

By: Corey Hanson, Water Quality Coordinator  
For: April 12, 2012  
Red Lake Watershed District Board Meeting

### **Thief River Watershed Assessment Project (Watershed Restoration and Protection)**

The MPCA has a new acronym for the watershed based studies like the ones that we are working on for the Thief River and Red Lake River. Originally, these projects were referred to as “Watershed-Based Total Maximum Daily Load (TMDL) studies.” Then they were referred to as Major Watershed Restoration and Protection Projects (MWRPPs). Now, they are called Watershed Restoration and Protection (WRAP) projects.

- Task 2 – Water Quality Monitoring
  - Completed a data review for finalization of the 2011 EQUIS data submittal.
- Task 5 – Stage and Flow Monitoring
  - Deployed HOBO water level loggers
  - Removed the ultrasonic sensor and CR10 from the Marshall County Road 7 crossing of the Thief River. The bridge is being replaced this spring and early summer. We will be sampling and collecting flow data at the next crossing downstream (CSAH 12) while the construction is underway. A HOBO water level logger has been temporarily deployed a little more than 200 feet downstream of the crossing so that we will still have a flow record from the CR7 site.



**Figure 1. Construction equipment in place to start the replacement of the CR7 Bridge over the Thief River**



**Figure 2. CR7 Bridge demolition and construction**



**Figure 3. Temporary HOBOT Water Level Logger deployment pipe in the Thief River downstream of CR7**



**Figure 4. Fish Kill in Branch A of JD21**

- There was a major fish kill in Branch A of JD21 over this past winter. Many white suckers were frozen into the ice.
- River Watch monitoring also discovered that there was a fish kill in the upper part of the Moose River over this past winter.

#### **Thief River Watershed Assessment Monitoring (Surface Water Assessment Grant)**

- Purchased calibration standards.
- Purchased a new sampler for the Pennington County Water Planner.
- Purchased new calibration standards for the HACH 2100P turbidimeter.

#### **Red Lake River Watershed Assessment Project (Watershed Restoration and Protection)**

- Task 1 – Evaluation of Existing Data
- Task 3 – Continuous Water Quality Monitoring
  - Prepared and installed deployment pipes for Eureka Midges and In-Situ TROLL 9500s.
- Task 5 – Flow Monitoring
  - Prepared and installed HOBOT deployment pipes
  - Deployed HOBOT water level loggers.



**Figure 5. Sonde and Water Level Logger pipes, ready to be installed.**



**Figure 8. HOBO Water Level Logger deployment pipe installed in CD1, west of Crookston**



**Figure 6. Eureka Midge and HOBO Water Level Logger deployment pipes installed in Kripple Creek**



**Figure 9. HOBO Water Level Logger deployment pipe installed in JD60, east of Crookston**



**Figure 7. Eureka Midge and HOBO Water Level Logger deployment pipes installed in Heartsville Coulee**



**Figure 10. HOBO Water Level Logger deployment pipe in CD96, south of St. Hilaire**

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

- Provided project partners with individualized sampling schedules, check lists, and budgets.
- Ordered calibration standards.
- Met with the Pennington County and Red Lake County Water Planners to discuss this summer's sampling.
- Discovered that the CSAH 11 crossing of JD11 (between Crookston and Gently) was unsafe for sampling. The next crossing upstream will work perfectly well, so a change order will be submitted to the MPCA to get the JD60 site moved.



**Figure 11. Planned JD60 monitoring site that's not very safe.**



**Figure 12. The 250th St. SW crossing of JD60 will be used instead of the CSAH 11 crossing.**

**Stream Gauging**

- Purchased fence posts for installing deployment pipes.
- Stage and flow will be monitored at key sites within the Clearwater River watershed this year. The Clearwater WRAP project won't start until 2014 or later, but we will need as much flow data as possible for the calculation of loads at key locations. HOBO water level loggers will be deployed in Silver Creek, Ruffy Brook, Lower Badger Creek (pictured), Hill River, and the Lost River (upstream of Pine Lake).



### Public Education

- A few updates were made in the *Standard Operating Procedures for Water Quality Monitoring in the Red River Basin* document. Copies were printed for distribution at the RRB Water Quality Training Session. The latest version is available on the RLWD website at: [http://www.redlakewatershed.org/waterquality/RRB\\_SOP\\_Revision\\_9.pdf](http://www.redlakewatershed.org/waterquality/RRB_SOP_Revision_9.pdf)
- Jim Blix created new web pages for the RLWD's BWSR Clean Water Fund projects.
  - Grade Stabilization for Reduction of Sedimentation in the Thief River: [http://www.redlakewatershed.org/tr\\_sediment.html](http://www.redlakewatershed.org/tr_sediment.html)
  - Grand Marais Creek Cut Channel Stabilization: <http://www.redlakewatershed.org/cutchannel.html>
- I wrote questions for the 2012 Envirothon Current Issue Topic quiz. I will be helping with the Envirothon at Rydell National Wildlife Refuge this year. This year's Current Issue Topic is "Going Green with Low Impact Development (LID) technology to reduce nonpoint source (NPS) pollution."

### March 2012 Meetings and Events

- **March 6, 2012** – 9<sup>th</sup> Annual Red River Basin Water Quality Monitoring Training , UMC
  - I gave a presentation on the use of standard operating procedures in the field.
- **March 13, 2012** – River Watch Forum, University of Minnesota, Crookston campus, 8:30 am - 2:30 pm.
- **March 14, 2012** - Marshall County Water Resources Advisory Committee, Newfolden, 9:30am
- **March 28, 2012** – RLWD Overall Advisory Committee Meeting
  - RLWD staff gave presentations on work that was completed in 2011 and current projects.

### Plans for April 2012

- Thief River Watershed Assessment Project.
  - Complete a report on the existing data that is available for the watershed.
  - Jim Blix will continue working on terrain analysis to identify potential erosion areas throughout the watershed.
  - Create a webpage dedicated to the Thief River
  - TMDL report and protection plan outlines
  - Flow measurements and continuous stage monitoring
- 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
  - Finish deploying HOBO water level loggers
  - Flow measurements and continuous stage monitoring
- Complete the first round of 2012 for the RLWD long-term monitoring program.

**Future Meetings/Events**

- **April 3, 2012** – Project 60 monitoring meeting, public meeting to “kick-off” the Grand Marais Creek and Red Lake River Intensive Watershed Monitoring. 10 AM – 2 PM at the RLWD Office.
- **April 4, 2012** - Marshall County Biennial Budget Request Project Planning Meeting
- **April 18, 2012** – County Ditch 20 Grade Stabilization CWF Project pre-construction meeting.
- **April 20, 2012** – Red River Basin Monitoring Advisory Committee meeting – 9:30 am at the Sand Hill Watershed District office. HOBO Water Level Logger training/demonstration in the afternoon for Tera Guetter (PRWD) and Andy Butzer (MPCA).
- **April 25, 2012** – Envirothon at Rydell National Wildlife Refuge.
- **May 14-17, 2012** – Agassiz National Wildlife Refuge Workshop.
- **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.

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