

District Monitoring

- The third round of sampling in 2012 for the Red Lake Watershed District's long-term water quality monitoring program was completed in September.
- There was no flowing water to sample in a bunch of streams and some rivers.
- The Red Lake DNR will be adding a sampling site on the North Cormorant River at the CSAH 36 crossing to their monitoring program next year.
- The Lost River upstream of Pine Lake (site LR10) had a high concentration of E. coli on September 18th.

Red Lake River and Grand Marais Creek Assessment (Surface Water Assessment Grant)

- Project partners collected two rounds of samples (full set of parameters) for this project in September. This was the last month of sampling for 2012. Sampling will resume in June of 2013. Now, we just need to get all the data entered and submitted to the MPCA.
- High concentrations of E. coli were found in the Red Lake River at CSAH 27 (cattle have access to the river upstream of this site).

Red Lake River Watershed Assessment Project (Watershed Restoration and Protection - WRAP)

- Task 2 – Water Quality Monitoring
 - Pre-9AM field measurements were made at the Smiley Bridge (CR7) monitoring site on the Red Lake River. Pre-9am dissolved oxygen measurements are needed in order to confidently declare that a river is meeting the State's dissolved oxygen water quality standard. The Smiley Bridge is close to the RLWD office in Thief River Falls, so it will be possible to get equipment calibrated and get to the site before 9:00am. This is being done on a semi-weekly basis, so we'll have a decent number of pre-9:00am readings by the end of the monitoring season.
 - WRAP funds were used to add biochemical oxygen demand, chemical oxygen demand, and orthophosphorus to the analysis of samples collected at sites where dissolved oxygen loggers are deployed.
- Task 3 – Continuous Water Quality Monitoring
 - Eureka Midge dissolved oxygen loggers were deployed at 4 sites (down from 5 sites -Polk CD1 went dry, so the logger was removed) throughout the Red Lake River watershed (Heartsville Coulee, Burnham Creek, Kripple Creek, and Gentilly Creek). TROLL 9500 dissolved oxygen loggers with optical dissolved oxygen sensors will be deployed in the Black River this year.
 - After two weeks of deployment, sondes are retrieved and replaced with clean, freshly calibrated equipment. They are then brought back to the lab where data is downloaded, sondes are cleaned, membranes are replaced, and dissolved oxygen sensors are re-calibrated.
- Task 5 – Stage and Flow Monitoring
 - Data was downloaded from HOBO water level loggers.

- Task 6 – Stream Channel Stability Assessment
 - A full geomorphic assessment were conducted on one more reach along the Red Lake River upstream of Thief River Falls in Kratka Township.



Task 7 – Stressor Identification

- Gullies were identified in ditches along the Upper Red Lake River corridor, particularly in Kratka Township. Local landowners say that some of the gullies developed in late 2011 when the US Army Corps of Engineers were trying to lower Red Lake by maximizing the outflow from the dam for an extended period of time. According to the landowners, the Red Lake River was high enough to overflow its banks and travel overland.



- Task 10 – Civic Engagement
 - Most of the Red Lake River civic engagement activities in September centered on preparation for the “Come ’grill us’ about your watershed” event that was held at the Downtown Central Square in Crookston on September 24th.
 - Lori Clark of RMB Labs created a tabletop display that can be used during public events for the Red Lake River WRAP.
 - Lori also created flyers and postcards to promote the event.
 - Red Lake River related fact sheets were created for display at the Crookston event and future events.
 - Articles were written in the Crookston Times and the Grand Forks Herald about the event.
 - The event was advertised in local newspapers.
 - Free will donations were accepted for the Crookston Natural Play Space. Two people involved with that project helped serve food.
 - Corey Hanson (RLWD) and Dave Friedl (DNR) were interviewed on the Crookston radio station KROX 1260AM about the Red Lake River and the upcoming event.
 - We would have liked to have seen more people at the event, but the people who did come were genuinely interested in the Red Lake River.
 - Attendees filled out surveys.
 - Brats and hot dogs from B&E Meats, pickles, chips, and cupcakes from Simplee Cupcakes were served.
 - DNR and MPCA staff also helped with the event – particularly with the surveys. Stephanie Klamm of the DNR also brought an informational display.
- Task 11 – Identification of Sources and Solutions
 - A culvert inventory for the hydro-correction of LIDAR data continued in September. Alisha Mosloff, the RLWD Water Quality Assistant is continuing to work part-time and help with this project during the school year.



Thief River Watershed Assessment Project
(Watershed Restoration and Protection - WRAP)

- Task 2 – Water Quality Sampling
 - The Mud River went completely dry in September.
- Task 3 – Continuous Water Quality Monitoring.
 - Eureka Manta and Manta 2 multi-parameter sondes were deployed at five sites throughout the Thief River watershed. They are deployed in the Thief River, JD30, Branch A of JD21, Moose River, and Mud River. Every two weeks, the deployed sondes are retrieved and replaced with clean, freshly calibrated sondes. The formerly deployed sondes are then brought back to the lab for maintenance.



- Task 7 – Stressor Identification
 - An attempt was made to identify the source of the E. coli impairment downstream of Thief Lake. There were no birds present either below the dam, or at the banding station near the outlet. So, E. coli levels were low on the downstream end of the lake. However, a high concentration of E. coli was found in Branch A of JD21, upstream of Thief Lake. Another attempt will be made next year to collect E. coli samples during the banding/baiting season to determine how much waterfowl contribute to the E. coli impairment. We will also collect more data to assess the impact of Branch A of JD21 upon E. coli concentrations in water that is being discharged from the lake.
- Task 12 – Identification of Sources and Solutions
 - With the culvert inventory mostly completed, with the exception of the Agassiz National Wildlife Refuge area. Stream power index analysis began on parts of the Thief River watershed. Jim Blix is starting with an analysis of the County Ditch 20 sub-watershed.



River Watch and Public Education

Several schools conducted a round of River Watch monitoring in September with the assistance of Jim Blix and Alisha Mosloff:

- Thief River Falls
- Fosston
- Bagley
- Red Lake Falls
- Challenger Elementary (3 groups of 4th graders)

The University of Minnesota Crookston Natural Resources Club plans to start monitoring water quality in rivers and streams near Crookston.

Jim Blix helped run the minnow race station at the Pennington County Outdoor Education day and the watersheds station at the Northwest Minnesota Water Festival. Corey Hanson helped run the “Incredible Journey” water cycle station at the Pennington County Outdoor Education Day and the water quality station at the Northwest Minnesota Water Festival.



Other Notes

- EOR Engineering is developing a work plan for a Watershed Restoration and Protection Project for Grand Marais Creek.
- Data was downloaded from the Lower Badger Creek HOBOWater Level Logger.
- Provided Thief River photos to Houston Engineering for use in reports

September Meetings/Events

- **September 12, 2012** – Pennington County Outdoor Education day at Oakland Park in Thief River Falls
- **September 24, 2012** – Come “Grill” Us About Your Watershed event in Crookston
- **September 25, 2012** – Northwest Minnesota Water Festival at the fairgrounds in Warren
- **September 26, 2012** – Northwest Minnesota Water Festival at the fairgrounds in Fertile

Plans for October and November 2012

- Thief River Watershed Restoration and Protection Project.
 - Stream power index analysis of sub-basins in the Thief River watershed.
 - Re-install an ultrasonic gauge at the Marshall County Road 7 crossing of the Thief River. The gauge was removed earlier this year because the bridge was being replaced.
 - Create a web page dedicated to the Thief River Watershed
 - Follow-up geomorphology surveying, measurements, BEHI ratings, and Pfankuch ratings at most of the Thief River geomorphology sites.
 - Retrieve deployed monitoring equipment. Remove sonde deployment pipes.
 - Enter data.
 - Finish cleaning and calibrating continuous water quality monitoring equipment.
 - Compile and apply corrections to continuous water quality data.
 - Compile flow monitoring data.
- Red Lake River Watershed Assessment Project
 - Complete a report on the existing data that is available for the watershed.
 - Create a webpage dedicated to the Red Lake River
 - Flow measurements (if there is rain and runoff) and continuous stage monitoring
 - Pre-9am dissolved oxygen (and other field measurements) at the “Smiley Bridge” crossing of the Red Lake River.
 - Retrieve deployed monitoring equipment. Move dissolved oxygen logger deployment pipes.
 - Enter data.
 - Finish cleaning and calibrating dissolved oxygen loggers.
 - Compile and apply corrections to continuous dissolved oxygen data.
 - Compile flow monitoring data.
- Data compilation and entry for both Surface Water Assessment Grant Projects
- Data entry for the RLWD long-term district monitoring.
- Fourth round of samples at long-term district monitoring sites.

Future Meetings/Events

- **October 31, 2012** – Marshall County Water Resources Advisory Committee meeting in Newfolden
- **November 1, 2012** – EQuIS data submittal deadline.
- **November 29 through December 1, 2012** – MAWD 2012 Annual Meeting and Trade Show
- **January 31, 2013** – The second progress report or final report for the Thief River SWAG monitoring is due.
- **February 1, 2013** - BWSR CWF Grant semi-annual progress reports are due.
- **February 1, 2013** - MPCA Thief River Watershed Assessment Project semi-annual progress report is due.
- **June 30, 2013** – Expiration of the Thief River Watershed Assessment Project Contract.
- **June 30, 2013** – Expiration of the Red Lake River Watershed Assessment Project – Phase I Contract.
- **June 30, 2013** – Final report for the Thief River SWAG grant is due
- **July 30, 2013** – Due date for the final progress report and final invoice for the Thief River Watershed Assessment Project
- **July 31, 2013** – Final payment request for the Thief River SWAG is due.

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

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

Dale Carnegie Quote of the Month:

“Great changes may not happen right away, but with effort even the difficult may become easy.” – Bill Blackman”