Lakes Solar, Caroline, Evans Health Report 2019

Testing

The following are the types of analysis are done for our lakes:

• A chemical analysis;
• Assessment of the presence of AEEP (invasive alien aquatic plants);
• Transparency measurement.

For 2020, the Ministry of the Environment and the Fight against Climate Change, has unfortunately suspended sampling activities until further notice due to the COVID-19 pandemic. We will resume these activities as soon as possible.

2019 Health Report

- **Lake Evans** has somewhat cloudy water and is considered to be **transitioning into a eutrophic** state. The lake water clarity has continued to slowly improve over the past 4 years and is currently transparent up to 2.8 m. 2019 Transparency, 2019 Summary Findings

- **Lake Caroline** has slightly cloudy water in different places and is considered to be a in a **mesotrophic** state. The lake water clarity has continued to improve over the past 4 years and is currently transparent up to 3.4 m. 2019 Transparency Results, 2019 Summary Findings

- **Lake Solar** has slightly cloudy water with an intermediate level of plant productivity and is considered to be in a **mesotrophic** state. Lake water clarity has continued to improve over the past 4 years and is currently transparent up to 3.9 m. 2019 Transparency Results, 2019 Summary Findings

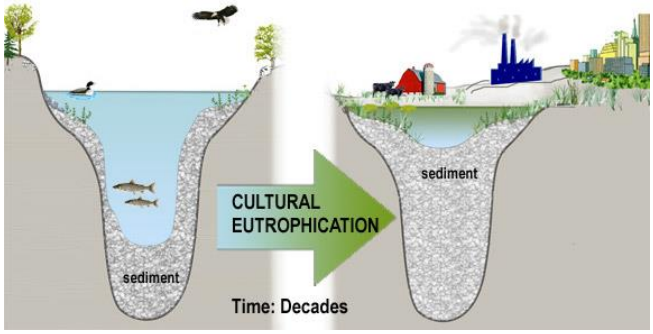
Stages of Eutrophication

The trophic status of a lake is a measure of the degree of excessive richness of nutrients present in the water usually due to run off from the land. This enhances biological productivity, resulting in increases in microscopic algae, aquatic plants and a reduction in dissolved oxygen, degrading the water quality in our lakes. Lakes can be in one of the following three main trophic states:

Oligotrophic state: Clear waters with little organic matter or sediment and minimum biological activity. These lakes are usually deep and the shoreline is sparsely populated with aquatic plants.

Mesotrophic state: Waters with more nutrients and, therefore, more biological productivity. These lakes are intermediate with respect to depth, chlorophyll concentration, water clarity, and aquatic plants.

Eutrophic state: Waters extremely rich in nutrients, with high biological productivity. These lakes have higher concentrations of phosphorus and chlorophyll and poorer clarity. Typically, they are shallow, often muddy and contain an abundance of aquatic plants.



Ways to prevent or slow Eutrophication

We can all help

- **Use no-phosphorus fertilizer on lawns and gardens.** Be sure to check the bags when you buy them. Look for the package formula of nitrate-phosphorus-potassium, such as 22-0-15. The middle number, representing phosphorus, should be 0.
- **Avoid and minimize use** of cleaning products with phosphates, bleaches, acids and antibacterial compounds.
- **Fix or replace faulty septic systems** to prevent run off of raw nutrient rich sewage into lake waters.
- **Rake Up** grass clippings, cut plants, and leaves from your land to prevent them from washing into the lakes.
- **Plant a wide strip of deep-rooted aquatic friendly plants along shoreland (Riparian Strips).** Instead of planting and mowing turfgrass here, plant aquatic friendly wildflowers, ornamental grasses, shrubs or trees. These plantings absorb and filter runoff that contains nutrients and soil, as well as provide habitat for wildlife.

2019 Detection of Invasive Aquatic Plants

We patrolled the 3 lakes on August 12, 13 and 14 with a liaison officer from the Eurasian milfoil project (LCMAE). **Good news,** none of the lakes had milfoil. You have to make sure to keep monitoring.

For further information please click on the following links:

Gore : Township of Gore Environment site
Québec : Environnent Québec Rivers and Lakes
Québec : Réseau de surveillance volontaire des lacs (RSVL)
Québec : Détection des plantes aquatiques exotiques envahissantes