

# SHORELINE HABITAT CREATION MANUAL

Protecting our Biodiversity



# SHORELINE HABITAT

*There are many ways landowners can help to protect shoreline habitat for fish, amphibians, birds, and mammals.*

## 1. Plant native trees and shrubs along your shoreline.

As plants along the shoreline grow, the overhanging and fallen branches create habitat which small fish use for protection from predators. The shaded area also protects them from the sun and any birds that may be preying overhead. As well, overhanging plants provide a source of food as insects will often fall into the water for fish to eat.

Choosing native shrubs that produce flowers and berries are great for creating habitat for birds, pollinators, and small mammals as it provides them with a reliable source of food throughout the year (Black Elderberry pictured, right).



*See page 7 for instructions on how to naturalize your shoreline.*

## 2. Leave aquatic vegetation.

Aquatic vegetation, such as Canadian Waterweed and Yellow Water Lilies, are another key habitat feature for aquatic life. Unfortunately, many shoreline landowners remove these “weeds” to increase their swimming area, and in the process inadvertently destroy habitat. In addition, when native plants are removed, the area becomes available for harmful invasive plants like Eurasian Milfoil. Invasive species can have additional negative impacts on native species, are more aggressive and unpleasant for people, and are often more challenging to manage or remove. The best way to access your lake is to clear a small area through the existing vegetation to get to deep water and leave the rest untouched.

**5. Brush piles.** Brush piles are an excellent way for landowners to create wildlife habitat while also re-purposing “waste”. These structures can provide birds and small mammals shelter from predators or a potential place to nest or hibernate. Brush piles can be constructed using the cut waste materials from pruning, trail clearing, or woodlot management. Pile the brush waist-high on a stump, log, or boulder so that there are open spaces between the branches. For added benefit, train climbing vines, such as Virginia Creeper, onto the brush pile.



**6. Leave dead standing trees and woody debris in place.**



Cavity trees: Cavity trees are trees with holes in the trunk or main branches. Many species of birds and mammals depend on these trees for nesting, roosting, storing food, rearing young, escaping predators, feeding, and hibernating. As long as these trees are not a hazard to your property or yourself, it is best to leave cavity trees and dead standing trees in place.

Fallen terrestrial logs and fallen leaves: Fallen logs are essential for species like moles, woodpeckers, toads, and many insects. As the log rots, reptiles and amphibians lay their eggs in the moist wood. In the fall, the leaves that drop off nearby trees add insulation and shelter before the winter, as well as decaying organic matter and nutrients to the soil.

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# PLANT NATIVE VEGETATION

*The best way to create wildlife habitat is to plant native trees, shrubs, and wildflowers along your shoreline.*



Plants directly benefit wildlife by providing food like nectar and berries, as well as shelter. They also have indirect benefits for wildlife species by filtering contaminants, improving water quality, reducing erosion, and providing shade for fish and amphibians. By planting native vegetation, you can directly benefit wildlife while protecting your property from erosion. Native vegetation has an extensive root system that holds soil in place, preventing shorelines from washing away.

Planting native species means less maintenance as plants are suited to local conditions, reproduce on their own, and require no fertilizer or pesticides. If you have already participated in the Natural Edge Program and have done shoreline planting, you have taken the first and most important step to restoring wildlife habitat!

## How to Plant

- Dig a hole about an inch or two wider and deeper than the pot (enough space for the roots to fit without damaging them).
- Gently remove the plant from the pot by lifting the root ball and stem base. Squeeze the pot to loosen up the soil, or simply cut the pot open.
- Once the plant is out of the pot, use your fingers to massage the root ball and loosen up the soil. This will allow the roots to spread once in the ground. Do not remove all the soil off the roots because too much air exposure can stress the plant.
- Place the root ball into the center of the hole, making sure the roots are pointing down and the stem is straight up. If planting bare root stocks, be sure not to bend or “J” root the plants as this will cause stress.
- Fill the hole with soil making sure that the soil is level with the root crown (the colour change where the trunk meets the root). Firmly press the soil down around the base of the plant to remove air pockets in the hole and top up with soil, if needed.
- Add a layer of natural mulch around wildflowers and place coconut fibre mats around trees and shrubs (pictured, right).
- Mulch can also be used around trees and shrubs. Place it in a circular “doughnut” shape. Mulch should be thicker towards the outer edge of the circle and thinner in the centre to prevent the plant stem from rotting.
- Finally, water plants generously right after planting. This will further remove air pockets in the hole and give each plant a good start to grow.



Turtle Nest Protection Cage: Many turtle species are considered at-risk due to habitat loss, development of wetlands, road mortality, and low survival rates of eggs. These reptiles are important for their role in maintaining wetlands, cleaning freshwater habitat, and spreading seeds. To help create turtle habitat, you can plant native vegetation, leave aquatic logs, and leave natural upland areas with sand or gravel that may be a suitable nesting area.

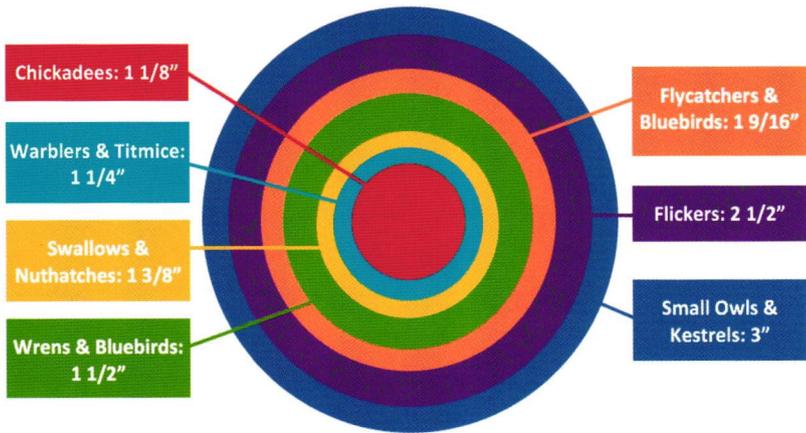


If you see that turtles have laid eggs on your property, place a turtle egg protection cage around the area to prevent other animals like raccoons or foxes from eating them before they hatch. If your cage does not have openings, make sure you remove the cage before the eggs hatch so the hatchlings can make it to the water.

You can also install a small ramp on your dock so turtles can access this prime sun basking area. If you have a hardened retaining wall or shoreline structure that may impede wildlife, consider creating a ramp or a more gradual slope in a few sections to act as a ladder for wildlife to go to and from the water.

6.) Hinged roof or front. You should build your bird house with either a hinged roof or front. This allows you to open the bird house and clean out old nests, allowing new birds to move in.

7.) The right hole. Birds can be picky when choosing a house as different species prefer different sized holes. The diameters are:



## DUCK NEST BOX

Many duck species, like Wood ducks, Mergansers, and Buffleheads, are cavity nesters, meaning they use dead standing trees and cavity trees to build shelter for their young. Habitat loss and removal of dead standing trees on shorelines is threatening these areas. By building and installing a duck nest box, you can help replace these cavity trees by providing a secure place for duck species to lay their eggs.

