

Lake Status

Overall Strategy: Impaired Watershed Management

Water Quality Rating: B: Secchi – 7.4 ft.; TP – 35 µg/L

Impairment: *Aquatic recreation* due to excess nutrients in the lake.

Water Quality Trend: Secchi & TP – Improving

Shoreland Classification: Natural Environment

Subwatershed Land Cover: 15% developed, 30% forests and woodlands, 2% grassland/shrubland/sparse vegetation, 12% lakes and open water wetlands, 31% planted or cultivated, 10% wetlands.



Resource Goals

Short Term Goals – Year 2015

- Maintain a water quality rating of at least D.
- Maintain a five-year mean summer phosphorus concentration at or below 100 µg/L ± 4%.
- Maintain a mean summer secchi depth no less than 1.5 ft.
- Establish an active Lake Association for teaming on lake management and education.
- Revise goals based on the CMSCWD Lake TMDL Study.

Long Range Goals - Year 2020

- Maintain a water quality rating of at least D.
- Achieve a five-year mean summer phosphorus concentration at or below 80 µg/L ± 4%.
- Maintain a mean summer secchi depth no less than 1.5 ft.
- Conduct watershed management in consideration of the area’s statewide importance to the Blanding’s turtle.

DNR Fisheries Lake Management Plan: None

BASIC FACTS	
DNR ID	82006800
Section	27
Township	32
Range	20
Lake Area	35 acres
Subwatershed Area	438 acres
Outlet Elevation	N/A
Low Water Level	961.1 (‘00)
High Water Level	966.50 (‘03)
Ordinary High Water	965.00
100-Yr. Flood Elev	966.6 (District)
Greatest Depth	7 ft.
Control Structures:	None
Fish Species:	N/A
Aquatic Nuisance Species:	None
CMSCWD References:	WCD Water Monitoring Report (‘08) DNR Lake Water Level Report

Implementation

Operational Priorities

Impaired Watershed Management per TMDL Study Recommendations

Education

Impaired Watershed Education Program per TMDL Study Recommendations

Regulatory

Activities impacting Long Lake will be regulated by the watershed district through its *Rules of the District*. Regulatory efforts will be coordinated with Scandia Township, Washington County and the Minnesota DNR, where applicable.

Projects

Current:

- CMSCWD Lake TMDL Study
- Best Management Practices (BMP) Program per TMDL Study Recommendations
- Water Quality Monitoring Program per TMDL Study Recommendations
- Permitting Program

Future/Potential:

- TMDL Implementation Plan Projects.

* See 2010 Watershed Management Plan Section V, *Lake Management Plans* for additional information on District lake management activities.

Overall Assessment: Long Lake (Scandia)

Long lake is a shallow lake with poor water quality and limited development. The lake is tributary to Jellum's Bay which in turn outlets to Big Marine Lake. In-lake phosphorus concentrations commonly exceed MPCA shallow lake standard of (60µg/L), and the lake is therefore listed as impaired. In 2007 the lake was better than the MPCA shallow lake standard of 1 m for sechi depth transparency and has an improving trend for this parameter. Future development of this lake could further impact the lake and downstream resources.

Past District management efforts included cooperation with the MN DNR to remove rough fish in 2002 prior to the District's barley straw application to improve water quality in downstream Jellum's Bay. Rough fish re-suspend bottom sediments, releasing nutrients resulting in decreased water clarity and quality. Following the removal of rough fish the MN DNR used the lake for several years to rear walleye fry. Agricultural and roadway non-point source runoff appear to have the greatest negative impact on the lake. Future development of this lake could further impact the lake and downstream resources if not handled properly.

Based on measured lake characteristics and land use in the lake's minor subwatershed, water quality modeling indicated that a significant amount of phosphorus needs to be removed to improve the water quality of the lake.

Currently, Long Lake has an improving water quality trend based on Secchi depth. In addition, it has met the 2010 goals of achieving a **water quality rating of at least D**, a five-year mean summer phosphorus concentration at or below 100 µg/L ± 4% and a mean summer secchi depth no less than 1.5 ft based on the 2007 WCD Water Monitoring Report. However, Long Lake is one of 10 lakes in the CMSCWD on the EPA's 303(d) list of impaired waters impaired for nutrients. Phase I of the Lake Total Maximum Daily Load (TMDL) Study is complete. The target completion date for the Long Lake TMDL is 2015. Based on the impaired condition of Goose Lake, this watershed is undergoing impaired watershed management.

