

LAKE: NARROWS P (LOWER) (VLMP CWD)
 TOWN: WINTHROP
 COUNTY: KENNEBEC

MIDAS: 103
 TRUE BASIN: 1
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

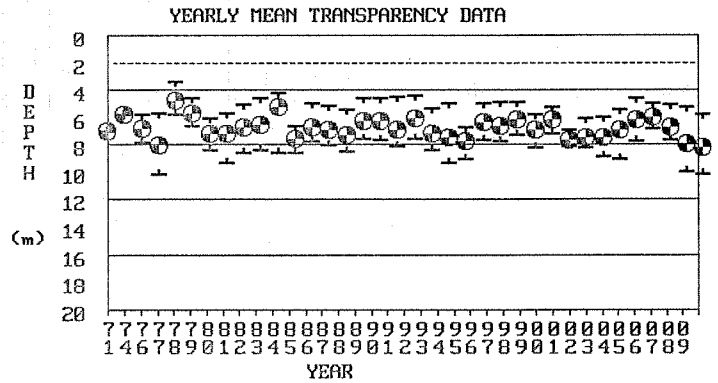
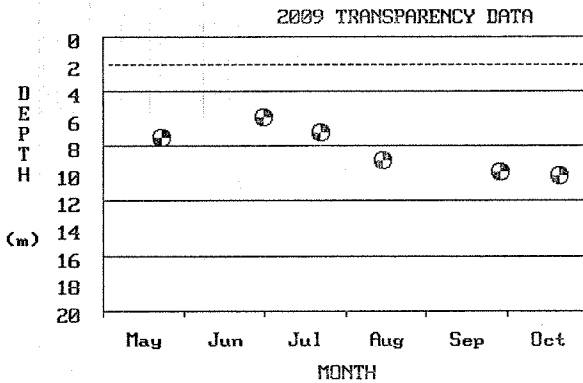
MAX. DEPTH: 32 m. (106 ft.)
 MEAN DEPTH: 9 m. (31 ft.)
 DELORME ATLAS #: 12
 USGS QUAD: WINTHROP
 IFW REGION B: Belgrade Lakes (Augusta)
 IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 84.0 ha. (207.6 a.)
 FLUSHING RATE: 1.58 flushes/yr.
 VOLUME: 7206064.0 cu. m. (5846 ac.-ft.)
 DIRECT DRAINAGE AREA: 3.49 sq. km. (1.35 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. NARROWS P (LOWER) 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	SURF	BOT.	PRO.	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1971	-	-	-	-	-	-	-	-	7.0	7.0	7.0	1	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	5.8	5.8	5.8	1	-	-	-	-	-	-	-
1976	-	-	-	-	8	-	-	-	5.8	6.8	7.8	6	1.5	3.1	4.6	35	-	33	41
1977	-	-	-	-	4	-	-	-	5.7	8.0	10.1	3	2.8	2.8	2.8	-	-	-	-
1978	-	-	-	-	14	-	-	-	3.3	4.7	5.8	3	2.3	4.2	6.0	-	-	-	-
1979	-	7.12	-	-	-	-	15	12	4.5	5.7	6.6	5	2.9	5.2	6.9	-	46	42	54
1980	-	-	-	-	-	-	15	10	6.0	7.1	8.3	3	2.0	2.7	3.4	-	-	-	-
1981	-	-	-	-	11	-	20	13	5.6	7.1	9.3	5	1.5	2.3	4.7	-	-	31	33
1982	-	-	-	-	8	-	9	8	5.0	6.7	8.5	7	1.2	2.1	2.7	-	-	34	31
1983	-	-	-	-	5	-	-	-	4.5	6.5	8.3	6	1.6	3.0	6.4	-	-	35	40
1984	20	7.18	-	-	-	-	-	-	4.2	5.2	8.5	5	-	-	-	-	-	46	-
1985	-	7.02	-	55	7	-	-	-	6.6	7.5	8.5	6	3.8	3.8	3.8	-	-	29	-
1986	-	7.30	-	-	11	-	-	-	4.9	6.7	7.7	6	-	-	-	-	-	34	-
1987	-	7.10	15.8	-	10	-	-	-	5.1	6.9	8.0	6	-	-	-	-	-	32	-
1988	-	7.00	13.5	-	8	-	-	-	5.4	7.2	8.4	6	-	-	-	-	-	30	-

LAKE: NARROWS P (LOWER) (VLMP CWD)
 TOWN: WINTHROP
 COUNTY: KENNEBEC

MIDAS: 103
 *TRUE BASIN: 1
 *SAMPLE STATION: 1

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

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.											
	(SPU)		(mg/l)	(uS	/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC
1989	-	-	-	-	-	-	-	-	4.5	6.2	7.5	5	-	-	-	-	-	37	-
1990	15	6.97	17.1	-	-	-	-	-	4.6	6.2	7.6	5	-	-	-	-	-	37	-
1991	-	7.00	17.1	-	8	-	-	-	4.4	6.9	8.1	5	2.1	3.4	6.6	37	-	32	43
1992	-	7.10	15.5	-	-	-	-	-	4.3	6.0	7.5	5	-	-	-	-	-	39	-
1993	-	6.99	16.7	-	-	-	-	-	5.3	7.1	8.3	6	-	-	-	-	-	31	-
1994	12	7.03	16.4	-	7	-	-	-	4.9	7.4	9.3	6	1.1	3.2	5.9	35	-	29	41
1995	-	-	-	-	-	-	-	-	6.7	7.7	9.0	6	-	-	-	-	-	28	-
1996	-	-	-	-	-	-	-	-	4.9	6.3	7.6	6	-	-	-	-	-	37	-
1997	-	6.91	17.3	-	8	-	-	-	4.8	6.6	7.7	5	1.5	2.5	4.1	36	-	34	36
1998	-	-	-	-	-	-	-	-	4.8	6.1	7.2	6	-	-	-	-	-	38	-
1999	-	-	-	-	-	-	-	-	5.8	6.9	8.2	6	-	-	-	-	-	32	-
2000	-	6.91	15.8	-	9	-	8	-	5.2	6.1	7.1	6	2.1	5.0	12.0	39	-	38	53
2001	-	-	-	-	-	-	-	-	6.9	7.6	8.1	6	-	-	-	-	-	28	-
2002	-	-	-	-	-	-	-	-	6.0	7.4	8.2	6	-	-	-	-	-	29	-
2003	12	7.12	16.9	-	8	-	-	-	5.9	7.4	8.8	5	1.7	3.1	4.1	-	-	29	-
2004	6	7.05	15.3	-	7	-	-	-	5.4	6.9	9.0	6	1.4	2.8	4.5	-	-	32	-
2005	-	-	-	-	-	-	-	-	4.6	6.1	7.7	5	-	-	-	-	-	38	-
2006	18	6.96	18.7	92	8	-	-	-	4.9	5.9	6.8	6	2.6	3.8	5.1	36	-	40	46
2007	-	-	-	-	-	-	-	-	5.0	6.7	7.6	6	-	-	-	-	-	34	-
2008	-	-	-	-	-	-	-	-	5.2	7.9	9.9	6	-	-	-	-	-	26	-
2009	-	-	20.1	-	7	-	-	-	5.8	8.2	10.1	6	1.2	1.8	3.0	32	-	25	28
SUMMARY:	14	7.04	16.6	73	8	-	13	11	3.3	6.7	10.1	36	1.1	3.2	12.0	36	46	34	41

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

DEPTH	SAMPLE DATE															
	09/28/06		08/03/07		09/07/07		08/13/08		09/08/08		09/12/08		08/14/09		09/28/09	
	m	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C
0.0	18.3	8.8	28.1	7.7	22.3	8.8	22.6	8.2	23.0	8.5	20.9	8.4	24.7	8.2	18.7	9.0
1.0	18.3	8.8	27.5	7.7	21.5	8.9	22.1	8.2	22.9	8.5	20.9	8.5	24.5	8.3	18.5	9.1
2.0	18.3	8.8	27.3	7.6	21.4	8.9	21.9	8.3	22.7	8.5	21.0	8.4	24.3	8.3	18.0	9.1
3.0	18.3	8.8	25.5	8.5	21.3	8.9	21.7	8.4	22.6	8.5	21.0	8.4	23.9	8.3	17.7	9.1
4.0	18.3	8.8	22.4	9.8	21.2	8.9	21.7	8.4	22.5	8.5	21.0	8.4	22.3	8.6	17.6	8.8
5.0	18.2	8.9	17.1	12.7	20.9	9.2	20.5	8.3	21.8	8.5	21.0	8.4	18.6	7.8	17.6	9.0
6.0	17.9	8.4	12.7	13.8	16.4	13.5	14.8	9.6	18.3	9.7	18.6	9.2	14.1	8.5	16.6	8.0
7.0	13.5	3.1	10.2	13.6	11.5	12.6	11.5	8.9	12.7	8.6	12.4	8.3	10.7	7.7	11.7	6.6
8.0	11.3	2.9	8.5	8.4	9.4	7.0	9.0	8.2	10.2	7.9	10.0	7.3	8.9	8.0	10.0	6.5
9.0	9.1	3.5	7.4	7.6	8.4	6.1	7.6	7.5	-	-	7.8	6.6	7.7	8.2	8.1	6.6
10.0	7.9	4.0	6.6	7.6	6.9	6.4	6.5	7.1	-	-	6.9	6.2	6.8	8.0	7.4	6.7
11.0	7.2	4.3	6.1	7.8	6.3	6.7	5.8	7.3	-	-	6.0	5.9	6.3	8.4	6.7	6.8
12.0	6.7	4.2	5.7	7.9	5.7	7.1	5.4	7.1	-	-	5.5	6.6	5.9	8.0	6.0	7.1
13.0	6.2	4.9	5.4	7.6	5.4	6.8	5.2	7.0	-	-	5.2	6.1	5.6	8.0	5.6	6.5
14.0	5.8	4.3	5.2	7.6	5.2	6.4	5.0	6.6	-	-	5.0	5.3	5.4	8.0	5.4	6.3
15.0	5.7	4.0	5.0	8.3	5.0	6.7	4.8	6.8	-	-	4.9	5.0	5.3	7.7	5.3	6.3
16.0	5.6	4.1	4.9	8.0	4.9	7.2	4.7	6.4	-	-	4.8	5.0	5.2	7.5	5.2	6.2
17.0	5.5	4.5	4.8	8.2	4.8	7.4	4.6	6.5	-	-	4.6	5.2	5.1	7.5	5.1	6.6
18.0	5.4	4.6	4.8	8.2	4.8	7.6	4.5	6.4	-	-	4.5	5.4	5.0	7.7	5.0	6.3

WATER QUALITY SUMMARY

Lower Narrows Pond, Winthrop

Midas: 103, Basin: 01

The Cobbossee Watershed District (CWD), in conjunction with the Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP), has collected 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 Lower Narrows Pond have been collected since 1971. During this period, 10 years of basic chemical information were collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Lower Narrows 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 Lower Narrows Pond is low.

Water Quality Measures: Lower Narrows Pond is a non-colored lake (average color 15 SPU) with an average SDT of 6.7 m (22.0 ft). The range of water column TP for Lower Narrows Pond is 4-14 parts per billion (ppb) with an average of 8 ppb, while Chla ranges from 1.1-12.0 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. 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 coldwater species.

See the 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, the Maine DEP at 207-287-3901 or the VLMP at 207-783-7733, or on the Web at <http://www.pearl.maine.edu> or <http://www.maine.gov/dep/blwq/lake.htm>.

Filename: narr0103, Revised: 12/2004, By jm