

By: Corey Hanson, Water Quality Coordinator
For: July 9, 2009
Red Lake Watershed District
Board Meeting

Thief River Watershed Sediment Investigation

- Regular monthly samples were collected at all the monitoring sites.
- The Highway 89 Bridge over the Mud River was removed in the latter part of the month. A temporary HOBO water level logger was installed, but the Manta water quality logger has been removed until work on the crossing is completed.
- Water levels are decreasing, so it should be possible to deploy the rest of the monitoring equipment in July.
- Flow measurements were conducted to establish the upper portions of flow rating curves.

Clearwater River Dissolved Oxygen and Fecal Coliform TMDL Study

June was the final month of this project. The June tasks involved working through the statistical analysis needed to determine pollutants, determine current loads, and determine pollutant loading reductions. A final stakeholders' advisory group meeting was also held to go through the results of the SWAT modeling and load allocations. In the end, all but \$5,087.90 of the contract money from the MPCA was spent. A draft TMDL report was completed for each reach

- Clearwater River E. coli
 - Not currently impaired
 - TMDL incorporates margin of safety, reserve capacity
 - Reductions in E. coli loading are needed in July (38%) and August (23%).
- Clearwater River low dissolved oxygen
 - Monitoring found that, while low dissolved oxygen concentrations occasionally occur, the reach of the Clearwater River from Ruffy Brook to the Lost River is no longer impaired by low dissolved oxygen.
 - TMDL incorporates margin of safety, reserve capacity
 - Target pollutant = chemical oxygen demand
 - Pollutant threshold = 80 mg/L
 - Load reductions are needed in June (2%), August (46%), September (10%), and October (25%).
- Lost River E. coli
 - Not currently impaired
 - TMDL incorporates margin of safety, reserve capacity
 - Reductions in E. coli loading are needed in June (52%) and July (39%).

- Silver Creek E. coli
 - The E. coli impairment was verified.
 - Greater reductions in E.coli loading are needed at the mid-reach monitoring site located just downstream of Silver Creek's confluence with Clear Brook than at the downstream end of the watershed.
 - 75% - 94% reductions are required for the months of May through October at the Silver Creek monitoring site downstream of the Clear Brook confluence.
 - 42% - 70% reductions are needed at the site at the downstream end of the watershed during the months of June through September.

- Poplar River low dissolved oxygen
 - The low dissolved oxygen impairment was verified.
 - Target pollutant = orthophosphorus
 - Threshold concentration = 1 mg/L
 - The wastewater treatment facilities, especially Fosston, are essentially killing the river every time they discharge.
 - Organic pollutants are discharged and filtered from the stream as it flows through large wetland areas. Decomposition of these organic pollutants will continue to consume and deplete dissolved oxygen during the rest of the year.
 - Setting the discharge limits to the design flow of the facility would be a sufficient to achieve the amount of load reduction needed to keep orthophosphorus concentrations in the river below 1 mg/L.
 - The McIntosh plant is currently doing a much better job than the Fosston plant at removing nutrients (10.4 lbs/day total phosphorus on average compared to Fosston's 297.7 lbs/day).
 - Because the plants are currently exceeding their respective design flow rates and discharging phosphorus at a higher concentration than the river can tolerate, great reductions in pollutant loading from both WWTFs will be needed.
 - Fosston WWTF – 99% reduction
 - McIntosh WWTF – 90% reduction

- Red Lake County Ditch 57 low dissolved oxygen
 - The MPCA wanted to have a TMDL set for this reach as an appendix to the Clearwater River DO report.
 - It is definitely impaired, but it is a road ditch, not a warm water fishery.
 - Chemical oxygen demand was used as the pollutant, with the same threshold. No COD sampling data exists for CD57, so the concentrations from the Plummer USGS gauge on the Clearwater River were applied.
 - Moderate load reductions are needed in the latter part of the year (August through October) when there is usually very low or no flow in the ditch.

The draft TMDL reports will now go through several steps in a review process. The dissolved oxygen TMDLS and TMDLS involving wasteload allocations are the reports most likely to be adjusted throughout the review process.

1. MPCA peer review
2. EPA peer review
3. Public comment period
4. Submittal to the EPA

District Monitoring

There was no district monitoring scheduled for this month at the main long-term sites. Samples were collected in the Silver Creek watershed, however, to monitor the effectiveness of ongoing implementation projects.

Surface Water Assessment Grant Monitoring

Two rounds of samples and field measurements were collected at the Blackduck River, South Cormorant River, Darrigan's Creek, O' Briens Creek, Kripple Creek, and Lower Badger Creek monitoring sites in June. This monitoring is being paid for by Surface Water Assessment Grant funds being administered by the Red River Watershed Management Board.

Red Lake River Corridor Enhancement

The RLRCE executive committee met with Wade Miller of the DNR and learned that there is a lot that the DNR can do to help get water access projects done. We identified a few projects that meet the criteria of what the DNR is looking for in a project. If the RLRCE is successful in facilitating a partnership between local units of government, these projects have a great shot at becoming a reality.

St. Hilaire Access

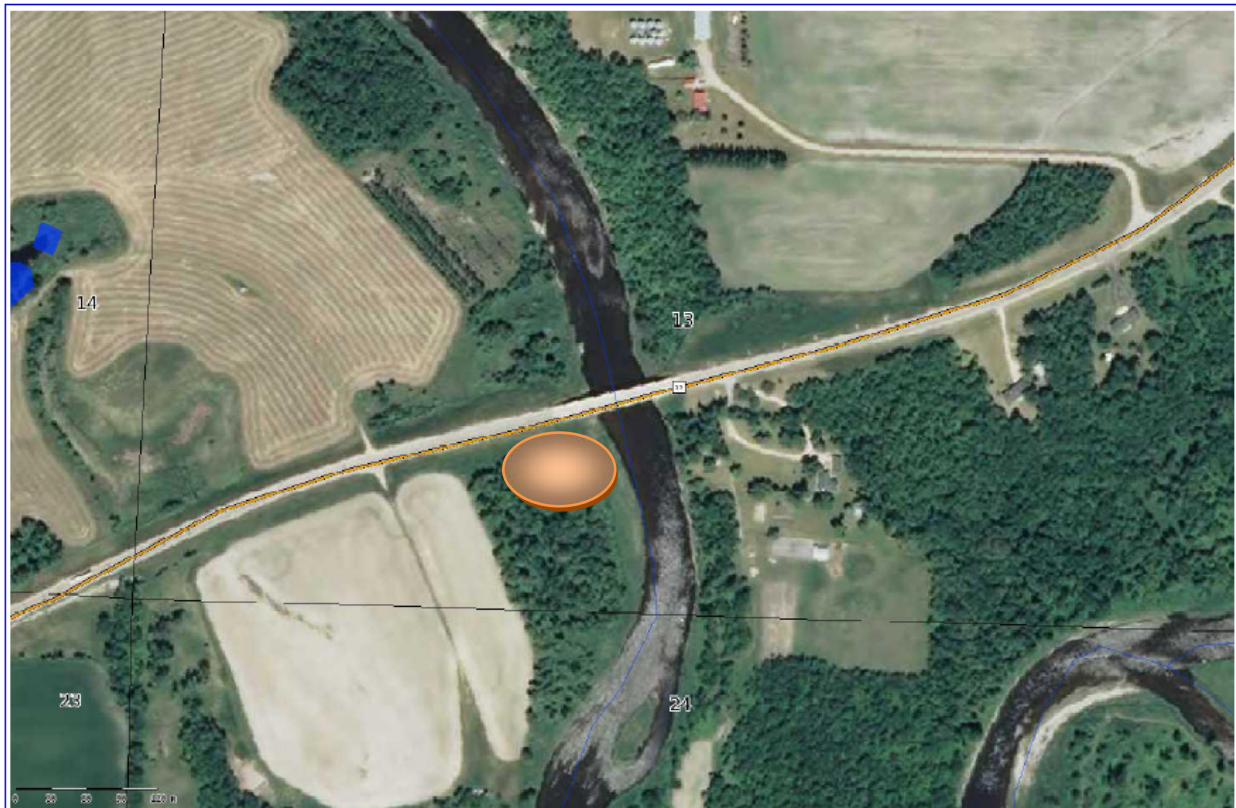
- There are two accesses in the park. People can put in on the north side (old access) and travel "around the horn" to the south side (new access). The trip takes about 45 minutes. The old access needs some maintenance.
- The city can maintain the access.
- Apply for appropriate DNR Waters and USCOE permits.
 - 1 application
 - Put together a concept plan and send it to Garry Bennett

Highway 32 Crossing of the Red Lake River

This is the perfect new-access project for which we should start planning. It has all the things the DNR is looking for in a project.

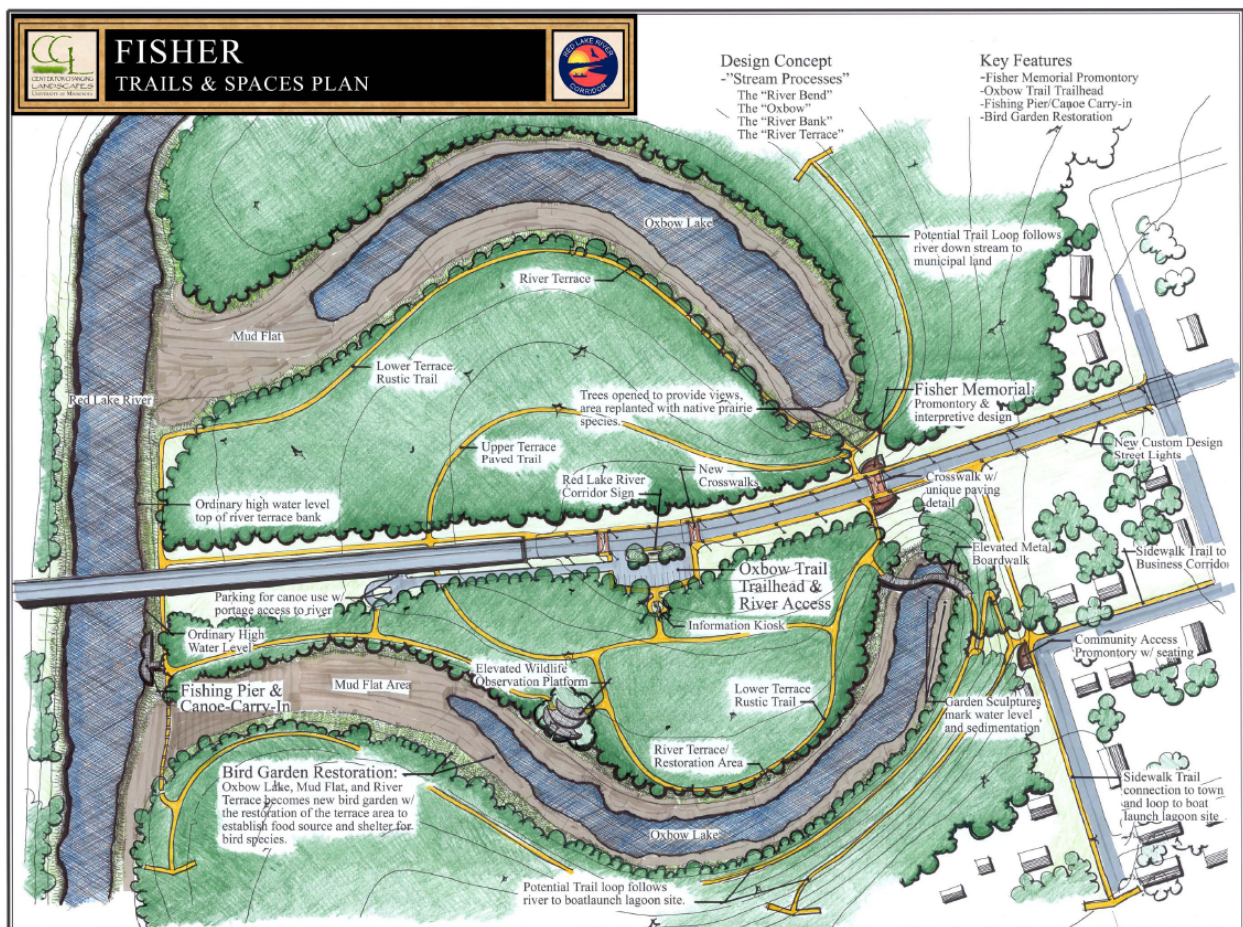
1. A landowner that is willing to sell a parcel of land
2. It is on a straight stretch of the river
3. It is already a popular put-in site. People can put in at highway 32 and float to Sportsman's Park for a nice evening canoe/kayak trip.
4. It improves public safety because people currently park along the highway. Gail mentioned that there are a lot of skid marks from drivers trying to avoid collisions at the bridge.
5. There are erosion problems on the upstream bend and on the east side of the river. These present restoration opportunities.
6. This project would be a new access that would shorten the distance between accesses (a shared goal of the DNR and the RLRCE)

What are the next steps in making this a reality? First of all, we will need to create a partnership among the RLRCE, Red Lake County, DNR, landowners, and the RLWD and make sure they are all "on board" for the project to commence. The next meeting of the RLRCE group will be held in Red Lake Falls, possibly at Swen's Bar, so that the RLRCE members can go look at the site.



Fisher Access Improvement

- This would be a good project to start with that can get done relatively quickly because the land is already owned by the city.
- The DNR and the city can enter into a cooperative agreement.
- The DNR can improve the access, install a fishing platform, and create a trail. The city will maintain these into the future.
- If this is something the City of Fisher wants to do, it can become a reality. We need to create a paper trail showing that the city wants to cooperate with the DNR to get the project done.



Signs

- At existing accesses? No chance
- Under a co-op agreement? It can be done
- The DNR has a strict policy on signs because they ran into troubles when every lake association had a sign with their non-legalized rules that they wanted to post at the access.
- A simple sign with the RLRCE logo and website address would be the most feasible route to go if we want to have signs at accesses.
- It also wouldn't be a bad idea to have signs that provide information to paddlers about the next access points and the distances/times to get to them.

June Meetings and Events

- **June 1, 2009** – BWSR Technical Advisory Group for the Pennington County Water Plan
 - WQ trends for the major watersheds
 - Identifying the “hot” subwatersheds, prioritizing work areas
 - Identifying probable BMPs
 - Estimating # of targets
 - Identifying further studies/analysis needed
- **June 8, 2009** – Pennington County Water Resources Advisory Committee, 9am
- **June 17, 2009** – Red Lake River Corridor Enhancement Project Exec. Committee mtg. 9am.
- **June 19, 2009** – Clearwater River Dissolved Oxygen and Fecal Coliform TMDL Stakeholders' meeting, 9:30 am, Clearbrook Community Center Council Room.
- **June 22, 2009** – Red River Basin Water Quality Team, RLWD office, 10 am
 - Primer on channel stability in the classroom and the field
 - Dave Friedl, DNR Clean water Legacy Specialist
- **June 25, 2009** – Red Lake River Corridor Enhancement Project executive committee meeting at the Thief River Falls DNR office.
- **June 30, 2009** – Deadline for completion of the Clearwater River Dissolved Oxygen and Fecal Coliform TMDL Study.

July Plans

- SWAG Monitoring
- District Monitoring
- Week of vacation
- Deploy the rest of the continuous monitoring equipment

Future Meetings/Events

- **July 15, 2009** - Red Lake River Corridor Enhancement Project meeting, Swen's Bar, Red Lake Falls, 6 pm.
- **July 16, 2009** – Marshall County Water Plan meeting, 9:30
- **July 20-24** – I will be on vacation in Montana for my brother's wedding.
- **August 31, 2010** – Deadline for completion of the Thief River Watershed Sediment Investigation