

Lake Status

Overall Strategy: Impaired Watershed Management

Water Quality Rating: C-: Secchi – 5.4 ft.; TP – 76 µg/L

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

Water Quality Trend: Secchi – Improving;
TP – No Trend

Shoreland Classification: Natural Environment

Subwatershed Land Cover: 11% developed, 34% forests and woodlanes, 5% grassland/shrubland/sparse vegetation, 17% lakes and open water wetlands, 20% planted or cultivated, 13% wetlands.

Resource Goals

Short Term Goals – Year 2015

- Achieve a water quality rating of at least C.
- Achieve a five-year mean summer phosphorus concentration at or below 65 µg/L ± 4%.
- Maintain a mean summer secchi depth no less than 3 ft.
- Establish an active Lake Association for teaming on lake management and education.
- Aquatic vegetation is established along 60% of the roadway adjacent to the lake (185th Street).
- Revise goals based on the CMSCWD Lake TMDL Study.

Long Range Goals - Year 2020

- Maintain a water quality rating of at least C.
- Achieve a five-year mean summer phosphorus concentration at or below 50 µg/L ± 4%.
- Maintain 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



BASIC FACTS

DNR ID	82005202
Section	27
Township	32
Range	20
Lake Area	72 acres
Subwatershed Area	419 acres
Outlet Elevation	941.75
Low Water Level	939.16 ('07)
High Water Level	943.04 ('03)
Ordinary High Water	N/A
100-Yr. Flood Elev	942.5 (FEMA)
Greatest Depth	16 ft.

Control Structures:

A road and culvert with a control structure separate this lake from Big Marine Lake

Fish Species:

Bass, Northern, Sunfish, Carp

Aquatic Nuisance Species:

None

CMSCWD References:

- WCD Water Monitoring Report ('08)
- DNR Lake Water Level Report
- CMSCWD Lake 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 Jellum's 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
- Roadside Revegetation Project
- Jellum's Lake Water Quality Restoration
- Water Quality Diagnostic Feasibility Study

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

Overall Assessment: Jellum's Lake

Jellum's Lake is a poor-quality lake with plans for potential development in the future. The lake outlets to Big Marine Lake. In-lake phosphorus concentrations commonly exceed the MPCA shallow lake standard of (60µg/L), and the lake is therefore listed as impaired. In 2008 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. 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 Jellum's Lake. 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 rearing walleye fry. Agricultural and development 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 Big Marine Lake if not properly managed.

Based on measured lake characteristics and land use in the lake's minor subwatershed, water quality modeling indicated that a substantial amount of phosphorus would need to be removed from the lake's system in order to achieve any significant water quality improvement. Without extensive restoration efforts, this lake will remain hypereutrophic and continue to have poor water quality.

Jellum's 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 Jellum's Lake TMDL is 2015. Jellum's Lake has not achieved 2010 goals for phosphorus or water quality rating, but it has achieved the 2010 goal of a mean summer secchi depth no less than 3 feet. 2010 goals have been moved to 2015 goals as appropriate and this watershed is undergoing impaired watershed management as a result of its nutrient impairment.

