

Lake Status

Overall Strategy: Impaired Watershed Management

Water Quality Rating: D+: Secchi – 2.5 ft.;
TP – 151 µg/L

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

Water Quality Trend: Secchi – Declining; TP – N/A

Shoreland Classification: Natural Environment

Subwatershed Land Cover: 15% developed, 8% forests and woodlands, 5% grassland/shrubland/sparse vegetation, 7% lakes and open water wetlands, 50% planted or cultivated, 16% wetlands.



Resource Goals

Short Term Goals – Year 2015

- Achieve a mean summer phosphorus concentration at or below 140 µg/L ± 4%.
- Achieve a mean summer secchi depth no less than 3 ft.
- Revise goals based on the CMSCWD Lake TMDL Study.
- Establish an active Lake Association and continue cooperative relationship with County Parks Department for teaming on lake management and education.

Long Range Goals - Year 2020

- Achieve a mean summer phosphorus concentration at or below 140 µg/L ± 4%.
- Achieve a mean summer secchi depth no less than 3 ft.
- Conduct watershed management in consideration of the area’s statewide importance to the Blanding’s turtle.

DNR Fisheries Lake Management Plan: none

The DNR uses the lake as a walleye rearing pond following years when the lake experiences winter kills.

BASIC FACTS

| | |
|----------------------------|--------------|
| DNR ID | 82002500 |
| Section | 6 |
| Township | 30 |
| Range | 20 |
| Lake Area | 48 acres |
| Subwatershed Area | 1589 acres |
| Outlet Elevation | Landlocked |
| Low Water Level | 941.64 (‘07) |
| High Water Level | 945.86 (‘96) |
| Ordinary High Water | 943.50 |
| 100-Yr. Flood Elev | 949.2 (FEMA) |
| Greatest Depth | 12 ft |

Control Structures:
None

Fish Species:
Walleye

Aquatic Nuisance Species:
Curlyleaf Pondweed
Reed Canary Grass

CMSCWD References:
WCD Water Monitoring Report (‘08)
DNR Lake Water Level Report
CMSCWD TMDL Phase I Report (‘08)

Implementation

Operational Priorities

Impaired Watershed Management per TMDL Study Recommendations

Education

Impaired Watershed Education Program per TMDL Study Recommendations

Regulatory

Activities impacting Louise Lake will be regulated by the watershed district through its *Rules of the District*. Regulatory efforts will be coordinated with Stillwater 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
- Ongoing Monitoring of BMPs.
- 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: Louise Lake

Louise Lake is a shallow, land-locked lake with poor water quality and limited development as approximately half of the lake is located in the Pine Point Regional Park.

Based on an Aerial Lakeshore Analysis study (1998), the greatest influence on the lake is non-point source runoff, particularly from adjacent agricultural fields and 120th Street. The recommendations from that study are to develop or expand vegetative buffers between the residences and the lake, install berms or other retention devices where vegetative buffers are not feasible and to remove nuisance waste and debris from specific locations. A stormwater treatment basin was installed by the County as part of the 2001 reconstruction of County Highway 61 (Myeron Rd.).

In-lake phosphorus concentrations are significantly worse than the MPCA shallow lake standard of (60µg/L) and the lake is therefore listed as impaired. In 2008 the lake did not meet the MPCA shallow lake standard of 1-m for sechi depth transparency and was identified as having a declining trend for this parameter. 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.

Louise 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 Louise Lake TMDL is 2015. This watershed is undergoing impaired watershed management as a result of its nutrient impairment.

