

Little Sunapee Protective Association

Annual Meeting

July 3, 2021

Water Quality Report

Little Sunapee Water Analysis

Your water quality team gathered samples from the Little Sunapee east basin deep spot on Tuesday June 22, 2021. Roger Bloch captained his boat for the sampling process. The team included Carol Foss and Dave Livingston. The Colby-Sawyer College water laboratory is performing the analysis of the water samples.

Our most recent deep spot laboratory analysis was completed in 2019 after the annual meeting. At that time the Phosphorus level in the surface layer was below the level the lab could detect. This was an outstanding condition for it minimized plant growth (including algae).

Little Sunapee is not scheduled to receive a visit by a scientist from the New Hampshire Department of Environmental Services (NH DES) this year.

Conductivity Measurements

Monthly conductivity measurements have continued uninterrupted since October 2017. Conductivity readings through this past winter and spring were consistent with historic values. No anomalies were observed.

Little Sunapee Water Level

Fresh water lakes worldwide are being studied by the Lake Observations by Citizen Scientists and Satellites organization (LOCSS). The staff of this organization pronounces their name LOCKS.

LOCSS is able to determine the horizontal surface area of a lake using data gathered by satellites. Due to limitations of current technology, an

accurate vertical water level must be physically measured in the lake. One of the goals of LOCSS is to determine accurate lake levels with satellite data but they are not there yet. Until then LOCSS is dependent on volunteers like us to provide them with lake level data.

LOCSS is included in the environmental studies program at the University of North Carolina (UNC). In March 2020 we contacted UNC with the aim of getting Little Sunapee included in the LOCSS program. In October 2020 LOCSS sent us a water level gauge. Basically the gauge is a four inch wide aluminum yardstick. This gauge is to be installed each year after ice out and removed before the lake freezes over.

Satellite data for LOCSS is gathered by the Landsat 8 satellite. Over flights of Little Sunapee by this satellite occur about once a week. The over flight schedule is available on the LOCSS website. LOCSS welcomes water level readings at any time but they are particularly interested in readings taken on the days Landsat 8 over flies our lake.

On April 21, 2021, the gauge was installed in Little Sunapee. Since then the water level has been reported to LOCSS on all of the weekly over flight days. Plus on most other days just for fun.

LOCSS maintains a webpage dedicated to Little Sunapee:

<https://www.LOCSS.org/gauge/little-sunapee>

It is through this webpage that the water level readings for Little Sunapee are provided to LOCSS. The history of all the data submitted to LOCSS is included in a graph on this webpage.

In addition to the lake water level data being used by LOCSS for their purposes, the data is maintained in our Association archives for our use in the future.