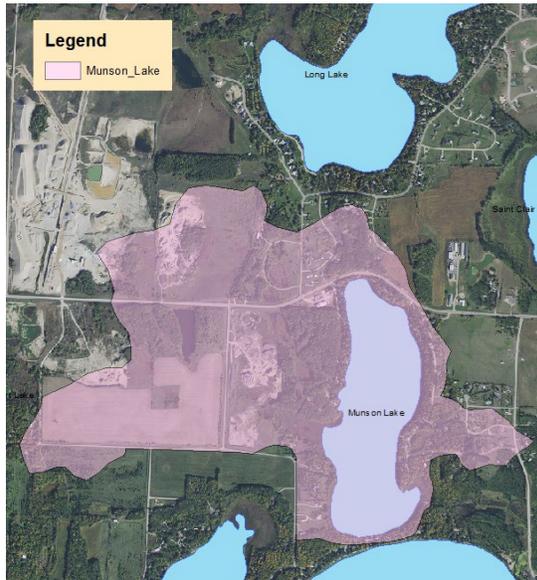


**Overall Strategy:**  
Maintain Water Quality

**Impairment:** Not listed as impaired

**Subwatershed Lake Cover/Use:**  
17.9% Open Water  
14.9% Developed  
3.7% Wetlands  
25.2% Cultivated Crops  
25.6% Forest  
12.8% Grassland



Water Quality	10-Year Average (2008-2017)	Trend
Secchi	10.8 ft.	Stable
Total Phosphorus	18 µg/L	Improving
Ortho Phosphate	4.2 µg/L	Stable
Chlorophyll-a	6.0 µg/L	Stable

**Short Term Goals - Year 2025**

- Achieve a 5-year mean summer phosphorus concentration at or below 20 µg/L ± 4%
- Maintain mean summer Secchi depth no less than 10ft

**Long Range Goals – Year 2035**

- Achieve a 5-year mean summer phosphorus concentration at or below 20 µg/L ± 4%
- Maintain mean summer Secchi depth no less than 10 ft

**Basic Facts**

<b>DNR ID/ Becker No</b>	03035700
<b>Township(s)</b>	Lake View (Sec 5,8)
<b>Lake Classification</b>	Rural Development
<b>Lake Area</b>	133.83 acres
<b>Littoral Area</b>	48 acres (35.87%)
<b>Sub-watershed Area</b>	748 acres
<b>Shoreline Length</b>	2.34 miles
<b>Inlet(s)</b>	None
<b>Outlet(s)</b>	1 (Wetland Stream to Lake Sallie)
<b>Control Structures</b>	None
<b>Highest Recorded*</b>	1333.99 (04/02/2003)
<b>Lowest Recorded*</b>	1333.99 (04/02/2003)
<b>Ordinary High Water Level*</b>	1333.99 ft.
<b>Recorded Range*</b>	Not Recorded
<b>Maximum Depth</b>	26 feet
<b>Main Fish Species</b>	Black crappie, Bluegill, Largemouth bass, Northern pike, Walleye
<b>Secondary Fish Species</b>	Brown/Yellow bullhead, Hybrid sunfish, Pumpkinseed, White sucker, Yellow perch
<b>MN DNR/ Private Fish Stocking</b>	Walleye
<b>Aquatic Invasive Species (2015)</b>	None listed
<b>Public Access Sites</b>	SE Shore off Twnshp Rd
<b>Marinas</b>	None
<b>Public Beach</b>	None
<b>References</b>	DNR Lake Finder, Becker County

\*Elevations NGVD 29

\*\* Elevations NAVD 88

**Overall Assessment**

Munson lake is a 134 acres recreational development lake with heavily developed shoreline. It is located just southeast of the City of Detroit Lakes city limits, between Long Lake and Lake Sallie. Munson Lake has a maximum depth of 26 feet and has a littoral area of approximately 48 acres (36% of lake surface area). The lake receives water primarily from stormwater runoff and groundwater interaction as there is no significant surface water inlets. Water flows out of the on the lake on the southeast corner through a series of historic MN DNR fisheries rearing ponds to Lake Sallie. A MN DNR public access construct of gravel is located near the outlet.

The shoreline topography is composed predominantly of steep slopes and bluffs draining toward the lake. During early development of these steep areas, wood retaining walls were constructed to alter the slope topography to allow building construction closer to the lake. In many areas the wood walls have begun to fail and are need to be removed and stabilized or in cases where building are too close, the walls are being reconstructed. In a shoreline survey of shoreline alteration, a total of 23 parcels containing retaining walls were counted.

Munson is classified as a mesotrophic lake with good water quality that supports a healthy fishery and allows many types of recreational use. Munson is dimictic, mixing in the spring in the fall, and remain well mixed in the upper 5-6 meters (16.5-19.5 feet). Water quality on Munson has been stable for the last 10 years with the exeption of total phosphorus level, which showed a 20% improvement from the previous ten-year period (1998-2007). Water clarity averages are nearly 11 feet with total phosphorus levels of 18ppb.

Because Munson's elongated shape it has a higher shoreline length to lake area ration, which allow more residential development, and increased developmental pressure, than a lake similar to its size with a round shape. As such Munson Lake has 1.44 acres of lake surface area for each parcel. Developmental pressure was apparent with a survey of shoreline alteration where 52% of the parcels were observed to have greatly of moderately altered shorelines. Only 24% of the parcel remained in a natural condition.

Land cover (excluding open water) of the contributing drainage area if primarily cultivated cropland and forested, both total 31% (190 acres) of area. Developed land accounts for 18% (110 acres), grassland 15% (94 acres) and wetland 4% (27 acres). Two gravel mining operations are located in the western portion of the drainage area.

**Implementation**

**Planned/Potential Projects:**

**Capital Improvement Projects:**

**Projects & Programs**

**Ongoing Programs:**

**Past Studies**