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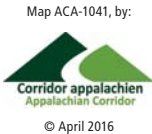
The Fitch Bay sector of Lake Memphremagog is an area well known for its landscapes of ecological interest as well as for it's overall beauty. It contains a number of flora and fauna of particular interest, as well as a variety of wetlands and forested areas. Nevertheless, the quality of the water of the bay is worrisome. The lack of water clarity, the high concentrations of phosphorus, the muddy bottom, the high density of aquatic vegetation and the frequent cyanobacteria blooms are clear indications of the degradation of the bay and are evidence of eutrophication (accelerated aging). The various uses being made of the watershed and the deterioration of the ecosystem and the environment of the bay are compromising the health of these ecosystems, reducing the quality of life of the residents and reducing the ecotourist potential of the area and of the lake as a whole.

*The Healthy Fitch Bay: From Diagnoses to Solutions!* project has two objectives: improve the quality of the water in the bay and its watershed and conserve the existing biodiversity along with the ecosystem functions that this biodiversity provides.

Each actor in the region has a role to play in ensuring the health of Fitch Bay and its watershed.

## Subwatersheds

- |  |   |
|--|---|
|  Fitch Bay Subwatershed             |  Highway                     |
|  Lime Kiln Watercourse Subwatershed |  Regional or National Road   |
|  Tompkin Watercourse Subwatershed   |  Local Road                  |
|  Bachelder Watercourse Subwatershed |  Street                      |
|  Gale Watercourse Subwatershed      |  Watercourse                 |
|  Bunker Watercourse Subwatershed    |  Waterbody                   |
|  Fitch Watercourse Subwatershed     |  Municipal Boundary          |
|  Lake Lovering Subwatershed         |  Fitch Bay and its Watershed |



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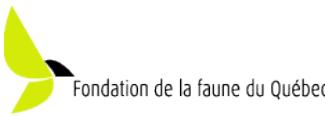
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# Healthy Fitch Bay: From Diagnoses to Solutions!

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# What can we do to ensure the health of Fitch Bay and its watershed?



## Conservation of natural landscapes

- ✓ Conserve the natural landscapes of ecological interest on your property (such as forests, wetlands, habitats of species of concern, waterways and their shorelines);
- ✓ Consult with Memphremagog Conservation Inc. regarding conservation options.
- ⚠ Natural landscapes provide a number of ecological services and contribute to the quality of life of the residents. For example, wetlands are areas of high biodiversity, filter the water, contribute to the slowing of erosion and maintain aquatic habitats.
- ⚠ A number of conservation options, each with different fiscal and financial incentives, are available to property owners (private nature reserve, property or servitude donation, sale for conservation purposes, etc.).

## Preserving and renaturalizing shorelines

- ✓ Preserve a 10 to 15 m (or larger) shoreline buffer zone;
- ✓ Renaturalize with trees, shrubs and grasses;
- ✓ Completely cover artificial shores (rock or concrete walls) with vegetation.
- ⚠ Adequately large shoreline buffer zones reduce the transport of pollutants into waterways, provide food and shelter to a variety of fauna and provide shade that help keep water temperatures cool.
- ⚠ When exposed to the sun, rock or concrete walls heat the water and promote the proliferation of algae in the bay, while also limiting the presence of certain fish species such as trout, etc.

## Maintaining forest cover

- ✓ Maintain forest cover over a minimum of 75% of your property;
- ✓ Avoid fragmenting large forest block by the installation of roads.
- ⚠ Large blocks of forest cover on a property help reduce erosion, filter nutrients, prevent the heating of the water, and provide habitat for many species of flora and fauna.
- ⚠ Certain animals require large territories for their cycle of life while others need specific types of habitat, such as deep forests, in order to survive.

## Fertilizers and pesticides

- ✓ Opt for ecological maintenance of lawns and flower beds;
- ✓ Immediately stop using fertilizers and pesticides in shoreline buffer zones.
- ⚠ The major part of phosphates spread on lawns near waterways end up in the water.
- ⚠ Pesticides and herbicides used to manage your property irremediably end up in the lake after it rains.

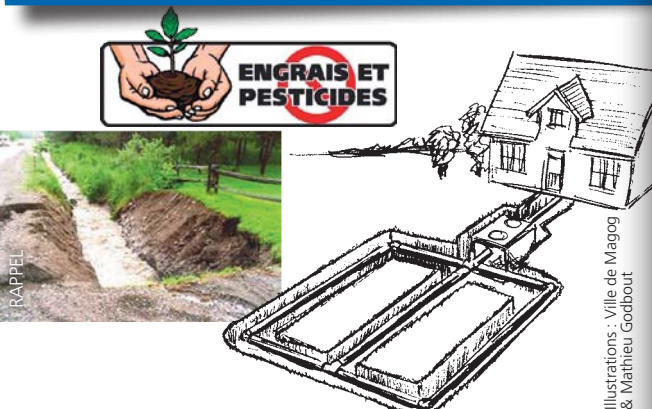
## Septic systems

- ✓ Use only biodegradable, phosphate free cleaning products;
- ✓ Inspect, maintain and repair, as needed, your septic system.
- ⚠ Septic system filter beds do not eliminate phosphorus. It is thus important to send as little phosphorus as possible into the septic system.
- ⚠ Properly installed and functioning septic systems reduce the risk of contaminating waterways.

## Driveways and private roads

- ✓ Maintain roadside ditches using the bottom third technique;
- ✓ Avoid paved entryways and impermeable patios.
- ⚠ Vegetation in ditches absorb phosphorus and reduce the amount of sediment transported into the lake.
- ⚠ Water which flows over paved driveways and entryways does not soak into the soil and is thus not filtered in any way.

For more information:  
[www.memphremagog.org](http://www.memphremagog.org)



# As well, certain residents have specific roles to play, depending on their activities ...

## Owners of forested tracts

- ▶ Opt for forestry practices that maintain the forest cover, and that protect sensitive areas such as wetlands, waterways, shorelines and difficult zones, such as steep slopes;
- ▶ Do not permit heavy equipment on steep slopes or in shoreline buffer zones;
- ▶ Respect local bylaws in shoreline buffer zones and on slopes greater than 30%, and harvest trees selectively;
- ▶ First harvest sick and damaged trees, and never surpass maximum harvest percentages as prescribed in local bylaws;
- ▶ Leave snags (dead tree trunks) in place for fauna, in particular for woodpeckers, bats and flying squirrels;
- ▶ Carry out logging work while the soil is frozen;
- ▶ Install logging roads where the terrain is stable (vegetated, frequent deviations of the water in the forest, use of sedimentation basins, other anti erosion techniques);
- ▶ Install effective culverts.

## Farmers

- ▶ Install water troughs and fences in order to prevent livestock from accessing waterways;
- ▶ Avoid spreading fertilizers near lakes and waterways;
- ▶ Use agricultural practices that ensure a rapid revegetation of bare soil (using agricultural residues on the soil, ensuring ditches are vegetated);
- ▶ Preserve wetlands, waterways and shoreline buffer zones;
- ▶ Maintain windbreak hedges that promote a deeper snow cover and reduce wind caused erosion;
- ▶ In maple syrup operations, maintain the composition of the understory, avoiding favouring a single species. Maintain companion species (such as linden and butternut, etc.).

## Resort businesses (camping, marinas, etc.)

- ▶ Collect and properly treat waste water;
- ▶ Sensitize your clients regarding good environmental practices;
- ▶ Provide appropriate waste disposal facilities.

## Boaters

- ▶ Respect reduced speed zones: in the first 100 m from the shore, the limit is 10 km/h (6 mi/h);
- ▶ Practice activities that generate large waves at least 250 m from the shore, and in areas where the water depth is at least 5 m;
- ▶ Dispose of garbage, grey water and waste water at facilities intended for this purpose;
- ▶ Avoid spilling fuel when refuelling, and opt for a boat that has an anti spill system;
- ▶ Opt for a boat that is as silent as possible;
- ▶ Do not feed waterfowl.

## Municipal and government actors

- ▶ Educate and promote the protection of the environment and the conservation of natural landscapes;
- ▶ Oversee and supervise the management of the territory;
- ▶ Design and implement appropriate municipal bylaws.

## Lake and waterway protection associations

- ▶ Carry out environmental sensitization and distribute information on good environmental practices (conferences, brochures, etc.);
- ▶ Report all abuses of the environment, and any practices that appear problematic.