

## WATER QUALITY SUMMARY

### KEOKA LAKE, WATERFORD

MIDAS: 3416, 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 Keoka Lake have been collected since 1977. During this period, 23 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). In summary, the water quality of Keoka Lake is considered above average based on measures of SDT, total phosphorus (TP), and Chlorophyll-a (Chla). The potential for nuisance algal blooms on Keoka Lake is low.

Water Quality Measures: Keoka Lake is a non-colored lake (average color 18 SPU) with an average SDT of 5.5 m (18 ft). The range of water column TP for Keoka Lake is 4 - 18 parts per billion (ppb) with an average of 10 ppb. Chla ranges from 1.5 - 18.0 ppb with an average of 4.0 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 little to moderate. Oxygen levels below 5 parts per million (ppm) stress certain cold water fish and a persistent loss of oxygen may eliminate habitat for sensitive cold water species.

Maine Department of Inland Fisheries and Wildlife manages this lake for both warm-water and cold-water species of fish.

Keoka Lake is sampled in conjunction with the Lakes Environmental Association (LEA) located in Bridgton, Maine.

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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