



# Minnesota Pollution Control Agency

520 Lafayette Road  
St. Paul, MN 55155-4194

# Darling Lake, Douglas County

National Lake Assessment Project (NLAP)

Sample Date: July 19, 2007

**Minnesota Lake ID:** 21-008000

**Area:** 1,156 acres

**Watershed Area:** 11,213 acres

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

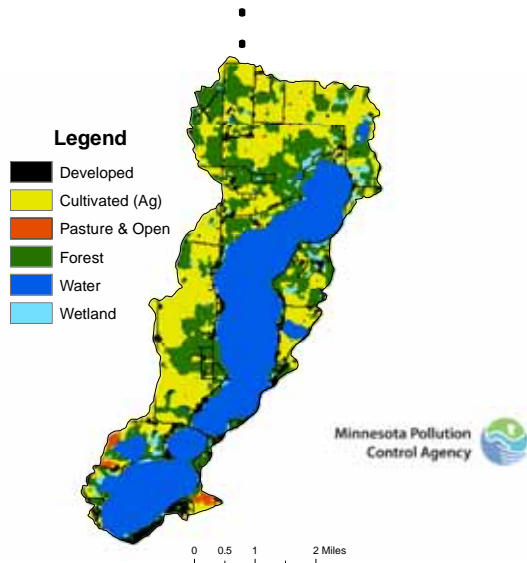
**NLAP ID:** 1390

**Maximum Depth:** 62 ft

**Mean Depth:** 35 ft



Darling Land Use  
Douglas County



Land Use	Darling Lake Land Use %	NCHF Typical Land Use %
<b>Developed</b>	<b>9</b>	<b>2-9</b>
<b>Cultivated (Ag)</b>	<b>30</b>	<b>22-50</b>
<b>Pasture &amp; Open</b>	<b>1</b>	<b>11-25</b>
<b>Forest</b>	<b>23</b>	<b>6-25</b>
<b>Water &amp; Wetland</b>	<b>37</b>	<b>14-30</b>
<b>Feedlots (#)</b>	<b>7</b>	

Minnesota 2000 Level 1 Landsat Landcover  
Classification.img

University of Minnesota Remote & Geospatial Analysis Lab

**Darling 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	Darling	NCHF
Number of reference lakes	1	43
Total Phosphorus ( $\mu\text{g/L}$ )	15	23 - 50
Chlorophyll-a ( $\mu\text{g/L}$ )	6	5 - 22
Secchi Disk (feet)	4.9	4.9 - 10.5
(meters)	1.5	(1.5 - 3.2)
Total Kjeldahl Nitrogen (mg/L)	0.6	< 0.6 - 1.2
Alkalinity (mg/L)		75 - 150
Color (Pt-Co U)	10	10 - 20
pH (SU)	8.7	8.6 - 8.8
Chloride (mg/L)	16	4 - 10
Total Suspended Solids (mg/L)		2 - 6
Total Suspended Inorganic Solids (mg/L)		1 - 2
Conductivity ( $\mu\text{mhos/cm}$ )	352	300 - 400
TN:TP ratio	37:1	25:1 - 35:1
Microcystin( $\mu\text{g/L}$ )	Near Shore	<10 Low Risk
WHO risk Category*	Index Site	10-20 Moderate Risk
	0.2	20- 200 High Risk

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

$\mu\text{g/L}$  = micrograms per liter  
 mg/L = milligrams per liter

$\mu\text{mhos/cm}$  = micromhos per centimeter

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

**Mixing Status: thermally stratified (dimictic)**

**Temperature and Dissolved Oxygen Profile for Darling Lake. July 19, 2007.  
 Temp (C) and DO (mg/L)**

