

## **Introduction to water stabilization for the Briggs lake chain.**

### **Work to investigate the causes of high water events:**

The water stabilization project is somewhat stalled for 2022 making it a complex subject -

We currently are taking water level data to improve the model accuracy & understand the timing of high water.

2 electronic measuring systems were deployed in 2021 in Elk and the Bayou. (1 bought and one borrowed from the MPCA.)

We should be able to gather from a few heavy rains in 2022 data that can predict high water and improve the recent water model.

That's the only current plan because no money has been approved from the TLID or the BLCA.

Progress on water stabilization is a long term plan where the next step is often clear (based on DNR requirements and Engineering recommendations).

Unfortunately, every one of those next steps requires funding that has consistently slowed the progress.

Initial intent was to have the BLCA add to the six figure money already collected over the years for water quality be used to start this long sought after mission.

The first recommendations by the engineering report was to remove the "fish barrier" and to get a certified engineering water model.

The DNR reviewed the report and ordered that the BLCA remove the barrier and stated no other stabilization efforts are allowed without the water model.

The BLCA held many meetings about the order and after about a year took down the barrier.

The BLCA had agreed to pay for part of the water model cost before their plans to change the mission and the cost was roughly 1/3rd each from BLCA, TLID, and Sherburne County.

**In 2019 Dan Cibulka gave the LID a presentation about water stabilization** and how we need to work toward having a "One Watershed Plan" in order to find funding.

Dan has been working on a watershed plan for the Rum River Watershed. Dan advised in the 2019 presentation that the LID & BLCA & COLA should get involved with the MississippiRiverStCloud Watershed Advisory Committee.

The TLID voted to put Dan Cibulka in charge of water stabilization which is not exactly what he recommended.

(Please review the presentation for clarity. Link: [Fall Special Meeting presentation 2019 \(pdf\)](#)Download)

The BCLA could not be convinced to have the plan on the agenda and moved on to other unrelated projects.

It is possible planning money is available from the committee but we need to be in contact with the people working on our watershed to find out.

Dan and Scott met with WENCK Engineering to discuss the progress of the water model & report.

Money was paid for for the engineering work to be reported at a meeting. Meetings with Dan and Scott were interpreted to be that meeting so there was no board presentation like the last report had.

Scott reported to the group with the statement “If we put a dam up at the Bayou this would do no good.”

Water Stabilization was removed from the TLID agenda at that point.

The engineering report was encouraging since that model came out about the same as the excel model version I made the year before.

### **Dan’s leadership was requested to start 2022 planning.**

He discussed presenting to the the board in 2021, but it kept getting put off (mostly due to COVID concerns).

Dan gave some recommendations for the TLID budget but he did not produce it until after the general meeting where the budget is set each year.

He suggested sediment analysis and buoy system to model temperature and other needed data but it will likely be put off until 2023 without a funding source.

We were left without anyone presenting to the board where most members just say the report is too hard to understand.

Water Stabilization is a complex subject that is easily taken off track when the details are not understood.

A simple explanation and on going discussion of where we were at on the stabilization can be found in a document called “**WENCK report discussion**”.

I found several discrepancies in the report that should be addressed and included them in the document in hope of getting the agenda back.

It seems for 2021 the county focus was on the lakes with larger populations.

**One Watershed participation is key since it is the source of most state grant funding.**

The water stabilization plans should be a permanent agenda item for both the TLID and the BLCA simply because it is a major reason for their existence.

Every year that the “One watershed” plan has no project plans for the Briggs chain means any action started will be more than 2 years away. Dan might not have time to be in charge of the chain’s interests. - We have an obligation to report on the progress of flood control and clean water. We should be working toward getting a project plan turned into the “one watershed” system since it is the only way we can apply for our fair share of state funding.

**Our watershed is: Mississippi River (St. Cloud) Watershed** of which the Elk river from Big Elk lake north has the greatest effects on our water stability and water quality.

Since 2010 1232.8 Million dollars have been spent from the clean water fund alone. The bulk of these funds come from the lottery and it is due to sunset in 2024.

Since it takes years to go from planning to funding, we seem to be running out of time to advocate for our watersheds share...

**The map below shows legacy funded projects by location.**

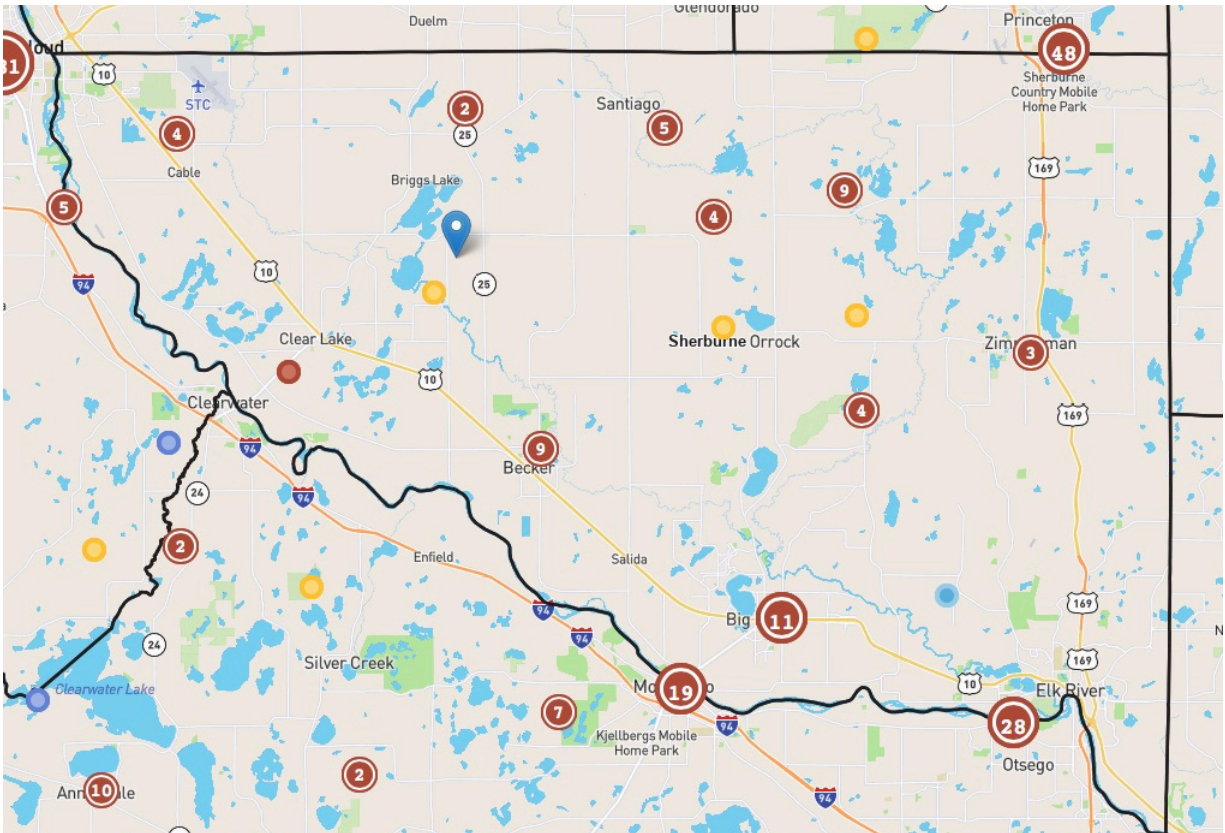
I was only able to find 2 projects relating to our sub watershed when reviewing the funding:

1) TMDL study - (Which showed we were not represented for the Elk river watershed resulting in incorrect assumptions that took much expense and time to correct.)

2) Shore-land restoration run by soil and water - ( unrelated planning issues that most everyone knows)

This upper sub watershed is notable in how little has been spent for projects. Even paid studies over that timeframe seem to lack sample data from this sub-watershed.

(Red circles indicate the # of projects by location. You can search all of them at: [search-projects](#) )



To move forward with water stabilization **we need to communicate with the people who are working on our watershed.**

Dan has been busy getting a watershed plan approved in 2021 for the Rum river watershed.

The Rum river plan could act as a guide for us to follow.

**We need to keep in touch with the various people who are involved in our watershed to have a voice.**

**We should stay informed of related actions within our county.**

Water advisory board and commissioner meetings BLCA and COLA plans should be discussed at LID meetings (when our watershed comes up and if not why it didn't)

Currently we should look for a formal commitment to the plan from Sherburne county. (Wright county has already done so and could be used as an example.)

Engineering report recommendations should be added to the plan and well understood by the board in order to defend the needs of the Briggs Chain.

Below is a list of people working on our plan. (Of which the LID has yet to add it's input )

MISSISSIPPI RIVER ST. CLOUD

Review Agency	Name	Email	Phone
MN Board of Water and Soil Resources	Jason Weinerman, Board Conservationist	<a href="mailto:jason.weinerman@state.mn.us">jason.weinerman@state.mn.us</a>	320-223-7072
	Marcey Westrick, Central Region Manager	<a href="mailto:marcey.westrick@state.mn.us">marcey.westrick@state.mn.us</a>	651-284-4153
	Julie Westerlund, One Watershed, One Plan Coordinator	<a href="mailto:julie.westerlund@state.mn.us">julie.westerlund@state.mn.us</a>	651-600-0694
MN Department of Agriculture	Casey Field, Research Scientist	<a href="mailto:casey.field@state.mn.us">casey.field@state.mn.us</a>	218-846-7425
	Margaret Wagner, Pesticides and Fertilizer Management Section Manager	<a href="mailto:margaret.wagner@state.mn.us">margaret.wagner@state.mn.us</a>	651-201-6488
MN Department of Health	Chad Anderson, Regional Planner	<a href="mailto:chad.anderson@state.mn.us">chad.anderson@state.mn.us</a>	651-201-5847
	Carrie Raber, Groundwater Restoration and Protection Strategies Coordinator	<a href="mailto:carrie.raber@state.mn.us">carrie.raber@state.mn.us</a>	651-201-4695
MN Department of Natural Resources	Reid Northwick, Clean Water Specialist	<a href="mailto:reid.northwick@state.mn.us">reid.northwick@state.mn.us</a>	651-259-5749
	Dan Lais, Central Regional Manager, Ecological and Water Resources Division	<a href="mailto:dan.lais@state.mn.us">dan.lais@state.mn.us</a>	651-259-5766
	Barbara Weisman, Clean Water Operations Consultant	<a href="mailto:barbara.weisman@state.mn.us">barbara.weisman@state.mn.us</a>	651-259-5147
MN Environmental Quality Board*	Erik Dahl	<a href="mailto:erik.dahl@state.mn.us">erik.dahl@state.mn.us</a>	651-757-2364
MN Pollution Control Agency	Phil Votruba, Watershed Project Manager	<a href="mailto:phil.votruba@state.mn.us">phil.votruba@state.mn.us</a>	218-316-3901
	Jeff Risberg, Watershed Unit Coordinator	<a href="mailto:jeff.risberg@state.mn.us">jeff.risberg@state.mn.us</a>	651-757-2670

Below is the newly approved Rum River plan as an example of what we should be doing. (It appears they got planning grant money.)



Task	Subtask	Labor/ Equip.	Lab	Total	Notes
Sediment Assessment	Sediment core collection	\$3,200	--	\$3,200	Core collection and delivery to lab (1 Stantec staff, 1 SWCD staff)
	Lab Analysis (4 locations)	--	\$11,200	\$11,200	Lab P-release and P fractionation analysis (\$2,800 per core location; 2 on Briggs and 1 each on Rush and Julia)
	Reporting	\$6,500	--	\$6,500	Memo/report to meet BWSR's internal load requirements for CWF grant applications
<b>TOTAL</b>				<b>\$20,900</b>	
Carp Assessment (1-time survey)	Permit Application	\$550	--	\$550	<u>MnDNR</u> permit application for survey
	Carp Biomass Density Surveys (all 3 lakes)	\$5,200	--	\$5,200	Electrofishing survey includes minimum of 3 transects per lake (2 Stantec staff)
	Reporting	\$2,400		\$2,400	Memo summarizing results of surveys
<b>TOTAL</b>				<b>\$8,150</b>	
TMDL Review/ Update	Modeling/ Analysis (3 lakes)	\$7,250	--	\$7,250	Update lake model and TMDL allocations using historic data, newly collected data, hydraulic model, HSPF model, and internal load assessments
	Memo/Report (3 lakes)	\$6,000	--	\$6,000	
	Meeting (1)	\$1,600	--	\$1,600	
<b>TOTAL</b>				<b>\$14,850</b>	



Task	Subtask	Labor/ Equip.	Lab	Total	Notes
Sediment Assessment (Optional)	Sediment core collection	\$3,200	--	\$3,200	2 Wenck staff (can reduce cost if SWCD staff can assist with collection)
	Lab Analysis (3 lakes)	--	\$7,500	\$7,500	Lab P-release and P fractionation analysis (\$2,500 per lake)
Carp Assessment (Optional)	Permit Application	\$500	--	\$500	MnDNR permit application for survey
	Carp Biomass Density Surveys (3 lakes)	\$6,500	--	\$6,500	Electrofishing survey includes minimum of 3 transects per lake
TMDL Review/ Update	Modeling/ Analysis (3 lakes)	\$7,250	--	\$7,250	Update lake model and TMDL allocations using historic data, newly collected data, hydraulic model, HSPF model, and internal load assessments (optional tasks above)
	Memo/ Report (3 lakes)	\$4,250	--	\$4,250	
	Meeting (1)	\$1,600	--	\$1,600	

Recent cost estimate provided by Dan Cibulka 2020:

(Note the Sediment Assessment has changed from \$10,700 in 2019 to \$20,900 in 2021!)