

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 3/6/2018.

- ✓ New email addresses for RLWD staff
- ✓ Data Entry
- ✓ Equipment retrieval
- ✓ Thief River Watershed Restoration and Protection Strategy
- ✓ Thief River One Watershed One Plan

New Email Addresses

Red Lake Watershed District staff and board managers were assigned new, uniform email addresses. Here is the current list of RLWD contacts so you can update email addresses in your contacts list:

Staff:

- Myron Jesme, Myron.Jesme@redlakewatershed.org
- Tammy Audette, Tammy.Audette@redlakewatershed.org
- Loren Sanderson, Loren.Sanderson@redlakewatershed.org
- Arlene Novak, Arlene.Novak@redlakewatershed.org
- Christina Slowinski, Christina.Slowinski@redlakewatershed.org
- Ashley Hitt, Ashley.Hitt@redlakewatershed.org
- Corey Hanson, Corey.Hanson@redlakewatershed.org
- Brady Stanley, Brady.Stanley@redlakewatershed.org
- RLWD (in general), RLWD@redlakewatershed.org

Board of Managers:

- Dale Nelson, Dale.Nelson@redlakewatershed.org
- Gene Tiedemann, Gene.Tiedeman@redlakewatershed.org
- LeRoy Ose, LeRoy.Ose@redlakewatershed.org
- Terry Sorenson, Terry.Sorenson@redlakewatershed.org
- Brian Dwight, Brian.Dwight@redlakewatershed.org
- Allan Page, Allan.Page@redlakewatershed.org
- Les Torgerson, Les.Torgerson@redlakewatershed.org

River Watch

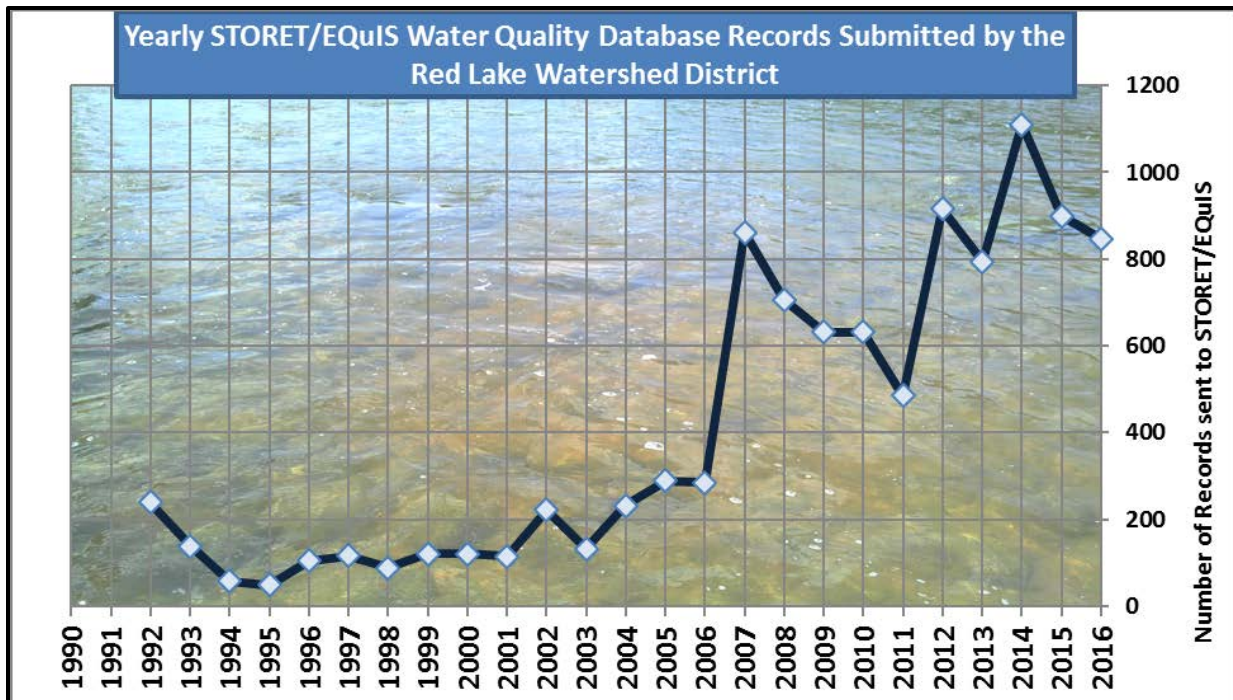
At the end of 2017, River Watch teams were working on the preparation of projects for the 2018 River Watch Forum. Ashley Hitt visited schools within the District to provide assistance.

Clearwater River Watershed Restoration and Protection Strategy (WRAPS) Project

- Objective 10 – Reports
 - Some progress was made in writing the total suspended solids sources section.
 - A map of Pfankuch stability assessment locations and results was created and added to the TMDL report.

Red Lake Watershed District Long-Term Monitoring Program

Data from 2017 water quality monitoring was entered into the RLWD’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 265 of those records involved the collection of water quality samples.



Red Lake Watershed District Stream Gaging and Flow Monitoring

HOBO water level loggers collected water level measurements at 24 monitoring sites throughout the Clearwater, Red Lake River, Thief River, and Grand Marais Creek watersheds in 2017. Those loggers were retrieved early in November as cold weather arrived and streams began freezing-over. Data was downloaded from the loggers.

Red Lake River Watershed Restoration and Protection Strategy

Because the revised TMDL and WRAPS documents were not yet reviewed by the MPCA, there was an opportunity to apply general MPCA comments from the Thief River TMDL and WRAPS documents to the Red Lake River documents. The newly revised documents were provided to the MPCA Project Manager on December 28, 2017.

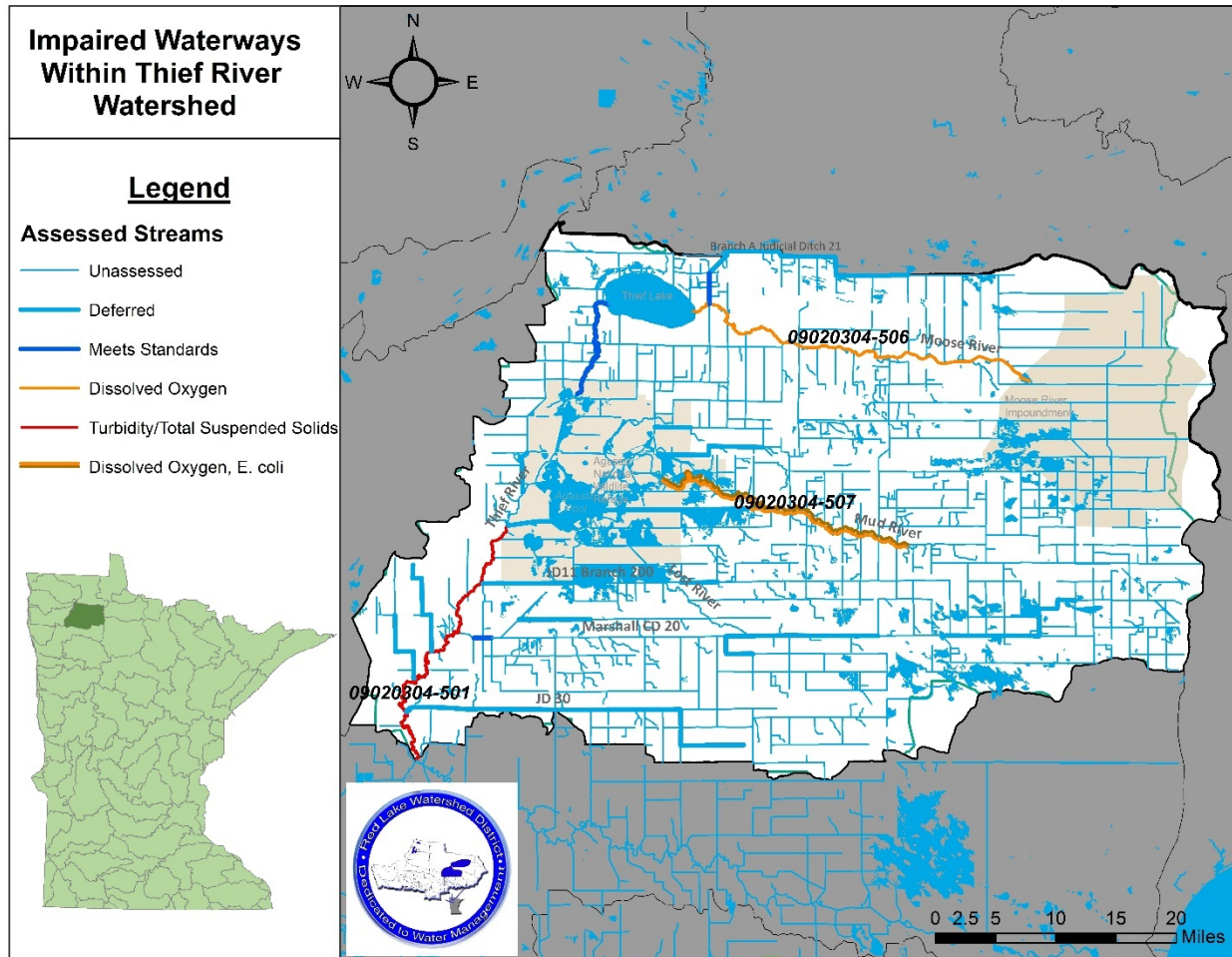
Red Lake River One Watershed One Plan (1W1P)

A Red Lake River 1W1P planning group meeting took place on November 14, 2017 to discuss “other waters” and the project’s work plan.

Grand Marais Creek Watershed Restoration and Protection Strategy

A contract is being developed for the public notice process and editing of the Grand Marais Creek Total Maximum Daily Load (TMDL) and Watershed Restoration and Protection Strategy (WRAPS) documents.

Thief River Watershed Restoration and Protection Strategy (WRAPS)

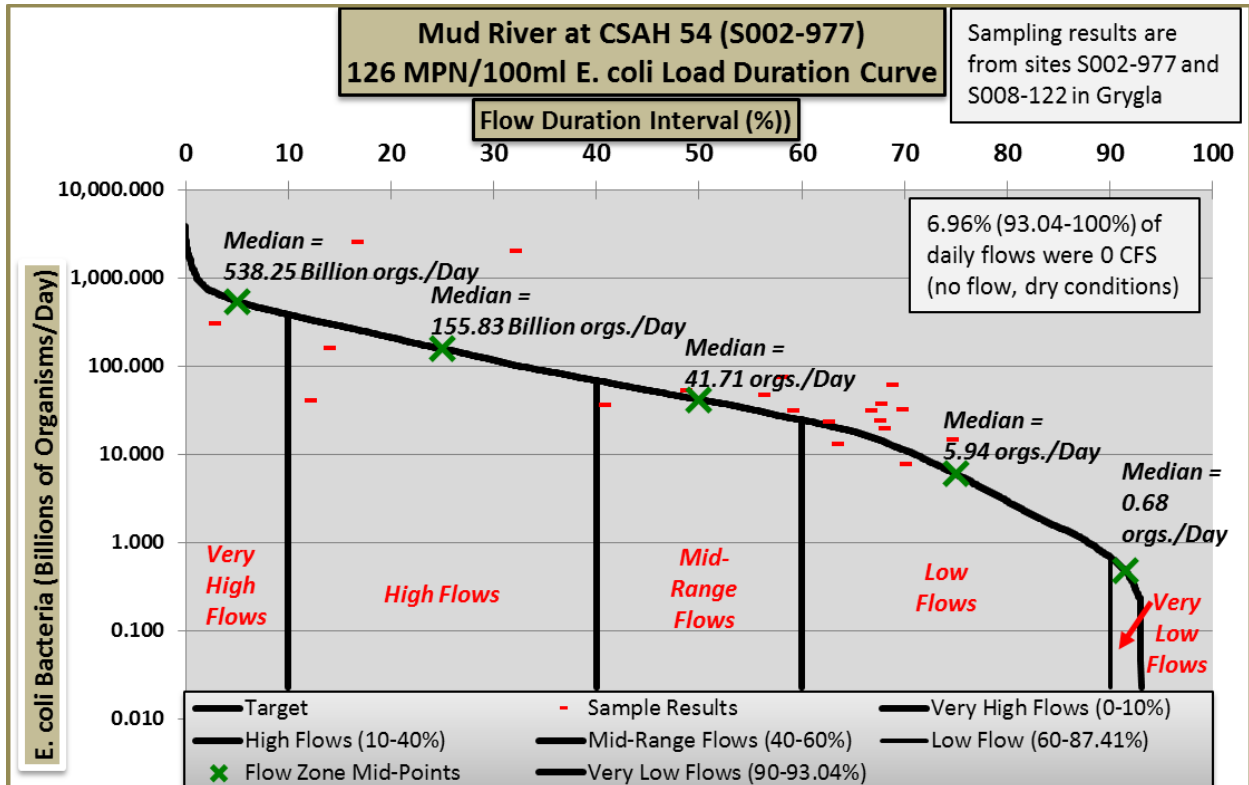


The MPCA had completed a review of the Thief River Total Maximum Daily Load (TMDL) and Watershed Restoration and Protection Strategy (WRAPS) reports. RLWD staff used those comments to edit and improve the documents. TMDLs for the Mud River in Grygla (*E. coli* bacteria) and the Thief River at CSAH 7 (total suspended solids) were added. New revisions of the Thief River TMDL and WRAPS reports were completed in December and sent to the MPCA Project Manager. They should be ready to progress to the public notice phase.

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

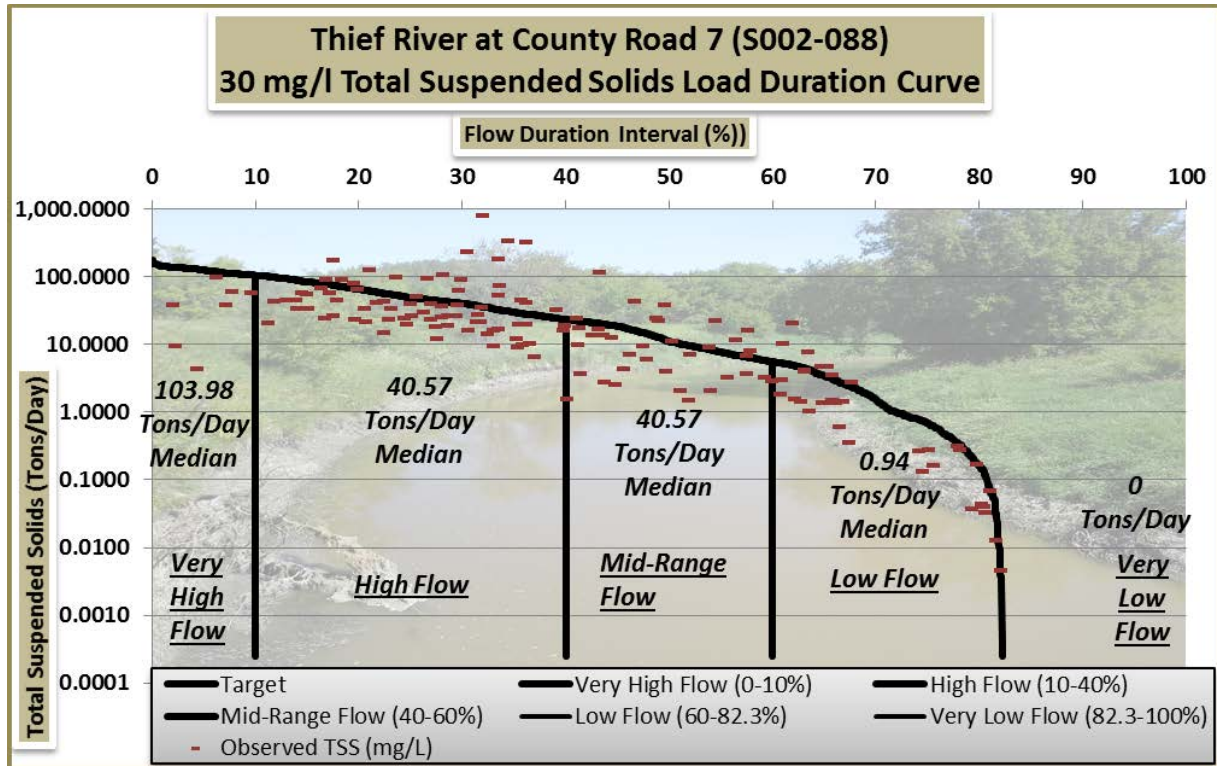
November -
December 2017

E. coli bacteria Total Maximum Daily Load for the Mud River in Grygla:



Mud River (09020304-507) at CSAH 54 Annual <i>E. coli</i> Load Reductions at S002-977	Very High Flows	High Flows	Mid-Range Flows	Low Flows	Very Low Flows	Total
Current Daily Load (10^9 orgs/day)	53.00	229.80	157.97	203.49	No Data	
Load Allocation (10^9 orgs/day)	484.43	140.25	37.54	5.35	0.43	
Load reduction (10^9 orgs/day)	-	89.55	120.42	198.14	-	
% of Flows Represented	10%	30%	20%	30.0%	3.0%	93%
# of Days Represented	36.5	109.5	73.0	109.5	11.1	339.60
Annual Load Reduction (10^9 orgs/year)	-	9,805.98	8,790.93	21,696.74	-	40,293.64
Total Current Load	1,934.50	25,163.30	11,531.48	22,282.46	0	60,911.74
Percent Reduction	0.0%	39.0%	76.2%	97.4%	0.0%	66.2%

Total suspended solids Total Maximum Daily Load for the Thief River at CSAH 7:

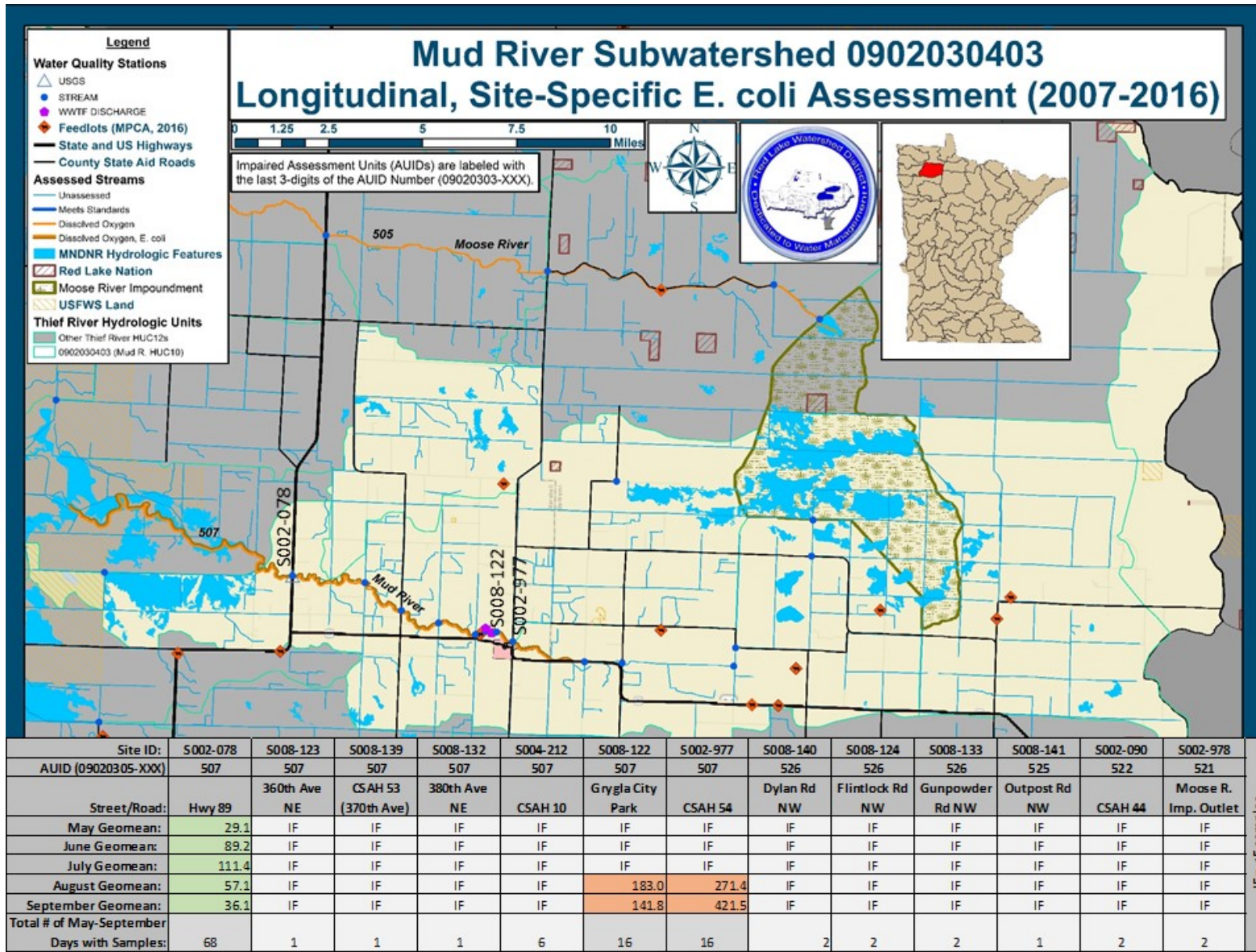


Lower Thief River (09020304-501) Total Suspended Solids Load Reductions S002-088 Thief River at CSAH 7	Very High Flows	High Flow	Mid-Range Flows	Low Flows	Very Low (No) Flow	Total
Current Daily Load (tons/day)	43.64	61.6	14.39	2.29	0	--
Load Allocation (tons/day)	93.58	36.51	8.33	0.85	0	--
Load reduction (tons/day)	0.00	25.09	6.07	1.44	0.00	--
% of Flows Represented	10%	30%	20%	22.26%	17.74%	100%
# of Days Represented	36.5	109.5	73.0	81.2	64.8	365
Annual Load Reduction (tons/year)	0.0	2747.0	442.7	117.3	0.0	3307.1

Current and historical water quality conditions (*E. coli*) in the Mud River were described. A section was written about the sources of *E. coli* bacteria in the Mud River watershed.

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

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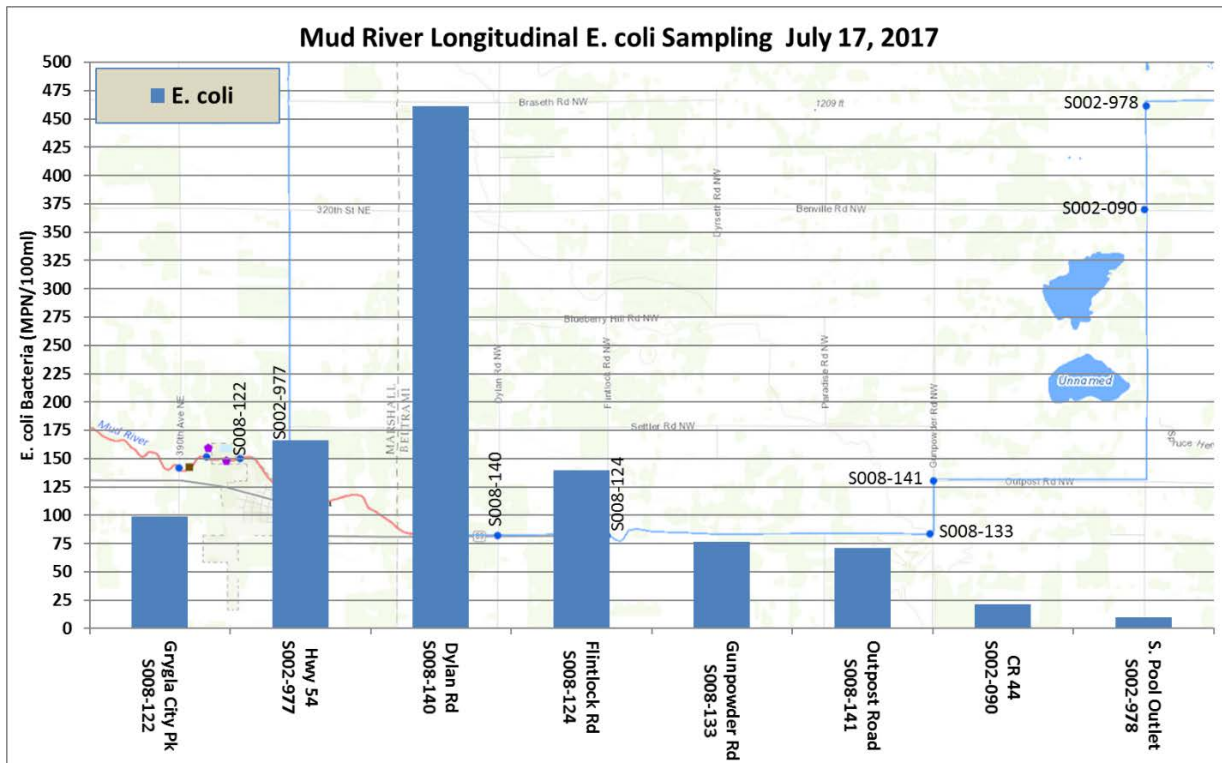


RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

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History of Mud River *E. coli* Monthly Geometric Means

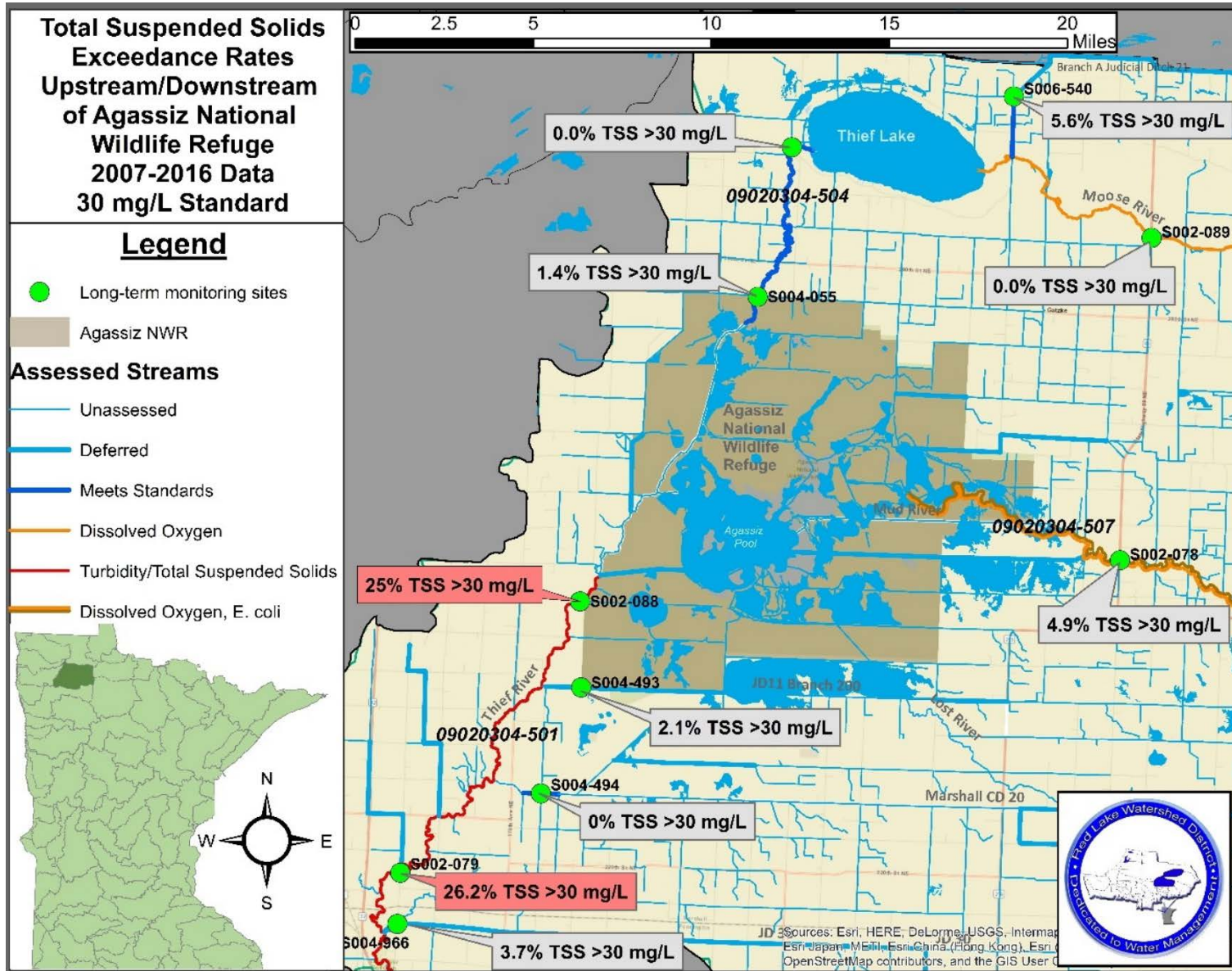
Monthly <i>E. coli</i> Geomean 2007-16 Data	Monthly <i>E. coli</i> Geomean 2006-15 Data	Monthly <i>E. coli</i> Geomean 2005-14 Data	Monthly <i>E. coli</i> Geomean 2005-13 Data	Monthly <i>E. coli</i> Geomean 2005-12 Data	Monthly <i>E. coli</i> Geomean 2005-11 Data	Monthly <i>E. coli</i> Geomean 2005-10 Data	Monthly <i>E. coli</i> Geomean 2005-09 Data
14.6	14.6	16.9	16.9	16.9	17.5	14.3	
29.1	27.1	27.7	27.7	25.4	24.0	29.2	29.2
86.0	86.6	91.7	91.6	91.6	100.9	86.5	82.9
115.39	115.37	116.4	125.6	128.7	167.8	102.8	102.8
101.5	87.1	78.3	78.3	82.8	109.9	101.7	105.2
67.0	64.9	42.6	42.6	40.6	40.6	38.8	38.8
93.8	86.7	101.3	101.3	126.2	179.0	239.9	394.7



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. USFWS staff were given an opportunity to review a revised version of the nonpoint sediment sources section. More common ground has been found and some additional edits were made to the section. Responses were written for the new USFWS comments and points of agreement were noted. Information was provided in other cases where it was needed to improve descriptions of the assessment process, data collection, and federal law. The National Environmental Policy Act of 1969, Section 101, states that it is the responsibility of the Federal Government to use all practicable means to “attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.” Management activities in Agassiz Pool by the USFWS have increased downstream degradation of water quality and increased health risks in Thief River Falls drinking water, both of which are unintended consequences of the excavation, flushing, and drawdown activities in Agassiz Pool.

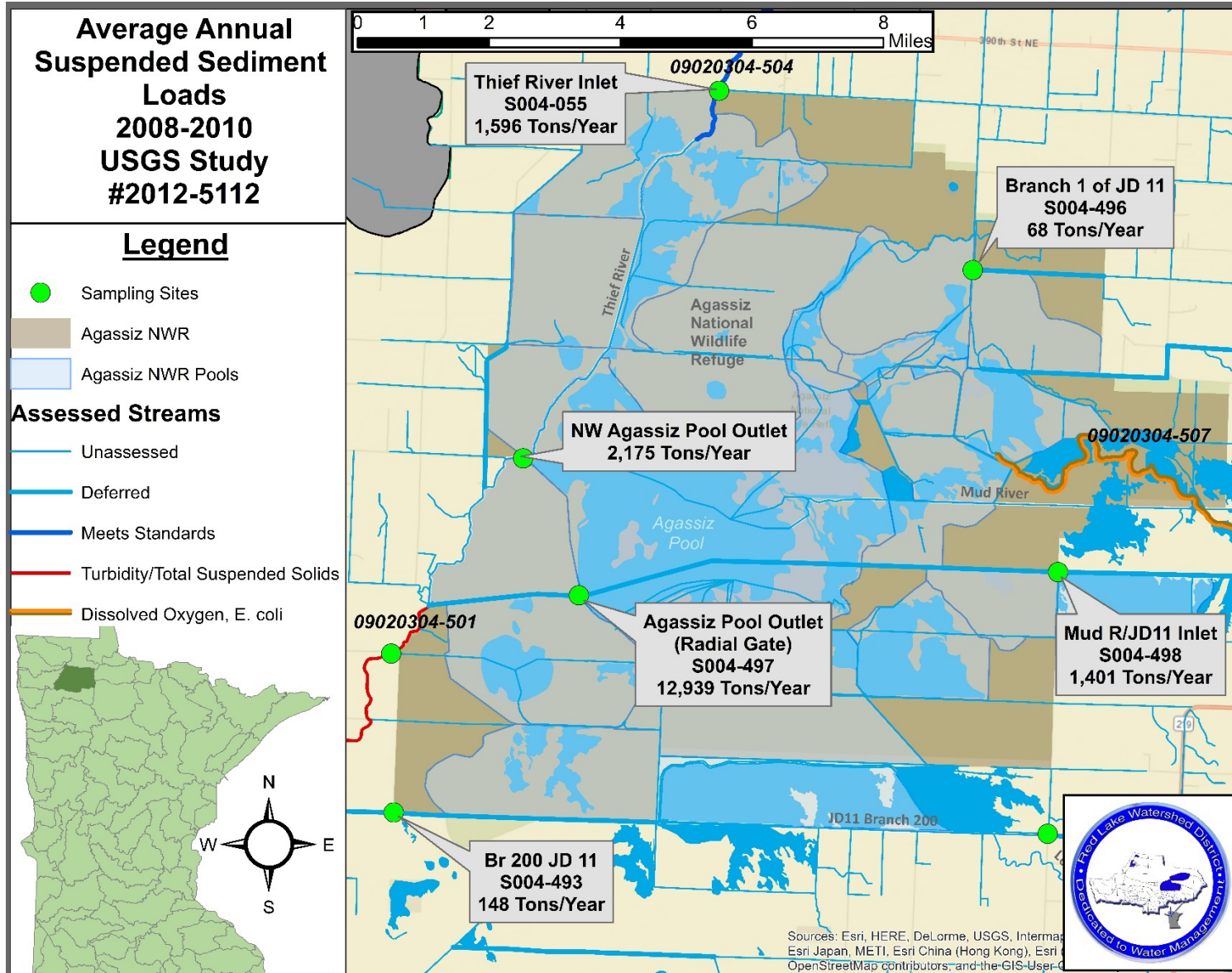
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

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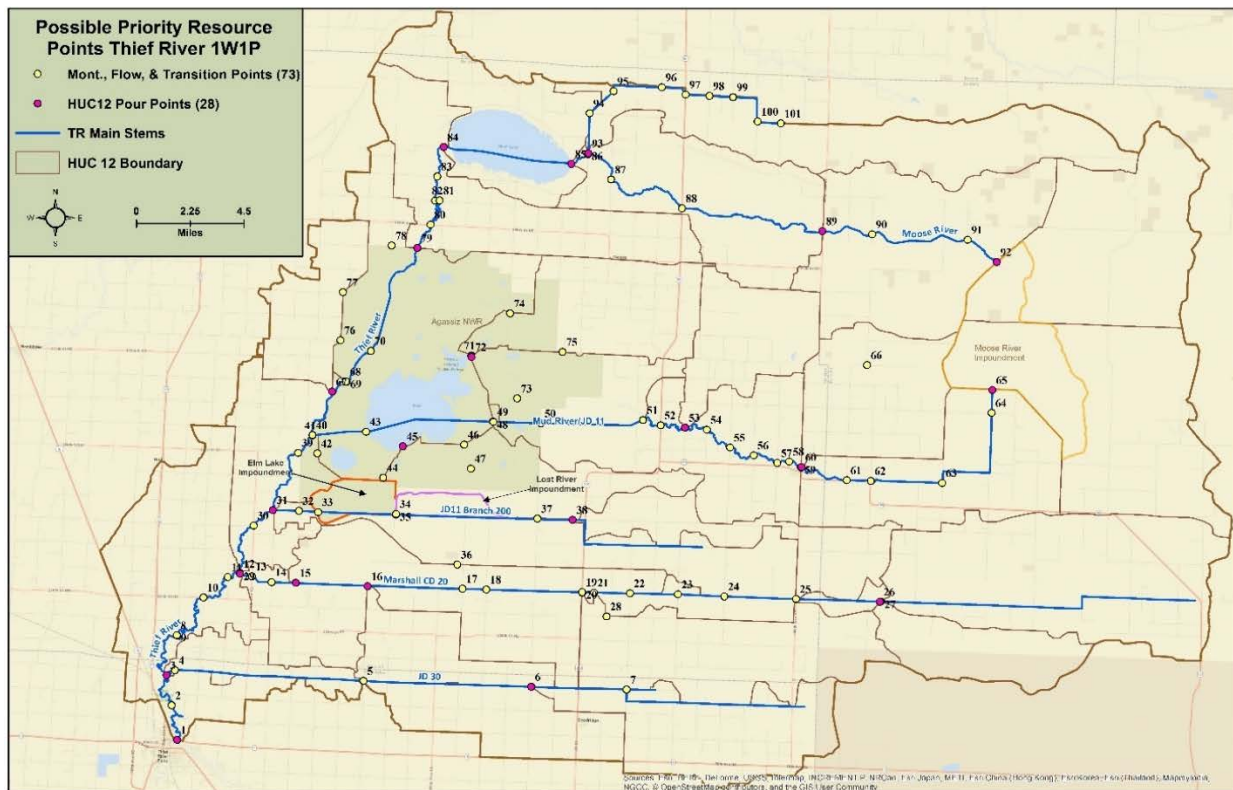


Thief River One Watershed One Plan (1W1P)

A Thief River 1W1P meeting was held on November 8, 2017. RLWD staff and project partners reviewed the Thief River Watershed Land and Water Resources Inventory document, a section on emerging concerns, resource maps, and the plan’s introduction. Comments on the inventory, maps, and emerging concerns were submitted by the December 22, 2017 deadline. The Thief River 1W1P website was updated.

Thief River Watershed Prioritize, Target, and Measure Application (PTMApp) Development

Thief River watershed PTMApp priority resource points and lake routing GIS layers were reviewed and edited. Water quality stations, land use transitions, and lake/pool outlets were added to the priority resource points. Time was spent on deciphering the network of pools in Agassiz National Wildlife Refuge for the lakes routing part of the model. RLWD staff met with USFWS staff to figure out ways to accurately simulate the refuge’s pools in the model. A ditch on the north side of Agassiz Refuge that flows into Agassiz Refuge was ground-truthed. The main channel of the ditch flows south into Tamarac Pool, but the model sent the water east, to the Thief River. The RLWD Natural Resources Technician is working on fixing the flow paths in the model so that the water flows along the main channel of Branch B of County Ditch 28 instead of Branch 3 of State Ditch 83.



Other Notes

- The MPCA has released the 2018 Draft List of Impaired Waters. The public comment period for the list began on November 27, 2017.
 - <https://www.pca.state.mn.us/water/minnesotas-impaired-waters-list>
- RLWD staff provided flow data to Minnesota Department of Natural Resources Division of Ecological and Water Resources floodplain staff. Data from the Red Lake River and Thief River watersheds will be used to refine their models.
- Water quality related notes from the November 9, 2017 RLWD Board of Managers meeting:
 - Construction is complete on the Polk County Ditch 63 (Burnham Creek tributary) Grade Stabilization Project, and it is ready to be seeded. Due to the inclement weather conditions and late season construction timeline, the contractor will try to mulch and disc-anchor the project area the best they can, with mulching and seeding occurring next spring.
 - BWSR has announced the hiring of Henry VanOffelen as the Red River Valley Clean Water Specialist. VanOffelen's first day of employment will be November 15, 2017. He will replace Brian Dwight who retired this summer.
 - Agassiz National Wildlife Refuge (NWR) staff reported that the District, in partnership with Agassiz National Wildlife Refuge, received a Conservation Partners Legacy Grant in the amount of \$268,075 for cattail spraying and repairs to six water control structures within Agassiz NWR. The District will receive \$6,000 for administration of the grant. Young stated that cattail spraying should take place this August. Young discussed the potential of bringing in a harvester to help reduce the amount of cattails within the NWR. The Board voted and approved acceptance of the grant.

November and December 2017 Meetings and Events

- **November 8, 2017** – Thief River One Watershed One Plan meeting.
- **November 14, 2017** – Red Lake River One Watershed One Plan meeting
- **November 20, 2017** – Thief River One Watershed One Plan planning group conference call
- **November 21, 2017** – Draft 2018 Impaired Waters List public meeting and teleconference.
 - <https://www.pca.state.mn.us/water/minnesotas-impaired-waters-list>
- **November 29, 2017** – Thief River One Watershed One Plan coordination meeting (phone conference)
- **December 11, 2017** – Pennington County Water Resources Advisory Committee
 - One Watershed One Plan Updates (Red Lake River and Thief River)
 - Funding for implementation of the Red Lake River 1W1P (\$677,551)
 - A prioritized workplan has been written for initial implementation of the Red Lake River 1W1P.
 - “Other waters” maps have been discussed.
 - The Thief River 1W1P project is on-schedule.

- Ashley Hitt is working on preparing the input data for the Thief River PTMApp, which includes manipulation of elevation data for the creation of accurate flow paths, lakes routing, and editing pour point locations.
- The county has passed a buffer ordinance
- The county has added ‘planned unit development’ rules to its shoreland ordinances.
- The SWCD has completed some SSTS projects (3 in 2017) and are looking for more projects because they have some grant funding available.
- City of Thief River Falls Stormwater Assessment: Houston Engineering has submitted a draft report for review. The SWCD and the City have reviewed the draft report and submitted comments. The report identified 12 urban best management practices (BMPs), estimated pollutant load reductions, and completed a cost/benefit analysis for each practice. Streambank stabilization projects within the city were also identified. Erosion problems near the Greenwood Street Bridge, “Wenzloff” property, and the Hartz Park walking bridge will be targeted for stabilization projects.
- CD96, 21, 16 Gully Control and Buffer Implementation Project: The SWCD is mainly focusing on the installation of side water inlets (SWIs). The ditch inventory project identified 81 locations that needed SWIs within these drainage systems. Landowners have not been cooperative, so the SWCD will work with the county (ditch authority) to get them installed.
- Ditch Outlet Analysis project: The SWCD is inspecting ditch outlets for erosion problems using drones. Northland Community and Technical College students/staff are conducting the drone flights. Survey-grade GPS will be used to convert drone-collected data into real elevations. Some outlets have been “flown” by the college. Wind has been a hindrance and need to be less than 15 mph. A total of 53 outlets in the county will be “flown.”
- The City of Thief River Falls has received a grant to move the drinking water intake to its original location in the Red Lake River, upstream of the confluence with the Thief River (across from the “Swenson House”).
- Next meeting: March 12, 2018
- **December 12, 2017** – Marshall County Water Resources Advisory Committee meeting
 - Marshall County has a draft buffer ordinance on their website. They made the ordinance as lenient as possible. People have every opportunity possible to work with the SWCD to get into compliance.
<http://www.co.marshall.mn.us/MC%20Buffer%20Ordinance.pdf>
 - Two units within Agassiz National Wildlife Refuge were grazed during the summer of 2017. It hasn’t been as effective for removing cattails as USFWS staff had hoped. They will try to intensify the grazing.
 - The bridge at the 310th Ave NE crossing of the Moose River is being replaced with box culverts.
 - Next meeting: April 18, 2018.
- **December 15, 2017** – Red River Basin Monitoring Advisory Committee meeting
- **December 18, 2017** – Minnesota Board of Water and Soil Resources 1W1P/WRAPS Focus Group meeting in Rogers, MN

- There was a lot of good discussion about 1W1P experiences (good and bad) and ways that the process can be improved at the meeting. Notes from the meeting and potential actions are available upon request.
- **December 20, 2017** – Polk County Water Resources Advisory Committee meeting
 - Buffer update: The SWCDs are anticipating busy spring.
 - Township nitrate testing: Private wells in townships along the beach ridge were targeted.
 - Aquifer testing update: Tests were completed in the fall of 2017, but the results aren't back yet. Well interference occurred in Badger township.
 - “We Are Water” Traveling Exhibit: A 1000 ft² 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. The group that is organizing the event is looking for partners to get involved.
 - The West Polk SWCD knows of a home with a straight pipe to Gentilly Creek.
 - Nicole Bernd (West Polk SWCD) and Jillian Fejszes (Pheasants Forever Farm Bill Biologist) received a scholarship for soil health training and will be planning a local educational event.
 - The National Association of Conservation Districts (NACD) is hiring people to help with EQIP and conservation planning. There are plans to hire an assistant.
 - Rob Sip, the newly hired director of the Red River Watershed Management Board, is temporarily working out of Fertile.
 - East Polk SWCD staff have noticed a lot of dumping of waste cement along ditches and back roads. This is a hazardous material. The MPCA will look into the problem and sent out a reminder to contractors.
 - Next meeting: March 28, 2018, in Crookston.
- **December 20, 2017** – Thief River 1W1P conference call
- **December 29, 2017** – Thief River 1W1P conference call

Quote of the Month:

“Preconceived notions are the locks on the door to wisdom.”
- Merry Brown

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

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

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

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.