

LAKE: BUKER P (VLMP CWD)
 TOWN: LITCHFIELD
 COUNTY: KENNEBEC

MIDAS: 5242
 TRUE BASIN: 1
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

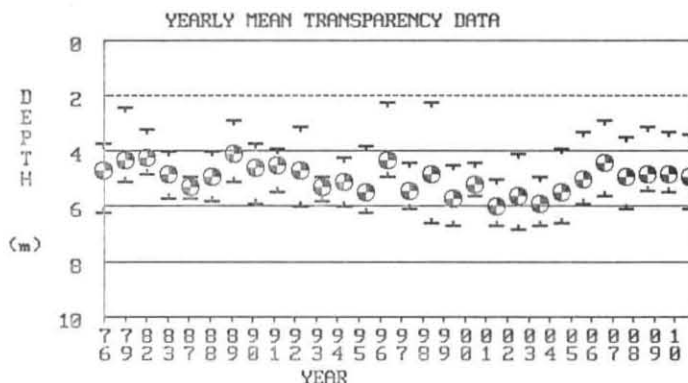
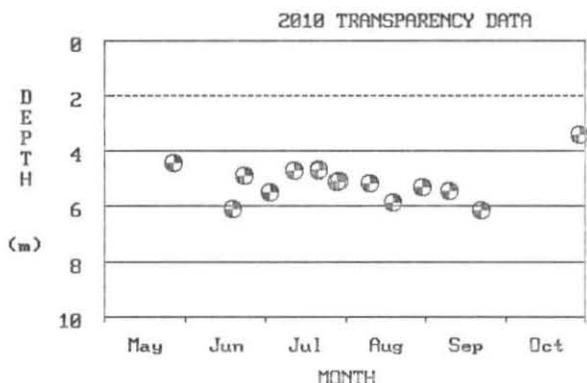
MAX. DEPTH: 9 m. (28 ft.)
 MEAN DEPTH: 3 m. (10 ft.)
 DELORME ATLAS #: 12
 USGS QUAD: PURGATORY
 IFW REGION B: Belgrade Lakes (Augusta)
 IFW FISH. MANAGMENT: Warmwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 31.0 ha. (76.6 a.)
 FLUSHING RATE: 13.85 flushes/yr.
 VOLUME: 858879.3 cu. m. (697 ac.-ft.)
 DIRECT DRAINAGE AREA: 2.48 sq. km. (0.96 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. BUKER P 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)].

YEAR	MEAN COLOR	MEAN pH	MEAN ALK	MEAN COND.	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
	(SPU)		(mg/l)	(uS	EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
				/cm)	CORE	GRAB	GRAB	GRAB											
1976	-	-	-	-	12	-	-	-	3.7	4.7	6.2	6	2.1	7.0	22.4	45	-	52	62
1979	-	6.78	-	-	21	-	-	-	2.4	4.3	5.1	4	1.9	4.1	7.0	-	-	-	-
1982	-	-	-	-	-	-	-	-	3.2	4.2	4.8	3	-	-	-	-	-	-	-
1983	25	7.35	15.0	-	6	-	25	-	4.0	4.8	5.7	5	1.4	1.4	1.4	-	-	50	-
1987	17	7.10	13.0	65	9	10	23	-	4.9	5.3	5.7	3	-	-	-	-	-	-	-
1988	-	6.95	15.5	-	16	-	-	-	4.0	4.9	5.8	5	-	-	-	-	-	49	-
1989	-	-	-	-	-	-	-	-	2.9	4.1	5.1	5	-	-	-	-	-	59	-
1990	30	6.92	16.7	58	9	-	-	-	3.7	4.6	5.9	6	-	-	-	40	-	53	-
1991	-	6.84	13.7	-	-	-	-	-	3.9	4.5	5.5	5	-	-	-	-	-	54	-
1992	17	7.07	15.6	71	-	-	-	-	3.1	4.7	6.0	5	2.1	3.6	7.1	-	-	52	44
1993	-	6.92	15.0	-	-	-	-	-	4.9	5.3	5.8	5	-	-	-	-	-	45	-
1994	19	-	-	-	-	-	-	-	4.2	5.1	6.0	5	-	-	-	-	-	47	-
1995	-	6.85	18.7	-	10	-	-	-	3.8	5.5	6.2	6	-	-	-	43	-	43	-
1996	-	-	-	-	17	-	-	-	2.2	4.3	4.9	5	10.6	10.6	10.6	-	-	56	-
1997	-	-	-	-	-	-	-	-	4.4	5.4	6.1	6	-	-	-	-	-	44	-

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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	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1998	-	6.64	13.5	-	11	-	-	-	2.2	4.8	6.6	6	1.6	4.3	8.8	45	-	50	49
1999	-	-	-	-	-	-	-	-	4.5	5.7	6.7	6	-	-	-	-	-	42	-
2000	-	-	-	-	-	-	-	-	4.4	5.2	5.6	6	-	-	-	-	-	46	-
2001	-	6.96	13.4	-	8	-	-	-	5.0	6.0	6.7	6	2.3	3.9	7.6	37	-	39	46
2002	-	-	-	-	-	-	-	-	4.1	5.6	6.8	6	-	-	-	-	-	43	-
2003	-	-	-	-	-	-	-	-	4.9	5.9	6.7	6	-	-	-	-	-	40	-
2004	8	6.97	14.8	-	10	-	-	-	3.9	5.5	6.6	6	2.5	6.1	8.8	41	-	43	58
2005	-	-	-	-	-	-	-	-	3.3	5.0	5.9	6	-	-	-	-	-	48	-
2006	29	7.55	20.5	107	12	-	-	-	2.9	4.4	5.6	6	-	-	-	-	-	55	-
2007	-	6.93	17.8	-	12	-	-	-	3.5	4.9	6.1	6	2.5	3.9	6.0	47	-	49	46
2008	-	6.90	17.0	-	31	-	-	-	3.1	4.8	5.4	5	3.4	3.4	3.4	-	-	50	-
2009	-	-	19.9	-	-	-	-	-	3.3	4.8	5.5	5	-	-	-	-	-	50	-
2010	-	-	21.7	-	9	-	-	-	3.4	4.9*	6.1	6	2.4	2.9	4.4	40	-	-	39
SUMMARY:	21	6.94	16.4	75	13	10	24	-	2.2	5.0*	6.8	28	1.4	4.6	22.4	42	-	48	49

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

DEPTH m	SAMPLE DATE															
	08/07/07		09/14/07		08/12/08		09/16/08		08/03/09		09/08/09		08/18/10		09/21/10	
	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm
0.0	26.3	7.7	20.0	8.2	20.4	9.4	20.4	8.3	24.9	8.1	22.9	8.9	24.9	8.4	18.4	9.0
1.0	25.4	7.7	20.0	8.2	20.4	9.4	20.1	8.2	24.8	8.0	22.0	9.0	24.5	8.4	18.4	9.0
2.0	25.2	7.7	19.9	8.2	20.4	9.4	20.0	8.1	22.4	8.5	20.9	9.0	24.2	8.5	18.3	9.0
3.0	24.6	7.4	19.7	8.2	19.1	6.5	19.6	7.1	18.6	6.7	20.5	8.0	24.1	8.3	18.3	9.0
4.0	19.8	11.0	19.6	8.0	18.5	6.5	18.3	4.2	16.1	3.8	17.5	1.2	22.1	8.7	18.3	9.0
5.0	14.7	8.3	18.9	6.9	14.4	3.8	14.8	0.2	12.6	1.1	13.3	0.7	16.3	2.6	18.0	8.6
6.0	11.1	0.3	14.1	0.9	10.9	0.5	10.9	0.2	9.7	0.3	10.3	0.2	10.9	2.6	14.2	2.7
7.0	9.6	0.2	11.3	0.3	8.9	0.3	9.2	0.2	8.6	0.3	9.1	0.2	9.7	0.3	10.6	0.3
8.0	8.8	0.2	9.9	0.2	7.7	0.3	8.6	0.2	8.2	0.2	9.0	0.2	9.0	0.3	9.6	0.2
9.0	-	-	-	-	7.5	0.3	8.4	0.1	8.0	0.2	8.7	0.2	8.7	0.2	9.3	0.2

WATER QUALITY SUMMARY

Buker Pond, Litchfield

Midas: 5242, Basin: 1

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 data for Buker Pond has been collected since 1976. During this period, 10 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Buker Pond is considered average based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algal blooms on Buker Pond is medium to high.

Water Quality Measures: Buker Pond is a non-colored lake (average color 22 SPU) with an average SDT of 5.0 m (16.5 ft). The range of water column TP for Buker Pond is 6 - 21 parts per billion (ppb) with an average of 12 ppb. Chla ranges from 1.4 - 22.4 ppb with an average of 5.0 ppb. Recent dissolved oxygen (DO) profiles show moderate DO depletion in deep areas of the lake. The potential for phosphorus to leave the bottom sediments and become available to algae in the water column (internal loading) is moderate.

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>.

Filename: 5242buke, Revised: 3/05, By jp