

WATER QUALITY SUMMARY

GARDINER LAKE, EAST MACHIAS

MIDAS: 1358, Sample Station # 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 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 Gardiner Lake have been collected since 1977. During this period, 5 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Gardiner Lake is considered average based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algal blooms on Gardiner Lake is low.

Water Quality Measures: Gardiner Lake is a colored lake (average color 35 SPU) with an average SDT of 4.6 m (15.6 ft). The range of water column TP for Gardiner Lake is 4 - 6 parts per billion (ppb) with an average of 5 ppb. Chla ranges from 2.0 - 6.8 ppb with an average of 4.7 ppb. Recent dissolved oxygen (DO) profiles show little 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 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 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 or VLMP at 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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