

WATER QUALITY SUMMARY

COBBOSSEECONTE (Cobboossee) LAKE, Winthrop

MIDAS: 5236, Sample Station # 1 (South)

The Cobboossee Watershed District (CWD), Maine Department of Environmental Protection (Maine DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of Cobboossee Lake data to evaluate water quality, track algal blooms, and determine historical water quality trends. This dataset does not include bacteria, mercury, or nutrients other than total phosphorus.

Water quality monitoring datasets for Cobboossee Lake (Sample Station # 1) have been collected since 1976. During this period, 22 years of basic chemical information was collected in addition to 35 years of Secchi Disk Transparencies (SDT). In summary, the water quality of Cobboossee Lake is considered fair to poor based on historical measures of SDT, total phosphorus (TP), and chlorophyll-a (Chla). The potential for nuisance summertime algal blooms on Cobboossee Lake is moderate to high, however, water quality has greatly improved during the past twelve years.

Water Quality Measures (Sample Station # 1): Cobboossee Lake is a non-colored lake (average color 15 SPU) with an average SDT of 3.9 meters (12.8 feet). The range of upper water column TP for Cobboossee Lake is 12 - 27 parts per billion (ppb) with an average of 18 ppb. Chla ranges from 1.5 - 40.1 ppb with an average of 9.4 ppb. Recent dissolved oxygen (DO) profiles show high 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-high. Oxygen levels below 5 parts per million stress certain cold water fish. A persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species (e.g., lake trout/togue and landlocked Atlantic salmon).

Comments (Sample Station # 1): Cobboossee Lake is actively managed and monitored the Cobboossee Watershed District (CWD) and was on the state listing of Maine lakes (303 (d)) non-attaining water quality standards until 2006. As of 2006 the water quality had improved and it currently meets water quality standards. Associated studies include a Maine DEP non-point source pollution grant through the Kennebec County Soil and Water Conservation District for the restoration of Cobboossee Lake through reduction of total phosphorus in the Jock Stream watershed.

Nutrient Management (Sample Station # 1): A Cobboossee Lake Total Maximum Daily (Annual Phosphorus) Load (TMDL) report was originally prepared by the Cobboossee Watershed District under contract with Maine DEP in the mid-1990s (1995 report). This report was revised to meet the US-EPA New England guidance template in 1999 and following lake stake holder and public reviews, this document was approved by US-EPA (New England) on January 26, 2000. This final (addendum) report, along with the EPA-New England review summary and letter of approval, can be found on the Maine DEP webpage at:
<http://www.maine.gov/dep/water/monitoring/tmdl/tmdl2.html>

Sample Station # 2 (North)

Water quality monitoring datasets for Cobboossee Lake (Sample Station # 2) have been collected since 1975. During this period, 22 years of basic chemical information was collected in addition to 36 years of Secchi Disk Transparencies (SDT). In summary, the water quality of Cobboossee Lake is considered fair to poor based on historical measures of SDT, total phosphorus (TP), and chlorophyll-a (Chla). The potential for nuisance summertime algal blooms on Cobboossee Lake is moderate to high; however, water quality has improved during the past eight years.

Water Quality Measures (Sample Station # 2): Cobbossee Lake is a non-colored lake (average color 15 SPU) with an average SDT of 3.9 meters (12.8 feet). The range of upper water column TP for Cobbossee Lake is 14 - 24 parts per billion (ppb) with an average of 17 ppb. Chla ranges from 1.7 - 37.9 ppb with an average of 8.3 ppb. Recent dissolved oxygen (DO) profiles show high 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 high. Oxygen levels below 5 parts per million stress certain coldwater fish and a persistent loss of oxygen may eliminate or reduce habitat for sensitive coldwater species (e.g., lake trout/togue and landlocked Atlantic salmon).

Comments: Cobbossee Lake is actively managed and monitored by the Cobbossee Watershed District (CWD) and was on the state listing of Maine lakes non-attaining water quality standards (303 (d)) until 2006. As of 2006 the water quality had improved and it currently meets water quality standards. Associated studies include a Maine DEP non-point source pollution grant through the Kennebec County Soil and Water Conservation District for the restoration of Cobbossee Lake through reduction of total phosphorus in the Jock Stream watershed.

Nutrient Management: A Cobbossee Lake Total Maximum Daily (Annual Phosphorus) Load (TMDL) report was originally prepared by the Cobbossee Watershed District under contract with Maine DEP in the mid-1990s (1995 report). This report was revised to meet the US-EPA New England guidance template in 1999 and following lake stakeholder and public reviews, this document was approved by US-EPA (New England) on January 26, 2000. This final (addendum) report, along with the EPA-New England review summary and letter of approval, can be found on the Maine DEP webpage at: <http://www.maine.gov/dep/water/monitoring/tmdl/tmdl2.html>.

See the Maine DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be obtained by contacting CWD (207-377-2234), Maine DEP (207-287-3901) or VLMP (207-783-7733), and at these Websites: <http://www.lakesofmaine.org> and <http://www.maine.gov/dep/water/lakes/index.html> and <http://www.mainevolunteerlakemonitors.org>.

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