Lake Breezes

LAKE RESCUE ASSOCIATION
EST. 1933 | LUDLOW, VERMONT

October 2018

Milfoil Update

Our divers, Cat and Shane Yoder, visited our lake twice a week throughout the summer from Memorial Day through mid-September, a total of 27 days. The maps below show where plants were found last year and this year. And, while the dispersion does not look so different from last year's, the volume and number of plants this year has more than doubled: 1078 plants/136 gallons in 2017 vs 2058 plants/361 gallons in 2018. This may have been the result of early season low water level (due to late installation of flash boards at the dam) and an early season heat wave. The low water level and early season growth could also have made it more likely for milfoil plants to be cut by propellers and spread by drifting south to new areas. The shallow area at the northern end of the slalom course was of particular concern, with many milfoil fragments observed in that area. The expense of the milfoil program in 2018 was $16,505, of which $14,605 was for our divers and $1900 for the Greeter Program at the boat launch. The state's contribution will be $7698, and the LRA expense will be $8807, assuming full state funding.

Because of the increase in milfoil growth, we are exploring additional options for milfoil control in 2019. We have applied to the state for a permit to use Bottom Barriers next summer. These are synthethic sheets, 10' x 50' in size, which are placed on the lake bottom and kill vegetation by blocking sunlight. The divers would place several of these in areas of intense growth for a period

2017.

2018

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of time and then relocate them as needed. This would be a more efficient and effective use of the divers' time and would eliminate all invasive plants in that area. The divers would then be freed to search other areas. We expect to hear back about this permit in the next eight weeks.

Sedimentation Concerns

The 'Narrows' Channel is Shrinking

No doubt many of you have noticed how the channel has lost depth in recent years. While we successfully dredged the mouth of the Black River in 2013, we were not able to address the significant sedimentation south of that area nor the silt flowing into the narrow channel. Over recent years, this sediment has moved and shifted in ways that may potentially compromise the navigation channel. In an effort to 'stay ahead' of the problem, the LRA has contracted with Griggs-Land Consulting Geologists to do an underwater survey of the area between the mouth of the Black River and the northern part of Lake Rescue. This survey will cost $2,200 and will provide a base line, in the event we need to apply to the state for a dredging permit in the future. The survey has already been conducted this fall and we are awaiting the final report.

Remediation Efforts with the Town of Ludlow

We are in talks with the town of Ludlow about addressing the increasing sediment flow into the lakes. One avenue we have pursued in the past, securing a Better Backroads (BBR) grant from the state that funds projects to create catch basins to mitigate sediment inflow, is unavailable this year, as the town has committed to another BBR project on Okemo. However, we look forward to next year's BBR application process. In the meantime, we are committed to ensuring that the existing culverts and catch basins around the lakes that prevent sediment inflow are cleaned and maintained by the town. This has been a challenge in the past. Two of our board members have mapped the culverts and catch basins around the lake, and report that most need cleaning. This mapping information will be important this fall as we create a remediation plan and meet with the town to discuss solutions and other sources of funding they suggest might be available. We look forward to partnering with the town to address this important challenge. Finally, we ask that residents do not put leaves and other matter into the road ditches, as this makes the problem worse.

Update on ADA Dock at Fishing Access

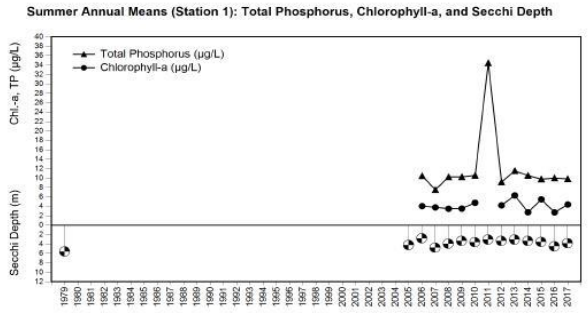
As we reported in September, a group of Lake Rescue homeowners, led by Ken and Kate Haslam and the Lake Rescue Association Board, decided to file a legal appeal on the state's decision to install a 48-foot ADA compliant boat dock on The Lake Rescue Fishing Access Boat Ramp. The participants in the legal appeal directed our counsel, Springfield attorney George McNaughton, to see if the state was willing to negotiate a settlement prior to addressing this matter in Environmental Court. On October 17, attorney McNaughton and 3 LRA board members, along with residents Kate Haslam and Lisa Kaman, met with Vermont DEC General Counsel Gjessing and her colleagues at the Fishing Access boat ramp site. The purpose of the meeting was to discuss whether a compromise could be reached. The meeting was cordial and productive. Although no decision was made at the meeting, in subsequent telephone calls the state indicated a compromise might be possible. We are now waiting to hear back from the state with specific details. The next Environmental Court hearing is scheduled for Monday, November 26, 2018. So, stay tuned.

Water Quality

Water quality is the most important measure of lake health. It is affected by many factors, such as run-off from fertilizer, dirt roads, failing septic systems, agricultural and residential runoff and erosion from construction and logging. In turn, water quality determines the health of aquatic life and the amount of algae and undesirable plant growth.

Since 1979 the state has monitored lake water quality via the Lay Monitoring Program. The state trains and equips volunteers to conduct water sampling from their boat 8-10 times a summer. On Lake Rescue the Lay Monitors who perform this vital duty since 2007 have been Janine and Jim Norman. For over 10 years they have collected water samples and made many water clarity measurements during the summer months. These data are then analyzed by the state for total phosphorus concentration, chlorophyll-a concentration and Secchi depth (water transparency). Phosphorus concentration is sampled to determine a lake's level of nutrient enrichment. Phosphorus feeds algae, cyanobacteria (blue-green algae), and aquatic plants. Chlorophyll-a is the green pigment in plants, algae and cyanobacteria. The concentration of chlorophyll-a is used to describe the amount of algae and cyanobacteria in a lake. Water transparency is measured by using a Secchi disk, an eight-inch diameter disk painted with black and white quadrants. The disk is lowered into the lake by a rope, marked in meters, until it disappears, this measure is the Secchi depth. Generally, water clarity decreases as chlorophyll-a concentration increases.

Source: Agency of Natural Resources, Dept of Environmental Conservation



The above graph shows Annual Summer Means for Total Phosphorus, Chlorophyll-a, and Secchi Depth. Station 1, referred to above, is in the northern part of Lake Rescue. In general, none of the three measures show a significant trend for the years 2005 – 2017. (The elevated phosphorus reading in 2011 appears to be an outlier and may be related to TS Irene.) If the 1979 data point is included for the Secchi Depth, then there is indeed a significant decrease in water transparency over the forty year time period. This is unfortunate, but perhaps not unexpected given the increase in traffic on our lake over this time period.

Compared to other lakes in the Vermont, Lake Rescue is better than the median in measures for water transparency and chlorophyll-a; and we are within the 20th percentile for total phosphorus, meaning our lake is better than 80% of other lakes in Vermont for total phosphorus. We don't know the causal explanation for this, but possible reasons may include the constant cleansing effect of the Black River.

Having these measurements gives us the confidence to say that our lake's water quality is indeed very good. The fact that it has been unchanged for a number of years is reassuring, but it could be better. We have all seen the recent vigorous growth of water lilies and we must continue to be mindful of all the ways that pollutants enter the lake and do all in our control to minimize erosion, and harmful runoff. The ecology and health of the lake needs our protection.

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Promoting Water Safety, Environmental Education & Improved Water Quality

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The Lake Rescue Association is a 501c3 Non-Profit organization. All donations to the 'Lake Restoration & Preservation Fund' are tax-deductible.

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