

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 5/22/2019.

- ✓ Clearwater River Watershed Restoration and Protection Strategy
- ✓ Red Lake River Watershed Restoration and Protection Strategy
- ✓ Thief River Gage Analysis

Red Lake Watershed District (RLWD) Long-Term Monitoring Program

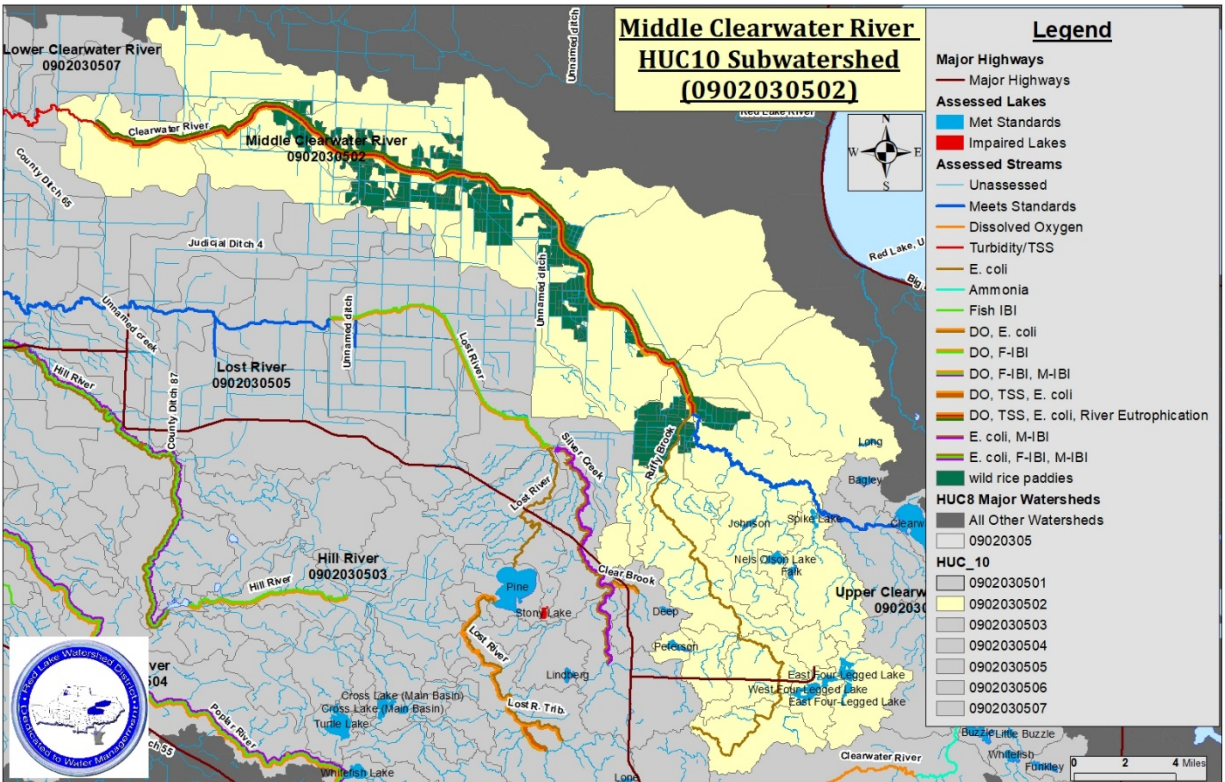
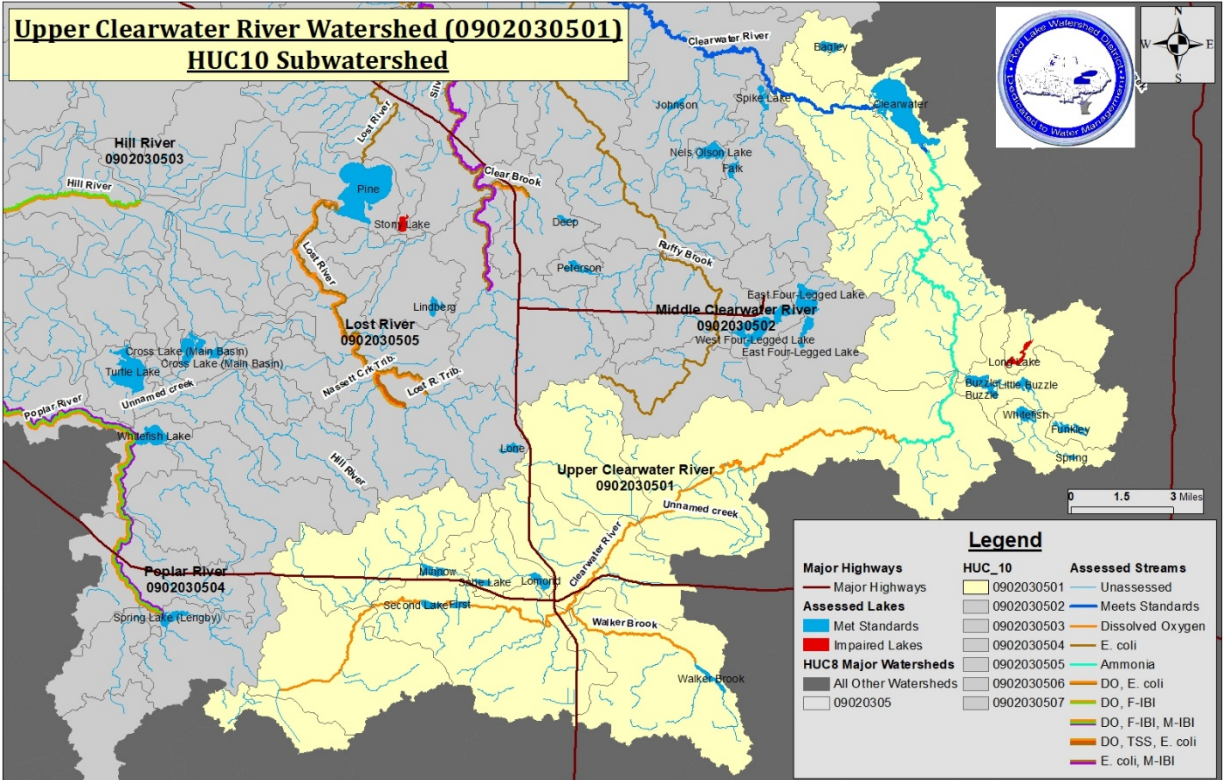
Entry and submittal (to the MPCA) of 2018 RLWD monitoring data was completed in November. The RLWD reimbursed the Maple Lake Improvement District for their 2018 sample analysis expenses.

Clearwater River Watershed Restoration and Protection Strategy (WRAPS) Project

- Objective 9 – Civic Engagement
 - A presentation was prepared for the November 28, technical advisory committee meeting.
 - A technical advisory meeting was held on November 28, 2018 to discuss restoration and protection strategies for the Clearwater River Watershed.
 - Completed sections of the TMDL and WRAPS were shared with the core team of technical advisors
- Objective 10 – Report Writing
 - RLWD staff worked on editing Section 3 of the Clearwater TMDL
 - Long Lake’s summer average total phosphorus concentrations were recalculated using the 2018 data that met standards, but the addition of the new data wasn’t enough to bring the average significantly closer to meeting the 30 ppb standard.
 - Actions were added to the lists of restoration and protection strategies for the WRAPS report based on information in the Clearwater River Watershed Monitoring and Assessment Report.
 - The total suspended solids TMDL section was nearly completed, except for a map of sites where TMDLs were established.
 - *E. coli* load duration curves were edited.
 - Maps were created for each HUC10 subwatershed.
 - Population trends in the watershed were summarized.

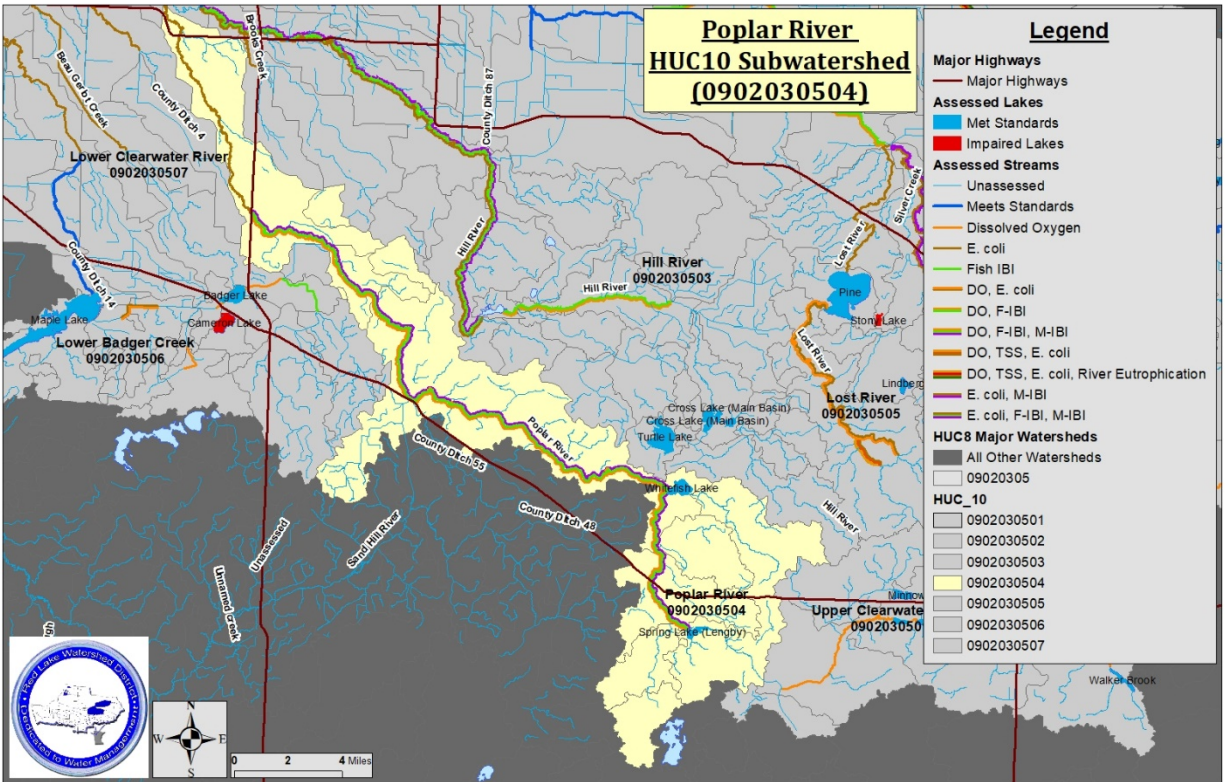
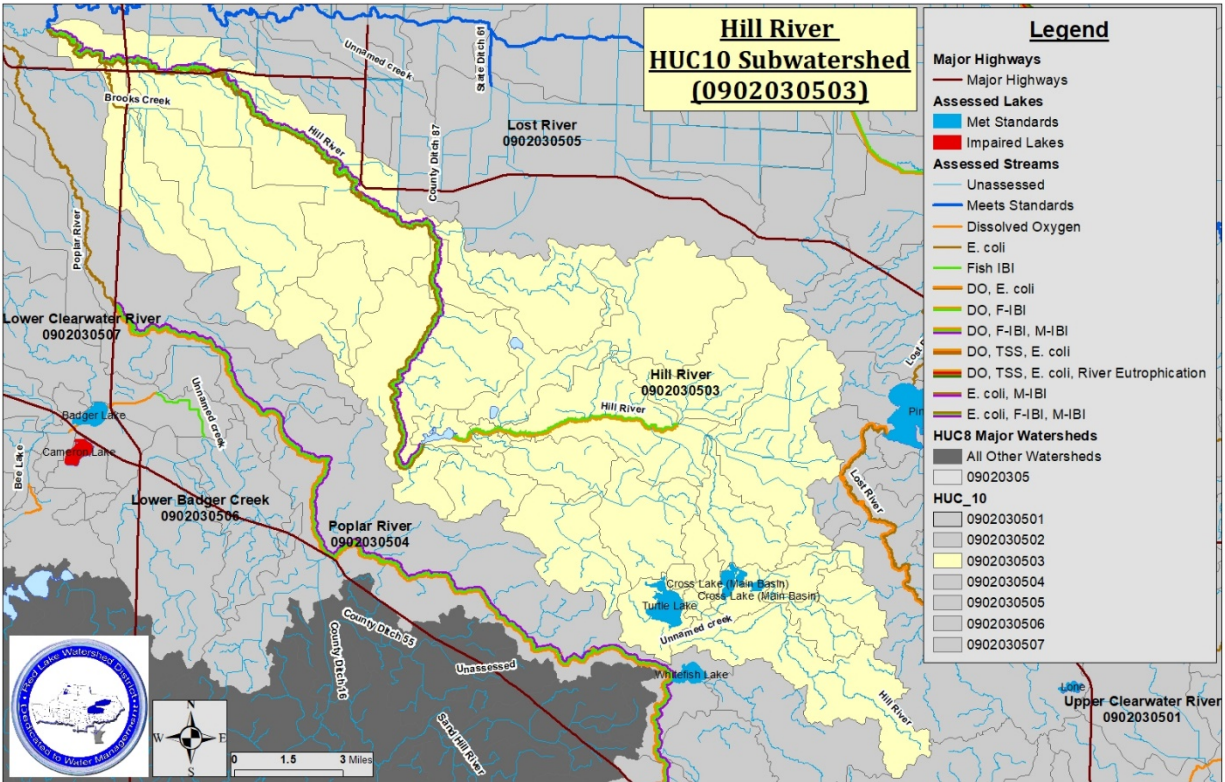
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November-
December 2018



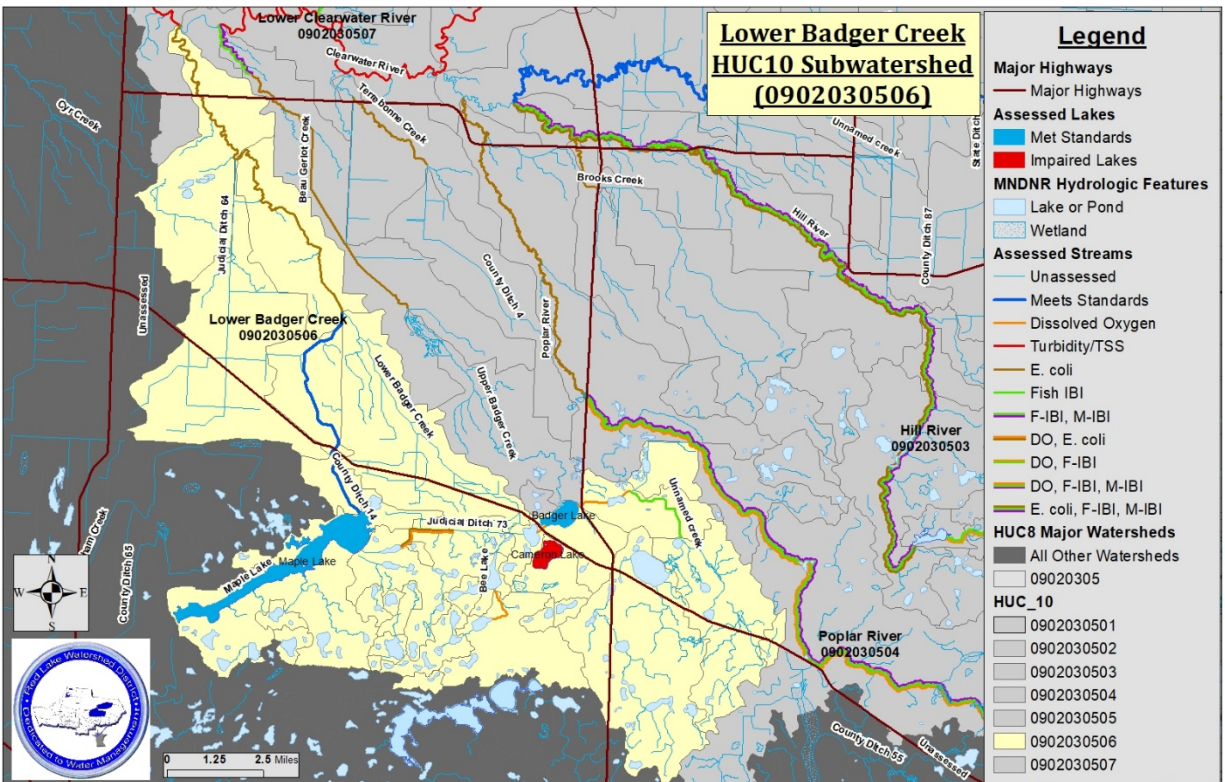
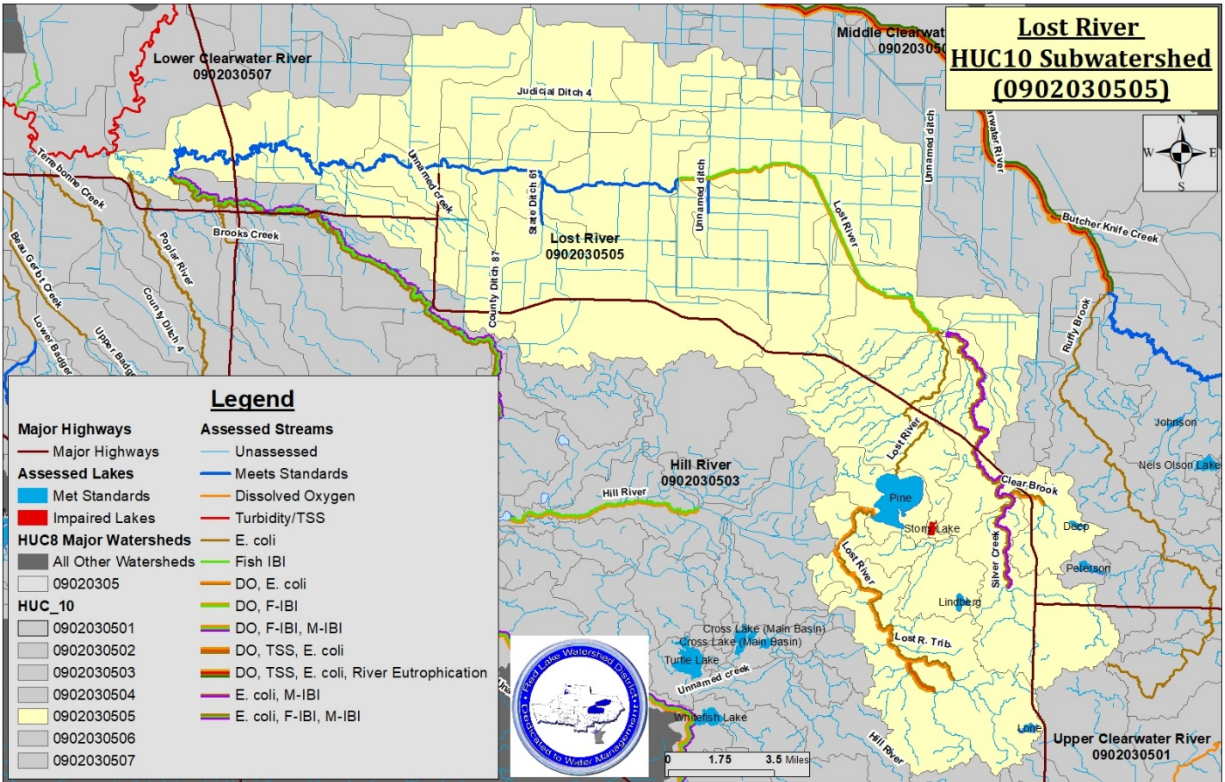
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November-
December 2018



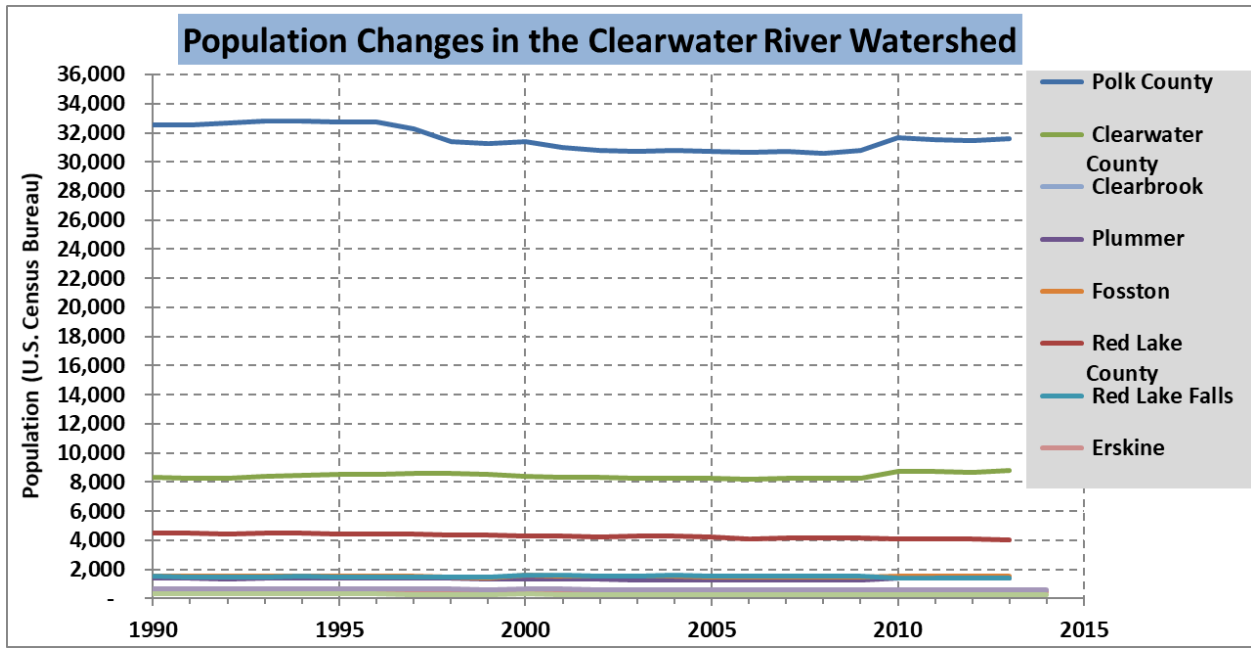
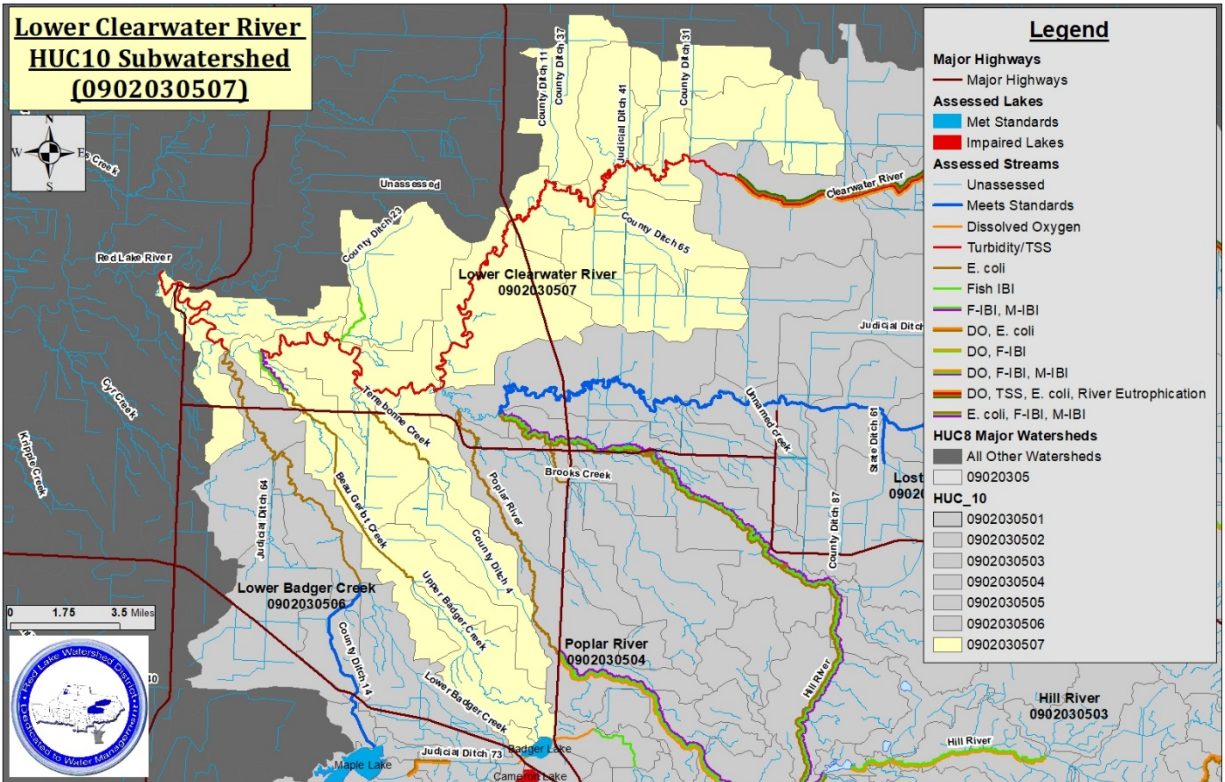
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November-
December 2018



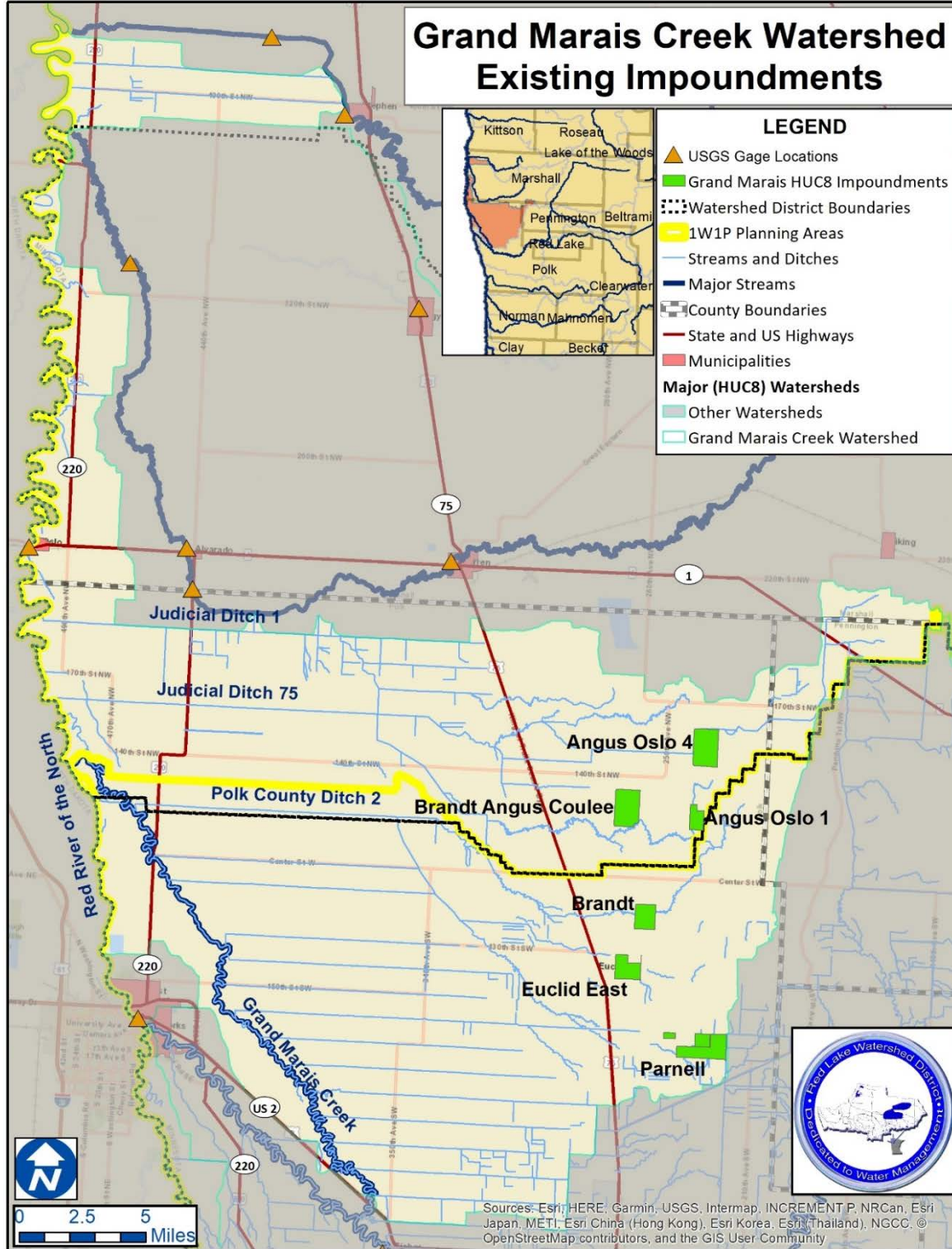
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November-
December 2018



Grand Marais Creek Watershed Restoration and Protection Strategy (WRAPS)

A revised map of existing Grand Marais Creek watershed impoundments was created for the reports.



Red Lake River Watershed Restoration and Protection Strategy (WRAPS)

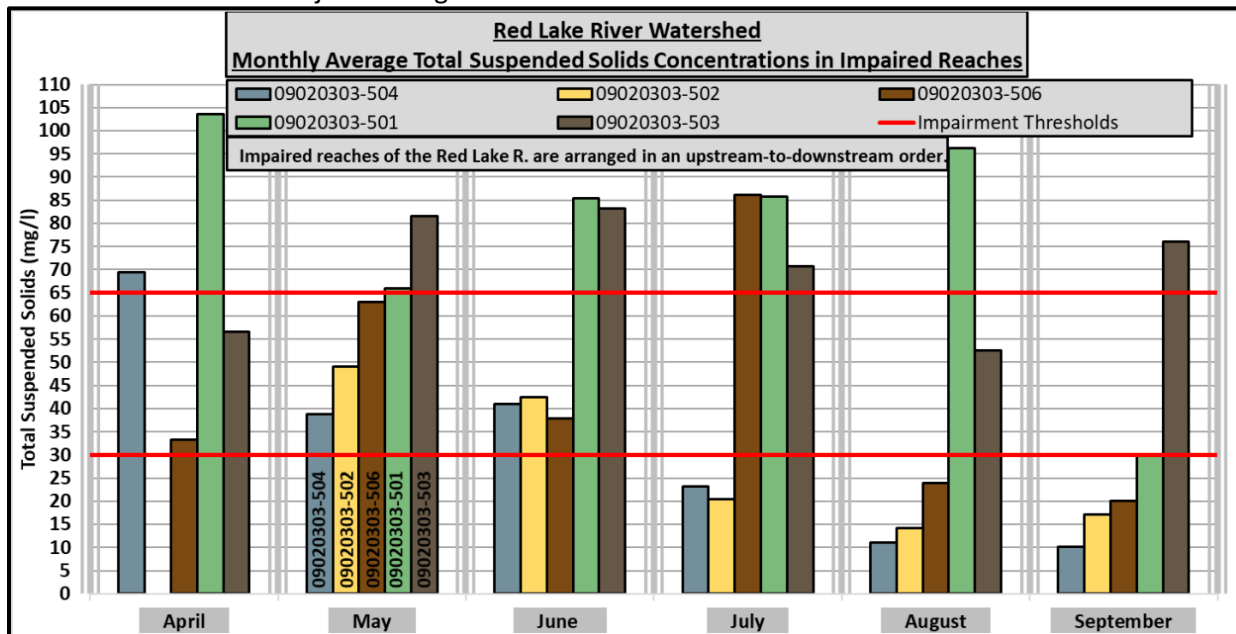
Comments were received from the MPCA and EPA on the Red Lake River Total Maximum Daily Load (TMDL) report on 10/31/2018, so editing of that document began in early November. The map and table of impaired were revised so that they reflected changes (delistings and recategorizations) that were made in the 2018 Draft List of Impaired waters (compared to the 2016 Draft List of Impaired Waters). Other map revisions included:

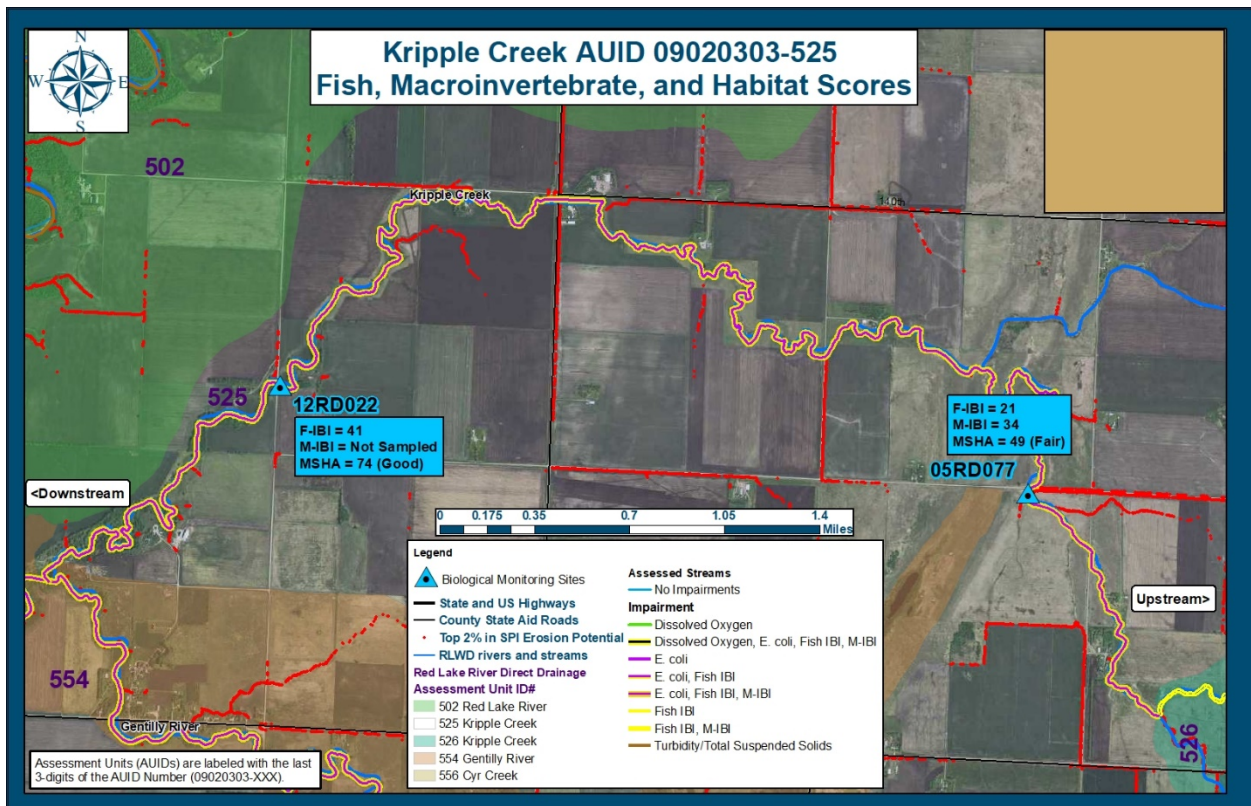
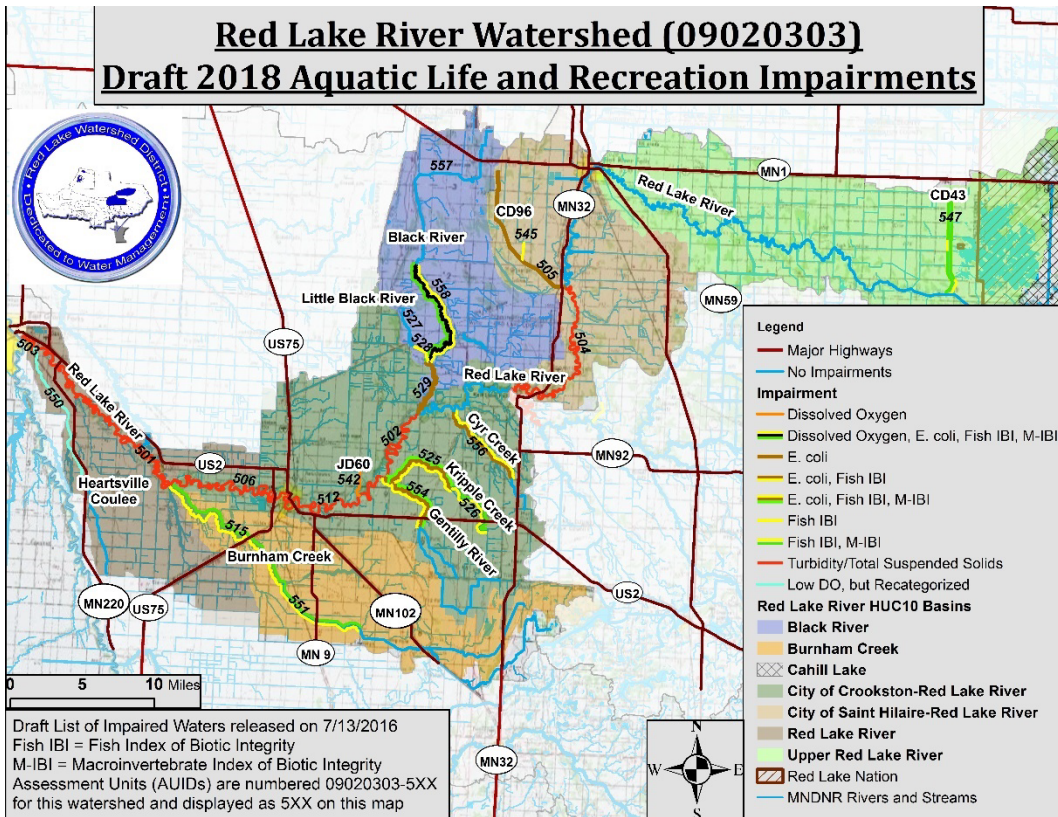
- Land use
- Drainage areas of impaired waters
- Kripple Creek fish, macroinvertebrate, and habitat scores (AUIDs 098020303-525 and -526)
- JD 60 subwatershed map
- Cyr Creek fish, macroinvertebrate, and habitat scores
- Black River longitudinal dissolved oxygen

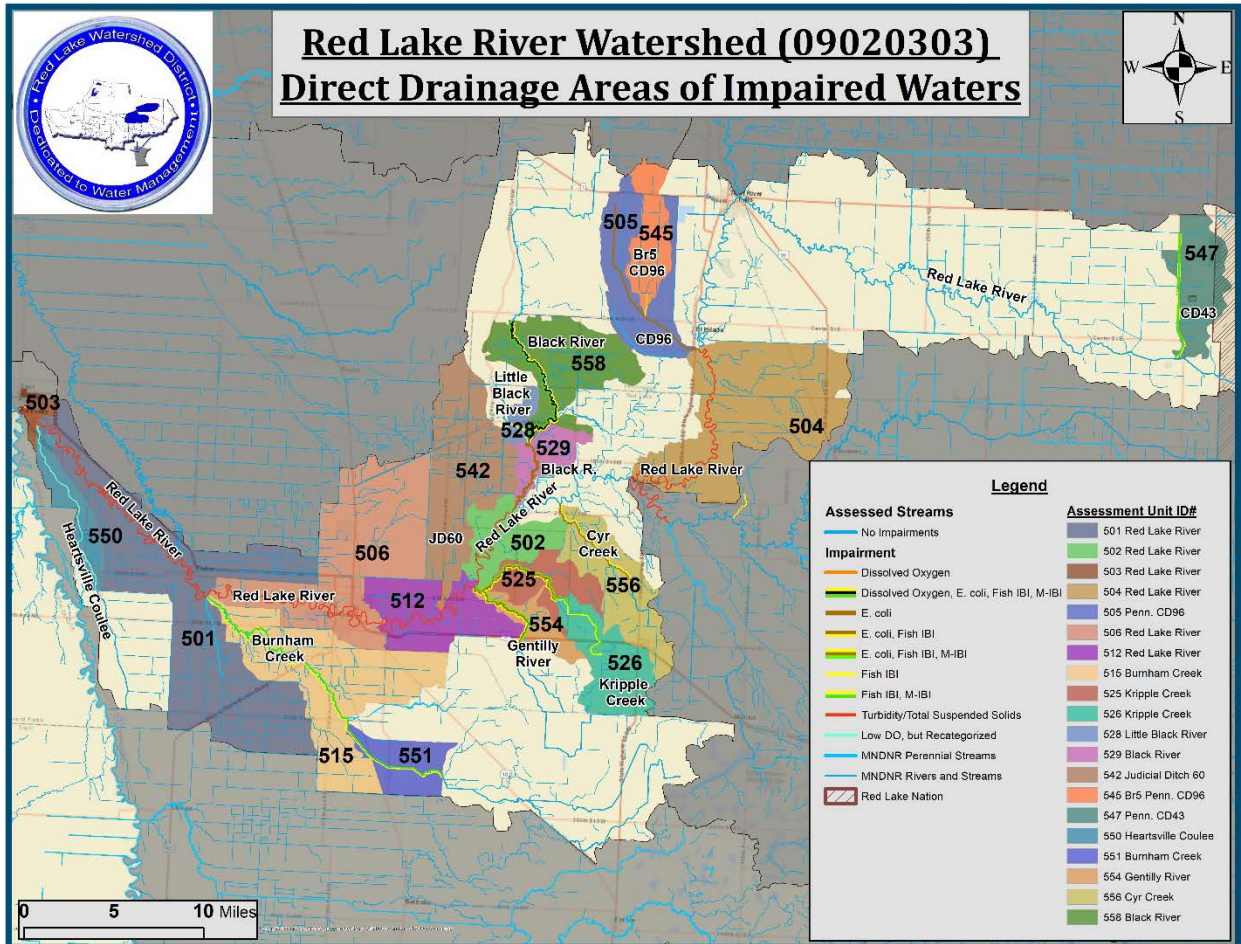
A chart showing the seasonality of total suspended solids was revised. The spreadsheets that were used for the calculation of total maximum daily loads were provided to the MPCA Project Manager and MPCA engineers. All of the sections in the report were reviewed for grammar, spelling, and clarity. The Cyr Creek and Gentilly Creek TMDLs were revised with updated flow records. Industrial and construction stormwater wasteload allocations were added to all total suspended solids TMDLs.

RLWD and MPCA staff discussed the possibility of designating the City of Thief River Falls as an MS4 (Municipal Separate Storm Sewer). The MS4 and MNDOT Right of Way stormwater wasteload allocations for the cities of East Grand Forks and Crookston were calculated, incorporated into TMDLs, and summarized.

A revised draft of the Red Lake River TMDL was completed and sent to the MPCA Project Manager on December 7, 2018. An edited TMDL summary section for the Red Lake River WRAPS was also completed and sent to the MPCA Project Manager.







Thief River One Watershed One Plan (1W1P)

A Planning Work Group phone conference was held on November 2, 2018. RLWD staff prepared an informational presentation about the findings of the Thief River WRAPS to be presented at a Thief River 1W1P meeting. RLWD staff reviewed a draft Section 5 of the Thief River 1W1P. A meeting of advisory committees and the policy committee was held on November 14, 2018 in Grygla. District staff updated the Thief River 1W1P website. A Planning Work Group meeting was held on December 5, 2018 to discuss the targeted implementation schedule tables of Section 4. A meeting of advisory committees and the policy committee was held on December 12, 2018 at the RLWD office.

Red Lake River One Watershed One Plan

A Planning Work Group phone conference was held on November 1, 2018. RLWD staff reviewed a targeted implementation plan for the Red Lake River planning area that was developed by Houston Engineering using an updated version of the Red Lake River PTMApp model. A Planning Work Group meeting was held in Red Lake Falls to discuss methods for tracking progress and targeted Regional Conservation Partnership Program (RCPP) funding.

Other Notes

- Water quality related notes from the November 8, 2018 Red Lake Watershed District Board of Managers meeting:
 - Darren Carlson, Marshall County SWCD, stated that in 2017 the SWCD installed side water inlet (SWI) culverts within the District's boundary which were in part, funded with the assistance from the District's Erosion Control Funds, RLWD Project No. 164. Carlson requested additional funding from the 2018 Erosion Control Funds, RLWD Project No. 164, in the amount of \$12,500 to assist in the design of the structures and installation of SWI culverts located within the District's boundary. The Board voted and approved the cost share funding in the amount of \$12,500 to assist in the design and installation of side water inlet culverts for the Marshall County SWCD.
 - The Pennington SWCD was featured in a Minnesota Board of Water and Soil Resources newsletter: SWCD Managers Collaborate to Solve Problems, Save Money. <http://www.bwsr.state.mn.us/news/webnews/november2018/3.pdf>
- Water quality related notes from the November 27, 2018 Red Lake Watershed District Board of Managers meeting:
 - Chester Powell, Clearwater SWCD, appeared before the Board to request funding assistance for Clearwater County to complete 3D aerial imaging of Clearwater County. Mr. Powell indicated that the estimated cost of the aerial imagery is \$75,375. Clearwater SWCD was awarded a grant through BWSR, but it did not cover all cost for the 3D aerial imaging project. Mr. Powell stated that funds from Wild Rice Watershed District and Clearwater County have been secured contingent upon funding from the District. Upon questions from the Board, Mr. Powell indicated that he would like to request funding from the District in the amount of \$7,537.50 which would assist in funding the shortfall. Motion by Page, seconded by Sorenson, to approve cost-share in the amount of \$7,537.50, with the Clearwater SWCD to complete 3D aerial imaging in Clearwater County. Motion carried.
 - Additional discussion was had with Chester Powell, Clearwater SWCD, concerning buffer compliance in Clearwater County. Mr. Powell stated all ditches in Clearwater County are in compliance with the new buffer law. Powell further noted that the SWCD just completed installation of four side water inlets that were partially funded by the District.
- Water quality related notes from the December 13, 2018 Red Lake Watershed District Board of Managers meeting:
 - Craig Mowry, Agassiz National Wildlife Refuge (NWR) appeared before the Board to update the Board on the current Conservation Partners Legacy Grant from the Lessard Sam Heritage Council that the District had applied for on behalf of Agassiz NWR in the amount of \$242,000, with matching funds in the amount of \$46,400 from Agassiz NWR. Mowry stated that the grant allowed for spraying of 2,000 acres of cattails within the refuge, for a total of 8,448 acres of cattails sprayed since 2010. The grant also included repairs to a water control structure which was recently completed by Triple D Contractors. Agassiz NWR hired an amphibious excavator, which cleaned out ditches within the refuge that were full of silt. The balance of the current grant will be spent in the fall of 2019, with the replacing of two rusted out corrugated pipes with a large box culvert. Mowry requested assistance to administer an additional grant from the

Lessard Sam Heritage Council for a Conservation Partners Legacy grant for \$50,000 to restore wetland function with the refuge. Agassiz NWR would be required to have a 10% match for the grant. The District would be appropriating funds in to administer the grant. Mowry discussed the efforts of the refuge to reduce sediment and nutrient loading within the Thief River Watershed. Motion by Ose, seconded by Tiedemann, to approve the partnership and administration of a \$50,000 grant for Agassiz National Wildlife Refuge from the Lessard Sam Heritage Council Conservation Partners Legacy Grant. Motion carried.

- Note: The excavation and flushing of sediment from the old JD 11 channel through Agassiz Pool has caused alarmingly high increases in turbidity and TSS downstream in the Thief River. It has also caused sedimentation within the State Ditch 83 portion of the Thief River. Discharge from Agassiz Pool during drawdowns and flushing of sediment has led to violations of drinking water safety standards in Thief River Falls (excess trihalomethanes).
- RLWD staff reviewed and provided comments on a draft letter from the Red River Watershed Management Board to the MPCA regarding a public comment period on Tiered Aquatic Life Use (TALU) classifications.
- RLWD staff provided assistance with a grant proposal from the Gully Co-op for a project that will implement BMPs in wild rice paddies.
- A May 2018 water quality report was completed and posted online:
<http://www.redlakewatershed.org/waterquality/MonthlyWQReport/2018%2005%20May%20Water%20Quality%20Report.pdf>
- A June 2018 water quality report was completed and posted online:
<http://www.redlakewatershed.org/waterquality/MonthlyWQReport/2018%2006%20June%20Water%20Quality%20Report.pdf>
- A July 2018 water quality report was completed and posted online:
<http://www.redlakewatershed.org/waterquality/MonthlyWQReport/2018%2007%20July%20Water%20Quality%20Report.pdf>
- RLWD staff reviewed proposed legislative changes to the Clean Water Legacy Act regarding coordinated watershed management plans (comprehensive watershed management plans and one watershed one plans) at the request of the Red River Watershed Management Board's lobbyist.
- The Pennington Soil and Water Conservation District was awarded \$542,642 in Clean Water Funds from the Minnesota Board of Water and Soil Resources (BWSR) for their proposed Thief River Falls Streambank Stabilization Projects project:
 - Three streambank stabilization projects have been identified as high priority projects in the Thief River Falls Water Quality Study completed in 2017. The proposal will use a combination of bendway weirs, toe protection by building a floodplain bench and live stake plantings. It has been estimated that a total of 385 tons per year of sediment from these three locations is entering the river contributing to the impairment downstream.
- The RLWD application for BWSR Clean Water Funds for stabilization of the outlet of the Westside FDR Project and the East Polk SWCD application for Clearwater River watershed Water and sediment control basins were unsuccessful in this round of funding.
- RLWD staff provided MPCA staff with 2018 flow data from the Gentilly River.
- Dave Friedl (DNR, retired) shared gage analysis of the Thief River. The analysis determined that bankfull height was approximately 1,100 CFS. That flow rate could be used as a reference point

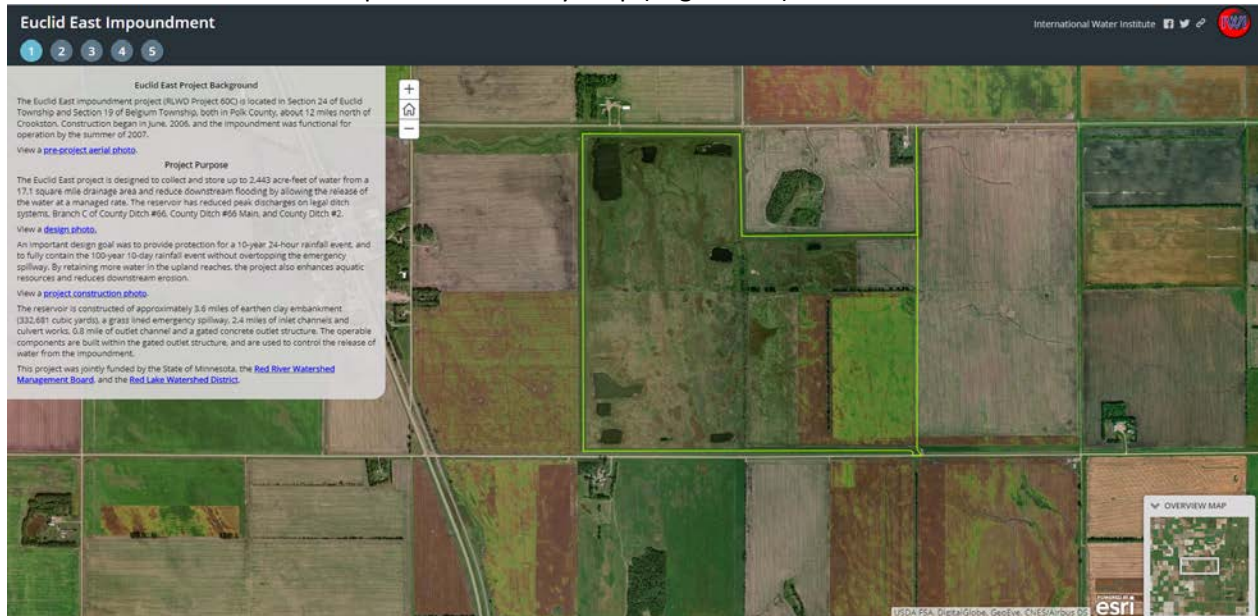
when discussing discharge rates from impoundments. Keeping in-stream flow rates below that level would help reduce erosion along the river.

Meetings and Events from November and December 2018

- **November 1, 2018** – Red River Basin Monitoring Advisory Committee Meeting
 - Red River Basin Monitoring Situation – MPCA Monitoring and Assessment
 - Andrew Butzer discussed Watershed Pollutant Load Monitoring and Data Products.
 - In reference to some questions about whether or not Watershed Pollutant Load Monitoring Network (WPLMN) sampling (which targets higher flows) introduces a bias that could be considered during water quality assessments, a meeting attendee noted that mean flow from sampling dates could be compared to the overall mean daily flow in order to identify bias.
 - MPCA and International Water Institute staff have been using the CANVAS app for recoding data during the WPLMN sampling. Entering the data adds 15-20 minutes per site.
 - Data can be accessed and analyzed online (including FLUX modeling results) through TABLEAU.
 - Scott Niemala discussed MPCA biological monitoring, TALU, and the second cycle of the Intensive Watershed Monitoring and Watershed Restoration and Protection Strategy processes.
 - During the second cycle of monitoring and assessment, sites that didn't work well will not be re-sampled. There will probably be less money available for monitoring. Surface Water Assessment Grant sites that would create a duplication of existing sampling efforts could also be cut.
 - Local partners will be engaged prior to monitoring, in response to comments that were submitted. More people are buying into the process. Getting locals involved in early stages will be helpful.
 - Stressors and pollutants will be identified. There will, hopefully, be some opportunities for delistings.
 - The planning process for the second cycle of monitoring and assessment in the Thief River Watershed will begin in 2020.
 - Red River Basin MAC Organization
 - MAC Meeting Schedule
- **November 14, 2018** – Thief River One Watershed One Plan Advisory Committee and Policy Committee meetings
- **December 3, 2018** – Red Lake River One Watershed One Plan Planning Work Group meeting
 - Much of the discussion at this meeting focused on potential methods for tracking planned/completed projects and progress toward goals of the Red Lake River 1W1P.
 - RCPP funding for priority areas (\$428,000 over three years) was also discussed. Priority areas and a set of screening questions will need to be selected for this funding.
- **December 10, 2018** – Polk County Water Resources Advisory Committee meeting at the Valley Technology park in Crookston

- Efforts to control aquatic invasive species in the county have included the purchase of 5 sets of tools for cleaning boats and trailers along with youth education and essay contests. There was discussion about blue-green algae.
- Polk County staff reported that 98% of the East Polk SWCD portion of the county is in compliance with the buffer law.
- The We Are Water exhibit will be at the University of Minnesota Crookston from January 21 -March 4, 2019.
- There was discussion about educational workshops about lakescaping, rain barrels, and/or rain gardens. A public demonstration project might be helpful. A lakescaping project has been completed at the Union Lake/Sarah campground.
- **December 12, 2018** – Red Lake River One Watershed One Plan PTMApp close-out meeting
- **December 14, 2018** – Red River Basin Monitoring Advisory Committee meeting
 - Red River Basin MAC Organization – Planning Committee Outcomes
 - Red River Basin Member Updates
 - The International Water Institute has assembled a Story Map Gallery of flood damage reduction projects:
<http://www.arcgis.com/apps/PublicGallery/index.html?appid=742ffba9bf2e4190b7254a720fb2ebdf>.
 - International Water Institute staff shared information about the River of Dreams educational canoe launch program (www.riverofdreams.org). They are looking for a non-toxic, yet durable alternative to the epoxy that is used to protect the informational tag “inside” the canoes.
 - The International Water Institute has been conducting pesticide sampling at Minnesota Department of Agriculture Tier 1 and Tier 2 locations. They are trying to collect samples after runoff events.
 - Some River Watch programs have started using DIY kits to conduct continuous monitoring at 8 locations throughout the Red River Basin. They are looking for locations that are close to a school, have adequate sunlight for the solar panels, need data, and are safe from vandalism.
 - There was an update on Watershed Pollutant Load Monitoring Network sampling that has been conducted by the International Water Institute.
 - The MPCA has been conducting hydrologic monitoring at 22 stations throughout the Red River Basin. They have upgraded sensors to radar in some watersheds. Flow measurements are being conducted once per month. Telemetry is being added to sites in the Otter Tail River Watershed. New stations with velocity meters (concern about backwater) have been added to the Blackduck and Tamarac Rivers.
 - MPCA sondes will be upgraded to YSI EXO2s as the YSI 6920 and 6820 sondes will be phased-out.
 - Sondes may be available for agencies that want to do monitoring.
 - The International Water Institute commissioned a painted map of the Red River Basin, by Laura Salmela.

○ Euclid East Impoundment Story Map (Page 1 of 5):



- **December 20, 2018** – Meeting at the Grand Rapids DNR office with BWSR about the One Watershed One Plan processes and potential Regional Conservation partnership Program (RCPP) funding from the NRCS that will be directed toward priority watershed that were identified in 1W1Ps.
 - Your Experience: from planning to implementation
 - Data-based prioritization
 - Templates would be helpful
 - Having a neutral facilitator is important.
 - When do we start thinking about the next round?
 - Assurance measures
 - Discussion about invoicing and making sure that partners know how much they can invoice and for what.
 - Make sure that the plan will still function through changeover in staff or policy committee members.
 - Plan for social marketing.
 - Grants are reviewed against criteria.
 - The 1W1P replaces competitive grant application and review processes.
 - There will be a decrease in competitive grant funding as the amount of non-competitive 1W1P funding increases.
 - Develop easy-to-understand metrics to measure progress toward goals, based upon the workplan (High Performance = meet or exceeded goals; Successful = met most of the goals; Needs Improvement = little to no progress)
 - Try to think of ways to maximize the amount of water quality improvement that comes from “other people” through education and marketing.
 - A challenge in the northeastern portion of Minnesota is that waters are already in good condition (all protection, little restoration). Use other metrics in addition to water quality (index of biological integrity, Minnesota Stream Habitat Assessment).

- 80% of funds should be spent on activities that address priority clean water issues in targeted areas. There was some discussion about whether or not education, outreach, plan administration, and coordination should factor into this equation.
- It has been difficult to come up with practical metrics for education.
- Documentation is important, even where we fail to meet goals. Are there areas where landowners don't want to participate, and we have to move on to the next priority area?
- RCPP next steps
 - Local planning workgroups determine the ranking questions.
 - Federal funds available for EQIP BMP implementation in targeted areas.
 - The Red Lake River was one of the watersheds that were selected for this program.

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

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

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

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