

## Golden Lake Property Owners Association

### Environment Report – Golden Lake – 2015 Season

A number of items related to the environment were conducted during the 2015 season: sampling for fecal coliforms, sampling for phosphorus via the RSVL program (Voluntary Monitoring Network of Lakes) and the completion of a report on Golden Lake by Abrinord.

#### Results of Coliforms

Three sets of samples were carried out at each beach for fecal coliform monitoring. The findings appear in the annexed table showing that Golden Lake has an excellent quality at the bacteriological level.

#### The RSVL Program

Several tests were performed for transparency, total phosphorus, chlorophyll and chemical application. All results indicate that Golden Lake has very little pollution. We recorded, on the annexed table, the phosphorus concentrations from 2001 to 2015. The years 2007, 2012 and 2015 are those where tests were performed by the Ministry of Environment's laboratory. For the years 2011, 2013 and 2014, results came from the accredited laboratory Bio Ste-Agathe services.

We observe a significant difference between phosphorus concentrations measured by the two laboratories. This discrepancy may be a result of different sampling techniques used, methodology, analysis or evaluation of phosphorus at the time. However, values up to 7 micrograms per liter (average of the years 2011, 2013 and 2014) represent a very good water quality. It would be useful for the GLPOA to continue with the RSVL monitoring program.

#### The Abrinord Report

Abrinord is the organization that manages the watershed of the North River. A meeting was held on February 6, 2016 with Mrs. Melissa Daniel. A summary report entitled Portrait of Golden Lake was produced by Abrinord and gives a very good picture of the situation.

#### Presence of Blue-Green Algae (Cyanobacteria)

There was some localized incidence of cyanobacteria in 2015. Photographs of this occurrence were taken and everything was reported to MDDELCC.

#### Profile of Dissolved Oxygen

Measurements of dissolved oxygen and temperature were taken on July 10, 2015 in the deepest area of the lake. These results appear in the appendix. The dissolved oxygen concentration is near saturation in the measurements, which is excellent.

## Conclusion

Given its peculiarities, Golden Lake can be seen as a fragile lake. The following points should be considered:

- The lake is relatively small (0,083 km<sup>2</sup>), shallow (average of approximately 6 meters) without a tributary or outflow. The water level of the lake is maintained by groundwater.
- The temperature of the lake can reach over 25° in summer.
- It is located in a highly urbanized area. Approximately 1,100 people have access to the lake permanently (shoreline residents, beach access, Auberge Prema Shanti, etc.).
- The new homes that are built are becoming larger, which increases the risk of runoff and erosion.
- The walls (retaining walls) account for 74% of the perimeter of the lake.
- There are mature (healthy) trees that regularly disappear, but it is not evident that they are being replaced.
- Drainage from the roads around the lake is not well captured or maintained favoring runoff of these surface waters into the lake.

Can we not come up with a better protection plan for the lake, something prepared together with experts in the field, to preserve this gem of a lake? It is beautiful, but if we let it go without a protection plan, we run the risk of losing it.

- Prepared by Roger Tessier, Environment Consultant, June 2016

(translation)