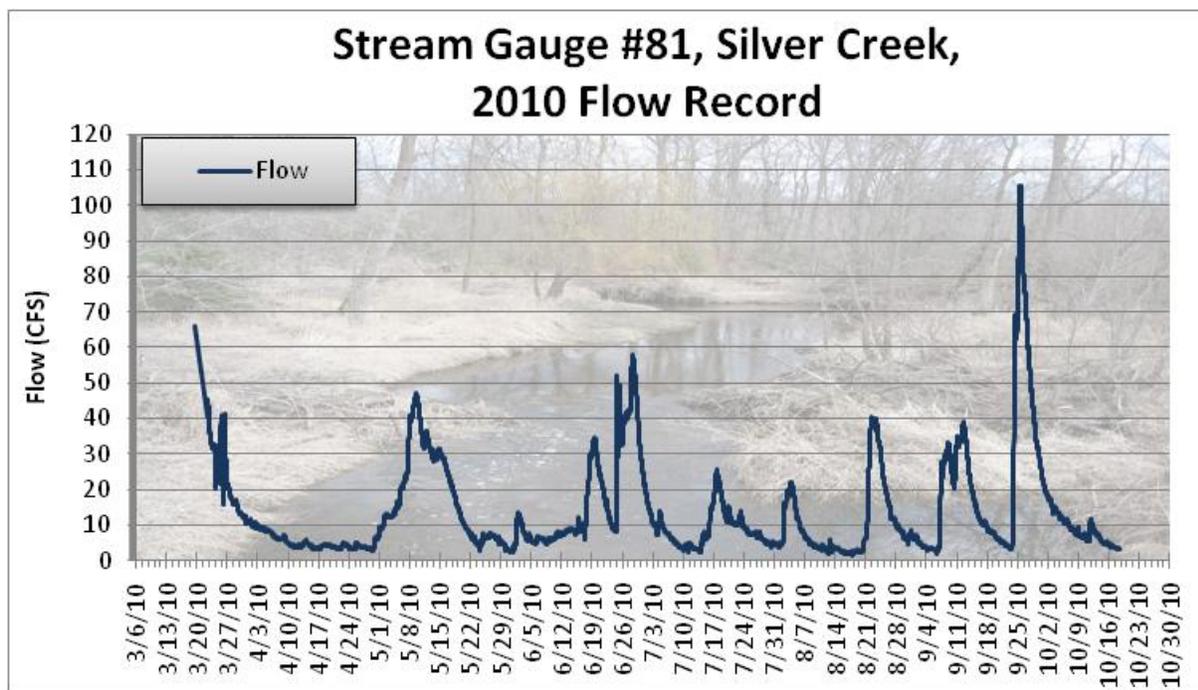


By: Corey Hanson, Water Quality Coordinator
For: December 9th, 2010
Red Lake Watershed District Board Meeting

Stream Gauging

- Retrieved HOBO water level loggers where I could get access to the installation pipes. There are four sites (Mud River and the Thief River at CR7, CSAH 49, and CSAH 42) where I can't get to the top of the installation pipe. I can't even see the top of the pipes at the sites on the lower reach of the Thief River because water levels are so high.
- Cleaned loggers, downloaded data, and put them away for the winter.
- Compiled and plotted the 2010 flow record for stream gauge 81 on Silver Creek.



- Uploaded flow measurement data from the AquaCalc device, printed the records for the stream gauge file, and added the new measurements to rating curves.

Other Notes

- Finished entering monitoring data from this year, double-checked 10% of the entries against the original data sheets, and submitted the data to the MPCA for entry into the STORET database.
- Completed a revision of the Thief River Watershed Assessment Project work plan. More money was added to the civic engagement objective and the continuous monitoring plans were scaled back.

- Completed writing a Surface Water Assessment Grant proposal for monitoring in the Thief River Watershed.
 - The mandatory Conflict of Interest form was completed and sent to Ron Schwartz.
 - The grant proposal was sent to the MPCA in the morning of November 5th.
- We received the final payment from the MPCA for the Thief River Watershed Sediment Investigation (\$9,650).
- The flume that measured flow from the Yaggie surface drained field was missing when I went to remove it. I've contacted the Red Lake County Highway Department and have talked to the neighbors and have had no luck in finding it.
- Successfully contacted a local landscaper to discuss the RLWD rain garden. It looks like we can save a lot of money by using a local contractor.
- Provided Maggie Anderson (USFWS) with in-kind matching expenditure amounts that she can use for the Agassiz NWR Water Quality Study grant.
- Retrieved, cleaned, and calibrated the TS300 turbidity loggers that were used at the Brandt Channel monitoring site in 2010.
- Visited the site of the Spring Lake Gravel dam breach (near Melvin, SE of Crookston) with Loren Sanderson, Larry Hanson (USFWS) and a relative of the landowner. The breach has caused erosion downstream, channel incision upstream, and drainage of wetlands. We will be putting together plans for a wetland restoration and erosion control project for this site over the winter. I have a map, photos, and notes that can be used to develop a proposal that can be brought to the RLWD Board at a later meeting – when we have clearer plans of what needs to be done.

November 2010 Meetings and Events

- **November 5, 2010** – Deadline for Surface Water Assessment Grant proposals
- **November 29, 2010** - Red River Basin Water Quality Team meeting, 9am – 4 pm, Detroit Lakes MPCA Office.
 - Triennial Review of Water Quality Standards
 - These proposed standards won't become official until 2013 at the earliest.
 - Nitrates
 - Class 2A Waters: 3.1 mg/L
 - Class 2B Waters: 4.9 mg/L
 - *RLWD's highest ever NO₂+NO₃ level = 4.28 mg/L.*
 - Acute: 41 mg/L
 - Total Suspended Solids
 - 10 mg/L for Class 2A (cold-water fishery) waters
 - 65 mg/L for the southern river nutrient region (Red River Valley)
 - 30 mg/L for the central river nutrient region (Upper Red Lake R.)
 - 15 mg/L for the northern river nutrient region (Clearwater R. Headwaters)
 - 100 mg/L for the mainstem of the Red River of the North

Draft river eutrophication criteria ranges by River Nutrient Region for Minnesota.

Region	Nutrient	Stressor		
	TP µg/L	Chl-a µg/L	DO flux mg/L	BOD ₅ mg/L
North	55	<10	≤4.0	≤1.5
Central	100	<20	≤4.5	≤2.0
South	150	<40	≤5.0	≤3.5

- Sediment research at Agassiz National Wildlife Refuge (Gregg Knutson, Shawn Schottler)
- Thief River Watershed Sediment Investigation (Dave Friedl, Corey Hanson)

Plans for December 2010

- Work on plans for a rain garden at the RLWD office.
- Retrieve the remaining water level loggers if water levels go down enough to allow access. If they don't go down, I'll have to wait until the channel freezes over and I can either drill through the ice to get them or leave them there until spring.
- Continue revising the work plan for the Red Lake River watershed-based TMDL before the Thief River watershed-based TMDL begins.
- Compile data from water level loggers and the Project 60 turbidity loggers.
- STORET data review
- Write annual report articles

Future Meetings/Events

- **December 10, 2010** – Red River Basin Monitoring Advisory Committee, Sand Hill Watershed District, 9:30 am
- **January 13, 2011** – Franklin Middle School Science Fair Judging