Coughlin

1012 Snake River Line, Snake River

Planting plan created by Muskrat Watershed Council

Funded by • Ontario Trillium Foundation •

Ontario Trillium Foundation / Fondation Trillium de l'Ontario

An agency of the Government of Ontario
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Schedule A:

Plants & Property

Land Characteristics

This planting plan is designed based on the land characteristics identified during the day of the site visit. Plants are chosen according to the soil and light conditions on your property. The number of plants chosen for each planting compartment takes into account the square metre area of the space, as well as the amount of current vegetation cover. **Your property is part of ecoZone: 4a**

Land Characteristics by Compartment

	Length	Width	Area	pH	Soil	Moisture	Light	Height
A	440m	7m	3080m^2	normal	clay	normal	full sun, partial sun	max 1.5m
B	375m	7m	2625m^2	normal	clay	normal	full sun, partial sun	max 1.5m
	815m	7m	5705m^2					

Plant Selection Summary

The following shrubs and trees are chosen for their suitability and survivability given the current soil and light conditions in each compartment on your property, as well as preferable features.

Plant Species	A	B	Potted	Bareroot	Wildflower
Tamarack	25	25		50	
Red Maple	25	25		50	
Pussy Willow	1000	750		1750	
Speckled Alder	25	25		50	
Buttonbush	1000	750		1750	
White Birch	25	25		50	
Gray Dogwood	1000	750		1750	
Subtotal	3100	2350	0	5450	0
Totals	5450				

Plant Information

The following table summarizes key information about each plant selected for your property.

Tamarack

Height: 20 m

Tamarack is a small to medium sized, deciduous coniferous tree species that grows up to 20 m tall. This plant may also be known by the common name American Larch. The bark is scaly and reddish brown coloured. The needles are delicate, 2-4 cm long, blueish-green coloured, grow in clusters of 15 to 25, and change golden yellow in the fall. This tree provides food and habitat for wildlife species, including birds and mammals. Tamarack is a fast-growing, long lived species that can live up to 150 years and is found across all of Canada. The wood from this tree is decay-resistant and has been used to make railway ties, posts, and crates. Tamarack is considered unique because it is the only conifer species to drop its needles in the fall.

Red Maple

Height: 12-25m

The Red Maple is the most common and widespread deciduous tree of Eastern and Central North America. This species can grow 12-25m at maturity. The trunk of this hardwood species is branch free from the base to about halfway up the trunk. When planted in an open area, the trunk can divide and branch out fairly close to the ground. As the tree matures, it develops a short, narrow crown consisting of horizontal and ascending branches. The leaves on the Red Maple grow opposite each other on the branches. During the summer, leaves are bright green on top with a whitish underside. During the fall, the leaves turn a bright red or scarlet colour, from which the name is derived. Prior to leaf development, tree flowers bloom in early May. Red Maple tree flowers are small and red to yellowish orange in colour, growing in clusters on a thin stalk. During June and July, tree flowers develop into reddish winged keys, which hold and disperse seeds. The Red Maple plays an important role in the lumber industry, as its wood is excellent for woodworking.

Pussy Willow

Height: 6m

The Pussy Willow is a fast growing, deciduous shrub or small tree found reaching heights of 6m, and is from British Columbia to Newfoundland. This species grows from shoots extending from the base of the trunk, creating a multi-stemmed, tall, round bush. The Pussy Willow is an ideal species for bank stabilization and erosion control due to its large, fibrous root system and love of water. This species branches extend from the main shoots and are usually hairy and reddish-brown in colour. The main shoots of Pussy Willow are smooth and greyish-brown, becoming scaly with age. It produces simple, narrow, lance-shaped leaves alternately arranged along the branch. The Pussy Willow yields purple-brown fuzzy catkins which will form long-beaked and finely haired capsules during May and June.

Speckled Alder

Height: 8m

The Speckled Alder is a large shrub species which can grow to 8m. This species produces alternate, egg-shaped, and double-toothed leaves with prominent veins. The stem initially begins reddish-brown and hairy, becoming dark brown and hairless with age. The bark also develops prominent orange-white speckles as it matures, hence the common name. The Speckled Alder produces male and female catkins on the same tree. Wingless nutlets drop from the female catkins during autumn. This species is ideal for rehabilitation applications because its roots contain nodules with nitrogen fixing bacteria, which converts nitrogen to a usable form and increases this nutrient in the soil. Speckled Alder requires moist soils and can usually be found in wet organic swamps, along shorelines, and in moist hardwood forests.

Buttonbush

Height: 2 m

Buttonbush is a small to medium-sized deciduous shrub species which typically grows about 2 m in height. This plant may also be known by the common name Button Willow. Twigs are slender to stout and dark red-brown in colour with white speckling. The leaves are bright green coloured, shiny, ovate shaped, oppositely arranged, and have entire margins. The flowers are tiny, tubular, white, fragrant, and appear densely on distinctive, spherical clusters in June. These flowers turn into a dense cluster of seeds, which remain on the plant throughout the winter. The flowers are beneficial for pollinator species, including hummingbirds and butterflies. This is a hardy, adaptable species and an excellent choice for planting on wet shoreline sites.

White Birch

Height: 15-25m

The Paper Birch is a medium-sized (15-25m), deciduous tree which may also be referred to as White Birch or Canoe Birch. This species produces a sparse, irregular crown which arises from a slender trunk. This tree is best known for distinctive white, horizontally flaking bark, from which its name is derived. The Paper Birch produces light green, egg-shaped, 5-10 cm long leaves alternately arranged. During the fall, the light green foliage turns a bright yellow colour. During the spring, catkins appear and produce winged seed keys which mature and drop between the fall and following spring.

Gray Dogwood

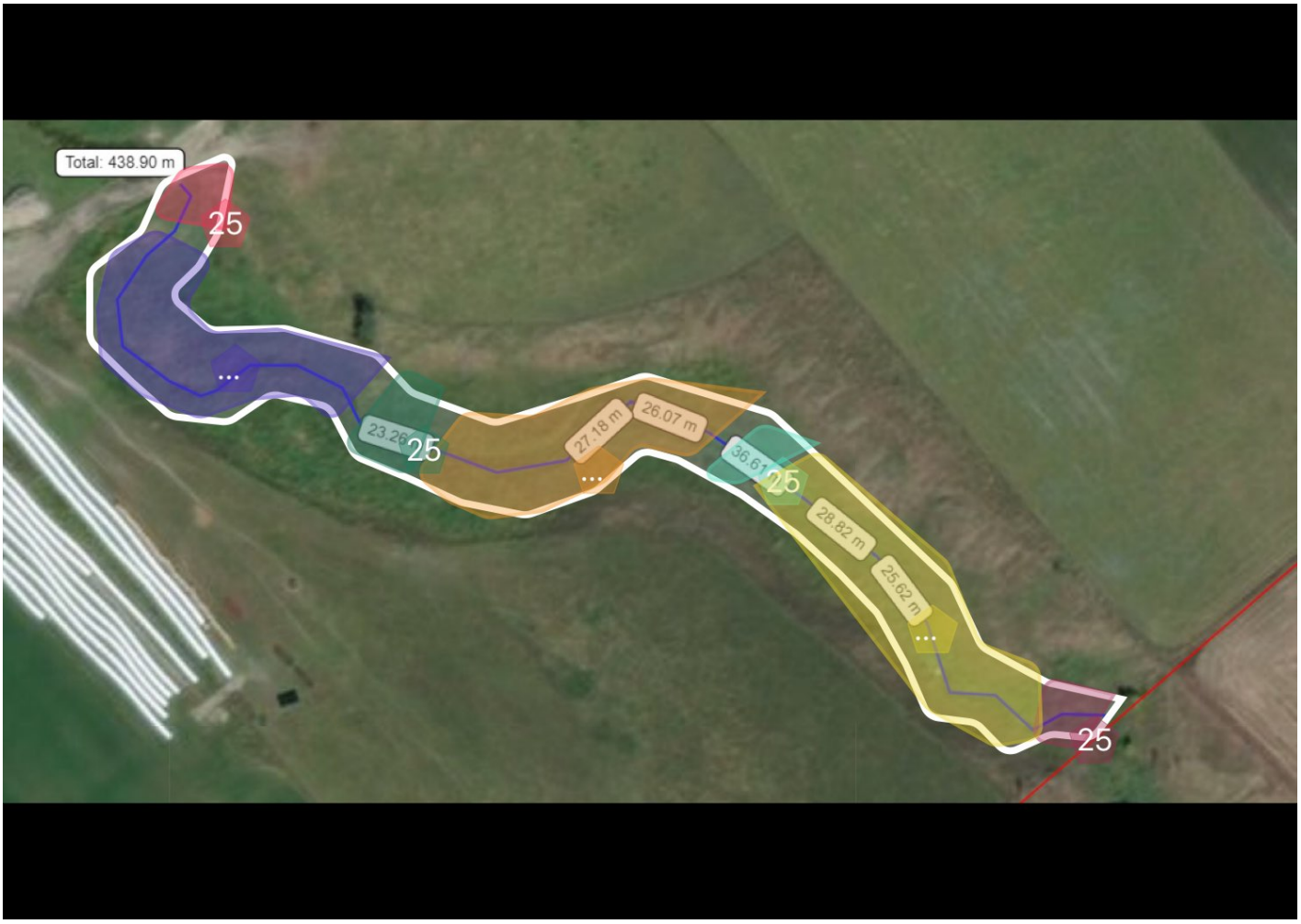
Height: 2-3m

The Gray Dogwood, also referred to as Northern Swamp Dogwood or Panicle Dogwood, is a medium-sized, deciduous shrub which typically grows 2-3m. This species is multi-stemmed, with a full, round form. The leaves are green and arranged alternately along the branches. During the fall, leaves turn a bright red to deep purple colour. Between May and June, showy clusters of small white flowers bloom. These flowers turn into white fleshy berries late in the summer. The reddish-pink stems hold the berries throughout the winter, creating an artful contrast to the gray bark and snowy scenery. The Gray Dogwood is tolerant of a variety of environmental conditions and its complex, fibrous root system make it an ideal plant to use for controlling erosion.

Compartment A

Naturalization Area

- PH: normal
- DEPTH: bareroot
- MOISTURE: normal
- SOIL TYPE: clay
- PLANT HEIGHT: max 1.5m
- LIGHT CONDITIONS: full sun, partial sun



Tamarack
25

Red Maple
25

Pussy Willow
100
0

Speckled Alder
25

Buttonbush
100
0

White Birch
25

Gray Dogwood

100

0

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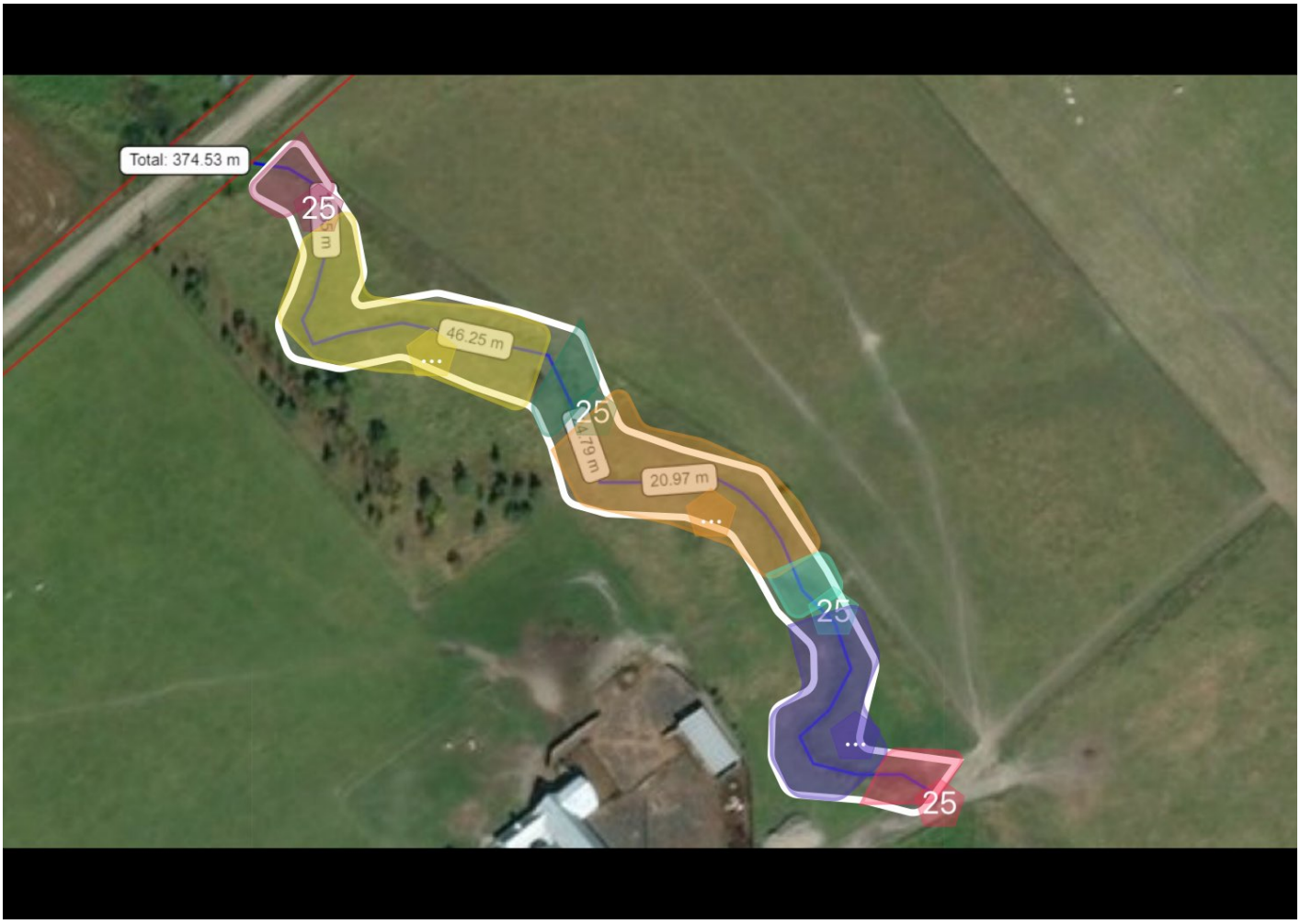
info@watersheds.ca

Compartment B

Naturalization Area

- PH: normal
- DEPTH: bareroot
- MOISTURE: normal
- SOIL TYPE: clay
- PLANT HEIGHT: max 1.5m
- LIGHT CONDITIONS: full sun, partial sun



Tamarack
25

Red Maple
25

Pussy Willow
750

Speckled Alder
25

Buttonbush
750

White Birch
25

Gray Dogwood

750

Schedule B

Financial Summary

Project Partners: Watersheds Canada and Muskrat Watershed Council

The following section outlines the total cost of your project. It has been divided into 2 sections; 1- Plants and Material, 2- Services. It also includes the breakdown of the landowner contribution and the portion that will be paid by Watersheds Canada, as outlined in the Project Costs Total table.

The Natural Edge program has received generous funding to help support the costs of plants, materials, and project coordination and delivery, making this program possible.

Bareroot stock

Item	Quantity	Cost/Item	Subtotal
Tamarack	50	2.25	112.50
Red Maple	50	2.25	112.50
Pussy Willow	1750	2.25	3937.50
Speckled Alder	50	2.25	112.50
Buttonbush	1750	2.25	3937.50
White Birch	50	2.25	112.50
Gray Dogwood	1750	2.25	3937.50
Total Bareroot plant stock	5450		12262.50

Tending materials

Item	Quantity	Cost/Item	Subtotal
Mulch	5450	1.00	5450.00
Tree guards (deciduous only)	100	1.50	150.00
Total Tending materials			5600.00

Totals

1-Plants and materials	
Bareroot plant stock	12262.50
Wildflower plant stock	0.00
Tending materials	5600.00
Plants & Materials	17862.50

2-Services	Quantity	Cost/Item	Subtotal
Watersheds Canada's Site visit *(Site visit in-kind)*	1 on	0.00	0.00
Plant stocking	5450	2.00	10900.00
Mulching & tree guard installation	5450	1.50	8175.00
Shipping & handling of materials			25.00
Planting plan			350.00
Project management and delivery			400.00
Administration fee			100.00
Services total			19950.00

Total Project Costs	Subtotal
Total project value (including in kind contributions)	37812.50
Total eligible costs *(excluding in kind contributions)*	37812.50
Muskrat Watershed Council's contribution *(100% of eligible costs)*	37812.50
Landowner contribution *(0% of eligible costs)*	0.00

Schedule C

Project Agreement

Stewardship Agreement

Please indicate your agreement to this proposed plan by signing the following Stewardship Agreement and submitting it, along with your financial contribution, to:

Watersheds Canada
115-40 Sunset Blvd. Perth, ON, K7H 2Y4

Plant Availability

Please note that plant species may need to be changed based on plant stock availability at the time of ordering.

Project Completion

Upon receiving your signed stewardship agreement and financial contribution, a date will be booked to complete the project. Watersheds Canada will supply all plants, materials, and planting labour. If there are particular dates that you would prefer, we will do our best to accommodate your requests.

The Natural Edge Stewardship Agreement with Watersheds Canada

Agreement made this **19th** Day of the Month of **November** in the Year **2019**.

BETWEEN Coughlin 1012 Snake River Line Ontario K0J 1K0 *(Hereinafter called the OWNERS)*

AND **Watersheds Canada**, 115-40 Sunset Blvd, Perth, ON, K7H 2Y4 *(Hereinafter called WC)*

WHEREAS the Owners and WC have met and discussed plans for shoreline naturalization on the specified area(s) in Schedule A existing on the Owners' land;
WHEREAS the Owners indicate approval of the project as proposed; and
WHEREAS the project is, or will be for the benefit of the Owners and others;
NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:

1. This Agreement shall be in effect for a period of 5 years, commencing with the date of this Agreement.

2. The Owners and WC agree that the areas where the work is to be performed is as described in Schedule A.

3. The Owners grant WC, its contractors, employees and agents, the right to enter the property to perform the work agreed upon as outlined in Schedule A. In addition, WC, its contractors, employees and agents may inspect the work performed for the purposes of monitoring the project and survival assessment, with prior agreement with Owners for date and time of inspection.

4. The Owners agree to contribute the "Landowner contribution (0% of eligible costs)" and pay the costs indicated in Schedule B.

5. In instances where the Owners are to pay WC for work to be performed (outlined in Schedule A), the Owners agree to provide payments to WC prior to the commencement of that operation. Failure of payment shall constitute a breach of this Agreement and the Owners agree this Agreement will be terminated and thereupon the Owners agree to pay WC the estimated costs of the operations of the project completed, if any.

6. The Owners agree, if necessary, to perform a reasonable amount of maintenance, which is described in the Native Plant Care Guide, available at watersheds.ca.

7. If the contractor is required to perform the work outlined in Schedule A, then the contractor carrying out the work on the land described will be required to take out and furnish evidence of a comprehensive policy of public liability and property damage coverage. The contractor and their workers will be required to be in good standing with the Workplace Safety and Insurance Board prior to performing the work.

8. The Owners agree not to remove, destroy or alter the project without prior consultation and approval of WC. Pruning and trimming planted nursery stock, or adding replacement native nursery stock is exempt.

9. The Owners agree not to mow the planted area.

10. The Owners do acknowledge that WC, its contractors, employees and agents, having performed said works, are not under further obligation with respect to survival of nursery stock, inspection, or maintenance.

11. The Owners, in the absence of negligence, hereby remises, releases and forever discharges WC, its contractors, employees and agents from all claims and demands for injuries, including death, loss, damages and costs in any way related to or connected with installation and maintenance of the work described or resulting from any deleterious effects of the work to the land or to the lands and buildings thereon retained by the Owners.

IN WITNESS WHEREOF the parties have agreed to the contents of this plan; SIGNED:

Watersheds Canada

Representative Signature:

Coughlin

Owner Signature:

About this program

This project is created as a co-partnership between Watersheds Canada and Muskrat Watershed Council

About Muskrat Watershed Council

We are a volunteer, community-based, not-for-profit organization with the goal of improving water quality in the Muskrat Lake Watershed by using scientific and local based knowledge. We seek to engage and empower people and communities by promoting best management practices in an effort to identify and reduce nutrient loading from all sources in the Watershed. Through these objectives, we hope to foster economic, societal and environmental sustainability.

This program was created by Watersheds Canada

We believe that every person has the right to access clean and healthy lakes and rivers in Canada. At Watersheds Canada, we work to keep these precious places naturally clean and healthy for people and wildlife to continue using for years to come. We love working with others to meet the needs of local communities, whether you're a concerned citizen, a landowner, a lake association looking for help, or a coalition of groups interested in activating your local community.