SHORELINE INSPECTIONS REPORT 2024

Municipality of the Township of Gore

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INTRODUCTION

During the summer of 2024, the Municipality of the Township of Gore's environmental inspection team carried out 173 shoreline inspections. Our main objective was to prioritize waterfront properties that had not been visited in recent years. The purpose of this report is to raise awareness among Gore citizens of the importance of complying with regulations governing shoreline areas, and to provide a better understanding of the quality and impact of these areas in different sectors of the municipality.

IMPORTANCE OF SHORELINES

Shorelines play a crucial role in protecting our lakes, wetlands and streams. They offer much more than opportunities for water-based activities; they are an treasured asset, providing drinking water, food resources and helping to reduce atmospheric CO_2.

Here are some of the main benefits of maintaining a compliant shoreline:

1. Ecosystem protection: Well-maintained shorelines act as natural buffers between water and land, protecting aquatic ecosystems.
2. Erosion prevention: Tree and plant roots stabilize soils along watercourses, reducing bank erosion and the risk of degradation.
3. Improved water quality: A healthy shoreline naturally filters sediments, nutrients and pollutants before they reach watercourses, contributing to better water quality for wildlife and humans.
4. Flood control: Vegetated riparian buffer strips can absorb and hold back some of the water during flash floods, reducing the risk of flooding in shoreline areas at risk.
5. Conservation of natural resources: By protecting shorelines, we preserve natural resources and the ecosystem services they provide, such as water purification, climate regulation and biodiversity protection.

REGULATIONS REMINDER

Compliance with shoreline regulations is essential to protect Gore's lakes, wetlands and waterways. Here's a reminder of the main requirements:

1. Protection strip: A 15-meter shoreline protection strip must remain in its natural state. The cutting of grass, trees or any form of vegetation control is prohibited.
2. Composition of the shoreline buffer: A compliant shoreline must include three vegetation strata: trees, shrubs and herbaceous plants. If one of these layers is lacking, native species must be replanted along the shoreline.
3. Access path: An access may be created to reach the lake, but its width is limited as follow:
    a. Slope greater than 30%: The path must be a maximum of one (1) meter wide and be winding through all the three vegetation strata.
    b. Slope less than 30%: The trail may be up to five (5) meters wide, while preserving existing herbaceous and shrub species.
4. Painting and treatment: To avoid damage to aquatic ecosystems caused by toxic products, it is forbidden to paint, treat or stain docks, stairs and walkways located in the protection strip or along the shoreline.

For further information, please refer to the Zoning By-Law (R-214), chapter 10, which covers all regulations relating to shorelines.

RESULTS

Lake Kenny

Lake Kenny consists of 44 lakefront properties. During our inspections, we found all 44 properties to be in full compliance. Kenny is the most compliant lake of 2024, with a compliance percentage of 100%.

Lake Frederic

Lake Frederic consists of 9 waterfront properties. During our inspections, we found all 9 properties to be in full compliance. Another lake with a 100% positive result.

Lake Chevreuil

Lake Chevreuil is made up of 24 lakefront properties. Our inspections revealed that only 5 shorelines are in the process of getting compliant, while the remaining 19 properties are in conformity. This gives Lake Chevreuil an 80% compliance rate.

Lake Barron

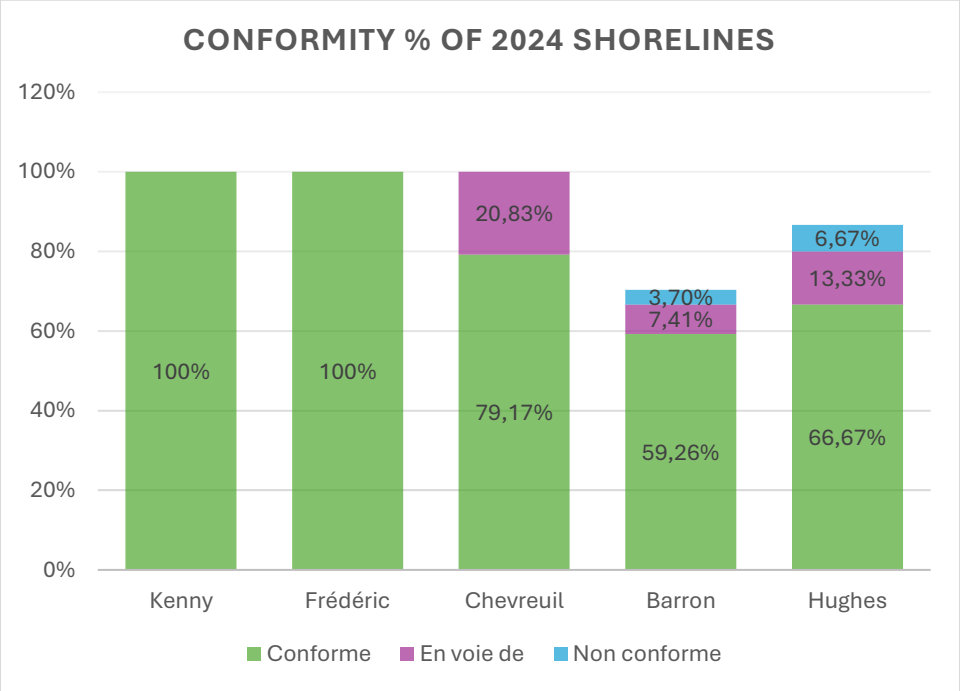
For the lake Barron, we inspected 81 properties, which does not cover all the lake's shorelines (207). Our inspections revealed that 48 shorelines were conform, 6 are in the process of getting conformity and 3 were in infraction. Thus, the inspected sectors of lake Barron are approximately 59% compliant.

It's important to note that this assessment does not reflect the complete condition of lake Barron, as not all shorelines were inspected. Moreover, Lake Barron has been a developed area for several decades, with many properties and buildings located in the shoreline. This makes it difficult to respect the 15-meter protection zone. However, this factor is considered during our inspections.

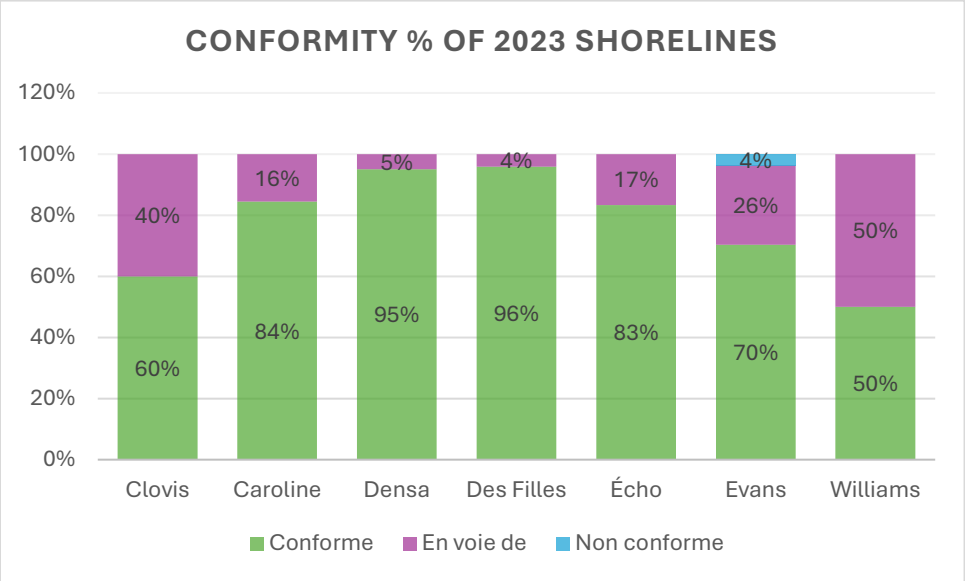
Lake Hughes

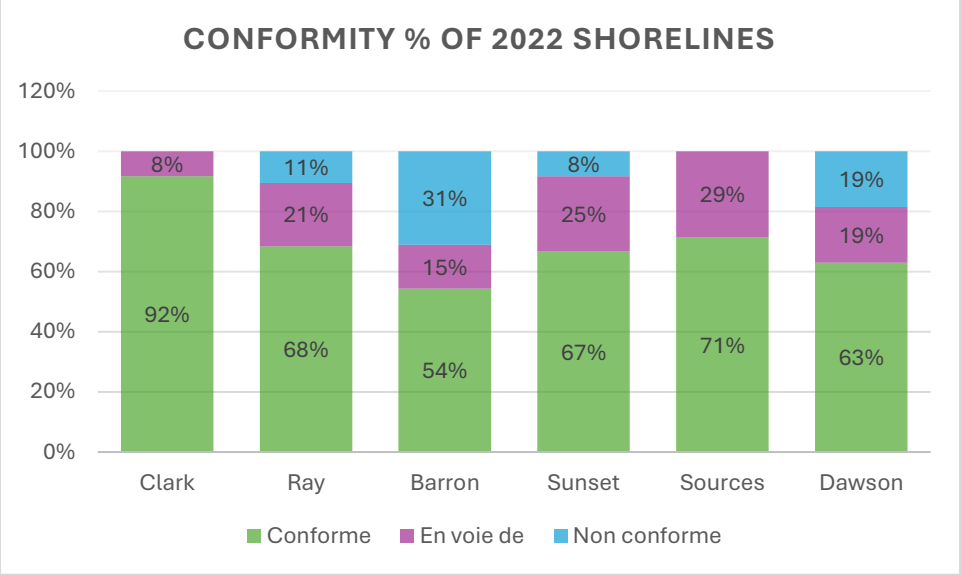
For lake Hughes, we inspected 15 of the 52 existing properties, which does not cover all the lake's shorelines. Our inspections revealed that 10 shorelines were conform, 2 were in the process of being compliant and 1 was in infraction. This means that approximately 67% of lake Hughes inspected properties are compliant. It's important to note that this assessment does not reflect the complete condition of lake Hughes, as not all shorelines were inspected. In addition, lake Hughes is a developed area with many properties located directly in the shoreline. This factor is also considered during our inspections.

Lakes	Properties	Inspected	Compliant	In the process	Non-compliant	Conformity %
Kenny	44	44	44	0	0	100%
Frederic	9	9	9	0	0	100%
Chevreuil	24	24	19	5	0	80%
Barron	207	81	48	6	3	~59%
Hughes	52	15	10	2	1	~67%



Previous year's results





Invasive species observed in the Municipality of Gore in 2024:

In 2024, in-depth inspections of lakes in the Municipality of Gore revealed the presence of three invasive species of concern: common reed (*Phragmites australis)*, Chinese mystery snail *(Cipangopaludina chinensis)* and Japanese knotweed *(Reynoutria japonica)*. These species, known for their negative impacts on aquatic ecosystems, pose major challenges for environmental management. The next section presents these species, their effects on the environment and the methods recommended to eliminate them.

Phragmite (*Phragmites australis*)

Phragmites, often called "common reed", is an herbaceous perennial that spreads rapidly and aggressively. Although originally a coastal plant in temperate zones, it has become invasive in many regions, including Quebec.

Characteristics:

- Phragmites can reach up to 2 to 5 meters in heights and it is recognised by its large stems and feathery inflorescences.
- It forms dense colonies that can choke out native vegetation.

Environmental impact:

- Reduce biodiversity: Phragmite colonies replace native aquatic plants, reducing the diversity of local plants and animal species.
- Habitat modifications: Dense colonies alter aquatic habitat conditions, affecting birds, insects and other animals.
- Erosion: Although phragmites roots stabilize banks in the short term, they can cause soil erosion if disturbed.

Control methods:

- Cutting and removal: Regular cutting before flowering is essential to limit spread. Debris should be removed to prevent seed dispersal.
- Water management: In some cases, temporary management of water levels to dry out infested areas can help control phragmites.

- Colonies can be covered with resistant geotextile in a specific area. The tarps should remain in place for a minimum of 2 years.

Chinese mystery snail (*Cipangopaludina chinensis*)

The Chinese mystery snail, also known as *Cipangopaludina chinensis,* is a small freshwater mollusc native to East Asia. This mollusc is known for its ability to reproduce rapidly and disrupt the aquatic environments into which it introduces itself.

Characteristics:

- *Cipangopaludina chinensis* is a snail with a conical shell that usually measures less than 3 cm, but can reach up to 7 cm.
- The snail has a special “door” (operculum) made of calcium carbonate (a hard substance) inside the shell. This door can close completely to protect the snail.

Environmental impact:

- Food chain disruption: By feeding on phytoplankton and decomposing organic matter, the Chinese mystery snail can alter aquatic food chain.
- Competition with native species: It competes with local species for food and habitat, reducing biodiversity.
- Spread of parasites: This mollusc is a host for parasites that can affect other aquatic species, exacerbating negative impacts on the ecosystem.

Control methods:

- Monitoring and early detection: Regular monitoring is essential to detect new infestations and limit their spread.
- Mechanical removal: Manual collection of the Chinese mystery snails can be effective for localized infestations. Snails must be removed from the water and disposed of properly.

Japanese knotweed (*Reynoutria japonica)*

Japanese knotweed (*Reynoutria japonica*) is an invasive perennial plant in the Polygonaceae family. It rapidly invades green spaces, suppresses native plants and can damage structures with its rhizomes. It reproduces mainly by underground rhizomes, but also by seed.

Characteristics:

- Leaves: large, heart-shaped, green.
- Stems: Robust, hollow, red or green, similar to bamboo.
- Flowers: small, white or pink, in cluster.

Environmental impact:

Japanese knotweed chokes out other plants by spreading rapidly, reducing plant diversity. By invading shorelines, it alters habitats for aquatic plants and animals. Its roots can damage roads and buildings by working their way through structures. Moreover, managing this plant is costly and complex.

Control methods:

Includes mechanical removal, use of herbicides, and continuous monitoring to control its spread.

The discovery of phragmites, Chinese mystery snails and Japanese knotweed in the lakes and shorelines of the Municipality of Gore in 2024 highlight the urgency of adopting effective management measures to protect local aquatic ecosystems. A combined approach of monitoring, elimination and control is crucial to limit the impacts of these invasive species. Citizens are invited to report any sightings of these species and to work with local authorities to ensure successful management and preserve the ecological health of our aquatic environments.

Conclusion

For another year in a row, the Township of Gore's environmental department has continued its efforts to ensure compliance of the territory's shorelines. Given the magnitude of the task and the sheer size of the territory, it's only natural that inspections should be spread over several years. That's why we concentrated our efforts on lakes and sectors that had not been inspected in the previous year. This method enables us to keep an eye on all waterfront properties, while following up on those that show non-compliance, as well as situations in breach. Owners with a non-compliant shoreline or one in the process of becoming compliant were given recommendations and specific objectives to achieve by the inspectors. We continue to depend on the full participation of citizens and lake associations to continue educating and raising public awareness of the importance of a compliant shoreline for the health of our lakes.

For more information

Municipality of the Township of Gore website:

- https://www.cantondegore.qc.ca/fr

For more information on shorelines:

- https://banderiveraine.org/

Ministry of the Environment invasive species monitoring program:

- https://www.environnement.gouv.qc.ca/biodiversite/especes-exotiques-envahissantes/sentinelle.html