



THE RIPARIAN BUFFER ZONE



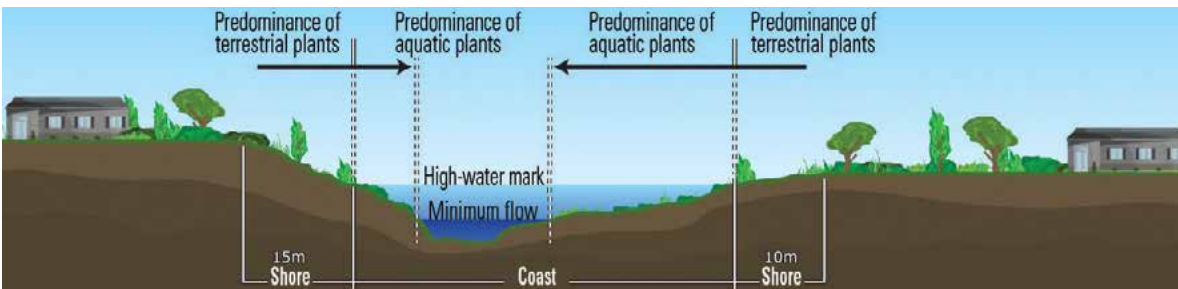
What Role Does it Play?

- Provides stream-bank stability;
- Filters pollutants;
- Absorbs the nutritive elements necessary to the growth of blue-green algae;
- Reduces overland runoff;
- Reduces erosion of your land;
- Provides food and habitats for the wildlife;
- Contributes to the aquatic environment's good health;
- Increases plant and animal diversity;
- Prevents floods;
- Protects from waves and strong winds;
- Reduces sand-covering and the cost of construction work.

What Is a Riparian buffer zone?

A riparian buffer zone is a natural and permanent vegetation strip bordering a water body. It represents a transition area between land and water.

Erosion: deterioration of the land's superficial layer by wind, rain, ice, and flowing water.



The riparian buffer zone offers many advantages for riparian owners.

As per the *Policy for the protection of riverbanks, shore areas and floodplains*, its width ranges between a minimum of 10 to 15 meters, depending upon the slope of the terrain. To be effective, the riparian buffer zone should consist of herbaceous plants, shrubs and trees native to Québec.

Why Do We Promote Preservation and Landscaping of the Riparian buffer zones?

Because the shore assumes many functions necessary to ensure the health of a water body, and that the majority of our interventions within the aquatic environment are made either on the shore or within the portion of the shoreline near the shore.

Shore: land strip bordering a water body.

Shoreline: water area that extends from the high-water mark to the centre of the water body.



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Did you know that...

Québec's non-navigable and non-floatable lake or stream shores have been protected since 1888, by the "Réserve des trois chaînes", which vested ownership of a riparian buffer zone of approximately 60 meters to the provincial State. The automatic reservation of a riparian buffer zone was intended to facilitate fishing and preserve the environment and the wildlife habitat. No construction work could be initiated without authorization from the State. The "Réserve des trois chaînes" was abolished in 1987, and ownership of the riparian buffer zone was "devolved" to the riparian owners.

- Choquette (2008-09) -

What can I do to prepare the riparian buffer zone for my own land property?

There are two ways to create a riparian buffer zone. The simplest is to let nature take over by not mowing the portion of your land that borders the lake or stream (Consult with your municipality to know the distances to be respected). This rather passive action is called re-naturalization and has the advantage of letting nature choose the vegetation for the future riparian buffer zone. In this manner, whatever species grows will be well adapted to the local conditions of your area. The other method is to re-vegetate the shore. Unlike re-naturalization, some work is required to plant herbs, shrubs and trees native to Québec.



Comité de l'environnement du Lac Hoxté



OBV Côte-du-Sud



CAPSA

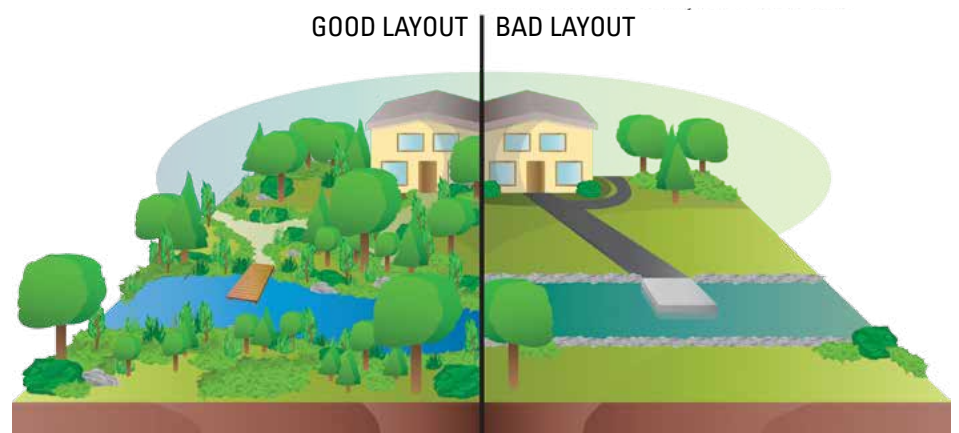
The more the shores are vegetated, the stronger the protection of the lakes and streams!

! CAUTION

In situations where major landscaping work is required or to resolve a particular problem, it is recommended to contact a specialist or your local OBV.

To find out which species are recommended for riparian buffer zones, consult the "Répertoire des végétaux recommandés pour la végétalisation des bandes riveraines du Québec", issued by the FIHOQ (Federation of ornamental horticulture) and AQPP (Association of nursery garden producers). Additional reading references listed at the end of this fact sheet will show the web link to consult this Directory.

A riparian buffer zone does not necessarily block your view to the water body.





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Be careful of invasive species!

Many plant species from other countries or from a region outside of Québec (non-native) have spread throughout our province. Very often accidentally introduced by humans, they can be harmful to our health, environment and economy. If the circumstances are favourable, these species can spread and integrate new habitats, overrun them and disrupt the natural environments.

Below is a list of 20 exotic plants that can be found in Québec and considered pervasive. Do not allow them to grow on the riparian buffer zone, on your property or in the water! For additional information on the listed plants, refer to the "Supplemental Reading" found at the end of this fact sheet.

Reed canary grass	European frogbit
Giant hogweed	Kudzu
Flowering rush	Eurasian water-milfoil
Fanwort	Alder buckthorn
European water-chestnut	European buckthorn
Black dog-strangling vine	Brittle-leaved naiad
Dog-strangling vine	Curly-leaved pondweed
Brazilian elodea	Common water reed
Yellow floating heart	Japanese knotweed
Hydrilla verticillata waterweed	Purple loosestrife



Purple loosestrife



Japanese knotweed

Exotic and Pervasive Species:

Species that propagated beyond its natural range (due to human activity), to new regions.

- SCF 2010 -

The Riparian buffer zone, There's More!

It is wrong to believe that preservation or landscaping of a riparian buffer zone is the only solution to improve the quality of our water bodies. The riparian buffer zone must be prepared in concert with other environment-friendly actions throughout the watershed.

When landscaping your property, it is important to adopt good and ongoing practices. These habits include efficient management of the waters flowing on your property by using the appropriate techniques and products to maintain your land or residence, by keeping an eye on pervasive plant species, and by keeping informed on all topics related to life near the shoreline. **Each riparian resident must do his part to protect his lake or stream.**

The riparian buffer zone is not an alternate solution!



All the stakeholders (residential, commercial, industrial, farming, etc.) of a watershed are responsible for the quality of the water body, but you are the first affected when a problem occurs (e.g. blue-green algae). **Act responsibly and set an example by preserving a riparian buffer zone!**



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Everyone is taking on their share...

Here are a few examples of actions accomplished by other communities in order to protect the water bodies.

Agricultural Sector: preparation of the riparian buffer zones located near the streams, adherence to manure standards (application period and quantities stored), hydro-agricultural developments* (run-off and erosion management), Prime-Vert Program*, etc.

Municipal Sector: preparation of retention basins, green roofs and rain gardens, ground permeabilization, standardization of outdated or broken onsite systems, cross-connections disposal program, etc.

Industrial Sector: environmental certification, environment and water foundations (e.g. Naya Fund), internal wastewater treatment and recycling, sustainable practices for lands bordering water bodies in woodlands and mining environments, etc.

Commercial Sector: biodegradable and phosphate-free products, certified autonomous purification systems, commercial projects submitted to the BAPE, environmental certifications, etc.

Horticulture Sector: creation of green spaces (e.g. rain gardens, roof decks), improvement of preparation and maintenance practices, etc.

* See the Supplemental Reading section

Good practices for the riparian owner to maintain a healthy environment.

- Avoid planting invasive exotic species, even if they are pretty;
- With heavy equipment, ATVs or other, circulate outside the riparian buffer zone;
- Do not use fertilizer on the riparian buffer zone and avoid fertilizing bordering areas;
- Use biodegradable and phosphate-free products;
- Limit the width for the access path to the water;
- Build meandering paths rather than straight ones;
- Favour permeable surfaces (gravel, lawn, plants, etc.);
- Control overland runoff of rainwater;
- Preserve a riparian buffer zone;
- Let the water plants spread;
- Let nature take its course!

You are not the only one making the efforts.

If you require further information, contact your local OBV.



New riparian buffer zone within an agricultural environment.

Denis Chabot



Green roof

Centre de l'Environnement Frédéric Back (Québec) - N. Doyon



Retention basin

Retention bassin Schulz (St-Jérôme) - J. Bouchard



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Jacques Labrecque, ministère du Développement durable, de l'Environnement et des Parcs (MDDEP), Direction du patrimoine écologique et des parcs.

Supplemental Reading

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MAPAQ (2009) Programme Prime-Vert, 42 p. <http://www.mapaq.gouv.qc.ca/NR/rdonlyres/32F6530C-9A4F-4CA7-8ECC-3CF48AFEB875/0/PrimeVert.pdf>

Fiches descriptives d'espèces envahissantes: Réseau de surveillance de plantes exotiques envahissantes, Union St-Laurent Grands Lacs (2010), http://www.rspee.glu.org/recherche_espece/liste_des_especes.php

Guide de plantes exotiques envahissantes, Nature-Action Québec et Union St-Laurent Grands Lacs :

Cet été, surveillez votre jardin...on y trouve peut-être des plantes exotiques envahissantes, http://www.nature-action.qc.ca/nature_action/pdf/Evee/Depliant_Internet_reduit_encoreplus.pdf

L'Alpiste roseau, http://www.nature-action.qc.ca/nature_action/pdf/Evee/Alpiste%20roseau.pdf

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