

Monthly Water Quality Report | February 2008

By: Corey Hanson, Water Quality Coordinator
For: March 11th, 2008
RLWD Board Mtg.

Tile Drainage Study

Copies of the report were distributed. The report is also available on the RLWD Projects webpage (<http://www.redlakewatershed.org/projects.html#RLWFTSTile>). A final report was submitted for the Northwest Minnesota Foundation Grant.

I presented the results of the study at the 2008 ND-MN Subsurface Drainage Forum.

The Red River Watershed Management Board has decided to fund an extension of the flow monitoring through 2008. The final report will be revised with the results of this monitoring at the end of the monitoring season.

Clearwater River Dissolved Oxygen and Fecal Coliform TMDL

The next Stakeholders' Advisory Committee meeting for this study will be held on April 3rd at the Clearbrook Community Center Choir Room from 10 am until noon. The agenda can be found at the end of this document.

I also started writing some sections of the TMDL Report in February and completed a final data review for this project as part of the STORET data submittal process.

Standard Operating Procedures (SOP) for Water Quality Monitoring in the Red River Watershed.

I began working on a revision (#7) of the SOP for water quality monitoring within the RLWD and the rest of the Red River Basin. This document includes standard methods helps ensure that data collected throughout the basin will be comparable, accurate, precise, reliable, representative, and collected safely. It was written as part of the Red River Watershed Assessment Protocol project in 2003. New technologies, experience, and knowledge have created a great need for an update to the SOP. An effort will be made to make the SOP a more useful document by, for example, adding photos to demonstrate proper procedures.



Clearwater River Habitat and Bioassessment Project

I have dedicated some time to the completion of a report for this study along with all the other reports I hope to finish this year. Now that Valley City State University has completed their analysis of the last remaining macroinvertebrate (aquatic insect) samples, I have been able to working on calculating metrics (% Diptera, taxa richness, etc.) using this data. Preliminary analysis shows that this data will be very expressive of the negative impact stream channelization can have upon aquatic habitat and aquatic life. The results of more recent intensive biological monitoring conducted by the MPCA will also be included in the report.



RLWD Long-Term Monitoring Program

I began working on a comprehensive water quality report for the RLWD long-term monitoring program. The last report of this type was completed in 2004 and was intended to be updated once every two years. So, a report of this type is overdue. The 2008 report will most likely not include FLUX modeling results like the 2004 report due to limited time available for its completion. It will cover timely topics such as turbidity standard issues, what the new E. coli standard will mean for the RLWD, 2007 statewide water quality assessment results, trend analysis, boxplots, and changes to the RLWD long-term monitoring network.

I completed a final data review for this project as part of the STORET data submittal process.

Thief River Watershed Sediment Investigation

I completed a final data review for this project as part of the STORET data submittal process.

Agassiz will be hiring a seasonal full-time employee for the study. I posted the job opening on employment page of the RLWD website. There also will be a student intern from UMC working on the project again this year. Agassiz NWR has received money to purchase two additional water quality logging multi-probe sondes in addition to the sonde that they are purchasing for spot measurements of water quality.

Because of the TRWSI grant funds that helped pay for monitoring activities, Jan Kaspari (Marshall County Water Planner) has just enough money left over in her budget to purchase a multi-probe sonde. Thanks to this project and Surface Water Assessment Grants, most SWCDs in the RLWD will now have their own equipment that they will need to conduct their water quality monitoring programs. In past years, the Pennington and Marshall County Water Planners had to share the use of a sonde that was borrowed from the MPCA.

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Other Notes

- Wrote the Water Quality articles for the 2007 RLWD Annual Report
- Established new stream gauging files for the monitoring sites that were new for 2007. Flow measurement data was entered into respective rating curve development spreadsheets.
- Progress was made toward getting insurance money to replace damaged water quality equipment (In-Situ TROLL 9000 multi-probe sondes).

March and April Tasks

- Continue working on a comprehensive water quality report for the RLWD long-term monitoring program (originally scheduled for 2006)
- Continue working on the Clearwater River Dissolved Oxygen and Fecal Coliform TMDL Study Report.
- Provide information and data to the EERC for calibration of the SWAT model.
- Complete a revision of the *Standard Operating Procedures for Water Quality Monitoring in the Red River Watershed*
- Complete the Clearwater River Habitat and Bioassessment Project Report
- Analyze the data collected in 2007 for the Thief River Watershed Sediment Investigation and get a start on writing the final report for the project.
- Compile the continuous flow data collected with HOBO Water Level Loggers in 2007.
- Make sure portable and continuously monitoring equipment is calibrated ready for the monitoring season.
- Install continuous monitoring equipment as the rivers and streams begin to thaw.
- Collect a round of district monitoring samples when the rivers open up.
- Flow measurements
- Maintenance of continuous monitoring equipment once it's installed.
- Review expiring Project 82E buffer strip contracts with SWCD staff and make plans to meet with landowners, inspect the sites, and see what we can do to maintain the buffers.

February Meetings and Events

- **February 1, 2008** – Semi-annual report for the Thief River Watershed Sediment Investigation is due.
- **February 14th** – Presentation at Tile Drainage Forum
- **February 21st, 2008**—Red Lake River Corridor Enhancement Project Meeting, 4-6:30 pm @ Room 116 of the Kiehle Auditorium on UMC Campus
 - The DNR has been working on a plan for stabilization of the Sportsman's Park access area (where the Red Lake River and Clearwater Rivers meet).
 - Thief River Falls will be Capital for a Day on May 12, 2008.
- **February 28th** – Joint meeting of the Red River Basin Water Quality Team and the Red River Basin Monitoring Advisory Committee

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- Scott Kroeber from UND RGIS gave a presentation on a georeferenced video mapping/monitoring technique that ties video clips with GPS points. He hopes to be able to apply this technology to erosion assessments within the Red River Basin. This has mainly been used by the highway department, but can also be useful for ditch inspections (cattails, erosion, buffers, documentation, mapping) and erosion assessments. The system consists of a Red Hen GPS unit connected to a video camera. The cost of the Red Hen system and software is about \$4,000. With the additional cost of a digital tape video camera, this can be an expensive system. So, there would have to be a demonstrated need in order to purchase a system like this. It may be worthwhile if it can save money by saving time.



- Jan Kaspari has \$5,000 in cost share money available for erosion control projects.
- The EPA wants to shift the responsibility of maintaining the STORET database to the states. Each state would have a water quality database in the future.
- I talked about Revision 7 of the Standard Operating Procedures for Water Quality Monitoring in the Red River Basin. The RRBMAC committee members will review the SOP when I have incorporated all the edits that are needed.
- There was discussion of channel stability assessment protocols. The MPCA has a datasheet (<http://proteus.pca.state.mn.us/publications/wq-bsm3-02.pdf>) for habitat assessments, but it will have to be modified for different areas of the Red River Basin. The MPCA is also in the process of creating a potential stressor ID form.
- There will be a flow monitoring training session in mid-April (in Hawley).
- Citizen Stream Monitoring Volunteer Recruitment Project
 - Volunteers are especially needed in the Bois de Sioux, Buffalo, Otter Tail, Wild Rice, and Marsh watersheds.
 - Outreach could be done through FDR project work teams
 - Local Water Planning Task Forces could add volunteer participation as a goal
 - Citizen stream monitors could monitor the success of TMDL implementation plans

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Future Meetings/Events

- **March 20, 2008** – Red Lake River Corridor Enhancement Project meeting, St Hilaire City Hall, 6:30 PM
- **March 5, 2008** – Water Quality Monitoring Training Session at UMC
 - I will be giving a presentation on using Standard Operating Procedures in the field.
- **March 6, 2008** – Glacial Ridge Conference, 8am – 4:30 pm at Rydell NWR Headquarters.
 - I gave a presentation on water quality issues in the Red Lake River Watershed
- **March 24, 2008** - Red River Basin Water Quality Team Meeting in Moorhead, 10am
 - Education for decision makers
 - I will be a presentation on the Tile Drainage Study results
- **March 28, 2008** – Red River Basin Monitoring Advisory Committee meeting at 9:30 at the Sand Hill Watershed District office in Fertile.
- **April 2, 2008** - Marshall County Water Resources Advisory Committee, 9:30am
- **April 3, 2008** – Clearwater Dissolved Oxygen and Fecal Coliform TMDL Study stakeholders' meeting (not scheduled yet)
- **April 3, 2008** – Red Lake River Corridor Enhancement Project Meeting 4 pm, Red Lake Falls
- **April 16, 2008** – Clearwater County Water Plan Task Force meeting, 10am, Clearwater County Court House
- **Mid April, 2008** – Flow monitoring training session in Hawley, MN
- **April 23, 2008** – Envirothon, I will be a backup for Rachele Winter (who is going to be having a baby in March) as a judge at the aquatics station. I am scheduled to collect samples and flow measurements in the Thief River Watershed that day and will be in the area if needed.
- **April 28, 2008** - Red River Basin Water Quality Team Meeting at the RLWD, 10am
- **May 19, 2008** - Red River Basin Water Quality Team Meeting in Moorhead, 10am
- **June 19, 2008** – Red Lake River Corridor Enhancement Project meeting, Fisher School Library, 6:30 PM
- **June 23rd, 2008** - Red River Basin Water Quality Team Meeting at the RLWD, 10am
- **July 9th** - Marshall County Water Resources Advisory Committee, 9:30am
- **July 28, 2008** - Red River Basin Water Quality Team Meeting in Moorhead, 10am
- **August 25, 2008** – Red River Basin Water Quality Team Meeting at the RLWD, 10am
- **September 22, 2008** – Red River Basin Water Quality Team Meeting in Moorhead, 10am
- **October 24, 2008** – Red River Basin Water Quality Team Meeting at the RLWD, 10am
- **November 5, 2008** - Marshall County Water Resources Advisory Committee, 9:30am
- **November 24, 2008** – Red River Basin Water Quality Team Meeting in Moorhead, 10am
- **December 22, 2008** - Red River Basin Water Quality Team Meeting at the RLWD, 10am

AGENDA

Clearwater River Dissolved Oxygen and Fecal Coliform TMDL Study Stakeholder Advisory Group Meeting

April 3rd, 2008

10:00 a.m. – 12:00 p.m.

Clearbrook Community Center - Choir Room

There will be free coffee and Nordic Gnome cookies



10:00 a.m. – 10:10 a.m. **Welcome and Introductions**

10:10 a.m. – 10:30 p.m. **Monitoring Results**

Corey Hanson (RLWD)

1. Review of Impairments
2. Verification of bacteria impairments
3. Verification of low dissolved oxygen impairments
4. 2008 List of Impaired Waters

10:30 a.m. – 10:45 a.m. **Wastewater Treatment**

Lisa Scheirer (MPCA)

10:45 a.m. – 11:00 a.m. **SWAT Model Update**

Bethany Kurz

10:45 a.m. – 11:00 a.m. **Reclassification Issues, Possibilities, and Stakeholder views**

Corey Hanson and MPCA Rep

11:00 a.m. – 11:15 a.m. **Delisting Issues, Possibilities, and Stakeholder views**

Corey Hanson and MPCA Rep

11:40 a.m. – 11:55 p.m. **Stakeholder Comments and Concerns**

Stakeholder Group

1. Clearwater River: Aggregate data from entire reach vs. data from the channelized reach – delisting or TMDL?
2. Inventory of sources

11:55 a.m. – 12:00 p.m. **Next Steps in the TMDL Process**

Corey Hanson, MPCA Rep

1. TMDL Process
 2. Future meetings
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