

How to Complete Your Planting Plan

The following pages will assist you in assessing your property's site conditions and clearly demonstrate ways vegetation will be increased as a result of your plan. You may wish to refer to the <u>Shoreline Restoration Guide</u> to help in the design of your natural waterfront property.

The planting plan is divided into the following four parts:

Part 1: Draw your Planting Area

You will need to draw a bird's eye view of your property, including all existing and proposed development and natural vegetation. This will be a visual representation of your property when your project is completed. It is recommended that you consult your municipality's planning department to ensure your plan complies with municipal standards. It may also be necessary to consult with other applicable agencies (e.g., Conservation Authority, Parks Canada, Ontario Ministry of Natural Resources and Forestry).

Part 2: Assess Planting Area Conditions

You will need to go out onto your property and assess the site conditions of each proposed planting area identified in Part 1, including the soil, sun exposure, and slope. Make sure it has not rained in the past 3 days to properly determine the moisture level. You will need to dig a small hole (using an auger or shovel) to determine the soil type and depth.

Part 3: Choose Plants

Once you have an understanding of the general site conditions of each planting area you can begin choosing the plants best suited to your area. Consult the <u>Natural Edge Native Plant Database</u> to filter through native plants appropriate to your region and site conditions.

Part 4: Maintenance Plan

Lastly, you will be asked to outline your 5-year buffer maintenance plan to ensure your plants reach maturity and address the control of any invasive species. See Watersheds Canada's <u>Native Plant Care Guide</u> for tips.

To assist with your plan, you are encouraged to consult an organization with a shoreline planting program. See page 3.

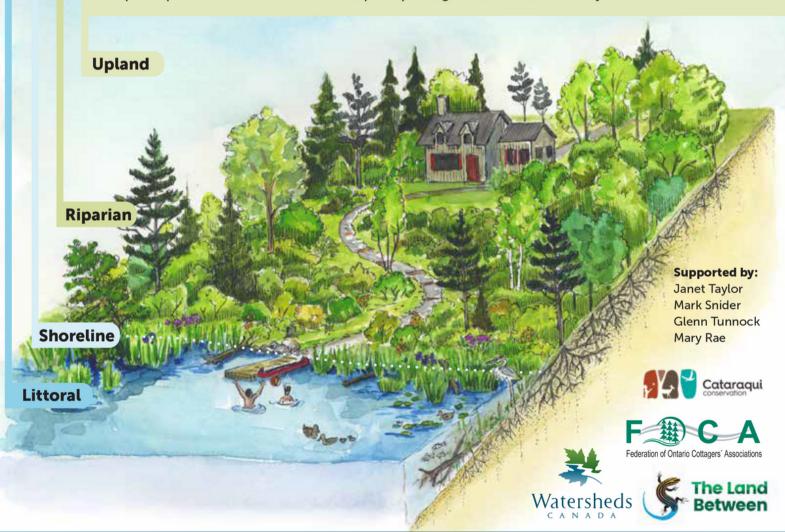
RESILIENT SHORELINES

The **Littoral Zone** extends from the water's edge to where sunlight no longer penetrates to the bottom of the water. This is where docks are built, and people swim. However, we share this area with an incredible array of biodiversity as up to 90% of lake species (e.g., pike, ducks, otters, and turtles) are born, raised, fed, or live in the littoral zone.

The **Shoreline** is the edge where the land and water meet. The mix of plants, shrubs, and trees form an intricate web of roots, foliage, and fallen limbs that hold the waterfront together and fend off erosion from wind, rain, boat wakes, ice, etc.

The **Riparian Zone**, also known as the Ribbon of Life, extends inland from the shoreline for at least 15 metres and may be flooded during high water periods. It is a natural buffer protecting the shoreline, water quality, and natural habitat both on land and in the water. It is made up of trees, shrubs and grasses that absorb excess nutrients (e.g., fertilizers) and pollutants (e.g., seepage from septic systems, oil, gas, pesticides, etc.) before they can contaminate the water.

The **Upland Zone** is a drier forested area with better drainage compared to the riparian zone. The deep roots of trees stabilize the slope, the foliage buffers the effects of wind, the canopy cools its surroundings, and plants provides habitat for deer, birds, porcupines, grouse, rabbits, and many other creatures.



Considerations Before Planting

Wastewater Treatment Systems

The simplest way to address a wastewater treatment system in your planting plan is to keep the area clear of plants (especially trees and shrubs) as a mowed area. A <u>study</u> by the University of Minnesota recommends that woody plants (shrubs and trees) should be kept at least 6m from a septic system. Be sure to clearly indicate the location and dimensions of your mowed area in your Planting Area drawing (Part 1).

*It should be noted that some wastewater treatment systems require a smaller setback from plants than others. See the <u>Septic Smart</u> for further tips and information.

Local Planting Programs Options

- 1. Visit Watersheds Canada's <u>Natural Edge</u> program to see if there is a delivery partner in your area that can assist you in creating a planting plan.
- 2. Find your local <u>Conservation Authority</u> to see if they have a planting program.
- 3. Contact your municipality to see if there are other planting programs in the area to assist you.

Region/ Area	Program
Ontario	Watersheds Canada's Natural Edge Program Delivery Partners: Cataraqui Conservation (Glenburnie) Junction Creek Stewardship Committee (Sudbury) Kawartha Lake Stewards Association The Land Between (Haliburton) Lower Trent Conservation (Trenton) Muskoka Watershed Council (Bracebridge) Muskrat Watershed Council (Cobden) Quinte Conservation (Belleville) Watersheds Canada (Perth)

What Counts as 'Vegetation'?

'Vegetation', in terms of this document, refers to woody plants such as trees and shrubs because of their deep root systems and ability to limit erosion, provide shade, and buffer adjacent water bodies from surface runoff pollution. Because of their shallow root systems, grasses and wildflowers do not have the ability to provide the same benefits. Therefore, the plants proposed in your plan should emphasize trees and shrubs, although there may be wildflowers for aesthetic purposes.

Part 1: Draw Your Planting Area

You may wish to attach a separate sheet for your drawing.

Note: Shoreline plantings are considered No Mow Zones. However, this can also include other areas on the property that will be left natural (e.g., rocky areas with low survival rates that will be left to naturalize on their own).

Property Location:				
Planting Plan Prepared by (person/ organization):				
Include a sketch identifying the <u>location</u> and <u>dimensions</u> of the listed items, where applicable:				
North arrow High water mark/ shoreline Lot lines (rear, front, and side) Dwelling Septic System Existing and proposed shoreline structures (e.g., docks, gazebos, etc.)	Hardened areas (e.g., patios, driveway, seating areas, etc.) Shoreline clearing/ activity area Existing/ Proposed pathway to the water (winding, curved paths are best) Existing vegetation Mow zone/ Maintained lawn area No mow zones (NMZ) Proposed planting areas			
Planting Completion Date (MM/DD/YYYY):				
Planting Completed By (person/ organization):				

Provide Details of the Existing Vegetation on Your Property

For each area of existing vegetation indicated in your drawing above, please describe the type of plants, number of plants, and the dimensions of each area.

Existing Area 1	
Type of Plant	Trees / Shrubs / Wildflowers / Grasses
Number of Plants	
Area Dimensions	
,	
Existing Area 2	
Type of Plant	Trees / Shrubs / Wildflowers / Grasses
Number of Plants	
Area Dimensions	
ı 	
Existing Area 3	
Type of Plant	Trees / Shrubs / Wildflowers / Grasses
Number of Plants	
Area Dimensions	
,	'
Existing Area 4	
Type of Plant	Trees / Shrubs / Wildflowers / Grasses
Number of Plants	
Area Dimensions	

Part 2: Assess Planting Area Conditions

For each planting area labeled in Part 1, identify the conditions in the tables below.

Planting Area Condition Descriptions				
Sun Exposure	Throughout the day, what level of sun exposure does the plant area get? High: Direct sun Medium: Partial sun Low: Shaded			
Soil Depth	Using a shovel, dig down a few inches (10 in) to see how deep the soil goes. Shallow = < 8 inches Deep = > 8 inches			
Soil Type	Conduct a "feel test": Rub some moist soil between your fingers and determine which soil type it feels like. Gritty = Sand Smooth or floury = Silt Sticky = Clay Crumbly = Humus			
Moisture Level	At least 3 days after the last rainfall, is the soil's moisture level: High: Very wet Medium: Damp Low: Dry			
Slope	Standing a few metres back, consider whether the area is: Flat Gradual Steep			

Circle the appropriate conditions. Include any useful notes. If more planting areas are required, use an additional piece of paper to include in your application.

Planting Area A			
Sun Exposure	xposure Direct / Partial / Shaded		
Soil Depth	Shallow / Deep		
Soil Type	Sand / Silt / Clay / Humus		
Moisture Level	High / Medium / Low		
Slope	Flat / Gradual / Steep		
Notes			

Planting Area B		
Sun Exposure Direct / Partial / Shaded		
Soil Depth	Shallow / Deep	
Soil Type	Sand / Silt / Clay / Humus	
Moisture Level	High / Medium / Low	
Slope	Flat / Gradual / Steep	
Notes		

Planting Area C		
Sun Exposure Direct / Partial / Shaded		
Soil Depth	Shallow / Deep	
Soil Type	Sand / Silt / Clay / Humus	
Moisture Level	High / Medium / Low	
Slope	Flat / Gradual / Steep	
Notes		

Planting Area D			
Sun Exposure	Direct / Partial / Shaded		
Soil Depth	Shallow / Deep		
Soil Type	Sand / Silt / Clay / Humus		
Moisture Level	High / Medium / Low		
Slope	Flat / Gradual / Steep		
Notes			

Part 3: Choose Plants

To ensure the highest survival rate, plantings should be done when the plants are dormant (early spring or late fall). This is especially true for bareroot stock. However, it can be noted that potted stock can be planted later in the spring as the roots are completely covered by soil and thereby protected from higher temperatures.

Note: Although wildflowers can be incorporated into the plan, a focus should be placed on woody plants (e.g., trees and shrubs). Pay attention to where you want your viewpoints to be and ensure low-growing shrubs are planted in these areas. If an area is subject to spring flooding, ensure flood tolerant plant species are chosen for these areas.

You may wish to consult the Natural Edge <u>Native Plant Database</u> when identifying suitable plant species.

Туре	Picture	Overview
Bareroot		Soil Depth: As they are generally smaller in size, bareroot is more easily planted in shallow soil compared to potted stock. If your planting site is rocky (e.g., riprap), bareroot is preferred.
		Planting Density: Generally, 1 plant per square metre.
		When to Plant: Early spring or late fall when natural areas are dormant. Plant right after frost has left the ground in the spring, and right before the ground freezes in fall.
		Plants should be planted within a couple days of obtaining them. If more time is needed before planting, they can be potted in the meantime.
	Buttonbush	Cost: Typically cheapest option to buy but takes longer to reach maturity.

Plug	
stock	



Cardinal Flower

Soil Depth: Since they are smaller plants, they are often planted in shallow soils.

Planting Density: Generally, 1 plant per square metre.

When to Plant: Mid-spring or mid-fall. Avoid planting when you are still experiencing frost outside as the frost can damage the plant. A good practice is to plant outside of your area's first and last frost dates.

Cost: Comparable to bareroot but depends on the plant species and size.

Potted



Red Osier Dogwood

Soil Depth: Thrives in medium to deep soil.

Planting Density: Generally, 1 plant per 2 square metres.

When to Plant: Mid-spring or early to mid-fall. When vegetation is blooming in the spring and when vegetation still has most of its foliage in the fall are the ideal times to plant.

Cost: Generally more costly but will fill out and reach maturity the quickest.

Watersheds Canada's Staff Picks

To attract pollinators, consider sprinkling native wildflowers throughout your planting plan. Consult the <u>Natural Edge Wildflower Garden Guide</u> for flower descriptions.

Staff	Plant Name	Picture	Description	
Chloe	Swamp Rose		"It has beautiful pink flowers that bloom in the summer but be sure to plant away from pathways as they do have thorns. It's a fairly low growing plant, so it won't obstruct your view of the water. It loves wet conditions so you can plant it right on the shoreline."	
Chloe	Red Osier Dogwood		"It can grow in most soil conditions. It has a beautiful red bark all year round and is very effective at erosion control. Wildlife love the berries, too!"	
Barbara	Buttonbush		"It is an amazingly versatile plant that likes to grow right at the shore in wet conditions. It has the most amazing white honeysmelling button flowers that attract pollinators. Ducks and other water birds love to eat the seeds."	
Barbara	Ninebark		"It is the only shrub that I could get to grow on my sandy, sunny slope. This is a hardy shrub that is drought tolerant and good for erosion control and harsh conditions."	
Melissa	Sweet Gale		"It is a water-loving shrub with leaves that give off a sweet fragrance when rubbed. They grow in wet, rocky locations or along boggy areas. It is not very large and is often used for bordering ponds, foot paths, or property edges. Flowers form in spring before leaves emerge. They are easy to maintain and make a wonderful habitat for many birds and small wildlife. The leaves can even be dried and made into tea!"	
Melissa	Tamarack		"It is a deciduous conifer that has needles that change to a rich golden colour before losing its needles each fall. It does well in wet conditions and is such a beautiful tree."	

Based on the planting area conditions identified in Part 2, choose plants appropriate for these conditions to include in your plan. You may wish to use the <u>Natural Edge Native Plant Database</u> to identify native plants suitable to your region. The database also has filters along the left-hand side of the page to narrow your options further.

Plant Species	Circle Plant Size Shallow soil = Bareroot / Plug stock Deep soil= Potted	Mature Plant Height	Number of Plants	Planting Area
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			

Part 4: Maintenance Plan

Growth Expectations

Naturalization takes time. For faster results, potted proceeds to start seeing your plants mature after 5 years.	
Plant survival will increase with regular watering and	d mulching in the first 2 years.
	Initial
5-Year Maintenance Plan: Outline your plan to grow plants to maturity. See Guide for more tips. Examples: Watering regularly for at least 2 years (aver Mulching annually for 2 years around plants)	rage of 3 times/week depending on weather).
species. No mowing. In times of extreme weather (flood, drought drooping, etc. and adjust watering according If plants aren't doing well, add additional specific Use tree guards or chicken wire to protect to on by wildlife.	gly.
Invasive Species Management (if applicable) Monitor for invasive species and remove whe	en spotted.
Signature	Date

Appendix A: Sample Planting Plan

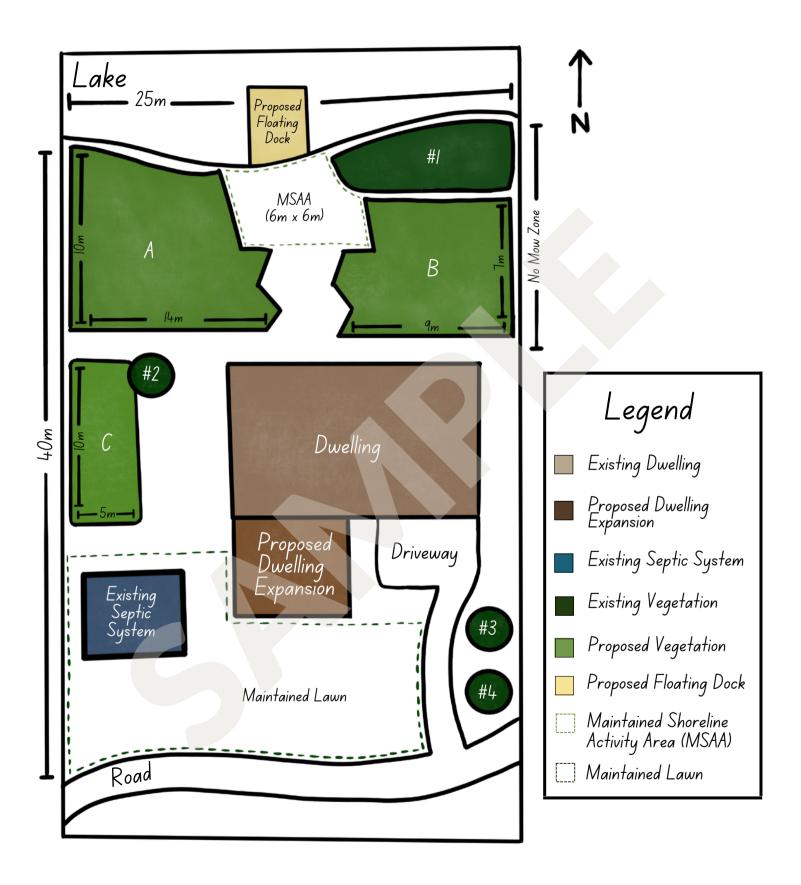


Part 1: Draw Your Planting Area

You may wish to attach a separate sheet for your drawing.

Note: Shoreline plantings are considered No Mow Zones. However, this can also include other areas on the property that will be left natural (e.g., rocky areas with low survival rates that will be left to naturalize on their own).

Property Location: Perth, ON			
Planting Plan Prepared by (person/ organization): Gale Sumac			
Include a sketch identifying the <u>location</u> and <u>dimensions</u> of the listed items where applicable:			
 ✓ North arrow ✓ High water mark/ shoreline ✓ Lot lines (rear, front, and side) ✓ Dwelling ✓ Septic System ✓ Existing and proposed shoreline structures (e.g., docks, gazebos, etc.) 	 ✓ Hardened areas (e.g., patios, driveway, seating areas, etc.) ✓ Shoreline clearing/ activity area ✓ Existing/Proposed pathway to the water (winding/curves paths are best) ✓ Existing vegetation ✓ Mow zone/Maintained lawn area ✓ No mow zones (NMZ) ✓ Proposed planting areas 		
Attached on the following page.			
	/nn /n nn		
Planting Completion Date (MM/DD/YYYY): 08/22/2022			
Planting completed by (person/ organization): $Gala$	e Sumac		



Provide Details of the Existing Vegetation on Your Property

For each area of existing vegetation indicated in your drawing above, please describe the type of plants, number of plants, and the dimensions of each area.

Existing Area 1	
Type of Plant	Trees Shrubs Wildflowers / Grasses
Number of Plants	5
Area Dimensions	10x 3m
Existing Area 2	
Type of Plant (Trees / Shrubs / Wildflowers / Grasses
Number of Plants	
Area Dimensions	l x l m
Existing Area 3	
Type of Plant (Trees / Shrubs / Wildflowers / Grasses
Number of Plants	1
Area Dimensions	1 x l m
Existing Area 4	
Type of Plant (Trees / Shrubs / Wildflowers / Grasses
Number of Plants	
Area Dimensions	l x l m

Part 2: Assess Planting Area Conditions

For each planting area labeled in Part 1, identify the conditions in the tables below.

Planting Area Condition Descriptions		
Sun Exposure	Throughout the day, what level of sun exposure does the plant area get? High: Direct sun Medium: Partial sun Low: Shaded	
Soil Depth	Using a shovel, dig down a few inches (10 in) to see how deep the soil goes. Shallow= < 8 inches Deep= > 8 inches	
Soil Type	Conduct a "feel test": Rub some moist soil between your fingers and determine which soil type it feels like. Gritty = Sand Smooth or floury = Silt Sticky = Clay Crumbly = Humus	
Moisture Level	At least 3 days after the last rainfall, is the soil's moisture level: High: Very wet Medium: Damp Low: Dry	
Slope	Standing a few metres back, consider whether the area is: Flat Gradual Steep	

Circle the appropriate conditions. Include any useful notes. If more planting areas are required, use an additional piece of paper to include in your application.

Planting Area A	
Sun Exposure (Direct / Partial / Shaded
Soil Depth	Shallow Deep
Soil Type	Sand / Silt / Clay / Humus
Moisture Level	High/Medium/Low
Slope	Flat / Gradual / Steep
Notes	Low plants will be planted near the pathway to keep a view of the water from the
	dwelling. Taller plants will be planted to the side.

Planting Area B	
Sun Exposure	Direct Partial Shaded
Soil Depth	Shallow Deep
Soil Type	Sand / Silt / Clay / Humus
Moisture Level	High Medium Low
Slope	Flat / Gradual / Steep
Notes	Wildflowers planted along pathway and in view of the dwelling to maintain view of
	the water.

Planting Area C		
Sun Exposure (Direct / Partial / Shaded	
Soil Depth	Shallow Deep	
Soil Type	Sand /Silt / Clay / Humus	
Moisture Level	High Medium Low	
Slope	Flat / Gradual / Steep	
Notes	Trees to create shade	

Planting Area D		
Sun Exposure	Direct / Partial / Shaded	
Soil Depth	Shallow / Deep	
Soil Type	Sand / Silt / Clay / Humus	
Moisture Level	High / Medium / Low	
Slope	Flat / Gradual / Steep	
Notes		

Based on the planting area conditions identified in Part 2, choose plants appropriate for these conditions to include in your plan. You may wish to use the <u>Natural Edge Native Plant Database</u> to identify native plants suitable to your region. The database also has filters along the left-hand side of the page to narrow your options further.

Plant Species	Circle Plant Size Shallow soil = Bareroot / Plug stock Deep soil= Potted	Mature Plant Height	Number of Plants	Planting Area
Red Osier Dogwood	Bareroot) Plug Stock / Potted	<3m	20	Α
Meadowsweet	Bareroot / Plug Stock / Potted	2-3m	20	Α
Sweet Gale	Bareroot / Plug Stock / Potted	2-3m	20	Α
Fragrant Sumac	Bareroot Plug Stock / Potted	2-3m	15	В
Bush Honeysuckle	Bareroot / Plug Stock / Potted	1.5-2m	15	В
Cardinal Flower	Bareroot / Plug Stock / Potted).5-2m	10	Α
Blue Loblelia	Bareroot / Plug Stock / Potted	1.5-2m	10	Α
Swamp Milkweed	Bareroot / Plug Stock / Potted	1.5-2m	10	Α
Purple Coneflower	Bareroot / Plug Stock / Potted	1.5-2m	8	В
Red Maple	Bareroot / Plug Stock Potted	> <3m	3	С
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			
	Bareroot / Plug Stock / Potted			

Part 4: Maintenance Plan

Growth Expectations

Naturalization takes time. For faster results, potted plants are best but are more expensive. Expect to start seeing your plants mature after 5 years. Plants will start to fill in the empty spaces within 5-10 years.

Plant survival will increase with regular watering and mulching in the first 2 years.



Initial

5-Year Maintenance Plan:

Outline your plan to grow plants to maturity. See Watersheds Canada's <u>Native Plant Care Guide</u>.

Examples:

- ✓ Watering regularly for at least 2 years (average of 3 times/week depending on weather).
- Mulching annually for 2 years around plants to keep moisture in & fend off invasive species.
- ✓ No mowing.
- ✓ In times of extreme weather (flood, drought) monitor plants for browning, wilting, drooping, etc. and adjust watering accordingly.
- ✓ If plants aren't doing well, add additional species that are showing success in the area.
- ✓ Use tree guards or chicken wire to protect trees from being stepped on or being browsed on by wildlife.

Invasive Species Management (if applicable)

✓ Monitor for invasive species and remove when spotted.

Conservation Authority contacted to assess Invasive Phragmites and potentially Dog Strangling Vine. Will take actions as recommended.

Gale Sumac	08/22/2022

Signature Date

