

A healthy lake is our priority!



Brome Lake: a treasure to be protected

Brome Lake is a treasure at the heart of our community and a source of pride for all residents of the Town of Brome Lake. It offers a magnificent vista, an exceptional biodiversity and an ideal place to relax and enjoy nautical sports. As shoreline residents, we have an important role in its preservation. We must pay particular attention to the shoreline; it is essential to the health of the lake. Our actions count, not only for us but for future generations.

Terminology and sketch

'Riparian buffer strip' (bande riveraine): the part of the shore that has vegetation. Ideally this would be made up of herbaceous growth, trees and shrubs to fulfill the ecological role of protection of the lake.

'Shore' (littoral): the portion of a lake or watercourse that stretches from the line which separates the shoreline towards the center of the water surface. For the lake, this line is situated at an elevation of 197.28 meters.

'Shoreline' (rive): part of the territory that borders a lake or watercourse and which is measured horizontally from the limit of the shore towards the interior of the land. For the lake, the shoreline is 15 meters wide.



3

Municipal regulations for shoreline residents

As shoreline residents, we are subject to provincial and municipal regulations which ensure the good health and survivability of the lake. These rules must be respected. Relevant information is available to shoreline residents on the lacbrome.ca site under the heading of general regulations. Here is a noncomprehensive list of some of the practices that must be followed to protect our lake.

A. Construction and repairs on the shore

You are permitted:

- To repair and maintain an existing structure
- To construct a removable shelter for a boat or a floating dock, or a dock on piles, posts or wheels, having a total area of less than 20 square meters.

It is strictly forbidden:

 To build, repair or undertake any other type of construction or work such as, for example, the landscaping of a private beach.

If you wish:

- To build a dock on piles to a maximum length of 15 m and a maximum area of 37.5 square meters;
- To build a dock on piles to a maximum length of 30 m and an area that could attain 60 square meters in a situation where the depth of the lake is less than 1.2 meters at the extremity of the dock;
- · To stabilize the embankment;

Specific regulations apply. Please contact the Town Hall.

B. Septic systems

For shoreline properties, it is particularly important to ensure that septic systems are in good working condition and to carry out the necessary maintenance (for Ecoflo, Bionest, Enviroseptic, Hydrokinetic and other secondary or tertiary systems).

C. Construction and renovations on shoreline

You are authorized:

• To repair and maintain an existing structure.

It is strictly forbidden:

• To construct a new principal building.

If you wish:

- To enlarge an existing building, without additional ground coverage;
- To stabilize an embankment;
- To reconstruct a building after a disaster;
- To construct an accessory building;

Specific rules apply. Please contact the Town Hall.

D. Riparian buffer strips

On the shoreline, most work is forbidden. However, exceptions may be possible and therefore the following is authorized:

To build an access to the lake. Specifically:

- When the slope is less than 30%, the grass cutting on an angled path leading to the lake must have a maximum width of 3 meters.
- When the slope is equal to or greater than 30%, the construction of a staircase on posts or the grass cutting on a path leading to the lake must have a maximum width of 1.2 meters.

To plant native species which reduce the invasion of exotic species and contributes to the good health of the lake and its shoreline.

4

Main threats relating to non-conforming riparian buffer strips

The integrity and maintenance of the riparian buffer strip is everyone's responsibility. Municipal regulations provide for a riparian buffer to be established at 15 meters' width all the way around the lake. The more the riparian buffer is at the regulatory 15 meters, the better it can fulfill its role and continue to adequately protect the lake. Unfortunately, few of the riparian buffer strips comply with this standard at the present time. This puts the lake's health in jeopardy because:

- The absence of shade contributes to the proliferation of algae and causes increases in the temperature which decreases the quantity of oxygen in the water and degrades the habitat of the fauna and flora;
- The absence of a strong and diverse network of roots facilitates erosion;
- Lawns make the shoreline impermeable and limit the treatment of runoff water. This brings
 additional contaminants into the lake. The more the riparian buffer strip is dense, diversified and
 deep, the better the filtration. Properly landscaped, plants can efficiently retain 30 to 90% of
 transiting phosphorus.

Of note, making the property impermeable beyond the riparian buffer strip (by paving, for example), has a negative impact on the lake by causing additional run-off water.



5

How to arrange the riparian buffer strip to ensure the sustainability of the lake?

Maintaining the health and the integrity of the lake requires community involvement. Particular attention must be given to the riparian buffer strips and their landscaping.

To carry out all of its ecological roles, a riparian buffer must be made up of three strata of vegetation. **One grassy strata** to slow run-off, **one ligneous strata** which, among other things, establishes a root network to prevent erosion, and **one strata of trees** which strengthens the root network, provides shade and helps the other strata in their roles. To ensure the sustainability of the lake, all three strata must be found within the 15 meter riparian buffer zone provided for in the regulations. Also, for the riparian buffer to function effectively, it is essential that it is made up of native plants.

Δ

5



Ultimately, by surrounding the lake with a better riparian buffer zone, we will maintain its integrity and its health.

It is recommended to call upon professionals who are knowledgeable about the regulations and best practices, such as landscapers, or to inform oneself fully on the subject. The municipality's website contains a lot of relevant information.

The management of the level of the lake

Since 2019, we have noted a decrease in the level of the water in Brome Lake during the summer period. As climate change accentuates the dry periods, the lake may fall to ever decreasing levels. The management of the level of the lake, governed by the Foster dam, is a complex process which seeks to respond to the various changes in climate and the requirements of downstream users. The objective of the municipality is to maintain the level of the lake in the winter in order to avoid flooding in the Spring. At the end of the Spring thaw, and throughout the summer, the objective is to maintain a sufficient level in the lake to ensure an adequate flow for the health of the Yamaska River.



A few useful references

Types of riparian buffer strips:

banderiveraine.org/optimiser-son-efficacite/les-types-de-bandes-riveraines

Lake surveillance programmes:

General rules: environnement.gouv.qc.ca/eau/rsvl/index.htm

Lac Brome: environnement.gouv.qc.ca/eau/rsvl/relais/rsvl_details.asp?fiche=278

Bylaws:

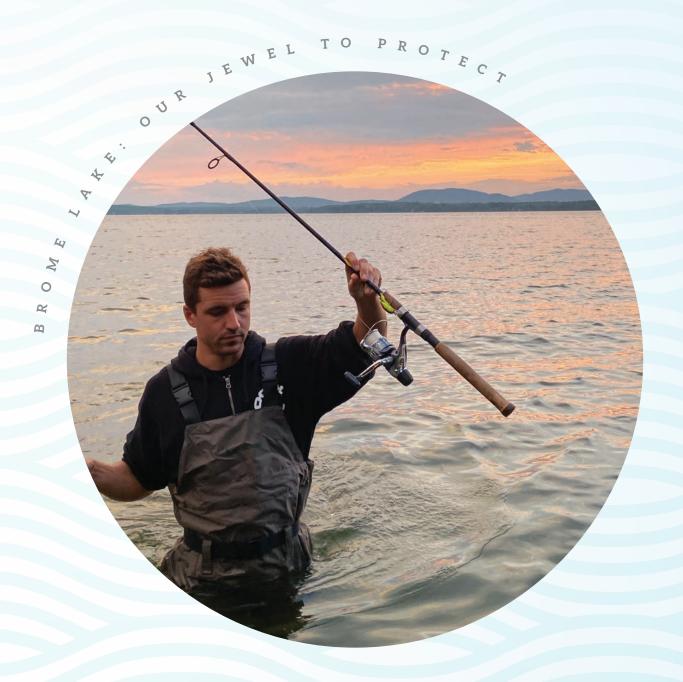
<u>lacbrome.ca/residents/reglements-municipaux</u>

Town website:

lacbrome.ca

Water levels of Brome Lake at Douglass Beach:

 $\underline{cehq.gouv.qc.ca/suivihydro/graphique.asp?NoStation=030350}$



Thank you to our partners!







Renaissance lac Brome : <u>renaissancelbl.com</u>

OBV Yamaska : <u>obv-yamaska.qc.ca</u>
Brome-Missisquoi MRC : <u>mrcbm.qc.ca</u>

