LAKE: SAND P (TACOMA LKS) (VLMP CWD)
TOWN: LITCHFIELD
COUNTY: KENNEBEC

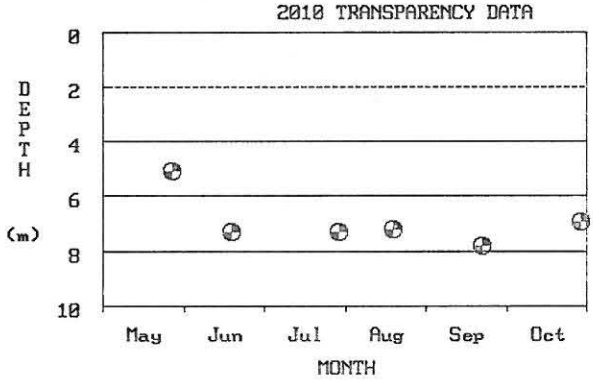
MIDAS: 5238
TRUE BASIN: 1
SAMPLE STATION: 1

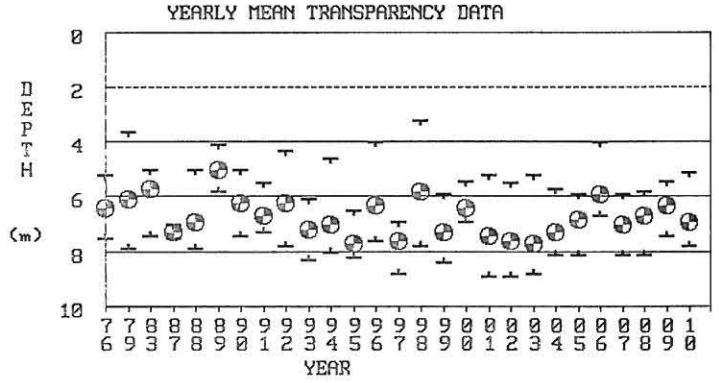
WHOLE LAKE INFORMATION
MAX. DEPTH: 25 m. (82 ft.)
MEAN DEPTH: 9 m. (31 ft.)
DELORME ATLAS #: 12
USGS QUAD: PURGATORY
IFW REGION B: Belgrade Lakes (Augusta)
IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS
SURFACE AREA: 106.0 ha. (261.9 a.)
FLUSHING RATE: 1.81 flushes/yr.
VOLUME: 8385286.0 cu. m. (6802 ac.-ft.)
DIRECT DRAINAGE AREA: 4.75 sq. km. (1.83 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. SAND P (TACOMA LKS) has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:





Note: 2010 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)].

	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS /cm)	TOTAL PHOS. MEANS (ppb) EPI CORE	SURF GRAB	BOT. GRAB	PRO. GRAB	SECCHI DISK (m.) MIN.	MEAN	MAX.	N	CHLOROPHYLL A(ppb) MIN.	MEAN	MAX.	TROPHIC STATE INDICES EPI PHOS C	G	SEC	CHL
YEAR																			
1976	-	-	-	-	7	-	-	-	5.2	6.4	7.5	6	1.9	3.8	11.0	33	-	36	46
1979	-	6.83	-	-	17	-	-	-	3.6	6.1	7.9	4	2.1	3.0	4.2	-	-	-	-
1983	15	7.20	13.5	-	6	-	3	-	5.0	5.7	7.4	5	1.0	1.0	1.0	-	-	42	-
1987	13	7.10	15.0	58	7	4	15	-	7.0	7.3	7.5	3	-	-	-	-	-	-	-
1988	-	6.90	13.5	-	8	-	5	-	5.0	6.9	7.9	5	-	-	-	-	-	32	-
1989	-	-	-	-	-	-	-	-	4.1	5.0	5.8	5	-	-	-	-	-	48	-
1990	20	6.92	15.5	57	7	-	-	-	5.0	6.2	7.4	6	-	-	-	32	-	37	-
1991	-	6.93	14.1	-	-	-	-	-	5.5	6.7	7.3	5	-	-	-	-	-	34	-
1992	-	7.02	15.0	-	-	-	-	-	4.3	6.2	7.8	5	1.5	3.2	6.7	-	-	37	42
1993	-	6.92	15.1	-	-	-	-	-	6.1	7.2	8.3	5	-	-	-	-	-	30	-
1994	12	-	-	-	-	-	-	-	4.6	7.0	8.0	5	-	-	-	-	-	32	-
1995	-	6.97	17.9	-	8	-	-	-	6.5	7.7	8.2	5	-	-	-	37	-	28	-
1996	-	-	-	-	-	-	-	-	4.0	6.3	7.6	5	-	-	-	-	-	37	-
1997	-	-	-	-	-	-	-	-	6.9	7.6	8.8	5	-	-	-	-	-	28	-
1998	-	6.79	14.8	-	8	-	-	-	3.2	5.8	7.8	6	2.1	3.2	5.9	37	-	41	41

LAKE: SAND P (TACOMA LKS) (VLMP CWD) MIDAS: 5238
TOWN: LITCHFIELD *TRUE BASIN: 1
COUNTY: KENNEBEC *SAMPLE STATION: 1

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS /cm)	TOTAL PHOS. MEANS (ppb) EPI CORE	SURF GRAB	BOT. GRAB	PRO. GRAB	SECCHI DISK (m.) MIN.	MEAN	MAX.	N	CHLOROPHYLL A(ppb) MIN.	MEAN	MAX.	TROPHIC STATE INDICES EPI PHOS C	G	SEC	CHL
1999	-	-	-	-	-	-	-	-	5.9	7.3	8.4	6	-	-	-	-	-	30	-
2000	-	-	-	-	-	-	-	-	5.4	6.4	6.9	4	-	-	-	-	-	-	-
2001	-	6.98	14.7	-	7	-	-	-	5.2	7.4	8.9	6	1.8	2.6	4.8	34	-	29	36
2002	-	-	-	-	-	-	-	-	5.5	7.6	8.9	6	-	-	-	-	-	28	-
2003	-	-	-	-	-	-	-	-	5.2	7.7	8.8	6	-	-	-	-	-	28	-
2004	7	6.99	14.8	-	7	-	-	-	5.7	7.3	8.1	6	2.4	2.9	4.5	35	-	30	39
2005	-	-	-	-	-	-	-	-	5.9	6.8	8.1	6	-	-	-	-	-	33	-
2006	17	7.48	17.5	97	8	-	-	-	4.0	5.9	6.7	6	-	-	-	-	-	40	-
2007	-	7.00	17.5	-	6	-	-	-	5.9	7.0	8.1	6	2.1	3.1	4.3	29	-	32	41
2008	-	-	-	-	-	-	-	-	5.8	6.7	8.1	6	-	-	-	-	-	34	-
2009	-	-	19.5	-	-	-	-	-	5.4	6.3	7.4	5	-	-	-	-	-	37	-
2010	-	-	19.2	-	6	-	-	-	5.1	6.9	7.8	6	1.8	2.1	2.6	30	-	32	31
SUMMARY:	14	6.98	15.8	71	8	4	8	-	3.2	6.7	8.9	27	1.0	2.8	11.0	33	-	34	39

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

	SAMPLE DATE															
DEPTH	08/07/07		09/17/07		08/12/08		09/16/08		08/03/09		09/08/09		08/18/10		09/21/10	
m	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm
0.0	25.7	7.9	19.0	8.4	21.4	9.0	20.8	8.7	25.6	8.0	23.6	8.8	24.6	8.5	18.8	9.3
1.0	25.6	7.9	19.0	8.4	21.5	8.9	20.7	8.7	24.5	8.0	22.6	9.0	24.2	8.5	18.8	9.3
2.0	25.2	7.9	19.0	8.3	21.5	8.9	20.6	8.7	23.8	8.3	21.5	9.0	24.0	8.5	18.8	9.3
3.0	25.1	7.9	19.0	8.2	21.5	8.8	20.5	8.6	23.4	8.4	21.1	9.1	24.0	8.6	18.7	9.3
4.0	25.1	7.9	19.0	8.2	21.6	8.8	20.5	8.6	20.9	8.9	21.0	9.0	23.9	8.6	18.7	9.3
5.0	22.7	9.5	19.0	8.2	21.6	8.8	20.5	8.5	18.3	6.5	20.9	8.9	23.8	8.6	18.7	9.3
6.0	16.3	12.8	18.9	8.1	21.5	8.7	20.2	8.4	14.5	6.0	16.0	4.6	19.2	10.7	18.7	9.3
7.0	13.1	13.4	18.8	8.1	12.8	10.7	14.7	7.0	11.3	5.6	12.9	3.3	14.4	8.0	18.6	9.3
8.0	10.4	11.0	12.7	8.6	10.1	9.3	11.3	7.7	9.4	6.3	10.4	4.2	11.5	6.4	15.6	5.5
9.0	9.1	8.8	10.5	6.0	8.4	8.3	9.0	6.3	8.2	6.7	8.6	5.0	9.7	5.8	11.2	4.5
10.0	7.8	7.7	8.8	5.5	7.3	7.5	7.7	5.8	7.3	7.0	7.9	5.4	8.6	6.0	9.0	4.9
11.0	6.7	8.1	7.0	6.1	6.6	7.1	6.7	6.1	6.7	7.5	7.1	6.3	7.6	7.0	7.7	5.6
12.0	5.9	7.9	6.1	6.2	5.7	7.1	6.0	5.6	5.8	7.7	6.1	7.1	6.8	7.6	6.9	6.1
13.0	5.4	7.9	5.6	6.3	5.3	6.3	5.3	5.4	5.4	7.9	5.5	7.5	6.3	7.9	6.4	7.0
14.0	5.0	7.9	5.2	6.1	5.2	6.0	5.0	5.1	5.1	7.9	5.2	7.6	5.9	8.0	6.1	7.0
15.0	4.8	8.1	4.9	5.8	4.8	5.5	4.7	3.9	4.8	7.9	5.0	7.5	5.7	8.0	5.9	7.0
16.0	4.6	8.1	4.7	5.6	4.5	4.8	4.4	3.1	4.7	7.7	4.8	7.3	5.5	7.6	5.7	7.0
17.0	4.5	7.6	4.5	5.0	4.3	3.8	4.2	2.8	4.5	7.5	4.6	7.1	5.4	7.2	5.6	6.6
18.0	4.4	7.1	4.5	4.2	4.3	3.3	4.2	1.7	4.4	7.2	4.5	6.2	5.3	6.6	5.5	6.2
19.0	4.3	6.6	4.4	3.0	4.2	2.6	4.2	0.6	4.4	6.4	4.4	4.3	5.3	5.6	5.4	5.5
20.0	4.3	5.7	4.4	2.0	4.1	2.0	4.1	0.2	4.3	5.6	4.4	3.0	5.2	4.3	5.3	4.5
21.0	4.3	4.8	4.4	0.8	4.1	0.7	4.1	0.2	4.3	4.7	4.4	1.5	5.2	2.7	5.3	2.4
22.0	4.3	3.6	4.4	0.2	4.1	0.4	4.1	0.2	4.3	2.6	4.4	0.5	5.2	1.4	5.2	0.7
23.0	4.2	0.9	4.3	0.2	4.1	0.4	4.1	0.2	4.3	0.6	4.3	0.3	5.1	0.4	5.2	0.3
24.0	4.2	0.3	4.3	0.1	4.1	0.3	4.1	0.2	4.3	0.3	4.3	0.2	5.1	0.3	5.1	0.3
25.0	4.2	0.3	4.3	0.1	4.1	0.3	4.1	0.2	4.3	0.3	4.3	0.2	5.1	0.3	5.1	0.2
26.0	4.2	0.2	4.3	0.1	4.1	0.3	4.1	0.2	4.3	0.3	-	-	5.1	0.2	5.1	0.2
27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

WATER QUALITY SUMMARY

SAND POND (of TACOMA LAKES), Litchfield
Midas: 5238, Station: 01 - Primary

The Cobbossee Watershed District (CWD) in conjunction with 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 bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring datasets for Sand Pond have been collected since 1976. During this period, 14 years of basic chemical information was collected, in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Sand Pond is considered to be above average, based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algal blooms on Sand Pond is low.

Water Quality Measures: Sand Pond is a non-colored lake (average color 14 SPU) with an average SDT of 6.7m (22ft). The normal range of water column TP for Sand Pond is 6 - 8 parts per billion (ppb) with an average of 8 ppb. One high TP of 17 was recorded in 1979 following an extreme rain event. Chla ranges from 1.0 - 11.0 ppb with an average of 2.8 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.

Sand Pond, Litchfield, is managed by the Maine Department of Inland Fish and Wildlife as both a warm water and cold water fishery. Oxygen levels below 5 parts per million (ppm) stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species. Sand Pond does experience oxygen levels below 5 ppm in a small portion of the deeper, colder waters.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be obtained by contacting CWD at 207-377-2234 or ME-DEP at 207-287-3901 or VLMP at 207-783-7733. Additional lake information can be found on the Internet at http://www.lakesofmaine.org/ and/or http://www.maine.gov/dep/blwq/lake.htm.

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