SPRING LAKE HEALTH EBLAST

Is it spring yet? (yes...and no)
Is the ice out? (no)

In Canada and the rest of the northern hemisphere, the first day of spring season is the day of the year when the Sun crosses the celestial equator moving northward (Tuesday, March 20th, this year) and spring ends Thursday, June 21st (just 75 days away).

Will the ice will be out by June 21st? (not sure,but the black flies will be...:)

"Leonard Lake: Water Quality and Algal Blooms"

Anecdotal reports of increased surface algal blooms in Leonard Lake over the past few years indicated a decline in water quality and a need to continue to monitor the lake. LLSA undertook a detailed study of the lake during 2017 and commissioned a report of the findings "*Leonard Lake: Water Quality and Algal Blooms".* The purpose of the study was to assess current lake status and vulnerability to the effects of human activities and shoreline development; and to determine the need for enhanced monitoring and stewardship programmes in partnership with regional and provincial agencies.

Expertise and analysis was provided by the authors of the report, Dr. Sue Watson, University of Waterloo, Department of Biology; and Hedy J. Kling, MSc., Algal

Taxonomy and Ecology Inc., Winnipeg. Field and lab support were provided by Mark Verschoor, MSc., York University, Department of Biology; and Dr. Mingsheng Ma, Laboratory Manager, Biogeochemical Analytical Service Laboratory, University of Alberta.

A synopsis of the report follows this introduction.

From May to October 2017, a Leonard Lake Stakeholders Association (LLSA) “Eyes on the Lake” campaign with lakefront residents was coupled with sampling carried out by Leonard Lake volunteers. This initiative was made possible with the generous assistance of many: the residents who stepped up to assist with sample collection and took the initiative to report potential algal blooms on the lake; the team of scientists at York, Waterloo and Calgary Universities, and an Algal Taxonomy Lab in Manitoba for ongoing support and collaboration throughout the collection, testing and analysis stages; and finally, a special mention to Gordon Roberts, Mark Greenham and Ken Riley for their leadership and participation through all stages of this lake study.

For the complete report on this activity entitled *“Leonard Lake: Water Quality and Algal Blooms”* by Dr. Sue Watson and Hedy Kling, including executive summary and glossary, click here:

http://leonardlake.net/LLSA/Water_Quality_Report.html

The study found that the lake generally has a healthy mix of food-producing plankton, a fairly robust “web of life” and water remains fairly clear. However, samples taken in mid-August revealed that in the deep site at the north end of the lake, as well as at a shallower site in the south bay, there is almost no oxygen in the water near the bottom (known as hypoxia or anoxia). This finding is worrying, as fish and other life in the food web can be adversely affected. Also, nutrients including phosphorus that are naturally absorbed into the bottom-lake sediment can be easily re-suspended in the water due to turbulence from weather or motor boats, when oxygen levels are low. This can result in increased cloudy water, and undesirable algae blooms on the surface, which can drift to shoreline areas.

Between July and September, our lakefront residents reported 10 sightings of possible algae in shoreline areas, which were then sampled. While most were found to contain harmless algae, four samples collected during warm calm weather in mid to late September were found to contain high levels of blue-green algae and could be classified as blooms (photo 1 below left: blue-green algae bloom mid-September 2017 southwest shore). The blooms were quite small and transient; within a day or so they had become milky in colour and started to sink (photo 2 below right: late bloom stage, September 26, 2017 northwest shore). Before officials from the Ministry of the Environment were able to confirm them, the brief blooms had disappeared.

Some blue-green algae blooms contain toxins which can affect swimmers, and

contaminate drinking water and are a potential hazard that must be assessed quickly.

The report made several recommendations to be considered by LLSA and all Leonard Lake residents, municipal and provincial authorities, the Muskoka Lakes Association (MLA) and other lake associations.

Recommendations included:
·Continued sampling next year, particularly the “Eyes on the Lake” campaign.
·A moratorium on new lot creation on Leonard Lake.
·Expanded public awareness among lakefront residents in protecting lake health, including the impacts of faulty septic systems, and problematic boating practices.
·Increased efficiency and effectiveness of lake monitoring through standardized sampling protocols among all agencies so that results can be compared. (There are presently five agencies carrying out sampling on Leonard Lake!)
·An improved and timely blue-green algae response from the Ministry of Environment and the Simcoe Muskoka health Unit.
·Recognizing Leonard lake as an hypoxic/ anoxic lake which would merit increased testing for internal loading by District Municipality of Muskoka / Ministry of the Environment.

This study has clearly shown the importance of working together if we are to continue to enjoy the beauty and health of our lake.

If assistance is required to access *"Leonard Lake: Water Quality and Algal Blooms"* contact LLSA at leonardlakemuskoka@gmail.com

---

❤Its Your Lake!

View a new 10 minute on-site septic installation video from Federation of Ontario Cottagers' Association (foca.on.ca) at https://youtu.be/5VeTGVnkYA4 designed for anyone using a septic system in rural waterfront areas. A Public Health Inspector walks the viewer through the

components of a new installation (prior to backfill) and provides some tips for on-going maintenance and how best to protect water quality for self, family and overall lake health.

April 21st, 2018 is community clean-up day in Muskoka Lakes Township. On that day, tipping fees at the Eveleigh Road Transfer Station will be waived for one vehicle load (non-commercial) of residential rubbish per property for those residents of Muskoka Lakes Township who take the opportunity to tidy up their yards and lots. The Eveleigh Road Transfer Station will be open from 9 a.m. to 6 p.m. on that day and the Hazardous Waste Depot at the Transfer Station will also be open from 9 a.m. until 3 p.m. For more information visit:

http://www.muskokalakes.ca/content/community-clean-day-coming-soon

---

At the last AGM, a poster of Leonard Lake was hung on the wall and all were encouraged to pencil in the name of their particular bay, or any bay on the lake. It was a good start, but LL has a lot of small bays! Do you have a bay name to share? If so, please send an email to leonardlakemuskoka@gmail.com with the location of "your" bay and the name. We thought it might be fun to produce a local LL map with all of the bay names (and are expecting some bays will have two or more...) and we'll share the map in a future EBLAST.
