

The Podvalej Property

42 Lovers Lane, Otter Lake

Planting plan created by The District Municipality of Muskoka

Survey Date: 07/02/2020

Funded by •





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: 5b**


Land Characteristics by Compartment

	Length	Width	Area	pH	Soil	Moisture	Light	Height
A	10.5m	12.3m	64.6m ²	acidic	clay	normal	partial sun, shade	
B	7.2m	6m	43.2m ²	acidic	sandy	normal, moist	full sun, partial sun	
C	10.6m	8.3m	88m ²	acidic	clay	moist, wet	full sun, partial sun, shade	
D	9m	4.5m	40.5m ²	acidic	sandy	moist	full sun	
	37.3m	7.78m	236.3m 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	C	D	Potted	Bareroot	Wildflower
Red Maple	1				1		
Ninebark	2				2		
Gray Dogwood	2	2		1	5		
Red Osier Dogwood	2	3			5		
Canadian Serviceberry	1				1		
Bush Honeysuckle	6			1	7		
Black Cherry	1				1		
Witch Hazel	2				2		
Ostrich Fern	9	3					12
Wild Bergamot	3						3
Sensitive Fern	6			3			9
Buttonbush		1	2		3		
Narrow Leaved Meadowsweet		3	6	8	17		
Yellow Birch		1		1	2		
Highbush Cranberry			3		3		
Sweet Gale			3	6	9		
Shining Willow			1		1		
Silky Dogwood			1	1	2		
Royal Fern			6	6			12
Pussy Willow				1	1		



Blue Vervain				3			3
Blue Flag Iris				6			6
Subtotal	35	13	22	37	62	0	45
Totals	107						

Plant Information

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



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.



Ninebark

Height: 2-3m

The Common Ninebark is a very hardy, large (2-3m in height), deciduous shrub naturally occurring within riparian zones. This species is often planted as an ornamental shrub for its exfoliating bark which reveals reddish-light brown inner bark. This shrub is multi-stemmed with numerous horizontal and ascending branches creating a full, round shape. The Common Ninebark produces dull green, ovate to round shaped leaves with three to five lobes per leaf. During the fall the leaves turn brilliant yellow or dark purple. Between May and June, showy, bell-shaped flowers bloom in clusters on the terminal ends of the branches. During the summer, these flowers give way to small green or green-yellow berries which turn a bright red upon ripening.



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.



Red Osier Dogwood

Height: 1.5-4m

The Red Osier Dogwood is a medium-sized, deciduous shrub native throughout Northern and Western North America which typically grows to 1.5-4m. This species is multi-stemmed with numerous erect and ascending bright red branches that create a loose and spreading form. Leaves produced are simple, two-toned with a dark green upper side and light green underside. They are arranged opposite each other along the branches. During the fall, the foliage turns a brilliant red to dark purple. Clusters of small, creamy white flowers form on the terminal ends of the branches between June and July. The Red Osier Dogwood produces blueish-white fruiting bodies during late summer, which may persist throughout the winter. This shrub's berries provide an important winter food source for numerous species, from large deer to small wintering birds.



Canadian Serviceberry

Height: 3-5 m

The Canadian Serviceberry is a multi-stemmed shrub or small tree which grows from 3-5 m in a dense round form. This plant may also be known by the common names: Juneberry, Shadblow, or Shadbush. Early in the spring, prior to leaf development, clusters of fragrant, showy white flowers bloom along the branches. By July, these flowers give way to the fruiting bodies. The fruits are initially small, green berries, which grow to the size of blueberries and turn a deep purple-blue upon maturation during the fall. Leaves produced are finely toothed and spear-shaped. Throughout the summer, leaves are dark green and turn a dramatic orange-red during the fall.



Bush Honeysuckle

Height: 1m

The Bush Honeysuckle is a small, hardy, deciduous shrub that rarely grows taller than 1 m in height. The leaves are simple, oppositely arranged, ovate shaped, and have finely toothed margins. During the spring and summer, the leaves are dark green in colour, then in the fall they take on a variety of colours ranging from a deep purple to light yellow. The flowers are small, showy, yellow to orange colored, trumpet shaped, appear in clusters on the tips of branches, and bloom between June and July. The flowers are beneficial to pollinator species, including hummingbirds and butterflies. The roots of the Bush Honeysuckle are fibrous, giving it the ability to form thickets and making it an ideal shrub to plant for erosion control.



Black Cherry

Height: 20-30m

The Black Cherry is a medium-sized deciduous tree typically 20-30m in height and can tolerate a wide variety of light, soil and moisture conditions. This species is native to North America. The Black Cherry is commonly found in mixed, broad-leafed forests. This cherry species produces a slender trunk and a narrow, irregular crown with arching branches and drooping tips. Leaves are simple and grow alternately along the branch. Small, white flower clusters appear in May and turn to reddish cherries during early summer and ripen by late August. These cherries provide a food source for songbirds and small mammals. Black Cherry Roots are shallow and wide-spreading.



Witch Hazel

Height: 4-9m

The Witch Hazel is a deciduous understory shrub, with a broad and rounded crown which typically grows 5-9m. This species can sometimes take on the form of a tree. Witch Hazel is most recognizable for its 2 cm long, spidery, bright yellow flowers, which bloom during late fall. Leaves produced are alternate, simple, 6-15 cm in length, and obovately shaped. These leaves are dark green on top with paler undersides and turn yellow during the autumn. Witch Hazel leaves produce hairs on their principal veins, are asymmetrical at their base, scalloped, and sometimes coarsely toothed. In addition, the leaves contain 5-7 straight, parallel, ascending veins per side. The twigs are slender, zigzagged, tawny, and smooth when mature. Witch Hazel fruiting bodies are short, thick, light brown capsules that become woody upon maturation. This species is typically multi-stemmed with two or more trunks, which are crooked and 10-15 cm in diameter.



Ostrich Fern

Height: 1.5 m

The Ostrich Fern is a coarse, erect to arching perennial fern, that can grow up to 1.5 m in height. The stems are clustered and arching while the leaves are ostrich-plume shaped, widest near top, and very gradually narrowed to the base. The size of the leaves grow up to 1.5 m long and 12-40 cm wide, with around 40 pairs of leaflets or pinnae. The leaflets are long, narrow-pointed, and ascending. The leaves are fertile, with spore clusters on the undersides of sub-leaflets.



Wild Bergamot

Height: 1 m

Wild Bergamot is a perennial wildflower species that is member of the mint family and can grow about 1 m tall. Its stems are light green and smooth with abundant branching on the upper half. The leaves are oppositely arranged, broadly lanceolate shaped, 6-10 cm long, and have toothed edges. The also leaves emit a aromatic minty/oregano scent when crushed. The flowers are showy, pink/lavender coloured, appear on the ends of flowering stems, and bloom between July and September. The flowers bloom in the center of the head first, moving outwards creating a wreath. The flowers are beneficial to pollinator species, like bees and butterflies. This wildflower spreads well and can be used to naturalize un-vegetated areas. The roots can be useful for controlling erosion and stabilizing shorelines.



Sensitive Fern

Height: 1 m

Sensitive Fern is a perennial fern species that typically grows less than 1 m in height. The leaves of this fern are light green, narrow, spaced out, have descending lower leaflets, and ascending upper leaflets. Erect, spore-bearing fronds appear out of the center of the leaves in the early spring and turn brown in the late summer. The fronds of this fern have a woody, segmented bead appearance.



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.



Narrow Leaved Meadowsweet

Height: 1-2m

The Narrow Leaved Meadowsweet is an erect, deciduous shrub, which grows in the shape of a mound to a height of 1-2m. This species develops numerous branches and branchlets, giving it a sparse appearance. Leaves produced are simple and narrow with sharply toothed borders growing alternately along the branches. These bright, light green leaves appear crowded, as they grow close together on the stocks and branches. During the fall, leaves turn a yellow-red or yellow-orange colour. Small white to light pink flower clusters appear in the spring growing in a dense, narrow pyramid at the terminal ends of the branches. During late summer to early fall, these flowers produce smooth, papery seed pods.



Yellow Birch

Height: 25 m

Yellow Birch is a native deciduous tree species that can grow up to 25 m in height. The bark is thin, flaky, shiny, and can be brownish-yellow, bronze, or silvery colored. The leaves are deep greenish-yellow, simple, alternately arranged, oval shaped, have doubly serrated edges, and are about 8-11 cm long. This tree species produces catkins in April-May, which are slim, cylinder shaped, yellowish brown flower clusters. In the Fall, seed pods are produced that are brown colored, cone shaped, and break apart easily. Yellow Birch is a slow growing tree but can live up to 150 years. This tree species is beneficial to wildlife species like birds and mammals.



Highbush Cranberry

Height: 3 m

Highbush Cranberry is a large deciduous shrub species that typically grows about 3 m in height. The branches on this shrub are dense with arching stems, creating a full form. The leaves are oppositely arranged, Maple leaf shaped, have 3 lobes, and have entire or toothed margins. The flowers are showy, creamy white coloured, appear in flat clusters with larger florets surrounding smaller ones, and bloom between May and June. These flowers change into drooping, bright red berry clusters that persist throughout the winter. While the berries are edible to humans, they are very tart when consumed raw so are typically cooked first. This shrub has very attractive fall foliage, changing a reddish purple colour. The flowers are beneficial to pollinator species, like bees and butterflies. The fruit is beneficial to wildlife species, including birds and small mammals. The root system is extensive, making this shrub valuable for controlling erosion and stabilizing loose soil. This species can be found across Canada from Newfoundland to British Columbia, but is most commonly found in Ontario and Quebec.



Sweet Gale

Height: 1-2m

Sweet Gale is a medium-sized shrub which grows into a thick bush about 1-2 m tall. This species produces 1-8 cm long, oblong-lanceolate leaves which are finely toothed at the tip and are spirally arranged. When bruised, these leaves give off a pleasant aroma. Male and female catkins are produced on separate plants. The seeds are dispersed from the female plants via water, as they float on two corky bracts. This shrub also provides a good food source for bird species that eat the seeds including Grouse, Chickadees, and Bluebirds. Mammal species like Beavers and White-Tailed Deer also browse on the twigs and leaves of this plant.



Shining Willow

Height: 10m

The Shining Willow is a relatively large deciduous shrub, which grows up to 10 m in height. The shiny leaves are 5-11 cm long and 1-5 cm wide, which are what give this Willow its name. They are lance shaped, with dark green color on the top, and light green on the bottom. Flowers bloom from May to June and range in colour from yellow to a green/brown.



Silky Dogwood

Height: 2-4m

The Silky Dogwood is a large, deciduous shrub species native to Eastern North America that reaches a height of 2-4m. This species produces a rounded shape due to its numerous upright branches stemming from a central, multi-stemmed base. Branches which grow touching the ground can develop their own root system, often creating thickets. During the spring and summer, branches are a shiny, light green colour and change to a red colour during the fall and winter. This species produces simple, lance-shaped leaves arranged oppositely along the branches. During the spring and summer, the foliage is a deep green colour and turns dark red-purple during the fall prior to dropping. Small, yellow-white flowers bloom during mid-June, maturing into bright blue berries in September. This species of Dogwood grows best alongside Willow when being planted to mitigate erosion and stabilize shorelines.



Royal Fern

Height: 1 m

Royal Fern is a perennial fern species that typically grows less than 1 m in height. This plant may also be known by the common name Flowering Fern. Fiddleheads appear from the base of the plant and unfurl into green, arching, pinnately compound leaves. The leaves of this fern are well separated, broader, and more rounded than other ferns, giving it the appearance of a pea plant. Erect, spore-bearing fronds grow out of the center of the leaves in the early spring and turn brown in the fall. The fronds of this fern have a flower like appearance.



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.



Blue Vervain

Height: 1.5 m

Blue Vervain is a perennial wildflower species that grows about 1.5 m in height. It has a slender, upright form with reddish-green coloured, rough-haired stems. Its leaves are oppositely arranged, lance-shaped, and on short petioles with large serrations along the edge. Occasionally, there are two lobes present at the base of the leaves. The flowers are showy, blueish purple coloured, have five petals, appear on dense spikes at the top of flowering stems, and bloom between July and September. The flowers bloom first at the bottom of the spike, travelling upwards and blooming in bands. This plant spreads well and can form small colonies. The flowers are beneficial to pollinator species, like bees and butterflies. The seeds are also beneficial to wildlife species, like birds and small mammals.



Blue Flag Iris

Height: 0.5 m

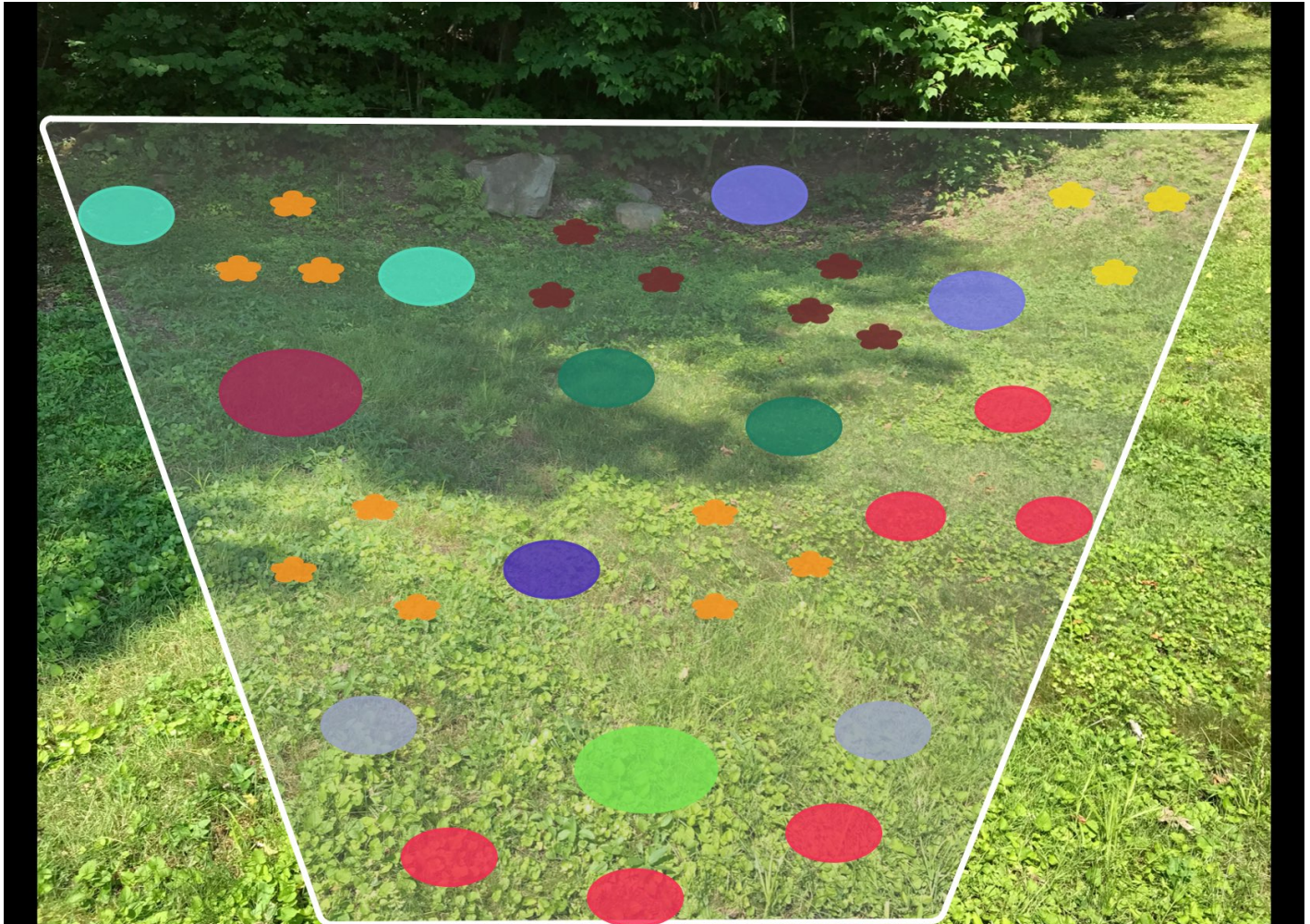
The Blue Flag Iris is a showy perennial wildflower that typically grows about 0.5 m in height. This plant may also be known by the common name Harlequin Blue Flag. The leaves are light green, sword-shaped, slightly arched or erect, and appear growing out as a cluster around the base of the plant. The attractive blue flowers start to bloom in the early spring, emerging from a tall flowering stalk that can reach up to 1 m. The flowers are beneficial to pollinator species, like bees and butterflies. The seeds are also beneficial to wildlife species, like birds and small mammals.

Compartment A

Naturalization Area

Georgian Bay Biosphere Reserve www.gbbr.ca

- ⚖ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: normal
- 🌀 SOIL TYPE: clay
- ☀️ LIGHT CONDITIONS: partial sun, shade



Red Maple

1



Gray Dogwood

2



Canadian Serviceberry

1



Black Cherry



Ninebark

2



Red Osier Dogwood

2



Bush Honeysuckle

6



Witch Hazel



1



Ostrich Fern

9

2



Wild Bergamot

3



Sensitive Fern

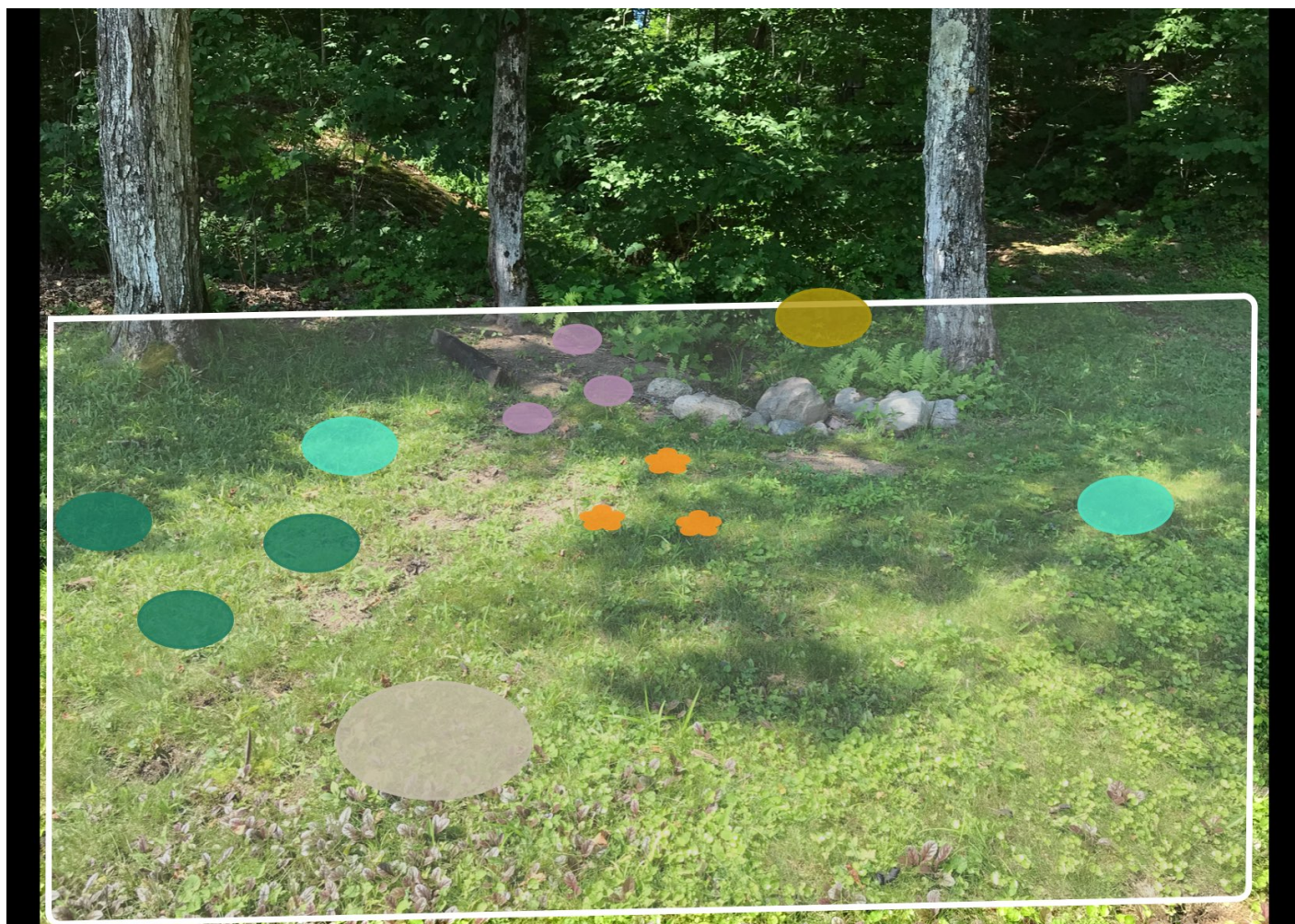
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Compartment B

Naturalization Area

Stream to culvert

- ⚖️ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: normal, moist
- 🌀 SOIL TYPE: sandy
- ☀️ LIGHT CONDITIONS: full sun, partial sun



Gray Dogwood

2



Ostrich Fern

3



Narrow Leaved Meadowsweet

3



Red Osier Dogwood

3



Buttonbush

1



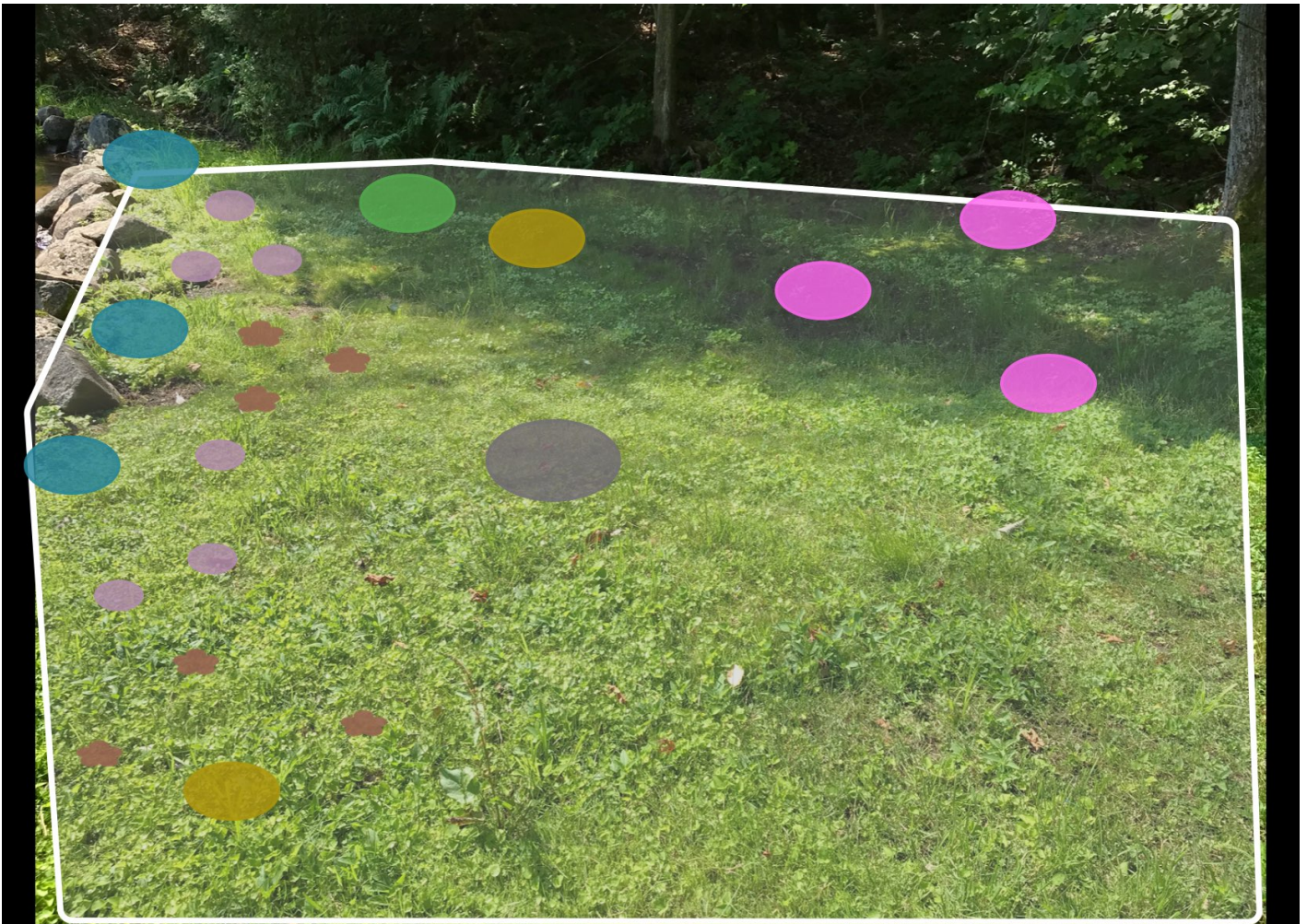
Yellow Birch

1

Compartment C

Naturalization Area

- ⚖️ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: moist, wet
- 🌀 SOIL TYPE: clay
- ☁️ LIGHT CONDITIONS: full sun, partial sun, shade



Buttonbush

2



Narrow Leaved Meadowsweet

6



Highbush Cranberry

3



Sweet Gale

3



Shining Willow

1



Silky Dogwood

1



Royal Fern

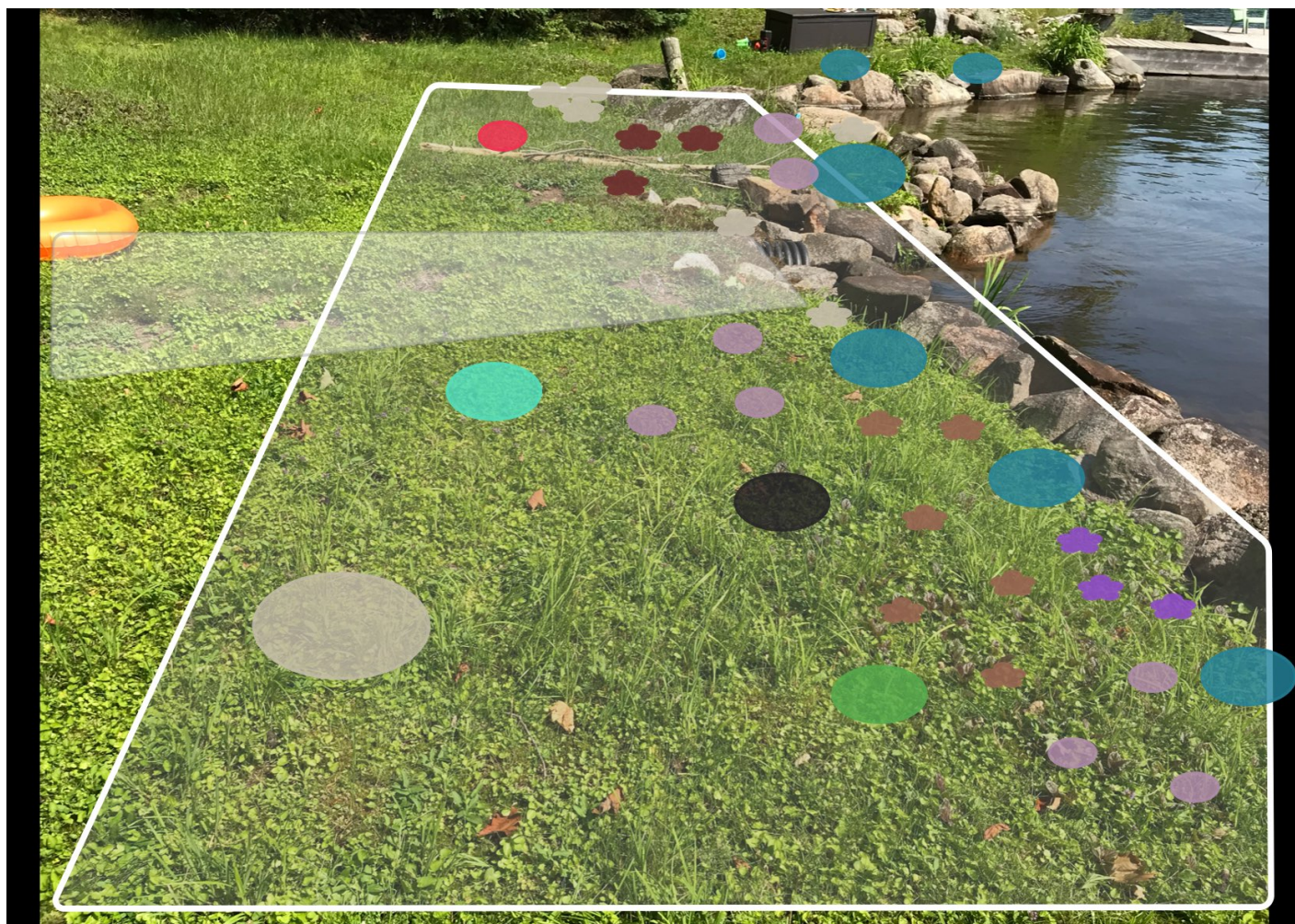
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Compartment D

Naturalization Area

Geese issues

- ⚖️ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: moist
- 🌾 SOIL TYPE: sandy
- ☀️ LIGHT CONDITIONS: full sun



Gray Dogwood

1



Sensitive Fern

3



Yellow Birch

1



Silky Dogwood



Bush Honeysuckle

1



Narrow Leaved Meadowsweet

8



Sweet Gale

6



Royal Fern



1



Pussy Willow

1

6



Blue Vervain

3



Blue Flag Iris

6



Schedule B

Financial Summary

Project by: The District Municipality of Muskoka

Shoreline Re-Naturalization Starter Kit includes: free site visit, customized re-naturalization planting plan for your shoreline property, native plants including free bare root (small) and potted (large) plants and wildflowers, coconut fibre pads to deter grass from growing around new plantings, tree guards for all deciduous trees, mulch for your wildflowers, Plant Care Guide with instructions on how to take care of your new plants, Habitat Creation Guide and a Wildflower Garden Guide.

Our planting plans are created onsite with you and provide detailed information and plans to re-naturalize your shoreline property. We take photos of areas for planting and overlay native plants that are well suited to your property based on site conditions such as soil type and sunlight availability.

We will work with you to create a plan that works for you including options for low growing plants in areas where views are important.

Item	Quantity	Cost/Item	Subtotal
Starter Kit fee			\$300
Free potted plants	20	\$0	\$0
Paid potted plants	42	12.00	504.00
Free bareroot plants	0	\$0	\$0
Free wildflowers	30	\$0	\$0
Paid wildflowers	15	6.00	90.00
Total costs			894.00



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:

The District Municipality of Muskoka

70 Pine Street Bracebridge, Ontario P1L 1N3

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 for you to pick up your Natural Edge Kit. The District Municipality of Muskoka will supply all plants and materials. If you are paying for the planting to be completed for you, a date will be arranged for The District Municipality of Muskoka to plant your shoreline, bringing the plants and materials with them. If there are particular dates that you would prefer, we will do our best to accommodate your requests.

The Natural Edge Stewardship Agreement with The District Municipality of Muskoka

Agreement made this **2nd** Day of the Month of **July** in the Year **2020**.

BETWEEN Nicki Podvalej 42 Lovers Lane Ontario (*Hereinafter called the OWNERS*)

AND **The District Municipality of Muskoka** 70 Pine Street Bracebridge, Ontario P1L 1N3 (*Hereinafter called DMM*)

WHEREAS the Owners and DMM 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 DMM agree that the areas where the work is to be performed is as described in Schedule A.
3. The Owners agree to pick up their Natural Edge Starter Kit from DMM's office and plant their shoreline within two days of receipt. The Owners will provide "after" photos of the work completed to be used for reporting purposes. If the Owners wish to have the planting completed for them, then DMM or it's contractors, employees and agents will complete the planting at cost, as indicated in Schedule B.
4. If the planting is to be completed by DMM, then the Owners grant DMM, its contractors, employees and agents, the right to enter the property to perform the work agreed upon as outlined in Schedule A. In addition, DMM, 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.
5. The Owners agree to contribute the "Landowner contribution" and pay the costs indicated in Schedule B.
6. In instances where the Owners are to pay DMM for work to be performed (outlined in Schedule A), the Owners agree to provide payments to DMM prior to the commencement of that operation. Failure of payment shall constitute a breach of this Agreement and the Owners agree that this Agreement will be terminated and thereupon the Owners agree to pay DMM the estimated costs of the operations of the project completed to date, if any.
7. The Owners agree, if necessary, to perform a reasonable amount of maintenance, which is described in the Native Plant Care Guide, available at naturaledge.watersheds.ca.
8. If a 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 (WSIB) prior to performing the work.
9. The Owners agree not to remove, destroy or alter the project without prior consultation and approval of DMM. Pruning and trimming planted nursery stock, or adding replacement native nursery stock is exempt.
10. The Owners agree not to mow the planted area.
11. The Owners do acknowledge that DMM, its contractors, employees and agents, having performed said works, are not under further obligation with respect to survival of nursery stock, inspection, or maintenance.
12. The Owners, in the absence of negligence, hereby remise, release and forever discharge DMM, 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:

The District Municipality of Muskoka

Nicki Podvalej

Representative Signature:

Owner Signature:





About this program

About The District Municipality of Muskoka

The District of Muskoka is an upper-tier municipality that has monitored water quality in Muskoka area lakes since 1980. Since 2002, the Muskoka Water Strategy has provided integrated and strategic initiatives for the protection of Muskoka's water resources. The purpose of the strategy is to guide and minimize the impact of human activities on water resources; ensure human and environmental health; and preserve the quality of life in Muskoka.

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.