

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 7/12/2016.

- ✓ Watershed Restoration and Protection project updates
- ✓ The majority of the work done in this month focused upon writing semi-annual reports for MPCA contracts and writing the Thief River TMDL report.

### **Clearwater River Watershed Restoration and Protection (WRAP) Project**

A semi-annual progress report was completed and submitted to the MPCA Project Manager.

### **Clearwater River Watershed Surface Water Assessment Grant (SWAG) Project**

A final invoice was submitted to close out the Clearwater River Surface Water Assessment Grant project.

### **Thief River Watershed Restoration and Protection (WRAP) Project**

The Thief River WRAPS contract was officially extended to June 30, 2016.

- Task 10 – Data Analysis
  - Dissolved oxygen data from the lower Thief River was analyzed and assessed.
  - Dissolved oxygen data from the Moose River was analyzed and assessed
  - Dissolved oxygen data from the Mud River was analyzed and assessed. Chemical oxygen demand data analysis and TMDL calculations were completed.
  - Dissolved oxygen concentrations in the Moose and Mud Rivers were compared to impoundment discharge records. Most of the low dissolved oxygen readings have occurred when the Moose River Impoundment outlet gates were closed or only allowing a minimal amount of discharge.
  - The flowing portions of the Moose River meet the dissolved oxygen water quality standard when the rate of flow at CSAH 54 is greater than 0 cubic feet per second (CFS).
  - The Mud River meets the dissolved oxygen standard when flow at Highway 89 is greater than 5 CFS.
- Task 13 – Reports
  - District staff worked on the completion of draft Thief River Watershed Total Maximum Daily Load and Thief River Watershed Restoration and Protection Strategy documents. Drafts of the documents were completed on January 15<sup>th</sup>, 2016 and sent to the MPCA Project Manager.
  - MN DNR staff completed a draft Desktop Water Quality Stressor Indicator Report – Thief River Watershed document in which identified points where potential blockages to fish passage/flow, field drainage, erosion, and livestock are visible in aerial photos.
  - Restoration and Protection Strategy Tables for the Watershed Restoration and Protection Strategy (WRAPS) report were completed.

- A semi-annual progress report was completed and submitted to the MPCA Project Manager.

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

A semi-annual progress report was completed and submitted to the MPCA Project Manager.

**Grand Marais Creek Watershed Restoration and Protection Project**

A semi-annual progress report was completed and submitted to the MPCA Project Manager.

**Other Notes**

- RLWD staff discussed the use of drones to collect data for water quality and ditch inspection purposes with the Northland Aerospace staff. The college plans to submit applications for funding to perform the work.
- RLWD staff participated in science fair judging at the Franklin Middle School in Thief River Falls.
- Water quality related topics from the January 28, 2016 RLWD Board of Managers meeting minutes:
  - Jim Retka and John Beck, representing the Northland Aerospace Program/Northland Community and Technology College, and Rex Hammerback, representing Northland Aerospace Foundation presented information to the Board on the Aerospace Program at the Northland Community and Technical College. Beck stated that the Northland Aerospace Program has been using unmanned aircraft for various agricultural research projects in Roseau County and would like to, with the assistance of the District, determine how this technology could be used in the water resource business, such as inspection of drainage ditches, water quality projects, as well as inspection of various other District projects. The unmanned aircraft is licensed through the FAA to fly under 200 feet and could be equipped to carry a camera which could be used to inspect ditch systems for various items like thistle, buffer strip encroachment, erosion control, etc. Hammerback stated that he has produced a Team Agreement for review by the District's Legal Counsel to work together in securing additional funding sources to help discover and develop protocol for watershed management resource to assist Watersheds. Potential funding by the District could be provided by in-kind work. It was the consensus of the Board, to have Legal Counsel Sparby review the Team Agreement, and report back to the Board.
  - Darrin Carlson, Marshall County SWCD, stated that in 2015 his office installed approximately 50 side water inlet culverts throughout the Thief River Watershed in Marshall County. Marshall County SWCD received 75% cost share assistance through Clean Water Funds, with landowners paying the remaining 25%. Funding has been exhausted, with a shortfall in funds for the Engineering design of the structures. Carlson requested funding in the amount of \$10,000 to assist in the

design of the structures through the District's 2016 Erosion Control Funds, RLWD Project No. 164. Motion by Torgerson, seconded by Coe, to approve cost share in the amount of \$10,000 to assist in the design of the side water inlet culverts for the Marshall County SWCD from the 2016 Erosion Control Funds, RLWD 164. Motion carried.

- Bruce Anspach, Beltrami County Environmental Services/Aquatic Invasive Species (AIS) Lake Technician presented information to the Board regarding the Beltrami County AIS program. Anspach stated that Beltrami County received \$189,000 in funding to assist in the AIS program. From the funding received, the county set aside \$100,000 to aide in the inspection of watercraft and to help educate water craft users of best management practices. Their goal is to help educate users to help prevent the spread of AIS in area water bodies. Anspach discussed the use of volunteer inspectors to help expand public awareness. Inspection and education of the Upper Red Lake has begun, with volunteers receiving mileage pay as an incentive to help defray the cost to the volunteer. Car counters have been purchased and installed at access points where they currently don't have volunteers located. Anspach has received mixed emotions from resort owners that have private access to lakes. Discussion was held on the installation and funding of a decontamination unit to be operated in the Waskish area. Anspach is requesting \$31,000 from the District, to assist in mileage reimbursement for the Upper Red Lake access, increase inspection hours, fund inspection at several smaller lakes, installation of additional car counters and to assist in obtaining a decontamination unit. Upon considerable discussion, Manger Coe indicated that he would like to see an additional \$4,000 be earmarked for additional decontamination units to be installed. Motion by Coe, seconded by Torgerson, to authorize a one-time payment in the amount of \$35,000, with the additional amount requested to be used to assist with the installation of a decontamination unit for the Beltrami County Aquatic Invasive Species program, with the understanding that Mr. Anspach will present a progress report this fall. Motion carried.
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### **January 2016 Meetings and Events**

- **January 4, 2016** – Pennington County Water Resources Committee Meeting.
  - The Pennington County SWCD has funding available to help low-income homeowners fix failing septic systems.
  - The Pennington County SWCD has inventoried 250 of the 420 miles of ditch in the county for the Ditch Inventory Grant project. Parcels in need of sidewater inlets and/or buffers have been identified.
  - Clean Water Fund Grant Applications
    - County Ditch 96 – added incentive payments for buffer installation
    - City of Thief River Falls Stormwater Assessment
  - The United States Fish and Wildlife Service has excavated and flushed sediment from ½ mile of the old Judicial Ditch 11 channel within Agassiz Pool. 300 yards of the channel was excavated after Thanksgiving in 2015.

- The county's highway department is hoping to get funding to replace the old 140<sup>th</sup> Ave NE (Airport Road) bridge over County Ditch 21. A new bridge should eliminate the nooks that are being used as roosting areas for pigeons. The pigeons have been linked to record-high E. coli concentrations in samples collected at that bridge.
- BWSR has money available for more One Watershed One Plan projects.
- The Pennington SWCD received a septic system inventory grant from the MPCA to investigate the Chief's Coulee watershed for septic systems that are an imminent threat to public health.
- **January 12, 2016** – City of East Grand Forks Water Department and Minnesota Department of Health Conference Call
  - High total organic carbon (TOC) concentrations during the warm water months (June through August) presents a major challenge for the city's water treatment process, especially when there are unpredictable spikes in TOC concentrations. The introduction of chlorine to organics leads to excess trihalomethanes.
  - The addition of hardness and TOC to the suite of sample analysis conducted at sites along the Red Lake River and the outlets of major tributaries would be helpful to the city.
  - The city is going to be conducting a study to identify precursors and conditions that lead to trihalomethane violations.
  - Treatment costs peak in May and August.
- **January 14, 2016** – City of Thief River Falls Water Department and Minnesota Department of Health Conference Call.
  - The City of Thief River Falls draws its municipal tap/drinking water from the Red Lake River near the Thief River Falls dam, which is located downstream of the confluence of the Red Lake River and the Thief River.
  - Due in large part to drawdowns of pools within Agassiz National Wildlife Refuge, the City of Thief River Falls uses 75% more carbon for the treatment of water than the amount used by the City of East Grand Forks. The cities are very similar in size. Thief River Falls is far upstream of East Grand Forks and the water quality should be better. Water quality in the Red Lake River, entering Thief River Falls from the east, is generally good. However, the purposeful scouring and flushing that is occurring during drawdowns of pools sends high concentrations of organic matter downstream in the Thief River.
  - In December of 2015, Agassiz National Wildlife Refuge began a drawdown on Farmed Pool without notifying the City of Thief River Falls.
- **January 19-21, 2016** – 33<sup>rd</sup> Annual Red River Basin Land and Water International Summit Conference – Alerus Center, Grand Forks
- **January 31, 2016** – Target date for draft Red Lake River TMDL and WRAPS Reports

### **Plans for early 2016**

- Thief River Watershed Restoration and Protection Project.
  - Complete a draft WRAPS Report.

- Edit TMDL and WRAPS reports based on comments during the review process.
- Plan a stakeholders' or open house meeting to present findings of the project and the recommendations compiled in the reports.
- Red Lake River Watershed Assessment Project
  - Stage and flow data compilation.
  - Creating Stream Power Index maps.
  - Flow characterization
  - Load allocations
  - Complete a draft Red River Watershed TMDL Report
  - Complete a draft Red River WRAPS Report
  - Technical Advisory meeting to review TMDL and WRAPS reports
  - Hold a meeting to discuss restoration and protection strategies for the WRAPS and TMDL reports.
- Clearwater River Watershed Restoration and Protection Project
  - Draft a Phase II work plan for the project
  - Write a short report on existing data, conditions, and knowledge of the watershed (summarizations of existing reports).
  - Stage and flow data compilation.
  - Participate in the assessment process
  - Identify areas that are in need of stressor identification efforts.
- Grand Marais Creek Watershed Restoration and Protection project
  - Technical advisory committee and public open house meetings.
  - Emmons and Olivier Resources staff will work on writing the TMDL and WRAPS reports.

**Quote of the Month:**

“The highest reward for a person’s toil is not what they get for it, but what they become by it.”

- John Ruskin

Red Lake Watershed District Monthly Water Quality Reports are available online at:

<http://www.redlakewatershed.org/monthwq.html>.

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