

By: Corey Hanson, Water Quality Coordinator  
 For: June 14th, 2007  
 RLWD Board Mtg.

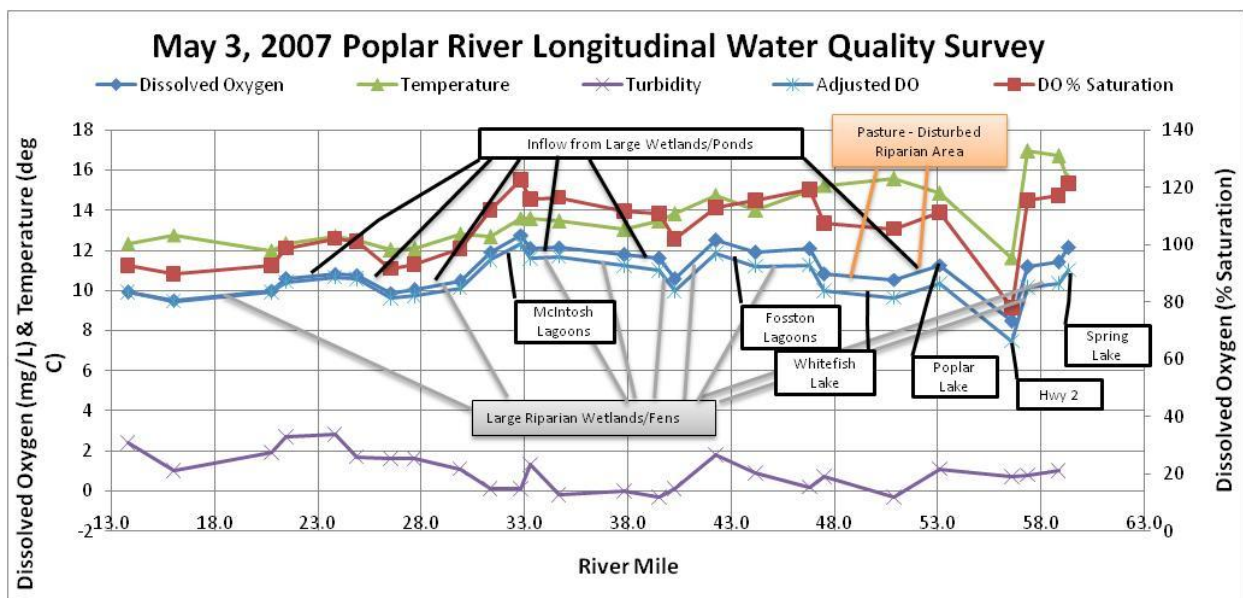
**Tile Drainage Study**

An Onset HOB0 water level logger was installed in the Hill River downstream of the Bachand tile drainage systems. Discharge from the Bachand Tile drainage site can be compared with the hydrograph from the hill River to see if tile drainage has an effect on the length of time that the river remains at a high (bank full) stage.



**Clearwater River Dissolved Oxygen and Fecal Coliform TMDL**

I completed a longitudinal water quality survey of the Poplar River on May 3<sup>rd</sup>. Field water quality measurements (dissolved oxygen, conductivity, pH, temperature, and turbidity) were collected at each crossing (27 sites) within the impaired reach. This revealed “dissolved oxygen sinks” where something is causing DO levels to decrease. This survey will be repeated on the Clearwater River and the Poplar River later in the summer. Although the first year’s monitoring will focus on verification of the impairment, these longitudinal surveys will help identify areas that need additional monitoring and stressor identification.



Equipment installation for continuous monitoring began this month. All of the Clearwater River monitoring equipment was installed by the end of May. There is an In-Situ TROLL 9000 in County Ditch #57 by Plummer that is collecting dissolved oxygen, pH, conductivity, temperature, and water level measurements once every hour. Two more of these TROLL 9000s are installed at stream gauging sites #21 and 37 on the Clearwater River. A Eureka Midge dissolved oxygen and temperature logger is installed at the Plummer USGS gauging site. Four more Eureka Midges and five Onset HOBO Water Level Loggers will be installed in June on the Poplar River, Lost River, and Silver Creek.

**CD57 In-Situ TROLL 9000 Water Quality Logging Station**

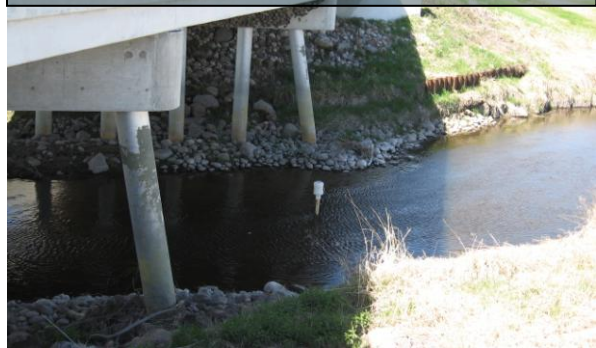


**Plummer USGS Gauge Eureka Midge Dissolved Oxygen and Temperature Logging Station**



An invoice for the first round of reimbursement was submitted to the MPCA Project Manager. I met with Lisa Scheirer and Bruce Paakh of the MPCA to review and approve monitoring sites. Project and station establishment forms were completed by the STORET metadata submittal deadline. E-coli monitoring for this study will begin in June, continue through October this year and then resume for April and May of 2008. There will be two E. coli monitoring sites on each impaired reach (Clearwater River, Silver Creek, and the Lost River).

**Stream Gauge #21 In-Situ TROLL 9000 Water Quality Logging Station**



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

Kristin Fritz began working at Agassiz NWR in May. She will be a student intern for the Thief River Sediment Investigation and Red Lake River Erosion Assessment as well as a volunteer at Agassiz National Wildlife Refuge this summer and fall. I spent some time training her for water quality monitoring at the Agassiz NWR sites and other sites near the refuge. She has also helped with equipment installations.

All of the Eureka Manta continuous water quality monitoring equipment (9 units) for this study has been installed. There are still some water level loggers left to be installed in early June.

Eureka Manta logging sondes will be collecting dissolved oxygen, pH, temperature, specific conductivity, turbidity, and water level measurements once every half hour at four sites on the Agassiz NWR and five sites at other locations within the watershed. A continuous record of barometric pressure will be collected from a logger installed at the Agassiz NWR headquarters. This record will be used to improve the accuracy of continuous water level records in the area. Samples were collected at all the monitoring sites in May by Marshall County and the RLWD. The deployed Eureka Manta multi-probes were calibrated after being installed for two weeks. Most of the equipment calibrations will be conducted by collecting the sondes and calibrating them in the office/lab (stable environment), so I am very much looking forward to having an actual lab in the new office.

**A3 (JD11 entering Agassiz NWR)  
Water Quality & Level Logging Station**



**Stream Gauge 40 (Thief R./SD83)  
Water Level Logging Station**



**Stream Gauge 6 on Ditch 200  
Water Level Logging Station**



**Site 757 (Mud River)  
Water Quality & Level Logging Station**



**A4 (Ditch 200 entering Agassiz NWR)  
Water Quality & Level Logging Station****Stream Gauge 140 (Thief R./SD83)  
Water Quality & Level Logging Station****Stream Gauge 2 (Thief R./SD83)  
Water Level Logging Station****Site #760 (Thief R. at Hillyer Bridge)  
Water Level Logging Station**

I met with Pete Fastner (St. Paul office) and Jim Courneya (Detroit Lakes office) of the MCPA to discuss the projects work plan requirements, budgeting, and reporting requirements. Project and station establishment forms were completed by the STORET metadata submittal deadline.

### **Red Lake River Rendezvous**

There have been three geocaches placed for the RLR Rendezvous. They are in St. Hilaire, Red Lake Falls (Sportsman's Park), and Fisher. I will be responsible for maintaining two of them and Rob Lacoursiere will maintain the St. Hilaire cache. The trip began at the end of May. I will canoe and document erosion sites on June 1<sup>st</sup>, 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup>. A birch bark canoe (pictured), along with several other prizes, will be raffled off to raise money for the Red Lake River Corridor Enhancement Project. Photos, blogs, and other details from the trip can be found on the RLRCE website ([www.redlakerivercorridor.org](http://www.redlakerivercorridor.org)).



I will be keeping a record of severe erosion sites along each reach I canoe. I will photograph the sites and mark their location with a GPS unit. Photos and waypoints can be matched using synchronized time stamps.

### May Meetings and Events

- ❖ **May 10<sup>th</sup>** – Red Lake River Corridor Enhancement – 6:30 @ East Grand Forks Public Library
- ❖ **May 14<sup>th</sup>** – Meeting with Pete Fastner and Jim Courneya of the MPCA to discuss the Thief River Watershed Sediment Investigation.
- ❖ **May 21<sup>st</sup>** – Meeting with Lisa Schierer and Bruce Paakh of the MPCA to review Clearwater River Dissolved Oxygen and Fecal Coliform TMDL study monitoring sites.
- ❖ **May 25<sup>th</sup>** – Red River Basin Monitoring Advisory Committee - Canceled
- ❖ **May 28<sup>th</sup> through June 10<sup>th</sup>** – Red Lake River Rendezvous 40<sup>th</sup> Anniversary Canoe/Kayak Expedition

### Future Meetings/Events

- ❖ **June 5<sup>th</sup>** – Pennington County Water Resources Advisory Committee meeting – 9 AM, Penn. SWCD conference room
- ❖ **June 6<sup>th</sup>** – Red River Basin Commission Tour – I will be presenting on the tile drainage water quality study
- ❖ **June 14<sup>th</sup>** – Red Lake River Corridor Enhancement Joint Powers Group – 6:30 PM at the Fisher School
- ❖ **June 25<sup>th</sup>** – Red River Basin Water Quality Team – Thief River Falls
- ❖ **July 23<sup>rd</sup>** – Red River Basin Water Quality Team – Moorhead
- ❖ **July 31<sup>st</sup>** – Final reports due for ditch inventory and project 60E BWSR Challenge Grant projects
- ❖ **August 1<sup>st</sup>** – Thief River Watershed Sediment Investigation semi-annual report is due.
- ❖ **August 8<sup>th</sup>** - Marshall County WRAC
- ❖ **August 13<sup>th</sup>** – Pennington County Water Resources Advisory Committee
- ❖ **August 27<sup>th</sup>** - Red River Basin Water Quality Team – Thief River Falls
- ❖ **September 24<sup>th</sup>** - Red River Basin Water Quality Team – Moorhead
- ❖ **October 10<sup>th</sup>** - Marshall County WRAC
- ❖ **October 22<sup>nd</sup>** - Red River Basin Water Quality Team – Thief River Falls
- ❖ **November 26<sup>th</sup>** - Red River Basin Water Quality Team - Moorhead

### Other Notes

- The first round of our long-term monitoring program began in late April but was completed in early May.