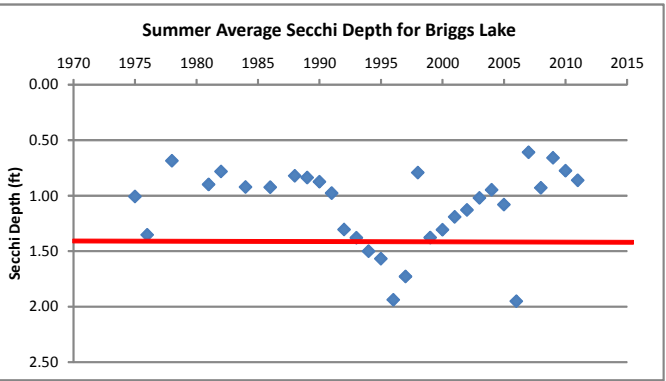
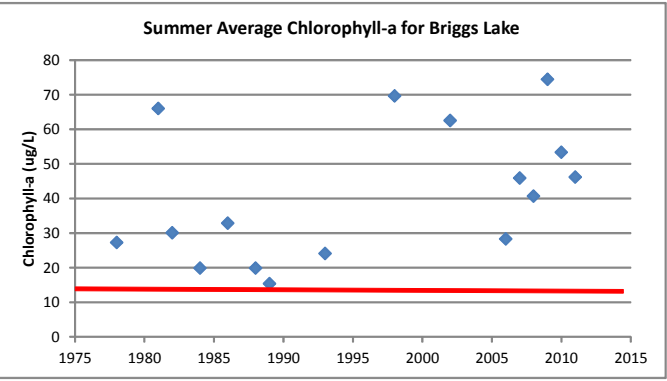
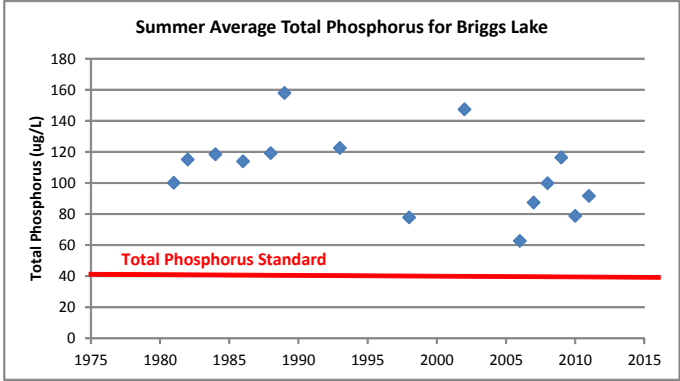
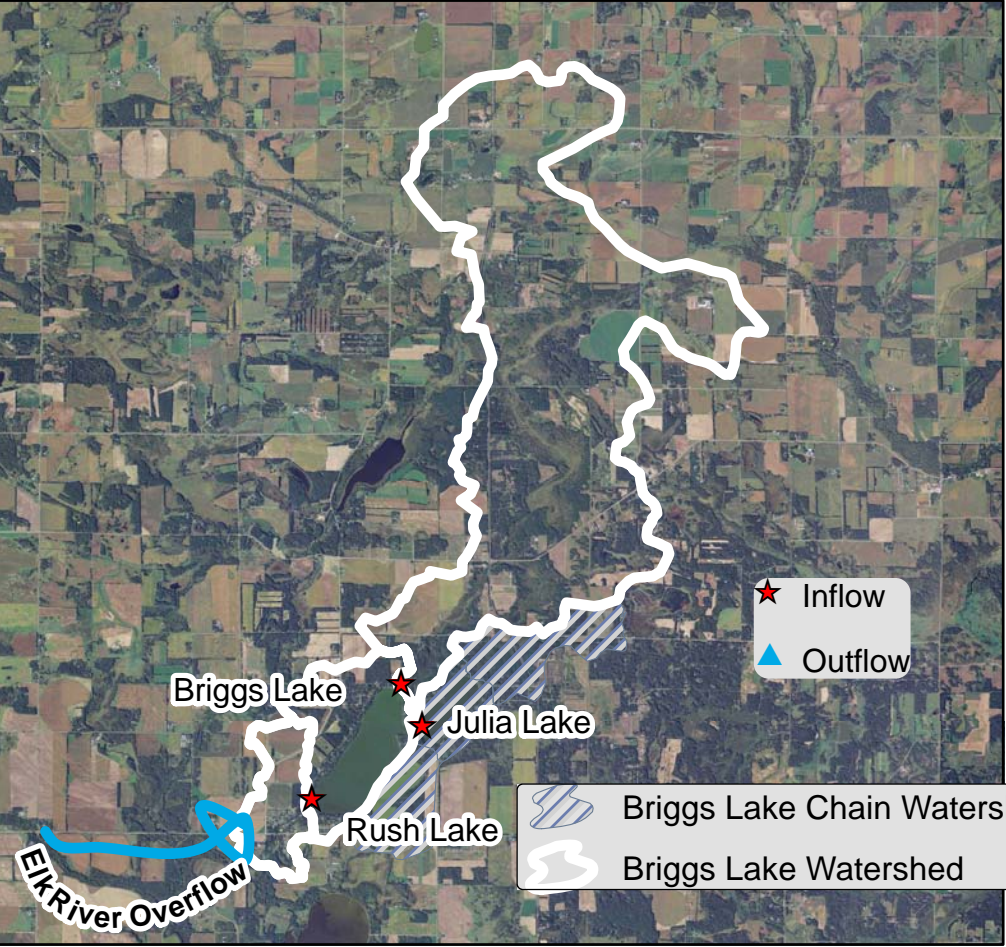
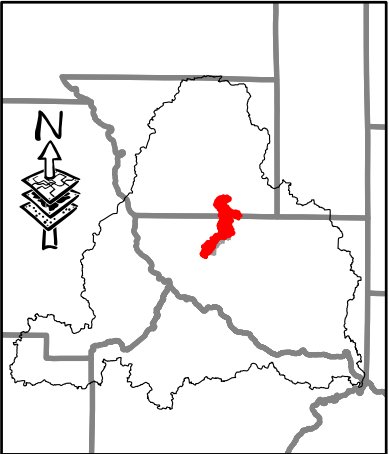


Briggs Lake (71-0146)- DRAFT

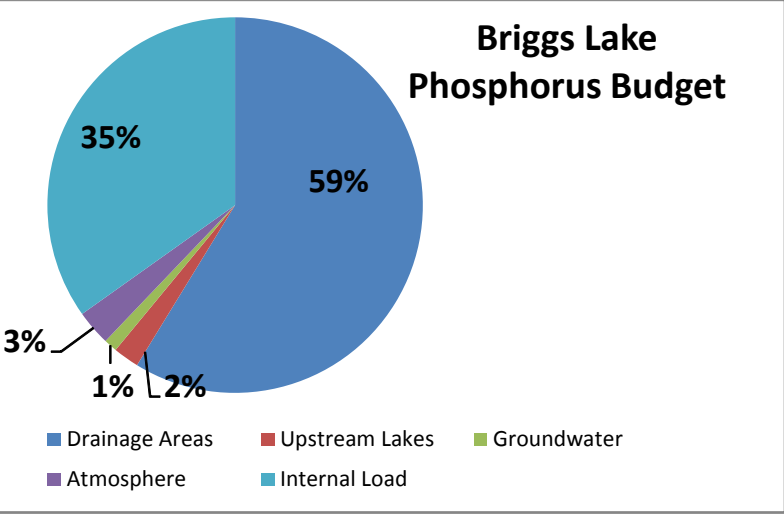
Briggs Lake Watershed



Project Location within the MSC Watershed



Briggs Lake is the second lake in the Briggs Chain of Lakes which includes: Julia, Briggs, Rush and Big Elk Lake. A TMDL study was completed for Big Elk Lake in 2012.



Lake Data

Surface Area: 404 Acres
Maximum Depth: 25 feet
Littoral Area: 220 Acres
Contributing Watershed Area: 7,894 Acres

Classification: Deep Lake

Questions/Comments can be directed to:

Tiffany Determan
Sherburne SWCD
763-241-1170 x 3
tdeterman@sherburneswcd.org

	% Reduction Required
Watershed	23%
Julia Lake Watershed	0%
SSTS	100%
Internal	84%
Atmosphere	0%

Summary

- Over the last 10 years, in-lake summer phosphorus and chlorophyll-a have varied greatly, however all years data have exceeded the deep lake goals.
- Previous water quality studies as well as work conducted by the Briggs Lake Chain Association have provided a substantial dataset with which to identify sources contributing to water quality degradation; still, local knowledge and input are fundamental.
- Under certain conditions, the Elk River overflows into Briggs Lake via the bayou on the south west side of the lake; the specific conditions under which this occurs are unknown.
- Stream nutrient samples taken in 2006 and 2007 on Briggs Creek indicated very good quality of water.
- 2009 MN DNR fisheries surveys indicate that rough fish, including carp are common in the lake chain.
- Internal nutrient recycling during lake mixing events is suspected to have a major influence on in lake water quality.

Recommended Activities

- In-depth investigation into the actual Elk River Contributions via the Bayou (intensive flow and nutrient sampling program).
- Quantification of sediment release rates (internal nutrient recycling) would help in prioritization of cleanup strategies. Methods to reduce said source may include: management of rough fish communities, boating education/guidelines, alum treatments, or other innovative reduction strategies. Internal treatment should be considered after watershed sources have been exhausted.
- Ensure minimal water quality impacts from developments around the lake; for example, no untreated stormwater should be directed into the lake, the amount of impervious surfaces in developed areas should be kept to a minimum, natural buffers of vegetation should be maintained between lawns and the lakeshore.
- The results of this work should be used to provide support to work currently underway by the Briggs Lake Chain Association (see bullet above).
- Steps should be taken to educate lakeshore property owners and systems out of compliance with County/State codes should be brought into compliance.
- Continue regular in-lake monitoring program.