

Choosing the right plants

An effective riparian buffer must be composed of : trees, shrubs and grasses.

The choice for these three types of vegetation must be made according to local site conditions. In its present surrounding environment, observing plants in their natural state allows identification of species which are adapted to local conditions. You can also find a list of indigenous plant species suitable for revegetalisation on websites mentioned in the section "To learn more".

Planting

Avoid frost and extreme heat periods. Plants must be arranged in **staggered rows** and well **watered**, especially right after planting.

Maintaining

Riparian buffers don't need **regular maintenance**: no mowing or fertilization. A mulch can be applied at base of the plant to maintain soil moisture. During the first year, it is important to **water**!



Crédit : Municipalité de Lambton

To learn more :

Fisheries and Oceans Canada - The Shore Primer:

http://publications.gc.ca/collections/collection_2011/mpo-dfo/Fs23-507-4-2011-eng.pdf

Rideau Valley Conservation Authority - How to Naturalize Your Shoreline:

<https://www.rvca.ca/stewardship-grants/shoreline-naturalization/how-to-naturalize-your-shoreline>

MELCC - Lakes and watercourses Ours to save:

<https://www.environnement.gouv.qc.ca/eau/rives/richesse/index-en.htm>

Watersheds Canada - Native Plant Database :

<https://naturaledge.watersheds.ca/plant-database/>

Québec Vert - Bande riveraine (french): banderiveraine.org

RAPPEL - Les pratiques riveraines (french): <https://www.rappel.qc.ca>



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RIPARIAN BUFFERS

Design and management

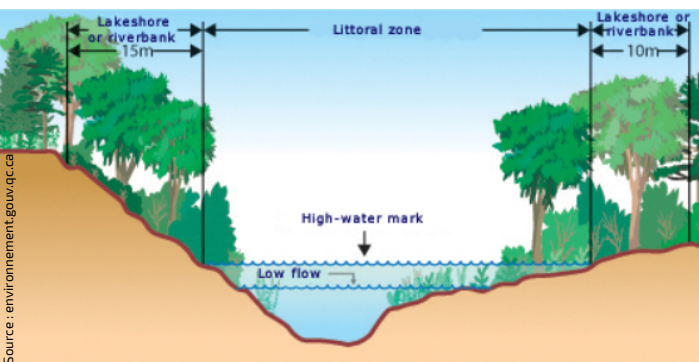


Definition

Riparian buffers are strips of natural and permanent vegetation bordering a lake or watercourse, forming a transition zones between aquatic environments and surrounding terrestrial environments. The width of a riparian buffer depends on rules and regulations. It is calculated from the high-water mark : the point where predominantly terrestrial plants succeed predominantly aquatic plants*.

Be careful! high-water mark does not necessarily correspond to the current water level.

*In specific cases (water retaining structure , retaining wall, etc.) or to obtain details concerning high-water mark , please refer to the PPLRLZF.



Lakeshore or riverbank refers to a strip of land bordering a lake or a watercourse extending inland from the high-water mark.:

- 10 m minimum when the slope is less than 30% or a bank less than 5 m high.
- 15 m minimum when the slope is continuous and higher than 30% or the slope is greater than 30% with a bank over 5 m high.

Rules and regulations

Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains (PPLRLZF) must be integrated into land use and development plan of MRCs, and then into planning laws of municipalities. In addition, some MRCs have adopted Interim Control By-law concerning riparian buffers. Consult your municipality and MRC to find out about them.

Importance of riparian buffer



Erosion control

Wind, waves and especially rainwater runoff cause soil erosion. Riparian buffer roots stabilize eroding banks or shorelines of adjacent water bodies. It also slows down rainwater runoff.



Heat Regulation

Shade provided by vegetation reduces water temperature and the amount of light entering water, limiting undesirable plant growth and help maintaining a suitable environment for aquatic life.



Water filtration

Act as a filter by trapping sediments and absorbing fertilizers and pesticides.



Windbreak

It reduces wind speed and creates microclimate beneficial for plants and animals.



Biodiversity and Heritage

Riparian buffers are rich in biodiversity. They provide shelter and food for many species of animals (insects, birds, mammals) and plants. In addition, they contribute to the beauty of natural landscapes.

Riparian buffer restoration

The simplest and most economical way to create a riparian buffer is to stop mowing grass. The other method is revegetalisation, which means planting .

Be careful! In some specific cases, for example an artificial beach or if erosion problems already exist, you may need to consult a professional.

Revegetalisation (planting):

Determining shoreline's characteristics

Identify :

- High-water mark
- The width of lakeshore or riverbank (according to slope and bank high).
- Soil moisture
- The **type of soil**
- Sunshine duration (sun , half-shade or shade)
- Exposure to winds and waves
- Existing vegetation

Delimiting the area

Regarding local **rules and regulations**, a riparian buffer may vary in width. A sketch of the area or its delimitation with picket or tape may be a good idea.

Caution ! Be aware of exotic invasive species. Make sure you are not introducing them.