



# Minnesota Pollution Control Agency

520 Lafayette Road  
St. Paul, MN 55155-4194

# North Mayfield Lake, Clay County

National Lake Assessment Project (NLAP)

Sample Date: August 9, 2007

**Minnesota Lake ID:** 14-0029

**Area:** 35 acres

**Watershed Area:** 47,184 acres

**Ecoregion:** North Central Hardwoods Forests (NCHF)

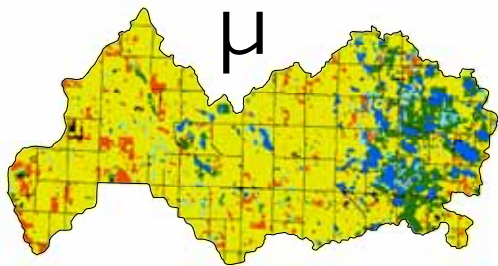
**NLAP ID:** 0558

**Maximum Depth:** 13 ft

**Mean Depth:** 8 ft



North Mayfield Land Use



**Legend**

- Developed
- Cultivated (Ag)
- Pasture & Open
- Forest
- Water
- Wetland



Minnesota 2000 Level 1 Landsat Landcover  
Classification.img

University of Minnesota Remote & Geospatial Analysis Lab

Land Use	N. Mayfield Lake Land Use %	NCHF Typical Land Use %
<b>Developed</b>	<b>4</b>	<b>2-9</b>
<b>Cultivated (Ag)</b>	<b>71</b>	<b>22-50</b>
<b>Pasture &amp; Open</b>	<b>7</b>	<b>11-25</b>
<b>Forest</b>	<b>9</b>	<b>6-25</b>
<b>Water &amp; Wetland</b>	<b>9</b>	<b>14-30</b>
<b>Feedlots (#)</b>	<b>21</b>	

**North Mayfield Lake 2007 as compared to typical range for NCHF ecoregion reference lakes. Single NLAP visit based on U.S. Environmental Protection Agency protocol as compared to typical range for summer-means.**

Parameter	N. Mayfield Lake	NCHF
Number of reference lakes	1	43
Total Phosphorus (µg/L)	17	23 - 50
Chlorophyll-a (µg/L)	7	5 - 22
Secchi Disk (feet)	8.2	4.9 - 10.5
(meters)	2.5	(1.5 - 3.2)
Total Kjeldahl Nitrogen (mg/L)	1.2	< 0.60 - 1.2
Alkalinity (mg/L)		75 - 150
Color (Pt-Co U)	15	10 - 20
pH (SU)	7.6	8.6 - 8.8
Chloride (mg/L)	9	4 - 10
Total Suspended Solids (mg/L)		2 - 6
Total Suspended Inorganic Solids (mg/L)		1 - 2
Conductivity (umhos/cm)	374	300 - 400
TN:TP ratio	60:1	25:1 - 35:1
Microcystin(µg/L)	Near Shore	<10 Low Risk
WHO risk Category*	Index Site	10-20 Moderate Risk
	<0.15	20- 200 High Risk

\* Guidelines for safe recreational water environments (World Health Organization, 2003)

µg/L = micrograms per liter  
mg/L = milligrams per liter

umhos/cm = micromhos per centimeter

Pt-Co-U = Platinum Cobalt Units  
SU = Standard Units

**Mixing Status: mixed with no temperature layer (polymictic)**

**Temperature and Dissolved Oxygen Profile for North Mayfield Lake. August 9, 2007.**  
Temp. (C) and DO (mg/L)

