

By: Corey Hanson, Water Quality Coordinator  
For: October 13, 2011  
Red Lake Watershed District Board Meeting

**Highlights in this Report:**

- ▶ Birth of Marshall Owen Hanson
- ▶ New TMDL Project
- ▶ Thief River Geomorphology Work

**Thief River Watershed Assessment Monitoring Surface Water Assessment Grant**

- The Marshall County Water Planner (Jan Kaspari, 6 sites) and Pennington County (Cassie Jacobson, 3 sites) Water planner each collected two rounds of samples in August.
- Regularly compiled data from Marshall County, Pennington County, and RMB Labs.
- Charges for lab analysis on bills from RMB labs were divided between this project and the Thief River TMDL.
- An invoice was sent to the MPCA for the work that had been completed as of July 31<sup>st</sup>.
- High E. coli bacteria concentrations were found in the Thief River at the Hillyer Bridge, Mud River, Judicial Ditch 30, and Marshall County Ditch 20.

**District Monitoring**

- “Make-up” sampling at some sites that didn’t get sampled during the first round of sampling this year (Beltrami County sites, western Polk County sites).
- High E. coli bacteria levels were found in Darrigan’s Creek, O’ Briens Creek, Blackduck River, and the South Cormorant River.
- The following photo shows a “plume” of water entering Maple Lake. The water coming in was tea-stained, but much cleaner than the water currently in the lake.

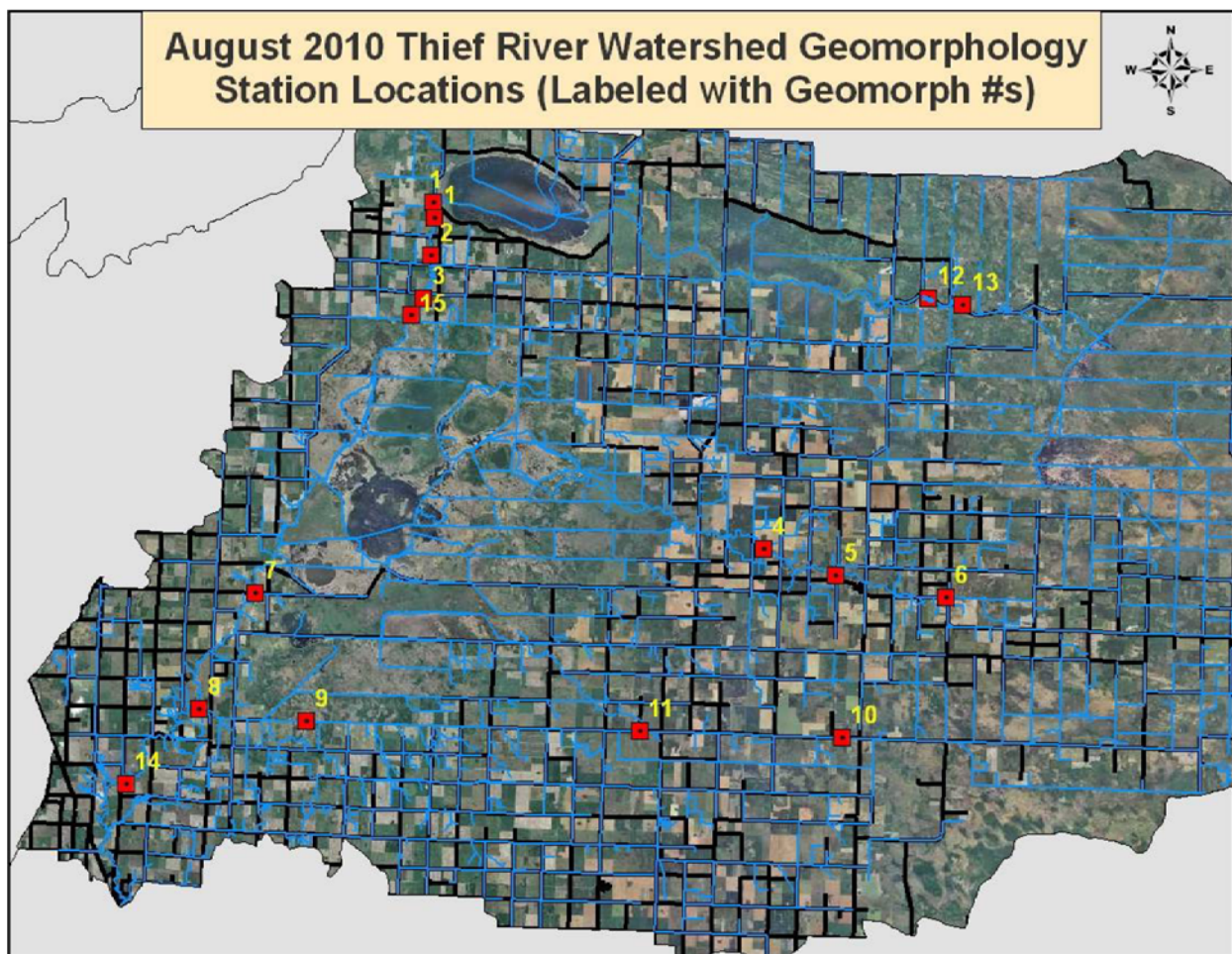


**Thief River Watershed Assessment Project (Watershed-Based TMDL)**

- Sample analysis for stressor/pollutant identification was piggy-backed onto samples collected for the Thief River SWAG monitoring.
- Swapped freshly cleaned and calibrated Eureka Manta multi-parameter logging sondes for the ones that have been deployed for two weeks at the 5 continuous water quality monitoring sites in the Thief River watershed twice this month.
- Cleaned and calibrated Eureka Manta multi-parameter logging sondes that were deployed at 5 of the monitoring sites twice this month. Two of the Mantas malfunctioned this month. I started using Manta 2 sondes to replace the unreliable Mantas.
- New suspension cable in the pipe in the Thief River at the Agassiz NWR north boundary road.
- Moved the Manta at site 40 (Thief River at CR7) from the high-water pipe to the low water pipe.
- Installed a low-water pipe at the USGS gauge site on the Thief River (Hillyer Bridge) and moved the Manta from the high-water pipe to the low-water pipe.
- Checked water levels to see which sites are accessible for the geomorphology work.
- Submitted a semi-annual report to the MPCA.
- Learned that there was a fish kill in Branch A of JD21.
- The civic engagement contract with RMB Environmental laboratories was signed by the RLWD on August 15<sup>th</sup> and by RMB Labs on August 17<sup>th</sup>.
- Geomorphology work at:
  - Geomorph 9: Marshall County Ditch 20, relatively stable reach
  - Geomorph 10: Marshall County Ditch 20, upper unstable reach
  - Geomorph 12: \_Moose River, along the Moose River Road
  - Geomorph 5: Mud River, reference reach downstream of 390<sup>th</sup> Ave NE
  - Geomorph 6: Mud River, upstream of Grygla



- Geomorph 8: Marshall County Ditch 20, downstream end
  - During pebble counts, we found chunks of coal on the streambed that were spilled there when the ditches were dredged with steam powered floating dredges at the beginning of the twentieth century. We learned that larger chunks can be found in the Thief River.
- Geomorph 1: Thief River, between Thief Lake and 410<sup>th</sup> St.
  - There are lots of young-of-the-year northern pike in the upper reach of the Thief River. We would, no doubt, see larger fish up there if this reach was connected to the lower reach without obstructions to fish passage.
- Geomorph 2: Thief River, between 410<sup>th</sup> St. and 400<sup>th</sup> St. NE



- 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.

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

- We received the signed contract for this project in August. The date of the final signature was August 19, 2011. The project has officially begun!
- Discussed Load Study Surface Water Assessment Grant sites with Bruce Paakh (MPCA) for the Red Lake River and Grand Marais Creek watersheds.

### **Other Notes**

- My wife Jessica and I became new parents with the birth of our son, Marshall Owen Hanson! He was born at 4:00 AM on August 25<sup>th</sup>, 2011. I took two weeks off at the end of August and beginning of September to be home with my wife and the new baby.
- Submitted a semi-annual eLink report for the Grand Marais Cut Channel CWF project.
- Submitted a semi-annual eLink report for the CD20 Grade Stabilization CWF project.



### **August 2011 Meetings and Events**

- **August 8, 9** - Thief River geomorphology field work
- **August 1, 2011** – BWSR CWF Grant semi-annual progress reports are due.
- **August 1, 2011** – MPCA Thief River Watershed Assessment Project semi-annual progress report is due.
- **August 19, 2011** – Starting date for the Red Lake River Watershed Assessment Project

### **Future Meetings/Events**

- **September 2011** – Fourth round of RLWD long-term monitoring for 2011.
- **September 6, 2011** - Pennington County Water Resources Advisory Committee, 9 AM
- **September 14, 2011** – Pennington County Outdoor Education Day
- **September 15<sup>th</sup>, 2011** – Webex teleconference with MPCA staff about the possible Clearwater River Dissolved Oxygen delisting.
- **September 16, 2011** – Meeting at RMB Labs to discuss Thief River Watershed Civic Engagement.
- **September 20, 2011** – Northwest Minnesota Water Festival in Warren
- **September 21, 2011** – Northwest Minnesota Water Festival in Fertile

- **September 27, 2011** – Grand Marais Creek flood damage reduction project monitoring conference call.
- **October 12, 2011** – Marshall County Water Resources Advisory Committee meeting.
- **October 19, 2011** – Flood Damage Reduction Work Group meeting – Grand Marais Creek monitoring update.
- **October 25<sup>th</sup> through 27<sup>th</sup>** – BWSR Academy – giving a water quality monitoring presentation.
- **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
- **January 3, 2012** – Pennington County Water Resources Advisory Committee, 9 AM
- **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.

### **Plans for September 2011**

- Finish the fourth round of 2011 District Monitoring.
- Thief River Watershed Assessment Project.
  - Continuous flow and water quality monitoring
  - Inventory of existing water quality data
  - Stream channel stability assessment
- 2011 SWAG sampling will be completed.
- Presenting at the NW MN Water Festivals and the Penn. Co. Outdoor Education Day.
- Compile water quality data collected by Pennington and Marshall County water planners for the Thief River Surface Water Assessment Grant monitoring.