



LAPA - West

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Lake Buel Cyanobacteria

On August 8, 2022, two samples were taken, one at the surface at Kyle's dock and the other at 15 feet in 43.4 feet of water. The phycocyanin levels of both samples were at 0.10 parts per billion which is extremely low. The cell counts at the surface were 1,000 cells/mL of *Microcystis*. At 15 feet, the cell counts were 660 cells/mL of *Microcystis* and 1,500 cells/mL of *Limnospira* for a total of 2,160 cells/mL. The cell counts at both locations are really small and no way near the state's threshold of 70,000 cells/mL, therefore the lake is safe at this sampling time.

Compared to last summer the phycocyanin levels are the same and the cell counts are the same.

Temperature and dissolved oxygen levels were taken from 1 to 35 feet. The oxygen levels are steady for the first 10 feet then increases at 15 feet, then decreases below 2 mg/L at 30 feet which provides an anoxic environment for phosphates to be released from the sediment. The secchi depth was 7.9 feet meaning the water was pretty clear. This temperature and dissolved oxygen profile is consistent with last year's sampling event.

Figure 1. Estimated Lake Stratification (where 0 is the surface of the lake)

