

LAKE: ALFORD L (VLMP 13)
 TOWN: HOPE
 COUNTY: KNOX

MIDAS: 4798
 TRUE BASIN: 1
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

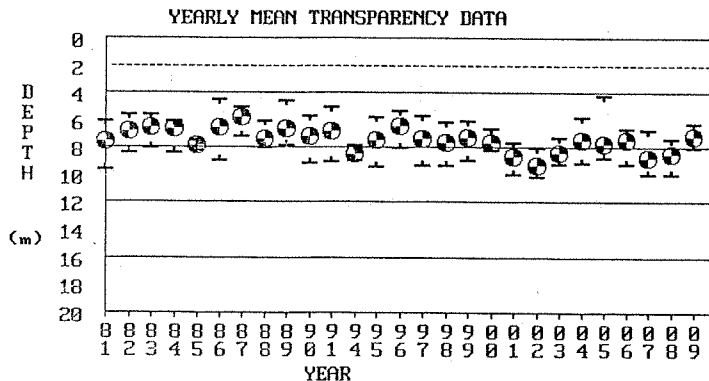
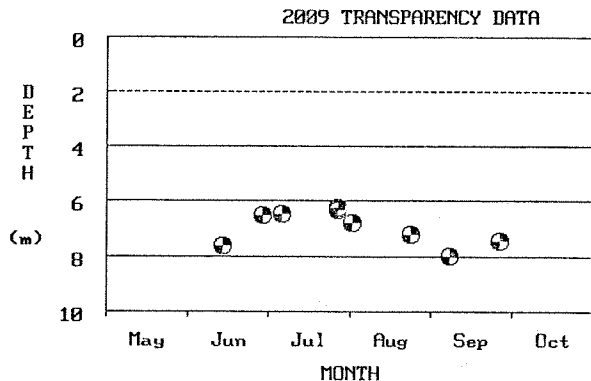
MAX. DEPTH: 24 m. (78 ft.)
 MEAN DEPTH: 9 m. (31 ft.)
 DELORME ATLAS #: 14
 USGS QUAD: WEST ROCKPORT
 IFW REGION B: Belgrade Lakes (Augusta)
 IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 241.0 ha. (595.5 a.)
 FLUSHING RATE: 0.59 flushes/yr.
 VOLUME: 19352400.0 cu. m. (15699 ac.-ft.)
 DIRECT DRAINAGE AREA: 9.61 sq. km. (3.71 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. ALFORD 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 visable at bottom of lake (or one reading used in calculation was visable)].

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
1981	-	-	-	-	-	-	-	-	6.0	7.5	9.5	3	-	-	-	-	-	-	-
1982	8	-	5.0	36	5	-	11	-	5.5	6.8	8.3	5	1.6	1.6	1.6	-	-	33	-
1983	-	-	-	-	-	-	-	-	5.5	6.5	8.0	5	-	-	-	-	-	35	-
1984	-	-	-	-	-	-	-	-	6.0	6.6	8.3	3	-	-	-	-	-	-	-
1985	10	6.90	4.0	25	3	-	11	-	7.4	7.8	8.2	3	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-	4.4	6.5	8.9	5	-	-	-	-	-	35	-
1987	-	-	-	-	-	-	-	-	5.0	5.8	7.1	2	-	-	-	-	-	-	-
1988	8	6.40	5.0	27	15	-	16	-	6.0	7.3	8.0	5	-	-	-	-	-	30	-
1989	-	-	-	-	-	-	-	-	4.6	6.6	7.8	6	-	-	-	-	-	34	-
1990	-	-	-	-	-	-	-	-	5.6	7.1	9.1	5	-	-	-	-	-	31	-
1991	8	6.98	6.0	29	4	-	-	-	5.0	6.8	9.0	5	-	-	-	-	-	33	-
1994	7	-	6.0	-	5	-	6	-	7.8	8.4	8.9	2	2.1	2.1	2.1	-	-	-	-
1995	-	-	-	-	-	-	-	-	5.8	7.4	9.4	6	-	-	-	-	-	29	-
1996	5	-	-	9	-	-	-	-	5.3	6.4	8.0	6	-	-	-	-	-	36	-
1997	-	-	-	-	-	-	-	-	5.6	7.3	9.3	6	-	-	-	-	-	30	-

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YEAR	MEAN	MEAN	MEAN	MEAN	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
	COLOR	pH	ALK	COND.	EPI	SURF	BOT.	PRO.								EPI PHOS			
	(SPU)		(mg/l)	(uS	/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC
1998	-	-	-	-	-	-	-	-	6.1	7.6	9.3	5	-	-	-	-	-	28	-
1999	13	-	13.0	31	5	-	-	-	6.0	7.2	8.9	6	1.1	1.1	1.1	-	-	30	-
2000	-	-	-	-	-	-	-	-	6.6	7.6	8.2	6	-	-	-	-	-	28	-
2001	-	-	-	-	-	-	-	-	7.6	8.6	9.9	6	-	-	-	-	-	23	-
2002	-	-	-	-	-	-	-	-	8.0	9.3	10.1	5	-	-	-	-	-	20	-
2003	-	-	-	-	-	-	-	-	7.2	8.3	9.2	5	-	-	-	-	-	24	-
2004	8	6.83	11.3	38	3	-	-	-	5.8	7.4	9.1	5	1.7	1.8	1.8	-	-	29	-
2005	-	-	-	-	-	-	-	-	4.2	7.7	8.7	4	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	6.6	7.4	9.2	3	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	6.7	8.7	9.9	4	-	-	-	-	-	-	-
2008	10	6.55	4.2	35	-	3	-	-	7.3	8.4	9.9	4	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	6.2	7.1	8.0	4	-	-	-	-	-	-	-
SUMMARY:	9	6.67	6.8	29	6	3	11	-	4.2	7.4	10.1	27	1.1	1.6	2.1	-	-	30	-

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

DEPTH	SAMPLE DATE															
	08/30/82		08/29/85		08/31/88		09/06/91		08/22/94		08/10/99		08/18/04			
	m	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	
0.0	-	-	21.3	8.7	22.5	9.7	21.0	8.8	22.0	8.9	22.4	8.2	22.5	8.3		
1.0	19.2	9.0	-	-	-	-	21.0	8.8	22.0	8.9	22.4	8.2	22.4	8.2		
2.0	19.2	9.0	21.3	8.6	22.5	9.6	21.0	8.8	22.0	8.8	22.4	8.3	22.4	8.2		
3.0	19.0	9.1	-	-	-	-	21.0	8.8	22.0	8.8	22.4	8.3	22.3	8.2		
4.0	19.0	9.1	21.3	8.5	22.3	9.6	20.9	8.8	22.0	8.9	22.4	8.3	22.3	8.2		
5.0	19.0	9.1	-	-	-	-	20.9	8.8	22.0	8.8	22.4	8.4	22.2	8.2		
6.0	19.0	9.0	21.4	8.5	22.1	9.5	20.8	8.8	21.9	8.9	22.3	8.3	22.1	8.3		
7.0	19.0	9.1	-	-	-	-	20.8	8.8	21.9	8.9	22.2	8.3	19.2	9.7		
8.0	18.8	9.0	21.3	8.5	21.5	9.8	20.3	8.6	17.4	11.0	17.6	11.2	15.3	11.3		
9.0	18.5	9.0	19.1	9.5	15.3	9.9	17.0	7.9	13.9	10.5	14.4	11.3	12.9	6.9		
10.0	14.5	8.7	16.3	8.3	14.0	7.8	13.0	5.9	12.8	8.5	12.3	10.0	11.3	4.2		
11.0	11.0	6.8	14.0	5.4	-	-	12.0	5.3	11.9	6.9	11.6	8.4	10.3	3.5		
12.0	10.0	5.6	13.0	4.7	12.0	6.2	11.0	4.4	11.2	6.0	10.8	6.7	9.7	3.1		
13.0	9.2	5.1	-	-	-	-	10.2	3.9	10.8	5.7	10.0	5.7	9.2	3.1		
14.0	8.8	4.9	11.0	3.5	10.9	4.8	9.9	3.5	10.8	5.2	9.9	5.3	9.0	3.0		
15.0	8.3	4.4	-	-	-	-	9.8	3.3	10.5	4.9	9.8	5.4	8.9	3.0		
16.0	8.2	4.2	10.3	2.8	10.5	4.8	9.3	3.2	-	-	9.7	5.2	8.8	2.9		
17.0	8.0	4.0	-	-	-	-	9.1	3.1	-	-	9.6	5.2	8.7	2.8		
18.0	8.0	3.9	10.0	2.4	10.2	4.3	9.0	2.9	-	-	9.6	5.1	8.7	2.8		
19.0	7.9	3.6	-	-	-	-	-	-	-	-	9.5	4.9	8.6	3.0		
20.0	7.9	3.2	9.8	1.8	10.1	4.2	9.0	2.8	10.0	4.6	9.5	4.9	8.6	2.9		
21.0	7.9	3.2	-	-	-	-	-	-	10.0	4.3	9.5	4.9	8.5	2.7		
22.0	-	-	-	-	-	-	9.0	2.6	-	-	9.5	0.3	8.5	2.6		
23.0	7.9	2.8	-	-	-	-	-	-	-	-	-	-	8.5	2.5		
24.0	-	-	-	-	10.0	2.9	8.9	2.4	-	-	-	-	-	-		

WATER QUALITY SUMMARY

ALFORD LAKE, HOPE

Midas: 4798, 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 Alford Lake since 1981. During this period, 7 years of basic chemical information was collected in addition to 21 years of Secchi Disk Transparencies (SDT). In summary, the water quality of Alford Lake is considered to be above average based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algae blooms on Alford Lake is low.

Water Quality Measures: Alford Lake is a non-colored lake (average color 8 SPU) with an average SDT of 7.3m (24ft). The range of water column TP for Alford Lake is 3-15 parts per billion (ppb) with an average of 6 ppb, while Chla ranges from 1.1-2.1 ppb with an average of 1.6 ppb. Recent dissolved oxygen (DO) profiles show low 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. 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>.

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