

Prepared for Rust Pond Annual Meeting, August 12, 2023

Report of the Rust Pond Volunteer Lake Assessment Program (VLAP) Team, 2023

Water testing occurred three times 2022, and samples have been taken 2 times so far this year. The annual report for 2022 is available at both the Rust Pond website under Water Quality, and at the New Hampshire DES website.

<http://rustpond.org/2022-rust-wolfeboro.pdf>

Our volunteers: Christie Parker, Rich Coan, and Peter Colbath. It has been a pleasure to work with all.

As I mention annually, I have no scientific background related to hydrology or liminology. I merely arrange for and coordinate the gathering of samples and get them to the NH DES laboratories for analysis. So for interpretation of the results I rely completely on the staff at DES. The "Recommended Actions" section in the above mentioned report are the best starting point for discussion of long term approaches

There has been concern this year about the heavy rain we got, 5 inches in about as many hours. The beaver dam was breached, which had created a trap for sediment and released some of that sediment into the pond. We tested for abnormal bacteria levels for which we received the results in about 24 hours showing safe levels, as interpreted by DES. Results of the Phosphorus, conductivity, and Chloride were also passed on to me earlier than usual and also did not show any variation from levels we have seen in the last few years.

Just for general information for the membership, I have done a little digging into past history of our three major water indicators with special attention to the North End Inlet. As early as the early nineties nutrient and conductivity levels were elevated as compared to other sampling points. I point this out because it is clear that from a water quality standpoint, what is coming into Rust Pond from the North End has been a problem since before the "delta" there developed significantly. It is only the first two years for which I have data, 1988 and 1989 that nutrient levels were at all comparable to the other sample locations.

In light of this long term information analysis, comments made in this report for last year mention a major algae bloom that we had last year and how significant rainfall increase may have had some causal relationship to it. The situation at the North End may also be why the only areas not affected by the algae bloom last year were on the south end of the pond.

Runoff from rain events, wherever they occur around the pond will threaten the quality of our water, possibly leading to algal blooms and cyanobacteria scum. We only have have data for 4 locations around the pond which we can use to see trends. It would not be unwise to extrapolate what we see in one area to other known problem areas, for example by Route 28.

Respectfully submitted,  
Keith Simpson