Introduction and Purpose

The application of a seed mix is required by the Toronto and Region Conservation Authority (TRCA) to restore and stabilize disturbed soils within or in proximity to the *Natural System*[1]. This technical guideline document directs best management practices and standardizes recommendations on:

- post-construction soil preparation (including soil quality and depth) for seed mix application;
- selection of appropriate seed mix based on site location and conditions, and;
- seed mix application (method, timing, monitoring, etc.).

When planning your project, the use of this document and other TRCA technical guidelines and checklists will help streamline submissions, and in the case of the Seed Mix Guideline (the Guideline), will create efficiencies in the review of the site restoration portion of the submission.

Please note that the Guideline is meant to be a living document, i.e., will be updated as required based on new scientific information as it becomes available; please ensure you are using the most up-to-date version.

The Guideline should be used as follows:

i. Read and understand Sections 1-3 of this document.
ii. Complete and submit the checklist in Appendix A as part of a complete submission.
iii. Include notes on detailed design plans, as required in the checklist, relevant to seed mix used in the project.

Section 1.0: Post-construction Soil Quality and Depth

To stabilize and restore disturbed soils with vegetation cover, the first step is to provide suitable growth media (i.e., healthy soils) for future plantings (including trees, shrubs, plugs, seeds, etc.). This includes minimum standards for soil porosity, pH, and organic matter content. Provision of healthy soils for the areas to be landscaped will increase water infiltration and planting success, decrease surface runoff, and decrease future maintenance costs.

The TRCA document, “Preserving and Restoring Healthy Soil: Best Practices for Urban Construction,” (2012) defines minimum standards for soil management during urban construction and describes how to develop and implement Soil Management Plans, including descriptions on required soil condition assessments, laboratory analyses (e.g. particle size

[1] As defined within TRCA’s The Living City Policies (2014): Natural Systems are comprised of water resources, natural features and areas, natural hazards, and restoration areas of potential natural cover and buffers.

distribution, soil pH, bulk density), soil preservation, potential amendment materials and equipment. It should be referred to throughout all construction phases, from planning to post-construction; Download is available at: www.sustainabletechnologies.ca.

The document states that in general, the following standards for post-construction soil quality and depth are recommended:

At project completion, all areas to be landscaped where soil or vegetation has been disturbed should have at least 20 centimeters of topsoil containing 5 to 15% organic matter (by dry weight) depending on the type of vegetation to be established, a total uncompacted soil depth of at least 30 centimeters and a soil pH of 6.0 to 8.0. Organic matter content is measured in a soil laboratory using the Loss-On-Ignition Test (ASTM International, 2007; USDA & USCC, 2002) described further in Section 3.2.3."

Additionally, when importing topsoil, ensure the topsoil does not contain materials or contaminants at levels that would be harmful to plant growth, impair drainage, or adversely impact its intended use. Topsoil should:

- Be free of refuse, stones, wood or debris larger than 50 mm in diameter;
- Be free of deleterious substances, plant or soil pests, invasive species, undesirable grasses, noxious weeds or weed seeds;
- Where applicable, meet topsoil specifications found in *Construction Specifications for Implementing Compost Amended Planting Soil in Ontario* (TRCA, 2017), available at www.sustainabletechnologies.ca

To streamline project reviews, please ensure that the submission **contains notes** on the applicable plans for:

- Soil best management practices during construction from the Erosion and Sediment Control (ESC) Plan. Please refer to Appendix B of TRCA's "Erosion and Sediment Control Guide for Urban Construction", (2019) (available at:https://trca.ca/planning-permits/procedural-manual-and-technical-guidelines/) ;
- Proposed soil mending methods, including soil testing, soil de-compaction, importing of topsoil and use of amendment materials (including Mycorrhizae) in the proposed Planting or Restoration Plan. Please refer to TRCA's "*Preserving and Restoring Healthy Soil: Best Practices for Urban Construction*", dated 2012 (available at: https://trca.ca/planning-permits/procedural-manual-and-technical-guidelines/).

1.1 Mycorrhizae

TRCA recommends the use of mycorrhizal fungi as part of the site restoration, especially in areas where soils have been impacted (compacted, stockpiled, stripped, etc.) or where engineered fill has been requested. Mycorrhizal fungi have a symbiotic relationship with plants and increase the ability of the plant roots to absorb water and nutrients. Mycorrhizae also release Glomalin, a soil "glue", which benefits soils structure by creating space for water and air in heavy soils and binding loose soils to help resist erosion. The use of mycorrhizal fungi

typically results in improved plant establishment, especially native plant growth, and suppression of unwanted non-mycorrhizal plants.

Endomycorrhizal fungi (or arbuscular mycorrhizae (AM)) form associations with 90% of plants including most native herbaceous species. Ectomycorrhizal fungi form relationships with most native woody species.

Mycorrhizal fungi should be applied during the seeding process by mixing the product with the seed; surface applications are not effective. The goal of the application is to create physical contact between the roots and the fungi. Mycorrhizal fungi are generally sold in granular or powder forms and should be applied according to the manufacturer's specifications.

Section 2.0 Selection of Seed Mixes

Failure to choose the appropriate seed mix can undermine the ecological integrity of the *Natural System* when:

- the mix is not suited to the site conditions and fails to stabilize soils; sedimentation of surface water features, wetlands, woodlots may ensue; and/or
- aggressive non-native species invade and dominate native species. Invasive exotic species can limit the regeneration of indigenous vegetation, restrict native biodiversity, and alter the nature of the ecosite.

The following are recommended for selection of seed mixes:

a) Seed mixes must be comprised by native species that are suitable to the local soil (including texture, fertility, pH, and organic matter content), moisture, and light conditions. Species should be compatible and complementary to the existing vegetation communities. Proposed percentages for each species in the mix should be provided.

b) Consideration should be given to the land use adjacent to the area to be restored. For example, if the proposed seed mix is going to be implemented along a trail or sidewalk that is subject to winter maintenance with salt, salt-tolerant species should be incorporated to the seed mix. Similarly, if the proposed seed mix will be implemented in a ditch, along a road or in other heavily impacted area, the resilience ("toughness") of the seed mix would be more important than the diversity. Please refer to Appendix B for examples of seed mixes; refer to Appendix C for a list of herbaceous species that are native within the TRCA jurisdiction. Please note the caveats indicated below (Section 4). General conditions where specific species may be appropriate are indicated.

c) In addition to the native seed mix, a **nurse crop** should be added to every seeding application – to aid in the quick establishment of erosion and weed control.

d) **Cover crops** can be used when temporary erosion control is needed. For example, to stabilize temporary stockpiles, temporary construction ditches, or when a portion of the site needs to be stabilized between two phases of construction.

e) Local source native seed from seed zone 34 is preferred. Otherwise purchasing native seed as close to the same seed zone as the site is preferred. For a seed zone map, please refer to MNRF's Southern Ontario Tree Seed Zone Atlas (2011), available at: https://collections.ola.org/mon/25007/311423.pdf

f) TRCA often encounters exotic species on proposed seed mixes or as proposed nurse/cover crops, such as: *Agrostis gigantea*, *Festuca arundinacea*, *Festuca rubra*, *Lolium perenne, Melilotus alba, Melilotus officinalis*. TRCA does not accept the use of these species as they typically outcompete native species. For a quick reference of invasive species that are not accepted by TRCA, please refer to Appendix D. Please note that Appendix D is not an exhaustive list of the species that should be avoided. For species that are native to TRCA's jurisdiction and accepted by TRCA, please refer to Appendix C.

Section 3.0 Seed Mix Application

Once the minimum soil quality and depth (minimum 200mm of topsoil with 300mm of total uncompacted depth) have been achieved, and fine grading completed, application of seed mixes can be carried out.

It is important to invest in application methods that prevent seeds from washing away (which results in additional applications being required). Pneumatic seeding is TRCA's preferred method for seed application, since when applied correctly is the most successful method.

a) Methods

Consult seed supplier and contractor to confirm appropriate application method and seed mix to ensure successful germination. Please specify method and application rate to be utilized. Please ensure the best management practices (listed below) are followed with any of these methods. The most common seed application methods are:

Pneumatic (blown) seeding with growing media

A calibrated mixture of seed and composted soil (or other growing media) that is applied onto bare soil surfaces with a blower truck. A minimum 50mm depth is required regardless of grades.

This treatment has the added benefit of providing erosion control (stabilizes the area) while seed germinates. For required depths for steep slopes, please refer to supplier's recommendations.

Hydroseeding (a.k.a. hydraulic mulch seeding)

A slurry containing seed, mulch, water and often a tackifier, stored in a tank and sprayed onto the soil surface using a hose. The mixture may also incorporate additives to improve vegetation growth, such as fertilizer and mycorrhizal fungi.

If hydroseeding is being used, the area can be considered stabilized as soon as the application is successfully completed, provided that a tackifier was included in the slurry. If no tackifier was included, the use of additional erosion protection (e.g. rolled erosion control products) until soil is established is required.

Mechanical

Seed applied directly into the soil by mechanical equipment such as a seed drill. Only vehicle accessible areas can be seeded mechanically.

For Mechanical Seeding, mulch application following or in conjunction with seed application is highly recommended as the mulch serves as a barrier against solar heat, moisture loss and physical transport due to runoff.

Broadcast

Applying seed by hand or with a seed spreader (least preferred method). Where possible, use a roller to push down seed for better seed-soil contact following seed distribution.

Because this is labor intensive, it is normally done for smaller areas that are not as easy to access with vehicles. Additional erosion and sediment control should be used to provide site stabilization.

b) Timing

i. Suitable seeding time window: April 15th to October 15th, avoiding peak summer months. Late spring (April to mid-June) is ideal seeding time during drier conditions. Fall (September to November) is best for dormant wildflower seeds. If seeding occurs after September 30th, additional erosion and sediment control measures may be required to minimize sediment transport off-site and seed loss due to runoff.

ii. Seeding should not be executed during the drought-prone season (i.e. mid-June through mid-August), unless adequate irrigation can be supplied.

iii. Works occurring during the late fall and winter months (November 1st to March 30th) should specify interim soil stabilization measures to secure the site during the spring freshet. Seeding might be required in the following growing season.

iv. All disturbed areas should be seeded as soon as possible following the completion of works in each area. Depending on location and erosion risk, TRCA may require notes on drawings directing that seed be applied to specific areas as soon as grading is completed. Seed can be applied as you go, reducing the need to revisit areas and regrade. The areas to be seeded should be evaluated in terms of how many truckloads of seed will be required. As an area equivalent to one truckload is completed, it should be immediately seeded, as opposed to waiting for all areas to be graded and only then applying the seed all at the same time. This will minimize the extend and duration of exposed soils. Erosion controls must remain in place until seeding has sufficiently stabilized the site (80% cover).

v. If germination is not anticipated during the same growing season when seeding was carried out, additional erosion control measures (e.g. rolled erosion control products) are required to provide interim stabilization until vegetation is visible. If rolled erosion control products are being proposed, please note they should be made of 100% natural fibers (no polypropylene layer).

c) Ensuring Success

Please ensure all appropriate best management practices are included as notes in the proposed Planting or Restoration Plan.

i. Securing seed mix with seed supplier well in advance is recommended, since there is limited local seed supply. Consider planning and budgeting for long-term as re-seeding may be required over time.

ii. Areas with disproportionately high invasive species presence, such as most of the Greater Toronto Area, should be seeded at a higher rate (646 seeds per m^2) as opposed to the standard rate of (431 seeds per m^2), due to the considerable invasive species pressure on newly seeded soils.

iii. Prior to seeding, tags should be checked to confirm that the correct (approved) seed mix is being applied.

iv. Ensuring a thorough coverage is key for a successful application.

v. Regardless of seeding method used, more intensive erosion controls may also be necessary in high erosion risk areas (e.g. slopes steeper than 2H:1V).

vi. Ensure vehicles and equipment are not driving over areas that have been seeded. To prevent damage, seeded areas should be fenced off during vegetation establishment, particularly if it is a heavily used area.

vii. Establish a plan to ensure seeded areas are irrigated as needed.

viii. Please incorporate inspection on seeded areas as part of the Erosion and Sediment Control inspection requirements approved for the site. Please add a specific section for the seeded areas in the stabilization monitoring reports and provide a percentage of successful coverage. Beyond this routine inspection, additional inspections of seeded areas may be needed when the seed is newly planted as well as during periods of drought. TRCA encourages the submission of monitoring reports to help inform future updates to the Guideline, based on in-field experience.

ix. During inspection, determine whether seed is well established with good coverage (>80%).

x. During restoration monitoring and restoration warranty inspection, please record which species from the applied seed mix have germinated and percentage of successful coverage for each one.

xi. Look for any evidence of erosion on seeded areas (e.g., rilling). Where erosion is occurring, determine whether a higher seed application rate is needed, if the area should be reinforced with additional erosion control measures (e.g. blankets, mats), or if flows should be re-routed around the seeded area.

xii. Regrade and re-apply topsoil and seed in areas that did not take or that have been removed by erosion.

xiii. Consideration should be given to increasing the rate of the seed mixes and using mycorrhizal fungi on specific areas of the site considered to be more challenging for germination, or in areas where the first application has failed, and it is understood that regular densities are not working.

xiv. A 2-year warranty on planting material will be required. TRCA considers the seeding to be a part of the overall warranty.

Section 4.0 Caveats

This document is dated January 2022 and is consistent with current policies adopted by the TRCA at this time. These guidelines are not meant to be exhaustive but present the typical TRCA expectations and are subject to change.

4.1 Seed Mix Examples

Appendix B shows examples of seed mixes for the TRCA jurisdiction, based upon general site criteria. Please note that:

a) These seed mixes are a working list of mixes that may be appropriate in the TRCA jurisdiction, and may be subject to additions, subtractions, or other changes.

b) It is the proponent's responsibility to ensure success of seed germination and for reparation of any failed germination on the subject site. The success of a seed mix depends on a variety of factors, including local soil, moisture, light conditions, quality of application and maintenance, weather (e.g., drought), and others, as per Sections 2 and 3. The suggested mixes in Appendix B are meant to provide examples of seed mixes that may be appropriate for a site, but on-site conditions must be considered in the selection of the seed mix to ensure success.

4.2 Species List

Appendix C shows all native herbaceous plants (wildflowers, grasses, sedges, rushes) within the TRCA jurisdiction, based on the 2020 TRCA jurisdictional score and rank. Please note that this is a working list of species that may be appropriate for seed mixes in the TRCA jurisdiction, and may be subject to additions, subtractions, or other changes.

4.3 Invasive Species

Appendix D shows a few of the most common herbaceous invasive species within the TRCA jurisdiction. Please note that this is to be used as a quick reference guide of species that are not supported by TRCA, but it is NOT an exhaustive list.

Appendix A:

Submission Checklist

Submission Checklist

Please read and understand the Seed Mix Guidelines before following the checklist below. This checklist is meant as a quick reference guide.

- ❑ **Notes and details demonstrating that each check box below has been addressed are required directly on the plans as part of a complete submission.**

Soil Quality

- ❑ Specify minimum topsoil depth (minimum of 200mm)
- ❑ Specify minimum uncompacted soil depth (minimum of 300mm: topsoil + subsoil)
- ❑ Specify any de-compaction methods and amendments
- ❑ Specify required minimum topsoil quality requirements (for example, minimum percentage of organic matter; range of pH; must be free of deleterious substances, plant or soil pests, invasive and undesirable species; etc.)

Seed Mix Application

- ❑ Specify application method
- ❑ Specify seed application rate
- ❑ Specify proposed timing for application
- ❑ Specify proposed maintenance activities (e.g., irrigation/mowing – refer to Appendix B for requirements) if applicable
- ❑ Specify additional erosion control measures should works be undertaken outside of the growing season

Seed Mixes

Seed mixes should be comprised of native seed mixes that are suitable to local soil, moisture, and light conditions, and be compatible with adjacent vegetation communities and land uses.

- ❑ Specify proposed seed mix(es). All areas requiring stabilization within natural features buffers and other areas to be restored will require 100% native seed mix
    - o Include species (scientific name and common name)
    - o Percentage composition for each species in the mix
    - o If different seed mixes are proposed in different areas, this should be specified in the drawings
- ❑ Specify proposed **nurse crop** to be applied with the native seed mix
- ❑ Additional notes for best management practices

Cover crop (ESC)

For manicured areas and temporary stabilization (e.g., stockpiles, construction ditches).

- ❑ Specify species (scientific name and common name)
- ❑ If a mix is proposed, please specify percentage composition for each species in the mix

Appendix B:

Seed Mix Examples

1. Nurse and Cover Crops

Nurse and Cover Crops should be applied according to the application rate and best management practices recommended by the seed supplier. Typically, the supplier will provide a range of application rate recommended by each species (e.g., 30 to 50Kg/ha); the lower end (e.g. 30Kg/ha) should be applied when species will be used as a **nurse crop** mixing with native seed mix, and the higher end (e.g. 50 Kg/ha) should be applied when species will be used as a **cover crop**. Currently, TRCA recommends the use of the following species as nurse and/or cover crops:

Table 1 - Recommended species to be used as nurse and/or cover crops[2].

Species and Timing	Description	Application Rate and Additional Instructions
Summer-Fall Cover (Annuals)	Can be planted in spring/early summer for summer cover or in fall for fall cover. **Control may be required.**	
Oats (*Avena sativa*)	Annual species. Suitable for a wide range of site and soil types. Oats are suitable for a wide range of sites, including both moist and dry sites. Some allelopathy effects are known to occur; however, the effects are anticipated to only last a few weeks after death. Seed March to October.	Control may be required for spring/summer plantings (e.g. mowing, etc.) to prevent cover crop from impeding native seed mix and to deter seed production. Oats can be mowed in October before they set seed to reduce competition. Can reduce seeding ratio to limit mowing needs. Winterkill is adequate control for fall plantings.
Annual Rye (*Lolium multiflorum*)	Annual species. Suitable for slopes and sites prone to heavy erosion. Please ensure not to use Perennial Rye (*Lolium perenne*), since it is an invasive species. Seed March to October.	Control is likely not required for spring/summer plantings (e.g. mowing, etc.) unless monitoring demonstrates it is impeding native seed mix growth. Winterkill is adequate control for fall plantings.
White/Proso Millet (*Panicum miliaceum*)	Annual species. Suitable for mesic sites (moderate moisture). Seed March to October. Good weed suppression. Better germination with seed drilling, but good success with broadscast seeding.	Control is likely not required for spring/summer plantings (e.g. mowing, etc.) unless monitoring demonstrates it is impeding native seed mix growth. Winterkill is adequate control for fall plantings.

[2] Adapted from Credit Valley Conservation (CVC). 2020. Grassland Restoration Guidelines. Prepared by North-South Environmental Incorporated. Campbellville, Ontario.

Fall-Spring Cover (Winter Annuals)	Can be planted in late summer/early fall for cover in the fall and the following spring, matures in summer. **Control may be required.**	
Winter Wheat *(Triticum aestivum*)	Winter annual species. Winter Wheat is a better choice for most sites since it is less persistent and has less chance of becoming weedy (resulting in uncontrolled dispersal) than Winter Rye. It performs better than Winter Rye in moist sites. Can be seed drilled or broadcast seeded. Seed September to November	Control is likely not required in spring/summer (e.g. mowing, etc.) unless monitoring demonstrates that it is impeding native seed mix. Can reduce seeding ratio to limit mowing needs.
Winter Rye (*Secale cereale*)	Winter annual species. Winter Rye displays allelopathy that can last up to 30 days past death, so overall less preferred than Winter Wheat. Winter Rye is a better choice than Winter Wheat for dry, sandy sites prone to wind erosion. Can be used in combination with Canada Wild Rye to provide additional perennial cover until native seed mix establishes. Can be seed drilled or broadcast seeded. Seed September to November	Control required in spring/summer (e.g. mowing, etc.) to prevent cover crop from impeding native seed mix and deter seed production. Winter Rye should be mowed before it sets seed. Can reduce seeding ratio to limit mowing needs.
Native Perennials	To be used as nurse crops. **No control required.**	
Canada Wild Rye (*Elymus canadensis*)	Native perennial species for dry sites. Quick germination; can be planted in spring and fall.	Use it as a **nurse crop** mixed with native seed.
Virginia Wild Rye (*Elymus virginicus*)	Native perennial species for moist sites. Quick germination; can be planted in spring and fall.	Use it as a **nurse crop** mixed with native seed.
Riverbank Wild Rye (*Elymus riparius*)	Native perennial species for moist sites. Quick germination; can be planted in spring and fall.	Use it as a **nurse crop** mixed with native seed.

2. Examples of Seed Mix

The suggested mixes are meant to provide examples of seed mix that may be appropriate for your site, but on-site conditions must be considered in the selection of the seed mix to ensure

success. Several variables, such as soil quality, moisture, sun exposure, watering schedule and rates of application will affect germination and ultimate coverage.

Please note that species on these seed mixes will be subject to availability. Some of these species may not be readily available for purchase from seed suppliers. Please check with your seed supplier. For acceptable replacement species, please check *Appendix C: List of Herbaceous Species Native to TRCA Jurisdiction (2020)* of this Guideline. Alternatively, the percentage of the available species already listed in the specified mix could be increased to replace species that have supply issues.

Please note that the minimum recommended ratio of seed quantity per area (Kg/ha) below was calculated based on the recommended quantity of 646 seeds per m^2 (e.g. 15% x 646 = 96.9 seeds per m^2).

Site conditions: Sunny and Dry

TRCA Frugal Dry Mix (TRCA-SD-1)			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Panicum virigatum*	Switch grass	15.0%
L2	*Sorghastrum nutans*	Indian grass	15.0%
L3	*Andropogon gerardii*	Big bluestem	15.0%
L4	*Elymus riparius*	Riverbank rye	3.0%
L5	*Elymus virginicus*	Virginia wild rye	7.0%
L4	*Elymus canadensis*	Canada wild rye	11.0%
L2	*Elymus trachycaulus*	Slender wheat grass	2.0%
L2	*Elymus villosus*	Silky Wild Rye*	2.0%
L5	*Oenothera biennis*	Evening primrose	2.0%
L2	*Heliopsis helianthoides*	Oxeye	2.0%
L4	*Rudbeckia hirta*	Black eyed Susan	5.0%
L2	*Schizachyrium scoparium*	Little bluestem	10.0%
L5	*Asclepias syriaca*	Common milkweed	5.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	2.0%
L3	*Pycnanthemum virginianum*	Virginia mountain mint*	2.0%
L5	*Monarda fistulosa*	Wild bergamont	2.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 21.39 Kg/ha			

Ontario Dry Grass Mix (TRCA-SD-2) Grass mix for dry/mesic sites or Meadowlark/Bobolink habitat			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Andropogon gerardii*	Big bluestem	15.0%
L5	*Asclepias syriaca*	Common milkweed	2.0%
LX	*Asclepias tuberosa*	Butterfly milkweed	1.0%

L5	*Symphyotrichum ericoides*	Heath aster	1.0%
L3	*Symphyotrichum oolentangiense*	Sky Blue aster*	1.0%
L5	*Symphyotrichum novae-angliae*	New England aster	1.0%
L5	*Desmodium canadense*	Showy tick-trefoil	1.0%
L4	*Elymus canadensis*	Canada wild rye	5.0%
L2-L+?	*Helenium autumnale*	Marsh sneezeweed*	1.0%
L2	*Heliopsis helianthoides*	Oxeye	2.0%
L3	*Lespedeza capitata*	Roundheaded bushclover*	1.0%
L5	*Monarda fistulosa*	Wild bergamont	5.0%
L5	*Oenothera biennis*	Evening primrose	3.0%
L3	*Panicum virigatum*	Switch grass	13.0%
L3	*Pycnanthemum virginianum*	Virginia mountain mint*	2.0%
L4	*Rudbeckia hirta*	Black eyed Susan	5.0%
L2	*Schizachyrium scoparium*	Little blue stem	15.0%
L5	*Solidago nemoralis*	Grey goldenrod*	4.0%
L2	*Sorghastrum nutans*	Indian grass	20.0%
L3	*Sporobolus cryptandrus*	Sand drop seed	2.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C. If substitutions need to be made for use as Bobolink/Meadowlark habitat, grass component for BOBO/EAME habitat should be 60-80%, or at least consistent with MECP requirements https://www.ontario.ca/page/bobolink-and-eastern-meadowlark-habitats-and-land-development#section-5			
Minimum recommended ratio of 13.98 Kg/ha			

TRCA Upland Slope Mix ((TRCA-SD-3) Use on dry slopes			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Andropogon gerardii*	Big bluestem	16.0%
L5	*Asclepias syriaca*	Common milkweed	2.0%
L5	*Symphyotrichum novae-angliae*	New England aster	1.0%
L5	*Desmodium canadense*	Showy tick-trefoil	2.0%
L4	*Elymus canadensis*	Canada wild rye	15.0%
L2	*Heliopsis helianthoides*	Oxeye	3.0%
L5	*Monarda fistulosa*	Wild bergamont	3.0%
L3	*Panicum virigatum*	Switch grass	15.0%
L3	*Pycnanthemum virginianum*	Virginia mountain mint*	2.0%
L4	*Rudbeckia hirta*	Black eyed Susan	3.0%
L2	*Schizachyrium scoparium*	Little blue stem	15.0%
L5	*Solidago canadensis*	Canada goldenrod	1.0%
L4	*Solidago juncea*	Early goldenrod*	1.0%
L2	*Sorghastrum nutans*	Indian grass	20.0%
L3	*Symphyotrichum laeve*	Smooth aster	1.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			

Minimum recommended ratio of 17.71 Kg/ha

Ontario Resilient Area Meadow Mix (TRCA-SD-4) Used in areas with high invasive species pressure or flat compacted soils			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Andropogon gerardii*	Big bluestem	25.0%
L5	*Asclepias syriaca*	Common milkweed	2.0%
L5	*Desmodium canadense*	Showy tick-trefoil	3.0%
L4	*Elymus canadensis*	Canada wild rye	5.0%
L2	*Heliopsis helianthoides*	Oxeye	3.0%
L5	*Monarda fistulosa*	Wild bergamont	7.0%
L5	*Oenothera biennis*	Evening primrose	2.0%
L3	*Panicum virigatum*	Switch grass	10.0%
L3	*Pycnanthemum virginianum*	Virginia mountain mint*	4.0%
L4	*Rudbeckia hirta*	Black eyed Susan	8.0%
L2	*Schizachyrium scoparium*	Little bluestem	10.0%
L5	*Silphium perfoliatum*	Cup Plant*	1.0%
L2	*Sorghastrum nutans*	Indian grass	20.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 16.40 Kg/ha			

Farm Field Edge Pollinator Mix (TRCA-SD-5)			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Andropogon gerardii*	Big bluestem	15.0%
L3	*Symphyotrichum oolentangiense*	Sky Blue Aster*	3.0%
L5	*Symphyotrichum ericoides*	Heath aster	3.0%
L5	*Symphyotrichum novae-angliae*	New England aster	3.0%
L4	*Elymus canadensis*	Canada wild rye	10.0%
L2	*Heliopsis helianthoides*	Oxeye	4.0%
L5	*Monarda fistulosa*	Wild bergamot	5.0%
L5	*Oenothera biennis*	Evening primrose	2.0%
L3	*Panicum virigatum*	Switch grass	10.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	2.0%
L3	*Penstemon hirsutus*	Hairy beardtongue*	1.0%
L4	*(Potentilla arguta) Drymocallis arguta*	Prairie cinquefoil	1.0%
L3	*Pycnanthemum virginianum*	Virginia mountain mint*	3.0%
L4	*Rudbeckia hirta*	Black eyed Susan	6.0%
L2	*Schizachyrium scoparium*	Little blue stem	15.0%
L2	*Sorghastrum nutans*	Indian grass	15.0%
L3	*Verbena stricta*	Hoary Vervain	2.0%
		Total	**100.0%**

* If supply issues arise, please replace these species with reasonable substitute from Appendix C.
Minimum recommended ratio of 13.57 Kg/ha

Ontario Butterfly Meadow (TRCA-SD-6) For areas of high public visibility and needing high wildflower diversity			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Andropogon gerardii*	Big bluestem	6.0%
L5	*Apocynum cannabinum*	Indian hemp	1.0%
LX	*Asclepias tuberosa*	Butterfly milkweed	3.0%
L5	*Asclepias syriaca*	Common milkweed	2.0%
L3	*Symphyotrichum oolentangiense*	Sky Blue Aster*	3.0%
L5	*Symphyotrichum ericoides*	Heath aster	3.0%
L5	*Symphyotrichum novae-angliae*	New England aster	3.0%
L5	*Desmodium canadense*	Showy tick-trefoil	2.0%
L4	*Elymus canadensis*	Canada wild rye	5.0%
L2-L+?	*Helenium autumnale*	Marsh sneezeweed*	3.0%
L2	*Heliopsis helianthoides*	Oxeye	5.0%
L3	*Lespedeza capitata*	Roundheaded bushclover*	3.0%
L1	*Liatris cylindracea*	Dwarf blazing star	2.0%
L5	*Monarda fistulosa*	Wild bergamot	6.0%
L5	*Oenothera biennis*	Evening primrose	3.0%
L3	*Panicum virigatum*	Switch grass	5.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	4.0%
L3	*Penstemon hirsutus*	Hairy beardtongue*	2.0%
L4	*(Potentilla arguta) Drymocallis arguta*	Prairie cinquefoil	2.0%
L3	*Pycnanthemum virginianum*	Virginia mountain mint*	5.0%
L4	*Rudbeckia hirta*	Black eyed Susan	8.0%
L2	*Schizachyrium scoparium*	Little blue stem	6.0%
L5	*Silphium perfoliatum*	Cup plant*	1.0%
L4	*Sisyrinchium montanum*	Blue-eyed grass	1.0%
L5	*Solidago graminifolia*	Lance leaved goldenrod	1.0%
L5	*Solidago nemoralis*	Grey goldenrod*	2.0%
L2	*Sorghastrum nutans*	Indian grass	8.0%
L3	*Sporobolus cryptandrus*	Sand drop seed	0.0%
L5	*Verbena hastata*	Blue vervain	2.0%
L3	*Verbena stricta*	Hoary Vervain	3.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 13.15 Kg/ha			

Site conditions: Sunny and Wet

TRCA Frugal Wet Mix (TRCA-SW-1)			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Panicum virigatum*	Switch grass	10.0%
L2	*Sorghastrum nutans*	Indian grass	5.0%
L4	*Elymus riparius*	Riverbank rye	20.0%
L5	*Elymus virginicus*	Virginia wild rye	20.0%
L5	*Oenothera biennis*	Evening primrose	3.0%
L4	*Rudbeckia hirta*	Black eyed Susan	5.0%
L4	*Rudbeckia laciniata*	Green coneflower*	3.0%
L5	*Verbena hastata*	Blue vervain	4.0%
L4	*Asclepias incarnata*	Swamp milkweed	3.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	3.0%
L5	*Carex bebbii*	Bebb's sedge*	10.0%
L5	*Eupatorium (Eutrochium) maculatum*	Joe-pye weed	1.0%
L5	*Eupatorium perfoliatum*	Boneset	1.0%
L5	*Carex vulpinoidea*	Fox sedge	10.0%
L4	*Juncus effusus*	Soft rush	1.0%
L5	*Juncus tenuis*	Path rush	1.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 26.05 Kg/ha			

TRCA Wet Slope Mix (TRCA-SW-2) Used in sloped wet areas like seeps or next to a water course			
L-Rank	**Scientific Name**	**Common Name**	**%**
L5	*Symphyotrichum novae-angliae*	New England aster	2.0%
L3	*Bromus ciliatus*	Fringed Brome	5.0%
L5	*Carex bebbii*	Bebb's sedge*	1.0%
L5	*Carex stipata*	Awl-fruited sedge	1.0%
L5	*Carex vulpinoidea*	Fox sedge	3.0%
L4	*Elymus riparius*	Riverbank rye	20.0%
L5	*Elymus virginicus*	Virginia Wlid Rye	25.0%
L5	*Juncus tenuis*	Path rush	3.0%
L5	*Juncus torreyi*	Torrey's Rush*	2.0%
L5	*Monarda fistulosa*	Wild bergamont	2.0%
L3	*Panicum virigatum*	Switch grass	12.0%
L4	*Rudbeckia hirta*	Black eyed Susan	3.0%
L5	*Scirpus atrovirens*	Green bulrush	5.0%
L4	*Scirpus cyperinus*	Woolgrass bulrush	5.0%
L5	*Solidago graminifolia*	Lance-leaved goldenrod*	1.0%
L2	*Sorghastrum nutans*	Indian grass	10.0%
		Total	**100.0%**

* If supply issues arise, please replace these species with reasonable substitute from Appendix C.
Minimum recommended ratio of 27.97 Kg/ha

Stream Stabilization (TRCA-SW-3) More diverse mix for stream edge			
L-Rank	**Scientific Name**	**Common Name**	**%**
L4	*Asclepias incarnata*	Swamp milkweed	1.0%
L5	*Symphyotrichum novae-angliae*	New England aster	2.0%
L3	*Symphyotrichum pilosum*	Hairy aster	2.0%
L5	*Symphyotrichum puniceum*	Swamp aster	1.0%
L4	*Doellingeria umbellata*	Flat-topped aster	1.0%
L3	*Bromus ciliatus*	Fringed Brome	5.0%
L5	*Carex bebbii*	Bebb's sedge*	1.0%
L5	*Carex stipata*	Awl-fruited sedge	1.0%
L5	*Carex vulpinoidea*	Fox sedge	5.0%
L5	*Elymus virginicus*	Virginia Wild Rye	20.0%
L4	*Elymus riparius*	Riverbank rye	15.0%
L5	*Eupatorium maculatum*	Joe-pye weed	2.0%
L5	*Eupatorium perfoliatum*	Boneset	2.0%
L5	*Glyceria striata*	Fowl manna grass	5.0%
L5	*Juncus articulatus*	Jointed rush	1.0%
L4	*Juncus balticus*	Baltic rush	1.0%
L4	*Juncus effusus*	Soft rush	1.0%
L5	*Juncus tenuis*	Path rush	1.0%
L5	*Juncus torreyi*	Torrey's Rush*	1.0%
L2	*Liatris spicata*	Dense blazing star	1.0%
L1	*Lobelia cardinalis*	Cardinal flower	1.0%
L3	*Lobelia siphilitica*	Blue lobelia	1.0%
L4	*Mimulus ringens*	Monkey flower	1.0%
L5	*Monarda fistulosa*	Wild bergamont	4.0%
L5	*Oenothera biennis*	Evening primrose	1.0%
L3	*Panicum virigatum*	Switch grass	5.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	2.0%
L3	*Physostegia virginiana ssp. virginiana*	False dragonhead or Obedient plant	2.0%
L4	*Rudbeckia hirta*	Black eyed Susan	2.0%
L4	*Rudbeckia laciniata*	Green coneflower*	1.0%
L5	*Scirpus atrovirens*	Green bulrush	4.0%
L4	*Scirpus cyperinus*	Woolgrass bulrush	4.0%
L5	*Solidago graminifolia*	Lance-leaved goldenrod*	1.0%
L5	*Verbena hastata*	Blue vervain	2.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 21.59 Kg/ha			

Riparian Access Points (TRCA-SW-4) No wildflowers, grassy species that are resilient to being run over			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Panicum virgatum*	Switch grass	15.0%
L2	*Sorghastrum nutans*	Indian grass	10.0%
L4	*Elymus riparius*	Riverbank rye	20.0%
L5	*Elymus virginicus*	Virginia wild rye	20.0%
L5	*Carex bebbii*	Bebb's sedge*	10.0%
L5	*Carex vulpinoidea*	Fox sedge	15.0%
L4	*Juncus effusus*	Soft rush	2.0%
L5	*Juncus tenuis*	Path rush	5.0%
L5	*Juncus torreyi*	Torrey's rush*	3.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 24.2 Kg/ha			

Ontario Short Wet Meadow (TRCA-SW-5) Shorter mix for sight lines - wet in spring, dryer in summer			
L-Rank	**Scientific Name**	**Common Name**	**%**
L4	*Asclepias incarnata*	Swamp milkweed	2.0%
L3	*Bromus ciliatus*	Fringed Brome	4.0%
L5	*Carex bebbii*	Bebb's sedge*	4.0%
L5	*Carex stipata*	Awl-fruited sedge	4.0%
L5	*Carex vulpinoidea*	Fox sedge	5.0%
L4	*Elymus riparius*	Riverbank rye	15.0%
L5	*Elymus virginicus*	Virginia Wild Rye	15.0%
L5	*Glyceria striata*	Fowl manna grass	5.0%
L5	*Juncus articulatus*	Jointed rush	2.0%
L4	*Juncus balticus*	Baltic rush	2.0%
L4	*Juncus effusus*	Soft rush	2.0%
L5	*Juncus tenuis*	Path rush	5.0%
L5	*Juncus torreyi*	Torrey's Rush*	2.0%
L2	*Liatris spicata*	Dense blazing star	2.0%
L1	*Lobelia cardinalis*	Cardinal flower	1.0%
L3	*Lobelia siphilitica*	Blue lobelia	2.0%
L4	*Mimulus ringens*	Monkey flower	1.0%
L5	*Monarda fistulosa*	Wild bergamont	3.0%
L5	*Oenothera biennis*	Evening primrose	2.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	2.0%
L3	*Physostegia virginiana ssp. virginiana*	False dragonhead or Obedient plant	2.0%
L4	*Rudbeckia hirta*	Black eyed Susan	5.0%
L5	*Scirpus atrovirens*	Green bulrush	10.0%
L5	*Verbena hastata*	Blue vervain	3.0%
		Total	**100.0%**

* If supply issues arise, please replace these species with reasonable substitute from Appendix C.
Minimum recommended ratio of 19.22 Kg/ha

Ontario Wet Meadow (TRCA-SW-6) For areas wet in spring, may be dry in summer			
L-Rank	**Scientific Name**	**Common Name**	**%**
L4	*Asclepias incarnata*	Swamp milkweed	2.0%
L5	*Symphyotrichum ericoides*	Heath aster	2.0%
L5	*Symphyotrichum novae-angliae*	New England aster	1.0%
L3	*Symphyotrichum pilosum*	Hairy aster	2.0%
L5	*Symphyotrichum puniceum*	Swamp aster	2.0%
L4	*Doellingeria umbellata*	Flat-topped aster	1.0%
L3	*Bromus ciliatus*	Fringed Brome	2.0%
L5	*Carex bebbii*	Bebb's sedge*	1.0%
L5	*Carex stipata*	Awl-fruited sedge	1.0%
L5	*Carex vulpinoidea*	Fox sedge	5.0%
L4	*Elymus riparius*	Riverbank rye	10.0%
L5	*Elymus virginicus*	Virginia Wlid Rye	10.0%
L5	*Eupatorium maculatum*	Joe-pye weed	3.0%
L5	*Eupatorium perfoliatum*	Boneset	2.0%
L5	*Glyceria striata*	Fowl manna grass	3.0%
L5	*Juncus articulatus*	Jointed rush	2.0%
L4	*Juncus balticus*	Baltic rush	1.0%
L4	*Juncus effusus*	Soft rush	1.0%
L5	*Juncus tenuis*	Path rush	2.0%
L5	*Juncus torreyi*	Torrey's Rush*	1.0%
L2	*Liatris spicata*	Dense blazing star	1.0%
L1	*Lobelia cardinalis*	Cardinal flower	1.0%
L3	*Lobelia siphilitica*	Blue lobelia	1.0%
L4	*Mimulus ringens*	Monkey flower	1.0%
L5	*Monarda fistulosa*	Wild bergamont	3.0%
L5	*Oenothera biennis*	Evening primrose	2.0%
L3	*Panicum virigatum*	Switch grass	10.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	2.0%
L3	*Physostegia virginiana ssp. virginiana*	False dragonhead or Obedient plant	2.0%
L4	*Rudbeckia hirta*	Black eyed Susan	5.0%
L4	*Rudbeckia laciniata*	Green coneflower*	1.0%
L5	*Scirpus atrovirens*	Green bulrush	3.0%
L4	*Scirpus cyperinus*	Woolgrass bulrush	3.0%
L5	*Solidago graminifolia*	Lance-leaved goldenrod*	1.0%
L2	*Sorghastrum nutans*	Indian grass	7.0%
L5	*Verbena hastata*	Blue vervain	3.0%
		Total	**100.0%**

* If supply issues arise, please replace these species with reasonable substitute from Appendix C.
Minimum recommended ratio of 15.68 Kg/ha

Site conditions: Shady Conditions

Difficult Site Mix (TRCA-SC-1) Shady, sloped, compacted, mixed soils mix			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Andropogon gerardii*	Big bluestem	15.0%
L5	*Elymus virginicus*	Virginia wild rye	15.0%
L2	*Schizachyrium scoparium*	Little bluestem	15.0%
L2	*Elymus villosus*	Silky Wild Rye*	15.0%
L4	*Elymus riparius*	Riverbank rye	15.0%
L4	*Rudbeckia laciniata*	Green coneflower*	2.0%
L5	*Desmodium canadense*	Showy tick-trefoil	3.0%
L4	*Aquilegia canadensis*	Wild Columbine	1.0%
L5	*Monarda fistulosa*	Wild bergamot	3.0%
L5	*Zizia aurea*	Golden Alexander	2.0%
L5	*Monarda didyma*	Bee Balm*	1.0%
L3	*Hypericum ascyron*	Great St.John's Wort*	1.0%
L3	*Agastache nepetoides*	Yellow Hyssop*	1.0%
L1	*Ceanothus americanus*	New Jersey Tea*	1.0%
L2	*Heliopsis helianthoides*	Oxeye	2.0%
L5	*Oenothera biennis*	Evening primrose	2.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	2.0%
L3	*Penstemon hirsutus*	Hairy beardtongue*	1.0%
L3	*Pycnanthemum virginianum*	Virginia mountain mint*	2.0%
L5	*Verbena urticifolia*	White vervain*	1.0%
		Total	**100.0%**
* If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 28.37 Kg/ha			

Swamp Mix (TRCA-SC-2) Partial shade, wet sites			
L-Rank	**Scientific Name**	**Common Name**	**%**
L3	*Anemone canadensis*	Canada Anemone	1.0%
L4	*Asclepias incarnata*	Swamp milkweed	2.0%
L3	*Symphyotrichum pilosum*	Hairy aster	4.0%
L5	*Symphyotrichum puniceum*	Swamp aster	3.0%
LX	*Bidens cernua*	Nodding burr-marigold	1.0%
LX	*Bidens frondosa*	Beggars ticks	1.0%
L3	*Bromus ciliatus*	Fringed brome	5.0%
L3	*Carex comosa*	Bottlebrush sedge	2.0%
L3	*Carex crinita*	Fringed sedge	4.0%
L5	*Carex stipata*	Awl-fruited sedge	2.0%
L4	*Carex stricta*	Tussock Sedge	2.0%
L5	*Carex vulpinoidea*	Fox sedge	5.0%
L1	*Chelone glabra*	Turtlehead	0.0%
L4	*Elymus hystrix*	Bottlebrush Grass	4.0%
L4	*Elymus riparius*	Riverbank rye	15.0%
L5	*Elymus virginicus*	Virginia wild rye	15.0%
L5	*Glyceria striata*	Fowl manna grass	5.0%
L4	*Juncus effusus*	Soft rush	1.0%
L5	*Juncus tenuis*	Path rush	1.0%
L5	*Juncus torreyi*	Torrey's Rush*	1.0%
L5	*Leerisia oryzoides*	Rice Cut Grass	8.0%
L1	*Lobelia cardinalis*	Cardinal flower	1.0%
L3	*Lobelia siphilitica*	Blue lobelia	1.0%
L4	*Mimulus ringens*	Monkey flower	1.0%
L3	*Penstemon digitalis*	Foxglove beardtongue	2.0%
L4	*Rudbeckia laciniata*	Green coneflower*	1.0%
L5	*Scirpus atrovirens*	Green bulrush	3.0%
L4	*Scirpus cyperinus*	Woolgrass bulrush	3.0%
L3	*Thalictrum pubescens*	Tall meadow rue	2.0%
L5	*Verbena hastata*	Blue vervain	2.0%
L5	*Verbena urticifolia*	White vervain*	2.0%
		Total	**100.0%**
*If supply issues arise, please replace these species with reasonable substitute from Appendix C.			
Minimum recommended ratio of 21.51 Kg/ha			

Appendix C:

List of Herbaceous Species Native to TRCA Jurisdiction (2020)

Appendix C: List of Herbaceous Species Native to TRCA Jurisdiction (2020)

Appendix C shows all native herbaceous plants (wildflowers, grasses, sedges, rushes) within the TRCA jurisdiction, based on the 2020 TRCA jurisdictional score and rank. Please note that:

a) This is a working list of species that may be appropriate for seed mixes in the TRCA jurisdiction, and may be subject to additions, subtractions, or other changes.

b) The species on this list will be subject to availability. Please check with your seed supplier.

Disclaimer: taxonomy is constantly changing, and names provided by seed suppliers might be different than what is listed below. To check for nomenclature synonyms, please check the Database of Vascular Plants of Canada (VASCAN) website: http://data.canadensys.net/vascan/search

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Euphorbiaceae	ACAVIRG	*Acalypha rhomboidea*	three-seeded mercury	**L5**	3	FO
Asteraceae	ACHMILA	*Achillea borealis* var. *borealis*	woolly yarrow	**L5**	3	FO
Acoraceae	ACOAMER	*Acorus americanus*	sweet flag	**L3**	-5	FO
Ranunculaceae	ACTPACH	*Actaea pachypoda*	white baneberry	**L5**	5	FO
Ranunculaceae	ACTRUBN	*Actaea rubra* f. *neglecta*	white form red baneberry	**L5**	5	FO
Ranunculaceae	ACTRUBR	*Actaea rubra* ssp. *rubra*	red baneberry	**L5**	5	FO
Ranunculaceae	ACTXLUD	*Actaea* x *ludovici*	hybrid baneberry	**L4**	0	FO
Orobanchaceae	AGAPAUP	*Agalinis purpurea* var. *parviflora*	small-flowered gerardia	**L1**	-5	FO
Orobanchaceae	AGATENU	*Agalinis tenuifolia*	slender gerardia	**L3**	-3	FO
Rosaceae	AGRGRYP	*Agrimonia gryposepala*	agrimony	**L5**	2	FO
Poaceae	AGRPERE	*Agrostis perennans*	upland bent grass	**L3**	1	GR
Rosaceae	AGRPUBE	*Agrimonia pubescens*	hairy agrimony	**L3**	5	FO
Poaceae	AGRSCAB	*Agrostis scabra*	ticklegrass	**L3**	0	GR
Alismataceae	ALISUBC	*Alisma subcordatum*	small-flowered water-plantain	**L3**		FO
Alismataceae	ALITRIV	*Alisma triviale*	common water-plantain	**L5**	-5	FO
Amaryllidaceae	ALLTRIC	*Allium tricoccum*	wild leek	**L4**	2	FO
Poaceae	ALOAEQU	*Alopecurus aequalis*	short-awned foxtail	**L3**	-5	GR

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Asteraceae	AMBARTE	*Ambrosia artemisiifolia*	common ragweed	**L5**	3	FO
Asteraceae	AMBTRIF	*Ambrosia trifida*	giant ragweed	**L5**	-1	FO
Poaceae	AMMBREV	*Calamagrostis breviligulata* ssp. *breviligulata*	marram grass	**L2**	5	GR
Fabaceae	AMPBRAC	*Amphicarpaea bracteata*	hog-peanut	**L5**	0	VI
Asteraceae	ANAMARG	*Anaphalis margaritacea*	pearly everlasting	**L3**	5	FO
Poaceae	ANDGERA	*Andropogon gerardi*	big bluestem	**L3**	1	GR
Primulaceae	ANDSEPT	*Androsace septentrionalis*	pygmy flower	**L3**	5	FO
Ranunculaceae	ANEACUT	*Hepatica acutiloba*	sharp-lobed hepatica	**L3**	5	FO
Ranunculaceae	ANEAMER	*Hepatica americana*	round-lobed hepatica	**L2**	5	FO
Ranunculaceae	ANECANA	*Anemonastrum canadense*	Canada anemone	**L5**	-3	FO
Ranunculaceae	ANECYLI	*Anemone cylindrica*	long-fruited thimbleweed	**L3**	5	FO
Ranunculaceae	ANEMULT	*Anemone multifida*	red anemone	**L2**	5	FO
Ranunculaceae	ANEQUIN	*Anemone quinquefolia* var. *quinquefolia*	wood anemone	**L3**	0	FO
Ranunculaceae	ANEVIRG	*Anemone virginiana*	common thimbleweed	**L5**	5	FO
Apiaceae	ANGATRO	*Angelica atropurpurea*	angelica	**L3**	-5	FO
Asteraceae	ANTHOHO	*Antennaria howellii* ssp. *howellii*	Howell's pussytoes	**L5**	5	FO
Asteraceae	ANTPAFA	*Antennaria parlinii* ssp. *fallax*	plantain-leaved pussytoes	**L3**	5	FO
Fabaceae	APIAMER	*Apios americana*	groundnut	**L4**	-3	VI
Apocynaceae	APOANDR	*Apocynum androsaemifolium*	spreading dogbane	**L5**	5	FO
Apocynaceae	APOCACA	*Apocynum cannabinum* var. *cannabinum*	hemp dogbane	**L5**		FO
Apocynaceae	APOCANN	*Apocynum cannabinum*	hemp dogbane (*sensu lato*)	**L5**	0	FO
Apocynaceae	APOSIBI	*Apocynum cannabinum* var. *hypericifolium*	clasping-leaved hemp dogbane	**L5**	0	FO
Apocynaceae	APOXFLO	*Apocynum* x *floribundum*	intermediate dogbane	**L3**	5	FO
Ranunculaceae	AQUCANA	*Aquilegia canadensis*	wild columbine	**L4**	1	FO
Brassicaceae	ARACANA	*Borodinia canadensis*	sicklepod	**L2**	5	FO
Brassicaceae	ARAGLAB	*Turritis glabra*	tower mustard	**L3**	5	FO
Brassicaceae	ARAHIPY	*Arabis pycnocarpa*	hairy rock-cress	**L2**	3	FO
Brassicaceae	ARALAEV	*Borodinia laevigata*	smooth rock-cress	**L2**	5	FO
Araliaceae	ARANUDI	*Aralia nudicaulis*	wild sarsaparilla	**L5**	3	FO
Araliaceae	ARARACE	*Aralia racemosa*	spikenard	**L3**	5	FO
Loranthaceae	ARCPUSI	*Arceuthobium pusillum*	dwarf mistletoe	**L1**	0	FO

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Araceae	ARITRIP	*Arisaema triphyllum*	Jack-in-the-pulpit	**L5**	-2	FO
Asteraceae	ARTCAMP	*Artemisia campestris* ssp. *caudata*	beach wormwood	**L2**	0	FO
Aristolochiaceae	ASACANA	*Asarum canadense*	wild ginger	**L4**	5	FO
Apocynaceae	ASCEXAL	*Asclepias exaltata*	poke milkweed	**L2**	5	FO
Apocynaceae	ASCINCA	*Asclepias incarnata* ssp. *incarnata*	swamp milkweed	**L4**	-5	FO
Apocynaceae	ASCSYRI	*Asclepias syriaca*	common milkweed	**L5**	5	FO
Asteraceae	ASTBORE	*Symphyotrichum boreale*	bog aster	**L2**	-5	FO
Fabaceae	ASTCANA	*Astragalus canadensis*	Canada milk-vetch	**L1**	-1	FO
Asteraceae	ASTCILI	*Symphyotrichum ciliolatum*	Lindley's aster	**L4**	4	FO
Asteraceae	ASTCORD	*Symphyotrichum cordifolium*	heart-leaved aster	**L5**	5	FO
Asteraceae	ASTERIC	*Symphyotrichum ericoides* var. *ericoides*	heath aster	**L5**	4	FO
Asteraceae	ASTFIRM	*Symphyotrichum firmum*	shining aster	**L4**		FO
Asteraceae	ASTLAEV	*Symphyotrichum laeve* var. *laeve*	smooth aster	**L3**	5	FO
Asteraceae	ASTLAHI	*Symphyotrichum lanceolatum* var. *hirsuticaule*	Great Lakes panicled aster	**L3**		FO
Asteraceae	ASTLALF	*Symphyotrichum lanceolatum* var. *latifolium*	broad-leaved panicled aster	**L4**		FO
Asteraceae	ASTLALT	*Symphyotrichum lateriflorum* var. *lateriflorum*	calico aster	**L5**	-2	FO
Asteraceae	ASTLANC	*Symphyotrichum lanceolatum* var. *lanceolatum*	panicled aster	**L5**	-3	FO
Asteraceae	ASTMACR	*Eurybia macrophylla*	big-leaved aster	**L5**	5	FO
Asteraceae	ASTNOVA	*Symphyotrichum novae-angliae*	New England aster	**L5**	-3	FO
Asteraceae	ASTONTA	*Symphyotrichum ontarionis* var. *ontarionis*	Ontario aster	**L3**	0	FO
Asteraceae	ASTOOLE	*Symphyotrichum oolentangiense*	sky-blue aster	**L4**	5	FO
Asteraceae	ASTPIPI	*Symphyotrichum pilosum* var. *pilosum*	hairy aster	**L3**	2	FO
Asteraceae	ASTPIPR	*Symphyotrichum pilosum* var. *pringlei*	Pringle's aster	**L2**	-2	FO
Asteraceae	ASTPUNI	*Symphyotrichum puniceum* var. *puniceum*	swamp aster	**L5**	-5	FO
Asteraceae	ASTUMBE	*Doellingeria umbellata* var. *umbellata*	flat-topped aster	**L3**	-3	FO
Asteraceae	ASTUROP	*Symphyotrichum urophyllum*	arrow-leaved aster	**L4**	5	FO
Asteraceae	ASTX	*Symphyotrichum cordifolium* x *lateriflorum*	heart-leaved calico hybrid aster	**L4**		FO
Asteraceae	ASTX2	*Symphyotrichum lateriflorum* x *puniceum*	calico-swamp hybrid aster	**L5**		FO
Asteraceae	ASTXAME	*Symphyotrichum* x *amethystinum*	amethyst aster	**L5**	0	FO
Poaceae	BECSYZI	*Beckmannia syzigachne*	slough grass	**L3**	-5	GR

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Asteraceae	BIDCERN	*Bidens cernua*	nodding burr marigold	**L5**	-5	FO
Asteraceae	BIDDISC	*Bidens discoidea*	small beggarticks	**L3**	-3	FO
Asteraceae	BIDFRON	*Bidens frondosa*	common beggarticks	**L5**	-3	FO
Asteraceae	BIDTRIP	*Bidens tripartita*	three-parted beggarticks	**L5**	-3	FO
Asteraceae	BIDVULG	*Bidens vulgata*	tall beggarticks	**L5**	-3	FO
Urticaceae	BOECYLI	*Boehmeria cylindrica*	false nettle	**L4**	-5	FO
Poaceae	BRAARIS	*Brachyelytrum aristosum*	northern shorthusk	**L3**		GR
Poaceae	BRAEREC	*Brachyelytrum erectum*	bearded shorthusk	**L3**	5	GR
Cabombaceae	BRASCHR	*Brasenia schreberi*	water-shield	**L1**	-5	FO
Poaceae	BROCILI	*Bromus ciliatus*	fringed brome grass	**L3**	-3	GR
Poaceae	BROLATI	*Bromus latiglumis*	eared brome	**L4**	-2	GR
Poaceae	BROPUBE	*Bromus pubescens*	Canada brome	**L3**	3	GR
Brassicaceae	CAKEDEN	*Cakile edentula*	sea-rocket	**L2**	3	FO
Poaceae	CALCANA	*Calamagrostis canadensis*	Canada blue-joint	**L4**	-5	GR
Araceae	CALPALS	*Calla palustris*	water arum	**L2**	-5	FO
Plantaginaceae	CALPALT	*Callitriche palustris*	marsh water starwort	**L3**	-5	FO
Ranunculaceae	CALPALU	*Caltha palustris*	marsh marigold	**L4**	-5	FO
Convolvulaceae	CALSEAM	*Calystegia sepium* ssp. *americana*	pink hedge bindweed	**L5**		FO
Convolvulaceae	CALSEAN	*Calystegia sepium* ssp. *angulata*	white hedge bindweed	**L5**		FO
Convolvulaceae	CALSEPI	*Calystegia sepium*	hedge bindweed (sensu lato)	**L5**	0	FO
Convolvulaceae	CALSPIT	*Calystegia spithamaea* ssp. *stans*	low bindweed	**L3**	5	FO
Poaceae	CALSTRI	*Calamagrostis stricta* ssp. *inexpansa*	northern reedgrass	**L2**	-4	GR
Orchidaceae	CALTUBE	*Calopogon tuberosus*	grass pink	**L1**	-5	FO
Campanulaceae	CAMAPAR	*Campanula aparinoides*	marsh bellflower	**L3**	-5	FO
Campanulaceae	CAMROTU	*Campanula intercedens*	harebell	**L1**	1	FO
Cyperaceae	CARALAL	*Carex albicans* var. *albicans*	blunt-scaled sedge	**L2**	5	SE
Cyperaceae	CARALBU	*Carex albursina*	white bear sedge	**L3**	5	SE
Cyperaceae	CARALOP	*Carex alopecoidea*	foxtail wood sedge	**L3**	-4	SE
Cyperaceae	CARAMPH	*Carex grisea*	grey sedge	**L4**	1	SE
Cyperaceae	CARAPPA	*Carex appalachica*	Appalachian sedge	**L2**	1	SE
Cyperaceae	CARAQUA	*Carex aquatilis*	water sedge	**L3**	-5	SE

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Cyperaceae	CARARCT	*Carex arctata*	nodding wood sedge	**L5**	5	SE
Cyperaceae	CARATHE	*Carex atherodes*	awned sedge	**L3**	-5	SE
Cyperaceae	CARAURE	*Carex aurea*	golden-fruited sedge	**L4**	-4	SE
Cyperaceae	CARBACK	*Carex backii*	Back's sedge	**L3**	5	SE
Cyperaceae	CARBEBB	*Carex bebbii*	Bebb's sedge	**L5**	-5	SE
Cyperaceae	CARBLAN	*Carex blanda*	common wood sedge	**L5**	0	SE
Cyperaceae	CARBREV	*Carex brevior*	short-fruited sedge	**L3**	0	SE
Cyperaceae	CARBROM	*Carex bromoides*	brome-like sedge	**L4**	-4	SE
Cyperaceae	CARBRUN	*Carex brunnescens* ssp. *brunnescens*	brownish sedge	**L3**	-3	SE
Brassicaceae	CARBULB	*Cardamine bulbosa*	spring cress	**L2**	-5	FO
Cyperaceae	CARBUXB	*Carex buxbaumii*	dark-scaled sedge	**L2**	-5	SE
Cyperaceae	CARCANE	*Carex canescens* ssp. *canescens*	silvery sedge	**L3**	-5	SE
Cyperaceae	CARCAST	*Carex castanea*	chestnut-scaled sedge	**L3**	-4	SE
Cyperaceae	CARCEPD	*Carex cephaloidea*	thin-leaved sedge	**L3**	2	SE
Cyperaceae	CARCEPP	*Carex cephalophora*	oval-headed sedge	**L4**	3	SE
Cyperaceae	CARCHOR	*Carex chordorrhiza*	creeping sedge	**L2**	-5	SE
Cyperaceae	CARCOMM	*Carex communis*	fibrous-rooted sedge	**L4**	5	SE
Cyperaceae	CARCOMO	*Carex comosa*	bristly sedge	**L3**	-5	SE
Brassicaceae	CARCONC	*Cardamine concatenata*	cut-leaved toothwort	**L4**	3	FO
Cyperaceae	CARCRAF	*Carex crawfordii*	Crawford's sedge	**L3**	-1	SE
Cyperaceae	CARCRIN	*Carex crinita*	fringed sedge	**L3**	-4	SE
Cyperaceae	CARCRIS	*Carex cristatella*	crested sedge	**L5**	-4	FO
Cyperaceae	CARCRYP	*Carex cryptolepis*	small yellow sedge	**L2**	-5	SE
Cyperaceae	CARDERU	*Carex debilis* var. *rudgei*	white-edged sedge	**L3**	-3	SE
Cyperaceae	CARDEWE	*Carex deweyana*	Dewey's sedge	**L5**	4	SE
Cyperaceae	CARDIAN	*Carex diandra*	lesser panicled sedge	**L3**	-5	SE
Cyperaceae	CARDIGI	*Carex digitalis*	slender wood sedge	**L3**	5	SE
Brassicaceae	CARDIPH	*Cardamine diphylla*	broad-leaved toothwort	**L4**	5	FO
Cyperaceae	CARDISP	*Carex disperma*	two-seeded sedge	**L3**	-5	SE
Brassicaceae	CARDOUG	*Cardamine douglassii*	purple cress	**L3**	-3	FO
Cyperaceae	CAREBUR	*Carex eburnea*	bristle-leaved sedge	**L3**	4	SE

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Cyperaceae	CARECHI	*Carex echinata* ssp. *echinata*	little prickly sedge	**L1**	-5	SE
Cyperaceae	CARFLAV	*Carex flava*	yellow sedge	**L3**	-5	SE
Cyperaceae	CARFORM	*Carex formosa*	handsome sedge	**L2**	-2	SE
Cyperaceae	CARGARB	*Carex garberi*	Garber's sedge	**L2**	-3	SE
Cyperaceae	CARGRAC	*Carex gracillima*	graceful sedge	**L5**	3	SE
Cyperaceae	CARGRAE	*Carex gracilescens*	rather slender sedge	**L3**	5	SE
Cyperaceae	CARGRAN	*Carex granularis*	meadow sedge	**L5**	-4	SE
Cyperaceae	CARGRAY	*Carex grayi*	Gray's sedge	**L3**	-4	SE
Cyperaceae	CARHIRF	*Carex hirtifolia*	hairy wood sedge	**L4**	5	SE
Cyperaceae	CARHITC	*Carex hitchcockiana*	Hitchcock's sedge	**L4**	5	SE
Cyperaceae	CARHOUG	*Carex houghtoniana*	Houghton's Sedge	**L3**		SE
Cyperaceae	CARHYST	*Carex hystericina*	porcupine sedge	**L4**	-5	SE
Cyperaceae	CARINTE	*Carex interior*	fen star sedge	**L3**	-5	SE
Cyperaceae	CARINTU	*Carex intumescens*	bladder sedge	**L4**	-4	SE
Cyperaceae	CARJAME	*Carex jamesii*	James' Sedge	**L3**		SE
Cyperaceae	CARLACU	*Carex lacustris*	lake-bank sedge	**L4**	-5	SE
Cyperaceae	CARLAEV	*Carex laevivaginata*	smooth-sheathed sedge	**L3**	-5	SE
Cyperaceae	CARLASI	*Carex lasiocarpa*	slender woolly sedge	**L2**	-5	SE
Cyperaceae	CARLAXC	*Carex laxiculmis* var. *laxiculmis*	spreading wood sedge	**L3**	5	SE
Cyperaceae	CARLAXI	*Carex laxiflora*	loose-flowered sedge	**L4**	0	SE
Cyperaceae	CARLEPN	*Carex leptonervia*	few-nerved wood sedge	**L3**	0	SE
Cyperaceae	CARLEPT	*Carex leptalea*	bristle-stalked sedge	**L3**	-5	SE
Cyperaceae	CARLIMO	*Carex limosa*	mud sedge	**L2**	-5	SE
Cyperaceae	CARLUPU	*Carex lupulina*	hop sedge	**L4**	-4	SE
Cyperaceae	CARLURI	*Carex lurida*	sallow sedge	**L3**	-5	SE
Cyperaceae	CARMAIR	*Carex magellanica* ssp. *irrigua*	stunted sedge	**L2**	-5	SE
Cyperaceae	CARMOLE	*Carex molesta*	troublesome sedge	**L3**	2	SE
Cyperaceae	CARMUHL	*Carex muehlenbergii* var. *muehlenbergii*	Muhlenberg's sedge	**L3**	0	SE
Cyperaceae	CARNORM	*Carex normalis*	tall straw sedge	**L3**	-3	SE
Cyperaceae	CARPALL	*Carex pallescens*	pale sedge	**L4**	3	SE
Cyperaceae	CARPECK	*Carex peckii*	Peck's sedge	**L4**	5	SE

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Cyperaceae	CARPEDU	*Carex pedunculata*	early-flowering sedge	**L5**	5	SE
Cyperaceae	CARPELL	*Carex pellita*	woolly sedge	**L4**	-5	SE
Brassicaceae	CARPENL	*Cardamine pensylvanica*	bitter cress	**L4**	-4	FO
Cyperaceae	CARPENS	*Carex pensylvanica*	Pennsylvania sedge	**L4**	5	SE
Cyperaceae	CARPLAN	*Carex plantaginea*	plantain-leaved sedge	**L3**	5	SE
Cyperaceae	CARPLAT	*Carex platyphylla*	broad-leaved sedge	**L3**	5	SE
Cyperaceae	CARPRAI	*Carex prairea*	fen panicled sedge	**L2**	-4	SE
Cyperaceae	CARPRAS	*Carex prasina*	drooping sedge	**L2**	-5	SE
Brassicaceae	CARPRAT	*Cardamine dentata*	cuckoo-flower	**L3**	-5	FO
Cyperaceae	CARPROJ	*Carex projecta*	necklace sedge	**L4**	-4	SE
Cyperaceae	CARPSEU	*Carex pseudocyperus*	pseudocyperus sedge	**L5**	-5	SE
Cyperaceae	CARRADI	*Carex radiata*	straight-styled sedge	**L5**	5	SE
Cyperaceae	CARRETR	*Carex retrorsa*	retrorse sedge	**L4**	5	SE
Cyperaceae	CARROSE	*Carex rosea*	curly-styled sedge	**L5**	5	SE
Cyperaceae	CARSART	*Carex sartwellii*	Sartwell's sedge	**L3**		SE
Cyperaceae	CARSCAB	*Carex scabrata*	rough sedge	**L4**	-5	SE
Cyperaceae	CARSCHW	*Carex schweinitzii*	Schweinitz's sedge	**L2**	-5	SE
Cyperaceae	CARSCOP	*Carex scoparia*	pointed broom sedge	**L3**	-3	SE
Cyperaceae	CARSICC	*Carex siccata*	hay sedge	**L3**	5	SE
Cyperaceae	CARSPAR	*Carex sparganioides*	bur-reed sedge	**L5**	0	SE
Cyperaceae	CARSPRE	*Carex sprengelii*	long-beaked sedge	**L4**	0	SE
Cyperaceae	CARSTIP	*Carex stipata*	awl-fruited sedge	**L5**	-5	SE
Cyperaceae	CARSTRI	*Carex stricta*	tussock sedge	**L4**	-5	SE
Cyperaceae	CARSWAN	*Carex swanii*	Swan's sedge	**L3**		SE
Cyperaceae	CARSYCH	*Carex sychnocephala*	dense long-beaked sedge	**L3**	-4	SE
Cyperaceae	CARTEEC	*Carex echinodes*	marsh straw sedge	**L5**		SE
Cyperaceae	CARTENE	*Carex tenera*	straw sedge (sensu lato)	**L5**	-1	SE
Cyperaceae	CARTENU	*Carex tenuiflora*	sparse-flowered sedge	**L2**	-5	SE
Cyperaceae	CARTETE	*Carex tenera*	straw sedge	**L4**		SE
Cyperaceae	CARTORU	*Carex tonsa* var. *rugosperma*	red-seeded sedge	**L3**	5	SE
Cyperaceae	CARTRBI	*Carex billingsii*	Billings' three-seeded sedge	**L1**	-5	SE

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Cyperaceae	CARTRIB	*Carex tribuloides*	blunt broom sedge	**L4**	-4	SE
Cyperaceae	CARTRIC	*Carex trichocarpa*	hairy-fruited sedge	**L3**	-5	SE
Cyperaceae	CARTRTR	*Carex trisperma*	three-seeded sedge	**L3**	-5	SE
Cyperaceae	CARTUCK	*Carex tuckermanii*	Tuckerman's sedge	**L3**	-5	SE
Cyperaceae	CARUTRI	*Carex utriculata*	beaked sedge	**L3**	-5	SE
Cyperaceae	CARVAGI	*Carex vaginata*	Sheathed Sedge	**L2**		SE
Cyperaceae	CARVESI	*Carex vesicaria*	inflated sedge	**L2**	-5	SE
Cyperaceae	CARVIRI	*Carex viridula* ssp. *viridula*	greenish sedge	**L2**	-5	SE
Cyperaceae	CARVULP	*Carex vulpinoidea*	fox sedge	**L5**	-5	SE
Cyperaceae	CARWOOD	*Carex woodii*	purple-tinged sedge	**L3**	0	SE
Cyperaceae	CARX	*Carex lacustris* x *trichocarpa*	hybrid Paludosae sedge	**L3**	-5	SE
Brassicaceae	CARXMAX	*Cardamine maxima*	hybrid toothwort	**L5**	0	FO
Berberidaceae	CAUGIGA	*Caulophyllum giganteum*	long-styled blue cohosh	**L4**	5	FO
Berberidaceae	CAUTHAL	*Caulophyllum thalictroides*	blue cohosh	**L3**	5	FO
Ceratophyllaceae	CERDEME	*Ceratophyllum demersum*	coontail	**L4**	-5	FO
Euphorbiaceae	CHAPOLY	*Euphorbia polygonifolia*	seaside spurge	**L2**	5	FO
Amaranthaceae	CHECAPI	*Blitum capitatum* ssp. *capitatum*	strawberry-blight	**L3**	5	FO
Plantaginaceae	CHEGLAB	*Chelone glabra*	white turtlehead	**L3**	-5	FO
Amaranthaceae	CHESIMP	*Chenopodiastrum simplex*	maple-leaved goosefoot	**L5**	5	FO
Saxifragaceae	CHRAMER	*Chrysosplenium americanum*	golden saxifrage	**L3**	-5	FO
Apiaceae	CICBULB	*Cicuta bulbifera*	bulblet-bearing water-hemlock	**L5**	-5	FO
Apiaceae	CICMACU	*Cicuta maculata*	spotted water-hemlock	**L5**	-5	FO
Poaceae	CINARUN	*Cinna arundinacea*	tall wood reed	**L3**	-3	GR
Poaceae	CINLATI	*Cinna latifolia*	nodding wood reed	**L4**	-4	GR
Onagraceae	CIRALPI	*Circaea alpina*	smaller enchanter's nightshade	**L3**	-3	FO
Asteraceae	CIRDISC	*Cirsium discolor*	pasture thistle	**L2**	5	FO
Onagraceae	CIRLUTE	*Circaea canadensis* ssp. *canadensis*	enchanter's nightshade	**L5**	3	FO
Asteraceae	CIRMUTI	*Cirsium muticum*	swamp thistle	**L1**	-5	FO
Montiaceae	CLACARO	*Claytonia caroliniana*	broad-leaved spring beauty	**L3**	3	FO
Cyperaceae	CLAMARI	*Cladium mariscoides*	twig-rush	**L1**	-5	SE
Montiaceae	CLAVIRG	*Claytonia virginica*	narrow-leaved spring beauty	**L3**	3	FO

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Liliaceae	CLIBORE	*Clintonia borealis*	bluebead lily	**L3**	-1	FO
Lamiaceae	CLIVULG	*Clinopodium vulgare*	wild basil	**L5**	5	FO
Lamiaceae	COLCANA	*Collinsonia canadensis*	horsebalm	**L3**	0	FO
Santalaceae	COMUMBE	*Comandra umbellata*	comandra	**L3**	3	FO
Orobanchaceae	CONAMER	*Conopholis americana*	American cancerroot	**L1**	5	FO
Asteraceae	CONCANA	*Erigeron canadensis*	Canada horseweed	**L5**	1	FO
Ranunculaceae	COPTRIF	*Coptis trifolia*	goldthread	**L3**	-3	FO
Papaveraceae	CORAURE	*Corydalis aurea* ssp. *aurea*	golden corydalis	**L3**	5	FO
Orchidaceae	CORMACU	*Corallorhiza maculata*	spotted coralroot	**L2**	4	FO
Orchidaceae	CORTRIF	*Corallorhiza trifida*	early coralroot	**L1**	-2	FO
Apiaceae	CRYCANA	*Cryptotaenia canadensis*	honewort	**L5**	0	FO
Convolvulaceae	CUSGRON	*Cuscuta gronovii*	swamp dodder	**L4**	-3	FO
Orchidaceae	CYPACAU	*Cypripedium acaule*	moccasin flower	**L1**	-3	FO
Cyperaceae	CYPBIPA	*Cyperus bipartitus*	two-parted umbrella-sedge	**L3**	-4	SE
Orchidaceae	CYPCAPA	*Cypripedium parviflorum* var. *makasin*	smaller yellow lady's-slipper	**L3**	-1	FO
Orchidaceae	CYPCAPU	*Cypripedium parviflorum* var. *pubescens*	larger yellow lady's-slipper	**L3**	-1	FO
Cyperaceae	CYPERYT	*Cyperus erythrorhizos*	red-rooted umbrella-sedge	**L3**	-5	SE
Cyperaceae	CYPLUPU	*Cyperus lupulinus*	slender umbrella-sedge	**L3**	4	SE
Cyperaceae	CYPODOR	*Cyperus odoratus*	fragrant umbrella-sedge	**L3**	-3	SE
Orchidaceae	CYPREGI	*Cypripedium reginae*	showy lady's-slipper	**L2**	-4	FO
Cyperaceae	CYPSCHW	*Cyperus schweinitzii*	Schweinitz's umbrella-sedge	**L2**	2	SE
Cyperaceae	CYPSTRI	*Cyperus strigosus*	straw-coloured umbrella-sedge	**L3**	-3	SE
Rosaceae	DALREPE	*Rubus repens*	Robin-run-away	**L3**	4	FO
Poaceae	DANSPIC	*Danthonia spicata*	poverty oat grass	**L4**	5	GR
Lythraceae	DECVERT	*Decodon verticillatus*	swamp loosestrife	**L2**	-5	FO
Fabaceae	DESCANA	*Desmodium canadense*	showy tick-trefoil	**L5**	1	FO
Poaceae	DESFLEX	*Avenella flexuosa*	common hairgrass	**L2**	5	GR
Fabaceae	DESGLUT	*Hylodesmum glutinosum*	pointed-leaved tick-trefoil	**L3**	5	FO
Fabaceae	DESNUDI	*Hylodesmum nudiflorum*	naked-flowered tick-trefoil	**L1**	5	FO
Papaveraceae	DICCANA	*Dicentra canadensis*	squirrel-corn	**L3**	5	FO
Papaveraceae	DICCUCU	*Dicentra cucullaria*	Dutchman's breeches	**L3**	5	FO

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Droseraceae	DROROTU	*Drosera rotundifolia*	round-leaved sundew	**L1**	-5	FO
Cyperaceae	DULARUN	*Dulichium arundinaceum*	three-way sedge	**L3**	-5	SE
Cucurbitaceae	ECHLOBA	*Echinocystis lobata*	wild cucumber	**L5**	-2	VI
Poaceae	ECHMICR	*Echinochloa muricata* var. *microstachya*	small-spiked barnyard grass	**L5**	-2	GR
Cyperaceae	ELEACIC	*Eleocharis acicularis*	needle spike-rush	**L3**	-5	SE
Cyperaceae	ELEELLI	*Eleocharis elliptica*	elliptic spike-rush	**L2**	-3	SE
Cyperaceae	ELEERYT	*Eleocharis erythropoda*	creeping spike-rush	**L5**	-5	SE
Cyperaceae	ELEINTE	*Eleocharis intermedia*	matted spike-rush	**L2**	-3	SE
Cyperaceae	ELEOBTU	*Eleocharis obtusa*	blunt spike-rush	**L4**	-5	SE
Cyperaceae	ELEOLIV	*Eleocharis flavescens* var. *olivacea*	olive-fruited spike-rush	**L1**	-5	SE
Cyperaceae	ELEPAUC	*Eleocharis quinqueflora*	few-flowered spike-rush	**L2**	-5	SE
Cyperaceae	ELESMAL	*Eleocharis palustris*	Small's spike-rush	**L3**	-5	SE
Hydrocharitaceae	ELOCANA	*Elodea canadensis*	common waterweed	**L4**	-5	FO
Hydrocharitaceae	ELONUTT	*Elodea nuttallii*	Nuttall's waterweed	**L3**	-5	FO
Poaceae	ELYCANA	*Elymus canadensis*	Canada wild rye	**L4**	1	GR
Poaceae	ELYHYST	*Elymus hystrix*	bottle-brush grass	**L4**	5	GR
Poaceae	ELYRIPA	*Elymus riparius*	riverbank wild rye	**L4**	-3	GR
Poaceae	ELYTRAC	*Elymus trachycaulus*	slender wheat grass	**L2**	0	GR
Poaceae	ELYVILL	*Elymus villosus*	hairy wild rye	**L2**	3	GR
Poaceae	ELYVIRG	*Elymus virginicus* var. *virginicus*	Virginia wild rye	**L5**	-2	GR
Poaceae	ELYWIEG	*Elymus wiegandii*	Wiegand's wild rye	**L3**	0	GR
Onagraceae	EPIANGU	*Chamaenerion angustifolium* ssp. *angustifolium*	fire-weed	**L3**	0	FO
Onagraceae	EPICICI	*Epilobium ciliatum* ssp. *ciliatum*	sticky willowherb	**L5**	3	FO
Onagraceae	EPICOLO	*Epilobium coloratum*	purple-leaved willowherb	**L5**	-5	FO
Onagraceae	EPILEPT	*Epilobium leptophyllum*	narrow-leaved willowherb	**L3**	-5	FO
Onagraceae	EPISTRI	*Epilobium strictum*	downy willowherb	**L3**	-5	FO
Orobanchaceae	EPIVIRG	*Epifagus virginiana*	beech-drops	**L4**	5	FO
Poaceae	ERAHYPN	*Eragrostis hypnoides*	teal lovegrass	**L3**	-5	GR
Asteraceae	EREHIER	*Erechtites hieraciifolius* var. *hieraciifolius*	burnweed	**L3**	3	FO
Asteraceae	ERIANNU	*Erigeron annuus*	daisy fleabane	**L5**	1	FO

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Cyperaceae	ERIGRAC	*Eriophorum gracile*	slender cottongrass	**L1**	-5	SE
Asteraceae	ERIPHIL	*Erigeron philadelphicus* var. *philadelphicus*	Philadelphia fleabane	**L5**	-3	FO
Asteraceae	ERIPULC	*Erigeron pulchellus*	Robin's plantain	**L2**	3	FO
Asteraceae	ERISTRI	*Erigeron strigosus*	rough fleabane	**L5**	1	FO
Cyperaceae	ERITENE	*Eriophorum tenellum*	rough cottongrass	**L1**	-5	SE
Cyperaceae	ERIVAGI	*Eriophorum vaginatum* ssp. *spissum*	dense cottongrass	**L1**	-5	SE
Cyperaceae	ERIVIRG	*Eriophorum virginicum*	tawny cottongrass	**L1**	-5	SE
Cyperaceae	ERIVIRI	*Eriophorum viridicarinatum*	thin-leaved cottongrass	**L2**	-5	SE
Liliaceae	ERYALBI	*Erythronium albidum*	white trout lily	**L3**	5	FO
Liliaceae	ERYAMER	*Erythronium americanum* ssp. *americanum*	yellow trout lily	**L5**	5	FO
Asteraceae	EUPMACU	*Eutrochium maculatum* var. *maculatum*	spotted Joe Pye weed	**L5**	-5	FO
Asteraceae	EUPPERF	*Eupatorium perfoliatum*	boneset	**L5**	-4	FO
Asteraceae	EUPPURP	*Eutrochium purpureum* var. *purpureum*	sweet Joe Pye weed	**L2**	0	FO
Asteraceae	EUPRUGO	*Ageratina altissima* var. *altissima*	white snakeroot	**L5**	3	FO
Asteraceae	EUTGRAM	*Euthamia graminifolia*	grass-leaved goldenrod	**L5**	-2	FO
Poaceae	FESSUBV	*Festuca subverticillata*	nodding fescue	**L4**	2	GR
Limnanthaceae	FLOPROS	*Floerkea proserpinacoides*	false mermaid	**L2**	-1	FO
Rosaceae	FRAVESC	*Fragaria vesca* ssp. *americana*	woodland strawberry	**L5**	4	FO
Rosaceae	FRAVIGL	*Fragaria virginiana* ssp. *glauca*	blue-leaved wild strawberry	**L5**	1	FO
Rosaceae	FRAVIRG	*Fragaria virginiana*	wild strawberry (sensu lato)	**L5**	1	FO
Rosaceae	FRAVIVI	*Fragaria virginiana* ssp. *virginiana*	common wild strawberry	**L5**	1	FO
Rubiaceae	GALAPAR	*Galium aparine*	cleavers	**L5**	3	FO
Rubiaceae	GALASPR	*Galium asprellum*	rough bedstraw	**L5**	-5	FO
Rubiaceae	GALBORE	*Galium boreale*	northern bedstraw	**L3**	0	FO
Rubiaceae	GALCIRC	*Galium circaezans*	white wild licorice	**L2**	4	FO
Rubiaceae	GALLABR	*Galium labradoricum*	Labrador bedstraw	**L1**	-5	FO
Rubiaceae	GALLANC	*Galium lanceolatum*	wild licorice	**L3**	5	FO
Rubiaceae	GALOBTU	*Galium obtusum*	obtuse bedstraw	**L3**	-5	FO
Rubiaceae	GALPALU	*Galium palustre*	marsh bedstraw	**L5**	-5	FO
Orchidaceae	GALSPEC	*Galearis spectabilis*	showy orchis	**L1**	5	FO
Rubiaceae	GALTINC	*Galium tinctorium*	stiff marsh bedstraw	**L3**	-5	FO

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Rubiaceae	GALTRID	*Galium trifidum* ssp. *trifidum*	small bedstraw	**L4**	-4	FO
Rubiaceae	GALTRIL	*Galium triflorum*	sweet-scented bedstraw	**L5**	2	FO
Gentianaceae	GENANDA	*Gentiana andrewsii* f. *albiflora*	white bottle gentian	**L2**		FO
Gentianaceae	GENANDR	*Gentiana andrewsii*	bottle gentian	**L3**	-3	FO
Gentianaceae	GENCRIN	*Gentianopsis crinita*	fringed gentian	**L2**	-4	FO
Gentianaceae	GENQUIN	*Gentianella quinquefolia*	stiff gentian	**L1**	0	FO
Geraniaceae	GERBICK	*Geranium bicknellii*	Bicknell's crane's-bill	**L3**	5	FO
Geraniaceae	GERMACU	*Geranium maculatum*	wild geranium	**L4**	3	FO
Rosaceae	GEUALEP	*Geum aleppicum*	yellow avens	**L5**	-1	FO
Rosaceae	GEUCANA	*Geum canadense*	white avens	**L5**	0	FO
Rosaceae	GEULACI	*Geum laciniatum*	cut-leaved avens	**L4**	-3	FO
Rosaceae	GEURIVA	*Geum rivale*	water avens	**L3**	-5	FO
Poaceae	GLYBORE	*Glyceria borealis*	northern manna grass	**L3**	-5	GR
Poaceae	GLYCANA	*Glyceria canadensis*	rattlesnake grass	**L2**	-5	GR
Poaceae	GLYGRAN	*Glyceria grandis*	tall manna grass	**L5**	-5	GR
Poaceae	GLYSEPT	*Glyceria septentrionalis*	eastern manna grass	**L3**	-5	GR
Poaceae	GLYSTRI	*Glyceria striata*	fowl manna grass	**L5**	-5	GR
Asteraceae	GNAMACO	*Pseudognaphalium macounii*	viscid cudweed	**L2**	5	FO
Asteraceae	GNAOBTU	*Pseudognaphalium obtusifolium*	fragrant cudweed	**L2**	5	FO
Orchidaceae	GOOPUBE	*Goodyera pubescens*	downy rattlesnake-plantain	**L1**	0	FO
Plantaginaceae	GRANEGL	*Gratiola neglecta*	clammy hedge-hyssop	**L2**	-5	FO
Boraginaceae	HACDEFL	*Hackelia deflexa*	nodding stickseed	**L2**	5	FO
Boraginaceae	HACVIRG	*Hackelia virginiana*	Virginia stickseed	**L5**	1	FO
Lamiaceae	HEDHISP	*Hedeoma hispida*	rough pennyroyal	**L2**	5	FO
Rubiaceae	HEDLONG	*Houstonia longifolia*	long-leaved bluets	**L2**	5	FO
Lamiaceae	HEDPULE	*Hedeoma pulegioides*	American pennyroyal	**L2**	5	FO
Cistaceae	HELBICK	*Crocanthemum bicknellii*	Bicknell's frostweed	**L1**	5	FO
Cistaceae	HELCANA	*Crocanthemum canadense*	frostweed	**L1**	5	FO
Asteraceae	HELDECA	*Helianthus decapetalus*	thin-leaved sunflower	**L3**	5	FO
Asteraceae	HELDIVA	*Helianthus divaricatus*	woodland sunflower	**L3**	5	FO
Asteraceae	HELHELI	*Heliopsis helianthoides*	sweet oxeye	**L2**	5	FO

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Asteraceae	HELSTRU	*Helianthus strumosus*	pale-leaved sunflower	**L4**	5	FO
Asteraceae	HELTUBE	*Helianthus tuberosus*	Jerusalem artichoke	**L5**	0	FO
Apiaceae	HERLANA	*Heracleum maximum*	cow-parsnip	**L5**	-3	FO
Pontederiaceae	HETDUBI	*Heteranthera dubia*	water stargrass	**L2**	-5	FO
Asteraceae	HIEKALM	*Hieracium umbellatum*	Canada hawkweed	**L3**	5	FO
Poaceae	HIEODOR	*Anthoxanthum nitens*	sweet grass	**L1**	-3	GR
Araliaceae	HYDAMER	*Hydrocotyle americana*	marsh pennywort	**L4**	-5	FO
Boraginaceae	HYDCANE	*Hydrophyllum canadense*	Canada waterleaf	**L3**	-2	FO
Boraginaceae	HYDVIRG	*Hydrophyllum virginianum*	Virginia waterleaf	**L5**	-2	FO
Hypericaceae	HYPASCY	*Hypericum ascyron*	great St. John's-wort	**L4**	-1	FO
Hypericaceae	HYPCANA	*Hypericum canadense*	Canada St. John's-wort	**L2**		FO
Hypericaceae	HYPMAJU	*Hypericum majus*	larger Canada St. John's-wort	**L2**	-3	FO
Hypericaceae	HYPPUNC	*Hypericum punctatum*	spotted St. John's-wort	**L2**	-1	FO
Balsaminaceae	IMPCAPE	*Impatiens capensis*	orange touch-me-not	**L5**	-3	FO
Balsaminaceae	IMPPALL	*Impatiens pallida*	yellow touch-me-not	**L4**	-3	FO
Iridaceae	IRIVERS	*Iris versicolor*	blue flag	**L3**	-5	FO
Iridaceae	IRIVIRG	*Iris virginica* var. *shrevei*	southern blue flag	**L4**	-5	FO
Berberidaceae	JEFDIPH	*Jeffersonia diphylla*	twinleaf	**L2**	5	FO
Juncaceae	JUNACUM	*Juncus acuminatus*	sharp-fruited rush	**L2**	-5	RU
Juncaceae	JUNALPI	*Juncus alpinoarticulatus*	Richardson's rush	**L3**	-5	RU
Juncaceae	JUNARTI	*Juncus articulatus*	jointed rush	**L5**	-5	RU
Juncaceae	JUNBALT	*Juncus balticus* ssp. *littoralis*	Baltic rush	**L4**	-5	RU
Juncaceae	JUNBRAC	*Juncus brachycephalus*	small-headed rush	**L2**	-3	RU
Juncaceae	JUNBREV	*Juncus brevicaudatus*	short-tailed rush	**L2**	-5	RU
Juncaceae	JUNBUFO	*Juncus bufonius*	toad rush	**L5**	-4	RU
Juncaceae	JUNCANA	*Juncus canadensis*	Canada rush	**L1**	-5	RU
Juncaceae	JUNDUDL	*Juncus dudleyi*	Dudley's rush	**L5**	0	RU
Juncaceae	JUNEFFU	*Juncus effusus*	soft rush	**L5**	-5	RU
Juncaceae	JUNNODO	*Juncus nodosus*	knotted rush	**L4**	-5	RU
Juncaceae	JUNTENU	*Juncus tenuis*	path rush	**L5**	0	RU
Juncaceae	JUNTORR	*Juncus torreyi*	Torrey's rush	**L5**	-3	RU

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Asteraceae	LACBIEN	*Lactuca biennis*	tall blue lettuce	**L4**	0	FO
Asteraceae	LACCANA	*Lactuca canadensis*	wild lettuce	**L4**	2	FO
Urticaceae	LAPCANA	*Laportea canadensis*	wood nettle	**L5**	-3	FO
Fabaceae	LATJAPO	*Lathyrus japonicus*	beach pea	**L2**	4	VI
Fabaceae	LATPALU	*Lathyrus palustris*	marsh vetchling	**L2**	-3	VI
Cistaceae	LECINTE	*Lechea intermedia*	pinweed	**L2**	5	FO
Poaceae	LEEORYZ	*Leersia oryzoides*	rice cut grass	**L5**	-5	GR
Poaceae	LEEVIRG	*Leersia virginica*	white grass	**L4**	-3	GR
Araceae	LEMMINO	*Lemna minor*	common duckweed	**L5**	-5	FO
Araceae	LEMTRIS	*Lemna trisulca*	star duckweed	**L3**	-5	FO
Araceae	LEMTURI	*Lemna turionifera*	turion duckweed	**L5**		FO
Brassicaceae	LEPVIRG	*Lepidium virginicum*	Virginia pepper-grass	**L4**	4	FO
Fabaceae	LESCAPI	*Lespedeza capitata*	round-headed bush-clover	**L3**	3	FO
Fabaceae	LESHIRT	*Lespedeza hirta*	hairy bush-clover	**L1**	5	FO
Asteraceae	LIACYLI	*Liatris cylindracea*	cylindric blazing-star	**L1**	5	FO
Asteraceae	LIASPIC	*Liatris spicata*	spike blazing-star	**L2**	0	FO
Liliaceae	LILMICH	*Lilium michiganense*	Michigan lily	**L3**	-1	FO
Plantaginaceae	LINCANA	*Nuttallanthus canadensis*	blue toadflax	**L2**	5	FO
Linderniaceae	LINDUDU	*Lindernia dubia*	false pimpernel	**L3**	-5	FO
Orchidaceae	LIPLOES	*Liparis loeselii*	Loesel's twayblade	**L3**	-4	FO
Orchidaceae	LISCORD	*Neottia cordata*	heart-leaved twayblade	**L1**	-3	FO
Campanulaceae	LOBCARD	*Lobelia cardinalis*	cardinal flower	**L1**	-5	FO
Campanulaceae	LOBINFL	*Lobelia inflata*	Indian tobacco	**L3**	4	FO
Campanulaceae	LOBKALM	*Lobelia kalmii*	Kalm's lobelia	**L2**	-5	FO
Campanulaceae	LOBSIPH	*Lobelia siphilitica*	great blue lobelia	**L3**	-4	FO
Campanulaceae	LOBSPIC	*Lobelia spicata*	pale-spiked lobelia	**L2**	0	FO
Onagraceae	LUDPALU	*Ludwigia palustris*	water purslane	**L3**	-5	FO
Fabaceae	LUPPERE	*Lupinus perennis*	wild lupine	**L2**	5	FO
Juncaceae	LUZACUM	*Luzula acuminata*	hairy wood rush	**L3**	1	RU
Juncaceae	LUZMULT	*Luzula multiflora* ssp. *multiflora*	wood rush	**L3**	3	RU
Lamiaceae	LYCAMER	*Lycopus americanus*	cut-leaved water-horehound	**L4**	-5	FO

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Lamiaceae	LYCUNIF	*Lycopus uniflorus*	northern water-horehound	**L5**	-5	FO
Primulaceae	LYSCILI	*Lysimachia ciliata*	fringed loosestrife	**L5**	-3	FO
Primulaceae	LYSQUAO	*Lysimachia quadrifolia*	whorled loosestrife	**L3**	5	FO
Primulaceae	LYSTERR	*Lysimachia terrestris*	swamp candles	**L3**	-5	FO
Primulaceae	LYSTHYR	*Lysimachia thyrsiflora*	tufted loosestrife	**L4**	-5	FO
Primulaceae	LYSXPRO	*Lysimachia* x *producta*	elongated loosestrife	**L3**		FO
Asparagaceae	MAICANA	*Maianthemum canadense*	Canada May-flower	**L4**	0	FO
Asparagaceae	MAIRACE	*Maianthemum racemosum*	false Solomon's seal	**L5**	3	FO
Asparagaceae	MAISTEL	*Maianthemum stellatum*	starry false Solomon's seal	**L5**	1	FO
Asparagaceae	MAITRIF	*Maianthemum trifolium*	three-leaved false Solomon's seal	**L3**	-5	FO
Orchidaceae	MALMONO	*Malaxis monophyllos* var. *brachypoda*	white adder's-mouth	**L1**	-3	FO
Liliaceae	MEDVIRG	*Medeola virginiana*	Indian cucumber-root	**L2**	5	FO
Asteraceae	MEGBECK	*Bidens beckii*	water-marigold	**L1**	-5	FO
Orobanchaceae	MELLINE	*Melampyrum lineare*	cow-wheat	**L1**	1	FO
Lamiaceae	MENARVE	*Mentha canadensis*	wild mint	**L5**	-3	FO
Menyanthaceae	MENTRIF	*Menyanthes trifoliata*	bog buckbean	**L2**	-5	FO
Poaceae	MILEFFU	*Milium effusum*	wood millet	**L2**	4	GR
Phrymaceae	MIMMOSC	*Erythranthe moschata*	musk-flower	**L2**	-5	FO
Phrymaceae	MIMRING	*Mimulus ringens*	square-stemmed monkey-flower	**L4**	-5	FO
Saxifragaceae	MITDIPH	*Mitella diphylla*	mitrewort	**L3**	2	FO
Saxifragaceae	MITNUDA	*Mitella nuda*	naked mitrewort	**L3**	-3	FO
Caryophyllaceae	MOELATI	*Moehringia lateriflora*	grove stitchwort	**L3**		FO
Lamiaceae	MONDIDY	*Monarda didyma*	bee-balm	**L3**	3	FO
Lamiaceae	MONFIST	*Monarda fistulosa*	wild bergamot	**L5**	3	FO
Ericaceae	MONHYPO	*Hypopitys monotropa*	pinesap	**L3**	5	FO
Ericaceae	MONUNIF	*Monotropa uniflora*	Indian-pipe	**L3**	3	FO
Ericaceae	MONUNIS	*Moneses uniflora*	one-flowered pyrola	**L1**	0	FO
Poaceae	MUHFRON	*Muhlenbergia frondosa*	wire-stemmed muhly grass	**L4**	-3	GR
Poaceae	MUHGLOM	*Muhlenbergia glomerata*	marsh wild Timothy	**L3**	-4	GR

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Poaceae	MUHMEFI	*Muhlenbergia mexicana* var. *filiformis*	slender muhly grass	**L5**	-3	GR
Poaceae	MUHMEME	*Muhlenbergia mexicana* var. *mexicana*	common muhly grass	**L5**	-3	GR
Poaceae	MUHSCHR	*Muhlenbergia schreberi*	Schreber's muhly grass	**L3**	0	GR
Boraginaceae	MYOLAXA	*Myosotis laxa*	smaller forget-me-not	**L4**	-5	FO
Ranunculaceae	MYOMINI	*Myosurus minimus*	mouse-tail	**L2**	3	FO
Boraginaceae	MYOVERN	*Myosotis verna*	spring forget-me-not	**L4**		FO
Haloragaceae	MYRHETE	*Myriophyllum heterophyllum*	variable water-milfoil	**L2**	-5	FO
Haloragaceae	MYRSIBI	*Myriophyllum sibiricum*	northern water-milfoil	**L2**	-5	FO
Haloragaceae	MYRVERT	*Myriophyllum verticillatum*	whorled water-milfoil	**L1**	-5	FO
Hydrocharitaceae	NAJFLEX	*Najas flexilis*	bushy naiad	**L2**	-5	FO
Hydrocharitaceae	NAJGUOL	*Najas guadalupensis* ssp. *olivacea*	southern naiad	**L2**		FO
Nymphaeaceae	NUPVARI	*Nuphar variegata*	bullhead lily	**L3**	-5	FO
Nymphaeaceae	NYMODOD	*Nymphaea odorata* ssp. *odorata*	fragrant water-lily	**L3**	-5	FO
Nymphaeaceae	NYMODOR	*Nymphaea odorata*	fragrant water lily (sensu lato)	**L3**	-5	FO
Nymphaeaceae	NYMODTU	*Nymphaea odorata* ssp. *tuberosa*	tuberous water-lily	**L3**	-5	FO
Onagraceae	OENBIEN	*Oenothera biennis*	common evening-primrose	**L5**	3	FO
Onagraceae	OENOAKE	*Oenothera oakesiana*	Oakes' evening-primrose	**L3**	5	FO
Onagraceae	OENPARV	*Oenothera parviflora*	smaller evening-primrose	**L4**	3	FO
Onagraceae	OENPERE	*Oenothera perennis*	perennial evening-primrose	**L2**	0	FO
Onagraceae	OENPILO	*Oenothera pilosella*	pilose sundrops	**L2**	1	FO
Onagraceae	OENVILL	*Oenothera villosa* ssp. *villosa*	villose evening-primrose	**L2**	0	FO
Orobanchaceae	OROUNIF	*Aphyllon uniflorum*	one-flowered cancer-root	**L1**	5	FO
Ericaceae	ORTSECU	*Orthilia secunda*	one-sided pyrola	**L1**	-1	FO
Poaceae	ORYASPE	*Oryzopsis asperifolia*	white-fruited mountain-rice	**L4**	5	GR
Poaceae	ORYRACE	*Patis racemosa*	black-fruited mountain-rice	**L3**	5	GR
Apiaceae	OSMCLAI	*Osmorhiza claytonii*	woolly sweet cicely	**L4**	4	FO
Apiaceae	OSMLONG	*Osmorhiza longistylis*	smooth sweet cicely	**L3**	4	FO
Oxalidaceae	OXAACMO	*Oxalis montana*	pink wood-sorrel	**L2**	3	FO
Oxalidaceae	OXADILL	*Oxalis dillenii*	deflexed yellow wood-sorrel	**L5**	3	FO
Oxalidaceae	OXASTRI	*Oxalis stricta*	common yellow wood-sorrel	**L5**	3	FO
Poaceae	PANACAC	*Dichanthelium implicatum*	hairy panic grass	**L4**	0	GR

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Poaceae	PANACLI	*Dichanthelium lindheimeri*	Lindheimer's panic grass	**L2**	-5	GR
Poaceae	PANCAPI	*Panicum capillare*	panic grass	**L5**	0	GR
Poaceae	PANCOLU	*Dichanthelium portoricense*	Columbia panic grass	**L3**	5	GR
Poaceae	PANFLEX	*Panicum flexile*	wiry panic grass	**L3**	-4	GR
Poaceae	PANGATT	*Panicum philadelphicum*	Gattinger's panic grass	**L2**		GR
Poaceae	PANLATI	*Dichanthelium latifolium*	broad-leaved panic grass	**L2**	3	GR
Poaceae	PANLINE	*Dichanthelium linearifolium*	narrow-leaved panic grass	**L2**	5	GR
Poaceae	PANOLIG	*Dichanthelium oligosanthes* ssp. *oligosanthes*	few-flowered panic grass	**L2**	3	GR
Poaceae	PANPERL	*Dichanthelium perlongum*	long-stalked panic grass	**L2**	5	GR
Araliaceae	PANQUIN	*Panax quinquefolius*	ginseng	**L2**	5	FO
Poaceae	PANVIRG	*Panicum virgatum*	switch grass	**L3**	-1	GR
Poaceae	PANXANT	*Dichanthelium xanthophysum*	yellow panic grass	**L2**	5	GR
Celastraceae	PARPARV	*Parnassia parviflora*	small-flowered grass of Parnassus	**L1**	-5	FO
Urticaceae	PARPENS	*Parietaria pensylvanica*	Pennsylvania pellitory	**L5**	3	FO
Orobanchaceae	PEDCANA	*Pedicularis canadensis*	wood-betony	**L1**	2	FO
Araceae	PELVIRG	*Peltandra virginica*	tuckahoe	**L3**	-5	FO
Plantaginaceae	PENDIGI	*Penstemon digitalis*	foxglove beardtongue	**L4**	1	FO
Plantaginaceae	PENHIRS	*Penstemon hirsutus*	hairy beardtongue	**L3**	5	FO
Haloragaceae	PENSEDO	*Penthorum sedoides*	ditch stonecrop	**L4**	-5	FO
Asteraceae	PETFRIG	*Petasites frigidus*	palmate-leaved sweet coltsfoot	**L1**	-3	FO
Polemoniaceae	PHLDIVA	*Phlox divaricata*	wild blue phlox	**L2**	3	FO
Poaceae	PHRAUAM	*Phragmites australis* ssp. *americanus*	American reed	**L1**		GR
Phrymaceae	PHRLEPT	*Phryma leptostachya*	lopseed	**L5**	5	FO
Solanaceae	PHYHETE	*Physalis heterophylla*	clammy ground-cherry	**L5**	5	FO
Solanaceae	PHYSUBG	*Physalis longifolia* var. *subglabrata*	smooth ground-cherry	**L3**		FO
Lamiaceae	PHYVIRG	*Physostegia virginiana* ssp. *virginiana*	false dragonhead	**L3**	-3	FO
Urticaceae	PILFONT	*Pilea fontana*	spring clearweed	**L4**	-3	FO
Urticaceae	PILPUMI	*Pilea pumila*	dwarf clearweed	**L5**	-3	FO
Orchidaceae	PLAAQUI	*Platanthera aquilonis*	tall northern green orchis	**L2**		FO
Orchidaceae	PLALACE	*Platanthera lacera*	ragged fringed orchis	**L1**	-3	FO

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Plantaginaceae	PLARUGE	*Plantago rugelii*	red-stemmed plantain	**L5**	0	FO
Poaceae	POAALSO	*Poa alsodes*	grove meadow grass	**L3**	-2	GR
Poaceae	POALANG	*Poa saltuensis* ssp. *languida*	languid spear grass	**L3**	5	GR
Poaceae	POAPALU	*Poa palustris*	fowl meadow-grass	**L5**	-4	GR
Poaceae	POASALT	*Poa saltuensis* ssp. *saltuensis*	bushy spear grass	**L3**	5	GR
Berberidaceae	PODPELT	*Podophyllum peltatum*	May-apple	**L5**	3	FO
Orchidaceae	POGOPHI	*Pogonia ophioglossoides*	rose pogonia	**L1**	-5	FO
Polygonaceae	POLAMEM	*Persicaria amphibia* var. *emersa*	swamp smartweed	**L3**		FO
Polygonaceae	POLAMPH	*Persicaria amphibia*	swamp smartweed (sensu lato)	**L4**	-5	FO
Polygonaceae	POLAMST	*Persicaria amphibia* var. *stipulacea*	water smartweed	**L4**		FO
Polygonaceae	POLCILI	*Fallopia cilinodis*	fringed black bindweed	**L3**	5	VI
Polygonaceae	POLDOUG	*Polygonum douglasii*	Douglas' knotweed	**L2**	3	FO
Polygonaceae	POLHYDS	*Persicaria hydropiperoides*	mild water-pepper	**L4**	-5	FO
Polygonaceae	POLLAPA	*Persicaria lapathifolia*	pale smartweed	**L5**	-4	FO
Polygalaceae	POLPAUC	*Polygaloides paucifolia*	fringed polygala	**L2**	3	FO
Polygonaceae	POLPENS	*Persicaria pensylvanica*	Pennsylvania smartweed	**L4**	-4	FO
Polygalaceae	POLPOLY	*Polygala polygama*	racemed milkwort	**L1**	4	FO
Asparagaceae	POLPUBE	*Polygonatum pubescens*	downy Solomon's seal	**L4**	5	FO
Polygonaceae	POLPUNC	*Persicaria punctata*	dotted water-pepper	**L3**	-5	FO
Polygonaceae	POLSAGI	*Persicaria sagittata*	arrow-leaved tear-thumb	**L3**	-5	FO
Polygonaceae	POLSCAN	*Fallopia scandens*	climbing false buckwheat	**L3**	0	VI
Polygalaceae	POLSENE	*Polygala senega*	Seneca snakeroot	**L1**	3	FO
Polygalaceae	POLVERT	*Polygala verticillata*	whorled milkwort	**L1**	5	FO
Polygonaceae	POLVIRG	*Persicaria virginiana*	jumpseed	**L3**	0	FO
Pontederiaceae	PONCORD	*Pontederia cordata*	pickerelweed	**L2**	-5	FO
Potamogetonaceae	POTAMPL	*Potamogeton amplifolius*	large-leaved pondweed	**L2**	-5	FO
Rosaceae	POTANSE	*Potentilla anserina* ssp. *anserina*	silverweed	**L5**	-4	FO
Rosaceae	POTARGU	*Drymocallis arguta*	tall cinquefoil	**L3**	4	FO
Potamogetonaceae	POTBERC	*Potamogeton berchtoldii* ssp. *berchtoldii*	least pondweed	**L3**	-5	FO
Potamogetonaceae	POTEPIH	*Potamogeton epihydrus*	ribbon pondweed	**L2**	-5	FO
Potamogetonaceae	POTFOLI	*Potamogeton foliosus*	leafy pondweed	**L4**	-5	FO

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Potamogetonaceae	POTGRAM	*Potamogeton gramineus*	grass-like pondweed	**L3**	-5	FO
Potamogetonaceae	POTILLI	*Potamogeton illinoensis*	Illinois pondweed	**L2**	-5	FO
Potamogetonaceae	POTNATA	*Potamogeton natans*	floating pondweed	**L3**	-5	FO
Potamogetonaceae	POTNODO	*Potamogeton nodosus*	knotty pondweed	**L2**	-5	FO
Potamogetonaceae	POTOAKE	*Potamogeton oakesianus*	Oakes' pondweed	**L2**	-5	FO
Rosaceae	POTPALU	*Comarum palustre*	marsh cinquefoil	**L3**	-5	FO
Rosaceae	POTPARA	*Potentilla supina* ssp. *paradoxa*	bushy cinquefoil	**L3**	-4	FO
Potamogetonaceae	POTPECT	*Stuckenia pectinata*	sago pondweed	**L4**	-5	FO
Potamogetonaceae	POTPERF	*Potamogeton perfoliatus*	clasping-leaved pondweed	**L2**	-5	FO
Potamogetonaceae	POTPRAE	*Potamogeton praelongus*	white-stem pondweed	**L2**	-5	FO
Potamogetonaceae	POTPUSI	*Potamogeton pusillus*	small pondweed	**L1**	-5	FO
Potamogetonaceae	POTRICH	*Potamogeton richardsonii*	redhead pondweed	**L3**	-5	FO
Rosaceae	POTSIMP	*Potentilla simplex*	old-field cinquefoil	**L3**	4	FO
Potamogetonaceae	POTZOST	*Potamogeton zosteriformis*	flat-stemmed pondweed	**L3**	-5	FO
Asteraceae	PREALBA	*Nabalus albus*	white wood lettuce	**L3**	3	FO
Asteraceae	PREALTI	*Nabalus altissimus*	tall wood lettuce	**L5**	3	FO
Lamiaceae	PRUVULA	*Prunella vulgaris* ssp. *lanceolata*	heal-all (native)	**L5**	5	FO
Lamiaceae	PYCTENU	*Pycnanthemum tenuifolium*	narrow-leaved mountain mint	**L3**	0	FO
Lamiaceae	PYCVIRG	*Pycnanthemum virginianum*	Virginia mountain mint	**L3**	-4	FO
Ericaceae	PYRASAR	*Pyrola asarifolia*	pink pyrola	**L2**	-3	FO
Ericaceae	PYRCHLO	*Pyrola chlorantha*	green-flowered pyrola	**L1**	3	FO
Ericaceae	PYRELLI	*Pyrola elliptica*	shinleaf	**L3**	5	FO
Ranunculaceae	RANABOR	*Ranunculus abortivus*	kidney-leaved buttercup	**L5**	-2	FO
Ranunculaceae	RANAQUA	*Ranunculus longirostris*	white water crowfoot	**L2**	-5	FO
Ranunculaceae	RANFLAB	*Ranunculus flabellaris*	yellow water crowfoot	**L2**	-5	FO
Ranunculaceae	RANHICA	*Ranunculus caricetorum*	swamp buttercup	**L4**	-5	FO
Ranunculaceae	RANPENS	*Ranunculus pensylvanicus*	bristly buttercup	**L4**	-5	FO
Ranunculaceae	RANRECU	*Ranunculus recurvatus* var. *recurvatus*	hooked buttercup	**L5**	-3	FO
Cyperaceae	RHYALBA	*Rhynchospora alba*	white beak-rush	**L1**	-5	SE
Brassicaceae	RORPAFE	*Rorippa palustris* ssp. *palustris*	Fernald's marsh cress	**L5**	-5	FO
Brassicaceae	RORPAHI	*Rorippa palustris* ssp. *hispida*	hispid marsh cress	**L4**	-5	FO

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Asteraceae	RUDHIRT	*Rudbeckia hirta*	black-eyed Susan	**L4**	3	FO
Asteraceae	RUDLACI	*Rudbeckia laciniata*	cut-leaved coneflower	**L4**	-4	FO
Polygonaceae	RUMORBI	*Rumex britannica*	great water dock	**L4**	-5	FO
Polygonaceae	RUMVERT	*Rumex verticillatus*	swamp dock	**L3**	-5	FO
Alismataceae	SAGCUNE	*Sagittaria cuneata*	arum-leaved arrowhead	**L3**	-5	FO
Alismataceae	SAGLATI	*Sagittaria latifolia*	common arrowhead	**L4**	-5	FO
Alismataceae	SAGRIGI	*Sagittaria rigida*	sessile-fruited arrowhead	**L2**	-5	FO
Papaveraceae	SANCANG	*Sanguinaria canadensis*	bloodroot	**L5**	4	FO
Apiaceae	SANMARI	*Sanicula marilandica*	sanicle	**L4**	3	FO
Apiaceae	SANODOR	*Sanicula odorata*	clustered sanicle	**L4**	-1	FO
Sarraceniaceae	SARPURP	*Sarracenia purpurea*	pitcher plant	**L1**	-5	FO
Saxifragaceae	SAXVIRG	*Micranthes virginiensis*	early saxifrage	**L1**	1	FO
Poaceae	SCHPURP	*Schizachne purpurascens*	purple melic grass	**L4**	2	GR
Poaceae	SCHSCOP	*Schizachyrium scoparium*	little bluestem	**L2**	3	GR
Cyperaceae	SCIACUT	*Schoenoplectus acutus* var. *acutus*	hard-stemmed bulrush	**L3**	-5	SE
Cyperaceae	SCIATRO	*Scirpus atrovirens*	black-fruited bulrush	**L5**	-5	SE
Cyperaceae	SCICYPE	*Scirpus cyperinus*	woolly bulrush	**L4**	-5	SE
Cyperaceae	SCIFLUV	*Bolboschoenus fluviatilis*	river bulrush	**L3**	-5	SE
Cyperaceae	SCIHUDS	*Trichophorum alpinum*	alpine club-rush	**L2**		SE
Cyperaceae	SCIMICR	*Scirpus microcarpus*	barber-pole bulrush	**L5**	-5	SE
Cyperaceae	SCIPEND	*Scirpus pendulus*	drooping bulrush	**L3**	-5	SE
Cyperaceae	SCIPUNG	*Schoenoplectus pungens* var. *pungens*	three-square	**L4**	-5	SE
Cyperaceae	SCIVALI	*Schoenoplectus tabernaemontani*	soft-stemmed bulrush	**L4**	-5	SE
Cyperaceae	SCLVERT	*Scleria verticillata*	low nut-rush	**L2**	-5	SE
Scrophulariaceae	SCRLANC	*Scrophularia lanceolata*	lance-leaved figwort	**L3**	2	FO
Scrophulariaceae	SCRMARI	*Scrophularia marilandica*	carpenter's-square figwort	**L3**	4	FO
Lamiaceae	SCUGALE	*Scutellaria galericulata*	common skullcap	**L5**	-5	FO
Lamiaceae	SCULATE	*Scutellaria lateriflora*	mad-dog skullcap	**L5**	-5	FO
Asteraceae	SENAURE	*Packera aurea*	golden ragwort	**L2**	-3	FO
Asteraceae	SENPAUP	*Packera paupercula*	balsam ragwort	**L2**		FO
Cucurbitaceae	SICANGU	*Sicyos angulatus*	bur cucumber	**L3**	-2	VI

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Caryophyllaceae	SILANTI	*Silene antirrhina*	sleepy catchfly	**L2**	5	FO
Asteraceae	SILPERF	*Silphium perfoliatum*	cup plant	**L5**	-2	FO
Iridaceae	SISMONT	*Sisyrinchium montanum*	blue-eyed grass	**L4**	-1	FO
Apiaceae	SIUSUAV	*Sium suave*	water-parsnip	**L5**	-5	FO
Smilacaceae	SMIHERB	*Smilax herbacea*	carrion-flower	**L5**	0	VI
Asteraceae	SOLALTI	*Solidago altissima*	tall goldenrod	**L5**	3	FO
Asteraceae	SOLARGU	*Solidago arguta* var. *arguta*	sharp-leaved goldenrod	**L2**	3	FO
Asteraceae	SOLCAES	*Solidago caesia*	blue-stemmed goldenrod	**L5**	3	FO
Asteraceae	SOLCANA	*Solidago canadensis* var. *canadensis*	Canada goldenrod	**L5**	3	FO
Asteraceae	SOLFLEX	*Solidago flexicaulis*	zig-zag goldenrod	**L5**	3	FO
Asteraceae	SOLGIGA	*Solidago gigantea*	late goldenrod	**L5**	-3	FO
Asteraceae	SOLHISP	*Solidago hispida*	hairy goldenrod	**L2**	5	FO
Asteraceae	SOLJUNC	*Solidago juncea*	early goldenrod	**L5**	5	FO
Asteraceae	SOLNEMO	*Solidago nemoralis* ssp. *nemoralis*	grey goldenrod	**L5**	5	FO
Asteraceae	SOLPATU	*Solidago patula*	rough-leaved goldenrod	**L4**	-5	FO
Asteraceae	SOLPTAR	*Solidago ptarmicoides*	upland white goldenrod	**L2**	5	FO
Solanaceae	SOLPTYC	*Solanum emulans*	American black nightshade	**L5**	5	FO
Asteraceae	SOLRUGO	*Solidago rugosa* ssp. *rugosa*	rough-stemmed goldenrod	**L5**	-1	FO
Asteraceae	SOLSQUA	*Solidago squarrosa*	stout goldenrod	**L2**	5	FO
Asteraceae	SOLULIG	*Solidago uliginosa*	bog goldenrod	**L2**	-5	FO
Poaceae	SORNUTA	*Sorghastrum nutans*	Indian grass	**L2**	2	GR
Typhaceae	SPAEMER	*Sparganium emersum*	green-fruited bur-reed	**L3**	-5	FO
Typhaceae	SPAEURY	*Sparganium eurycarpum*	great burreed	**L3**	-5	FO
Typhaceae	SPANATA	*Sparganium natans*	lesser burreed	**L2**	-5	FO
Poaceae	SPAPECT	*Sporobolus michauxianus*	prairie cordgrass	**L3**	-4	GR
Poaceae	SPHINTE	*Sphenopholis intermedia*	slender wedge grass	**L4**	0	GR
Orchidaceae	SPICASE	*Spiranthes casei*	Case's ladies'-tresses	**L1**	3	FO
Orchidaceae	SPICERN	*Spiranthes incurva*	nodding ladies'-tresses	**L3**	-2	FO
Orchidaceae	SPILALA	*Spiranthes lacera* var. *lacera*	northern slender ladies'-tresses	**L1**	-1	FO
Orchidaceae	SPILUCI	*Spiranthes lucida*	shining ladies'-tresses	**L2**	-4	FO
Orchidaceae	SPIMAGN	*Spiranthes magnicamporum*	Great Plains ladies'-tresses	**L2**		FO

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Araceae	SPIPOLY	*Spirodela polyrhiza*	greater duckweed	**L4**	-5	FO
Orchidaceae	SPIROMA	*Spiranthes romanzoffiana*	hooded ladies'-tresses	**L1**	-4	FO
Poaceae	SPOASPE	*Sporobolus compositus* var. *compositus*	rough dropseed	**L2**	5	GR
Poaceae	SPOCRYP	*Sporobolus cryptandrus*	sand dropseed	**L3**	4	GR
Lamiaceae	STAHISP	*Stachys hispida*	rough hedge-nettle	**L3**	-4	FO
Caryophyllaceae	STELONF	*Stellaria longifolia*	long-leaved chickweed	**L4**	-4	FO
Colchicaceae	STRROSE	*Streptopus lanceolatus* var. *lanceolatus*	rose twisted-stalk	**L3**	0	FO
Araceae	SYMFOET	*Symplocarpus foetidus*	skunk cabbage	**L4**	-5	FO
Apiaceae	TAEINTE	*Taenidia integerrima*	yellow pimpernel	**L2**	5	FO
Lamiaceae	TEUCACA	*Teucrium canadense*	wood-sage	**L4**	-2	FO
Ranunculaceae	THADIOI	*Thalictrum dioicum*	early meadow rue	**L5**	2	FO
Ranunculaceae	THAPUBE	*Thalictrum pubescens*	tall meadow rue	**L5**	-2	FO
Saxifragaceae	TIACORD	*Tiarella cordifolia*	foamflower	**L4**	1	FO
Poaceae	TORFERN	*Torreyochloa pallida* var. *fernaldii*	Fernald's manna grass	**L2**	-5	GR
Caprifoliaceae	TRIAURA	*Triosteum aurantiacum*	wild coffee	**L3**	5	FO
Primulaceae	TRIBORE	*Lysimachia borealis*	starflower	**L3**	-1	FO
Melanthiaceae	TRICERN	*Trillium cernuum*	nodding trillium	**L2**	0	FO
Melanthiaceae	TRIEREC	*Trillium erectum*	red trillium	**L4**	1	FO
Hypericaceae	TRIFRAS	*Triadenum fraseri*	marsh St. John's-wort	**L2**	-5	FO
Melanthiaceae	TRIGRAN	*Trillium grandiflorum*	white trillium	**L4**	5	FO
Juncaginaceae	TRIMARI	*Triglochin maritima*	seaside arrow-grass	**L1**	-5	FO
Melanthiaceae	TRIUNDU	*Trillidium undulatum*	painted trillium	**L1**	4	FO
Typhaceae	TYPLATI	*Typha latifolia*	broad-leaved cattail	**L4**	-5	FO
Urticaceae	URTDIGR	*Urtica dioica* ssp. *gracilis*	American stinging nettle	**L5**	-1	FO
Lentibulariaceae	UTRGIBB	*Utricularia gibba*	humped bladderwort	**L2**		FO
Lentibulariaceae	UTRINTE	*Utricularia intermedia*	flat-leaved bladderwort	**L1**	-5	FO
Lentibulariaceae	UTRMINO	*Utricularia minor*	small bladderwort	**L2**	-5	FO
Lentibulariaceae	UTRVULG	*Utricularia vulgaris*	common bladderwort	**L3**	-5	FO
Colchicaceae	UVUGRAN	*Uvularia grandiflora*	large-flowered bellwort	**L3**	5	FO
Hydrocharitaceae	VALAMER	*Vallisneria americana*	tape-grass	**L2**	-5	FO
Caprifoliaceae	VALSITC	*Valeriana uliginosa*	swamp valerian	**L1**	-4	FO

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Plantaginaceae	VERAMER	*Veronica americana*	American speedwell	**L4**	-5	FO
Plantaginaceae	VERANAG	*Veronica anagallis-aquatica*	water speedwell	**L4**	-5	FO
Plantaginaceae	VERCATE	*Veronica catenata*	pink water speedwell	**L3**		FO
Verbenaceae	VERHAST	*Verbena hastata*	blue vervain	**L5**	-4	FO
Plantaginaceae	VERSCUT	*Veronica scutellata*	marsh speedwell	**L4**	-5	FO
Verbenaceae	VERSIMP	*Verbena simplex*	slender vervain	**L2**	5	FO
Verbenaceae	VERSTRI	*Verbena stricta*	hoary vervain	**L3**	5	FO
Verbenaceae	VERURTI	*Verbena urticifolia*	white vervain	**L5**	-1	FO
Verbenaceae	VERXENG	*Verbena* x *engelmannii*	hybrid vervain	**L4**	-2	FO
Violaceae	VIOADUN	*Viola adunca*	hooked-spur violet	**L1**	1	FO
Violaceae	VIOAFFI	*Viola affinis*	Le Conte's violet	**L4**	-3	FO
Violaceae	VIOBLAN	*Viola blanda*	sweet white violet	**L3**	-2	FO
Violaceae	VIOCANA	*Viola canadensis*	Canada violet	**L3**	5	FO
Violaceae	VIOCONS	*Viola labradorica*	dog violet	**L5**	-2	FO
Violaceae	VIOCUCU	*Viola cucullata*	marsh blue violet	**L4**	-5	FO
Violaceae	VIOMACL	*Viola macloskeyi*	northern white violet	**L3**	-5	FO
Violaceae	VIOPUBE	*Viola pubescens*	stemmed yellow violet (sensu lato)	**L5**	4	FO
Violaceae	VIOPUPU	*Viola pubescens* var. *pubescens*	downy yellow violet	**L5**	4	FO
Violaceae	VIOPUSC	*Viola pubescens* var. *scabriuscula*	smooth yellow violet	**L5**	4	FO
Violaceae	VIORENI	*Viola renifolia*	kidney-leaved violet	**L3**	-3	FO
Violaceae	VIOROST	*Viola rostrata*	long-spurred violet	**L3**	3	FO
Violaceae	VIOSAGI	*Viola sagittata* var. *ovata*	arrow-leaved violet	**L1**	-2	FO
Violaceae	VIOSELK	*Viola selkirkii*	Selkirk's violet	**L3**	5	FO
Violaceae	VIOSORO	*Viola sororia*	common blue violet	**L5**	1	FO
Rosaceae	WALFRAG	*Geum fragarioides*	barren strawberry	**L4**	5	FO
Araceae	WOLBORE	*Wolffia borealis*	dotted water-meal	**L4**	-5	FO
Araceae	WOLCOLU	*Wolffia columbiana*	Columbia water-meal	**L4**	-5	FO
Asteraceae	XANSTRU	*Xanthium strumarium*	clotbur	**L5**	0	FO
Potamogetonaceae	ZANPALU	*Zannichellia palustris*	horned pondweed	**L1**	-5	FO
Apiaceae	ZIZAURE	*Zizia aurea*	golden Alexanders	**L3**	-1	FO

Family	Sp_code	Scientific Name	Common Name	Rank TRCA (Apr-20)	Coefficient of Wetness	Plant Type
Poaceae	ZIZPALU	*Zizania palustris* var. *palustris*	northern wild rice	**L2**	-5	GR

Legend

Rank TRCA	Conservation Concern
L1 – L3	Species of regional conservation concern
L4	Species of conservation concern in urban area
L5	Species not of conservation concern at this time

Coefficient of Wetness	Soil Moisture Regime Preference
5	Almost always occurs on uplands
4,3,2	Usually occurs on uplands
1,0,-1	Found on uplands and wetlands
-2,-3,-4	Usually occurs in wetlands
-5	Almost always occurs in wetlands

Code	Plant Type
FO	Forbs (generic term for broad-leaved species)
GR	Grasses (Poaceae family)
SE	Sedges (Cyperaceae family)
RU	Rushes (Juncaceae Family)
VI	Vines

Appendix D:

Non-exhaustive List of Invasive Herbaceous Species

Appendix D: Non-exhaustive List of Invasive Herbaceous Species

Appendix D is meant to use as a quick reference to invasive herbaceous species that are commonly seen within TRCA jurisdiction and/or proposed on seed mixes or as nurse or cover crops. Please note that:

a) This is not an exhaustive list. It is meant as a quick guide on invasive species to avoid.

b) The species on this list are considered invasive and will not be accepted by TRCA.

c) For a comprehensive list of species native to TRCA jurisdiction and recommended for use, please refer to Appendix C.

Scientific Name	**Common name**
Aegopodium podagraia	goutweed
Agrostis gigantea	red top
Agrostis stolonifera	creeping bent grass
Alliaria petiolata	garlic mustard
Arctium lappa	great burdock
Arctium minus	common burdock
Bromus inermis	smooth brome
Campanula rapunculoides	creeping bellflower
Carex spicata	European meadow sedge
Centaurea stoebe	spotted knapweed

Centaurea nigra	black knapweed
Chelidonium majus	celandine
Cirsium arvense	creeping thistle
Cirsium vulgare	bull thistle
Convallaria majalis	European lily-of-the-valley
Convolvulus arvensis	field bindweed
Coronilla varia	crown vetch
Dactylis glomerata	orchard grass
Elymus repens	quack grass
Epipactis helleborine	Eastern helleborine
Fallopia japonica	Japanese knotweed (semi-woody)
Festuca arundinacea	tall fescue
Festuca pratensis	meadow fescue
Festuca rubra	red fescue
Festuca trachyphylla	hard or sheep fescue
Glechoma hederacea	creeping Charlie or ground-ivy
Glyceria maxima	giant or rough manna grass

Heracleum mantegazzianum	giant hogweed
Hesperis matronalis	Dame's rocket
Hypericum perforatum	common St. John's-wort
Leonurus cardiaca	common motherwort
Linum perenne	perennial flax
Linum usitatissimum	common flax
Lolium arndinaceum	tall fescue
Lolium perenne	perennial rye
Lotus corniculatus	bird's foot trefoil
Lycopus europaeus	European bugleweed
Lythrum salicaria	purple loosestrife
Medicago lupulina	black medic
Melilotus alba	white sweet clover
Melilotus officinalis	yellow sweet clover
Miscanthus sacchariflorus	Amur silvergrass
Onopordum acanthium	Scotch thistle
Pastinaca sativa	wild parsnip
Phalaris arundinacea	reed canary grass

Phleum pratense	common timothy
Phragmites australis spp. australis	common, giant or great reed
Poa compressa	flat-stemmed bluegrass
Poa pratensis spp. pratensis	Kentucky bluegrass
Polygonym convolvulus	black bindweed
Saponaria officinalis	bouncing bet
Setaria faberi	giant foxtail
Setaria glauca	yellow foxtail
Setaria italica	foxtail millet
Setaria verticillata	bristly foxtail
Setaria viridis	green foxtail
Vincetoxicum rossicum	dog-strangling vine
Vicia cracca	cow, tufted or bird vetch
Vicia sativa spp. nigra	common vetch
Vinca minor or V. major	periwinkle