red Lake DNR conducted investigative *E. coli* sampling. They collected microbial source tracking samples to identify sources of E. coli bacteria pollution at 14 locations. Fecal DNA markers for ruminants (livestock, 4 sites), beaver (6 sites), humans (1 site), and birds (3 sites) were detected.

Improvements were made to Upper/Lower Red lakes web pages on the www.rlwdwatersheds.org website.

- http://www.rlwdwatersheds.org/2297560-general-info
- http://www.rlwdwatersheds.org/2297608-wrap-info

The MPCA has completed a watershed monitoring assessment report and a stressor identification report for the watershed. Local staff provided input for the stressor identification report.

- https://www.pca.state.mn.us/water/watersheds/upperlower-red-lake

Public Education

- District staff helped judge the Franklin Middle School Science Fair.
- District staff presented on water quality parameters at the 14th 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.
- District staff participated in the Northwest Minnesota Water Festival (Warren and Fertile).
- Monthly water quality reports are available online at http://www.redlakewatershed.org/monthwq.html.
- The District participated in the Thief River Falls Community Expo
- An open house event was held for the Clearwater River WRAPS project in September 2017.
- 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 a Facebook page: https://www.facebook.com/Red-Lake-Watershed-District-266521753412008/.
- The Board approved a donation of $300 to the Area I Envirothon to promote education and awareness of water quality issues.

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. The group successfully applied to get the Red Lake River corridor recognized as a trail of regional or statewide significance and to receive funding for projects.
- The Beltrami SWCD, Clearwater SWCD, Clearwater Area Lake Association and the District formed a partnership to successfully apply for an Enbridge Energy Ecofootprint Grant to restore and protect shoreline areas of Clearwater Lake from further erosion.
- District and RRWMB staff worked together to submit comments on the proposed amendments to state water quality standards, which will establish a Tiered Aquatic Life Uses (TALU) framework and modify Class 2 beneficial use designations.
- District staff met with a graduate student who is examining alternative strategies for restoring a portion of the Mud River upstream of Agassiz Pool.
- The West Polk SWCD received grants to do an inventory of the Burnham Creek subwatershed and to stabilize the outlet of a tributary to Burnham Creek (Project 134).
- The District paid for the repair of a YSI sonde that is used by the East Polk SWCD for the collection of water quality data.
- The District is working with partners on the Red Lake River 1W1P planning work group and Houston Engineering on a project that will update the Red Lake River PTMApp model.
- The Board approved a partnership with the USFWS and submittal of a grant application for potential wetland restoration in the Thief River Watershed and other various locations.

- District staff participate in the Polk County AIS Task Force that meets several times each year to discuss appropriation of AIS funds.
- The West Polk SWCD is planning to host a 1000 square foot traveling exhibit called We Are Water. The exhibit features state wide and local information about Minnesota's water story, bringing together personal narratives, historical materials and scientific information. District staff have participated in planning meetings. A 1000 ft^2 exhibit will be displayed in Crookston from January 20, 2019 through March 4, 2019, likely at Kiehle Hall on the University of Minnesota, Crookston campus.
- District staff and managers participated in the Governor Dayton's 25 by '25 Town Hall event at the University of Minnesota, Crookston.
- The Board approved a Clean Water Fund Assistance Contract with the West Polk SWCD for stabilization of the outlet of Polk County Ditch 63, Project No. 134.
- The Board approved the reimbursement of analysis expenses for water quality samples that were collected in Maple Lake by the Maple Lake Improvement District.

2018 Plans

- Thief River Watershed Restoration and Protection Strategy public review process
    - Assist MPCA staff with responses to public comments and prepare TMDL/WRAPS reports for final approval.
- Red Lake River Watershed Restoration and Protection Strategy public review process
    - Assist MPCA with responses to public comments on draft TMDL/WRAPS reports. Incorporate appropriate public comments into the TMDL and WRAPS reports and prepare documents for final state and USEPA approval.
- Clearwater River Watershed Restoration and Protection Strategy
    - Complete a draft Clearwater River Watershed Total Maximum Daily Load Report
    - Complete a draft Clearwater River Watershed Restoration and Protection Strategy
    - Edit draft WRAPS/TMDL reports using comments from state and local agencies
    - Clearwater River Open House Event
    - Assist MPCA with responses to public comments on draft TMDL/WRAPS reports.
- Sampling for the District's long-term monitoring program in May, June, July, and September
- Continuous dissolved oxygen monitoring at several locations.
- Stage and flow monitoring
- Contribute to the Thief River 1W1P process.
- Public education
- River Watch
- River of Dreams
- Assist SWCDs with grant-writing
- The District will reimburse the sample analysis expenses for 9 lakes in the Clearwater River watershed that will be sampled by the East Polk SWCD in 2018, 2019, and 2020.

River Watch

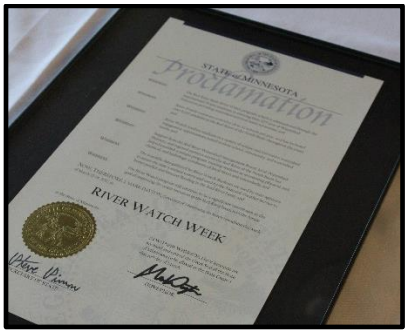
In 2017, eight schools located within Red Lake Watershed District's boundaries participated in River Watch. Four of which received direct support from RLWD staff, they included: Win-E-Mac, Red Lake County Central, Red Lake Falls and Clearbrook-Gonvick. International Water Institute (IWI) and University of MN Crookston led the remaining school groups in the watershed which included: Fisher, Red Lake, Crookston, and Sacred Heart of East Grand Forks, MN. River Watch water quality monitoring began late April and ended late October. Approximately 50 different sites were sampled 3 or more times in 2017 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 the only data collected, making River Watch a very beneficial program for collecting water quality data within the watershed district.

October 2016, IWI held one of three River Watch 2017 Kick Offs at the RLWD office in Thief River Falls, MN. Schools received a poster and video assignment to be presented at the spring 2017 River Watch Forum. This year's assignment was "Our Place in the Basin: Understanding our Subwatersheds". River Watch teams were given a worksheet to fill out about the subwatershed they sample. They were to use the information from the worksheet to create a 30-60 minute lesson plan for 4th graders in their school. Kickoff attendees were also treated to a paddle on the Thief and Red Lake Rivers, in large 10-person voyager canoes.

River Watch Forum

March 12-18, 2017 was proclaimed as River Watch Week by Minnesota Governor Mark Dayton.



The annual River Watch forum was held on March 15, 2017 at the University of MN Crookston campus, where schools from North Dakota and Minnesota were represented. The theme for the 2017 forum was "Water – Any career Any Day". Keynote speaker Mike Jacobs, former editor and publisher of the Grand Forks Herald, talked about how water in the Red River of the North affected his career at the Herald and threw the newspaper into the spotlight during the devastating 1997 floods. The Grand Forks Herald won a Pulitzer Prize for Public Service in 1998 for its coverage of the 1997 flood. The breakout session was divided into different careers tracks with speakers from many career genres speaking about how water plays a role in their careers. Some of the career tracks included: education, advocacy, public health, nursing, emergency response, agriculture and landowners. A lively round of River Watch Jeopardy was played with Clearbrook-Gonvick taking home 3rd place. Clearbrook-Gonvick was also awarded the 10 Year Milestone award to being active in River Watch for a total of 10 years.

River Explores Kayak Trip – River Watch

Red Lake County Central participated in a River Explorers kayak trip in June. The trip was led by the guidance of International Water Institute (IWI) staff. Students observed river characteristics, local flora and fauna, and overcame challenges such as kayaking over a rock riffle rapid. Students were encouraged to take photos using water proof geotagging cameras, that log the exact location a picture is taken.

On June 20th, RLCC started their paddle on the Clearwater River at Red Lake Co Road 1 bridge, Southwest of Plummer, MN ending where the Clearwater River passes under Red Lake Co Road 20 (4.2 river miles). Proper paddling techniques and safety measures were discussed before launching the kayaks. Students were given a handout printed on waterproof paper for them to take notes during the paddle, they were to write down their observations about habitat, wildlife, land use, areas of concern, etc. At the end of the trip the group discussed their observations. This program provides a great opportunity for students to experience kayaking around their communities. For one student, this was their first kayaking experience.

Macro Invertebrate Sampling – River Watch

The Red Lake County River Watch Team sampled for macro invertebrates in the Hill River, half a mile northwest of Brooks, MN in September. Students learned how to follow invertebrate sampling protocol, identify different habitat types to sample, proper use of equipment for collecting inverts, and sorting and identify invertebrates using a key. Students also learned which invertebrates are indicators of good and bad water quality.

Geographic Information Systems (GIS)

Mapping: Maps are created as needed to accommodate requests by District staff. It should be noted that RLWD created maps are not to be used as legal survey maps, and they are for reference use only.
In 2017, a live working ArcGIS map was created for tracking parcel splits for the Thief River Falls Water Management District, RLWD Project 171A.

GIS Data Storage: July 2017 RLWD installed a new server that would store all GIS data. GIS data had currently been stored on a desktop hard drive, which occasionally caused difficulties for other staff members that tried to access and save edits correctly. Having all GIS data now saved in a central location, unattached from a specific desktop hard drive allows other staff members to easily gain access to the many gigabytes worth of GIS data the District has. There are currently 640 gigabytes of data being stored on the new GIS drive.

PTMApp (Prioritize Target and Measure Application)

PTMApp is a GIS based application that uses LiDAR data and terrain analysis methods to prioritize field scale locations for conservation and best management practices. Generating data to prioritize resources/issues, target specific fields to place CPs and BMPs, and measure water quality improvement by tracking expected nutrient and sediment load reduction to priority resources.

The tool enables users to build prioritized and targeted implementation scenarios, measure the cost-effectiveness of the scenario for improving water quality, and report the results to pursue funds for project implementation.

RLWD, in partnership with Pennington County SWCD was awarded an Accelerated Implantation Grant in 2017 to help with the creation of data for PTMApp, run PTMApp, and evaluate the results in a written report to be presented to the Thief River 1W1P advisory board. Much of the time spent for this project in 2017 was preparing required input data needed to run PTMApp.

Other Watershed Activities

Permits (RLWD Project #90)

In 2017 a total of 176 permit applications were received, of those, 28 were for subsurface tile projects. This year was the second full year of the District's subsurface drain tile permitting policy.

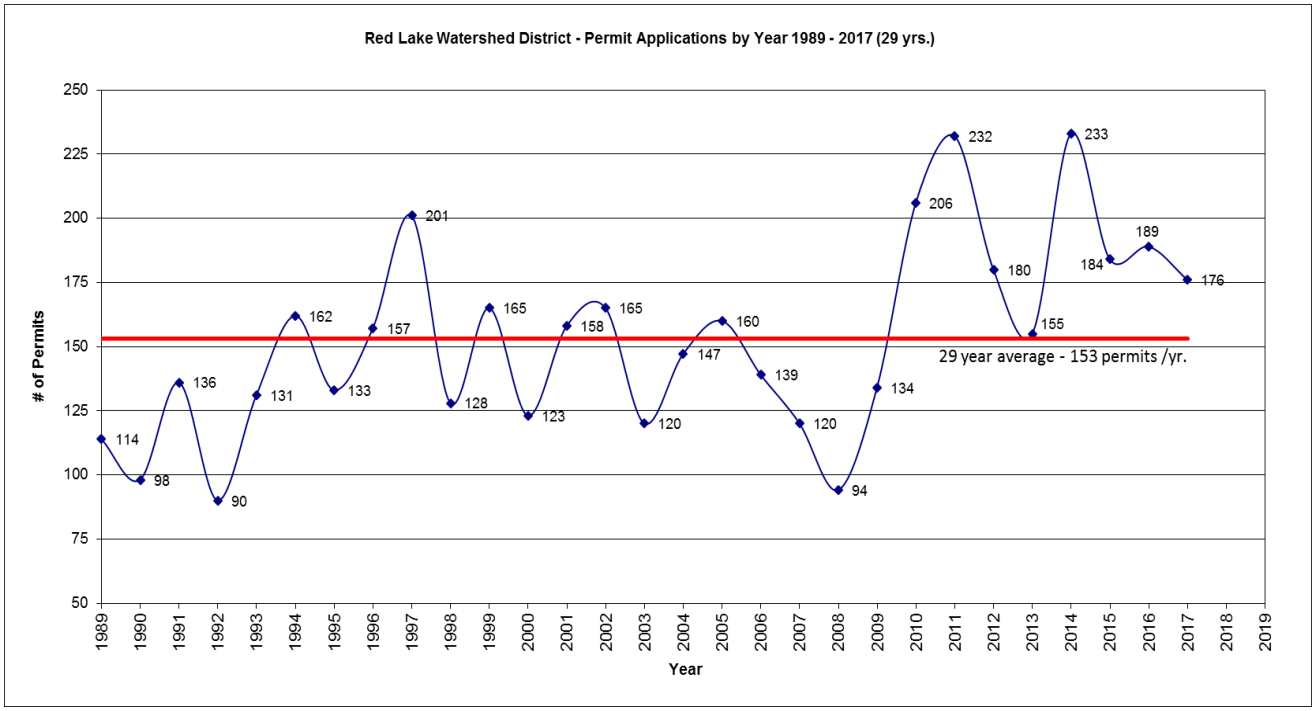
The numbers listed below indicate the permits and how they are categorized within our rules for permitting:

- 1 utility
- 10 re-grade
- 116 culvert/bridge
- 15 drainage
- 28 drain tile
- 1 wetlands
- 1 land development
- 1 water control basin
- 3 channel stabilizations

Applicants included state and county highway departments, railroads, townships, cities, utility & pipeline companies, State & Federal agencies, landowners, and private individuals.

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.

Permit applications are available on the District web site:www.redlakewatershed.org



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.

To prevent violations, the District 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.

Red Lake County, Gervais Township – township road right-of-way

Wild Rice Water Allocation (RWLD Project #45)

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


Typical pumping station

Wild rice production along the Clearwater River began in 1968, and the water allocation project was petitioned by the growers in 1984. This involves the appropriation of water from the Clearwater River for the 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.


Wild rice paddy

When there is substantial flow in the river, no water allocation is necessary and the grower's 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 sufficient to meet all of their needs.

2017

During most of 2017, flows in the Clearwater River were above the minimum that would initiate allocation. Allocation was necessary for only about 1 week (March) in the spring and 1 month (mid-October to mid-November) in the fall. 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.


Harvesting wild rice

Stream Flow & Pool Elevation Monitoring (RLWD Project #21)

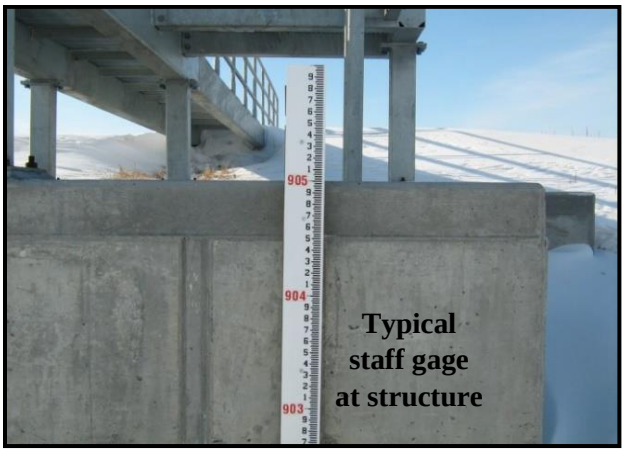
Stream flow monitoring is a vital on-going activity. The Di local volunteers assist us in recording gauge readings and m Approximately 160 gauges of various types (staff, wire weight, automated) are located throughout the District. Many automated river level gauges within the district can be accessed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

High-water staff gauge – Moose R.at Marshall Co.Hwy. #54

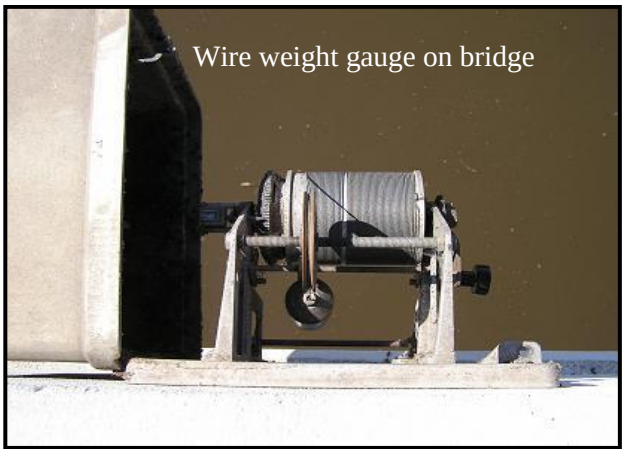
The District deploys autonomous water level loggers in tributary streams and other important locations that are not gauged by state or federal flow monitoring stations. HOBO water level loggers were deployed at 24 sites in 2017. Flow monitoring results can be viewed within monthly water quality reports.

District staff perform flow measurements and continue 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.

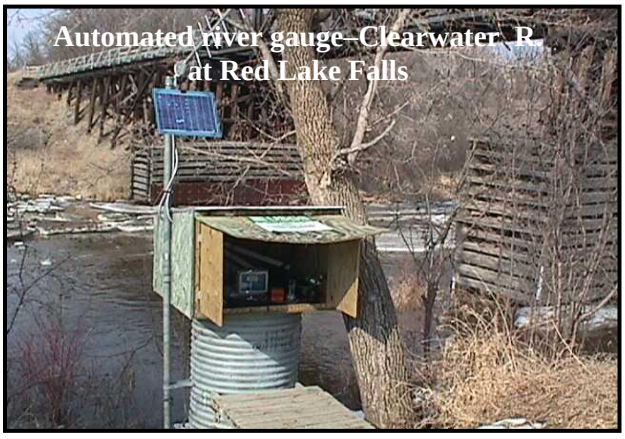
The data that has been collected is valuable to assist in the operation and maintenance of existing projects and for the development of potential projects.



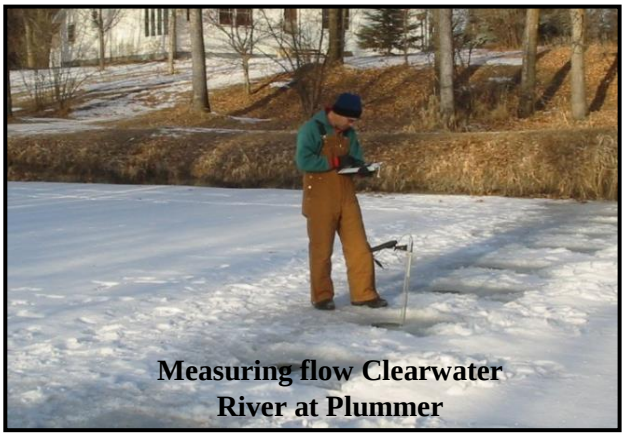
Typical staff gage at structure



Wire weight gauge on bridge



Automated river gauge–Clearwater R. at Red Lake Falls



Measuring flow Clearwater River at Plummer

Snow Surveys

Each year, the District performs snow surveys which usually begin in about the middle-to-late February and continues through the spring melt on an as needed basis if snow conditions change. Eight 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 2017, due to the existing weather and snowpack conditions, only one snow survey was obtained. On February 6th, the average depth of the snow at our sampling sites was 14.3 inches and the water equivalent (moisture content) was 2.77 inches.

This was the 6th consecutive year that the spring melt and runoff was basically "non-eventful" in the basin. During the last half of February, there was a significant warming trend, some rain, much melting and ditches and culverts began "opening". The landscape was mostly void of snow cover and the surface water runoff was nearly gone. The Red Lake River at Crookston and The Red River of the North at east Grand Forks did not even reach flood stage this spring.

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.

Establish base weight of empty sampling tube

Obtaining snow depth and core sample

Establishing weight of snow sample to calculate water content

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.

Maintenance of Drainage Systems

One of the many tasks of the District staff is to inspect the 279.01 miles of 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 is looking for are, erosion around culverts, runoff event water damage to slopes or scouring of the ditch bottom, violation to the right of ways or buffer strips, and cattails or other weeds that may need to be sprayed.

Larson Helicopters from Perham, Minnesota was again contracted this year to spray the Districts ditches. A helicopter is used because of our ditches are not accessible to a ground sprayer due to fences, wet ground, or ditches going cross country with no right of way to drive on. Being such a dry summer for rain, limited cattail control was needed on the District ditches and other projects this year. There was only a total of 43.11 miles of ditch that needed to be sprayed for cattails out of the 279.01 miles of ditch that are under the jurisdiction of the Red Lake Watershed District.

Most of the District's ditches have a permanent 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 buffer 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 on or about July 1st, spraying for any noxious weeds as needed, and trying to keep them from being encroached on by farming practices. Four to five contractors are hired each year to mow the many watershed projects and the approximately 161 miles of ditches that have ditch right-of-way.

Clearwater River (RLWD Project #3)

This system did not require any spraying or moving this year. It had two large log jams about a mile apart approximately 5 miles NE of Plummer, MN. They were removed by Triple D Construction of Plummer, MN in late August, early September.

Before

After

Before After

Lost River (RLWD Project #4)

Our office received notice of blockage on the Lost River, and after an inspection two beaver dams were found in Sec 5 of Gully Twp. We contacted a local trapper and he successfully removed the nuisance beavers. Triple D Construction of Plummer, MN was notified to mechanically remove the dam and restore any damage to the banks caused by the removal.

Ditch 3, (RLWD Project #7)

This system was mowed and had 2.88 miles of spot spraying for thistle and other noxious weeds where needed. While inspecting the system two damaged flap gates were found, along with one missing flap gate that belong to the side water inlets pipes. The District replaced two of the gates and repaired the other.

State Ditch 83, Marshall County (RLWD Project #14)

During the spring of 2017, Lunke Construction Inc. continued to spot-clean State Ditch 83. Some areas have had very large amounts of sediment built up over the years which have been and will continue to be excavated from the channel. There was close to 2 miles of bank stabilization done between 280th St NE and CR 7 due to erosion and sloughing of the river banks. Side water inlets with flap gates were replaced during the cleaning and stabilization process. Mowing was completed in August along most of the established access trails and other areas of this ditch system that the District has been maintaining during the past 12 years. The District staff again inspected the channel of State Ditch 83 by four-wheeler and pickup truck where it was possible.

The table below depicts the year, number of sites and costs the District spot-cleaned since 2003 on State Ditch 83.

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	$55,330.11
Total	84	$437,090.11

Judicial Ditch 72 (RLWD Project #41)

The District teamed with Triple D Construction of Plummer, MN to remove an old worn-out culvert and driveway in Sec.18 of Winsor Township. A new 60" by 60' culvert was put in its place to ensure a wider and safer driveway crossing. Larson Helicopters, LLC of Perham, MN sprayed approximately 9.16 miles of thistle and noxious weeds, where needed, along this system. A field survey was conducted in September 2017 to determine/verify the systems right of way boundaries.

Judicial Ditch 2 Branch A (RLWD Project #48)

The District received a call about a beaver dam in a roadside ditch that was causing water to back up into the field, roughly 4 miles north of Clearbrook, MN. After a field inspection was performed, the District hired a local trapper to remove nuisance beavers before bringing in Dyrdahl Construction of Bagley, MN to remove two dams and residual debris. This system was mowed but did not require any spraying this year.

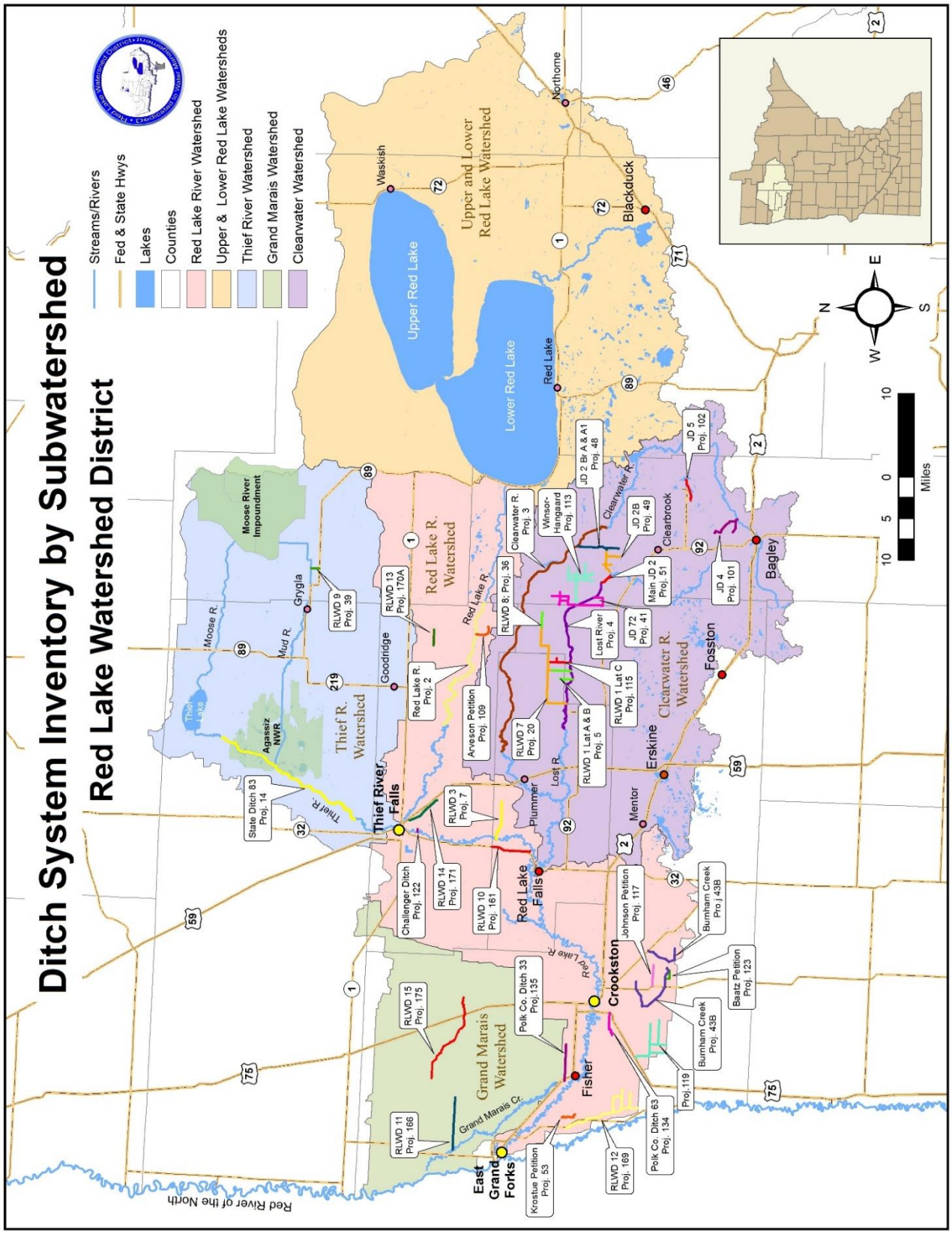
Grand Marais Creek (RLWD Project #60F)

The District maintains the channel of the Grand Marais Creek in Polk county, and performs an annual inspection. This past summer a good portion of the north bank and Section 23, Esther Township, Polk County was mowed to control thistle that was spreading towards ag fields. The mowing was done by Olson Construction of Thief River Falls, MN.

The tables below list the mowing and spraying completed in 2017 on legal ditch system and projects under the jurisdiction of the District.

Mowing 2017		
Project #	System	Contractor
20	Ditch 7	Olson Construction
5	Ditch 1	Olson Construction
36	Ditch 8	Olson Construction
113	Ditch 113	Olson Construction
48	JD 2 Branch A	Olson Construction
49	JD2 Main	Olson Construction
170A	TRF FDR	Olson Construction
122	Challenger Ditch	Olson Construction
109	Arveson Ditch	Olson Construction
7	Ditch 3	Olson Construction
171	Ditch 14	Olson Construction
161	Ditch 10	Olson Construction
43B	Burnham Creek	Garry Gravel
123	Baatz Petition	Garry Gravel
117	Johnson Petition	Garry Gravel
119	Polk County Ditch Improvement	Garry Gravel
60F	RIM Land	Garry Gravel
60FF	RIM Land	Garry Gravel
134	Polk County Ditch 63	Garry Gravel
166	Ditch 11	Garry Gravel
53	Krostue Petition	Garry Gravel
169	Ditch 12	Garry Gravel
135	Polk County Ditch 33	Garry Gravel
175	Ditch 15	Garry Gravel
171	Ditch 14	Les Cota
39	Ditch 9	Todd Stanley
14	State Ditch 83	Lunke Construction

Spraying 2017			
Project #	System	Miles	Contractor
122	Challenger Ditch	0.26	Larson Helicopters, LLC
171, 171A	Ditch 14	5.11	Larson Helicopters, LLC
175	Ditch 15	9.91	Larson Helicopters, LLC
41	JD 72	9.16	Larson Helicopters, LLC
109	Clifford Arveson Ditch	1.28	Larson Helicopters, LLC
170A	Penn. County Ditch 75	2.2	Larson Helicopters, LLC
134	Polk County Ditch 63 Imp.	2.34	Larson Helicopters, LLC
7	Ditch 3	2.88	Larson Helicopters, LLC
43B	Burnham Creek Channel	4.43	Larson Helicopters, LLC
119	Polk County 104,61,47,94	5.54	Larson Helicopters, LLC


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

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

Financial Report

RED LAKE WATERSHED DISTRICT
THIEF RIVER FALLS, MINNESOTA

AUDITED FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2017

BRADY MARTZ
CERTIFIED PUBLIC ACCOUNTANTS
AND CONSULTANTS

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, 2017, 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, 2017, 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, statement of direct expenditures by classification, and statement of receipts and disbursements and changes in amounts due to other governmental units 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, statement of direct expenditures by classification, and statement of receipts and disbursements and changes in amounts due to other governmental units 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 30, 2018 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 describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on 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 30, 2018

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, 2017, 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 15.

FINANCIAL HIGHLIGHTS

- The District's governmental funds total expenditures exceeded total revenues, on the modified cash basis of accounting, by $875,746 for the year ended December 31, 2017.
- The general fund showed a decrease on the modified cash basis fund balance in the amount of $141,528.
- The District's General Fund ended the year with a fund balance of $327,501.
- The District's combined fund balance at the close of the current year was $4,612,076.

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 15 and 16 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 17) 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 15 and 16. 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 17 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 $646,617 between fiscal years 2017 and 2016. 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 $19,183,122 at December 31, 2017, which is an increase of $646,617 over the year ended December 31, 2016; which is more than a 3.49% increase over the prior year.

A portion of Red Lake Watershed District's net position ($14,571,046 or 75.96%) 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 ($95,703) reflects a portion of net position that is restricted for ditch maintenance.

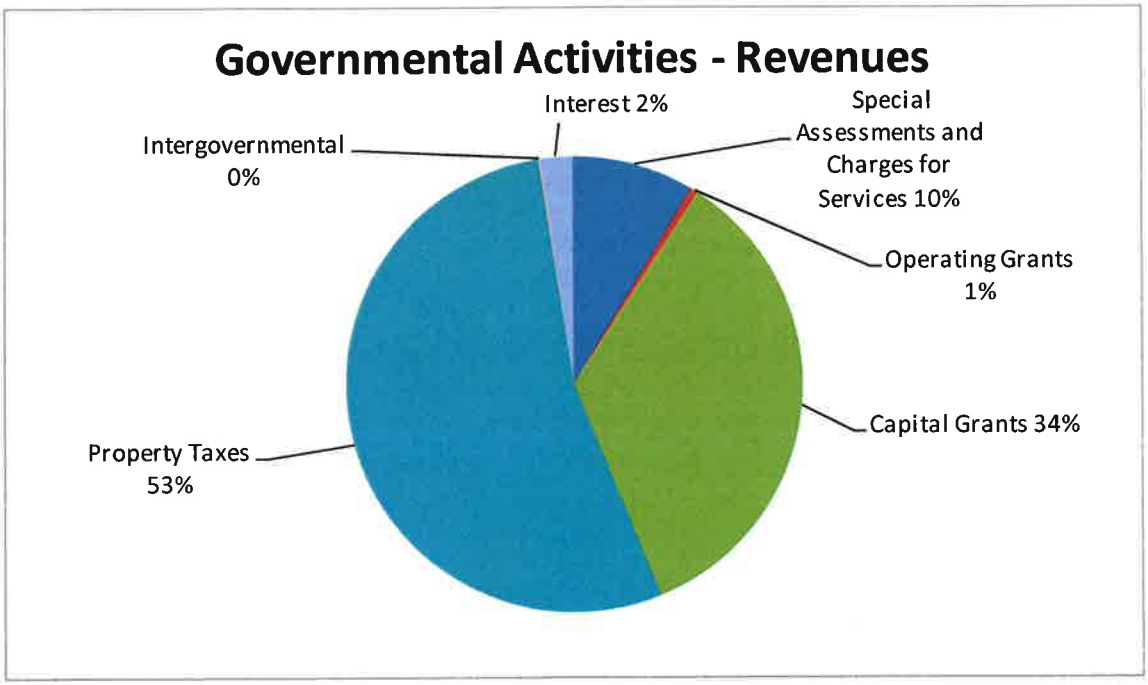
	Governmental Activities		Change
	2017	2016	16-17
ASSETS			
Total Current Assets	$ 4,612,076	$ 5,487,822	$ (875,746)
Net Capital Assets	14,571,046	13,048,683	1,522,363
Total Assets	$ 19,183,122	$ 18,536,505	$ 646,617
Net Position	$ 19,183,122	$ 18,536,505	$ 646,617

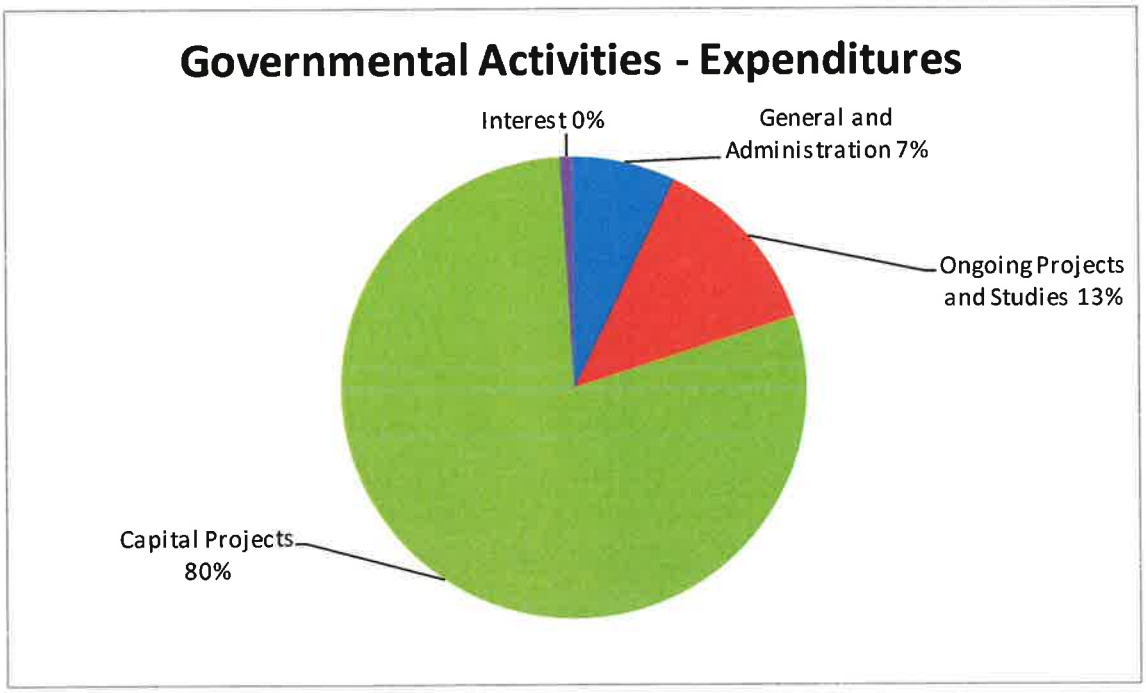
Changes in Net Cash Position

For the years ended December 31, 2017 and 2016, Net Position of the primary government (resulting from modified cash basis transaction) changed as follows:

	Governmental Activities		Change
	2017	2016	16-17
Revenues			
Program Revenues			
Special Assessments and Charges for Services	$ 235,043	$ 187,479	$ 47,564
Operating Grants	16,060	20,720	(4,660)
Capital Grants	950,015	653,358	296,657
General Revenues			
Property Taxes	1,468,953	1,496,117	(27,164)
Intergovernmental	1,805	903	902
Interest	65,441	31,049	34,392
Total Revenues	$ 2,737,317	$ 2,389,626	$ 347,691
Expenses			
General and Administration	$ 148,788	$ 135,125	$ 13,663
Ongoing Projects and Studies	268,581	145,602	122,979
Capital Projects	1,655,164	1,712,057	(56,893)
Allocated Interest	18,167	5,879	12,288
Total Expenses	$ 2,090,700	$ 1,998,663	$ 92,037
Increase in Net Position	$ 646,617	$ 390,963	

Below are specific graphs which provide comparisons of the governmental activities revenues and expenditures for the year ended December 31, 2017:





Governmental Activities

To aid in the understanding of the Statement of Activities Arising from Cash Transactions on page 16, 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, 2017, General Fund expenditures were $12,476 under final budget. The budget was not amended during the year.

CAPITAL ASSET AND DEBT ADMINISTRATION

Capital Assets—Modified Cash Basis

At December 31, 2017, the District had approximately $14,571,046 (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.

	2017			2016
	Cost	Accumulated Depreciation	Cost - Less Accumulated Depreciation	Cost - Less Accumulated Depreciation
Building and Improvements	$ 775,594	$ 296,804	$ 478,790	$ 501,421
Infrastructure Improvements	12,601,966	2,861,855	9,740,111	10,240,256
Engineering Equipment	426,170	358,878	67,292	58,589
Office Equipment	169,323	133,850	35,473	12,793
Land and Permanent Easements	3,018,474	-	3,018,474	1,906,922
Construction in Progress	1,230,906	-	1,230,906	328,702
	$ 18,222,433	$ 3,651,387	$ 14,571,046	$ 13,048,683

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 with other agencies, and investigation into a flood control project.

OTHER ITEMS OF INTEREST

Water Quality grants from the State of Minnesota, 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.

The Red River Watershed Management Board (RRWMB) was awarded funding for farmstead ring dike construction in the Red River Valley in 2015, by a grant provided by the Minnesota Department of Natural Resources, through an appropriation by the Minnesota State Legislature. Since the Red Lake Watershed District (RLWD) is a part of the RRWMB, funding for up to 3 ring dikes was appropriated. During the summer of 2016, a ring dike was constructed at a farmstead in Polk County as part of this funding. The grant was cost shared at 50% by the Minnesota Department of Natural Resources, 25% by the RRWMB, 12.5% landowner, and 12.5% RLWD. The cost share of the RLWD is paid from the Capital Project Funding. This project was closed out in 2017 when the Red Lake Watershed District received cost share funding from the Red River Watershed Management Board.

In 2013, the Red Lake Watershed District, in partnership with the United States Geological Survey, applied for and was approved for a $400,000 flow through grant from the Legislative-Citizen Commission on Minnesota Resources (LCCMR) for a project referred to in this report as Glacial Ridge Water Quality Study, Project 152B. The project's goals are intended to measure and characterize water flows through all parts of the water cycle in 4 surface (SW) and groundwater (GW) basins covering 28,754 acres as well as measure and characterize water quality in four groundwater and surface-water basins for comparison with pre-restoration water quality. Although the LCCMR grant was intended to cover all costs of the project, the overrun of staff time of Red Lake Watershed District was paid from the Capital Project Fund. Due to various grant extensions, this project was completed in June 2017.

In August of 2014, the Red Lake Watershed District, in partnership with the United States Geological Survey, was approved for a $168,000 flow through grant from the Legislative-Citizen Commission on Minnesota Resources (LCCMR) for a project referred to in this report as Glacial Ridge Water Quality Study, Project 152C. The project's goals are intended work in conjunction with the existing $400,000 grant mentioned above which is to measure and characterize water flows through all parts of the water cycle in 4 surface (SW) and groundwater (GW) basins covering 28,754 acres as well as measure and characterize water quality in four groundwater and surface-water basins for comparison with pre-restoration water quality. Although the LCCMR grant was intended to cover all costs of the project, the overrun of Red Lake Watershed District staff time was paid from the Capital Project Funding. Due to various grant extensions, this project was completed in June 2017.

State of Minnesota flow-through grant with Federal Emergency Management Agency (FEMA) for flood plan analysis along on the Red Lake River in Polk, Red Lake, and Pennington Counties was extended to April 30, 2015. This extension was intended to allow time for FEMA to determine how past modeling within the Cities of Crookston and East Grand Forks will match present datum. Public meetings were held in 2016 and presently the District is waiting for final approval from FEMA to implement the findings of the study. It is our understanding that in 2017 the hydraulic model went through QA/QC, but there is a potential change in the discharge frequencies that are being analyzed which will delay the end results. It is the hope of FEMA, Minnesota Department of Natural Resources, and the Red Lake Watershed District that the modeling issues will be resolved in 2018.

January of 2016, the Board approved contributing $35,000 to the Beltrami County Environmental Services to assist in the Aquatic Invasive Species (AIS) program in the Red Lake watershed area of Beltrami County. The funds will be used to assist in mileage reimbursement for volunteer inspectors for the Upper Red Lake access, increase inspection hours, fund inspection on several smaller lakes, installation of additional car counters, and to assist in obtaining a decontamination unit. An update on this project was presented to the Board of Managers on January 26, 2017. At this point, there is no additional funding going toward this project.

On September 8, 2016, the Red Lake Watershed District Board of Managers approved a motion to proceed with the completion of plans and specification for the City of Erskine Memorial Park, RLWD Project #164, in conjunction with a partnership with the City of Erskine and the East Polk Soil Water Conservation District. The project was to repair sloughs on Cameron Lake near the public swimming pool. Engineering was completed with construction starting late fall of 2016. The project was substantially completed with construction being halted due to winter. On June 8, 2017 at 9:30 am, final hearing was held for Davidson Construction of Middle River, MN in the amount of $17,310.00. Hearing no objection from the public, the Board by unanimous decision ordered the final payment be made for the project. Total construction cost for the project totaled $79,635.00 which included, $20,000 from City of Erskine, $12,500 dollars from East Polk Soil Conservation Service, $5,000 from the Erskine American Legion and the remaining balance of $42,135 being paid by the Red Lake Watershed District from the Capital Projects Fund.

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 will fund 70 percent, not to exceed $500,000, which will include a study for the completion of a Watershed Protection Plan. It is the hopes of the District to have this program completed by mid-2018.

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 will fund 70 percent, not to exceed $265,088, which will include a study for the completion of a Watershed Protection Plan. It is the hopes of the District to have this program completed by mid-2018.

Blackduck Lake Dam serves as the outlet of Blackduck Lake which is the headwater of the Blackduck River. The dam is located in Hines Township, in Beltrami County, and was given to Hines Township through legislative action in 1970's. The Red Lake Watershed District received a request by Hines Township to assist with the repair of the structure/dam. On October 16, 2016, the Red Lake Watershed District entered into an agreement with Hines Township for maintenance of the structure and hired Houston Engineering to analyze the dam and bring their recommendation to the Board. The Red Lake Watershed District, on behalf of Hines Township, applied for and was accepted for a $50,000 Conservation Partership Legacy Grant from the MnDNR to assist in reparing the dam. On June 27, 2017, Houston Engineering presented the plans and specifications to the Board of Managers which in turn lead to the advertising of bids. On July 27, 2017 bids were opened and low bid the amount of $87,968.00 was awarded to Gerit Hanson Contracting, Inc. Final hearing in the amount of $93,081.25 was held on December 17, 2017. It is anticipated that in the spring of 2018, staff will inpect the project to determine if there are any minor repairs needed to the project due to winter conditions.

Red Lake Watershed District and local partners entered into a grant agreement with the Board of 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 was completed in 2016 with final approval by the BWSR Board in July of 2017. It is expected that in 2018, funding through the BWSR Clean Water Fund will be awarded with various projects being completed.

Red Lake Watershed District and local partners entered into a grant agreement with the Board of Soil Resources (BWSR) to complete a Pilot Project referred to the public as "*Thief River One Watershed One Plan*". The planning process was started in late 2017, will continue through 2018 and expected to be completed in early 2019.

As part of a $38,700 grant agreement applied for and approved by the Board of Soil and Water Resource, the Red Lake Watershed District will develop a Drainage Database which will better record maintenance which can be used for development of future Inspection Plans and Reports. It is the hopes of the District that this project will be completed by December 31, 2018.

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. It is the hope of the District that Minnesota State bonding dollars can be obtained and construction on this project occurring early 2019.

Red L~~ak~~e 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. Engineering analysis was being completed for the "Thief River Falls Westside Flood Damage Reduction Project" in 2017 with the hopes of having alternatives to the Board in early 2018.

It should also be noted that in 2017 the District received two legal drainage petitions, one for a new ditch and one for an improvement of an existing public drainage system. Both petitioned projects are in Polk County Minnesota. It is the hope of the District that these two projects will go through the hearing process in late summer of 2018.

More details of the 2017 construction, maintenance, and ongoing water quality programs of Red Lake Watershed District are included in the 2017 Annual Report or by contacting the Red Lake Watershed District.

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.

RED LAKE WATERSHED DISTRICT
STATEMENT OF NET CASH POSITION
AS OF DECEMBER 31, 2017

	Total
Assets	
Current Assets:	
Petty Cash	$ 100
Pooled Cash and Investments	4,611,976
Total Current Assets	4,612,076
Capital Assets:	
Property and Equipment	18,222,433
Less: Accumulated Depreciation	(3,651,387)
Net Capital Assets	14,571,046
Total Assets	19,183,122
Net Position	
Investment in Capital Assets	14,571,046
Restricted for Ditch Maintenance	95,703
Unrestricted	4,516,373
Total Net Position	$ 19,183,122

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF ACTIVITIES ARISING FROM CASH TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2017

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	$ (766,827)	$ 618,039	$ (148,788)	$ 1,432	$ -	$ -	$ (147,356)
Ongoing Projects and Studies	(204,727)	(63,854)	(268,581)	162,535	16,060	-	(89,986)
Capital Projects	(1,100,979)	(554,185)	(1,655,164)	71,076	-	950,015	(634,073)
Allocated Interest	(18,167)	-	(18,167)	-	-	-	(18,167)
Total Governmental Activities	$ (2,090,700)	$ -	$ (2,090,700)	$ 235,043	$ 16,060	$ 950,015	$ (889,582)
General Receipts:							
Tax Levies							$ 1,468,953
Intergovernmental (not restricted to specific programs)							
State MV, Disparity Reduction Credits, and PERA Aid							1,805
Allocated Interest							65,441
Total General Receipts							1,536,199
Change in Net Position							646,617
Net Position - Beginning							18,536,505
Net Position - Ending							$ 19,183,122

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF BALANCES ARISING FROM CASH TRANSACTIONS – GOVERNMENTAL FUNDS
AS OF DECEMBER 31, 2017

ASSETS	General Fund	Special Revenue Fund	Capital Project Fund	Total Governmental Funds
Petty Cash	$ 100	$ -	$ -	$ 100
Pooled Cash and Investments	327,401	95,703	4,188,872	4,611,976
Total Assets	$ 327,501	$ 95,703	$ 4,188,872	$ 4,612,076
FUND BALANCES				
Restricted for Ditch Maintenance	$ -	$ 95,703	$ -	$ 95,703
Committed for Capital Projects	-	-	4,188,872	4,188,872
Unassigned	327,501	-	-	327,501
Total Fund Balances	327,501	95,703	4,188,872	4,612,076
Total Fund Balances	$ 327,501	$ 95,703	$ 4,188,872	$ 4,612,076

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		$ 4,612,076
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. How ever, the statement of net cash position includes those capital assets among the assets of the District as a w hole.		
	Cost of Capital Assets	18,222,433
	Accumulated Depreciation	(3,651,387)
Total Net Position		$ 19,183,122

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, 2017

	General Fund	Special Revenue Fund	Capital Project Fund	Total Governmental Funds
RECEIPTS				
Property Taxes	$ -	$ -	$ 1,468,953	$ 1,468,953
Special Assessments	-	162,535	-	162,535
Intergovernmental:				
Federal	-	60	372,336	372,396
State	1,805	16,000	412,860	430,665
Local	-	-	164,819	164,819
Other:				
Miscellaneous	1,432	-	71,076	72,508
Allocated Interest	7,359	2,138	55,944	65,441
Total Receipts	10,596	180,733	2,545,988	2,737,317
DISBURSEMENTS				
General and Administrative	148,788	-	-	148,788
Ongoing Projects and Studies	-	268,581	-	268,581
Capital Projects	-	-	3,177,527	3,177,527
Allocated Interest	3,336	573	14,258	18,167
Total Disbursements	152,124	269,154	3,191,785	3,613,063
EXCESS OF RECEIPTS OVER (UNDER) DISBURSEMENTS	(141,528)	(88,421)	(645,797)	(875,746)
OTHER FINANCING SOURCES (USES)				
Transfers In	-	140	-	140
Transfers Out	-	-	(140)	(140)
Net Other Sources (Uses)	-	140	(140)	-
Net Change in Fund Balances	(141,528)	(88,281)	(645,937)	(875,746)
FUND BALANCE JANUARY 1	469,029	183,984	4,834,809	5,487,822
FUND BALANCE DECEMBER 31	$ 327,501	$ 95,703	$ 4,188,872	$ 4,612,076

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, 2017

Net Change in Fund Balances - Total Governmental Funds	$	(875,746)
Governmental funds report capital outlay as expenditures, while governmental activities report depreciation expense allocating those expenditures over the life of the asset:		
Capital Additions		2,074,878
Depreciation Expense		(552,515)
Change in Net Position - Governmental Activities	$	646,617

See Notes to the Basic Financial Statements

RED LAKE WATERSHED DISTRICT
STATEMENT OF NET CASH POSITION – FIDUCIARY FUNDS
AS OF DECEMBER 31, 2017

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

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

Agency Funds

Agency funds account for assets held by the District in a purely custodial capacity. The reporting entity includes one agency fund. Since agency funds are custodial in nature (i.e., assets equal liabilities), they do not involve the measurement of results of operations. The agency fund is as follows:

Fund	Brief Description
Red River Water Management Board	Property Taxes are levied by the District 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 economics 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 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 $5,000 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, 2017, the carrying amount of the District's deposits was $4,612,076 and the bank balance was $5,410,081. 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, 2017.

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

PERA provides retirement, disability, and death benefits. Benefit provisions are established by state statute and can only be modified by the state legislature. Benefit increases are provided to benefit recipients each January. Increases are related to the funding ratio of the plan. Members in plans that are at least 90% funded for two consecutive years are given 2.5%

increases. Members in plans that have not exceeded 90% funded, or have fallen below 80%, are given 1% increases. The benefit provisions stated in the following paragraphs of this section are current provisions and apply to active plan participants. Vested, terminated employees who are entitled to benefits but are not receiving them yet are bound by the provisions in effect at the time they last terminated their public service.

1. General Employees Plan Benefits
General Employees Plan benefits are based on a member's highest average salary for any five successive years of allowable service, age, and years of credit at termination of service. Two methods are used to compute benefits for PERA's Coordinated and Basic Plan members. The retiring member receives the higher of a step-rate benefit accrual formula (Method 1) or a level accrual formula (Method 2). Under Method 1, the annuity accrual rate for a Basic Plan member is 2.2% of average salary for each of the first ten years of service and 2.7% for each remaining year. The annuity accrual rate for a Coordinated Plan member is 1.2% of average salary for each of the first ten years and 1.7% for each remaining year. Under Method 2, the annuity accrual rate is 2.7% of average salary for Basic Plan members and 1.7% for Coordinated Plan members for each year of service. 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.

Contributions

Basic Plan members and Coordinated Plan members were required to contribute 9.1% and 6.50%, respectively, of their annual covered salary in calendar year 2017. The District was required to contribute 11.78% of pay for Basic Plan members and 7.50% for Coordinated Plan members in calendar year 2017.

Pension Plan Fiduciary Net Position

Detailed information about each defined benefit pension plan's fiduciary net position is available in a separately issued PERA financial report. That report may be obtained on the Internet at www.mnpera.org.

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 District makes annual contributions to the pension plans equal to the amount required by state statutes. Basic Plan members and Coordinated Plan members were required to contribute 9.1% and 6.50%, respectively, of their annual covered salary in calendar year 2017. The Red Lake Watershed District is required to contribute the following percentages of annual covered payroll: 11.78% for Basic Plan members, 7.5% for Coordinated Plan members. The District's contributions to the Public Employees Retirement Fund for the year ended December 31, 2017 was $30,223.

Related-Party Investments

As of December 31, 2017, the District held no related-party investments.

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 INTERFUND TRANSFERS

The following reconciles interfund transfers during the fiscal year ended December 31, 2017:

	Transfers In	Transfers Out
Capital Projects Fund	$ -	$ 140
Special Revenues Fund	140	-
Total	$ 140	$ 140

The transfer made between funds is to recognize a previous board action to close a project.

NOTE 8 CAPITAL ASSETS

Capital assets activity resulting from modified cash basis transactions for the year ended December 31, 2017 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	395,732	30,438	-	426,170
Office Equipment	138,639	30,684	-	169,323
Land and Permanent Easements	1,906,922	1,111,552	-	3,018,474
Construction in Progress	328,702	902,204	-	1,230,906
Total	$ 16,147,555	$ 2,074,878	$ -	$ 18,222,433

	Beginning Balance	Additions	Deletions	Ending Balance
Accumulated Depreciation				
Building and Improvements	$ 274,173	$ 22,631	$ -	$ 296,804
Infrastructure Improvements	2,361,710	500,145	-	2,861,855
Engineering Equipment	337,143	21,735	-	358,878
Office Equipment	125,846	8,004	-	133,850
Total	3,098,872	552,515	-	3,651,387
	$ 13,048,683	$ 1,522,363	$ -	$ 14,571,046

Depreciation expense of $552,515 for the year ended December 31, 2017 is included in general and administrative program costs.

NOTE 9 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 2017 was $618,039.

NOTE 10 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, 2017, 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 11 SUBSEQUENT EVENTS

No significant events occurred subsequent to the District's year end. Subsequent events have been evaluated through March 30, 2018, which is the date these financial statements were available to be issued.

RED LAKE WATERSHED DISTRICT
BUDGETARY COMPARISON SCHEDULE - GENERAL FUND
FOR THE YEAR ENDED DECEMBER 31, 2017

REVENUES	Original and Final Budget	Actual 2017	Variance
Tax Levies	$ -	$ -	$ -
Intergovernmental			
State	-	1,805	1,805
Miscellaneous	-	1,432	1,432
Allocated Interest	-	7,359	7,359
Total Revenues	-	10,596	10,596
EXPENDITURES			
General and Administrative	164,600	148,788	(15,812)
Interest	-	3,336	3,336
Total Expenditures	164,600	152,124	(12,476)
Expenditures Exceed Revenues	(164,600)	(141,528)	23,072
FUND BALANCE JANUARY 1	469,029	469,029	
FUND BALANCE DECEMBER 31	$ 304,429	$ 327,501	

See Note to the Budgetary Comparison Schedule

RED LAKE WATERSHED DISTRICT
NOTE TO THE BUDGETARY COMPARISON SCHEDULE
FOR THE YEAR ENDED DECEMBER 31, 2017

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 budget for the general fund, which is limited by state statute at $250,000 and set by the Board for 2017 at $0. 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, 2017

		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	$ 469,029	$ 1,432	$ 1,805	$ 7,359	$ -	$ 766,827	$ 3,336	$ (618,039)	$ -	$ 327,501
SPECIAL REVENUE FUND JOBS:										
Red Lake River Project	54,360	-	-	506	-	-	-	820	-	54,046
Clearwater River Project	(8,872)	37,532	-	-	-	11,547	38	3,878	-	13,197
Lost River Project	6,273	1,606	-	52	-	900	-	2,181	-	4,850
RLWD Ditch #1	3,848	1,529	-	44	-	-	-	258	-	5,163
RLWD Ditch #3	6,577	1,069	-	63	-	1,415	-	869	-	5,425
State Ditch #83	13,475	18,354	16,060	66	-	56,863	-	4,567	-	(13,475)
RLWD Ditch #7	2,951	4,589	-	44	-	300	-	902	-	6,382
Pine Lake Maintenance	42	2,991	-	-	-	76	13	5,317	-	(2,373)
RLWD Ditch #8	3,479	900	-	31	-	-	-	1,621	-	2,789
RLWD Ditch #9	1,190	-	-	9	-	350	-	114	-	735
J.D. Ditch #72	(311)	3,884	-	-	-	13,041	95	21,335	-	(30,898)
Clearwater/Wild Rice River	(5,652)	9,002	-	-	-	-	22	2,631	-	697
Branch A & 1, J.D. #2	1,443	1,474	-	17	-	1,010	-	881	-	1,043
Main J.D. #2 and Branch B&C	(1,220)	2,962	-	-	-	-	1	388	-	1,353
Main J.D. 2C. Eck	(2,324)	145	-	-	-	300	24	227	-	(2,730)
Krostue Petition	1,101	86	-	-	-	5,100	36	247	-	(4,196)
Clearwater County Joint Ditch #1	(137)	-	-	-	-	-	3	-	140	-
Clearwater County Joint Ditch #4	589	990	-	10	-	-	-	168	-	1,421
Clearwater County Joint Ditch #5	(105)	248	-	-	-	196	1	745	-	(799)
Clearwater County Ditch #1	290	501	-	5	-	-	-	-	-	796
Clifford Arveson Ditch	4,285	2,065	-	39	-	486	-	120	-	5,783
Winsor/Hangaard/Clearwater County Petition	1,118	7,766	-	38	-	-	-	565	-	8,357
Equality RLWD Ditch #1, lat C	2,073	701	-	21	-	-	-	484	-	2,311
K. Johnson Petition	3,737	131	-	29	-	955	-	164	-	2,778
Polk County Ditch #'s 104, 61, 47, 94	(2,236)	7,241	-	-	-	6,326	22	1,021	-	(2,364)
TRF Drainage Ditch (Challenger Ditch)	1,509	-	-	12	-	99	-	294	-	1,128
Scott Baatz Petition	1,630	75	-	13	-	500	-	82	-	1,136
Polk County Ditch #63 Improvement	7,133	148	-	5	-	69,285	-	405	-	(62,404)
Polk County Ditch #33 Improvement	1,578	2,670	-	21	-	750	-	332	-	3,187
RLWD Ditch #10	(1,790)	2,872	-	-	-	510	7	545	-	20
RLWD Ditch #11	27,730	323	-	256	-	1,250	-	126	-	26,933
RLWD Ditch #12	(4,134)	15,862	-	-	-	5,775	16	908	-	5,029
RLWD Ditch #14	(2,619)	4,029	-	-	-	3,185	42	1,554	-	(3,371)
RLWD Ditch #15	92,979	672	-	833	-	8,141	-	2,181	-	84,162
Burnham Creek Channel	(14,280)	30,118	-	-	-	8,758	69	1,231	-	5,780
RLWD Ditch #13	3,005	-	-	24	-	836	-	302	-	1,891
Thief River Falls Flood Damage Reduction Project	(14,731)	-	-	-	-	3,334	181	5,132	-	(23,378)
RLWD Ditch #16	-	-	-	-	-	18	3	1,259	-	(1,280)
Improv to Polk Co. #39	-	-	-	-	-	3,421	-	-	-	(3,421)
TOTAL SPECIAL REVENUE	183,984	162,535	16,060	2,138	-	204,727	573	63,854	140	95,703

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, 2017

		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	$ -	$ -	$ -	$ -	$ -	$ 13,380	$ 80	$ 6,785	$ 20,245	$ -
Lost River Impoundment	-	-	-	-	-	-	2	425	427	-
Stream Gauging	-	-	-	-	-	11,381	113	22,086	33,580	-
Culvert Sizing	-	-	-	-	-	-	41	8,968	9,009	-
Schirrick Dam	-	-	-	-	-	-	9	1,516	1,525	-
Pine Lake PWT	(165,882)	-	272,401	-	-	426,831	2,454	13,381	-	(336,147)
Hydrologic Analysis	-	-	-	-	-	-	45	8,483	8,528	-
Emergency Maintenance	109,779	-	-	1,033	-	-	-	-	-	110,812
RRWMB - Technical Com	-	-	725	-	-	725	-	-	-	-
Water Quality	-	75	-	-	-	42,141	688	104,152	146,906	-
Maintenance Dams	-	-	-	-	-	-	8	1,647	1,655	-
Odney Flaat Dam	(1)	-	-	-	-	-	2	408	411	-
Latundresse Dam	(1)	-	-	-	-	2,454	20	365	2,840	-
Miller Dam	-	-	-	-	-	46	-	222	268	-
Seeger Dam	-	-	-	-	-	-	1	230	231	-
Blackduck Lake Structure	(17,942)	40	-	-	-	138,996	606	4,721	112,225	(50,000)
Elm Lake	-	-	-	-	-	1,254	14	1,857	3,125	-
Red Lake Res./Good Lake	-	-	-	-	-	1,800	14	690	2,504	-
Parnell Impoundment	-	3,210	-	-	-	172	17	5,482	2,461	-
Permits	-	-	-	-	-	5,473	514	116,041	122,028	-
Project Development	-	-	-	-	-	38,720	335	31,935	70,990	-
Louisville/Parnell Project	-	11,847	-	49	-	313	-	1,597	(9,986)	-
Ring Dike Program - General	-	-	-	-	-	-	2	1,105	1,107	-
Ross Ring Dike	-	-	25,208	197	-	-	-	121	(25,284)	-
Strandell Ring Dike	(4,026)	-	3,128	-	-	-	17	466	1,381	-
G.I.S.	-	-	-	-	-	3,476	118	19,605	23,199	-
Wetland Banking	400	-	-	-	-	2,826	9	666	3,101	-
Ten Year Overall Plan	-	-	541	-	-	302	23	6,206	5,990	-
Thief River 1W1P	-	-	127,340	356	-	46,586	-	30,817	-	50,293
PTMAPP Grant	-	-	30,280	171	-	15,026	-	14,823	-	602
North Parnell Storage Site	-	-	-	-	-	-	-	77	77	-
Clearwater River - TMDL	-	-	-	-	-	-	11	3,192	3,203	-
Red River Corridor	-	-	-	-	-	227	3	498	728	-
Erosion Control Projects	-	-	30,000	-	-	96,302	743	6,366	73,411	-
WS Ditch System Inventory & Mapping	273	-	-	-	-	6,275	68	3,497	-	(9,567)
FEMA D-Firm Grant	-	-	-	-	-	-	8	3,448	3,456	-
Black River Impoundment	(37,986)	-	36,240	-	-	341,122	1,920	20,478	-	(365,266)
Web Page Development	-	-	1,085	-	-	2,400	9	845	731	(1,438)
Administrative Construction	5,129,284	-	67,546	53,899	1,468,953	-	-	-	(666,590)	6,053,092
Burnham Creek - BR6	-	-	-	-	-	25	2	1,570	1,597	-
Euclid East Impoundment	-	2,993	-	-	-	3,078	17	811	913	-
Brandt Impoundment	-	102	-	-	-	6	5	1,026	935	-

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, 2017

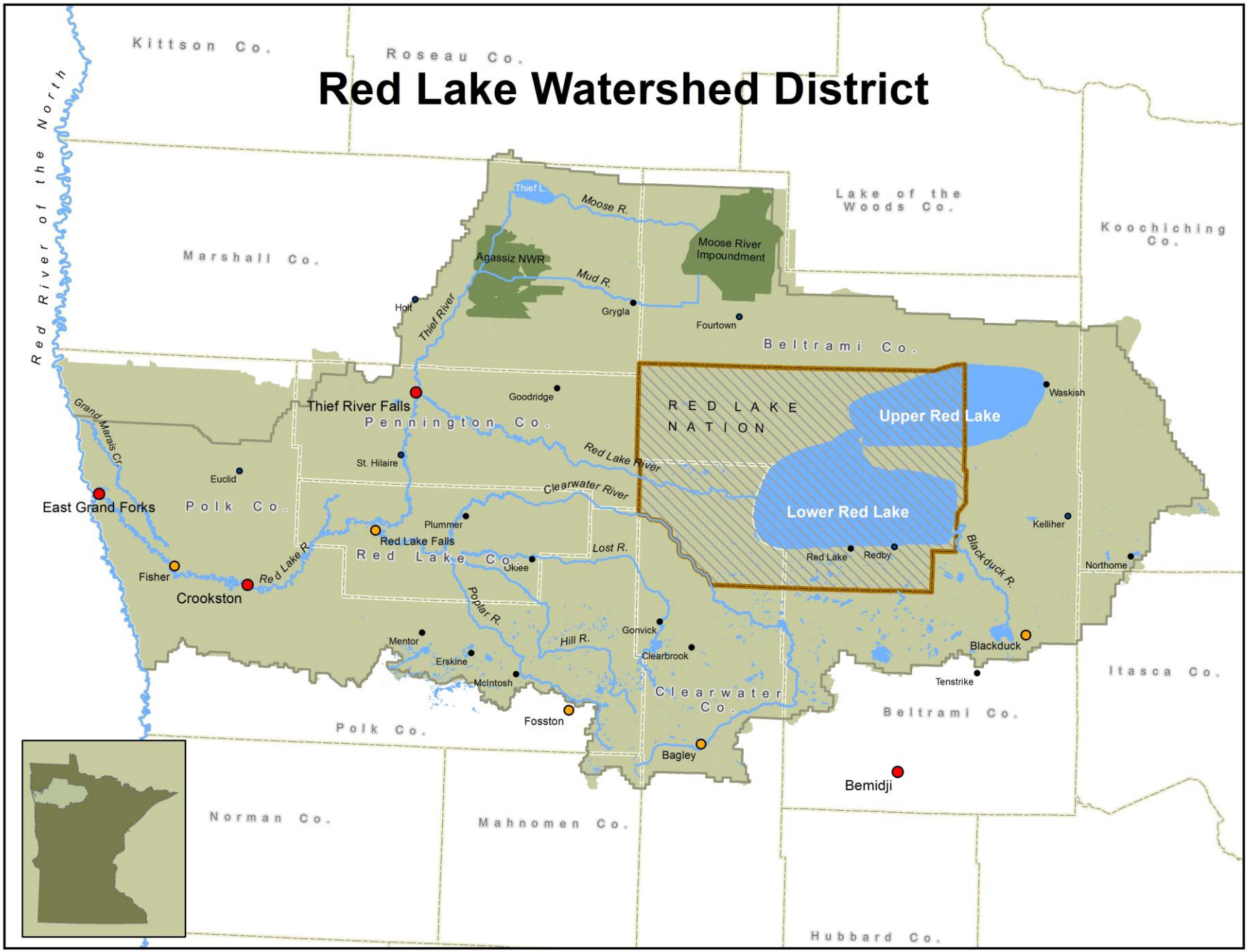
		Revenues				Expenses			Transfer	
	Fund Balance (Deficit) January 1	Assessments and Other Charges for Services	Operating/ Capital Grants and Contribution	Allocated Interest Earned	Taxes	Direct	Allocated Interest Charged	Allocated Salary and Overhead	In (Out)	Fund Balance (Deficit) December 31
Brandt Channel Restoration	$ -	$ -	$ -	$ -	$ -	$ 1,190	$ 8	$ -	$ 1,198	$ -
Grand Marais - Restoration	-	51,828	-	239	-	1,779	-	7,010	(43,278)	-
Grand Marais Cut Channel Stabilization	-	-	-	-	-	313	1	-	314	-
Clearwater Public Education (River Watch)	-	346	-	-	-	5,082	95	14,863	19,694	-
Red River Basin Long Term Flood Control	-	635	-	-	-	1,119,511	4,436	4,957	14,649	(1,113,620)
Four Legged Lake PWT	(125,553)	-	143,939	-	-	141,669	1,241	21,792	-	(146,316)
BWSR Flood Storage Pilot Project	-	-	-	-	-	-	1	192	193	-
Glacial Ridge/LCCMR/400k	-	-	68,283	-	-	68,283	58	806	864	-
Glacial Ridge/LCCMR/168k	-	-	44,961	-	-	44,961	40	879	919	-
Thief River TMDL	-	-	1,095	-	-	-	11	8,032	6,948	-
Red Lake River Watershed Assessment	(33,317)	-	21,652	-	-	1,797	215	7,793	21,140	(330)
Grand Marais WRAP	(6,821)	-	11,443	-	-	7,792	68	3,833	7,071	-
Clearwater River WRAP	(13,398)	-	40,260	-	-	4,209	161	35,906	13,221	(193)
TRF Westside FDR	-	-	23,888	-	-	25,419	5	1,514	-	(3,050)
Total Capital Projects	4,834,809	71,076	950,015	55,944	1,468,953	2,623,342	14,258	554,185	(140)	4,188,872
Total All Funds	$ 5,487,822	$ 235,043	$ 967,880	$ 65,441	$ 1,468,953	$ 3,594,896	$ 18,167	$ -	$ -	$ 4,612,076

RED LAKE WATERSHED DISTRICT
STATEMENT OF DIRECT EXPENDITURES BY CLASSIFICATION –
GOVERNMENTAL FUNDS - MODIFIED CASH BASIS
FOR THE YEAR ENDED DECEMBER 31, 2017

DIRECT EXPENDITURES:	
Salaries -	
Inspection	$ 8,165
Survey - Preliminary	4,975
Survey - Construction	175
Drafting	6,448
Engineering	63,031
Project Administration	245,105
Field Work - Water Programs	42,967
Other	32,595
Compensated Absences	38,661
Payroll Taxes and Benefits	119,619
Manager's Expense	24,853
Travel, Mileage, Meetings and Per Diems	5,917
Audit	9,000
Legal	23,613
Appraisal and Viewers	650
Other Professional Fees	91,717
Office Supplies	12,922
Office Equipment	30,684
Dues and Subscriptions	6,146
Insurance and Bonds	19,781
Repairs and Maintenance	10,699
Utilities	8,956
Telephone	9,128
Advertising and Publications	7,303
Truck Expense	12,635
Land Acquisition and Easements	1,111,552
Construction	419,322
Engineering Costs and Fees	5,393
Engineering Fees	1,079,203
Engineering Equipment	30,437
Glacial Ridge	113,244
Total Expenditures	$ 3,594,896

RED LAKE WATERSHED DISTRICT
STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN AMOUNTS
DUE TO OTHER GOVERNMENTAL UNITS –
TRUST AND AGENCY FUND – MODIFIED CASH BASIS
FOR THE YEAR ENDED DECEMBER 31, 2017

RECEIPTS		
Property Taxes		
Beltrami County	$	90,979
Clearwater County		195,117
Itasca County		979
Koochiching County		8,073
Mahnomen County		1,979
Marshall County		62,087
Pennington County		269,949
Polk County		712,237
Red Lake County		127,421
Roseau County		131
State - MV		67,546
TOTAL RECEIPTS		1,536,498
DISBURSEMENTS		
Red River Watershed Management Board		1,536,498
EXCESS OF RECEIPTS OVER (UNDER) DISBURSEMENTS		-
AMOUNT DUE TO OTHER GOVERNMENTAL UNITS, JANUARY 1		-
AMOUNT DUE TO OTHER GOVERNMENTAL UNITS, DECEMBER 31	$	-



Sound Water Management