



GREATER OTTER LAKE RESIDENTS ASSOCIATION

SPRING 2020 UPDATE

Farm Lake Creek

As you may recall, a primary issue of concern at the last AGM (July 13, 2019) was the debris in the Farm Lake Creek that impeded the flow of the creek resulting in elevated levels of lake water and flooding of basements in the spring of 2019 from an abnormally high water table.

Following the AGM, a few GORA members sent a request to Council to clean the debris from the Farm Lake Creek. A photo showing an accumulation of logs stretching from shore to shore was also provided. Council's response was that the Creek was looked at and they determined that removal of the debris was not necessary. Given this response, GORA members went to the Creek on Friday, July 26 to clear out - by hand - the numerous big logs and garbage. Council was notified that GORA removed the debris and the Municipality agreed to dispose of it. Photos are located on the GORA website.

At the regular Council meeting held on August 6, 2019, several GORA members attended and voiced their concerns about the creek situation. We made three requests of Council:

- 1) To cease having its snow removal contractor push snow to the edge of the creek and to ensure that the Ministry of Transport does not do the same;
- 2) To apply for a permit to dredge the creek in order to maximize water flow (if necessary); and
- 3) To regularly monitor and clear debris in the creek to help ensure that water levels in Farm Lake are not so unnecessarily elevated that they result in flooding of basements in the spring.

During the discussion, we pointed out to Council that since the debris had been cleared from the creek, the level of the lake water decreased by approximately six inches.

The Mayor committed to having the creek inspected by a civil engineer to help determine if anything else should be done.

In October, the engineer reported the following (the complete message is located on GORA's website):

- snow should never be pushed to the creek's edge;
- there are large branches (on standing trees) leaning into the creek that should be removed; and
- dredging the creek would not significantly lower the water level in the lake.

Current Status: Over the course of the winter, snow was not being pushed towards the edge of the creek in the centre of town. This is a victory. The large branches leaning into the creek have also been removed. There have been no blockages to date, with the result that water is flowing properly. We are continuing to monitor the water level daily and it is more normal for this time of year.

Mandatory Boat Washing and Control of Access to Farm Lake Boat Launch

Without some form of controlled access to our lakes, we are defenseless against the spread of invasive species from the unwashed boats of outsiders.

In terms of the boat launch at Farm Lake, you may recall that, at the AGM, it was unclear whether the property at the boat launch was privately owned or whether it was municipal, provincial, or federal property.

Following the AGM, we met with an official at the MRC Pontiac and we obtained a copy of the land registry for the property. As it turns out, the paved laneway from the street to the lake as well as the paved area adjacent to the lake belongs to the Municipality. Therefore, there is nothing impeding the Municipality from controlling access to the boat launch by installing a gate.

GORA was invited to discuss the issues at a Council Workshop which was held on July 29. Jennifer Quaille (GORA President) attended and gave a presentation on the importance of protecting our lakes by introducing mandatory boat washing

as well as controlling access to the Farm Lake boat launch. Two other members of GORA (Stephen and Tim Desabrais) also attended to provide their expertise and advice on gating and security issues. The Workshop went well; it gave us a good opportunity to present and discuss these important issues in a more fulsome manner with Council. Overall, it was a fruitful discussion. Our presentation is located on GORA's website.

As a result of the Workshop, Council determined that these issues should be discussed more fully in a special committee. As a result, a committee was formed. Its members are Robin Zacharias and Carlen Lafleur (Councillors); Jennifer Quaile, Stephen Desabrais, and Helene Boulet (GORA); and Don Chenel (cottage owner on Otter Lake).

The Committee held three meetings (October, November and January) that have been quite productive. We have done a scan of practices in other jurisdictions, including means of controlling access to lakes by boat owners and by-laws that make boat washing mandatory. We also explored ways of controlling access to the Farm Lake boat launch and obtained cost estimates for automatic gate access, including those that may be linked to the boat washing station. We also discussed the importance of public awareness, communication, and signage.

In addition, we had a teleconference call in early February with Blue Sea Lake officials to discuss practices in their municipality.

In February, work began to draft a by-law to introduce mandatory boat washing.

The Committee considered that given the costs of sophisticated gating systems and the lack of available provincial grants, it would be more feasible to introduce the by-law and carefully monitor compliance before taking further steps to control access to Farm Lake.

Current Status: Given the COVID-19 situation, this work has not progressed further but is expected to continue when Municipal Council is able to resume normal business and we are able to meet again as a Committee.

We would like to take this opportunity to thank Mayor Kim Cartier-Villeneuve and Councillors, in particular, Robin Zacharias and Carlen Lafleur, for their ongoing hard work to advance GORA's objectives. Through our collective efforts, we hope to continue making good progress towards further protecting our precious lakes.

GORA'S WATER QUALITY MONITORING ACTIVITIES, 2010-2019

For ease of reference, we have compiled the results of water tests that have been done since 2010 on all four of our lakes. These include the annual transparency results from measurements taken with the Secchi disks. The number is the average of the samples taken over the course of each year.

We also include the results of additional tests done for levels of phosphorus, chlorophyll, and dissolved organic carbon. These tests are done periodically and typically for 2-3 consecutive years in order to get a representative sample. They were last done during the years 2010-2012. The provincial government reinstated the testing in 2019. A note regarding interpretation of 2019 results compared to those from 2010-2012 – they only represent one year. The cost for the analysis of the samples taken in 2019 was \$476 per lake (total cost \$1904). We thank the Municipality of Otter Lake for sharing the cost 50/50 with GORA.

It is important to test for phosphorus levels because too much phosphorus leads to algae growth which can choke a lake by using up all the oxygen. Phosphorus enters a lake from the run-off from land surrounding a lake. This is why pesticides or fertilizers should not be used on lakefront properties. Phosphate-based products (detergents and soaps) and deficient septic systems can also be detrimental to a healthy lake.

Testing for chlorophyll helps to determine the level of algae present in a lake. While some algae is normal, elevated levels of algae can be very harmful to a lake. The tests for dissolved organic carbon are done to determine the extent to which the lake is coloured by organic deposits (wood, etc.). The more “coloured” a lake is, the more likely that it will impact the transparency measurements done with the Secchi disks.

An important point to make before reading these numbers is that each of the four different test results is an indicator of the state of the lake. The Government of Quebec uses a scale of 7 different classes along a spectrum from “ultra-oligotrophic” which indicates a lake of exceptional quality to “hyper-eutrophic” which indicates a lake in serious trouble. To simplify things in the following charts, we use a ranking from 1-7 that is based on the Government’s classification of each lake (1 indicates exceptional quality and 7 indicates serious trouble).

You will see that all four of our lakes scored very well. The province recommends these lakes “be protected” to preserve this status, and for us, “protection” includes a continued push for strict boat washing measures.

NOTE: In March 2020, we were informed by the Government of Quebec that lake water testing would not resume as usual in April 2020 due to the fact that government resources are being dedicated towards addressing the COVID-19 situation. We will begin testing when the Government gives us the “green light”.

FARM LAKE

	Transparency (metres)	Phosphorus (micrograms/litre)	Chlorophyll (micrograms/litre)	Dissolved Organic Carbon (milligrams/litre)
2010	6.1	4.1	1.9	2.7
2011	5.3	5.3	2.5	3.0
2012	5.8	2.2	1.7	3.6
2013	5.6			
2014	5.3			
2015	5.8			
2016	5.2			
2017	4.8			
2018	5.3			
2019	5.3	3.8	1.3	4.3

Brief Summary of 2019 Results (complete analysis is available at this website:
www.environnement.gouv.qc.ca/eau/rsvl/relais):

- Transparency of 5.3 metres characterizes clear water (ranking 3)
- Phosphorus level indicates that the lake is only slightly enriched by phosphorus (ranking 1)
- Chlorophyll level shows a low biomass of microscopic algae in suspension (ranking 2);
- Dissolved organic carbon level indicates that the water is coloured (from organic deposits) and this colour would affect the transparency of the water
- Overall, Farm Lake has little or no signs of eutrophication and is considered to be in the “oligotrophic” state (ranking 2); the province recommends that it be protected

HUGHES LAKE

	Transparency (metres)	Phosphorus (micrograms/litre)	Chlorophyll (micrograms/litre)	Dissolved Organic Carbon (milligrams/litre)
2010	5.0	3.5	1.9	2.9
2011	4.7	3.5	2.1	3.1
2012	5.2	2.2	1.4	3.2
2013	6.7			
2014	3.4			
2015	4.8			
2016	4.9			
2017	3.7			
2018	4.6			
2019	4.7	4.4	1.4	4.0

Brief Summary of 2019 Results (complete analysis is available at this website:
www.environnement.gouv.qc.ca/eau/rsvl/relais):

- Transparency of 4.7 metres characterizes clear water (ranking 3)
- Phosphorus level indicates that the lake is slightly enriched by phosphorus (ranking 2)
- Chlorophyll level shows a low biomass of microscopic algae in suspension (ranking 2)
- Dissolved organic carbon level indicates that the water is slightly coloured (from organic deposits) but this colour would likely have little effect on the transparency of the water
- Overall, Hughes Lake has little or no signs of eutrophication and is placed in the “oligotrophic” state (ranking 2); the province recommends that it be protected

LITTLE HUGHES LAKE

	Transparency (metres)	Phosphorus (micrograms/litre)	Chlorophyll (micrograms/litre)	Dissolved Organic Carbon (milligrams/litre)
2010	6.4	5.6	1.3	3.0
2011	5.7	2.9	0.8	3.0
2012	6.8	2.2	1.1	2.4
2013	5.3			
2014	6.1			
2015	6.3			
2016	----			
2017	----			
2018	7.2*			
2019	6.1	3.4	0.9	2.2

*Only one measurement taken (September 2018).

Brief Summary of 2019 Results (complete analysis is available at this website:
www.environnement.gouv.qc.ca/eau/rsvl/relais):

- Transparency of 6.1 metres characterizes very clear water (ranking 2)
- Phosphorus level indicates that the lake is only slightly enriched by phosphorus (ranking 1)
- Chlorophyll level shows a very low biomass of microscopic algae in suspension (ranking 1)
- Dissolved organic carbon level indicates that the water is not very coloured (from organic deposits) and this colour would likely have a very small effect on the transparency of the water
- Overall, Little Hughes Lake has little or no signs of eutrophication and is in the “ultra-oligotrophic” state (ranking 1); the province recommends that it be protected

MCCUAIG LAKE

	Transparency (metres)	Phosphorus (micrograms/litre)	Chlorophyll (micrograms/litre)	Dissolved Organic Carbon (milligrams/litre)
2010	7.0	6.7	1.0	2.0
2011	6.2	2.7	0.9	1.8
2012	7.2	1.6	0.8	2.3
2013	6.4			
2014	6.3			
2015	6.9			
2016	----			
2017	----			
2018	7.5*			
2019	6.1	4.2	0.7	3.1

*Only one measurement taken (September 2018).

Brief Summary of 2019 Results (complete analysis is available at this website:
www.environnement.gouv.qc.ca/eau/rsvl/relais):

- Transparency of 6.1 metres characterizes very clear water (ranking 2)
- Phosphorus level indicates that the lake is slightly enriched by phosphorus (ranking 2)
- Chlorophyll level shows a very low biomass of microscopic algae in suspension (ranking 1)
- Dissolved organic carbon level indicates that the water is slightly coloured (from organic deposits) but this colour would likely have little effect on the transparency of the water
- Overall, McCuaig Lake has little or no signs of eutrophication and is in the “oligotrophic” state (ranking 2); the province recommends that it be protected