

By: Corey Hanson, Water Quality Coordinator  
For: December 10, 2009  
Red Lake Watershed District Board Meeting

### **Thief River Watershed Sediment Investigation**

- Worked on providing Houston Engineering with data to aid in the calibration and development of the SWAT model.
- Worked on a work plan for the upcoming watershed-based TMDL Study
- Entered 2009 monitoring data into the RLWD water quality database and submitted it to the MPCA for STORET entry.
- Updated the budget with expenditures through October and sent it to the MPCA. We have now spent more than 50% of the grant funds, so we are eligible to receive the next payment from the MPCA of \$28,950. Through October, we had spent \$50,976.96 of the cash, \$50,904.72 of the grant, and \$34,666.04 of the in-kind budgeted for this project.
- Continued to get periodic field measurements of stage and water quality. Agassiz Pool is being drawn down (see photos below) and the turbidity has been very high in the Thief River downstream of there. Turbidity levels on the Mud River entering Agassiz NWR have been low in November.
- Turbidity levels of 73.7, 81.4, and 62.4 FNU were recorded at the CR7 monitoring site downstream of Agassiz NWR.
- The USGS continued to collect samples during the continued drawdown of Agassiz Pool.
- Retrieved Eureka Mantas from continuous monitoring sites for the last time this year.
- Cleaned, calibrated, and downloaded data from continuous water quality monitoring equipment (Midges, TROLL 9500s, and Mantas) for a final time this year.
- Measured flow at stream gauge #156 (County Road 44 near Thief River Falls) using a bridge crane.



- I tried out the Aquarius continuous data management software for the first time. It seems to work well, but could only do one parameter at a time and required some alterations to the formatting in the .csv spreadsheets.



Figure 1. Dissolved oxygen record from Eureka Midges installed in the Moose River at CSAH 54 north of Grygla.

**Project 60 Monitoring**

- Retrieved the HOBO water level loggers from both sites.



Figure 2. Beaver dam at the Hwy. 71 crossing of the Brandt Channel

### Surface Water Assessment Grant Monitoring

Jim and I both submitted Surface Water Assessment Grant Applications. Jim's grant application will fund sampling on unassessed reaches of the Hill River. Mine will provide funding to collect continuous dissolved oxygen records at 5 sites in order to meet the MPCA's pre-9 am data requirements for assessment and keep our dissolved oxygen monitoring equipment in use.

### Other Notes

- Submitted 2009 monitoring data from the RLWD district monitoring program and the Thief River Watershed Sediment Investigation study.
- Retrieved HOBO water level logger from Silver Creek at stream gauge 81.
- Found some potential sites where rain gardens could be constructed.
- Submitted a BWSR grant application for the installation of rain gardens in Thief River Falls and Crookston. The RLWD will be the fiscal agent for the project. The University of Minnesota Extension (Howard Person) and Minnesota GreenCorps at the University of Minnesota Crookston will coordinate the project.
- Gave Bruce Paakh (MPCA) a list of sites in the Thief River watershed where the DNR may want to establish stream gauging stations.
- Created a shapefile of RLWD water quality monitoring sites that includes a link to the MPCA's Environmental Data Access web page for each site. The EDA site stores all the data collected by multiple agencies at each established monitoring site that has been submitted to STORET.
- We received comment back from the EPA on the draft Clearwater TMDLs. The Clearwater River E. coli, Clearwater dissolved oxygen, and Lost River E. coli TMDLs will be modified into protection plans because the rivers meet the water quality standards and should be delisted. Additional reductions of pollutants are needed in order to ensure that the rivers won't return to the impaired waters list. However, it is the EPA's policy that they don't go through the approval process for TMDLs that only require reductions to establish a margin of safety on reaches that technically meet the water quality standards.
- Compiled flow records for tile monitoring sites from the data that was collected this year. I also worked on editing the tile drainage study presentation for the MAWD pre-conference drainage seminar.

### November Meetings and Events

- **November 1, 2009** – Deadline for submitting data to STORET
- **November 17, 2009** – Pennington County WRAC, 9am
  - Rachele will be leaving her position as the Pennington County Water Planner (December 11).
  - The water plan is nearly completed. A public hearing was held on November 24<sup>th</sup>.
  - Construction workers' RVs were discharging waste into a ditch along Hwy 1 (in the Snake River watershed) this summer.

- A failing septic system in the Basswood Trailer Court is creating a public health hazard.
- **November 18, 2009** – Marshall County Water Resources Advisory Committee, 9:30 am, Newfolden
  - LeRoy reported that some people may be concerned about how TMDLs may affect them (drainage, permitting). This is why the stakeholder involvement will need to be an important part of the Thief River TMDL. It will be important to educate the stakeholders and also get feedback from them on water quality improvement strategies that are both feasible and acceptable.
  - Questionnaire on the STS ordinance.
    - The County is not being helped by the State with enforcement.
    - People are installing septic systems without permits.
    - The State is not doing anything about unlicensed installers.
  - Agassiz Pool could be in drawdown until 2012.
    - Radial gates will be left wide open, unless there is enough snow to threaten the raw dikes along the newly repaired JD 11.
    - LIDAR data collection flights over the pool are planned.
  - *Healthy Rivers: A Water Course* is available for free online at <http://www.dnr.state.mn.us/healthyivers/index.html>.

### December Plans

- Retrieve the rest of the continuous water level logging equipment when the rivers begin to freeze.
- Thief River watershed-based TMDL work plan.
- Start working on compiling and making corrections to continuous monitoring records.

### Future Meetings/Events

- **December 3, 2009** – Presentation at the MAWD drainage conference about the tile drainage study
- **December 11, 2009** – Red River Basin Monitoring Advisory Committee
- **January 2010** – completed work plan for the Thief River watershed-based TMDL
- **January 14<sup>th</sup>, 2010** – Franklin Middle School Science Fair judging, 12 PM – 3 PM.
- **January 20<sup>th</sup>, 2010** – Marshall County Water Resources Advisory Committee, 9:30, Newfolden.
- **February 1, 2010** - Pennington County Water Resources Advisory Committee, 9 AM
- **Early March 2010** – Annual Spring Water Quality Monitoring Training Session.