

Restore a Ribbon of Life

The strip of moisture-loving trees, shrubs, and herbaceous plants along the edge of a lake, river, wetland, or other watery habitat is called the buffer zone. This ribbon of life enhances the beauty of the shoreline; shades and prevents the heating of water, which can kill aquatic creatures; protects water quality by filtering the run-off of pollutants like fertilizers and pesticides from land; controls soil erosion, which muddies streams and ruins fish spawning habitat; and provides food, cover, and nesting sites for a rich variety of life forms on land and in water.

The wider the strip (and the lush, more diverse, and deeply rooted its vegetation), the greater its ability to work as a buffer and life-support system. Chances are logging, construction, agriculture, or other activities have damaged one of these areas in your community. Here's how you can help revitalize a ribbon of life:

- Base your strategy on the amount of vegetation missing and the extent of erosion along your shoreline. Exposed, collapsed banks demand immediate attention.
- Survey your site and the surrounding area to see what plants already grow there. Many will be suitable for transplanting or as sources of seeds and cuttings to plant in the disturbed area.
- Choose a variety of native plants adapted to local conditions. They are favoured by wildlife and more resistant to disease and drought than non-native species. Keep in mind the sun, shade, soil, and moisture requirements of plants. For a list of suitable plants, see the [Shoreline Planting Chart](#).
- Plant in spring, after the last frost. For seedling stock, prepare a hole deep enough for a root system; plant each tree with its stem straight up and roots fanned out below ground level; replace the soil up to the root collar (a swelling above the roots), ensuring that there are no air pockets; and use your heel to pack the ground down around the stem.
- An effective alternative to planting seedlings, especially on larger shorelines, is to propagate vegetation from tree and shrub cuttings harvested from local sites. During late winter dormancy, before the buds sprout, collect shoots of wildlife favourites, like balsam-poplar, elderberry, serviceberry, red-osier dogwood, and sandbar-willow. Use a sharp knife to cut lengths of 20 to 25 cm, trimming one end at an angle. Each cutting should have at least three healthy buds. After spring thaw, before the buds open, poke a hole in the ground and push the angled end of each cutting into the soil, leaving only 3 cm above the surface and packing earth around the shoot. Larger cuttings, or "poles," 2 m in length and 5 to 10 cm in diameter, are also useful for stabilizing eroding banks. Push each pole 1 m into the shoreline, or drive it in with a rubber mallet if the soil is too hard. Heavy vegetative growth should appear on cuttings and posts by midsummer.
- The ideal buffer strip extends a minimum of 30 m from the water's edge. One model to follow consists of five to 10 zigzagging rows of fast-growing, flood-tolerant trees, like silver maple, Manitoba maple, cottonwood, willow, or ash, alongside the water, with 0.75 to 1 m between trees and 2 m between rows. Plant the inner row just below the highwater mark (about 25 cm from the water's edge). Fruit- and nut-bearing trees, shrubs, and vines are also valuable as the inner and outer rows of the buffer strip. Adjacent to the outer row, plant a wide strip of native grasses and legumes. This meeting of vegetative communities will create an "edge effect," or mingling among wildlife species attracted to different types of plants.

- If possible, water during droughts and weed out competing vegetation in the first few years.

Shoreline Planting Chart

| Species | Range | Site Requirements | Conservation Value |
|-------------------------------|--------------------------------|--|---|
| Shrubs and Small Trees | | | |
| American mountain ash | Coast to coast | Full sun; wide range of soils | Vegetation buffer; wildlife food, cover, and nesting sites |
| Balsam-poplar | Coast to coast | Full sun to partial shade; prefers most soils on shorelines | Erosion control; vegetation buffer; wildlife food, cover, and nesting sites |
| Barclay Willow | Y.T., N.W.T., B.C., Alta. | Moist to wet soils bordering on streams, lakes, and wetlands | Erosion control; vegetation buffer; wildlife food and cover |
| Blackberry | Coast to coast | Moist, well-drained soils | Vegetation buffer; fence row; food and cover for birds and mammals; butterfly nectar source |
| Canada plum | Ont., Que., N.B., N.S., P.E.I. | Wide range of soils; full sun to partial shade | Vegetation buffer; fence row; wildlife food and cover; butterfly nectar source |
| Elderberry | Coast to coast | Full sun to full shade; rich, moist soils | Food and cover for shoreline birds and mammals; butterfly nectar source |

| Species | Range | Site Requirements | Conservation Value |
|--------------------|---|--|---|
| Highbush blueberry | Ont., Que., N.B., N.S., P.E.I. | Wide range of soils; shade tolerant; flood tolerant | Vegetation buffer; fence row; food for birds and mammals |
| Highbush cranberry | Alta., Sask., Man., Ont., Que., N.B., N.S., P.E.I., Nfld. | Stream banks and lake shores; wide range of soils; shade tolerant | Erosion control; vegetation buffer; fence row; food for birds and mammals |
| Prickly gooseberry | Ont., Que., N.B. | Wide range of soils; full sun to full shade | Vegetation buffer; fence row; wildlife food and cover |
| Pussy-willow | Coast to coast | Full sun; deep, rich shoreline soils; moist to wet conditions | Vegetation buffer; fence row; nectar source for pollinators |
| Raspberry | Y.T., N.W.T., B.C., Ont., Que., N.B., N.S., P.E.I., Nfld. | Wide range of soils; shade tolerant; flood tolerant; stream banks and lake shores | Erosion control; vegetation buffer; fence row; food and shelter for birds and mammals |
| Red-osier dogwood | Coast to coast | Full sun to partial shade in moist to wet soils; stream banks; lake shores; wetlands | Vegetation buffer; fence row; food, cover, and nesting sites for birds and mammals |
| Sandbar-willow | Y.T., N.W.T., Alta., Sask., Man., Ont., | Full sun; moist to wet conditions | Erosion control; vegetation buffer; wildlife |

| Species | Range | Site Requirements | Conservation Value |
|-----------------------|--|---|---|
| | Que., N.B. | | cover |
| Saskatoon-berry | Y.T., N.W.T., B.C., Alta., Sask., Man., Ont., Que. | Full sun to partial shade; dry to moist conditions | Vegetation buffer; fence row; food and cover for birds and mammals |
| Staghorn sumac | Ont., Que., N.B., N.S., P.E.I. | Prefers full sunlight, well- drained to dry soils, around wetlands | Winter food for shoreline birds and mammals |
| Sweet viburnum | Y.T., N.W.T., B.C., Alta., Sask., Man., Ont., Que. | Wide range of soils; shade tolerant; flood tolerant | Vegetation buffer; fence row; wildlife food and cover; butterfly nectar source |
| Wild black currant | Y.T., N.W.T., Alta., Sask., Man., Ont., Que., N.B., N.S., P.E.I., Nfld. | Wide range of soils; moist to wet shorelines | Erosion control; vegetation buffer; fence row; wildlife food and cover; butterfly nectar source |
| Winterberry | Ont., Que., N.B., N.S., P.E.I. | Full sun to full shade; wide range of rich soils; moist to wet conditions | Vegetation buffer; fence row; wildlife food and cover |
| Trees | | | |
| Ash | Coast to coast | Alongside stream banks and lake shores; wet sites alongside wetlands; full | Erosion control; vegetation buffer; fence row; wildlife food, cover, and nesting sites |

| Species | Range | Site Requirements | Conservation Value |
|-----------------|---|--|--|
| | | sun to partial shade | |
| Balsam-fir | Y.T., Alta., Sask., Man., Ont., Que., N.B., N.S., P.E.I., Nfld. | Wide range of moist, rich soils; drought resistant | Vegetation buffer; wildlife food, shelter, and nesting sites |
| Black walnut | Ont. | Alongside stream banks and lake shores; dry sites alongside wetlands | Vegetation buffer; fence row; wildlife food and cover |
| Cedar | Coast to coast | Alongside stream banks and lake shores; wet sites alongside wetlands | Food and cover for marsh birds, songbirds, and mammals |
| Eastern Hemlock | Ont., Que., N.B., N.S., P.E.I. | Shade tolerant; wide range of soils | Vegetation buffer; food and cover for wintering birds and mammals |
| Manitoba maple | Alta., Sask., Man., Ont. | Wide range of shoreline soils; flood and drought resistant | Erosion control; vegetation buffer; food and cover for shoreline birds and mammals |
| Paper-birch | Coast to coast | Full sun to partial shade; wide range of moist soils | Erosion control; vegetation buffer; wildlife food and cover |
| Red maple | Man., Ont., Que., N.B., | Wide range of shoreline soils; | Erosion control; vegetation |

| Species | Range | Site Requirements | Conservation Value |
|-----------------|---|--|--|
| | N.S., P.E.I., Nfld. | flood tolerant | buffer; wildlife food and cover |
| Red pine | Ont., Que., N.B., N.S., P.E.I. | Full sun; wide range of soils; dry sites alongside wetlands | Vegetation buffer; food and cover for shoreline birds and mammals |
| Scouler Willow | Y.T., N.W.T., B.C., Alta., Sask., Man. | Full sun; dry to moist soils | Erosion control; vegetation buffer; food source for pollinators |
| Shining Willow | Sask., Man., Ont., Que., N.B., P.E.I., N.S., Nfld. | Moist to wet conditions | Erosion control; vegetation buffer; wildlife cover |
| Silver maple | Ont., Que., N.B., N.S., P.E.I. | Full sun to partial shade; moist banks of streams, lakes, and wetlands | Erosion control; food and cover for shoreline birds and mammals |
| Spruce | Coast to coast | Wet sites alongside lakes, streams, and wetlands | Vegetation buffer; wildlife food, cover, and nesting sites |
| Tamarack | Y.T., N.W.T., Ont., Que., N.B., N.S., P.E.I., Nfld. | Alongside stream banks and lake shores; wet sites alongside wetlands | Vegetation buffer; food and cover for shoreline birds and mammals |
| Trembling aspen | Man., Ont., Que., N.B., N.S., P.E.I., Nfld. | Full sun to partial shade; wide range of shoreline soils | Erosion control; vegetation buffer; food and cover for shoreline birds |

| Species | Range | Site Requirements | Conservation Value |
|----------------------------|--|--|---|
| | | | and mammals |
| White pine | Y.T., N.W.T., B.C., Alta., Sask., Man., Ont., Que., N.B., N.S., P.E.I., Nfld. | Wide range of soils; dry sites alongside wetlands | Food and cover for shoreline birds and mammals |
| Yellow birch | Ont., Que., N.B., N.S. P.E.I., Nfld. | Full sun to partial shade; moist shoreline soils | Erosion control; vegetation buffer; wildlife food and cover |
| Vines | | | |
| Climbing bittersweet | Sask., Man., Ont., Que., Ont. | Shade tolerant; wide range of soils; flood tolerant | Erosion control; vegetation buffer; wildlife food, cover, and nesting sites |
| Grape | Alta., Sask., Man., Ont., Que., N.B., N.S., P.E.I. | Full sun to partial shade; wide range of soils; flood tolerant | Vegetation buffer; fence row; wildlife food and cover |
| Virginia creeper | Ont., Que. | Full sun to full shade; dry to moist shoreline soils | Vegetation buffer; fence row; wildlife food and cover |
| Virgin's-bower | Man., Ont., Que., N.B., N.S., P.E.I., | Full sun to partial shade; flood tolerant | Vegetation buffer; fence row; wildlife food and cover |
| Grasses and Legumes | | | |
| Big bluestem | Sask., Man., Ont., Que. | Full sun; dry soils bordering on streams, lakes, and | Erosion control; vegetation buffer; food, cover, and |

| Species | Range | Site Requirements | Conservation Value |
|------------------|---|---|---|
| | | wetlands | nesting sites for upland birds and mammals |
| Blue grama-grass | B.C., Alta., Sask., Man. | Full sun; dry to moist soils bordering on streams, lakes, and wetlands | Erosion control; vegetation buffer; cover and nesting sites for upland wildlife |
| Broom-beardgrass | B.C., Alta., Sask., Man., Ont. | Full sun; dry to moist soils bordering on streams, lakes, and wetlands | Erosion control; vegetation buffer; food, cover, and nesting sites for upland wildlife |
| Clovers | Coast to coast | Full sun; wet soils bordering on streams, lakes, and wetlands | Food and cover for upland birds and mammals; nectar source for pollinating insects |
| Indian grass | Man., Ont., Que. | Full sun; dry to moist soils bordering on streams, lakes, and wetlands; drought resistant | Erosion control; vegetation buffer; food and nesting cover for upland birds, mammals, and insects |
| Rough fescue | Y.T., N.W.T., B.C., Alta., Sask., Man., Ont., Que., Nfld. | Full sun; dry to moist soils bordering on streams, lakes, and wetlands | Erosion control; vegetation buffer; food and cover for upland birds, mammals, and insects |
| | Sask., Man., | Full sun; dry to | Erosion control; |

| Species | Range | Site Requirements | Conservation Value |
|------------------|-------------------|--|--|
| Switchgrass | Ont., Que. | wet soils bordering on streams, lakes, and wetlands | vegetation buffer; food and cover for upland birds, insects, and mammals |
| Tall grama-grass | Sask., Man., Ont. | Full sun; dry to moist soils bordering on streams, lakes, and wetlands | Erosion control; vegetation buffer; shelter and nesting cover for upland birds, insects, and mammals |