

Lake Status

Overall Strategy: Routine Watershed Management

Water Quality Rating: D (2007): Secchi (2007) – 3.8 ft.; TP – N/A

Impairment: Not Impaired

Water Quality Trend: Secchi (2007) – No Trend; TP – N/A

Shoreland Classification: Natural Environment

Subwatershed Land Cover: 4% forests and woodlands, 2% grassland/shrubland/sparse vegetation, 19% lakes and open water wetlands, 60% planted or cultivated, 15% wetlands.



Resource Goals

Short Term Goals – Year 2015

- Achieve a five-year mean summer phosphorus concentration at or below 140 µg/L ± 4%.
- Maintain a mean summer secchi depth no less than 3 ft.
- Maintain District’s existing good relationship with Landowner and Land Manager for possible teaming on lake management and education opportunities.

Long Range Goals - Year 2020

- Achieve a five-year mean summer phosphorus concentration at or below 100 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

- Though there is no Lake Management Plan, the DNR occasionally uses the lake as a walleye rearing pond following years when the lake experiences winter kills.

BASIC FACTS

DNR ID	82003800
Section	18
Township	31
Range	20
Lake Area	38 acres
Subwatershed Area	186 acres
Outlet Elevation	N/A
Low Water Level	N/A
High Water Level	N/A
Ordinary High Water	N/A
100-Yr. Flood Elev	974.4 (FEMA)
Greatest Depth	11 ft

Control Structures:

Field Road Culvert

Fish Species:

Walleye

Aquatic Nuisance Species:

None

CMSCWD References:

WCD Water Monitoring Report ('07)

Implementation

Operational Priorities

Routine Watershed Management

Education

Routine Watershed Education Program

Regulatory

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

Projects

Current:

- Routine Watershed Water Quality Monitoring
- Routine Watershed Best Management Practices (BMP) Program
- Permitting Program

Future/Potential:

- None at this time.

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

Overall Assessment: Maple Marsh

Maple Marsh is a shallow lake completely surrounded by a large, private livestock grazing operation. There is no public access to the lake. In the past the lake has been subjected to considerable nutrient-laden runoff and erosion due to historic logging and farming practices. The lake likely has a high internal loading rate for phosphorus. When the District last monitored for in-lake phosphorus concentrations in 2001 concentrations were significantly worse than the MPCA shallow lake standard of (60µg/L). In 2007 the lake met the MPCA shallow lake standard of 1 m for sechi depth transparency.

Based on an Aerial Lakeshore Analysis study (1998), non-point source runoff has the greatest influence on the lake. The recommendations from that study are to exclude livestock from the lake, develop and expand a forested buffer strip around the lake and install minor erosion control. The grazing operation currently practices rotational grazing. The practice appears to help maintain healthy vegetation in the pastures draining to the lake especially when compared to typical feedlot operations; however, no studies have been completed on the benefits or impacts to the lake by this practice.

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. Without extensive restoration efforts, this lake will remain hypereutrophic and continue to have poor water quality. However, Maple Marsh has achieved the 2010 goal of a mean summer secchi depth no less than 3 feet since 1997 with the exception of two years (1998 – 1.6 feet; 2006 – 2.9 feet) based on the WCD Water Monitoring Reports. Currently, this lake is undergoing routine watershed management.

