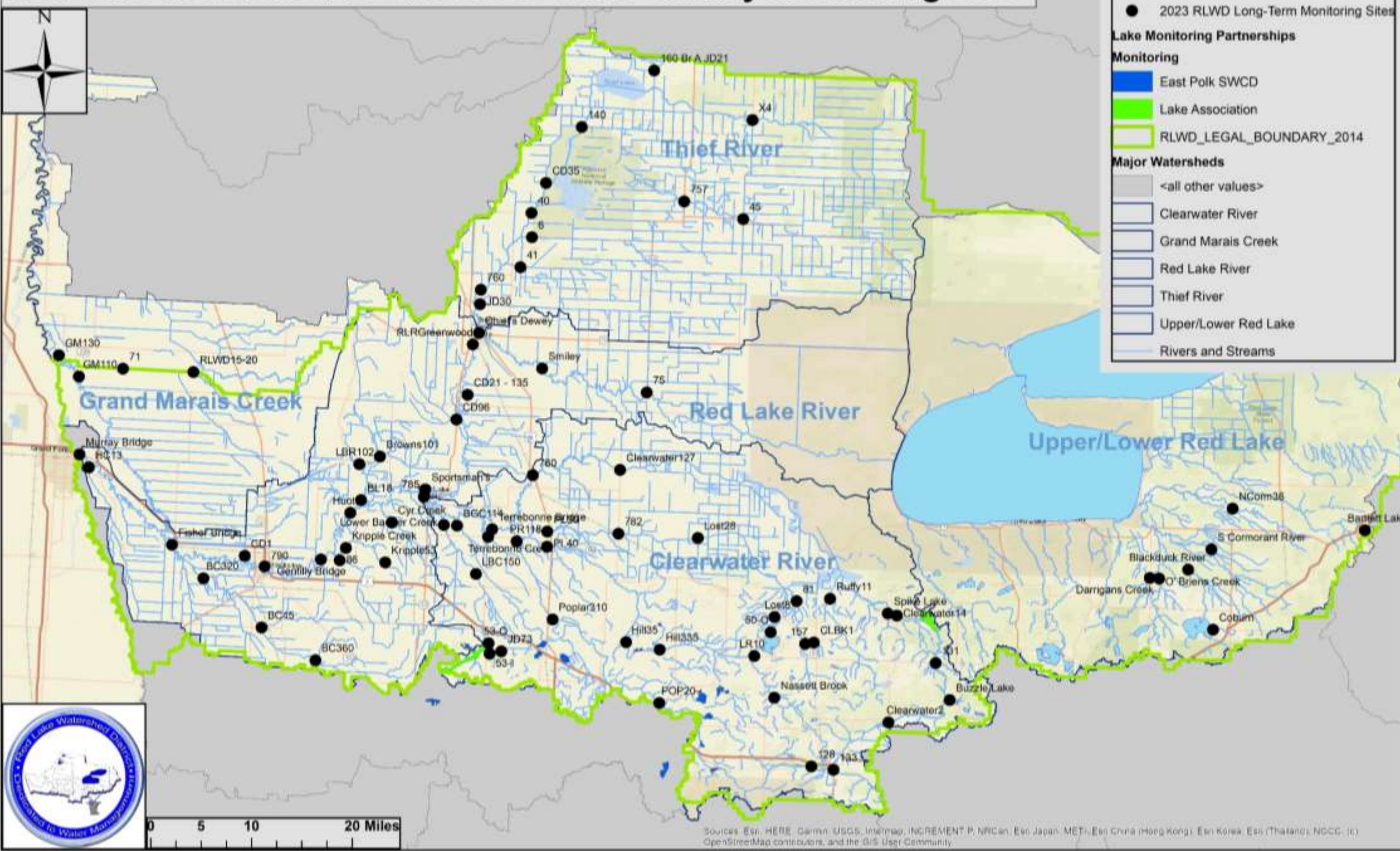


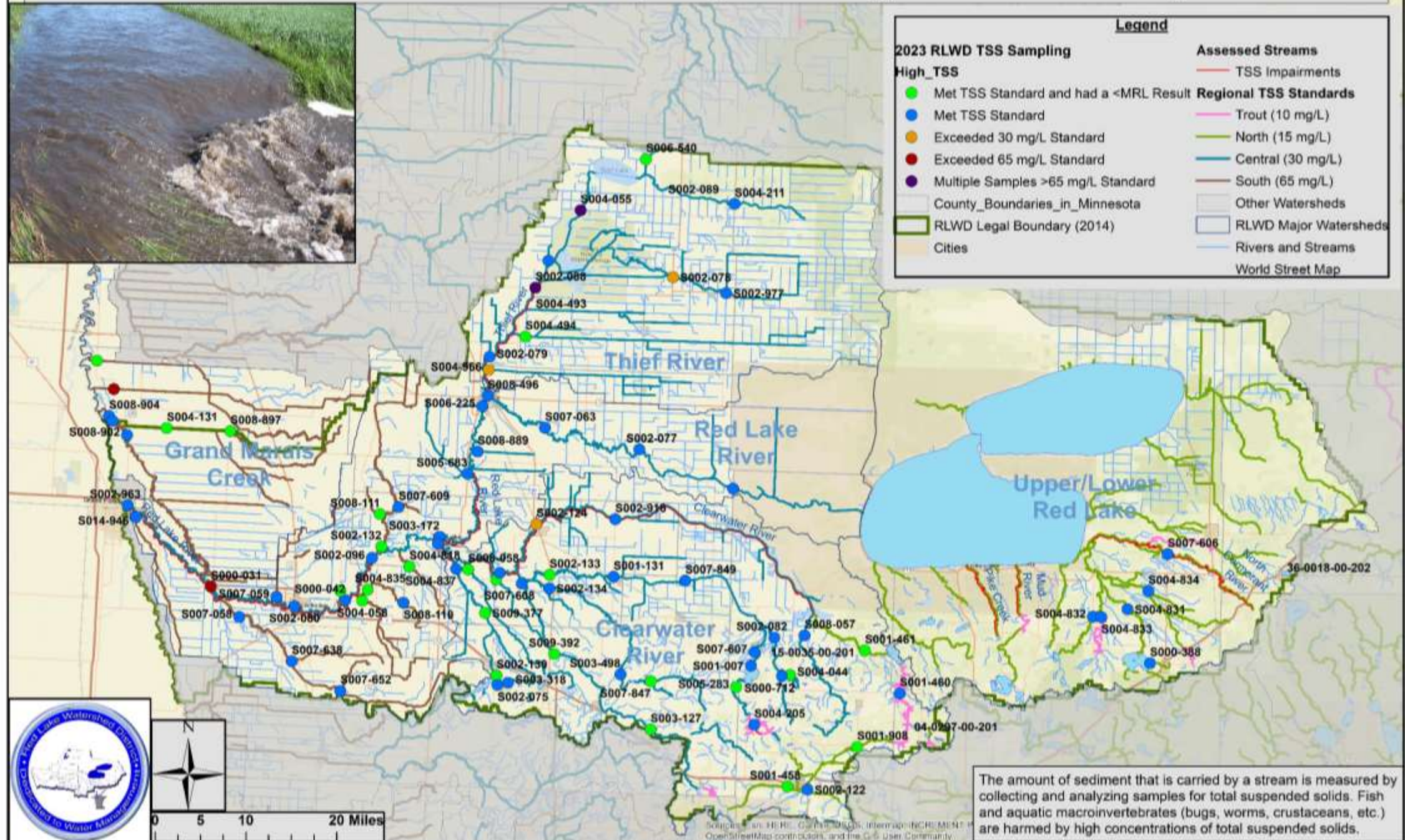
Red Lake Watershed District Water Quality Projects



Red Lake Watershed District 2023 Water Quality Monitoring Sites



Red Lake Watershed District 2023 Water Quality Monitoring Results - Total Suspended Solids

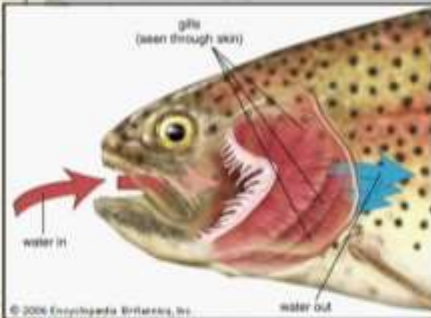


[illegible]

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Swisstopo, IGN, source: (OpenStreetMap contributors), and the GIS User Community

Red Lake Watershed District 2023 Water Quality Monitoring Results - Dissolved Oxygen

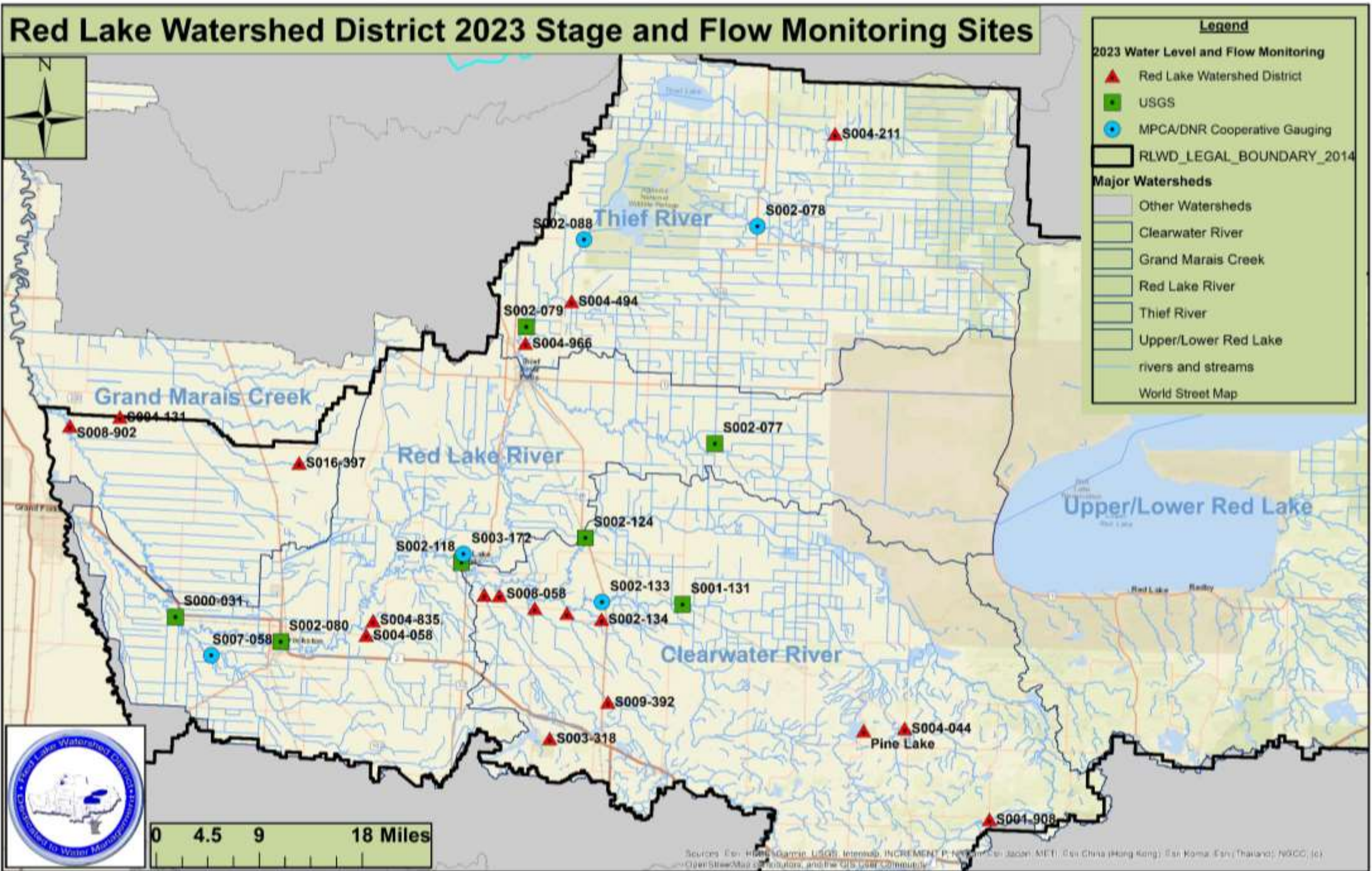
This map shows the number of low dissolved oxygen levels that were recorded by the RLWD long-term monitoring program (4 site visits per year), investigative sampling, dissolved oxygen logger deployments (approximately 2 months at each site), and the East Polk SWCD monitoring effort.



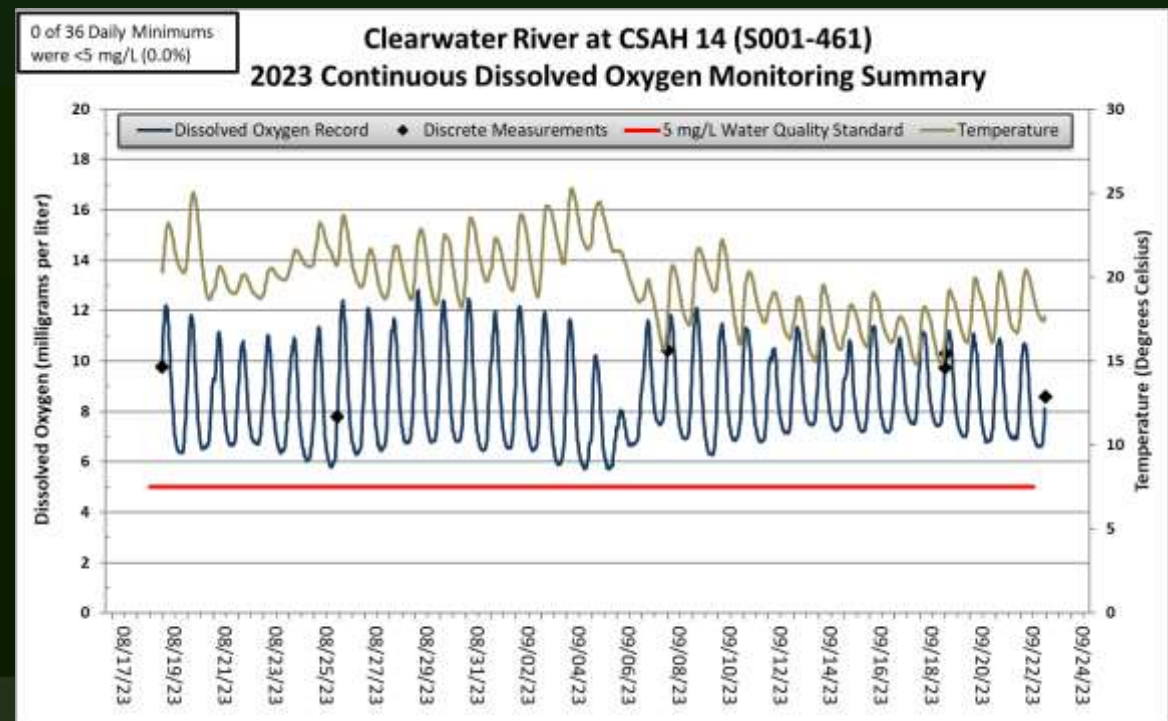
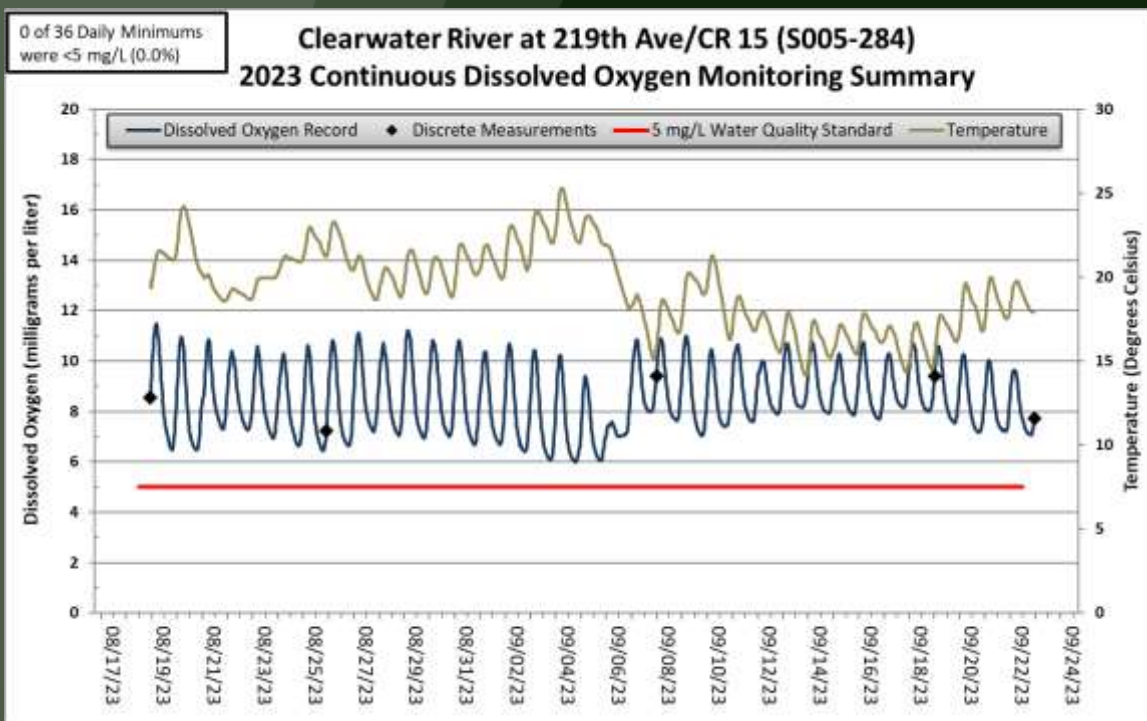


The District monitors concentrations of *E. coli* bacteria in streams, ditches, and rivers. High concentrations of *E. coli* bacteria indicate an increased risk of gastrointestinal illness from aquatic recreation activities (swimming) that involve contact with water.

Stage and Flow Monitoring



Continuous Dissolved Oxygen Monitoring



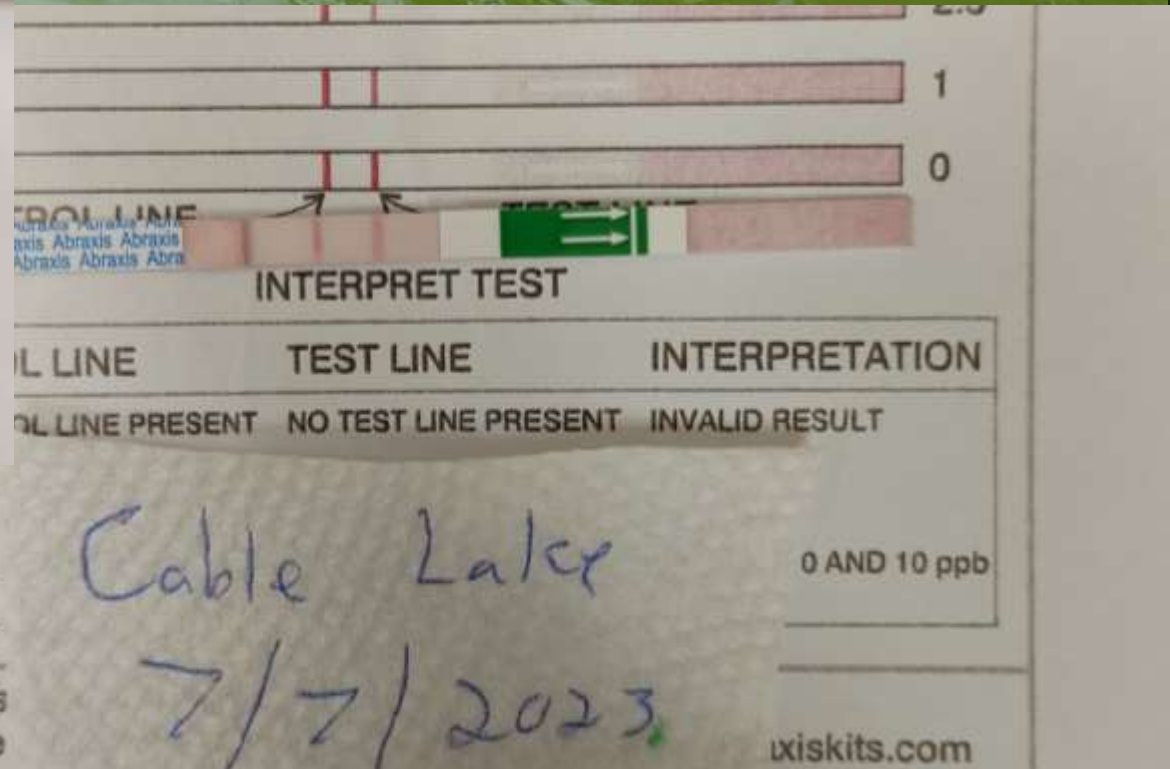
Public Education



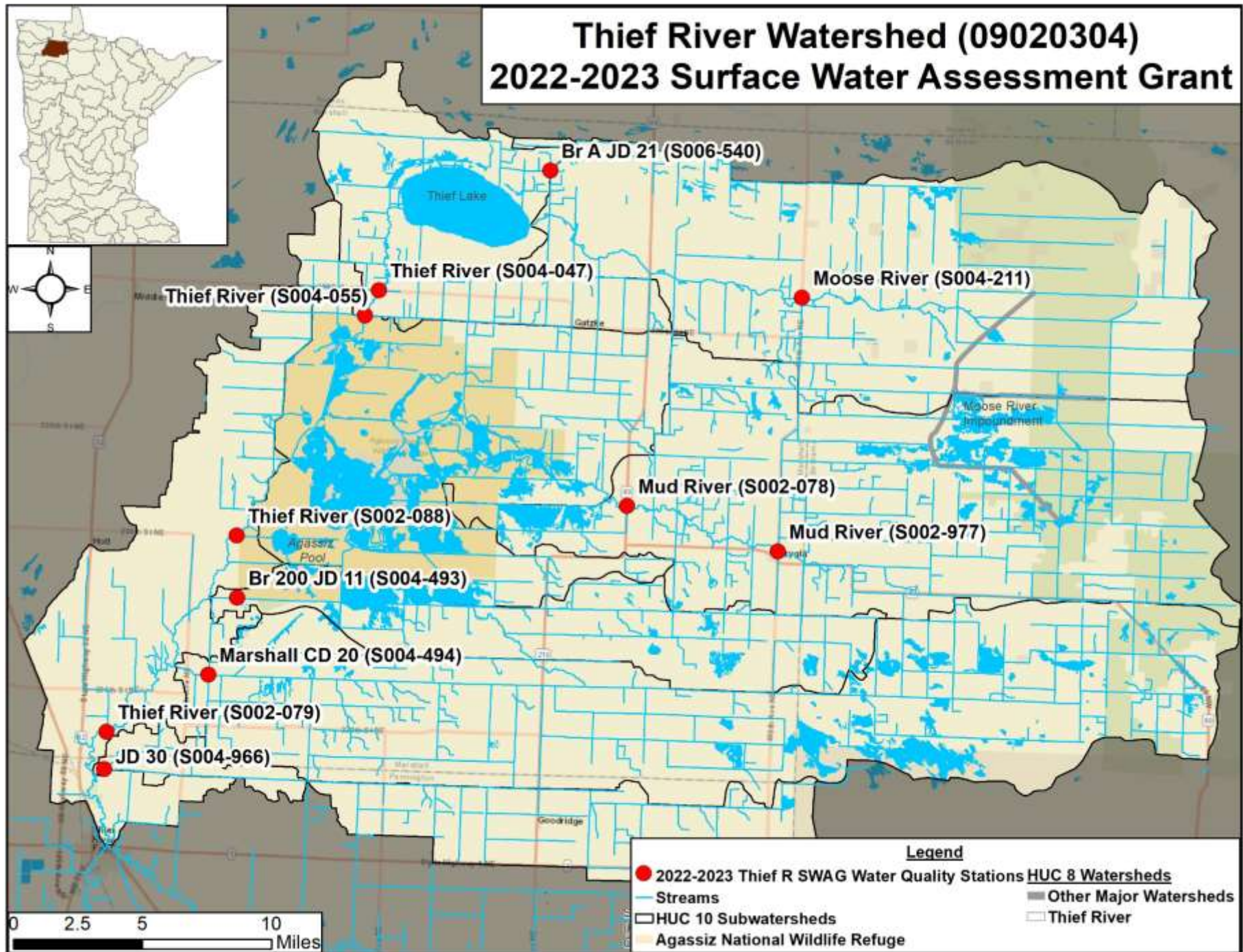
- River Watch
- River of Dreams
- Facebook page
- Websites
- Penn. Outdoor Education Day
- Northwest Minnesota Water Festivals
- Science Fair Judging
- Project Tours
- Newsletter Article Contributions

Blue Green Algae Monitoring

➤ <https://www.rlwdwatersheds.org/bluegreenalgae>



Thief River Watershed (09020304) 2022-2023 Surface Water Assessment Grant



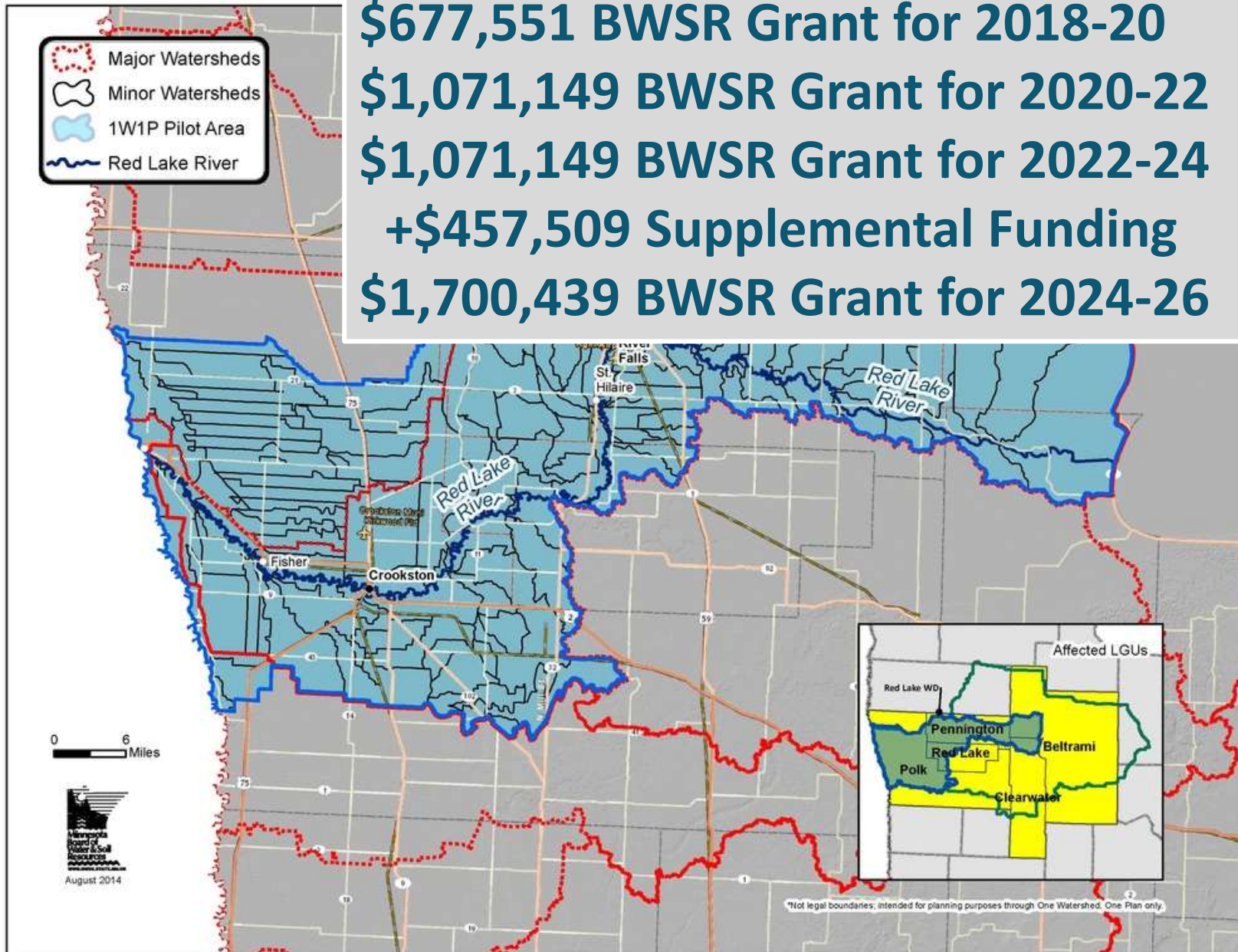
Red Lake River and Grand Marais Creek Watersheds 2023-2024 Surface Water Assessment Grant Water Quality Sampling Stations



Red Lake River One Watershed One Plan

\$677,551 BWSR Grant for 2018-20
\$1,071,149 BWSR Grant for 2020-22
\$1,071,149 BWSR Grant for 2022-24
+\$457,509 Supplemental Funding
\$1,700,439 BWSR Grant for 2024-26

- Side Water Inlets
- Grade stabilization
- Ditch outlet stabilization
- Grazing management
- Targeted ag practices
- Streambank Stabilization
- Septic System Upgrades
- Project Development
- Technical Assistance and Engineering
- LiDAR Analysis
- Supplemental Funding for 2022-24 – JD60 and Huot



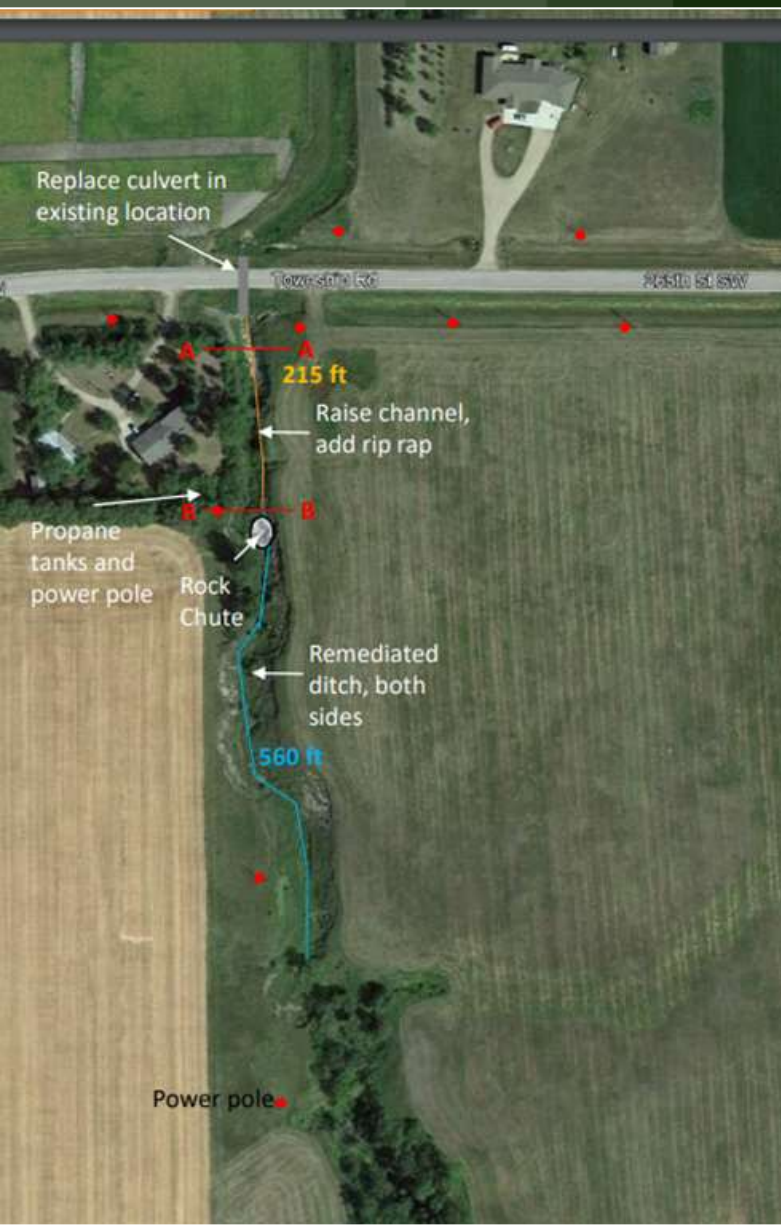
Crescent Avenue (Crookston)



Houston Avenue Streambank Stabilization



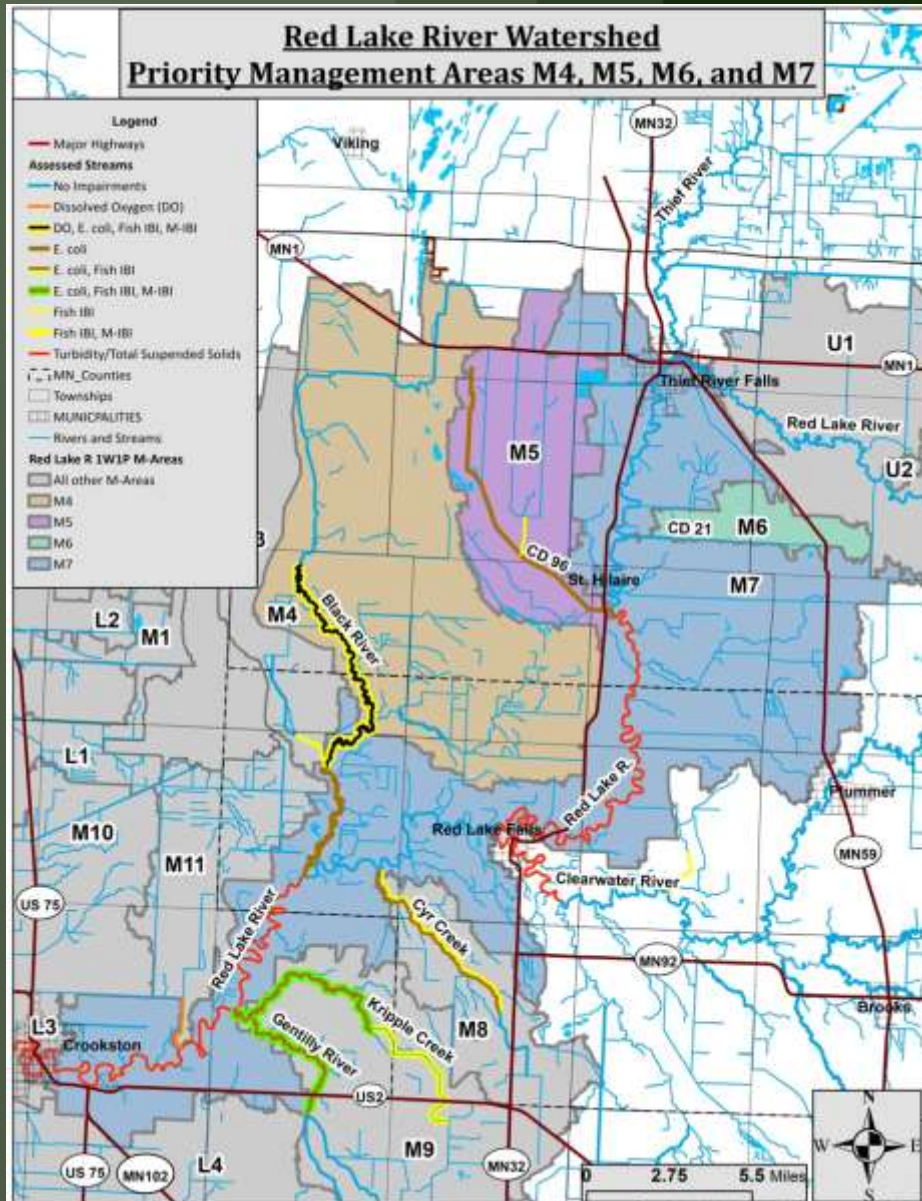
Polk County Ditch 99 Outlet Stabilization





- ▲ **\$280,000 from RLWD**
- ▲ **\$112,500 RRWMB Base Water Quality Funding**
- ▲ **\$126,000 from FEMA**
- ▲ **\$170,252.50 from 319 Grant**
- ▲ **\$36,944.50+ from Polk County**

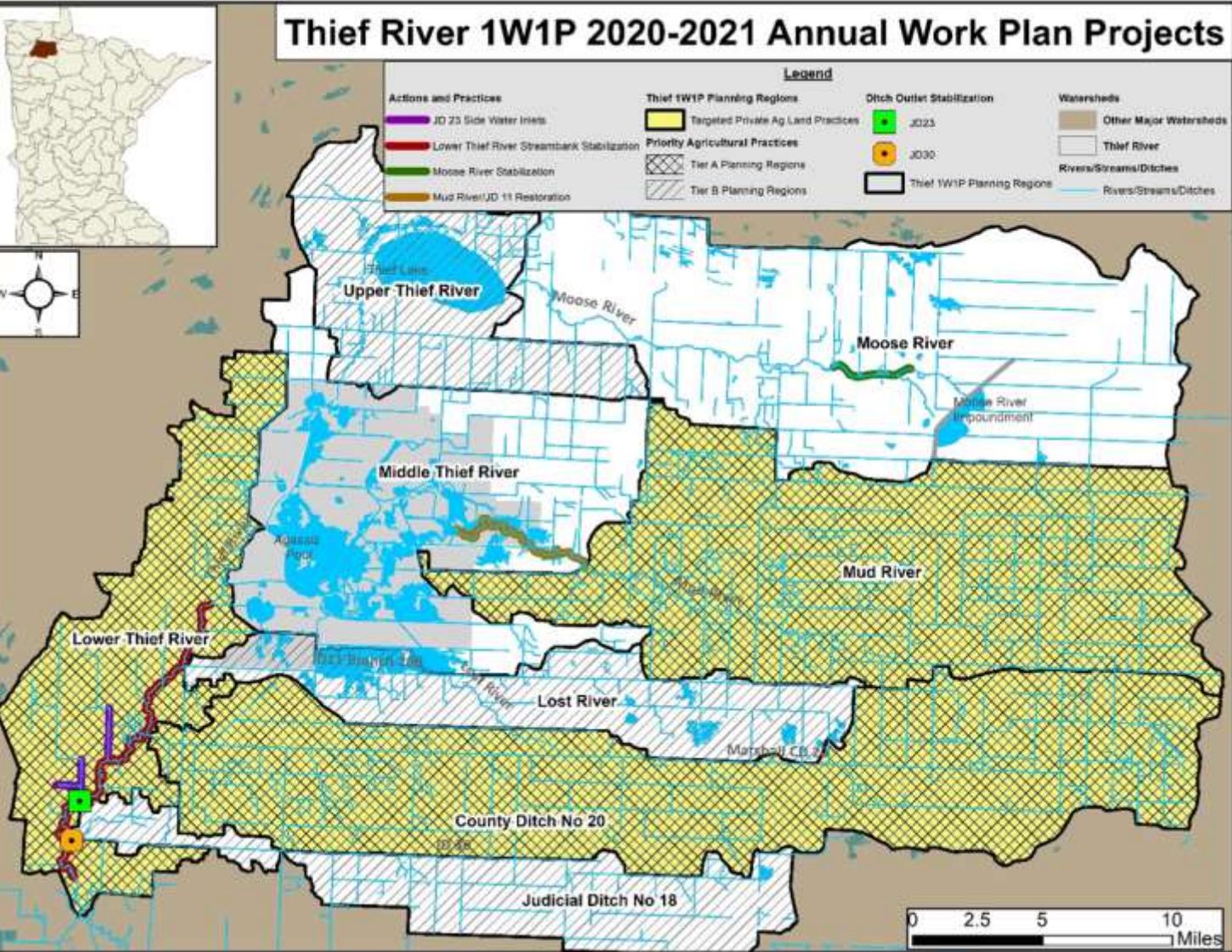
Red Lake River 319 Grant Small Watersheds Focus + Bonus Grant



Chief's Coulee Stormwater Project



Thief River One Watershed One Plan



\$529,892 BWSR Grant for 2020-23
\$529,892 BWSR Grant for 2022-24
\$702,239 BWSR Grant for 2024-26

- Streambank Stabilization
- Drainage Outlet Stabilization
- Grade stabilization structures (SWIs)
- Project development
- Technical assistance and engineering
- Forest Stewardship Plans
- LiDAR Analysis



Lower Thief River 2023 Streambank Stabilization Priorities



Legend

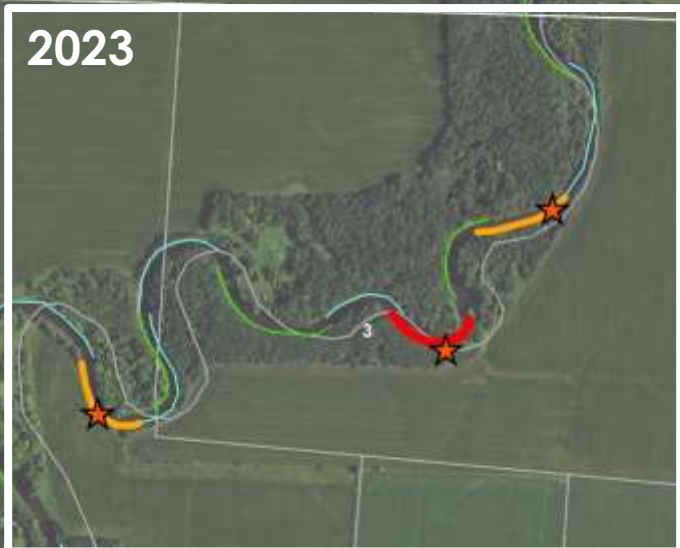
- ★ Streambank Stabilization Priorities
- Townships
- Sections
- Marshall_Parcels

2011 Bank Erosion Hazard Index

- Extreme or Very High
- High
- Moderate
- Low
- Very Low



Excel Township

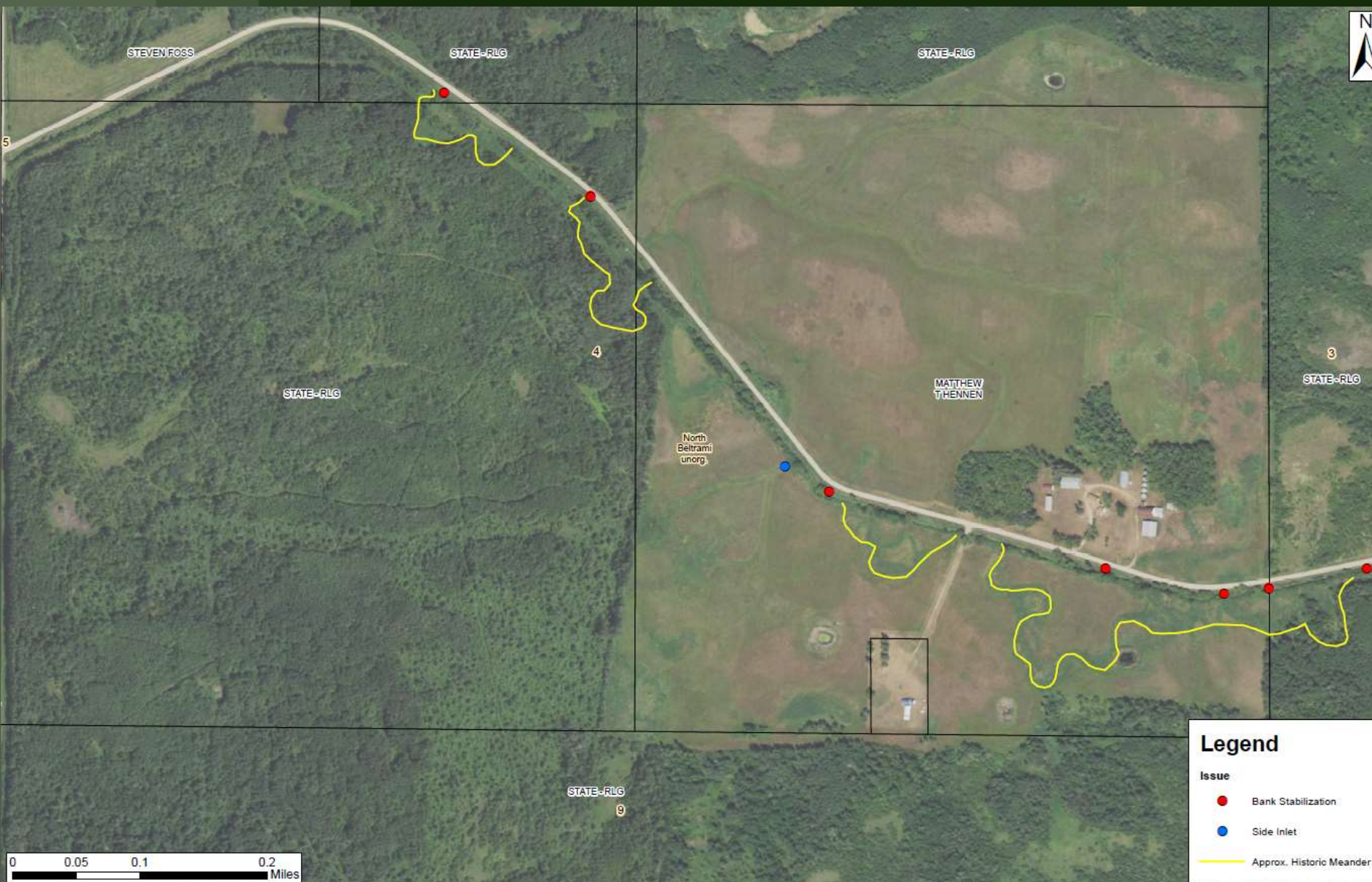


Streambank Stabilization



Moose River Erosion Control Project Development

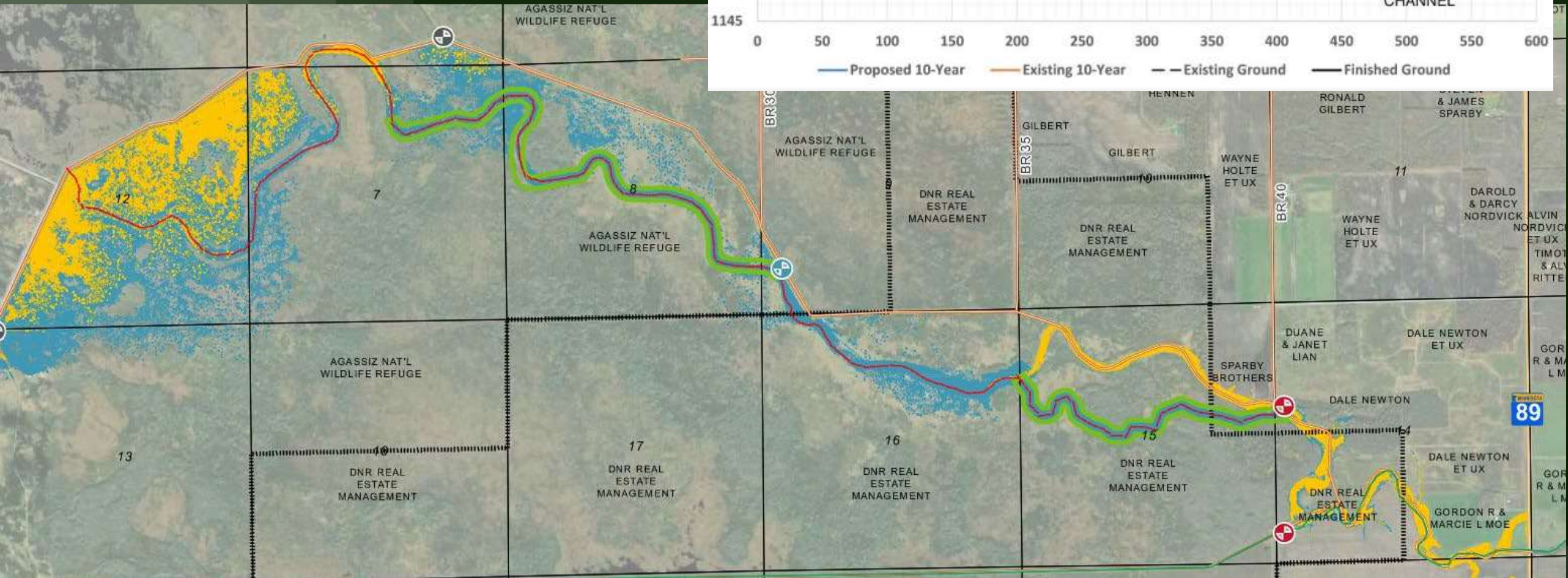
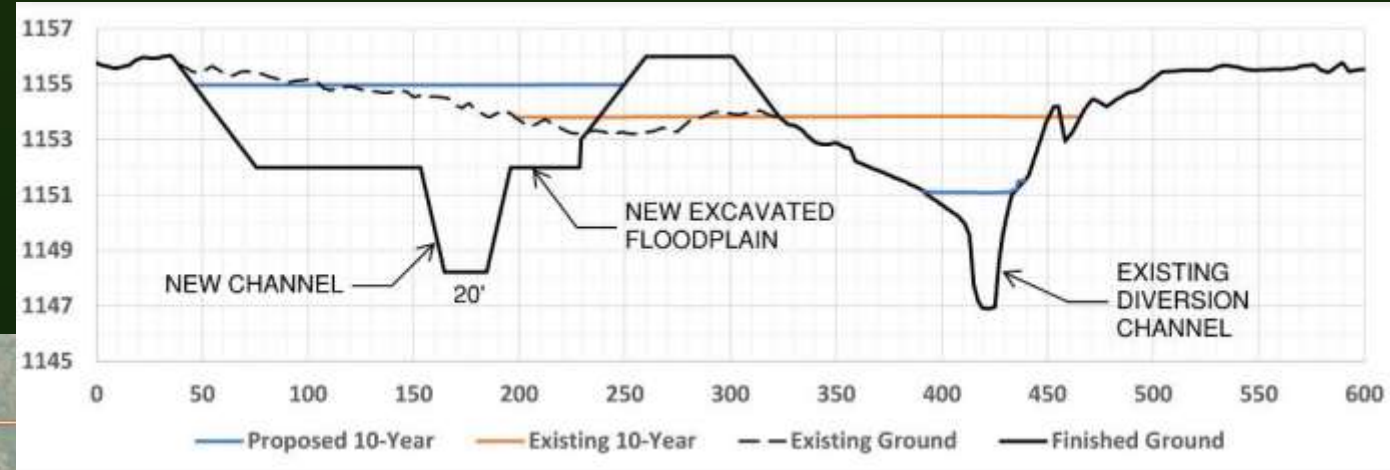


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Moose River Project Development



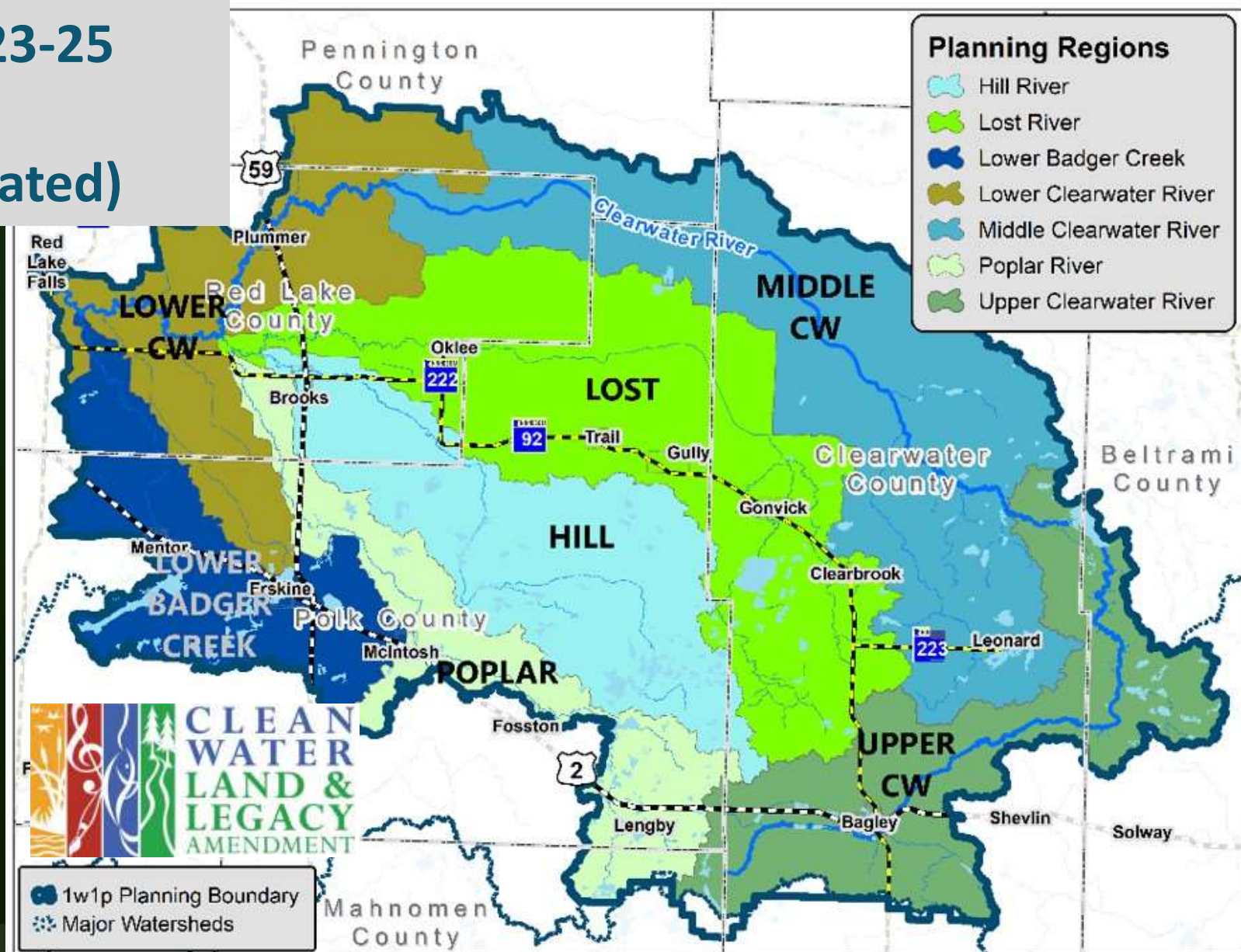
Mud River Project Team

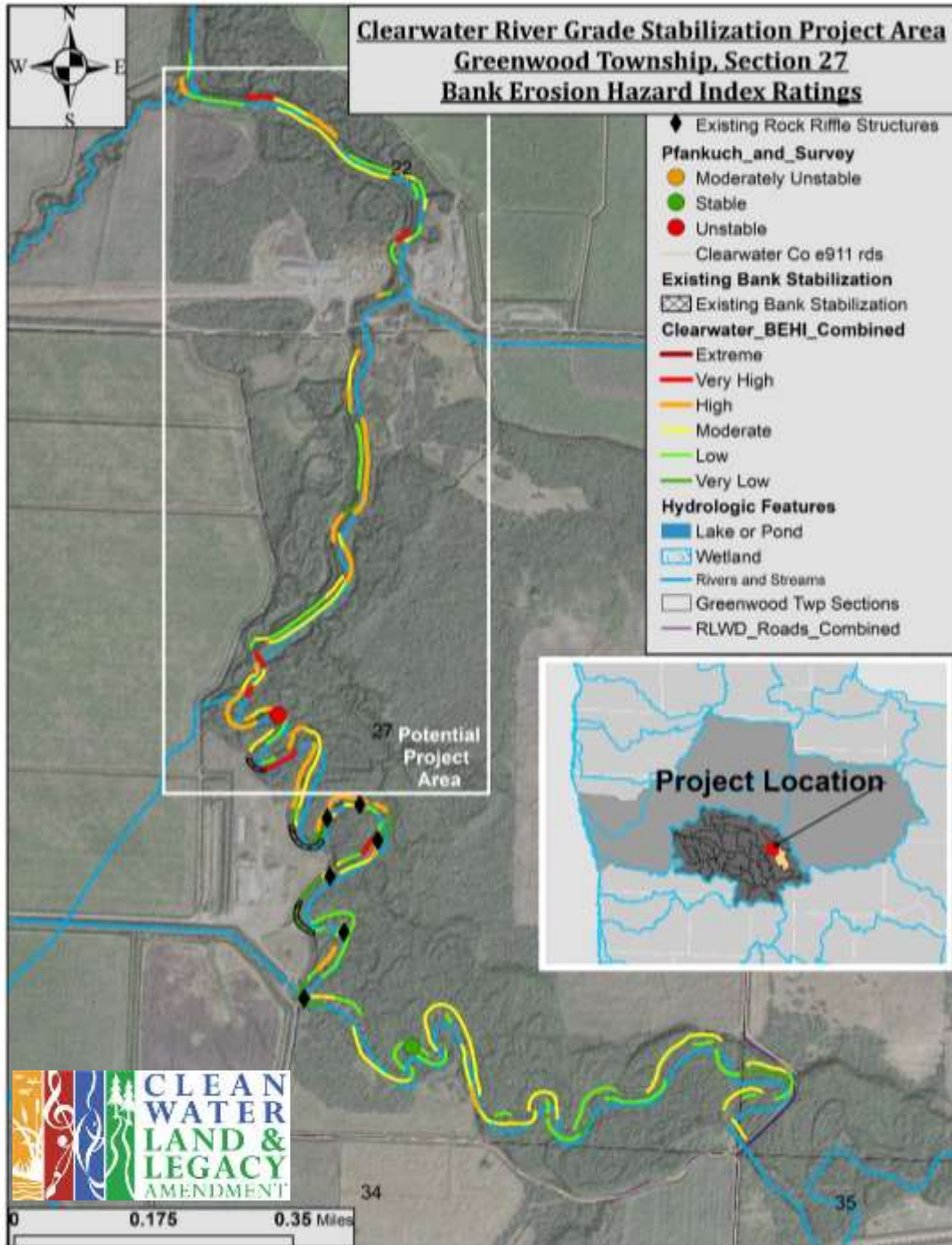


Clearwater River One Watershed One Plan

\$974,726 BWSR Grant for 2023-25
+Supplemental Funding
\$1,485,882 for 2025-27 (allocated)

- Streambank Stabilization
- Drainage Outlet Stabilization
- Grade stabilization structures (SWIs and WASCOBs)
- Project development
- Technical assistance and engineering
- Forest Stewardship Plans
- LiDAR Analysis
- No-till drill
- Non-structural ag practices





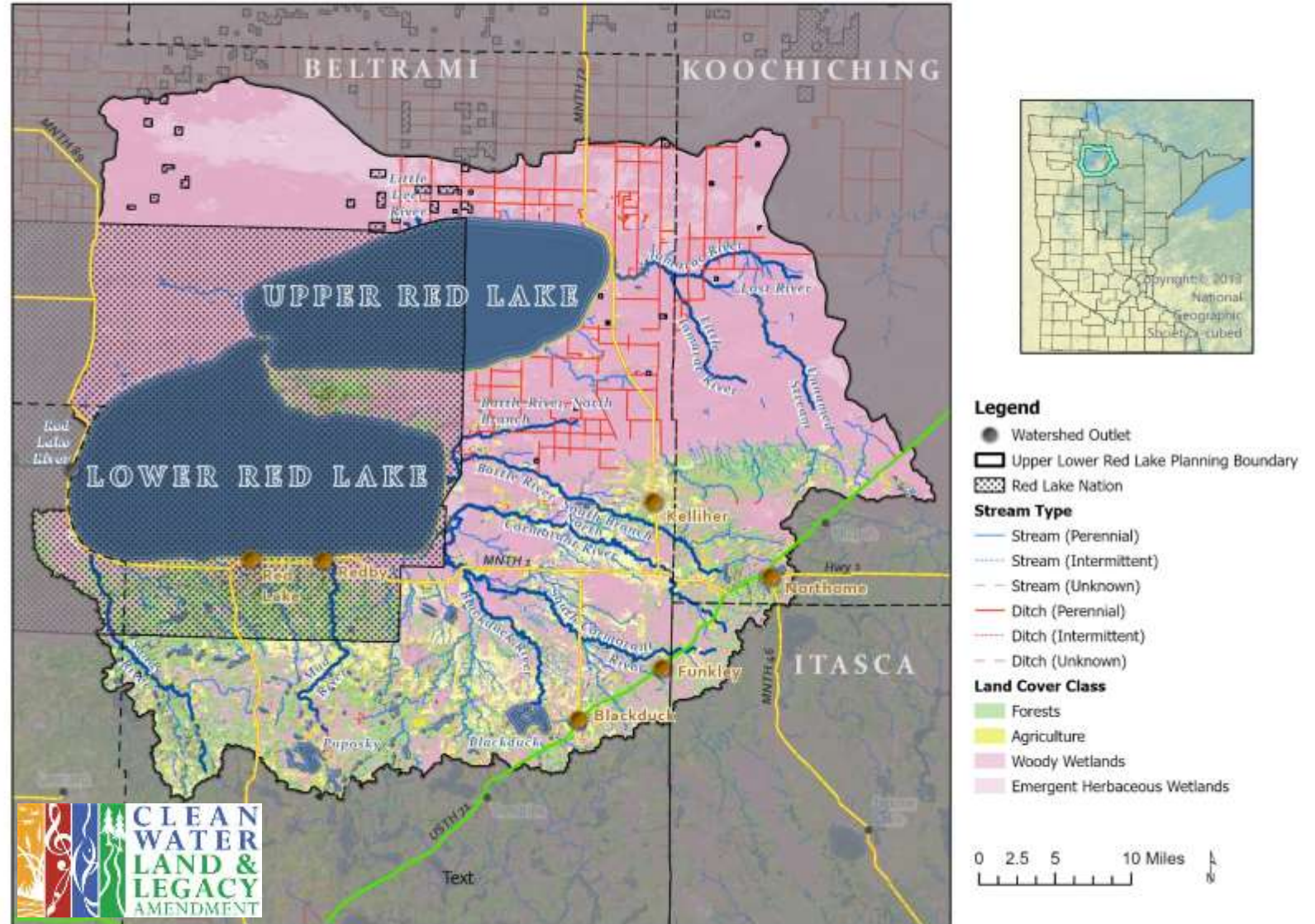
Clearwater River Stabilization



Upper/Lower Red Lakes 1W1P



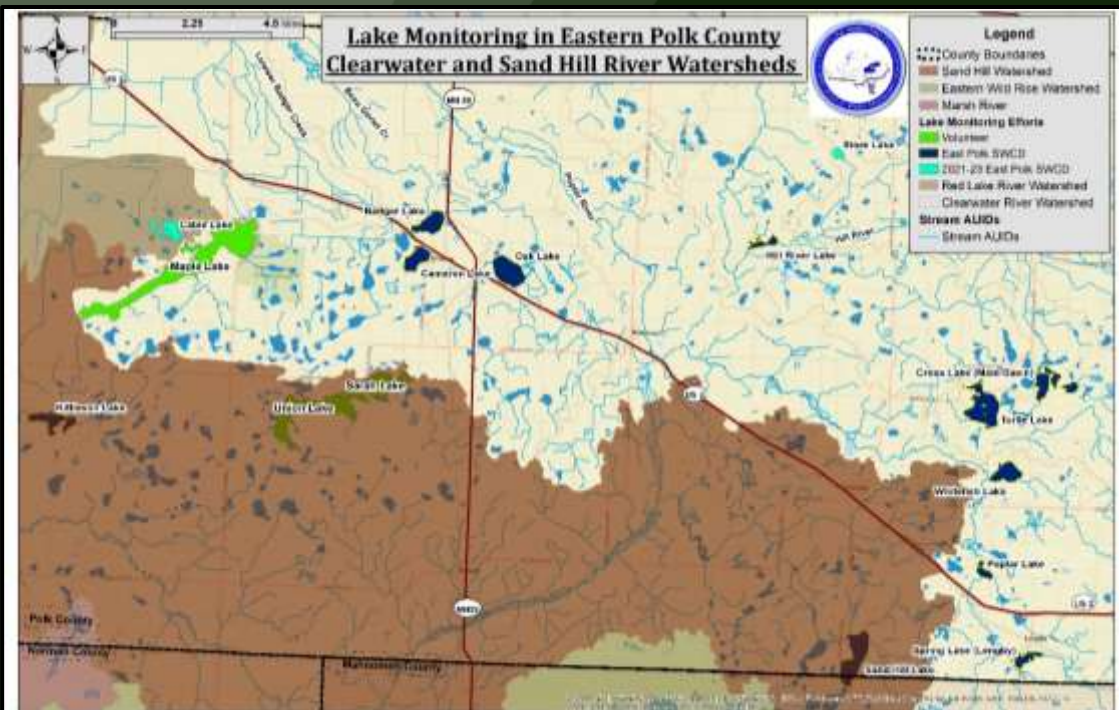
Upper/Lower Red Lake Watershed Planning Area





Water Quality Partnerships

- ▲ Envirothon sponsorships
- ▲ SWCD Water Resource Advisory Committees
- ▲ One Watershed One Plan
- ▲ Cost-share for SWCD erosion control projects (match)
- ▲ MPCA WRAPS, TMDLS, and Intensive Watershed Monitoring
- ▲ Lake Sampling – East Polk SWCD and Volunteers
- ▲ Beltrami County Forestry Plan
- ▲ Polk County AIS Task Force
- ▲ RRWMB Water Quality Funding
- ▲ Keep It Clean
- ▲ RRWMB Water Quality Funding – CD99
- ▲ Polk County Highway Department (CD99)



Projects for 2024



- ▲ One Watershed One Plan Implementation Projects
 - ▣ Red Lake River, Thief River, and Clearwater River
- ▲ Upper/Lower Red Lakes 1W1P Development
- ▲ River Watch and public education
- ▲ Water quality sampling at long-term monitoring sites
- ▲ Blue-green algae and AIS monitoring
- ▲ Dissolved oxygen loggers
- ▲ RRWMB Base Water Quality Funding
- ▲ Surface Water Assessment Grant Sampling
- ▲ Lake Monitoring Partnerships
- ▲ Chief's Coulee stormwater treatment project

For more detailed information...



➤ www.redlakewatershed.org

➤ www.rlwdwatersheds.org

➤ [www.facebook.com](https://www.facebook.com/redlakewatershed)

