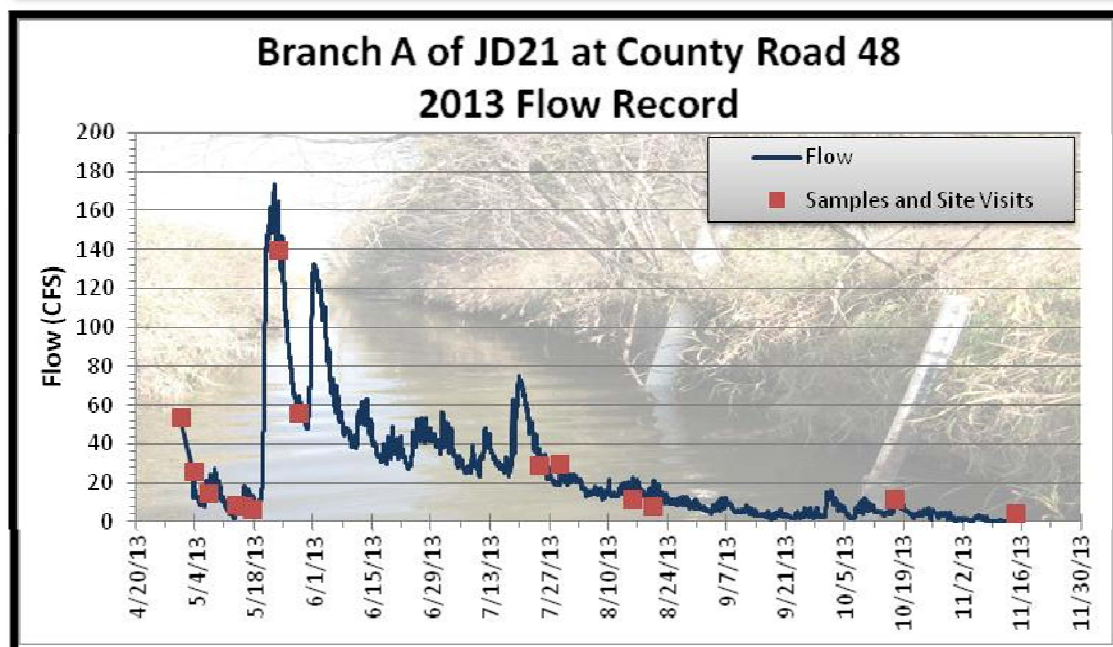
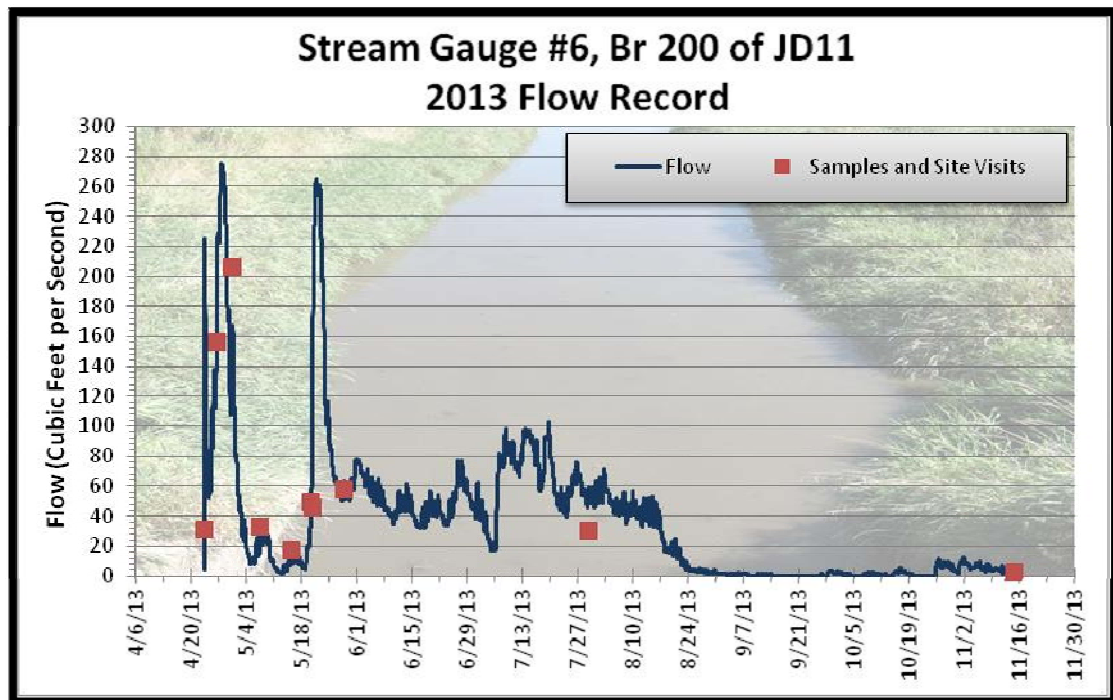
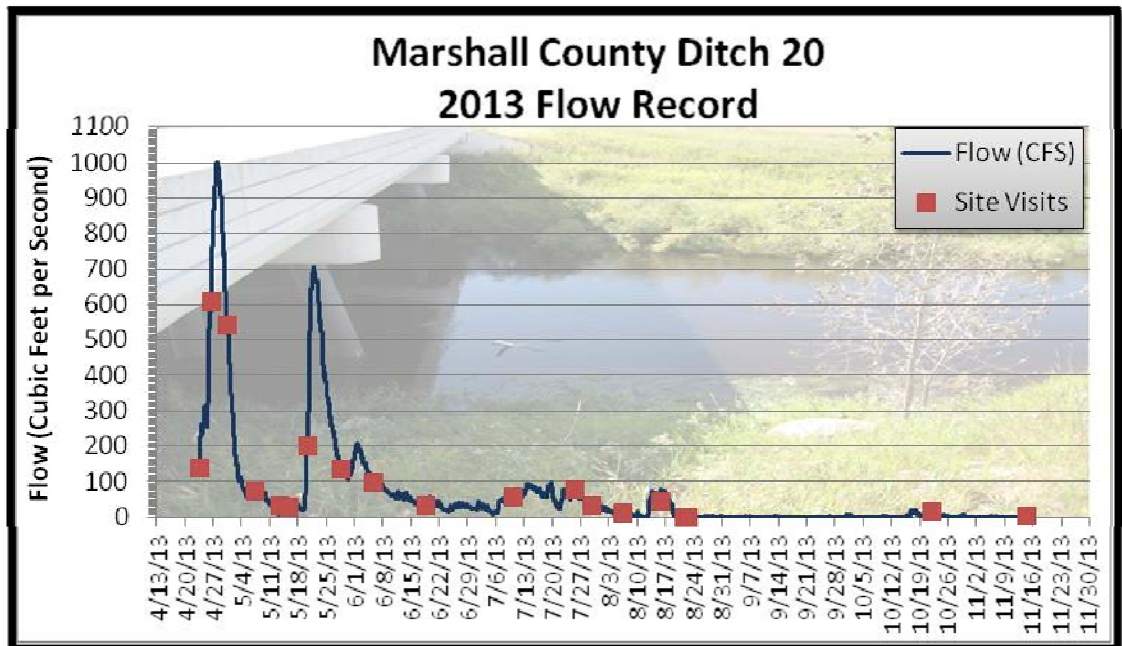
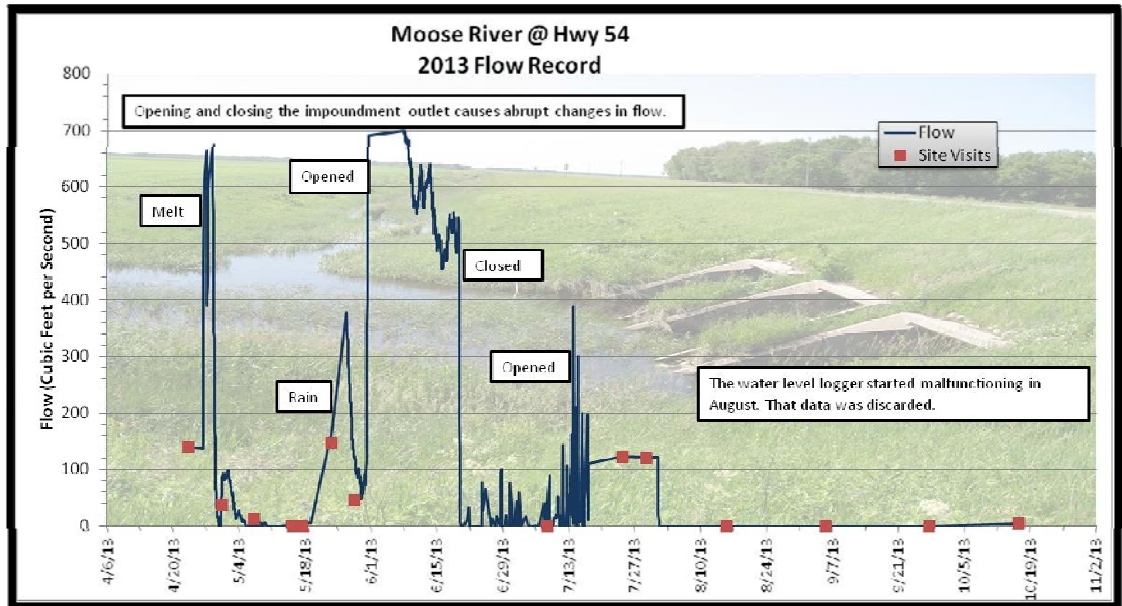
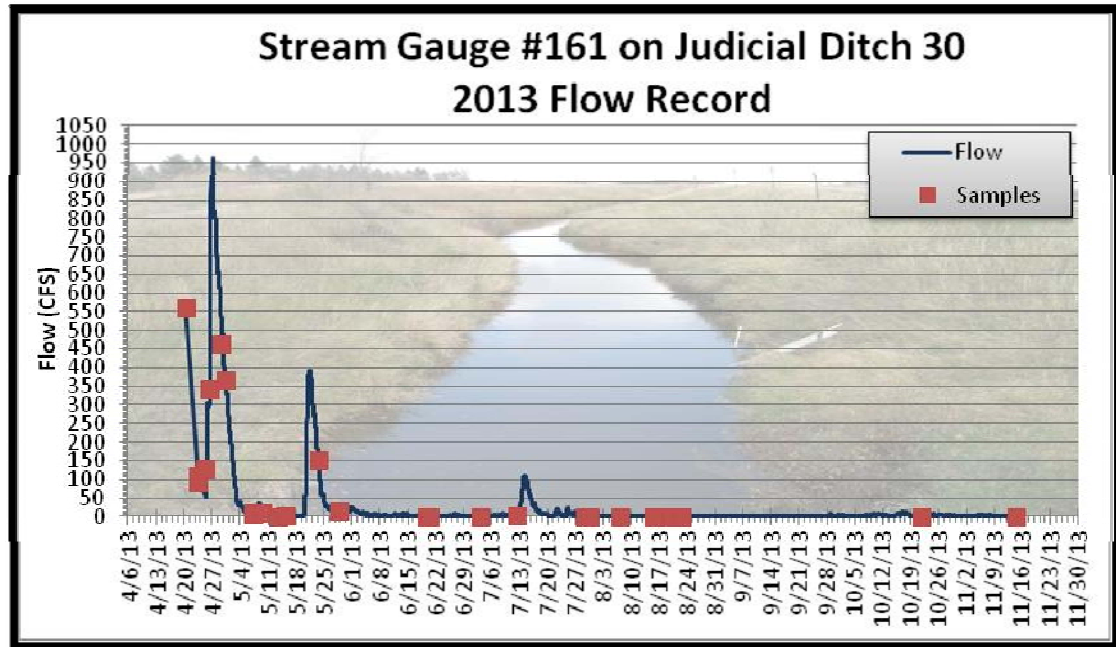


Thief River Watershed Assessment Project
(Watershed Restoration and Protection - WRAP)

- Task 5 – Stage and Flow Monitoring
 - Data was downloaded from HOBO water level loggers.
 - Data from the HOBO water level loggers was converted into stage and flow records.



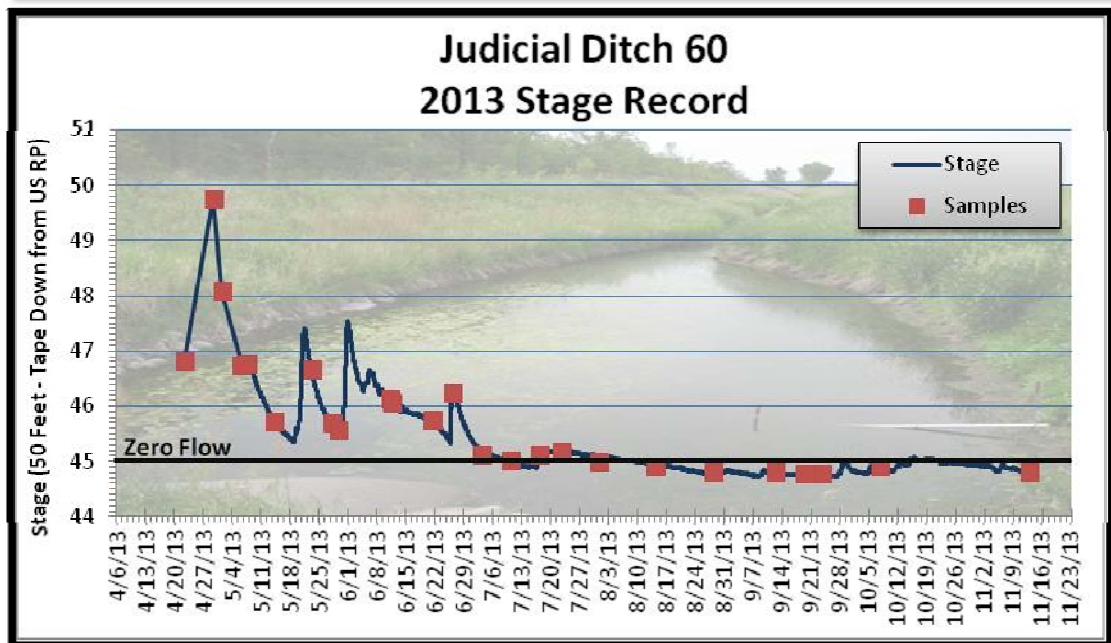
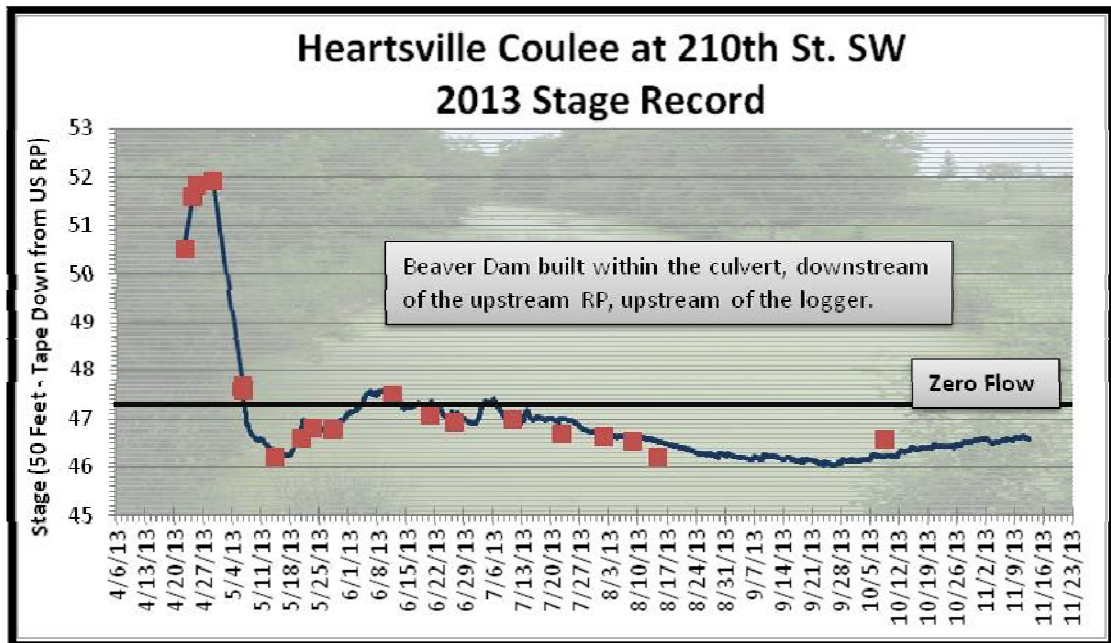


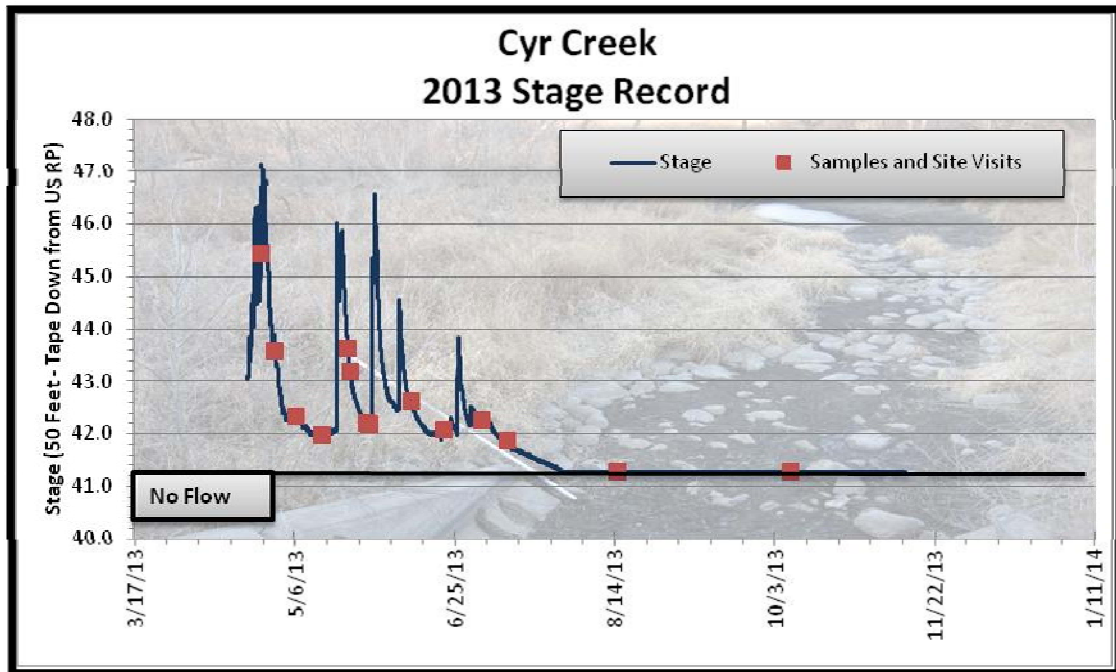
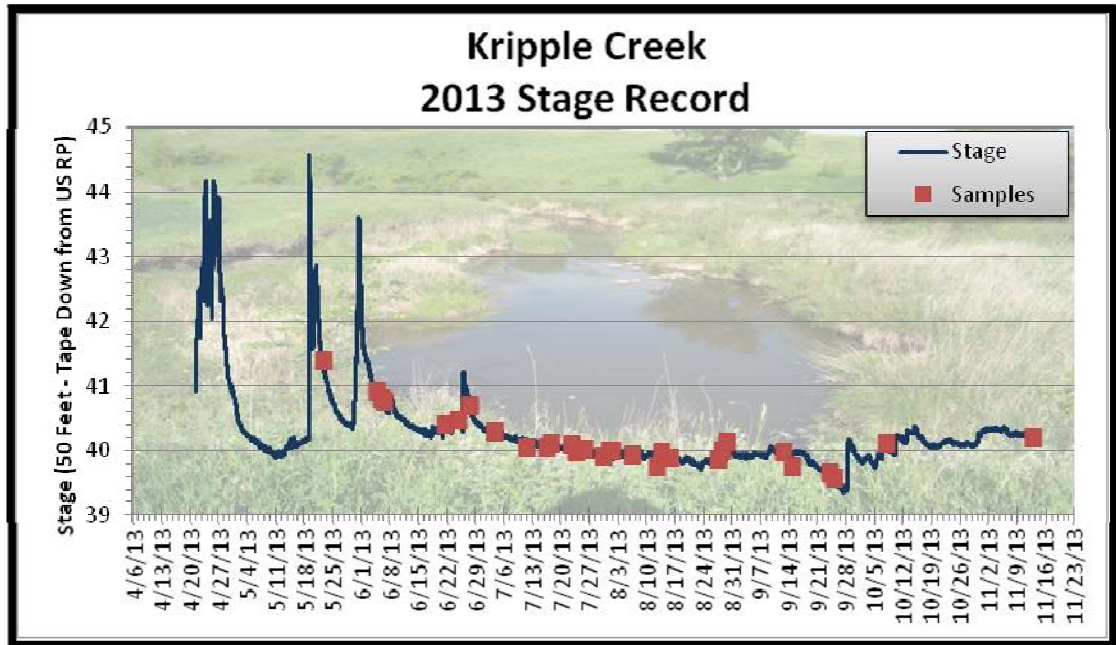


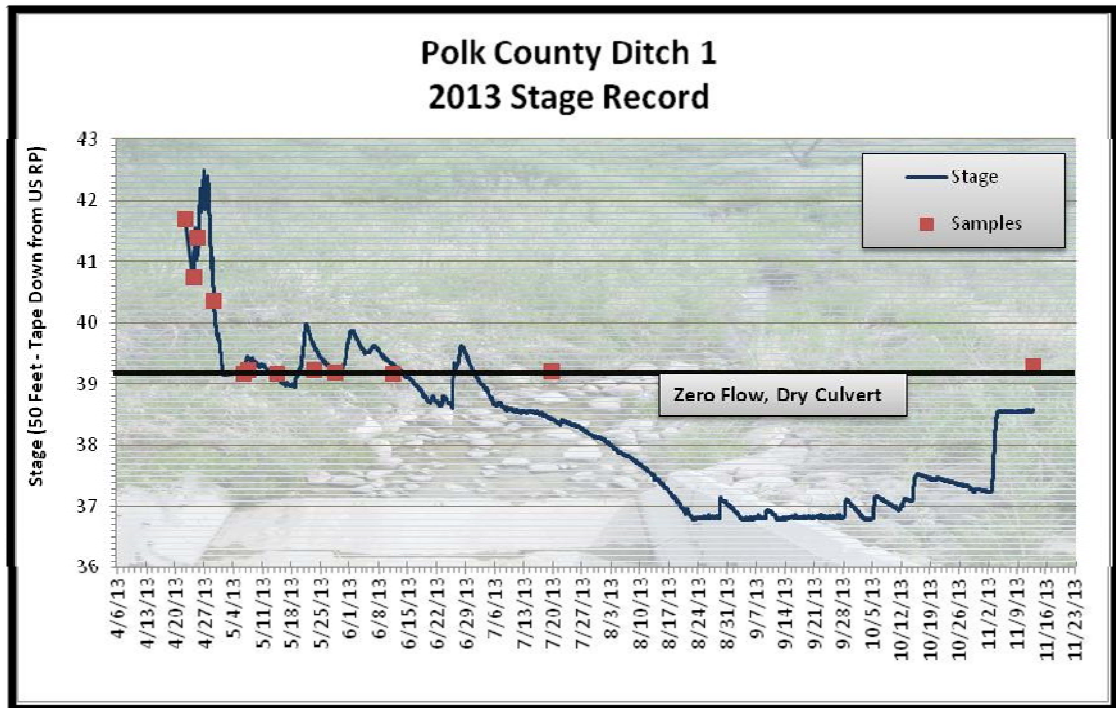
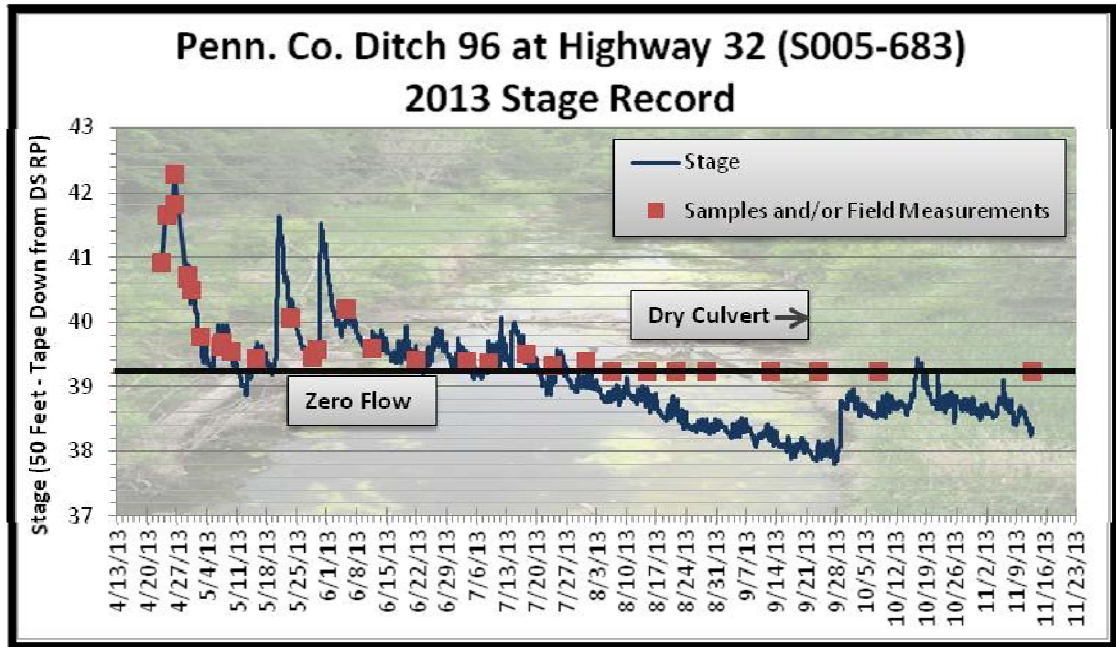
- Task 7 – Stressor Identification
 - Reviewed and found photos for a stressor identification section that was written for the Thief River Watershed Conditions Report (results of the biological assessment) that is being written by MPCA staff. The biological assessment didn't find any biological impairments on river (non-ditch) reaches within the watershed. Impairments on ditches will be deferred until new tiered aquatic life use standards come into effect. There will eventually be different standards for channelized rivers and ditches than there are for natural streams.

Red Lake River Watershed Assessment Project
(Watershed Restoration and Protection - WRAP)

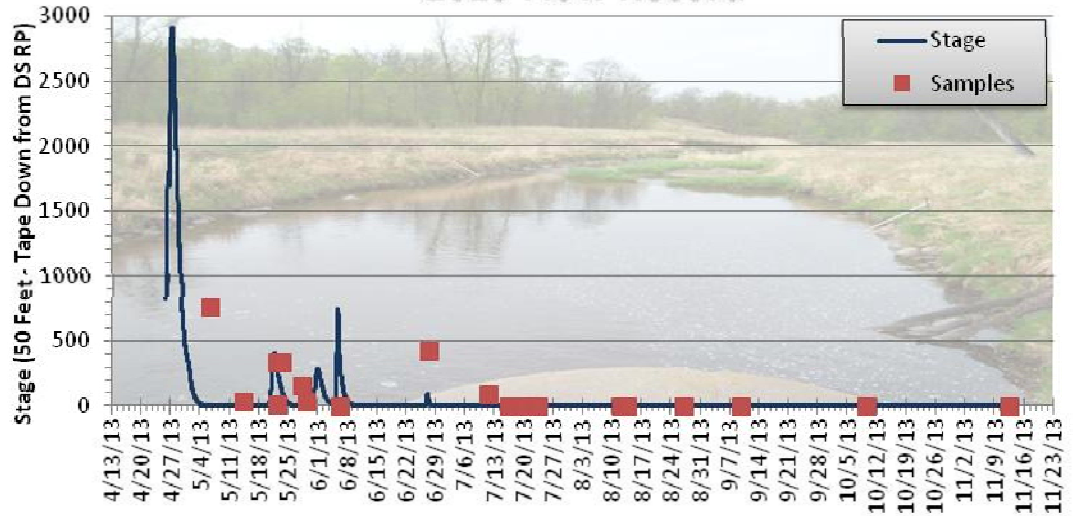
- Task 5 – Stage and Flow Monitoring
 - Data was downloaded from HOBO water level loggers.
 - Data from the HOBO water level loggers was converted into stage and flow records.



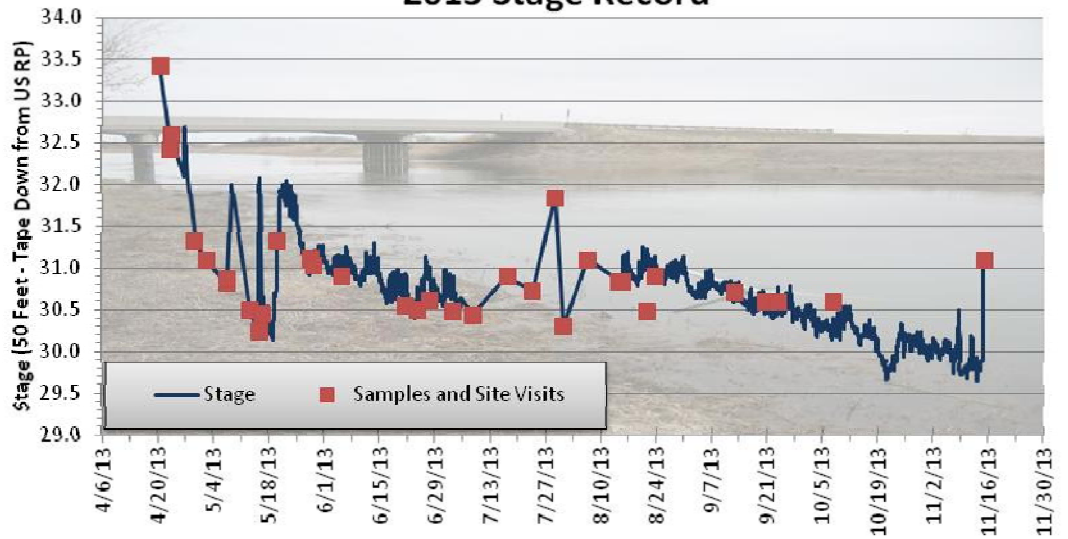


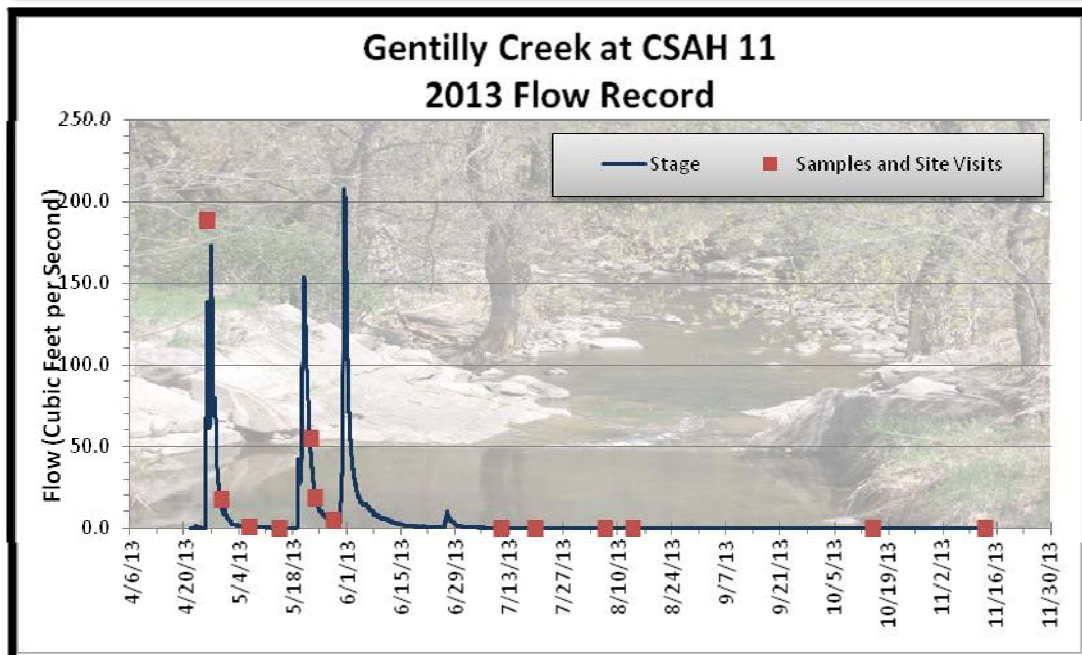
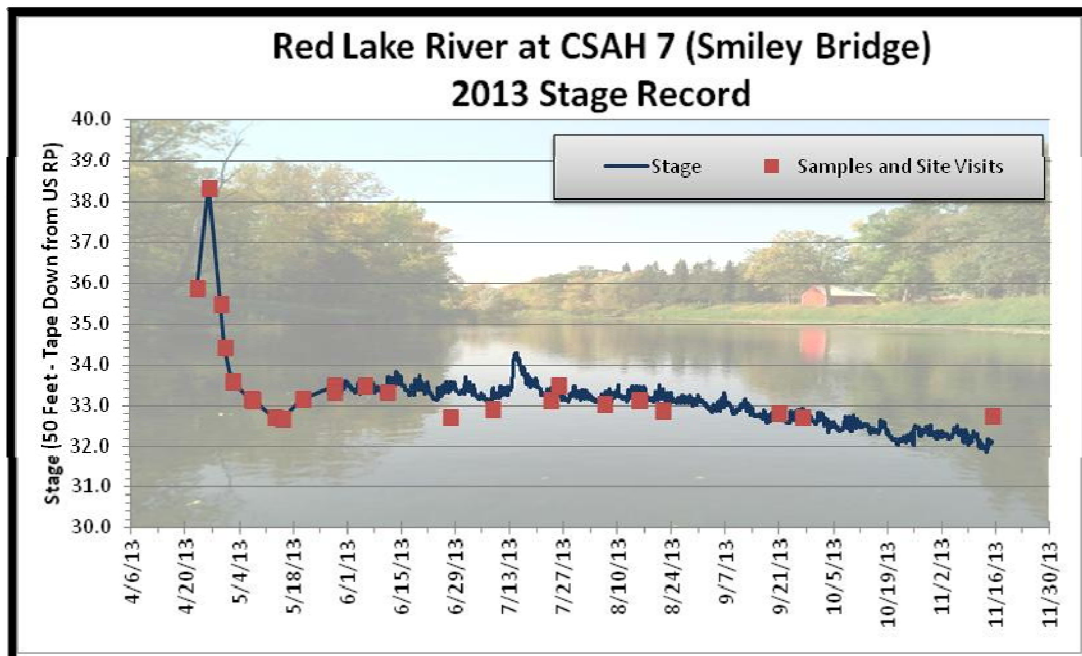


Black River at CSAH 18 in Red Lake County 2013 Flow Record



Red Lake River at CSAH 27 2013 Stage Record





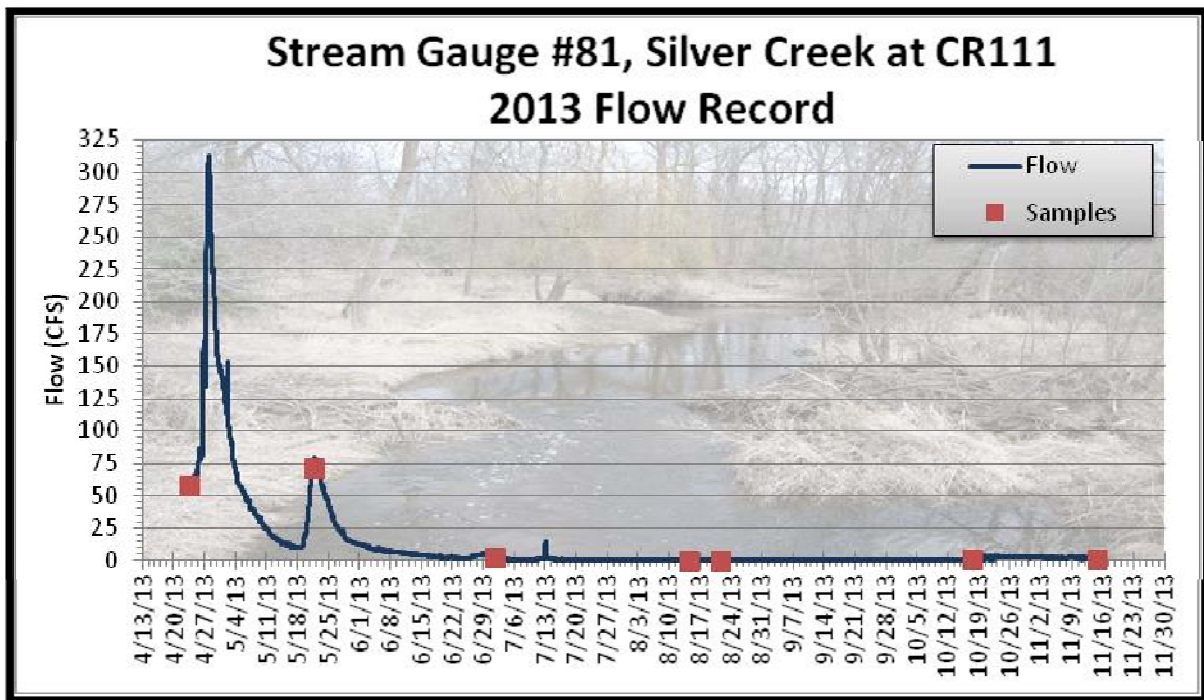
- Task 11 – ID Sources and Solutions
 - Work continued in the process of hydro-correcting (“burning-in” flow paths where there are culverts and bridges) the Red Lake River LIDAR surface and development of a Stream Power Index for the Red Lake River. RLWD staff are completing a township-by-township search for culverts that will help with the hydro-correction process.

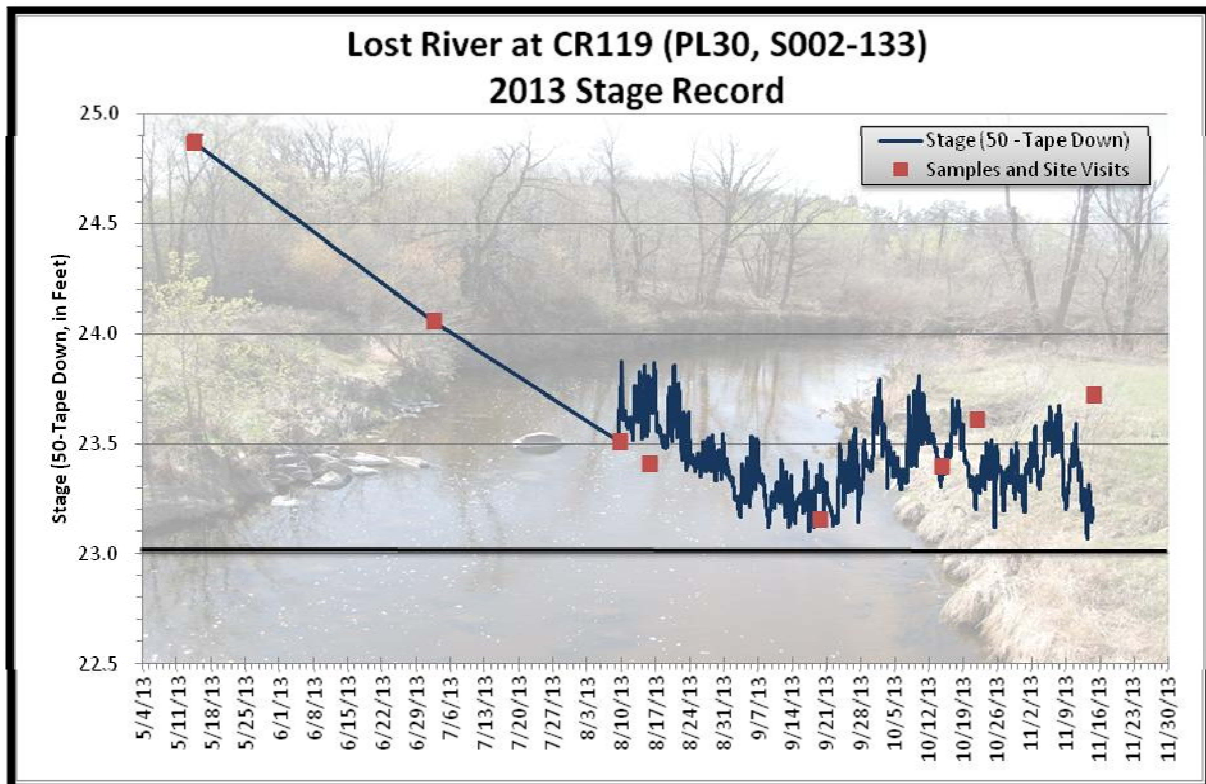
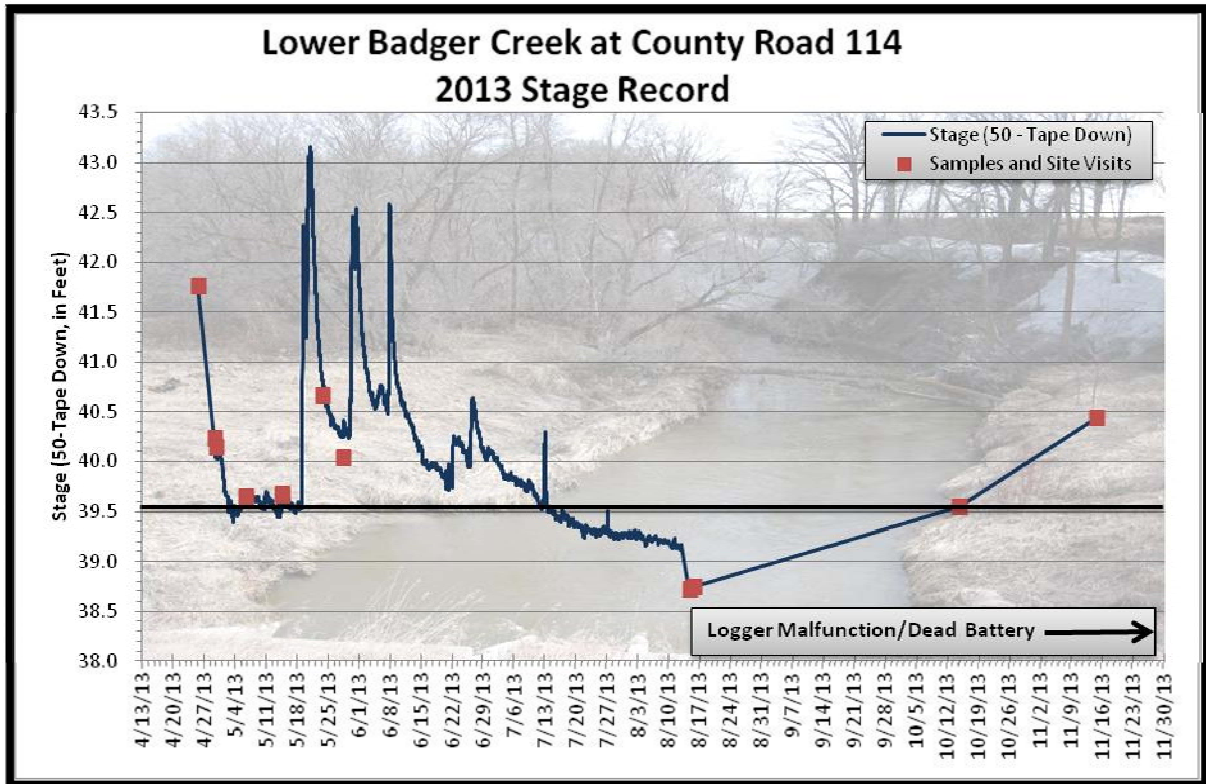
Red Lake River and Grand Marais Creek Assessment (Surface Water Assessment Grant)

A final progress report for this project was completed and sent to the MPCA Project Manager. Additional invoices were requested and received from project partners so that they could be paid in December. The final invoice and a grant closing letter will be sent to the MPCA in January.

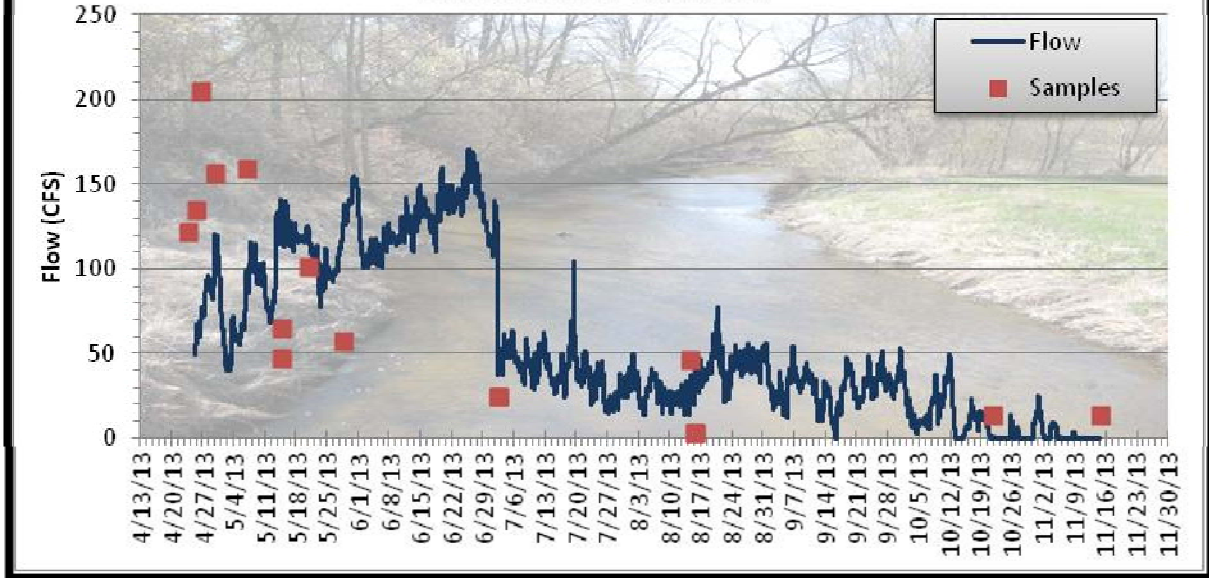
Stream Gauging

- Data was downloaded from HOBO water level loggers.
- Data from the HOBO water level loggers was converted into stage and flow records.

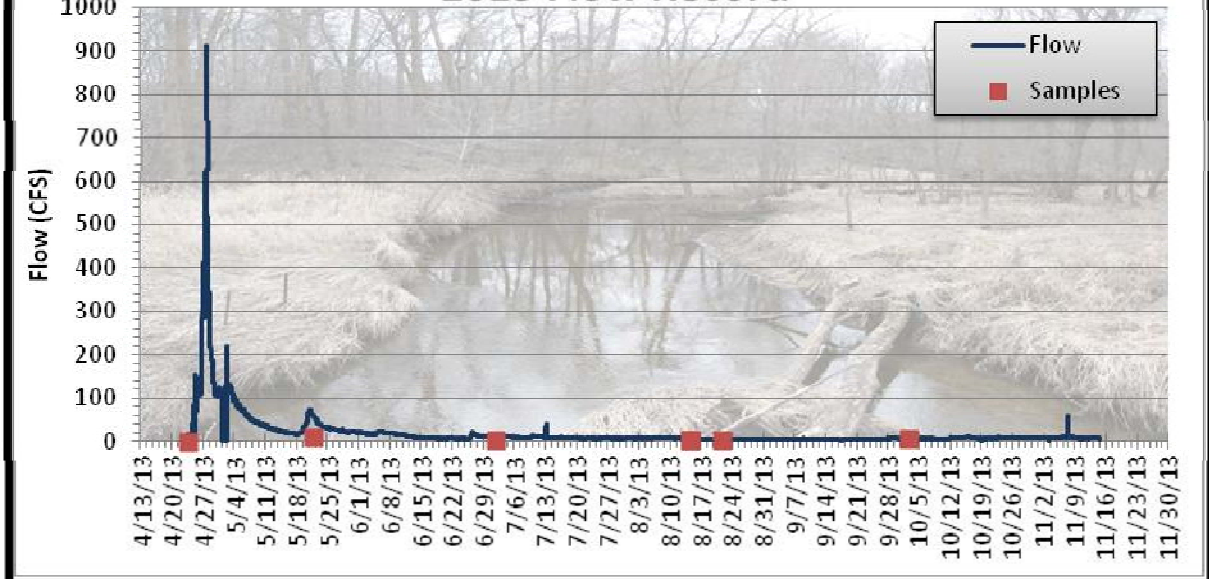


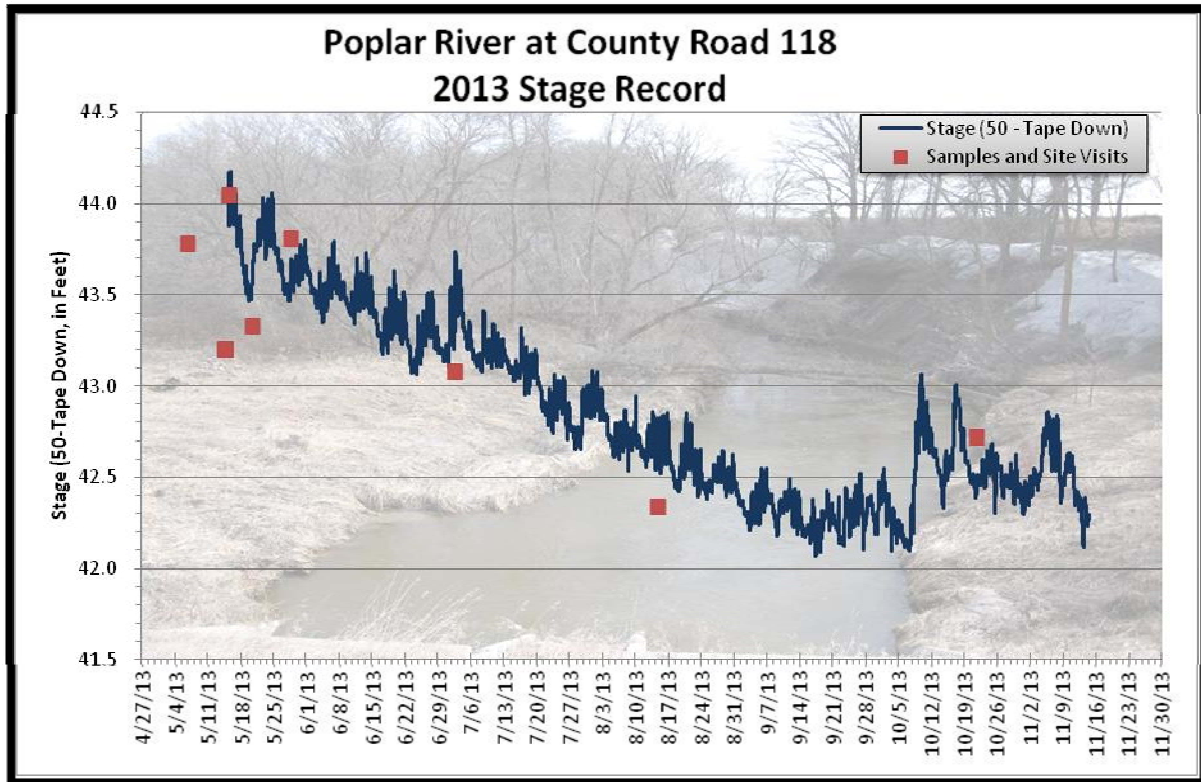


Hill River at County Road 119 2013 Flow Record



Ruffy Brook at County Road 67 2013 Flow Record



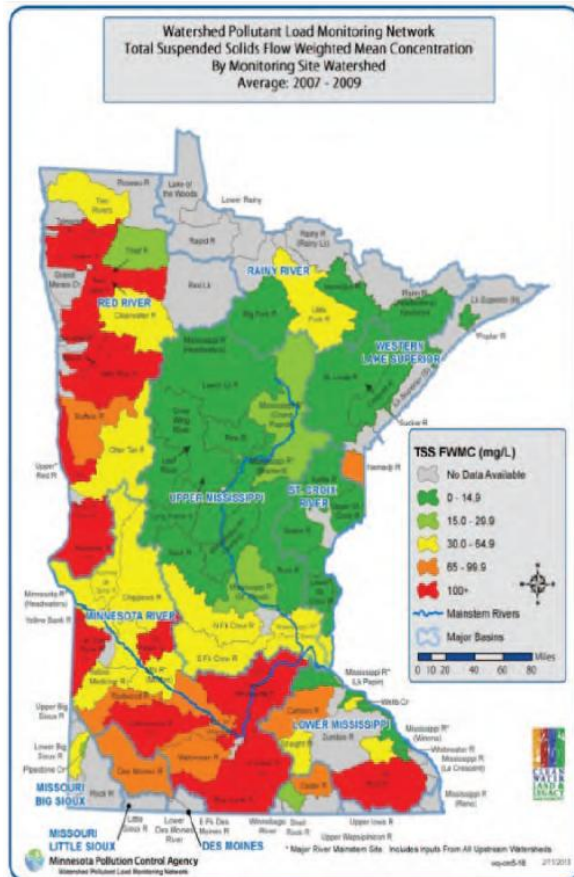
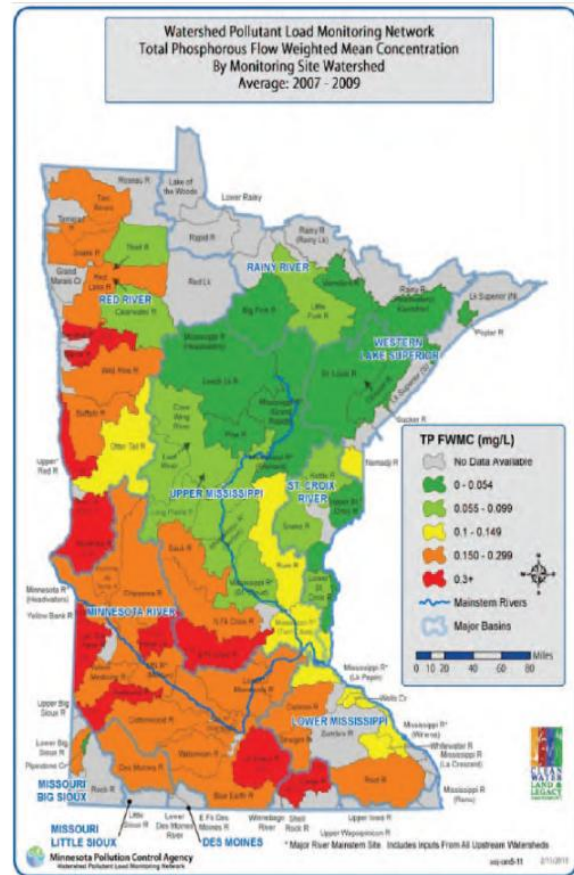
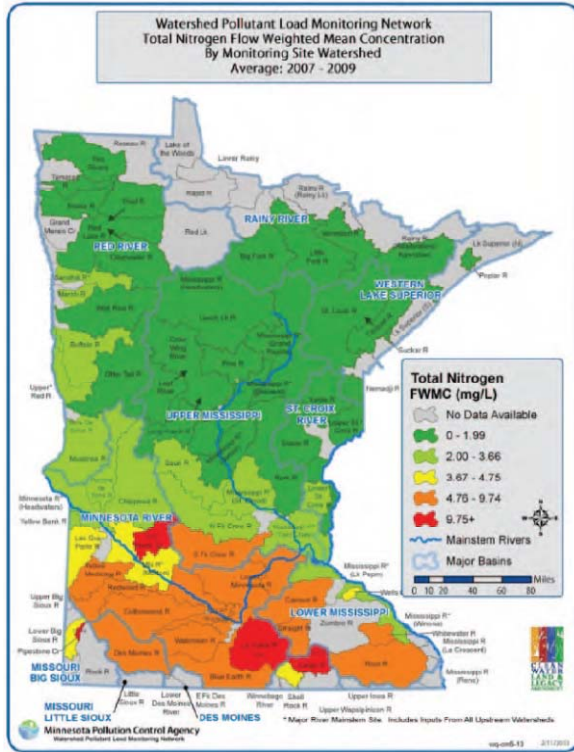


MPCA Watershed Pollutant Load Monitoring Results

The MPCA's Watershed Pollutant Load Monitoring Network is designed to obtain spatial and temporal pollutant load information from Minnesota's rivers and streams and track water quality trends. This long-term program utilizes state and federal agencies, universities, local partners (the International Water Institute collected most of the Red River Basin data) and Minnesota Pollution Control Agency staff to collect water quality and flow data to calculate pollutant loads. According to the following maps, the Thief River watershed had relatively low flow weighted mean concentrations of nitrogen, phosphorus, and total suspended solids. The Red Lake River has relatively low flow weighted mean concentrations of nitrogen, but relatively high concentrations of phosphorus and very high concentrations of total suspended sediment

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

December 2013



Other Notes

- The MPCA will be assessing the Red Lake River and Grand Marais Creek watersheds in 2014. While bioassessments are planned for the early part of the year, prior to field season, the water quality parameter-based (dissolved oxygen, turbidity, E. coli) assessment will be postponed until the fall of 2014 due to some changes in software.
- Dissolved oxygen data that was collected with Eureka Midge dissolved oxygen loggers in the Poplar River at the Spring Lake Outlet in 2007 was summarized (daily maximum, minimum, and average) and sent to the MPCA for entry into EQuIS/HYDSTRA. Similar data from the Clearwater River at Plummer ('07-'08) and the Clearwater River at CR96 ('07) was also summarized and sent to the MPCA.
- River Watch water quality monitoring data was submitted to the MPCA for entry into the EQuIS database.

December Meetings/Events

- **December 11, 2013** – Public meeting on the draft 2014 List of Impaired Waters – Detroit Lakes MPCA Office, 1-2 PM
 - Most of the changes in the 2014 List of Impaired Waters will come from watersheds that were assessed in 2012 and 2013. In the Red River Basin, these watersheds are the Mustinka River, Bois de Sioux, Thief River, and Sand Hill River.
 - Although watersheds will only be assessed and new impairments will be added only once every ten years, delistings may take place any year through the MPCA's annual delisting process.
- **December 5-7, 2013** – Minnesota Association of Watershed Districts Conference in Alexandria
- **December 16, 2013** - Pennington County Water Resources Advisory Committee
 - Discussion of "One Watershed One Plan"
 - The Pennington SWCD has applied for additional funding for the Ralph Engelstad Arena rain garden project.
 - Aqassiz National Wildlife Refuge staff visited with staff from the City of Thief River Falls Water Department about how discharges from refuge pools affect the city.
- **December 16, 2013** – Marshall County Water Resources Advisory Committee
- **December 20, 2013** – Red River Basin Monitoring Committee Meeting @ the Sand Hill Watershed District in Fertile, 9:30 AM.
 - Patrick Sherman from RMB Environmental Laboratories presented on the lab's QA/QC program. He stressed the importance of consistency in naming sites and projects. To assist with the lab's record keeping, STORET ID codes for sites should be included on chain of custody forms.
 - Joe Eisterhold of the MNDNR gave a good presentation on aquatic invasive species.
 - Lake vegetation management plans and response plans

- Citizen lake monitoring training
- Lake service provider and bait dealer training
- There has been success in controlling flowering rush in Detroit Lake.
- Zebra mussels don't like to settle in swiftly flowing water.
- Purple Loosestrife can be controlled with weevils, burning, and herbicides, but the seed banks for these weeds can be tremendous.
- Invasive species on the horizon that may end up getting here include hydrilla, northern snakehead, brittle naiad, and Brazilian water weed.
- The next Red River Basin Water Quality Monitoring Training Session will be held on March 5th, 2014.
- The Red River Basin Commission is working on a project to move aquatic invasive species training to the watershed scale, a mobile app for outreach and training, and the upcoming Red River Basin Land and Water International Summit Conference.
- The MPCA has installed a stage monitoring system at the 320th Ave crossing of Burnham Creek, west of Crookston.
- Red Lake County has installed 66 side water inlets this year. They've applied for six grants this fall for side water inlets (SWIs), a culvert inventory, soil erosion inventory, weed inspection, and a buffer/SWI inventory.
- Pennington County also applied for a grant to do a buffer/SWI inventory.
- The water quality data that everyone's been collecting has been helping with BWSR grant applications. Because of the data, we know where the problem's located, how bad the problem is, and what is causing it. Competition for grants is stiff, so water quality information and evidence helps greatly.
- The Red Lake DNR is working on a work plan for the Upper/Lower Red Lakes Watershed Restoration and Protection project and will be applying for a Surface Water Assessment Grant to collect water quality data in streams within the Upper/Lower Red Lakes watershed. They've also been working on a culvert assessment within the lakes' watershed.
- **December 31, 2013** – Second progress report or the final report for the Red Lake River and Grand Marais Creek Assessment project is due.

Plans for January and February 2014

- Thief River Watershed Restoration and Protection Project.
 - Creating Stream Power Index maps.
 - Create a web page dedicated to the Thief River Watershed
 - Flow characterization
 - Plan public meetings for early 2014.
- Red Lake River Watershed Assessment Project
 - Create a webpage dedicated to the Red Lake River
 - Compile and apply corrections to continuous dissolved oxygen data.
 - Flow characterization
 - Plan public meetings for early 2014.
- Clearwater WRAP work plan – there may be more money available to add more tasks.

- Data and other information for RESPEC for the Thief, Red Lake, and Clearwater River modeling.
- Apply for the Clearwater River watershed's stream condition monitoring Surface Water Assessment Grant when the request for proposals is released.

Upcoming Meetings/Events

- **January 14-16, 2014** – 31st Annual Red River Basin Land & Water International Summit Conference
- **January 17, 2014** – Surface Water Assessment Grant Application Deadline.
- **January 22, 2014** - Marshall County Water Resources Advisory Committee
- **February 3, 2013** – WRAP project progress reports are due.
- **March 5th, 2014** – Annual Red River Basin Water Quality Monitoring Training Session at the University of Minnesota, Crookston
- **March 10th, 2014** - Pennington County Water Resources Advisory Committee
- **June 30, 2014** – Clearwater River HSPF model should be completely finalized.

Quotes of the Month:

“We make a living by what we get, we make a life by what we give.”
– Winston Churchill

“You have to expect things of yourself before you can do them.”
– Michael Jordan

Red Lake Watershed District Monthly Water Quality Reports are available online at:
<http://www.redlakewatershed.org/monthwq.html>.

“Like” the Red Lake Watershed District on [Facebook](#) to stay up-to-date on RLWD reports and activities.