



## **Effectively Managing and Maintaining Native Landscapes**

This information was provided by David Mindell of PlantWise, Ann Arbor MI following his November, 2020 presentation to the Kalamazoo Area chapter of Wild Ones. You can view David's presentation on the [KAWO YouTube channel](#).

These documents summarize

- 1) how to manage for desired outcomes + basic herbicide information for graminoids and broad-leaved weeds;
- 2) changes in dominance of different groups of grasses and forbs in response to fire seasonality; and
- 3) invasive species control techniques & timing

For a list of additional resources from Kalamazoo Area Wild Ones,

visit <http://www.kalamazoowildones.org/resources>



## Maintenance of Native Landscapes

Here's a list of "if...thens." If you'd like the outcome on the left, implement the action on the right...

IF	THEN
You don't desire aggressive natives	Pull/dig/spray them (i.e., don't ignore them!)
Plants are taller than hoped for	Cut plants back in June
Desire a "neat" landscape	Plan to weed, mulch, cut bed edge regularly
Plan for expansion of plants by self-seed	Don't mulch the bed
Controlling annuals and biennials	Cut budding/flowering plants at base (no need to pull)
You want to nurture wildlife	Leave your planting "messy" through the winter
You desire an "open" site	Plan to remove/thin planting every year or two

### Basic herbicide info:

For control of graminoids (Phragmites, reed canary grass, cattails, turf or other cool-season grasses), we use an aquatic formulation of glyphosate (such as Rodeo). For foliar control, we dilute the chemical with water to 2% active ingredient and add 1 oz of Cygnet Surfactant and ½ oz of a tracking dye per gallon of total solution to see where we've sprayed.

For control of broad-leaved weeds, we use an aquatic formulation of triclopyr (such as Garlon 3a).

--For foliar control, we dilute the chemical with water to 2% active ingredient and add 1 oz of Cygnet Surfactant and ½ oz of a tracking dye per gallon of total solution to see where we've sprayed.

--For cut stump treatment, we dilute the chemical with water to 27% active ingredient and add 1 oz of Cygnet Surfactant and ½ oz of a tracking dye to every 10 oz total solution to see which stumps we've treated.



## Changes in dominance of different groups of grasses and forbs in response to fire seasonality

	April-May	July-Aug	Sept	Oct-Nov
Grasses and sedges				
Warm season	↑	↓	↔	↑
Cool season	↓	↑	↑	↓?
Forbs				
Early-flowering forbs	↓	↑	↑	↓?
Mid-flowering forbs	↓	↑?	↑	↑?
Late-flowering forbs	↑	↓	↑?	↑?
Legumes (Fabaceae)	↑	↑?	↑?	↑

# Invasive Species Control Techniques & Timing

F = Fire; p-prescribed burn, t-propane torch  
 C = Chemical; b-bloody glove, c-cut & paint, d-drill & fill, f-foliar, g-girdle & paint  
 M = Manual; b-cut at base, h-hand pull, s-cut below soil level

Scientific Name	Common Name	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
<i>Acer platanoides</i>	Norway maple	Ccdg	Ccdg	F	F		Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Ailanthus altissima</i>	Tree of heaven	Ccdg	Ccdg				Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Alliaria petiolata</i>	Garlic mustard	Cf	Cf	Cf	Mh	Mh	Mh					Cf	Cf
<i>Alnus glutinosa</i>	Black alder	Ccdg	Ccdg				Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Berberis spp.</i>	Barberry	Cc	Cc	Fp	Fp, Mh	Mh	Mh, Cc	Mh, Cc	Mh, Cc	Mh, Cc	Mh, Cc	Mh, Cc	Cc
<i>Bromus inermis</i>	Smooth brome grass					Fp, Cf	Cf	Cf					
<i>Butomus umbellatus</i>	Flowering-rush												
<i>Cardamine impatiens</i>	Bitter cress				Mh, Cd	Mh, Cc							
<i>Celastrus orbiculata</i>	Oriental bittersweet	Cc	Cc				Ccf	Ccf	Ccf	Ccf	Cc	Cc	Cc
<i>Centaurea maculosa</i>	Spotted knapweed	Cf	Cf	Fp	Fp	Cf	Cbf, Mhs	Cbf, Mhs	Cbf, Mhs	Cf, Mhs	Cf, Mhs		
<i>Cirsium arvense</i>	Canada thistle						Msh, Cf	Msh, Cf	Msh, Cf	Msh, Cf			
<i>Convallaria majalis</i>	Lily-of-the-valley						Cf	Cf	Cf	Cf			
<i>Coronilla varia</i>	Crown vetch				Cf	Cf	Cf						
<i>Eichhornia crassipes</i>	Water-haycynth						Cf	Cf	Cf				
<i>Elaeagnus umbellata</i>	Autumn olive	Cc	Cc				Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Euphorbia esula</i>	Leafy spurge						Cf			Cf			
<i>Gypsophila spp.</i>	Baby's breath						Ms	Ms	Ms	Ms			
<i>Hesperis matronalis</i>	Dame's rocket				Mh	Mh	Mh						
<i>Ligustrum vulgare</i>	Privet	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Lonicera spp.</i>	Bush honeysuckle	Cc	Cc	Fp	Fp		Cc, Mh	Cc, Mh	Cc, Mh	Cc, Mh	Cc, Mh	Cc, Mh	Cc
<i>Lonicera japonica</i>	Japanese honeysuckle					Cf, Ft	Cf, Ft	Cf, Ft					
<i>Lysimachia nummularia</i>	Moneywort												
<i>Lythrum salicaria</i>	Purple loosestrife						Cbcf	Cbcf	Cbc				
<i>Melilotus alba</i>	White sweet-clover						Mb	Mh	Mh				
<i>Melilotus officinalis</i>	Yellow sweet-clover						Mb	Mh	Mh				
<i>Myriophyllum spicatum</i>	Eurasian water milfoil												
<i>Pastinaca sativa</i>	Wild parsnip				Ms	Ms	Ms	Ms	Ms				
<i>Phalaris arundinacea</i>	Reed canary grass					Cf, Fp	Ccf	Ccf	Ccf				
<i>Phragmites australis</i>	Giant reed								Cbf	Cbf			

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Scientific Name	Common Name	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
<i>Polygonum cuspidatum</i>	Japanese knotweed					Cf	Cf	Cf	Cf	Cf			
<i>Polygonum perfoliatum</i>	Mile-a-minute weed												
<i>Rhamnus cathartica</i>	Common buckthorn	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Rhamnus frangula</i>	Glossy buckthorn	Cc	Cc				Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Rhodotypos scandens</i>	Black jetbead	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Robinia pseudoacacia</i>	Black locust	Cdg	Cdg				Cdg	Cdg	Cdg	Cdg	Cdg	Cdg	Cdg
<i>Rosa multiflora</i>	Multiflora rose	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Saponaria officinalis</i>	Bouncing bet (soapwort)						Cbf	Cbf	Cbf				
<i>Typha angustifolia</i>	Narrow-leaved cat-tail						Cbcf	Cbcf	Cbcf	Cbcf			
<i>Vinca minor</i>	Periwinkle	Cf	Cf	Cf	Cf							Cf	Cf
<i>Vincetoxicum spp.</i>	Black swallow-wort					Cbf	Cbf	Cbf	Cbf	Cbf	Cbf		

## Chemical Control

### Cut & Paint

<i>Acer platanoides</i>	Norway maple	Ccdg	Ccdg	F	F		Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Alnus glutinosa</i>	Black alder	Ccdg	Ccdg				Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Berberis spp.</i>	Barberry	Cc	Cc	Fp	Fp, Mh	Mh	Mh, Cc	Mh, Cc	Mh, Cc	Mh, Cc	Mh, Cc	Mh, Cc	Cc
<i>Celastrus orbiculata</i>	Oriental bittersweet	Cc	Cc				Ccf	Ccf	Ccf	Ccf	Cc	Cc	Cc
<i>Elaeagnus umbellata</i>	Autumn olive	Cc	Cc				Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Ligustrum vulgare</i>	Privet	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Lonicera spp.</i>	Bush honeysuckle	Cc	Cc	Fp	Fp		Cc, Mh	Cc, Mh	Cc, Mh	Cc, Mh	Cc, Mh	Cc, Mh	Cc
<i>Lythrum salicaria</i>	Purple loosestrife						Cbcf	Cbcf	Cbc				
<i>Phalaris arundinacea</i>	Reed canary grass					Cf, Fp	Ccf	Ccf	Ccf				
<i>Rhamnus cathartica</i>	Common buckthorn	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Rhamnus frangula</i>	Glossy buckthorn	Cc	Cc				Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Rhodotypos scandens</i>	Black jetbead	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Rosa multiflora</i>	Multiflora rose	Cc	Cc	Fp	Fp		Cc	Cc	Cc	Cc	Cc	Cc	Cc
<i>Typha angustifolia</i>	Narrow-leaved cat-tail						Cbcf	Cbcf	Cbcf	Cbcf			

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 M = Manual; b-cut at base, h-hand pull, s-cut below soil level

Scientific Name	Common Name	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Drill & Fill													
<i>Acer platanoides</i>	Norway maple	Ccdg	Ccdg	F	F		Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Ailanthus altissima</i>	Tree of heaven	Ccdg	Ccdg				Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Alnus glutinosa</i>	Black alder	Ccdg	Ccdg				Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Robinia pseudoacacia</i>	Black locust	Cdg	Cdg				Cdg	Cdg	Cdg	Cdg	Cdg	Cdg	Cdg
Girdle													
<i>Acer platanoides</i>	Norway maple	Ccdg	Ccdg	F	F		Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Ailanthus altissima</i>	Tree of heaven	Ccdg	Ccdg				Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Alnus glutinosa</i>	Black alder	Ccdg	Ccdg				Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg	Ccdg
<i>Robinia pseudoacacia</i>	Black locust	Cdg	Cdg				Cdg	Cdg	Cdg	Cdg	Cdg	Cdg	Cdg
Foliar Spray													
<i>Alliaria petiolata</i>	Garlic mustard	Cf	Cf	Cf	Mh	Mh	Mh					Cf	Cf
<i>Celastrus orbiculata</i>	Oriental bittersweet	Cc	Cc				Ccf	Ccf	Ccf	Ccf	Cc	Cc	Cc
<i>Centaurea maculosa</i>	Spotted knapweed	Cf	Cf	Fp	Fp	Cf	Cbf, Mhs	Cbf, Mhs	Cbf, Mhs	Cf, Mhs	Cf, Mhs		
<i>Cirsium arvense</i>	Canada thistle						Msh, Cf	Msh, Cf	Msh, Cf	Msh, Cf			
<i>Convallaria majalis</i>	Lily-of-the-valley						Cf	Cf	Cf	Cf			
<i>Coronilla varia</i>	Crown vetch				Cf	Cf	Cf						
<i>Eichhornia crassipes</i>	Water-haycynth						Cf	Cf	Cf				
<i>Euphorbia esula</i>	Leafy spurge						Cf			Cf			
<i>Lonicera japonica</i>	Japanese honeysuckle					Cf, Ft	Cf, Ft	Cf, Ft					
<i>Lythrum salicaria</i>	Purple loosestrife						Cbcf	Cbcf	Cbc				
<i>Phalaris arundinacea</i>	Reed canary grass					Cf, Fp	Ccf	Ccf	Ccf				
<i>Phragmites australis</i>	Giant reed								Cbf	Cbf			
<i>Polygonum cuspidatum</i>	Japanese knotweed					Cf	Cf	Cf	Cf	Cf			
<i>Saponaria officinalis</i>	Bouncing bet						Cbf	Cbf	Cbf				
<i>Typha angustifolia</i>	Narrow-leaved cat-tail						Cbcf	Cbcf	Cbcf	Cbcf			
<i>Vinca minor</i>	Periwinkle	Cf	Cf	Cf	Cf							Cf	Cf
<i>Vincetoxicum spp.</i>	Black swallow-wort					Cbf	Cbf	Cbf	Cbf	Cbf	Cbf		