

LAKE: SEBASTICOOK L (VLMP 19)
 TOWN: NEWPORT
 COUNTY: PENOBSCOT

MIDAS: 2264
 TRUE BASIN: 1
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

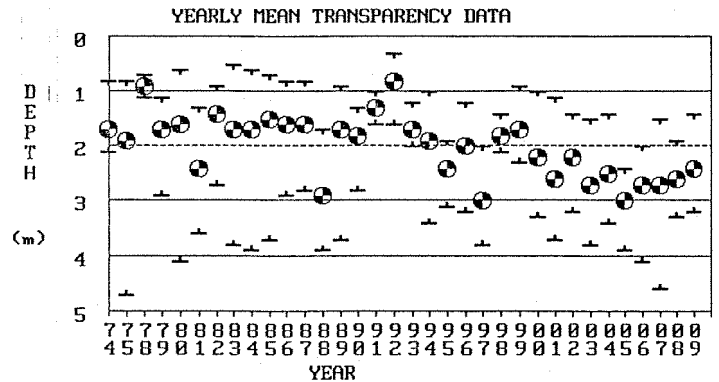
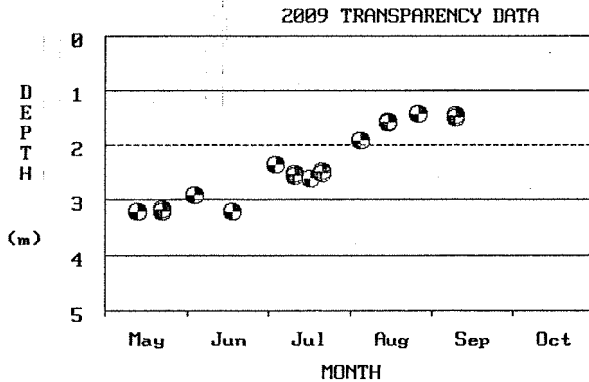
MAX. DEPTH: 15 m. (50 ft.)
 MEAN DEPTH: 6 m. (20 ft.)
 DELORME ATLAS #: 22
 USGS QUAD: PLYMOUTH
 IFW REGION B: Belgrade Lakes (Augusta)
 IFW FISH. MANAGEMENT: Warmwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 1735.0 ha. (4287.1 a.)
 FLUSHING RATE: 1.46 flushes/yr.
 VOLUME: 110600000.0 cu. m. (89718 ac.-ft.)
 DIRECT DRAINAGE AREA: 115.86 sq. km. (44.73 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. SEBASTICOOK 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 CORE	SURF GRAB	BOT. GRAB	PRO. GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1974	-	-	-	-	-	-	-	-	0.8	1.7	2.1	2	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	0.8	1.9	4.7	5	-	-	-	-	-	103	-
1977	-	-	-	-	-	-	-	-	-	-	-	-	25.1	25.1	25.1	-	-	-	-
1978	-	-	-	-	61	-	385	150	0.7	0.9	1.1	3	35.1	62.6	93.3	-	-	-	-
1979	50	7.50	30.0	118	-	-	431	277	1.1	1.7	2.9	7	15.2	30.1	53.7	-	137	110	104
1980	30	8.40	36.0	133	-	-	266	179	0.6	1.6	4.1	7	2.5	37.8	82.0	-	124	113	111
1981	30	7.90	19.0	80	-	-	225	149	1.3	2.4	3.6	4	7.3	28.5	43.9	-	119	-	103
1982	30	7.46	-	87	-	-	163	123	0.9	1.4	2.7	6	7.3	33.3	65.9	-	113	121	107
1983	30	7.60	31.0	47	-	-	551	322	0.5	1.7	3.8	6	4.4	43.4	68.1	-	142	110	115
1984	-	-	-	-	-	-	260	172	0.6	1.7	3.9	6	5.5	40.9	88.4	-	123	110	113
1985	30	7.90	35.0	91	-	-	103	74	0.7	1.5	3.7	6	6.0	38.1	85.7	-	98	117	111
1986	-	-	-	-	-	-	60	50	0.8	1.6	2.9	6	7.4	30.7	61.5	-	86	113	105
1987	-	-	-	-	-	-	60	49	0.8	1.6	2.8	5	9.1	36.6	55.1	-	86	113	110
1988	-	-	-	-	-	-	156	80	1.7	2.9	3.9	3	13.3	19.5	25.7	-	-	-	-
1989	-	-	-	-	-	-	181	114	0.9	1.7	3.7	4	6.0	30.3	54.5	-	-	-	-

WATER QUALITY SUMMARY

SEBASTICOOK Lake, Newport

Midas: 2264, Sample Station # 1

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

Water quality monitoring data for Sebasticook Lake (Sta. #1) have been collected since 1974. During this period, 25 years of basic chemical information were collected, along with a record 30 years of Secchi Disk Transparency (SDT) measures (continuous from 1978-05, in addition to 1974-75). In summary, the water quality of Sebasticook Lake is considered to be below average to poor, however greatly improved, based on historical vs. current measures of SDT, total phosphorus (TP), and chlorophyll-a (Chla). The potential for nuisance summertime algal blooms on Sebasticook Lake is moderate to high. Last year (2005) set a record for minimum summer water clarity exceeding 2.0 m!

Water Quality Measures: Sebasticook Lake is a lightly-colored lake (average color 29 SPU) with an average SDT of 1.9 meters (6.2 feet). The range of upper water column TP for Sebasticook Lake, since 1999, is 12 to 28 parts per billion (ppb) with an average of 20 ppb, while average Chla ranges from 2.5 to 93.3 ppb with an average of 30.4 ppb. Recent dissolved oxygen (DO) profiles show moderate 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 recycling) is moderate.

Comments: Maine DIF&W (Region B) manages Sebasticook Lake as a warmwater fishery. The fisheries section of the Maine Department of Marine Resources annually stock alewives in Sebasticook Lake as part of their anadromous fish restoration program.

Nutrient Management: Sebasticook Lake, once recognized as one of the most polluted lakes in Maine, remains on the Maine DEP/EPA 2004 303(d) list of waters non-attaining Maine state water quality standards. Water quality conditions in Sebasticook Lake have improved from a historical state of hyper-eutrophy (dystrophic) to a eutrophic state through a concerted effort by Maine DEP and Town/Lake Association stakeholders to reduce phosphorus loads (upgraded wastewater treatment in Corinna and Dexter, implementation of residential and agricultural runoff controls and adoption of best management practices, and reconstruction of the lake outlet dam to allow a 50% annual drawdown of the lake volume in the fall). A Sebasticook Lake TMDL study/report was prepared and US-EPA-approved in 2000-2001. This final report, with the EPA-New England review summary/approval letter, can be found on the following Maine DEP webpage: <http://www.maine.gov/dep/blwq/docmonitoring/tmdl2.htm>

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: seb22641, Revised: 03/2006, By: dbh

LAKE: SEBASTICOOK L (VLMP 19)
 TOWN: NEWPORT
 COUNTY: PENOBSCOT

MIDAS: 2264
 TRUE BASIN: 1
 SAMPLE STATION: 2

WHOLE LAKE INFORMATION

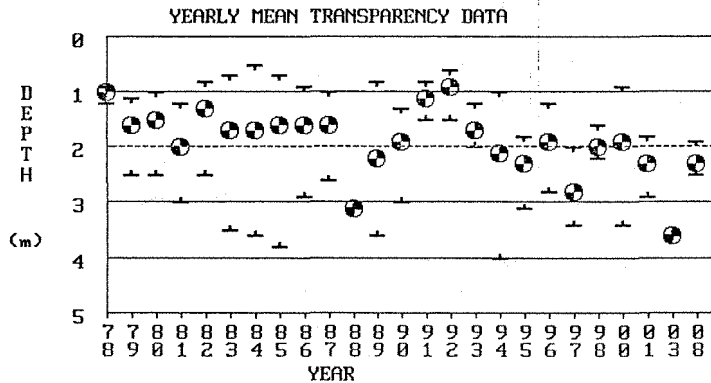
MAX. DEPTH: 15 m. (50 ft.)
 MEAN DEPTH: 6 m. (20 ft.)
 DELORME ATLAS #: 22
 USGS QUAD: PLYMOUTH
 IFW REGION B: Belgrade Lakes (Augusta)
 IFW FISH. MANAGMENT: Warmwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 1735.0 ha. (4287.1 a.)
 FLUSHING RATE: 1.46 flushes/yr.
 VOLUME: 110600000.0 cu. m. (89718 ac.-ft.)
 DIRECT DRAINAGE AREA: 115.86 sq. km. (44.73 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. SEBASTICOOK L has 1 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPH:



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	MEAN pH	MEAN ALK	MEAN COND.	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPIC STATE INDICES			
	(SPU)		(mg/l)	(uS)	EPI	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1972	-	-	-	-	-	-	60	62	-	-	-	3	-	-	-	-	-	-	-
1978	-	-	-	-	80	-	95	60	0.9	1.0	1.2	3	28.1	28.1	28.1	-	-	-	-
1979	-	-	-	-	-	-	71	55	1.1	1.6	2.5	7	-	-	-	-	89	113	-
1980	-	-	-	-	-	-	96	66	1.0	1.5	2.5	7	28.2	28.2	28.2	-	95	117	-
1981	-	-	-	-	-	-	394	53	1.2	2.0	3.0	4	-	-	-	-	88	-	-
1982	-	-	-	-	-	-	32	71	0.8	1.3	2.5	6	-	-	-	-	97	126	-
1983	-	-	-	-	-	-	149	71	0.7	1.7	3.5	6	-	-	-	-	97	110	-
1984	-	-	-	-	-	-	128	63	0.5	1.7	3.6	6	-	-	-	-	93	110	-
1985	-	-	-	-	-	-	48	38	0.7	1.6	3.8	5	54.6	54.6	54.6	-	79	113	-
1986	-	-	-	-	-	-	46	38	0.9	1.6	2.9	5	-	-	-	-	79	113	-
1987	-	-	-	-	-	-	59	42	1.0	1.6	2.6	4	-	-	-	-	82	-	-
1988	-	-	-	-	-	-	-	31	3.1	3.1	3.1	1	16.5	16.5	16.5	-	-	-	-
1989	-	-	-	-	-	-	-	39	0.8	2.2	3.6	2	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	37	29	1.3	1.9	3.0	3	-	-	-	-	-	-	-
1991	-	-	-	-	-	23	-	39	0.8	1.1	1.5	3	-	-	-	-	-	-	-

WATER QUALITY SUMMARY

SEBASTICOOK Lake, Newport

Midas: 2264, Sample Station # 2

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

Water quality monitoring data for Sebasticook Lake (Sta. #2) have been collected since 1972. During this period, 24 years of basic chemical information was collected, along with 24 years of Secchi Disk Transparency (SDT) measures (continuous from 1978-98, in addition to 1972 and 2000-03). In summary, the water quality of Sebasticook Lake is considered to be below average to poor, however greatly improved, based on historical vs. current measures of SDT, total phosphorus (TP), and chlorophyll-a (Chla). The potential for nuisance summertime algal blooms on Sebasticook Lake is moderate to high. Last year (2005) set a record for minimum summer water clarity exceeding 2.0 m!

Water Quality Measures: Sebasticook Lake is a lightly-colored lake (average color 29 SPU) with an average SDT of 1.9 meters (6.2 feet). The range of upper water column TP for Sebasticook Lake, since 2000, is 21 to 25 parts per billion (ppb) with an average of 23 ppb, while Chla ranges from 7.3 to 54.6 ppb with an average of 25.9 ppb. Recent dissolved oxygen (DO) profiles show moderate 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 recycling) is moderate.

Comments: Maine DIF&W (Region B) manages Sebasticook Lake as a warmwater fishery. The fisheries section of the Maine Department of Marine Resources annually stock alewives in Sebasticook Lake as part of their anadromous fish restoration program.

Nutrient Mangement: Sebasticook Lake, once recognized as one of the most polluted lakes in Maine, remains on the Maine DEP/EPA 2004 303(d) list of waters non-attaining Maine state water quality standards. Water quality conditions in Sebasticook Lake have improved from a historical state of hyper-eutrophy (dystrophic) to a eutrophic state through a concerted effort by Maine DEP and Town/Lake Association stakeholders to reduce phosphorus loads (upgraded wastewater treatment in Corinna and Dexter, implementation of residential and agricultural runoff controls and adoption of best management practices, and reconstruction of the lake outlet dam to allow a 50% annual drawdown of the lake volume in the fall). A Sebasticook Lake TMDL study/report was prepared and US-EPA-approved in 2000-2001. This final report, with the EPA-New England review summary/approval letter, can be found on the following Maine DEP webpage: <http://www.maine.gov/dep/blwq/docmonitoring/tmdl2.htm>

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: seb22642, Revised: 03/2006, By: dbh

