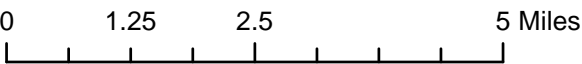
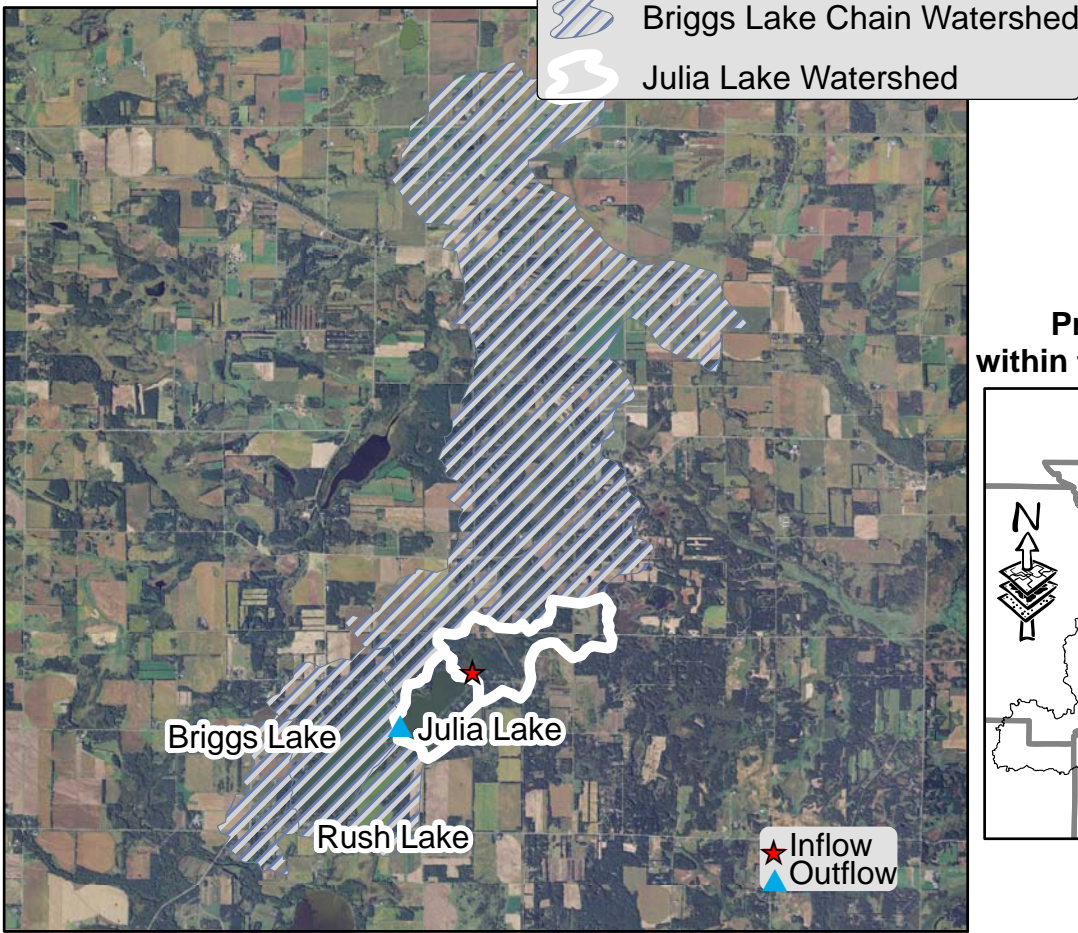
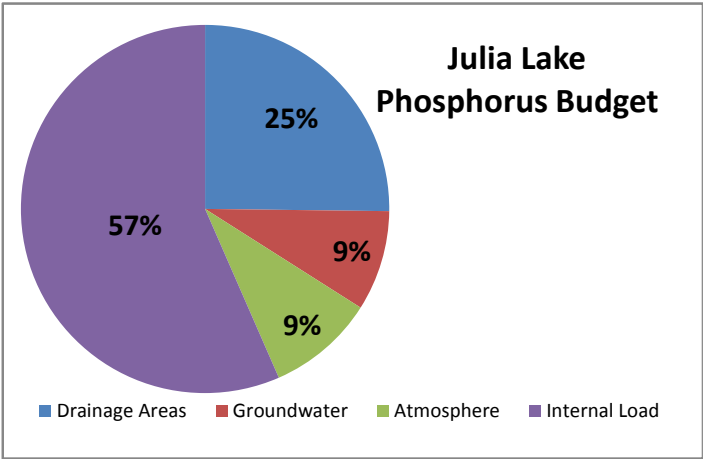


# Julia Lake (71-0145)- DRAFT

## Julia Lake Watershed

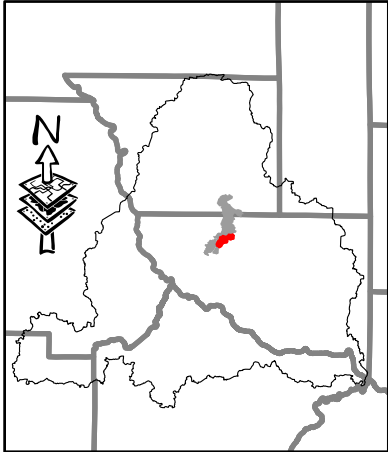


Julia Lake is the first lake in the Briggs Chain of Lakes which includes: Julia, Briggs, Rush and Big Elk Lake. A TMDL study was completed for Big Elk Lake in 2012.



	% Reducion Required
Watershed	0%
SSTS	100%
Atmosphere	0%
Internal	0%

### Project Location within the MSC Watershed



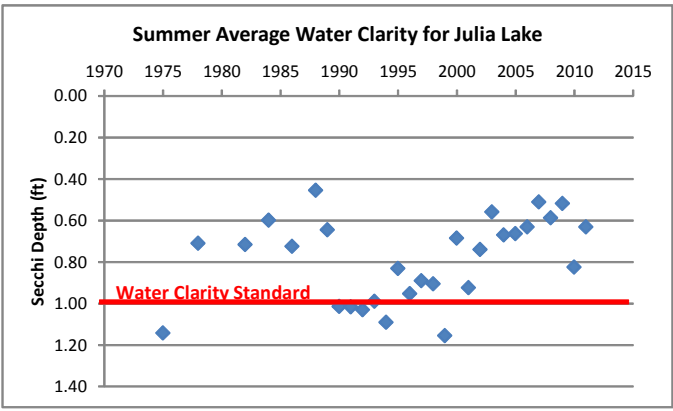
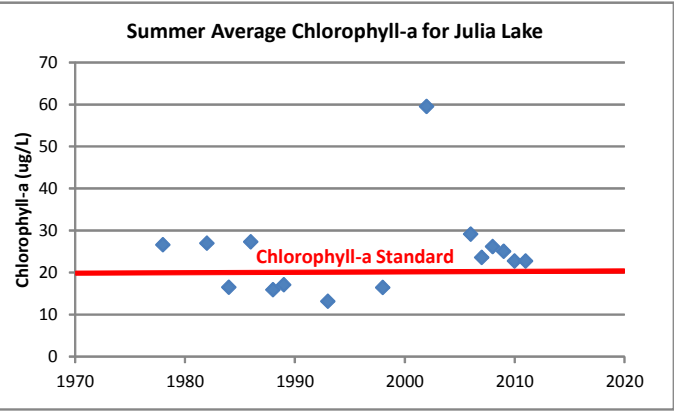
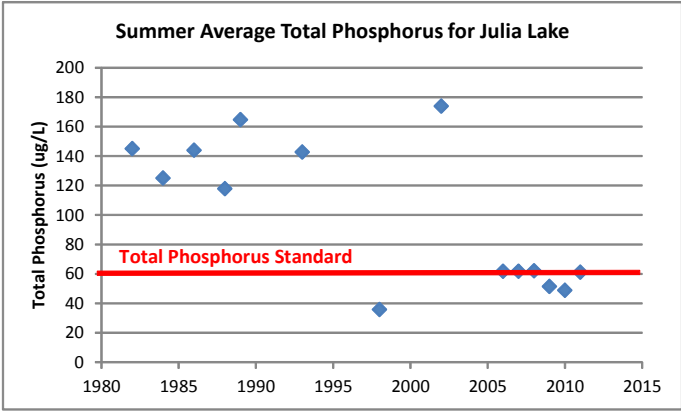
### Lake Data

Surface Area: 152 Acres  
Maximum Depth: 15 feet  
Littoral Area: 136 Acres  
Contributing Watershed Area: 725 Acres

Classification: Shallow Lake

Questions/Comments can be directed to:

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Sherburne SWCD  
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tdeterman@sherburneswcd.org



### Summary

- Over the last 10 years, in-lake summer phosphorus and chlorophyll-a have hovered near (even below) the State standard for shallow lakes. Water Clarity on the other hand has decreased.
- 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.
- The lake has a small, forest-dominated watershed which can provide excellent stormwater filtration.
- 2009 MN DNR fisheries surveys indicate that rough fish, including carp are common in the lake chain.
- While Phosphorus may be within the state established guidelines, it is clear that algae blooms still occur. Low water clarity may be caused by excessive algae growth in absence of native aquatic plants. – is this accurate??
- Julia and Rush Lakes received “whole-lake” treatment for curlyleaf pondweed from 2006-2009 and all three lakes continue to receive partial treatment. Notes from 2009 MN DNR aquatic plant surveys indicated that biomass was reduced and native species appeared to be on the rise.- is this accurate??
- Stream nutrient samples taken in 2006 and 2007 on Julia Creek indicated very good quality of water.

### Recommended Activities

- The shallowness of Julia Lake makes it is susceptible to increased eutrophication with increases in phosphorus loading. Developmental pressure may have an impact on water quality; every effort should be made to minimize TP loading to 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.
- High priority should be placed on protecting high concentration of forested land in watershed.
- Lake goals should include establishment and/or maintenance of native aquatic plant community.
- The results of this work should be used to provide support to work currently underway by the Briggs Lake Chain Association including placement of stormwater reduction practices in key areas.
- Steps should be taken to educate lakeshore property owners and systems out of compliance with County/state codes should be brought into compliance.
- Efforts should be pursued to continue with nutrient management strategies until water clarity is within guidelines.
- Continue in-lake monitoring program along with collection of current water quality data on Julia Creek to verify health.
- A shallow lake like Julia is sensitive to changes in the biological community within. Shallow Lakes typically reside in two states: Clear water dominated by rooted plants, or algae dominated turbid waters without much aquatic vegetation. Management strategies for shallow lakes can include: surface drawdowns, shoreline stabilizations, management of rough fish communities, and boating education and guidelines to minimize water quality degradations.