

## WATER QUALITY SUMMARY

Big Bear Pond, Hartford  
Midas: 3624, Basin: 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 present 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 Big Bear Pond has been collected since 1977. During this period, 8 years of basic chemical information was collected, in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Big Bear 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 Big Bear Pond is average.

Water Quality Measures: Big Bear Pond is a non-colored lake (average color 13 SPU) with an average SDT of 5.8m (19ft). The range of water column TP for Big Bear Pond is 7-11 parts per billion (ppb) with an average of 9 ppb, while Chla ranges from 1.9-4.7 ppb with an average of 3.3 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.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the World Wide Web at: [pearl.spatial.maine.edu](http://pearl.spatial.maine.edu) and/or [state.me.us/dep/blwq/lake.htm](http://state.me.us/dep/blwq/lake.htm), or telephone ME-DEP at 207-287-3901 or VLMP at 207-225-2070.

Filename: bear3624, Revised: 2/00 , By lb

LAKE: BEAR P (BIG) (VLMP)  
 TOWN: HARTFORD  
 COUNTY: OXFORD

MIDAS: 3624  
 \*TRUE BASIN: 1  
 \*SAMPLE STATION: 1

WHOLE LAKE INFORMATION

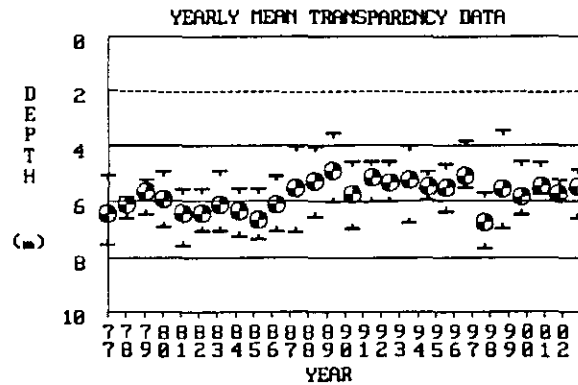
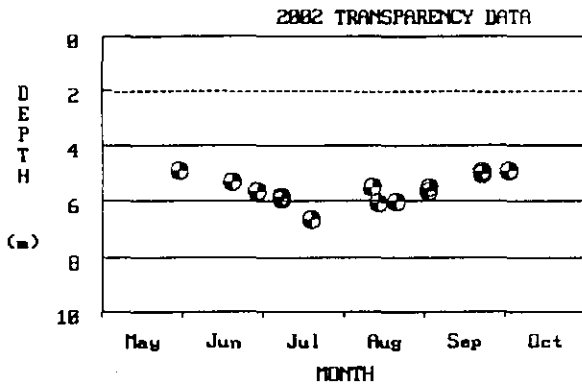
MAX. DEPTH: 9 m. (28 ft.)  
 MEAN DEPTH: 4 m. (12 ft.)  
 DELORME ATLAS #: 11  
 USGS QUAD: BUCKFIELD  
 IFW REGION B: Belgrade Lakes (Augusta)  
 IFW FISH. MANAGMENT: Warmwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 131.0 ha. (323.7 a.)  
 FLUSHING RATE: 2.50 flushes/yr.  
 VOLUME: 4211018.1 cu. m. (3416 ac.-ft.)  
 DIRECT DRAINAGE AREA: 4.09 sq. km. (1.58 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. BEAR P (BIG) has 2 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:



Note: 2002 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

YEAR	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS/cm)	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A (Pdb)			TROPHIC STATE INDICES			
					EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1977	-	-	-	-	-	-	-	-	5.0	6.4*	7.5*	3	-	-	-	-	-	-	-
1978	10	6.90	9.0	38	-	-	-	-	5.8*	6.1*	6.6*	4	2.1	2.1	2.1	-	-	-	-
1979	-	-	-	-	-	-	-	-	5.2*	5.6*	6.4*	5	-	-	-	-	-	-	-
1980	15	6.80	9.0	15	10	-	-	-	4.8	5.9*	6.8*	5	3.2	3.2	3.2	-	-	-	-
1981	-	-	-	-	-	-	-	-	5.5*	6.4*	7.5*	6	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	5.5	6.4	7.0	6	-	-	-	-	-	-	36
1983	10	7.00	9.0	-	8	-	6	-	4.8	6.1	7.0	6	2.4	2.4	2.4	-	-	-	38
1984	-	7.00	7.0	-	-	-	-	-	5.5	6.3	7.2	6	3.0	3.0	3.0	-	-	-	37
1985	-	-	-	-	-	-	-	-	5.5	6.6	7.3	6	-	-	-	-	-	-	34
1986	12	7.00	8.0	20	9	-	12	-	5.0	6.1	7.0	6	-	-	-	-	-	-	38
1987	-	-	-	-	-	-	-	-	4.0	5.4	7.0	6	-	-	-	-	-	-	44
1988	8	6.60	8.0	27	11	-	-	-	4.0	5.2	6.5	6	-	-	-	-	-	-	46
1989	-	-	-	-	-	-	-	-	3.5	4.8	6.0	6	-	-	-	-	-	-	50
1990	15	7.17	12.0	26	-	-	18	9	4.5	5.7	6.9	5	1.9	2.5	2.9	-	-	-	42
1991	-	-	-	-	-	-	-	33	4.5	5.1	6.0	6	4.5	4.5	4.5	-	-	-	47
1992	-	-	-	-	-	-	-	-	4.5	5.3	6.0	6	-	-	-	-	-	-	45



## WATER QUALITY SUMMARY

### BEAR POND (LITTLE BEAR POND) HARTFORD

Midas: 3624, Sample Station # 2, True Basin 2

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 present water quality, track algae blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring data for Little Bear Pond has been collected since 1990. During this period, 7 years of basic chemical information was collected, in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Little Bear Pond is considered to be average, based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance alga blooms on Little Bear Pond is low.

Water Quality Measures: Little Bear Pond is a non-colored lake (average color 23 SPU) with an average SDT of 3.7\*m (12.3\*ft) (\*means Secchi Disk was visible all the way to bottom of lake. If the lake were deeper, SDT would be greater). The range of water column TP for Little Bear Pond is 9-13 parts per billion (ppb) with an average of 11 ppb (State average is 12 ppb), while Chla ranges from 1.7-5.3 ppb with an average of 3.3 ppb (State average is 4.8 ppb). Recent dissolved oxygen (DO) profiles show no 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

Little Bear Pond is a shallow cove that is part of Big Bear Pond. Inland Fisheries and Wildlife manages the entire pond as a warm-water fishery.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the World Wide Web at: [pearl.spatial.maine.edu](http://pearl.spatial.maine.edu) and/or [state.me.us/dep/blwq/lake.htm](http://state.me.us/dep/blwq/lake.htm), or telephone ME-DEP at 207-287-3901 or VLMP at 207-225-2070.

Filename: bea36242, Revised: 02, By: jp

LAKE: BEAR P (BIG) (VLMP)  
 TOWN: HARTFORD  
 COUNTY: OXFORD

MIDAS: 3624  
 \*TRUE BASIN: 2  
 \*SAMPLE STATION: 2

WHOLE LAKE INFORMATION

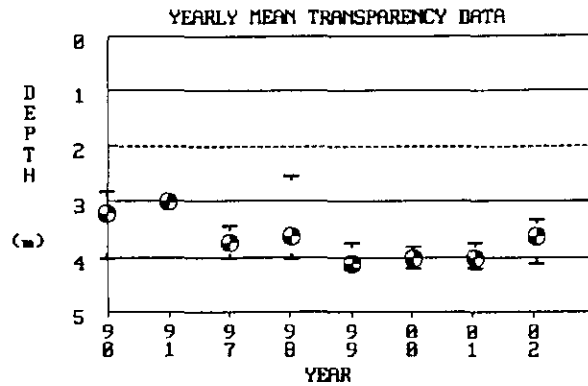
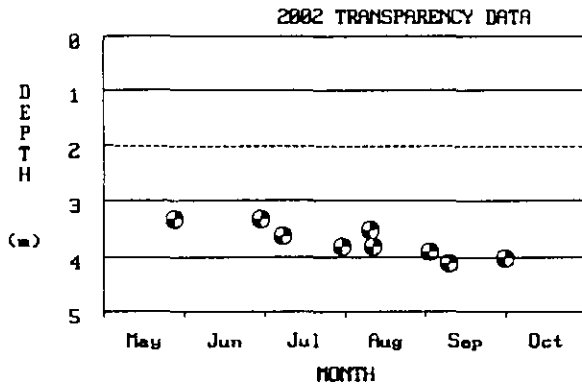
MAX. DEPTH: 9 m. (28 ft.)  
 MEAN DEPTH: 4 m. (12 ft.)  
 DELORME ATLAS #: 11  
 USGS QUAD: BUCKFIELD  
 IFW REGION B: Belgrade Lakes (Augusta)  
 IFW FISH. MANAGMENT: Warmwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 44.0 ha. (108.7 a.)  
 FLUSHING RATE: 11.10 flushes/yr.  
 VOLUME: 707557.3 cu. m. (574 ac.-ft.)  
 DIRECT DRAINAGE AREA: 13.70 sq. km. (5.29 sq. mi.)

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SECCHI DISK TRANSPARENCY GRAPHS:



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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
1990	25	7.02	14.5	29	9	-	-	-	2.8*	3.2*	4.0*	4	2.5	2.8	3.1	-	-	-	-
1991	-	-	-	-	11	-	-	-	3.0*	3.0*	3.0*	1	4.2	4.2	4.2	-	-	-	-
1997	23	-	-	-	11	-	-	-	3.4*	3.7*	4.0*	3	2.6	3.2	3.6	-	-	-	-
1998	26	-	-	-	13	-	-	-	2.5*	3.6*	4.0*	4	1.8	2.3	2.9	-	-	-	-
1999	20	-	-	-	11	-	-	-	3.7*	4.1*	4.2*	5	3.8	3.8	3.8	-	-	-	-
2000	20	-	-	-	12	-	-	-	3.8*	4.0*	4.2*	6	3.1	4.6	5.3	-	-	-	-
2001	24	6.63	7.0	36	11	-	-	-	3.7*	4.0*	4.2*	4	1.7	2.6	4.9	-	-	-	-
2002	25	-	-	-	11	-	-	-	3.3	3.6*	4.1*	5	3.2	6.6	13.0	-	-	-	-
SUMMARY:	23	6.79	10.8	33	11	-	-	-	2.5*	3.7*	4.2*	8	1.7	3.8	13.0	-	-	-	-

LAKE: BEAR P (BIG) (VLMP)  
 TOWN: HARTFORD  
 COUNTY: OXFORD

MIDAS: 3624  
 \*TRUE BASIN: 2  
 \*SAMPLE STATION: 2

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

DEPTH	SAMPLE DATE															
	08/14/91		08/21/97		08/30/98		08/27/00		08/12/01		08/16/01		08/11/02		09/02/02	
<u>m</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>	<u>°C</u>	<u>ppm</u>
0.0	25.0	8.6	23.5	7.8	22.5	8.4	24.0	8.8	26.5	8.1	25.7	8.0	25.0	8.6	21.5	7.9
1.0	25.0	8.5	23.5	7.8	22.5	8.4	23.0	9.0	26.5	8.0	25.4	8.1	24.0	8.5	21.5	8.0
2.0	24.5	8.5	23.5	7.8	22.0	8.4	22.5	9.0	26.5	8.1	25.0	8.1	23.5	8.4	21.0	8.0
3.0	24.0	9.0	23.0	7.7	21.5	8.4	21.5	8.8	26.0	8.2	25.0	8.0	23.0	8.0	21.0	7.9
4.0	-	-	-	-	19.0	6.0	-	-	22.0	99.9	-	-	21.0	4.1	-	-