



Minnesota Pollution Control Agency

520 Lafayette Road
St. Paul, MN 55155-4194

Richey Lake, Cook County

National Lake Assessment Project (NLAP)

Sample Date: August 2, 2007

Minnesota Lake ID: 16-0643

Area: 104 acres

Watershed Area: 4,334 acres

Ecoregion: Northern Lakes and Forests (NLF)

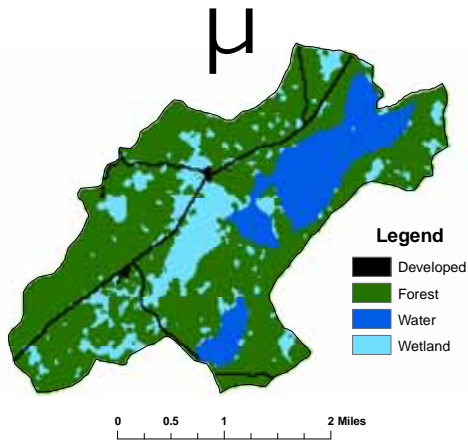
NLAP ID: 1018

Maximum Depth: 7 ft

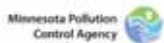
Mean Depth: 3 ft



Lake Richey Land Use
Cook County



Land Use	Richey Lake Land Use %	NLF Typical Land Use %
Developed	3	0 – 7
Cultivated (Ag)	0	<1
Pasture & Open	0	0 – 6
Forest	65	54 – 87
Water & Wetland	32	14 – 31
Feedlots (#)	0	



Minnesota 2000 Level 1 Landsat Landcover
Classification.img

University of Minnesota Remote & Geospatial Analysis Lab

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

Parameter	Richey Lake	NLF
Number of reference lakes	1	32
Total Phosphorus (µg/L)	36	14 – 27
Chlorophyll-a (µg/L)		4 – 10
Secchi Disk (feet)	3.3	8 -15
(meters)	1.0	2.4 – 4.6
Total Kjeldahl Nitrogen (mg/L)	1.2	0.4 – 0.75
Alkalinity (mg/L)		40 – 140
Color (Pt-Co U)	22	10 – 35
pH (SU)	7.7	7.2 – 8.3
Chloride (mg/L)	0.1	0.6 – 1.2
Total Suspended Solids (mg/L)		<1 – 2
Total Suspended Inorganic Solids (mg/L)		<1 - 2
Conductivity (umhos/cm)	35.6	50 – 250
TN:TP ratio	33:1	25:1 - 35:1
Microcystin(µg/L)	Near Shore	<10 Low Risk
WHO risk Category*	Index Site	10-20 Moderate Risk
	<0.15	<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 Richey Lake. August 2, 2007.
Temp. (C) and DO (mg/L)

