

By: Corey Hanson, Water Quality Coordinator
For: July 22nd, 2010
Red Lake Watershed District Board Meeting

Thief River Watershed Sediment Investigation

- Emailed and mailed agendas for the July 9, 2010 stakeholders' meeting.
- Started the process of preparing the continuous water quality data for entry into the State's HYDSTRA database.
- Worked on the final report for this project and on presentations for the upcoming July meeting.
 - Sediment budgets based on SWAT modeling results.
 - Time series graphs.
 - Stressor ID graphs.

Stream Gauging

Flow was measured at stream gauge #6.

District Monitoring

- The second round of 2010 long-term district monitoring was completed in June.
- Supplemental E. coli samples (to meet MPCA data requirements in time for the 2011 Statewide Assessment) were collected from Burnham Creek (2), Gentilly Creek (2), Black River (2), Grand Marais Creek (2), and Ruffy Brook (3).
 - An E. coli impairment was confirmed on Gentilly Creek by a 168.5 geometric mean and 6 total samples from the month of June.
 - An E. coli impairment was confirmed on Ruffy Brook for the month of June with a 366.7 CFU/100ml geometric mean concentration and 6 total June E. coli samples.
 - The Black River just barely meets the E. coli water quality standard in the month of June.
 - Burnham Creek and Grand Marais Creek meet the 126 CFU/100ml E. coli water quality standard in the month of June.
- Established a new monitoring site on the Red Lake River at the Greenwood Street Bridge in Thief River Falls. It will be called RLR Greenwood (S006-225). The RLWD will monitor this site instead of the 1st St. Bridge and the Pennington SWCD will continue to monitor the 1st St. Bridge. It will be possible to create a flow rating curve at this site if one is needed for a site in this part of the Red Lake River. Also, the street is wide enough to park



next to the sidewalk at the sampling site, making it a safe and efficient monitoring site.

- Polluted runoff was found in a ditch within the Burnham Creek watershed. It turned out to be a waste disposal and regulatory issue that is being handled by the MPCA to make sure that it doesn't recur. ►
- High concentrations of E. coli (>126 CFU/100 ml) were found in:
 - Ruffy Brook (all 4 samples)
 - Gentilly Creek
 - Hill River
 - Clearwater River (near Clearwater Lake inlet)
 - Silver Creek
 - This site (#157) had the same concentration as the Clear Brook monitoring located approximately 1 mile upstream at Hwy. 92. This indicates that the BMPs put in place on the cattle operation in between the two sites may be working. This also indicates that some work needs to be done in the town of Clearbrook and upstream of the town to decrease the impact of potential sources of E. coli.
 - Clear Brook
 - Cyr Creek
 - Black River
- Notable levels of biochemical oxygen demand were found in the Clearwater River near Bagley and Plummer.
- High total suspended solids and turbidity (>25 NTRU/FNU) levels were found in:
 - Red Lake River at the Murray Bridge in East Grand Forks
- The water was exceptionally clean and clear in Clearwater Lake on June 15th.
- A washout has developed on a recent attempt at stabilizing the outlet of a drainage pipe near the Hill River in Brooks. The rock was in place during the April visit to this monitoring site. The rock likely washed into the river during the late May storms and runoff. ►



Other Notes

- Conducted sampling, field measurements, and data entry for the RRWMB Surface Water Assessment Grant in Beltrami, Red Lake, and Polk Counties (100% reimbursed by the RRWMB).
- Took some photos of the Jerome Street Project after the floodwaters receded. The trees are in place, but don't look like many survived. ►
- Very high E. coli levels were found in the supplemental samples collected Ruffy Brook.
- Finished a revision of the Draft Poplar River Dissolved Oxygen TMDL report. The pollutant and the loads remained the same as it is not possible to identify a more influential pollutant at this time.
- The RLWD reimbursed for May 2009 compliance sampling (\$440.65).
- Reviewed a draft of the Grand Marais Creek Turbidity TMDL Report that is being developed by the Detroit Lakes MPCA office.
- Wrote a summary of the Clearwater River TMDL for an MPCA report.
- Project 60 area monitoring.
- The restored reaches of the Brandt Channel downstream of the Brandt impoundment are well vegetated and provide a good example for future applications of the 2-stage ditch design. The older reach has very good willow growth on the banks and the newer construction has good grass cover. This project can hopefully provide a good example of what can be accomplished in other areas. Areas have been identified in the Thief River watershed where this type of project would be beneficial.



June 2010 Meetings and Events

- **June 2010** – The public review and comment period for the Silver Creek and poplar River TMDLs should begin sometime this month.
- **June 9, 2010** – Marshall County Water Resources Advisory Committee Meeting, Newfolds
 - The Marshall County SWCD received a grant for a \$60,000 Cooperative Weed Management project that will target leafy spurge, spotted knapweed, and purple loosestrife.
 - The number of licensed SSTS installers is dwindling in Marshall County.
 - Marshall County doesn't have county-wide zoning, which is something that would help keep projects from going unnoticed.
 - There will be a local visit from a FEMA representative who will ID new houses built within floodplains and house built without permits.
 - The USCOE isn't certifying flood protection dikes. People will still have to buy flood insurance.
 - There has been lots of flood damage to roads in the county.
 - Crop residue has been floating from flooded fields into ditches and has been plugging culverts. The Marshall County Highway Department had to remove up to 15 truckloads per day. This best management practice is still effective at keeping the sediment out of the ditch, though.
 - Agassiz NWR provided an update with a record of pool levels and discharge.
- **June 10, 2010** – RLWD Board Meeting
 - Red Lake River Watershed Assessment Project
- **June 16, 2010** – Meeting at the Sand Hill Watershed District with RMB Labs and MPCA staff to discuss civic engagement and how RMB can help.
 - Demographic analysis
 - How to get people to pay attention and understand.
 - Measure the impact
 - Pre and post-project surveys
 - SOPs exist for the surveys
 - Proof that the money was spent wisely
 - Use interns to distribute information
 - MPCA wants to compare pre/post survey results with those from other states
 - Decide who to go after – target outreach to the most effective people (RLWD already does this).
 - Target surveys to this demographic.
 - Long-term strategy – plan for change over time.
- **June 17, 2010** - Grand Marais Creek Project Team and TMDL Stakeholders meeting, 9:30 AM, RLWD
- **June 21, 2010** – Hearing for the Clearbrook stormwater pond, Clearbrook, 9:00 am
- **June 25, 2010** – Red River Basin Monitoring Advisory Committee, 9:30 am, SHWD
 - The Project 60 FDR project monitoring plan calls for a re-evaluation of the monitoring effort after 2010.

- The MPCA is developing its own protocols for stressor ID.
 - Document the physical integrity of the stream and the condition of the riparian zone.
 - Document hydrologic features and pathways.
 - Document impacted areas.
 - Identify areas for further monitoring.
 - Identify critical breaks in the landscape.
 - Forms are being developed.
 - Water quality longitudinal profiles using a GPS unit and a multi-parameter sonde
 - Setup a “location” for each day’s trip in the handpad.
 - Collect a “snapshot” reading with the sonde.
 - Mark the point with a GPS unit.
- The Red Lake County SWCD received funding for a county-wide culvert inventory from the Northwest Minnesota Foundation.
 - The work will be done in 2010 and 2011.
 - They may be collecting some additional information that will be useful for the Red Lake River stressor ID process.
- The Red Lake County SWCD also received \$292,000 in funding for streambank stabilization projects:
 - Fixed the blowout just upstream of the Hwy 32 bridge over the Red Lake River.
 - Erosion downstream of the railroad trestle over the Red Lake River (aka Sportsman’s Bridge).
 - Huot area.
 - Grade stabilization for a farmer.
 - Another landowner’s streambank project.
- **June 28, 2010** - Red River Basin Water Quality Team meeting, 10 am, Detroit Lakes MPCA office
 - Social Indicators Survey and discussion
 - Non-response bias
 - Include more self-critical questions to avoid response bias?
 - What are some barriers to applying BMPs?
 - Pre-project surveys for the Thief River Watershed should be started soon.
 - Voluntary activities are needed to accomplish our goals of water quality improvement. We need to figure out a better way of persuading people. Surveys are needed to document improvement and project success.
 - Confirming the adoption of corrective practices and other beneficial behavior provides more immediate indications of expected water quality change.
 - Social indicators are used to measure change.
 - Awareness, attitudes, constraints, capacity, and behavior change.

- **June 29, 2010** – Ruffy Brook landowners’ meeting in Clearbrook. 7 PM
 - Not much support for the project from landowners.
 - The benefit wouldn’t be great enough to justify the cost.
 - Although grade stabilization could be designed in a way that minimally affects current water levels, there was concern that tile outlets would be submerged.

Plans for July 2010

- Surface Water Assessment Grant sampling (3 trips)
- Supplemental E. coli sampling at Burnham Creek, Black River, and Grand Marais Creek.
- Adding information to the Thief River Watershed Sediment Investigation report.
- Supplemental E. coli samples at some Red Lake River monitoring sites and Ruffy Brook.
- Start planning the Marshall CD20 grade stabilization project.

Future Meetings/Events

- **July 2010** – Construction on a stormwater retention pond in Clearbrook could start
- **July 22, 2010** – Pennington County Water Resources Advisory Committee meeting. 9am.
- **August 2010** – Anticipated beginning of the Thief River Watershed Assessment Project ((end of the month).
- **August 11, 2010** - Marshall County Water Resources Advisory Committee Meeting, Newfolden
- **August 16th – 19th and 23rd – 26th, 2010** – Stream channel stability assessment in the Thief River watershed. Two weeks of work will be needed to accomplish this task.
- **August 23, 2010** - Red River Basin Water Quality Team meeting, 10am, RLWD office
 - “Stressor Identification for Watersheds”
- **August 31, 2010** – Completion of the Thief River Watershed Sediment Investigation
- **September 2010** – Possible beginning of work on the Red Lake River watershed Assessment Project.
- **September 27, 2010** - Red River Basin Water Quality Team meeting, 10am – 2pm, Detroit Lakes MPCA, 1st floor conference room.
- **September 30, 2010** – Target approval date for Silver Creek and Poplar River TMDLs
- **November 3, 2010** - Marshall County Water Resources Advisory Committee Meeting, Newfolden
- **November 22, 2010** - Red River Basin Water Quality Team meeting, 10am, RLWD office - “Presenting Watershed Information”