

LAKE: SILVER L (VLMP 21)
 TOWN: KATAHDIN IRN WKS TWP
 COUNTY: PISCATAQUIS

MIDAS: 922
 TRUE BASIN: 1
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

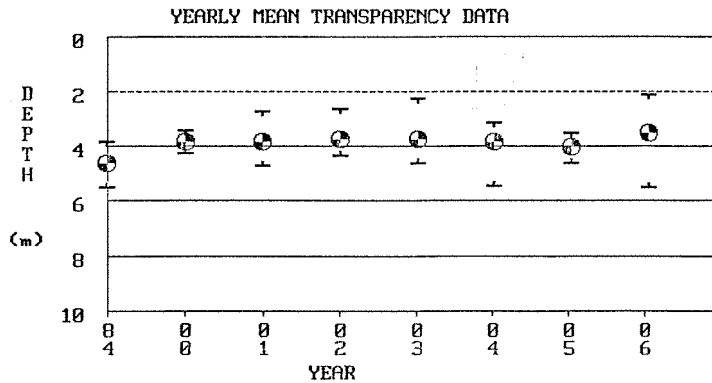
MAX. DEPTH: 9 m. (28 ft.)
 MEAN DEPTH: 2 m. (6 ft.)
 DELORME ATLAS #: 42
 USGS QUAD: SILVER LAKE
 IFW REGION F: Penobscot (Enfield)
 IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: ~122.0 ha. (301.5 a.)
 FLUSHING RATE: ~60.89 flushes/yr.
 VOLUME: ~2809181.0 cu. m. (2279 ac.-ft.)
 DIRECT DRAINAGE AREA: ~269.36 sq. km. (104.00 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. SILVER L has 1 True Basin.

SECCHI DISK TRANSPARENCY GRAPH:



SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visible at bottom of lake (or one reading used in calculation was visible)].

YEAR	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS /cm)	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPIC STATE INDICES			
					EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1984	32	6.50	10.0	-	7	-	-	-	3.8	4.6	5.5	5	1.5	1.5	1.5	-	-	-	-
2000	-	-	-	-	-	-	-	-	3.4	3.8	4.2	6	-	-	-	-	-	-	-
2001	36	6.92	12.0	32	13	-	12	-	2.7	3.8	4.7	6	9.8	9.8	9.8	-	-	-	-
2002	-	-	-	-	-	-	-	-	2.6	3.7	4.3	5	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	2.2	3.7	4.6	6	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	3.1	3.8	5.4	6	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	3.5	4.0	4.6	5	-	-	-	-	-	-	-
2006	37	6.91	9.8	28	9	-	-	-	2.1	3.5	5.5	5	1.1	1.1	1.1	-	-	-	-
SUMMARY:	35	6.73	10.6	30	10	-	12	-	2.1	3.9	5.5	8	1.1	4.1	9.8	-	-	-	-

LAKE: SILVER L (VLMP 21)
TOWN: KATAHDIN IRN WKS TWP
COUNTY: PISCATAQUIS

MIDAS: 922
*TRUE BASIN: 1
*SAMPLE STATION: 1

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

DEPTH	SAMPLE DATE					
	09/06/84		08/14/01		08/22/06	
<u>m</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>
0.0	-	-	22.8	8.1	18.3	8.9
1.0	15.0	8.6	22.1	8.1	17.3	9.0
2.0	15.0	8.4	21.5	8.0	16.9	8.9
3.0	15.0	8.3	20.7	7.5	16.8	8.9
4.0	14.9	8.3	18.0	3.5	16.8	9.0
5.0	14.9	8.4	16.0	0.1	16.6	8.9
6.0	14.9	8.5	14.2	0.1	15.8	6.5
7.0	14.9	8.6	10.5	0.1	15.5	5.2
8.0	-	-	10.1	0.1	15.2	1.9

WATER QUALITY SUMMARY

SILVER LAKE, KATAHDIN IRON WORKS TWP

Midas: 922, Sample Station # 1

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate water quality, track algal blooms, and determine water quality trends. This dataset does not include data for bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring data have been collected from Silver Lake since 1984. During this period, 2 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Silver Lake is considered to be average based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algae blooms on Silver Lake is low to moderate.

Water Quality Measures: Silver Lake is a moderately colored lake (average color 34 SPU) with an average SDT of 3.9m (13ft). Color can reduce the transparency of a lake, but does not effect the water quality. The range of water column TP for Silver Lake is 7-13 parts per billion (ppb) with an average of 10 ppb, while Chla ranges from 1.5-9.8 ppb with an average of 5.7 ppb. Recent dissolved oxygen (DO) profiles shows low to moderate DO depletion in deep areas of the lake. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal loading) is low to moderate. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

See the ME-DEP *Explanation of Lake Water Quality Monitoring Report* for measured variable explanations. Additional lake information can be obtained by contacting the Maine DEP at 207-287-3901 or the VLMP at 207-783-7733, or on the Internet at <http://www.pearl.maine.edu> and/or <http://www.maine.gov/dep/blwq/lake.htm>.

Filename: silv922, Revised: 3/05, By: jp