

LAKE: CHAMBERLAIN L (VLMP AWW)
 TOWN: T07 R13 WELS
 COUNTY: PISCATAQUIS

MIDAS: 2882
 TRUE BASIN: 1
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

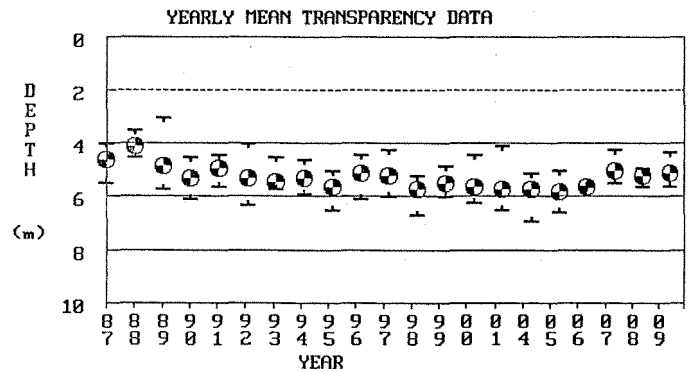
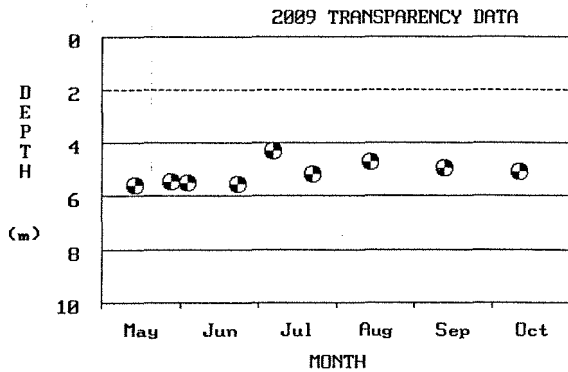
MAX. DEPTH: 47 m. (154 ft.)
 MEAN DEPTH: 10 m. (33 ft.)
 DELORME ATLAS #: 56
 USGS QUAD: MUD POND
 IFW REGION E: Moosehead Lake (Greenville)
 IFW FISH. MANAGEMENT: Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 4449.0 ha. (10993.3 a.)
 FLUSHING RATE: 0.50 flushes/yr.
 VOLUME: 583900416.0 cu. m. (473658 ac.-ft.)
 DIRECT DRAINAGE AREA: 205.08 sq. km. (79.18 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. CHAMBERLAIN L has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:



Note: 2009 graphs may indicate multiple readings taken on a given day.

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)			TROPHIC STATE INDICES			
					EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1987	-	-	-	-	-	-	-	-	4.0	4.6	5.5	4	-	-	-	-	-	-	-
1988	-	-	-	-	-	-	-	-	3.5	4.1	4.5	4	-	-	-	-	-	-	-
1989	-	-	-	-	-	-	-	-	3.0	4.8	5.7	6	-	-	-	-	-	50	-
1990	-	-	-	-	-	-	-	-	4.5	5.3	6.1	6	-	-	-	-	-	45	-
1991	-	-	-	-	-	-	-	-	4.4	4.9	5.6	6	-	-	-	-	-	49	-
1992	-	-	-	-	-	-	-	-	4.0	5.3	6.3	6	-	-	-	-	-	45	-
1993	-	-	-	-	-	-	-	-	4.5	5.4	5.7	6	-	-	-	-	-	44	-
1994	-	-	-	-	-	-	-	-	4.6	5.3	5.9	5	-	-	-	-	-	45	-
1995	-	-	-	-	-	-	-	-	5.0	5.6	6.5	5	-	-	-	-	-	43	-
1996	11	-	11.0	33	8	-	6	-	4.4	5.1	6.1	6	1.7	1.7	1.7	-	-	47	-
1997	-	-	-	-	-	-	-	-	4.2	5.2	6.0	6	-	-	-	-	-	46	-
1998	-	-	-	-	-	-	-	-	5.2	5.7	6.7	5	-	-	-	-	-	42	-
1999	-	-	-	-	-	-	-	-	4.8	5.5	6.0	6	-	-	-	-	-	43	-
2000	-	-	-	-	-	-	-	-	4.4	5.6	6.2	5	-	-	-	-	-	43	-
2001	29	7.36	8.0	33	6	-	-	-	4.1	5.7	6.5	6	2.3	2.3	2.3	-	-	42	-

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YEAR	MEAN	MEAN	MEAN	MEAN	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
	COLOR (SPU)	pH	ALK (mg/l)	COND. (uS /cm)	EPI CORE	SURF GRAB	BOT. GRAB	PRO. GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
2004	-	-	-	-	-	-	-	-	5.1	5.7	6.9	6	-	-	-	-	-	42	-
2005	-	-	-	-	-	-	-	-	5.0	5.8	6.6	6	-	-	-	-	-	41	-
2006	43	7.21	9.8	30	4	-	-	-	5.6	5.6	5.6	1	2.1	2.1	2.1	-	-	-	-
2007	-	-	-	-	-	-	-	-	4.2	5.0	5.5	6	-	-	-	-	-	48	-
2008	-	-	-	-	-	-	-	-	4.9	5.2	5.6	6	-	-	-	-	-	46	-
2009	-	-	-	-	-	-	-	-	4.3	5.1	5.6	6	-	-	-	-	-	47	-
SUMMARY:	27	7.28	9.6	32	6	-	-	6	3.0	5.3	6.9	21	1.7	2.0	2.3	-	-	45	-

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

DEPTH m	SAMPLE DATE					
	08/15/96		08/16/01		08/17/06	
	°C	ppm	°C	ppm	°C	ppm
0.0	21.4	9.1	22.5	8.7	19.2	8.9
1.0	20.7	9.1	22.4	8.7	19.2	8.9
2.0	20.4	9.1	22.2	8.7	19.2	8.9
3.0	20.2	9.1	22.1	8.7	19.2	8.9
4.0	20.1	9.1	22.0	8.7	19.2	8.9
5.0	20.0	9.1	21.9	8.7	19.1	8.9
6.0	19.9	9.0	21.7	8.6	19.1	8.8
7.0	19.9	9.0	20.9	8.7	19.1	8.8
8.0	19.7	9.0	19.9	8.2	19.0	8.9
9.0	19.5	9.0	18.0	8.2	18.5	8.7
10.0	16.9	8.7	17.0	8.1	17.4	8.7
11.0	16.9	8.6	16.5	8.1	16.5	8.6
12.0	15.6	8.4	15.9	8.1	14.6	8.4
13.0	15.0	8.4	14.5	8.1	13.6	8.4
14.0	14.1	8.3	14.2	8.1	12.0	8.4
15.0	13.4	8.4	14.2	8.1	11.5	8.6
16.0	12.8	8.5	-	-	11.3	8.6
17.0	-	-	13.8	8.1	-	-
18.0	12.0	8.5	-	-	-	-
19.0	-	-	13.0	8.2	-	-
20.0	11.1	8.6	-	-	10.4	8.8
21.0	-	-	12.2	8.3	-	-
23.0	-	-	11.9	8.3	-	-
25.0	8.8	9.1	9.2	8.8	9.9	8.9
27.0	8.3	8.9	-	-	-	-
30.0	-	-	8.2	8.9	9.2	8.9
31.0	-	-	-	-	9.1	8.4
35.0	-	-	7.9	8.8	-	-
39.0	-	-	7.5	8.1	-	-

WATER QUALITY SUMMARY

CHAMBERLAIN Lake, T 7 R 13 WELS

Midas: 2882, Sampling Station # 1

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

Water quality monitoring data for Chamberlain Lake have been collected since 1987. During this period, only 2 years of basic chemical information were collected, along with 17 years of continuous Secchi Disk Transparency (SDT) measures. In summary, the water quality of Chamberlain Lake is considered to be above average, based on measures of SDT, total phosphorus (TP), and chlorophyll-a (Chla). The potential for nuisance alga blooms on Chamberlain Lake is low.

Water Quality Measures: Chamberlain Lake is a non-colored lake (average color 20 SPU) with an average SDT of 5.3 meters (17.4 feet). The range of upper water column TP for Chamberlain Lake is 6 to 8 parts per billion (ppb) with an average of 7 ppb, while average Chla ranges from 1.7 to 2.3 ppb, with an average of 2.0 ppb. Recent dissolved oxygen (DO) profiles showed minimal DO depletion in the very deep (over 80 feet) areas of the lake. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal recycling) is low.

Comments: Maine DIF&W (Region G) manages Chamberlain Lake as a very significant coldwater fisheries resource. 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. Such is not a problem for Chamberlain Lake, which is one of the largest and deepest lakes in northern Maine. A grand assemblage of 19 native fish species inhabit Chamberlain Lake, including 9 minnow species, lake and round whitefish, white and longnose sucker, slimy sculpin, and threespined stickleback - in addition to burbot (cusk or lawyer), lake trout (toque), and brook trout (squaretail). The only warm-water fish present (introduced) into Chamberlain Lake is brown bullhead (horned pout, or as it is commonly called in neighboring Vermont, 'minister').

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

Filename: cham2882, Revised: 03/2006, By: dbh