Lake Status

Overall Strategy: Routine Watershed Management

Water Quality Rating: C: Secchi – 5.9 ft.;
TP (2007) – 22 µg/L

Impairment: Not Impaired

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

Shoreland Classification: Natural Environment

Subwatershed Land Cover:
18% developed, 19% forests and woodlands, 14% grassland/shrubland/sparse vegetation, 1% lakes and open water wetlands, 34% planted or cultivated, 14% wetlands.

Resource Goals

Short Term Goals – Year 2015

- Maintain a water quality rating of at least B.
- Maintain a five-year mean summer phosphorus concentration at or below 30 µg/L ± 4%.
- Maintain a mean summer secchi depth no less than 6 ft.
- Encourage an active Lake Association for teaming on lake management and education (including bog management and invasive specifies management).
- Manage upland areas to prevent lake degradation.
- Protect lakeshore property and lake access through management of floating bogs.

Long Range Goals - Year 2020

- Maintain a water quality rating of at least B.
- Maintain a five-year mean summer phosphorus concentration at or below 30 µg/L ± 4%.
- Establish rooted aquatic vegetation along 100% of the shoreline.
- Develop a Fisheries Management Plan with the Minnesota DNR.
- 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	82005600
Section	18
Township	32
Range	20
Lake Area	58 acres
Subwatershed Area	953 acres
Outlet Elevation	Landlocked
Low Water Level	952.55 ('07)
High Water Level	957.13 ('03)
Ordinary High Water	955.50
100-Yr. Flood Elev	958.7 (FEMA)
Greatest Depth	12 ft.

Control Structures:
None

Fish Species:
Sunfish, Bullhead, Bass

Aquatic Nuisance Species:
Curlyleaf Pondweed

CMSCWD References:
WCD Water Monitoring Report ('07 & '08)
German Lake Management Plan ('04)
DNR Lake Water Level Report

Implementation

Operational Priorities

Routine Watershed Management

Education

- Routine Watershed Education Program.
- Landowner education for monitoring and management of invasive exotic species such as curly leaf pondweed within the lake and common buckthorn in the watershed.
- Landowner education for monitoring and management of oak wilt.

Regulatory

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

Projects

Current:

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

Future/Potential:

- Invasive/exotic species management
- In-lake aeration**

* See *2010 Watershed Management Plan* Section V, *Lake Management Plans* for additional information on District lake management activities.
** If undertaken, to be conducted by Lake Association.

Overall Assessment: German Lake

German Lake is a shallow, landlocked lake with good water quality and limited development. The Lake is considered a high quality groundwater dependent resource and sensitive to any hydrologic alterations that could raise or lower water levels or increase duration of stormwater bounce. The lake and contributing watershed were annexed into the District in 2002. The District completed a detailed management plan for the lake and contributing watershed that was incorporated into the District Management Plan by amendment in 2004. Land use within the subwatershed is currently a mix of agriculture, undeveloped, single family residential, with a major gravel and sand mining operation.

An analysis of the lake's water quality, based on land use and land cover in the subwatershed, in-lake monitoring data, and water quality modeling, indicated that future development to proposed zoning density would result in a predicted 20% percent increase in phosphorus loading to the lake which in turn would lead to an increase of the in-lake total phosphorus concentration from the 32 µg/L, (observed in 2002) up to 34 µg/L.

German Lake has not met the 2010 goal of maintaining a water quality rating of at least B. In-lake phosphorus concentrations (2007 average was 22 µg/L) are better than average compared to other lakes within the North Central Hardwood Forest Ecoregion (interquartile range of 23 - 50 µg/L) and significantly better than the MPCA shallow lake standard of (60µg/L). Routine watershed management will continue to be implemented.