

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 7/2/2019.

- ✓ Zebra Mussels were found in Upper Red Lake
- ✓ Clearwater River Watershed Restoration and Protection Strategy

River Watch

RLWD Natural Resources Specialist, Ashley Hitt, conducted River of Dreams classroom instruction for elementary school students at J.A. Hughes Elementary School in Red Lake Falls and the Red Lake County Central Elementary School in Plummer. Hitt met with school administration from Thief River Falls to discuss the revival of a River Watch program at that school.

Zebra Mussels in Upper Red Lake

On March 11, 2019, online and newspaper articles notified the public that zebra mussel veligers had been found in Upper Red Lake. Red Lake Department of Natural Resources staff suspect that zebra mussels came to the lake as adults on a dock or other structure that was transported from an infested lake. If zebra mussels move downstream to the Red Lake River, there could affect the District's monitoring program and could affect water intake pipes for the City of Thief River Falls' water supply. Monitoring equipment will be deployed in the Red Lake River near the border of the reservation.

<https://www.bemidjipioneer.com/sports/4583184-dnr-finds-zebra-mussel-larvae-upper-red-lake>

Clearwater River Watershed Restoration and Protection Strategy (WRAPS) Project

Though some extra edits were made in the first week of April, draft Clearwater River Watershed Restoration and Protection Strategy and Clearwater River Watershed Total Maximum Daily Load reports were essentially completed by the end of March 2019. The additions to the reports in March included:

- TMDL Sections 1, 2, 5.1, 5.2, and 5.3 (Project Overview, Applicable Standards, Total Suspended Solids TMDLs, *E. coli* Bacteria TMDLs, and River Eutrophication TMDLs) were edited using comments from the MPCA Project Manager
- TMDL Section 5.4 - Total Phosphorus total maximum daily loads (TMDLs) for lakes.
 - Cameron Lake TMDL summary table
 - Stony Lake TMDL summary table
 - Lake TMDL section text
- TMDL Section 9 – Implementation Strategy Summary
- WRAPS formatting changes based on a newly released template (where practical and where they would improve the document)
- WRAPS Executive Summary
- WRAPS Section 1 – Watershed Background and Description
- WRAPS Section 1.1 – Subwatersheds
- WRAPS Section 1.3 – Streams
- WRAPS Section 1.4 – Lakes
- WRAPS Section 2.4 – TMDL Summary (TMDL Summary Tables)
- WRAPS Section 2.5 – Protection Considerations

- WRAPS Section 3.3 – Civic Engagement
- WRAPS Section 3.4 – Restoration and Protection Strategies
 - Used the HSPF-SAM modeling tool to estimate potential sediment and phosphorus reductions from the implementation of best management practices

Red Lake River Watershed Restoration and Protection Strategy (WRAPS) Project

Some minor revisions were made to the Red Lake River TMDL to address EPA comments. An executive summary was added to the WRAPS report. Additional edits were made (mostly formatting), based on comments that were received from the MPCA. RLWD staff reviewed a draft press release and a four-page summary document that the MPCA will use to publicize the public comment period for the Red Lake River WRAPS and TMDL.

Thief River Watershed Restoration and Protection Strategy (WRAPS) Project

The Thief River TMDL was edited to add construction and industrial stormwater wasteload allocations to the TMDLs to complete its final revision prior to submission for EPA approval. The Thief River WRAPS received final approval from the MPCA on March 18, 2019.

Grand Marais Creek Watershed Restoration and Protection Strategy (WRAPS)

Some minor revisions were made to the Grand Marais Creek TMDL to address EPA comments.

Thief River One Watershed One Plan (1W1P)

Planning work group (PWG) members discussed reducing phosphorus reduction goals to more achievable levels, the upcoming Advisory Committee meeting, and ways to make the report and its structure more understandable for the Policy Committee during a March 4, 2019 conference call. Comments on Section 4 (Targeted Implementation) of the plan were reviewed by the planning work group (PWG). The PWG met on March 13, 2019 to review the comments on Section 4 of the report.

Other Notes

- Water quality related notes from the March 15, 2019 Red Lake Watershed District Board of Managers meeting:
 - Correspondence from the MNDNR regarding a well interference in Red Lake County during the summer of 2018 was reviewed by the Board. It was noted by the MN DNR that the well interference complaint was valid. Based on DNR available information, irrigation pumping from two authorized irrigation wells and one unpermitted well likely contributed to this interference.
 - Administrator Jesme gave a brief explanation of LiDAR tools and website that are being managed by the International Water Institute. Jesme indicated that administrators recently had a meeting in which Chuck Fritz attended to show functions of the tools that are presently being used in North Dakota but due to absence for funding on the Minnesota side of the valley, these tools are no longer available to the watershed districts or the public. Staff member Loren Sanderson informed the Board of the

usefulness of the LiDAR tool and how the RLWD has utilized this tool in the past for permitting and surveying. It is estimated that the cost for hosting LiDAR is \$30,000 annually. The Board voted unanimously, to request to the Red River Watershed Management Board designate funding for these LiDAR tools in order to keep the tool available.

- Manager Dwight stated that the City of Northome would like to move forward with Bartlett Lake management. Emmons and Olivier had been contacted regarding a previous study done on Bartlett Lake and would be willing to assist in the process of moving forward with a lake management plan. Manager Dwight asked to be placed on the March 18, 2019 RLWD Advisory Committee agenda in order to present this update on Bartlett Lake in the absence of RLWD Advisory committee member Wayne Skoe. Consensus of the Board was for Manager Dwight to update the RLWD Advisory Committee on Bartlett Lake.
- Staff member Ashley Hitt presented quotes for repair/replacement of the PH probes of 3 YSI 600 QS sondes that the Red Lake Watershed District own. Since this equipment model is no longer being manufactured by the company, YSI, they will continue to repair until 2020. The Board voted in favor of approving the repairs of 3 YSI 600 QS sondes.
- West Polk SWCD submitted a request for a financial donation for the Area I Envirothon. The Area I Envirothon will be held on Wednesday, May 1, 2019, at Rydell Refuge. The Board voted in favor of donating \$300 to the West Polk SWCD for Area I Envirothon to promote education and awareness of water quality issues.
- Administrator Jesme stated there was an opportunity for former summer staff person Marisa Newton to assist the Red Lake Watershed District in hydro-conditioning LiDAR data. It was consensus of the Board to approve the hiring of Marisa Newton for summer intern position. Jesme also stated that the position vacated by Brady Stanley has not been filled and with the expectation of busy construction seasons for the next few years, he was wondering if the vacant position should be filled. The consensus of the Board was to identify the job description and position to be advertised and it bring back to the Board for discussion.
- An article and picture from the Leader Record which featured and recognized Red Lake County Central students on their first-place finish at the River Watch Forum was included in packet.
- Water quality related notes from the March 28, 2019 Red Lake Watershed District Board of Managers meeting:
 - Manager Dwight stated a District permit was applied for by the Minnesota Department of Transportation. The permit is for an improvement of TH#1 as well as adjacent storm sewer along both sides of TH#1 within the city of Northome. Dwight indicated that the existing storm sewer outlets as well as the improved storm sewer outlets into Bartlett Lake. Dwight was wondering if there were other options for the outlet. Dwight spoke with Staff member Loren Sanderson regarding the matter and will meet with Koochiching County Commissioner Wayne Skoe in the future.
 - Manager Ose stated that the RRWMB agreed to designate funding for LiDAR (online tools), with the two-watershed district's that are not within the RRWMB willing to pay their appropriate share.
- RLWD and MPCA staff discussed the classification of waters in the Thief River watershed for the assessment of aquatic life.

- The Mud River, from Grygla to Agassiz Pool (09020304-507), was split into two sections (unnecessarily). Similar, general use standards will be applied to both reaches.
 - An upstream portion of Marshall County Ditch 20 (CD 20, 09020304-548) will be assessed with modified use standards (lower expectations). The reach failed to meet expectations for fish but had a passing index of biological integrity score for macroinvertebrates. The stressor identification process would benefit from flow monitoring. The RLWD will monitor stage and flow on this reach in 2019.
 - The next portion of CD 20 upstream of assessment unit 09020304-548 is assessment unit 09020304-549, which zigzags through bog in the headwaters of CD 20. It starts near the corner of Bottom Road NW and Gundog Road NW, Flows along Gundog Road NW, turns south at Jelle Road for ½ mile, turns west again where it flows under Jelle Road, then turns south again as it flows to the main east-west channel of CD 20. This reach was too dry to sample invertebrates. The fish sample was collected after a rain event. The reach may not be assessed if there is a lack of flow. Flow monitoring within this reach was recommended.
 - Main JD 23 (09020304-551) and Lat 1 JD 23 (09020304-550) were both sampled for fish and macroinvertebrates, even though they are artificial watercourses (road ditches) and not streams that were channelized. They are just enlarged road ditches with relatively small drainage areas. They are very likely intermittent. Main JD 23 met fish standards for the modified use classification but failed to meet macroinvertebrate standards. Macroinvertebrates were sampled in the fall, when there likely was not any flow in the ditch. The sampling results from Lat 1 JD 23 were “not reportable” due to a disturbance. Flow in both of those ditches will be monitored in 2019 to determine whether or not there is enough flow for them to be worth assessing for aquatic life.
 - The MPCA will hold an internal Watershed Assessment Team meeting at the end of March.
- RLWD staff wrote articles for the 2018 Red Lake Watershed District Annual Report
 - RLWD staff discussed the MPCA’s Tiered Aquatic Life Use standards with administrators from other watershed districts in the Red River Basin.
 - RLWD staff conducted/discussed a gap analysis on monitoring for blue-green algae blooms within the district. Plans were made for 2019 monitoring and sampling. Maple Lake will be used as a “sentinel” lake because toxins were discovered there in 2018. Regular testing for algal toxins (approximately once every two weeks) will be conducted during the months of July and August of 2019. If toxins are found at the Maple Lake public beach, additional shallow lakes within the RLWD will be sampled. Temperature loggers will be deployed on waters that are sampled for algal toxins.
 - RLWD staff monitored snowpack and moisture content at various sites throughout the District to help estimate potential spring runoff. Yearly monitoring begins the end of February, until snow



melt. March 2019 sampling completed by Loren Sanderson and Christina Slowinski found snowpack ranging from 14 inches to 18.5 inches, which equals 4.1 inches to 5.2 inches of water content in the snow.

- The International Water Institute released its Spring 2019 River Rendezvous newsletter that shared highlights from the River Watch Forum and introduced new staff.
<https://mailchi.mp/8670ad0eae20/iwi-river-rendezvous-newsletter-spring-2019>.

Meetings and Events from March 2019

- **March 1, 2019** – Skype Conference for the Red Lake River funding and work plan development for the Section 319 Small Watersheds Focus Program
 - <https://www.pca.state.mn.us/featured/10-small-watersheds-selected-focused-funding>
- **March 4, 2019** – Thief River 1W1P Planning Work Group conference call
 - 221 comments were received on Section 4 of the plan.
- **March 7, 2019** – 16th Annual Red River Basin Water Quality Monitoring Training Session
 - RLWD Water Quality Coordinator presented on the use of standard operating procedures in the field.
 - Why We Sample – Parameters and Data Uses – Evelyn Ashiamah, MPCA, <https://iwinst.org/wp-content/uploads/2019/03/2019-Water-Quality-parameters-and-Data-uses.pdf>
 - Standard Operating Procedures – Corey Hanson, RLWD, <https://iwinst.org/wp-content/uploads/2019/03/2019-Water-Quality-Monitoring-SOPs.pdf>
 - Blue Green Algae – I.D., Health Issues, Testing – Andrew Butzer, MPCA, <https://iwinst.org/wp-content/uploads/2019/03/Harmful-Algal-Blooms-2019.pdf>
 - Andy gave an excellent presentation that covered the history of blue-green algae, interesting facts about blue-green algae, things that often get mistaken for blue-green algae, and who to contact if you find a blue-green algae bloom.
 - The Minnesota Department of Health has a hotline to report human or animal illness from algal toxins: 877-366-3455.
 - The MPCA also tracks blue-green algae blooms and can be contacted at 651-201-5414 or 800-657-3864
 - The Jar Test and Stick Test are inexpensive ways to test an algae bloom to see if it might be blue-green algae. If a jar of sampled water is set in a refrigerator overnight and a green ring of algae forms near the top of the water, there is a strong possibility that the sample contains a significant amount of blue-green algae. A mat of floating algae is NOT blue-green algae if you can lift it out of the water with a stick.
 - Sonde Technology – Maintenance, Care and Use – Danni Halvorson, IWI, <https://iwinst.org/wp-content/uploads/2019/03/Sonde-Maintenance-and-Care-2019.pdf>
- **March 12, 2019** – Polk County Aquatic Invasive Species Taskforce meeting
 - The committee discussed the purchase of a waterless decontamination station.

- <https://www.cd3station.com/cd3-wayside-solar>
- **March 12, 2019** – Polk County Water Resources Advisory Committee meeting
 - Well interference issues in Polk County were discussed. The DNR has not denied any permits, which has led to more irrigation, more well interference, and unknown harm to the aquifer.
 - The group also discussed snow storage/disposal piles that are too close to waters (especially the Red Lake River in Crookston).
- **March 13, 2019** – Thief River 1W1P meeting of the advisory committee, policy committee, and planning work group
 - Discussion of comments on Section 4 of the Thief River 1W1P document
 - Following the completion of the Advisory Committee meeting, the Policy Committee met to discuss the Memorandum of Agreement as well as discussion of timeline for completion of the Draft Plan which will hopefully be put out for public comment sometime in early summer of 2019.
- **March 18, 2019** – Red Lake Watershed District Overall Advisory Committee meeting
 - RLWD staff (Myron Jesme, Corey Hanson, Ashley Hitt, Christina Slowinski, and Loren Sanderson) presented on 2018 projects and plans for 2019
 - We need 260,000 acre-feet of storage in our district to meet the goal of a 35% reduction in flows at Crookston. It will take many projects to reach that goal.
 - There was discussion about the One Watershed One Plan process. There was a farmer from the Thief River watershed that asked how it benefits landowners. Other advisory committee members (also landowners) spoke in defense of the process and explained how best management practices that reduce sediment runoff also help keep ditches from getting filled with sediment.
 - There was discussion about Bartlett Lake.
 - There was a recommendation from an advisory committee member to have a liaison with the Red Lake Band so that projects like Good Lake can be done. Good Lake had a very significant benefit for downstream areas.
- **March 26, 2019** – Polk County Township Officers Association spring meeting
 - RLWD Water Quality Coordinator was invited to speak about the Red Lake River One Watershed One Plan

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

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

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.