

2000 Water Quality Report

Water quality results for 2000 have been received from the Maine Department of Environmental Protection and the Volunteer Lake Monitoring Program. Included in this summary is a brief explanation of each variable used to measure water quality, which are recorded throughout the summer by our lake Volunteer Monitors. This information is followed by data specific to the large lower and small upper basins of Cold Stream Pond.

Secchi Disk Transparency (SDT) is a measure of the water clarity, or transparency, of the lake. All Secchi disk readings are in meters (1 meter (m) = 3.28 feet). Factors, which reduce clarity, are algae, zooplankton, water color and silt. Since algae are generally the most abundant, measuring transparency indirectly measures the algal productivity. Transparency values in Maine average 4.9m (16.2 ft.).

Color refers to the concentration of natural dissolved organic acids, which give the water a tea color. Lakes that are considered colored can have reduced transparency readings with increased phosphorus values. Color in Maine averages 27 Standard Platinum Units (SPU).

Total Phosphorus (TP) is one of the major nutrients needed for plant growth. It is generally present in small amounts and limits the plant growth in lakes. It is measured in parts per billion (ppb). As phosphorus increases, the amount of algae also increases. TP in Maine averages 12 ppb.



Lower Basin

The water quality of the lower basin of Cold Stream Pond is considered to be excellent, based on measures of SDT, TP and Chla. The potential for nuisance algal blooms is low.

The lower basin is an uncolored lake (average 9 SPU) with an average SDT of 10m (33 ft.) The range of water column TP is 3–7 ppb with an average of 5 ppb. Chla ranges from 1.1–2.8 ppb with an average of 1.6 ppb. DO profiles show minimal DO depletion in deep areas of the lake. DO levels do not indicate a threat to coldwater fisheries.



Chlorophyll A (Chla) is a measurement of the green pigment found in all plants including microscopic plants such as algae. It is used to estimate algae biomass—the higher the Chla, the higher the amount of algae in a lake. Chla in Maine averages 4.8 ppb.

Dissolved Oxygen (DO) is the measure of the amount of oxygen dissolved in the water. The amount of DO is very important to aquatic life. Water with less than 5 parts per million (ppm) is generally considered so stressful that most coldwater fish will avoid these areas.



Upper Basin

The water quality of Cold Stream Pond's smaller basin is considered to be above average, based on measures of SDT, TP and Chla. The potential for nuisance algal blooms is low.

The upper basin is an uncolored lake (average 12 SPU) with an average SDT of 5.7m (19 ft.). The range of water column TP is 4–8 ppb with an average of 6 ppb. Chla ranges from 1.1–2.9 ppb with an average of 2.0 ppb. DO profiles show low-moderate DO depletion in deep areas of the lake. DO frequently drop below 3 ppm. If increased oxygen loss occurs, sensitive coldwater species may be affected and stress on water quality will be caused.