

2020 Mirror Lake Update for the Mirror Lake Watershed Association

The Ausable River Association (AsRA) and the Adirondack Watershed Institute (AWI) continue to monitor Mirror Lake year-round on a bi-weekly basis. The lake completed turnover in the spring of 2020, the first time since 2016. Lower levels of chloride were seen in the hypolimnion, or lower lake waters. The average hypolimnion chloride concentration for 2020 was 56 mg/L (milligrams per Liter). In years prior the average hypolimnion chloride concentration ranged between 71-74 mg/L. These lower chloride levels may be attributed to the combination of a mild winter in 2020 and the Salt Use Reduction Initiative that has been working to reduce road salt applications and movement of salt into Mirror Lake.

Mirror Lake experienced hypoxic conditions (low oxygen levels, a dissolved oxygen reading of less than 2 mg/L) in the hypolimnion, during each summer from 2015-2020. Low dissolved oxygen reduces habitat for lake trout and other aquatic organisms essential to lake health.

The water quality of Mirror Lake remains impaired by winter salt use. The lake completed turnover in spring and fall of 2020 after a mild winter season. In November of 2020, a harmful algae bloom was detected on Mirror Lake due to unseasonably warm air temperatures and calm waters. Although this algal bloom was not directly caused by high sodium and chloride concentrations, it is a reminder of the harm that can be caused by high usage of road salt in the watershed.

2021 monitoring and data assessment is ongoing. AsRA and AWI staff have reported that Mirror Lake did not completely turnover in the spring of this year. Thus far, initial data suggest lower concentrations of chloride and higher dissolved oxygen concentrations are present in the hypolimnion. If true, lake trout habitat has expanded slightly over the prior year. However, this improvement remains well short of gains that may be achieved with continued salt use reduction efforts within the watershed.