By: Corey Hanson, Water Quality Coordinator

For: July 26th, 2007
RLWD Board Mtg.

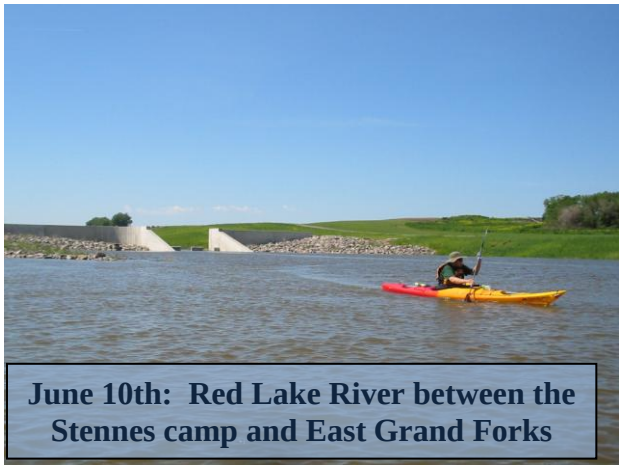
Red Lake River Rendezvous

I participated in the Red Lake Rendezvous for 4 of the 10 days of the event. Along the way, I documented erosion sites by marking them with a GPS unit and photographing them. Because the time and date stamps on the GPS unit and digital camera are synchronized, the data from the two instruments can be matched for each erosion site at a later time. The severity of the erosion sites can be visually assessed using the photographs. I also helped establish three new geocaches as part of the RLR Rendezvous. These are located in St. Hilaire, Red Lake Falls, and Fisher (www.geocaching.com).

June 1st: Red Lake River between the Smiley Bridge and Thief River Falls

June 8th: Red Lake River between pre-Fisher campsite and Fisher

June 9th: Red Lake River between Fisher and the Stennes pre-EGF camp



June 10th: Red Lake River between the Stennes camp and East Grand Forks

Tile Drainage Study

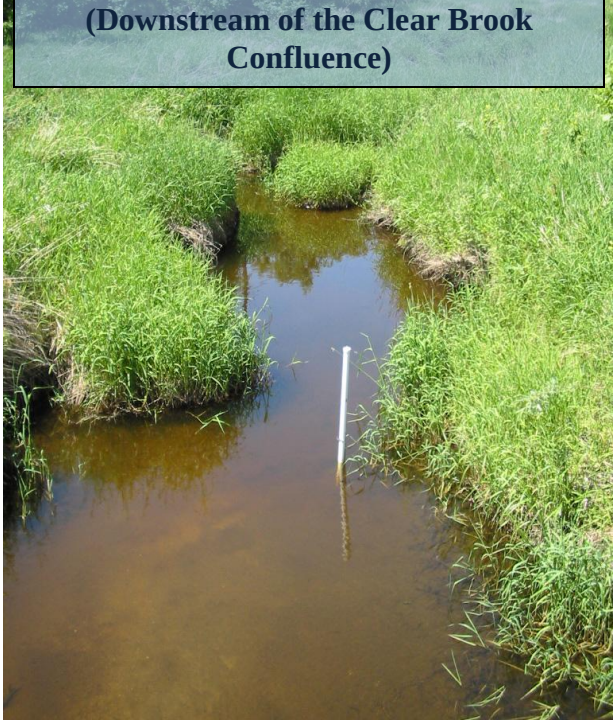
Runoff events in June provided several opportunities to collect paired samples of surface and tile drainage in both Red Lake and Marshall Counties. Flooding on the Hill River, however, caused water to back up into the Bachand Surface h-flume. Flow from surface drainage can only be quantified when water can flow unobstructed out of the h-flumes. The backwater effect at the Bachand Surface site means that a lot of data from the h-flume will be unusable. The Yaggie2 (h-flume measuring flow from a surface drained field) and Bachand Tile structures are still working well. Water level data will be downloaded once every month.

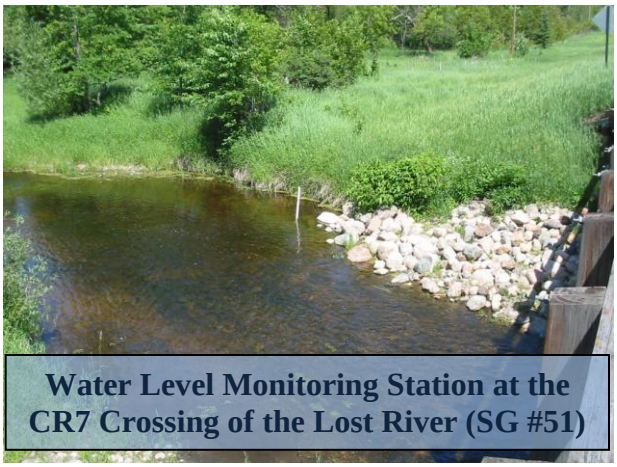
Clearwater River Dissolved Oxygen and Fecal Coliform TMDL

E. coli sampling for this study began in June. Five samples will be collected each month this year through October as well as April and May of next year. So far, there is only one monitoring site from which data indicates E. coli impairment. This site is located on Silver Creek, just downstream of its confluence with Clear Brook. Dissolved oxygen monitoring has found some low readings at certain locations, notably in the Clearwater River during the June runoff events.

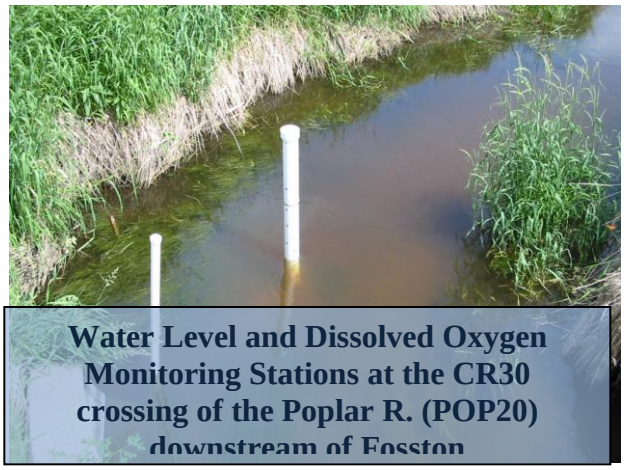
Water Level Monitoring Station at the CR111 crossing of Silver Creek (#81)

Water Level Monitoring Station at the L-13 crossing of Silver Creek (Downstream of the Clear Brook Confluence)





Water Level Monitoring Station at the CR7 Crossing of the Lost River (SG #51)



Water Level and Dissolved Oxygen Monitoring Stations at the CR30 crossing of the Poplar R. (POP20) downstream of Fosston

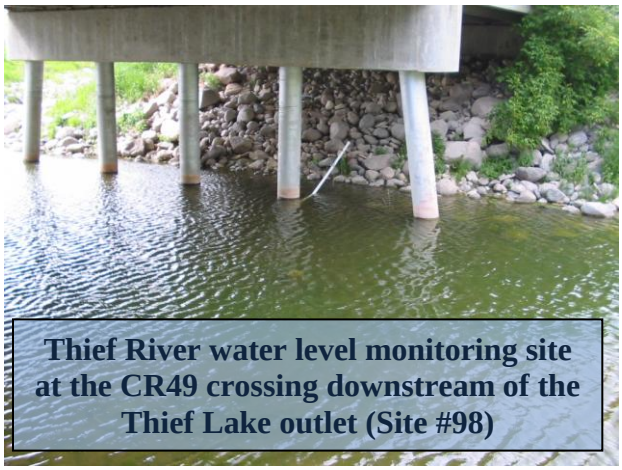
Dissolved Oxygen Monitoring Station at the Spring Lake Outlet to the Poplar R.

Dissolved Oxygen Monitoring Station at the Stream Gauge #105 downstream of the Hwy 59 crossing of the Poplar River

Dissolved Oxygen Monitoring Station at the WINPOP site on the Poplar River (Downstream of McIntosh)

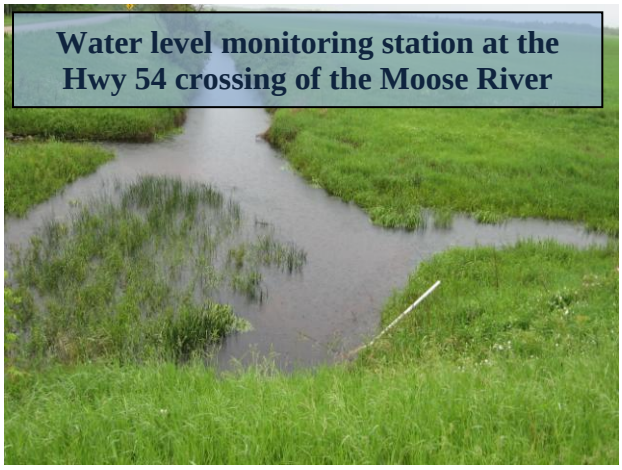
Thief River Watershed Sediment Investigation

Thief River water level monitoring site at the CR 44 crossing (SG #156)



Thief River water level monitoring site at the CR49 crossing downstream of the Thief Lake outlet (Site #98)

Water level monitoring site on the Hwy 89 crossing of the Moose River



Water level monitoring station at the Hwy 54 crossing of the Moose River

The rest of the continuous monitoring equipment was deployed for the study in the early part of June. I assisted the USGS in collecting samples for the Agassiz NWR sites. I trained another USFWS staff member on the calibration of the Hydrolab multiprobe. Eureka Manta multiprobes are installed and collecting dissolved oxygen, conductivity, pH, temperature, turbidity, and water level reading every half hour. These sondes will be collected and brought to the RLWD water quality lab every two weeks where they will be cleaned and calibrated. Data is validated based on how closely measurements on the deployed multiprobe match those from the portable multiprobe. This process will also determine how much error is caused by fouling of the sensors and how much error is caused by calibration drift.

Project 60E

I completed a round of cleaning and calibration in mid-June and will continue to clean and calibrate the equipment on a monthly basis.

June Meetings and Events

- **May 28th through June 10th –** Red Lake River Rendezvous 40th Anniversary Canoe/Kayak Expedition
- **June 5th –** Pennington County Water Resources Advisory Committee meeting – 9 AM, Penn. SWCD conference room
- **June 6th –** Red River Basin Commission Tour – I gave a presentation on the Tie Drainage Study
- **June 14th –** Red Lake River Corridor Enhancement Joint Powers Group – 6:30 PM at the Fisher School
- **June 25th –** Red River Basin Water Quality Team – Thief River Falls

Future Meetings/Events

- **July 23rd –** Red River Basin Water Quality Team – Moorhead
- **July 31st –** Final reports due for ditch inventory and project 60E BWSR Challenge Grant projects. Semi-annual reports for the Thief River Watershed Sediment Investigation and Clearwater River Dissolved Oxygen and Fecal Coliform TMDL studies are also due.
- **August 1st –** Thief River Watershed Sediment Investigation semi-annual report is due.
- **August 8th -** Marshall County WRAC
- **August 13th –** Pennington County Water Resources Advisory Committee
- **August 27th -** Red River Basin Water Quality Team – Thief River Falls
- **September 24th -** Red River Basin Water Quality Team – Moorhead
- **October 10th -** Marshall County WRAC
- **October 22nd -** Red River Basin Water Quality Team – Thief River Falls
- **November 26th -** Red River Basin Water Quality Team - Moorhead

Other Notes

- The second round of district monitoring for 2007 began at the end of June and will be completed in July.
- Red River Basin Buffer Initiative samples were collected on Silver Creek and Clear Brook.