

LAKE: WHETSTONE P (VLMP 21)
 TOWN: BLANCHARD TWP
 COUNTY: PISCATAQUIS

MIDAS: 296
 TRUE BASIN: 1
 SAMPLE STATION: 1

WHOLE LAKE INFORMATION

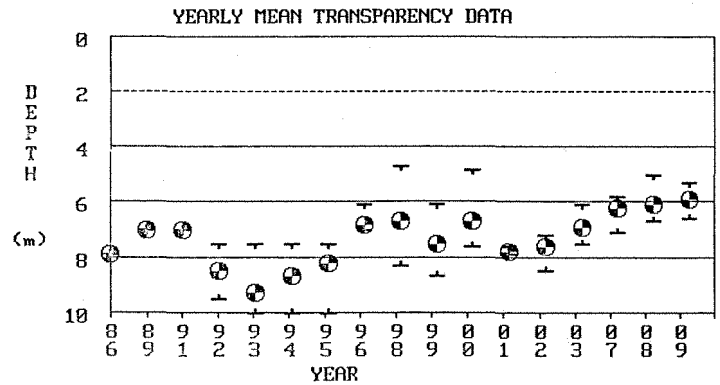
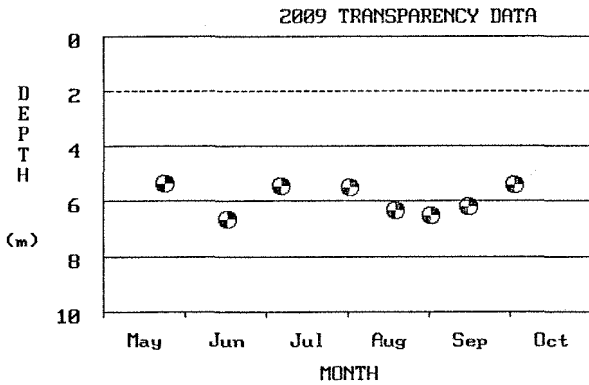
MAX. DEPTH: 38 m. (125 ft.)
 MEAN DEPTH: 12 m. (41 ft.)
 DELORME ATLAS #: 31
 USGS QUAD: WHETSTONE POND
 IFW REGION E: Moosehead Lake (Greenville)
 IFW FISH. MANAGMENT: Coldwater

TRUE BASIN CHARACTERISTICS

SURFACE AREA: 99.0 ha. (244.6 a.)
 FLUSHING RATE: 0.30 flushes/yr.
 VOLUME: 14464436.0 cu. m. (11733 ac.-ft.)
 DIRECT DRAINAGE AREA: 5.48 sq. km. (2.12 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. WHETSTONE P 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 visable at bottom of lake (or one reading used in calculation was visable)].

| 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. | MIN. | MEAN | MAX. | N | MIN. | MEAN | MAX. | EPI PHOS | | SEC | CHL |
| | (SPU) | | (mg/l) | (uS | CORE | GRAB | GRAB | GRAB | /cm) | | | | | | | C | G | | |
| 1986 | - | - | - | - | - | - | - | - | 7.9 | 7.9 | 7.9 | 1 | - | - | - | - | - | - | - |
| 1989 | - | 6.45 | - | 17 | 8 | - | - | - | 7.0 | 7.0 | 7.0 | 1 | 3.1 | 3.1 | 3.1 | - | - | - | - |
| 1990 | - | - | - | - | - | - | - | - | - | - | - | - | 2.7 | 2.7 | 2.7 | - | - | - | - |
| 1991 | 12 | 6.69 | 12.0 | 25 | 9 | - | - | - | 7.0 | 7.0 | 7.0 | 1 | 3.4 | 3.4 | 3.4 | - | - | - | - |
| 1992 | - | - | - | - | - | - | - | - | 7.5 | 8.5 | 9.5 | 6 | - | - | - | - | - | 23 | - |
| 1993 | 3 | - | 6.5 | - | 5 | - | - | - | 7.5 | 9.3 | 10.0 | 4 | 1.6 | 1.6 | 1.6 | - | - | - | - |
| 1994 | 3 | - | 7.0 | - | 6 | - | 10 | - | 7.5 | 8.7 | 10.0 | 5 | 2.3 | 2.3 | 2.3 | - | - | 22 | - |
| 1995 | - | - | - | - | - | - | - | - | 7.5 | 8.2 | 10.0 | 4 | - | - | - | - | - | - | - |
| 1996 | 15 | - | 33.4 | 12 | 7 | - | 5 | - | 6.1 | 6.8 | 7.0 | 3 | 5.2 | 5.2 | 5.2 | - | - | - | - |
| 1998 | - | - | - | - | - | - | - | - | 4.7 | 6.7 | 8.3 | 5 | - | - | - | - | - | 34 | - |
| 1999 | - | - | - | - | - | - | - | - | 6.1 | 7.5 | 8.7 | 5 | - | - | - | - | - | 29 | - |
| 2000 | 14 | - | 7.0 | 20 | 9 | - | - | - | 4.8 | 6.7 | 7.6 | 4 | 8.5 | 8.5 | 8.5 | - | - | - | - |
| 2001 | - | - | - | - | - | - | - | - | 7.6 | 7.8 | 7.9 | 2 | - | - | - | - | - | - | - |
| 2002 | - | - | - | - | - | - | - | - | 7.2 | 7.6* | 8.5* | 4 | - | - | - | - | - | - | - |
| 2003 | - | - | - | - | - | - | - | - | 6.1 | 6.9 | 7.5 | 5 | - | - | - | - | - | 32 | - |

LAKE: WHETSTONE P (VLMP 21)
 TOWN: BLANCHARD TWP
 COUNTY: PISCATAQUIS

MIDAS: 296
 *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 (SPU) | pH | ALK (mg/l) | COND. (uS /cm) | EPI CORE | SURF GRAB | BOT. GRAB | PRO. GRAB | MIN. | MEAN | MAX. | N | MIN. | MEAN | MAX. | C | G | SEC | CHL |
| 2007 | - | - | - | - | - | - | - | - | 5.8 | 6.2 | 7.1 | 4 | - | - | - | - | - | - | - |
| 2008 | 19 | 6.90 | 5.3 | 21 | - | 6 | - | - | 5.0 | 6.1 | 6.7 | 4 | - | - | - | - | - | - | - |
| 2009 | - | - | - | - | - | - | - | - | 5.3 | 5.9 | 6.6 | 6 | - | - | - | - | - | 40 | - |
| SUMMARY: | 11 | 6.64 | 11.9 | 19 | 7 | 6 | 8 | - | 4.7 | 7.3* | 10.0 | 17 | 1.6 | 3.8 | 8.5 | - | - | 30 | - |

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

| DEPTH m | 08/21/91 | | 08/27/93 | | 08/16/94 | | 08/21/96 | | 08/28/96 | | 08/21/00 | |
|------------|----------|------|----------|------|----------|------|----------|-----|----------|-----|----------|------|
| | °C | ppm | °C | ppm | °C | ppm | °C | ppm | °C | ppm | °C | ppm |
| 0.0 | 20.2 | 8.7 | 24.0 | 8.5 | 21.2 | 8.6 | 22.1 | 8.7 | 23.1 | 8.6 | 20.3 | 9.0 |
| 1.0 | 20.2 | 8.7 | 23.1 | 8.5 | 21.2 | 8.7 | 22.1 | 8.7 | 22.9 | 8.7 | - | - |
| 2.0 | 20.2 | 8.7 | 23.0 | 8.5 | 21.1 | 8.6 | 22.1 | 8.8 | - | - | 20.0 | 9.0 |
| 3.0 | 20.2 | 8.7 | 23.0 | 8.5 | 21.1 | 8.6 | 21.7 | 8.7 | 21.9 | 8.7 | - | - |
| 4.0 | 20.2 | 8.7 | 22.8 | 8.5 | 21.1 | 8.6 | 21.3 | 8.7 | 21.4 | 8.7 | 19.8 | 9.0 |
| 5.0 | 20.2 | 8.7 | 22.1 | 8.5 | 21.1 | 8.6 | 18.4 | 9.0 | 20.3 | 8.9 | - | - |
| 6.0 | 19.0 | 8.9 | 21.3 | 8.5 | 18.0 | 11.9 | 14.5 | 8.7 | 15.0 | 8.7 | 19.1 | 9.4 |
| 7.0 | 16.2 | 10.2 | 16.6 | 11.2 | 13.3 | 12.8 | 11.0 | 8.8 | 12.0 | 8.5 | - | - |
| 8.0 | 13.7 | 11.6 | 13.0 | 11.7 | 10.2 | 12.6 | 9.0 | 9.1 | 9.7 | 8.8 | 10.0 | 10.0 |
| 9.0 | 10.3 | 11.0 | 10.8 | 11.3 | 8.8 | 12.2 | 7.8 | 8.8 | 8.0 | 8.6 | - | - |
| 10.0 | 8.3 | 10.8 | 9.1 | 11.0 | 7.5 | 10.8 | 7.2 | 8.5 | 7.4 | 8.3 | 7.1 | 8.8 |
| 11.0 | 7.0 | 10.4 | 7.8 | 10.0 | 6.9 | 9.8 | 6.8 | 8.3 | 7.0 | 8.2 | - | - |
| 12.0 | 6.5 | 10.2 | 7.0 | 9.6 | 6.5 | 9.7 | 6.5 | 8.2 | 6.8 | 8.2 | 6.0 | 8.2 |
| 13.0 | 6.0 | 10.1 | 6.7 | 8.9 | 6.2 | 9.7 | 6.2 | 8.0 | 6.1 | 8.2 | - | - |
| 14.0 | 6.0 | 9.8 | 6.5 | 8.8 | 6.0 | 9.6 | - | - | 6.0 | 8.1 | 5.4 | 8.2 |
| 15.0 | 5.8 | 9.8 | 6.2 | 8.7 | 6.0 | 9.5 | 6.0 | 8.0 | 5.9 | 7.9 | - | - |
| 16.0 | - | - | - | - | - | - | - | - | 5.7 | 7.7 | 5.0 | 8.2 |
| 17.0 | 5.5 | 9.5 | 5.9 | 8.0 | - | - | - | - | 5.5 | 7.7 | - | - |
| 18.0 | - | - | - | - | - | - | - | - | 5.5 | 7.7 | 5.0 | 8.2 |
| 19.0 | 5.1 | 9.1 | 5.5 | 7.8 | - | - | - | - | 5.3 | 7.5 | - | - |
| 20.0 | - | - | - | - | 5.5 | 8.5 | 5.6 | 7.8 | 5.2 | 7.5 | 4.8 | 8.0 |
| 21.0 | 5.1 | 8.8 | 5.3 | 7.3 | - | - | - | - | 5.2 | 7.5 | - | - |
| 22.0 | - | - | - | - | - | - | - | - | - | - | 4.5 | 7.4 |
| 23.0 | 5.0 | 8.5 | 5.2 | 7.1 | - | - | - | - | - | - | - | - |
| 24.0 | - | - | - | - | - | - | - | - | - | - | 4.5 | 7.2 |
| 25.0 | 5.0 | 8.3 | 5.1 | 6.9 | 5.2 | 8.0 | 5.3 | 7.4 | 5.0 | 7.0 | - | - |
| 26.0 | - | - | - | - | - | - | - | - | - | - | 4.5 | 6.6 |
| 27.0 | 5.0 | 8.2 | 5.1 | 6.6 | - | - | - | - | - | - | - | - |
| 28.0 | - | - | - | - | - | - | - | - | 5.0 | 6.8 | 4.5 | 6.3 |
| 29.0 | 5.0 | 8.0 | 5.1 | 6.4 | - | - | - | - | - | - | - | - |
| 30.0 | - | - | - | - | 5.2 | 7.1 | 5.2 | 7.1 | 5.0 | 6.6 | 4.5 | 5.7 |
| 31.0 | 5.0 | 7.7 | 5.1 | 6.1 | - | - | - | - | - | - | - | - |
| 32.0 | - | - | - | - | - | - | - | - | - | - | 4.5 | 5.8 |
| 33.0 | 4.9 | 7.5 | 5.0 | 5.5 | - | - | - | - | - | - | - | - |
| 34.0 | - | - | - | - | - | - | 5.1 | 6.9 | - | - | 4.5 | 4.8 |
| 35.0 | 4.9 | 7.1 | 5.0 | 5.2 | 5.1 | 6.0 | 5.1 | 6.5 | 5.0 | 5.1 | - | - |
| 36.0 | 4.9 | 6.9 | - | - | - | - | 5.1 | 6.0 | - | - | 4.5 | 4.3 |

LAKE: WHETSTONE P (VLMP 21)
TOWN: BLANCHARD TWP
COUNTY: PISCATAQUIS

MIDAS: 296
*TRUE BASIN: 1
*SAMPLE STATION: 1

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

| DEPTH | SAMPLE DATE | | | | | | | | | | | |
|----------|-------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | 08/21/91 | | 08/27/93 | | 08/16/94 | | 08/21/96 | | 08/28/96 | | 08/21/00 | |
| <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> |
| 37.0 | - | - | 5.0 | 5.0 | - | - | 5.1 | 6.0 | - | - | - | - |
| 38.0 | - | - | - | - | 5.1 | 5.3 | - | - | - | - | - | - |
| 39.0 | - | - | - | - | 5.1 | 4.7 | - | - | - | - | - | - |

WATER QUALITY SUMMARY

WHETSTONE POND, Blanchard Plantation

Midas: 0296, Station: 01 - Primary

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 Whetstone Pond have been collected since 1986. During this period, 6 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Whetstone 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 Whetstone Pond is low.

Water Quality Measures: Whetstone Pond is a non-colored lake (average color 9 SPU) with an average SDT of 7.6m (25.1ft). The range of water column TP for Whetstone Pond is 5 - 9 parts per billion (ppb) with an average of 7 ppb, while Chla ranges from 1.6 - 8.5 ppb with an average of 3.8 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. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

See the ME-DEP *Explanation of Lake Water Quality Monitoring Report* for measured variable explanations. Additional lake information can be obtained by contacting the Maine DEP at 207-287-3901 or the VLMP at 207-783-7733, or on the Internet at <http://www.pearl.maine.edu> and/or <http://www.maine.gov/dep/blwq/lake.htm>.

Filename: WHET0296, Revised: 12/06, By: jp