



Minnesota Pollution Control Agency

520 Lafayette Road
St. Paul, MN 55155-4194

Norway Lake, Kandiyohi County

National Lake Assessment Project (NLAP)

Sample Date: August 22, 2007

Minnesota Lake ID: 34-0251

Area: 2,241 acres

Watershed Area: 20,828 acres

Ecoregion: North Central Hardwoods Forests (NCHF)

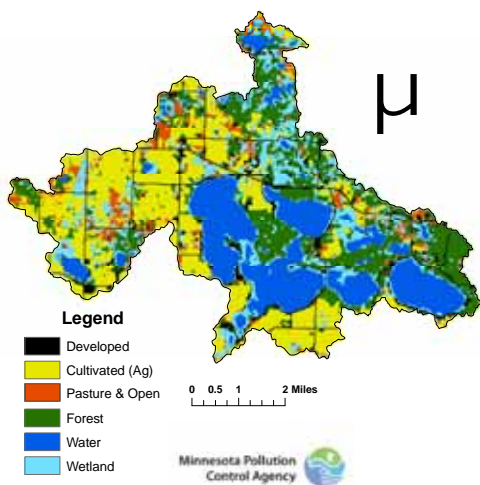
NLAP ID: 1383

Maximum Depth: 33 ft

Mean Depth: 12 ft



Norway Lake Land Use



Land Use	Norway Lake Land Use %	NCHF Typical Land Use %
Developed	6	2-9
Cultivated (Ag)	29	22-50
Pasture & Open	6	11-25
Forest	21	6-25
Water & Wetland	38	14-30
Feedlots (#)	24	

Minnesota 2000 Level 1 Landsat Landcover
Classification.img

University of Minnesota Remote & Geospatial Analysis Lab

Norway 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.
Data from Minnesota Department of Health (MDH) laboratory.

Parameter	Norway Lake	NCHF
Number of reference lakes	1	43
Total Phosphorus (µg/L)	46	23 - 50
Chlorophyll-a (µg/L)	21.9	5 - 22
Secchi Disk (feet)	3	4.9 - 10.5
(meters)	0.9	(1.5 - 3.2)
Total Kjeldahl Nitrogen (mg/L)	1.89	< 0.60 - 1.2
Alkalinity (mg/L)	160	75 - 150
Color (Pt-Co U)	20	10 - 20
pH (SU)	8.8	8.6 - 8.8
Chloride (mg/L)	16	4 - 10
Total Suspended Solids (mg/L)	9.2	2 - 6
Total Suspended Inorganic Solids (mg/L)	2.4	1 - 2
Conductivity (umhos/cm)	280	300 - 400
TN:TP ratio	41:1	25:1 - 35:1
Microcystin(µg/L)		<10 Low Risk
WHO risk Category*	Near Shore: 8.0 Index Site: 2.9	10-20 Moderate Risk 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 Norway Lake. August 22, 2007.
Temp. (C) and DO (mg/L)

