

By: Corey Hanson, Water Quality Coordinator
For: November 23, 2011
Red Lake Watershed District Board Meeting

Thief River Watershed Assessment Project (Watershed-Based TMDL)

- Task 3 – Continuous Water Quality Monitoring
 - Retrieved, for the last time this year, Eureka Manta multi-parameter logging sondes that had been deployed for two weeks at the 5 continuous water quality monitoring sites in the Thief River watershed.
 - Cleaned and calibrated Eureka Manta multi-parameter logging sondes that had been deployed at the 5 monitoring sites.
 - Removed Manta deployment pipes and posts from four of the continuous monitoring sites (sites 40 – Thief River, 6 – Ditch 200, 140 – Thief River, and 41 – CD 20). They will be installed at four new sites in preparation for next year's monitoring (sites X4 - Moose River, 757 – Mud River, Branch A of JD21, and JD30).
 - Installed a Manta deployment pipe at the JD30 monitoring site.
 - Installed a Manta deployment pipe at the Branch A, JD21 monitoring site.
 - Number of successful two-week (or so) deployments:
 - 10 at Site 6 on Ditch 200
 - 9 at Site 760 at the Hillyer Bridge crossing of the Thief River
 - 10 at Site 40 at the CR7 crossing of the Thief River
 - 9 at Site 41 on CD20
 - 8 at Site 140 on the Thief River on the north side of Agassiz NWR
- Task 5 – Stage and Flow Monitoring
 - Dave Friedl helped survey elevations of measure-down reference points on the CR7 Bridge.
 - Found and retrieved a HOBO water level logger from the river bottom at stream gauge 40 (CR7) on the Thief River that I wasn't able to retrieve last fall because of high water and then ice. The logger had become detached from its suspension cable due to corrosion of the cable that occurred during winter months. I wasn't able to find it earlier this year, either, because of high water. The logger still works and all the 2010 data was intact.
 - Installed a high water deployment pipe for the HOBO water level logger at the JD30 site.
 - Flow measurement at the Branch A, JD21 monitoring site.



- Task 6 – Stream Channel Stability Assessment
 - Geomorphology work at site #14 on the Thief River upstream of the “Hillyer Bridge” crossing north of Thief River Falls.
 - Geomorphology work at site #7 on the Thief River 1 mile south of the CR7 crossing near Agassiz National Wildlife Refuge
 - Each geomorphology site visit involved a reconnaissance of the reach, pool pebble count, riffle pebble count longitudinal pebble count, surveyed longitudinal profile, surveyed cross section profiles for the riffle and pool, establishment of a bank study site, bank erosion hazard index (BEHI) assessment at the bank study site, vegetation assessment, and monumenting of the cross sections.



- Task 9 – Monitoring Data Entry
 - Entered 2011 data from this project into the RLWD water quality database and submitted it to the MPCA for entry into the State’s EQIS database.
- Task 11 – Civic Engagement
 - Lori Clark (RMB Environmental Laboratories, Inc.) spent time researching collaborations, researching demographic information, and identifying social networks and points of contacts.
- Task 12 – Identification of Sources and Solutions
 - This year’s monitoring found that Branch A of JD21 can sometimes have high turbidity levels and E. coli concentrations. I traveled along the course of the ditch to look for sources of pollutants. Most of the land draining into this ditch is hunting land or CRP that is in a relatively “natural” state. The only field along the main channel of this ditch is near the monitoring site at CR 48 crossing of that ditch. Some side water inlets have been installed along the field, but there are at least 6 additional spots where SWIs could be installed.

Red Lake River Watershed Assessment Project (Watershed-Based TMDL)

- Task 2 – Water Quality Sampling
 - Discussed and visited potential Intensive Watershed Monitoring Surface Water Assessment Grant sites with Jessica Moore (MPCA IWM Project Leader) for the Red Lake River and Grand Marais Creek watersheds on October 19-20.
 - There has been a lot of headcutting and failure of slopes downstream of the CSAH 11 crossing of JD60, east of Crookston. The downstream end of the culvert is significantly perched. This is a potential grade stabilization project. Jessica Moore and I talked to the landowner while we were working on the Red Lake River monitoring site reconnaissance and he would be in favor of a project there.



- Organized a cooperative monitoring effort for the 2012 Surface Water Assessment Grant that includes the Marshall County Water Planner, Marshall County SWCD, International Water Institute, Red Lake County SWCD, Pennington County SWCD, and the Red Lake DNR.
- The International Water Institute will be submitting an application for the event-based SWAG. Twenty-five samples will be collected each year from the Red Lake River at Fisher, Red Lake River at the CSAH 13 near Red Lake Falls, Red Lake River at Highlanding, Kripple Creek, and the Black River. Sampling events will be triggered by rain events and other significant changes in flow.

- Task 3 – Continuous Water Quality Monitoring
 - Purchased two In-Situ TROLL 9500 dissolved oxygen loggers.



- Task 11 – Civic Engagement
 - The Red Lake River civic engagement contract with RMB Environmental Laboratories was signed on September 30, 2011.
 - Lori Clark began researching potential collaborations in order to assess the community's capacity for watershed planning.

Thief River Watershed Assessment Monitoring Surface Water Assessment Grant

- Finished compiling and entering data from Marshall County, Pennington County, and RMB Labs and submitted it to the MPCA for entry into the State's EQUIS database.
- Charges for lab analysis on bills from RMB labs were divided between this project and the Thief River TMDL.

District Monitoring

- Collected the last few water quality samples of the year during the first week of October.
- Entered 2011 data into the RLWD water quality database and submitted it to the MPCA for entry into the State's EQUIS database.

Public Education

- I gave a water quality monitoring presentation at the BWSR Academy conference that was held at Breezy Point Resort near Pequot Lakes.

Other Notes

- There will be an opportunity to add another side water inlet installation to the CD20 grade stabilization project. We will have excess money in the project administration budget, so we can use some of that to construct the additional SWI.

October 2011 Meetings and Events

- **October 12, 2011** – Marshall County Water Resources Advisory Committee.
 - Special Marshall County water Plan amendment meeting.
- **October 19, 2011** – Flood Damage Reduction Work Group meeting – Grand Marais Creek monitoring update.
- **October 24, 2011** – Red River Basin Water Quality Team meeting (over WebEx)
- **October 26, 2011** – BWSR Academy – giving a water quality monitoring presentation.
- **October 28, 2011** – Red River Basin Monitoring Advisory Committee meeting

Plans for November 2011

- Thief River Watershed Assessment Project.
 - Clean, calibrate, and store continuous water quality monitoring equipment
 - Remove HOBO water level loggers before they get frozen into the ice.
 - Inventory of existing water quality data
 - Finish moving Manta deployment pipes to next year's continuous monitoring sites (757, Moose River at Hwy 54). Mantas will be installed at the USGS gauge site again next year, so those pipes will stay where they are.
 - Install high-water deployment pipes for HOBO water level loggers where needed (Mud River, Moose River, CD20, Branch A of JD21).
- Red Lake River Watershed Assessment Project
 - Purchase pipes and hardware for level logger and sonde deployment.
 - Assist RMB Labs with the civic engagement process.
 - Install deployment pipes for water level and water quality monitoring equipment.
 - Inventory of existing data
 - Finish and submit a Surface Water Assessment Grant application for the Red Lake River and Grand Marais Creek sites that are listed in the MPCA's 2012 SWAG RFP.

Future Meetings/Events

- **November 1, 2011** – Deadline for submitting field and lab data to the MPCA for entry into the EQUIS database.
- **November 2, 2011** - Marshall County Water Resources Advisory Committee
- **November 10, 2011** – Due date for 2012 Assessment-SWAG applications
- **December 9, 2011** – Red River Basin Monitoring Advisory Committee meeting
- **December 19, 2011** – Red River Basin Water Quality Team meeting (over WebEx)
- **January 3, 2012** - Pennington County Water Resources Advisory Committee, 9 AM
- **January 11, 2012** – Marshall County Water Resources Advisory Committee, 9 AM
- **January 12, 2012** – Franklin Middle School Science Fair judging
- **January 31, 2012** – First progress report for the Thief River SWAG monitoring is due.
- **February 1, 2012** - BWSR CWF Grant semi-annual progress reports are due.
- **February 1, 2012** - MPCA Thief River Watershed Assessment Project semi-annual progress report is due.
- **August 1, 2012** – BWSR CWF Grant semi-annual progress reports are due.
- **August 1, 2012** – MPCA Thief River Watershed Assessment Project semi-annual progress report is due.
- **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.