

**MILWAUKEE COUNTY PARKS QUICK REFERENCE GUIDE:  
PHENOLOGY AND CONTROL OF COMMON INVASIVE PLANT SPECIES  
IN SOUTHEASTERN WISCONSIN**

**APPENDIX I**



# Quick Reference Guide

Phenology and Control of Common Invasive Plant Species  
in Southeastern Wisconsin



## Sources:

- Milwaukee County Parks field staff experience
- Wisconsin Department of Natural Resources
- University of Wisconsin Stevens Point Freckmann Herbarium
- Czarapata, Elizabeth. Invasive Plants of the Upper Midwest: An Illustrated Guide to Their Identification and Control
- Renz Lab, University of Wisconsin Madison
- Techline News Calibration Handout
- Wisconsin State Natural Area Volunteer Handbook
- Pennsylvania Department of Conservation and Natural Resources
- The Nature Conservancy
- National Park Service
- Cornell University Cooperative Extension

## Publication developed by:

- Mary McQuiggin, Natural Areas Stewardship Assistant, Milwaukee County Parks
- Stacy Greefkes, Natural Areas Stewardship Assistant, Milwaukee County Parks
- Allison Hager, Natural Areas Intern, Milwaukee County Parks
- Katlyn Pluer, Restoration Ecologist, Milwaukee County Parks
- Brian Russart, Natural Areas Supervisor, Milwaukee County Parks

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# Common Herbicide Application Methods

## Cut-stump Treatment:

Applying herbicide to freshly cut stump's cambium layer. Triclopyr should be mixed with a penetrating bark oil (year round) and Glyphosate can be mixed with water (growing season only).

## Foliar Treatment:

Apply to the green leaves of the plant with a sprayer or wick applicator. Leaves should be thoroughly covered without herbicide dripping off of them. Follow herbicide label instructions to determine if and which kind of surfactant is recommended. Recommended application times are early Spring and late Fall within high quality sites because most native plants are dormant. In degraded sites application can occur throughout the growing season.

## \*Aquatic Foliar Treatment:

Apply ONLY aquatic approved herbicides when treatment is occurring in standing water or within 2 feet of standing water. Use extreme caution when using Imazapyr as it can cause tree mortality.

## Basal bark Treatment:

Applying a mixture of Triclopyr and bark oil in a 6-15" band around the entire trunk of a tree or the stems at the base of a shrub.

## Bloody Glove Treatment:

Soak a cloth glove in herbicide and wear it over chemical resistant rubber gloves. Wipe the glove along the blades of grass or other vegetation. This method is particularly useful in high quality site where broad foliar treatments would be ecologically damaging.

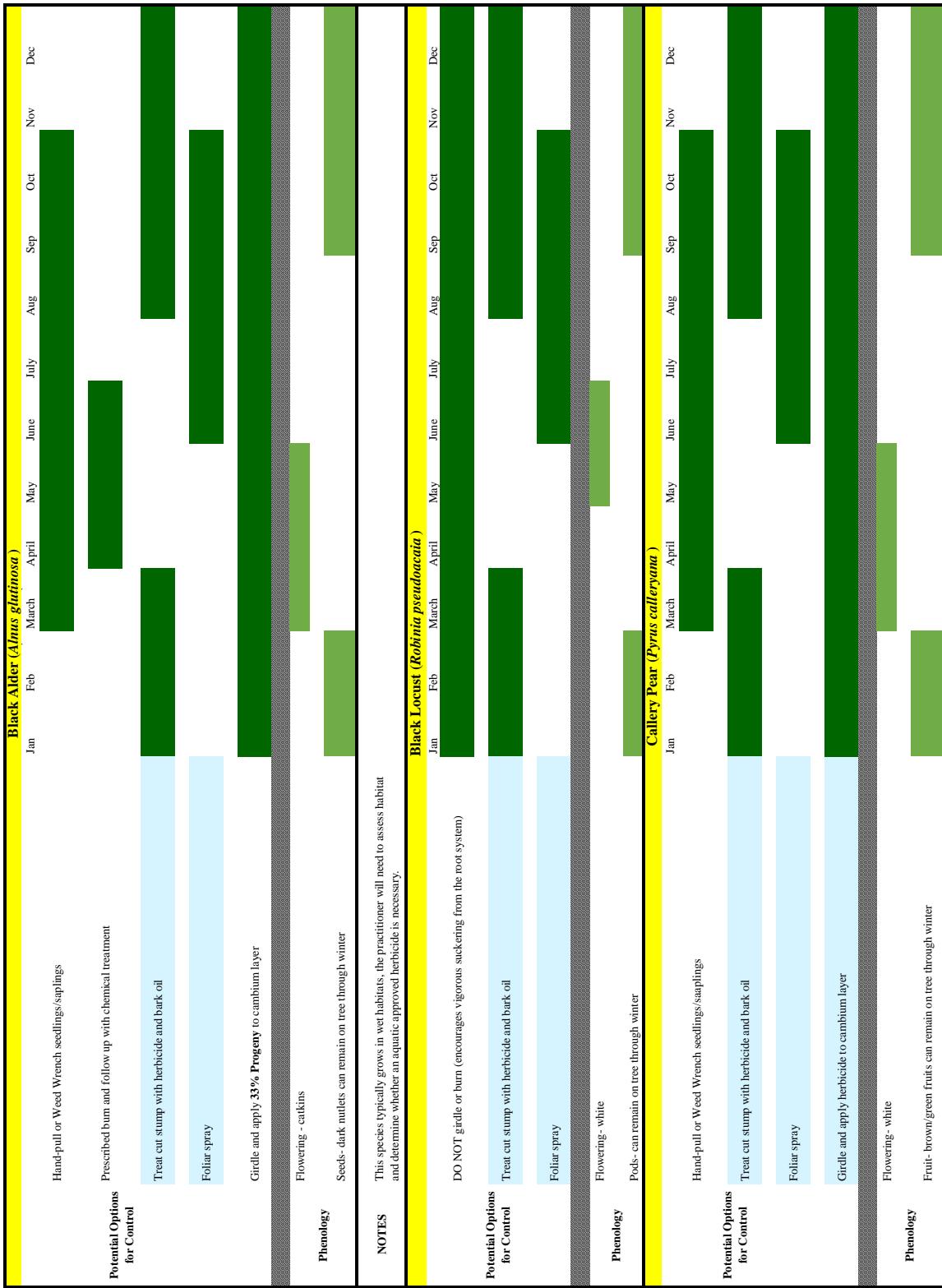
## Girdling Treatment:

Cut and remove a band (1-2" wide on smaller trees, 6-8" on larger trees) of bark around the entire trunk of the tree to interrupt the flow of sap between the roots and the crown of the tree. Cuts should be treated with herbicide prior to sap flow. On larger trees, two cuts roughly 10" apart, are most effective if not using herbicide.

# **Invasive Trees, Shrubs & Vines of Southeastern Wisconsin**

Blue cells indicate the need to assess the site for aquatic approved herbicides.

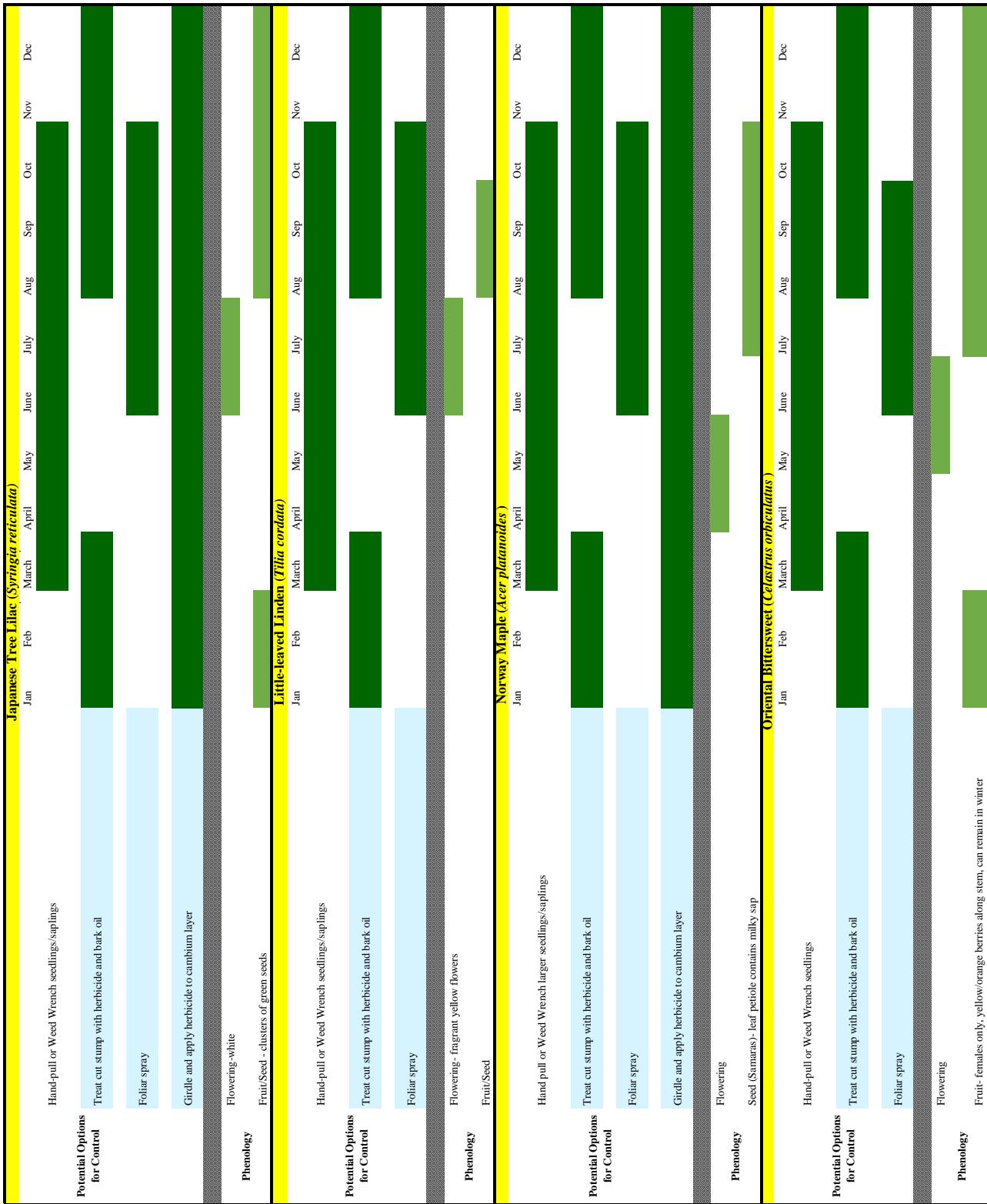






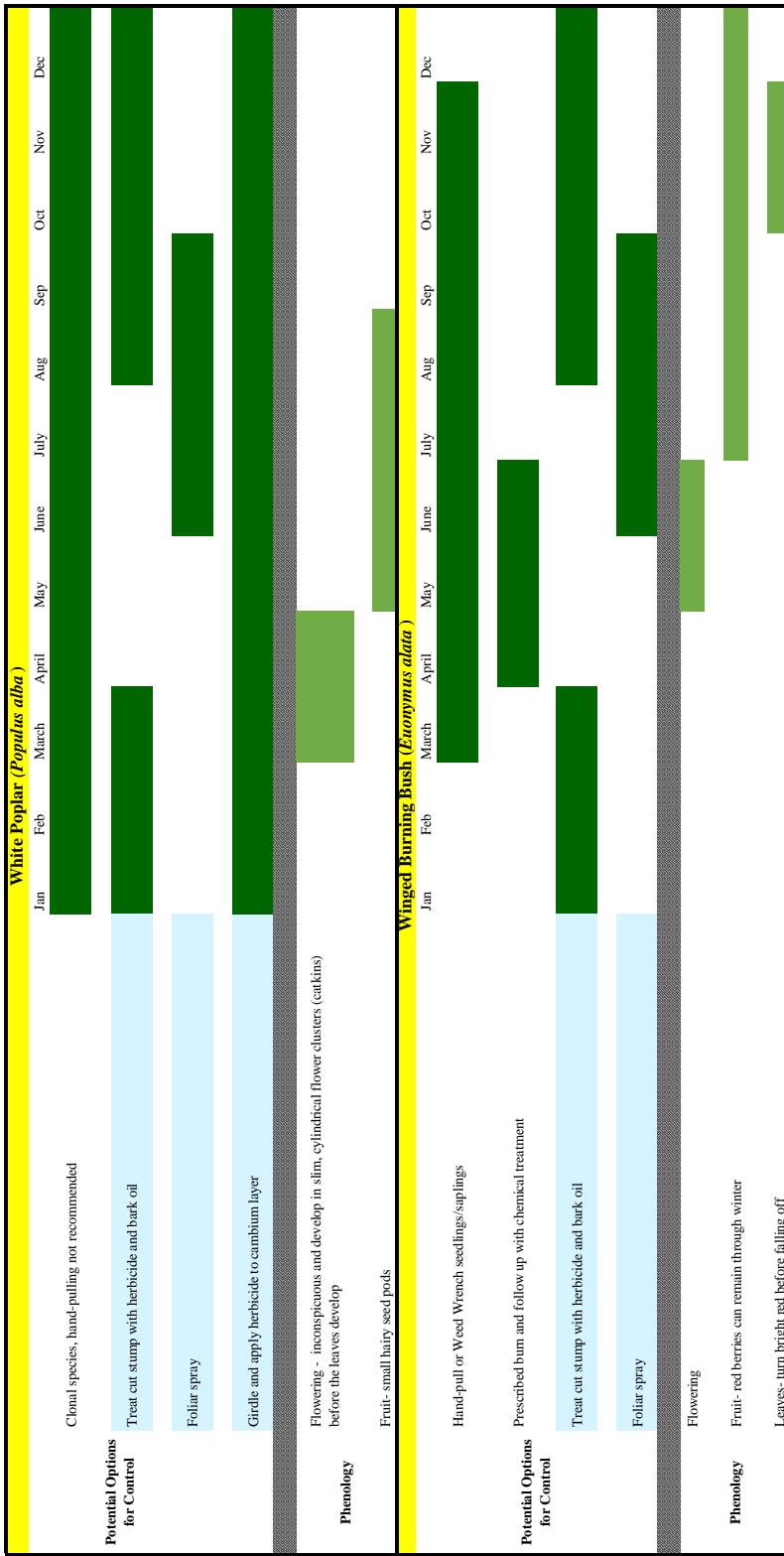










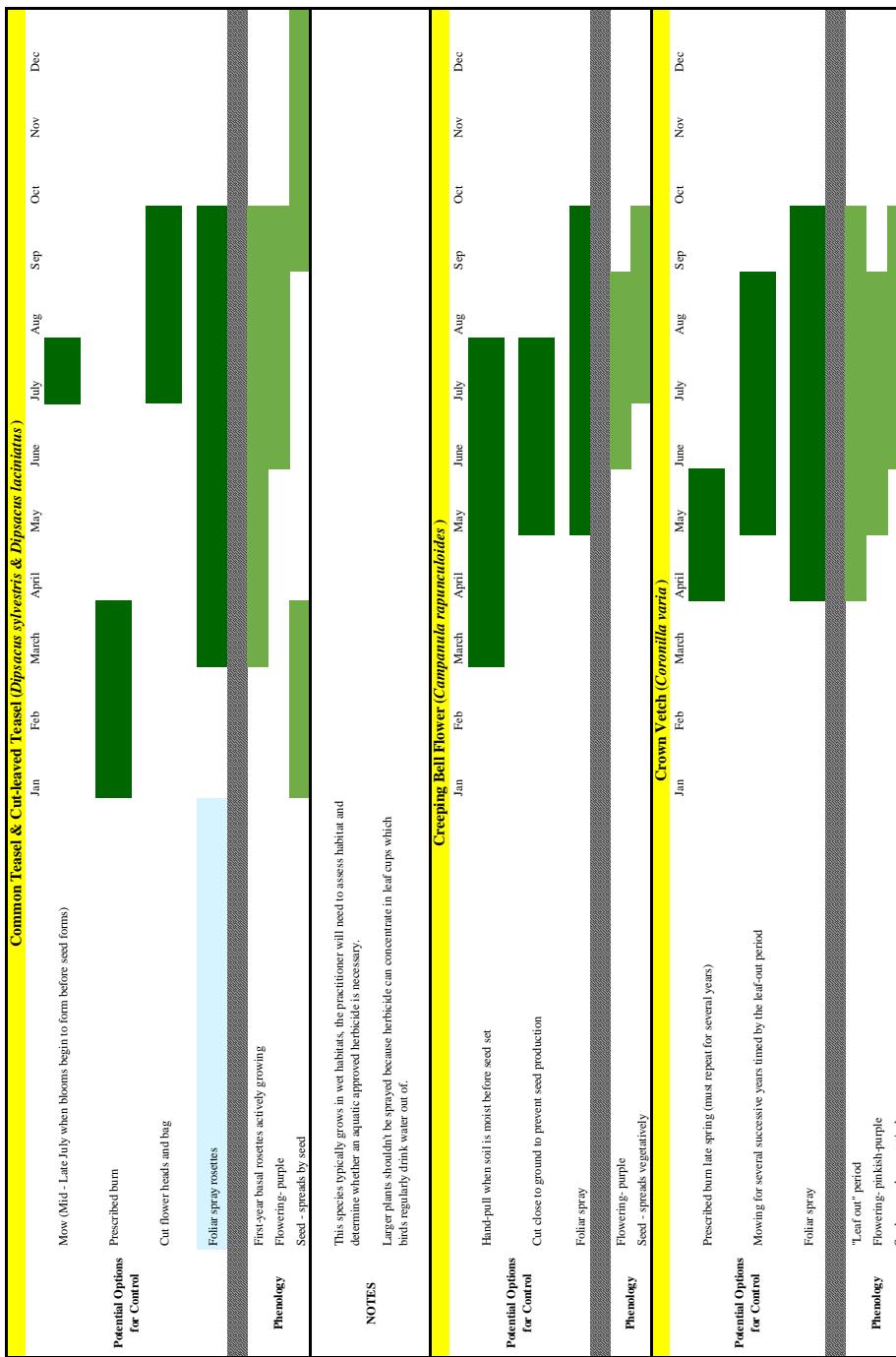


# Invasive Forbs of Southeastern Wisconsin

Blue cells indicate the need to assess the site for aquatic approved herbicides.



<b>Coldfoot (<i>Tussilago farfara</i>)</b>	
Potential Options for Control	Hand-pull and bag when soil is moist (small populations)  Foliar spray
Phenology	Flowering-yellow Seed
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.
Potential Options for Control	Remove seed heads and bag or burn  Slice taproot with parsnip predictor shovels 3-4" below soil surface before flowering  Foliar spray
Phenology	Second year (stems and flowers) Seed (burs remain through winter) - spreads by seed
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.
Potential Options for Control	Hand pull and bag when soil is moist (small populations)  Slice taproot with parsnip predictor shovels 3-4" below soil surface before flowering  Foliar spray
Phenology	Flowering pink/purple Seed readily distributed by birds
Potential Options for Control	Diligently hand-pull or dig-up plants, removing as much of the rhizomes as possible. Bag and dispose of all plant debris as plant fragments readily resprout  Foliar spray
Phenology	Flowering-white Seed - spreads vegetatively



<b>Dame's Rocket (<i>Hesperis matronalis</i>)</b>													
Potential Options for Control	Hand-pull and bag when soil is moist before seed set  Foliar spray	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Flowering - pinkish-purple										First & second year plants  First year rosettes only			
Phenology										First & second year plants  First year rosettes only			
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.												
<b>Forget Me Not (<i>Myosotis scorpioides</i>)</b>													
Potential Options for Control	Hand-pull and bag when soil is moist before seed set  Foliar spray	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Flowering purple and yellow										First & second year plants  First year rosettes only			
Phenology										First & second year plants  First year rosettes only			
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.												
<b>Garlic Mustard (<i>Alliaria petiolata</i>)</b>													
Potential Options for Control	Hand-pull and bag when soil is moist before seed set  Foliar spray	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Flowering white										First & second year plants  First year rosettes only			
Phenology										First & second year plants  First year rosettes only			
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.												
<b>Greater Celandine (<i>Cheerlonium majus</i>)</b>													
Potential Options for Control	Hand pull and bag when soil is moist before seed set (wear gloves to avoid irritation)  Foliar spray	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Flowering - yellow										First & second year plants  First year rosettes only			
Phenology										First & second year plants  First year rosettes only			
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.												
<b>Grecian Foxglove (<i>Digitalis lanata</i>)</b>													
Potential Options for Control	Use a shovel to remove dug up plants in a small population before seed set (CAUTION: Wear gloves and long sleeves, plant is toxic)  Repeatedly now and follow up with chemical treatment  Foliar spray (treat in May, again in July and follow up in Aug-Nov to treat missed rosettes)	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Flowering										1st 2nd Follow up and treat missed rosettes			
Phenology										1st 2nd Follow up and treat missed rosettes			
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.												





<b>Lily-of-the-valley (<i>Convallaria majalis</i>)</b>	
Potential Options for Control	Manual control requires the removal of all tubers and roots (digging)  Foliar spray
Phenology	Flowering - white  Seed - spreads vegetatively
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.
Potential Options for Control	Manual control requires the removal of all tubers and roots (digging)  Foliar spray
Phenology	Flowering - orange  Seed (most escaped cultivars are sterile, spreads mainly by tubers)
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.
Potential Options for Control	Manual control requires the removal of all roots and runners (digging)  Foliar spray
Phenology	Flowering  Seed - Spreads mainly by underground runners
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.
Potential Options for Control	Prescribed burn late spring (must repeat for several years)  Moving for several successive years timed by the leaf-out period  Foliar spray
Phenology	Flowering - pink  Seed
Potential Options for Control	Manual control requires the removal of all roots and runners over many years (digging)  Moving is not recommended  Foliar spray
Phenology	Flowering - bluish purple  Seed - Most plants are sterile and spread mainly by underground runners
NOTES	This species typically grows in wet habitats, the practitioner will need to assess habitat and determine whether an aquatic approved herbicide is necessary.







# Invasive Grasses of Southeastern Wisconsin

Blue cells indicate the need to assess the site for aquatic approved herbicides.





## Calibrating backpacks

One gallon = 128 fluid ounces and your calibration area to be sprayed is 1/128 of an acre, thus fluid ounces collected = gallons per acre.



1. Clean sprayer and nozzle thoroughly. Then, fill the spray tank with clean water. Spray with water only to check to see that the nozzle forms a uniform spray pattern. If the pattern is uneven, check to make sure the nozzle is clean and replace it if needed. Adjustable nozzles should be set and marked to permit repeated use of the selected spray pattern. If necessary, add a marker dye to the water to more easily see your spray pattern.
2. Measure an area 18.5 feet by 18.5 feet, which is equal to 1/128th of an acre.
3. Time the number of seconds it takes to spray the measured area uniformly with water using gentle side-to-side sweeping motion with the spray wand similar to spray painting a home or automobile. Record the number of seconds required to spray the area. During application be sure to maintain a constant sprayer pressure and cover the entire area uniformly one time. You should repeat step 3 at least twice and use the average of the two times.
4. Spray into a container for the average time calculated in step 3. Be sure to maintain constant sprayer pressure while you spray into the container.
5. Measure the number of fluid ounces of water in the container. The number of fluid ounces collected from the container is equal to the number of gallons of water per acre the sprayer is delivering. Volume sprayed in fluid ounces = gallons of water per acre (GPA).
6. Convert from gallons to liters if necessary. 1 gal = 3.79 L

Information adapted from Techline News Calibration Handout

\*\* use cone tip nozzles when calibrating and average the time for all backpacks\*\*