

April 2006 Water Quality Program Progress Summary

By: Corey Hanson

For: May 11, 2006 RLWD Board Meeting

Tile Drainage Study:

Water level loggers were installed at the beginning of April. I have begun sampling at the Red Lake County sites and Lisa Newton (M-B SWCD) has begun sampling at the Marshall County sites. Nate Dalager and I have made some improvements to the flumes to reduce erosion at the Bachand flume, prevent loss of water out the back of the Yaggie flume, and level-out the Yaggie flume.



Project 60 Monitoring

The continuous monitoring equipment for the Project 60 water quality (turbidity) and flow monitoring is all installed. I did a lot of research into turbidimeters, stilling well construction, etc. to make sure that I would get the equipment installed correctly. It also took some time to get the stilling wells constructed and installed due to delays from high

flows and other concurrent project. There is now a Stevens TS300 turbidity probe and an Onset HOBO Water Level Logger at each of the two continuous monitoring sites. The equipment takes measurements once every 30 minutes.

I decided to move the monitoring site at the downstream end of the County Ditch 2 system from Stream Gauge #70 (Hwy 220 crossing) to Stream Gauge # 71 that is a few miles upstream. The Hwy 220 site had deep water, backwater from the Red River (this would hinder the development of a rating curve), and too much traffic that combine to make the site a poor monitoring site. I picked Stream Gauge #71 because it was the first site upstream at which stage was not being affected by backwater from the Red River.



Flooding along the west end of the Polk County Ditch 2.

April Meetings

- ❖ **April 3rd** – Northwest Minnesota Regional Sustainable Development Partnership focus group.
- ❖ **April 5th** – Marshall County Water Resources Advisory Committee in Newfolden
- ❖ **April 5th and 6th** – Shallow Lakes Forum in Willmar (Jim)
- ❖ **April 11th** – Flow Measurement Training Seminar in Hawley (Gary, Loren, Jim, and I)

- Refresher course on bridge board and wading techniques plus instruction on the use of AquaCalc computers. Also, we learned about new technology such as magnetic and optical heads that make readings more reliable.
- ❖ **April 24th** – Red River Basin Water Quality Team Meeting at the RLWD – Red River Basin Water Quality Monitoring Network report, streambank erosion
- ❖ **April 26th** – Envirothon at Agassiz NWR. Jim helped out at the Aquatics station and I was in charge of the Current Events station this year. The theme for this year’s Envirothon was “Water Stewardship in a Changing Climate.”
- ❖ **April 28th** – Red River Basin Monitoring Advisory Committee in Fertile

Future Meetings/Events

- ❖ **May 11th** – Presentation: *Potential Impacts of Expanded Tile Drainage on Aquatic Ecosystems in the Red River Basin* by Kristen Blann - at the VFW in Ada from 10am to 11 am
- ❖ **May 26th** – Red River Basin Monitoring Advisory Committee in Fertile
- ❖ **June 15th** – Next Red Lake River Corridor Enhancement Project meeting – in Thief River Falls
- ❖ **June 26th** - Red River Basin Water Quality Team Meeting at the RLWD
- ❖ **July 24th** - Red River Basin Water Quality Team Meeting in Moorhead

River Watch

- ❖ Jim is continuing to assist area River Watch schools with their monitoring.

Other Notes

- ❖ Submitted 2005 data to the STORET database. I filled out around 20 new site establishment forms. There was some more data from the past couple of years that I entered into the database before submitting it to the MPCA.
- ❖ The turbidity measurements from our new Eureka Manta probe don’t match-up exactly with the measurements from the HACH 2100P meter. Because of this, I researched the issue and found that this is common but there are ways to improve the calibration of the Eureka probe to make it match-up better. Eureka turbidity readings taken after my calibration efforts now correlate better with the HACH meter.
- ❖ Took pictures and videos of flooding and results of flooding (many on my own time around the Crookston area). All are available in a 2006 flooding pictures folder on my computer.
- ❖ Installed stilling wells for Ruffy Brook In-Situ multi-probes (In-Situ sondes were installed on May 5th)