INVASIVE PHRAGMITES

BEST MANAGEMENT PRACTICES PRIMER

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PHRAGMITES BASICS

- Commonly found growing in wetlands and ditches in southern Ontario
- Becoming more common along roadsides in north-eastern Ontario and Manitoulin Island
- Forms dense stands up to 15ft tall
- Mainly spread through construction equipment
- Seed viability less than 1%

Invasive phragmites stand – photo courtesy of J.M. Gilbert, NDMNRF

NATIVE VS INVASIVE PHRAGMITES

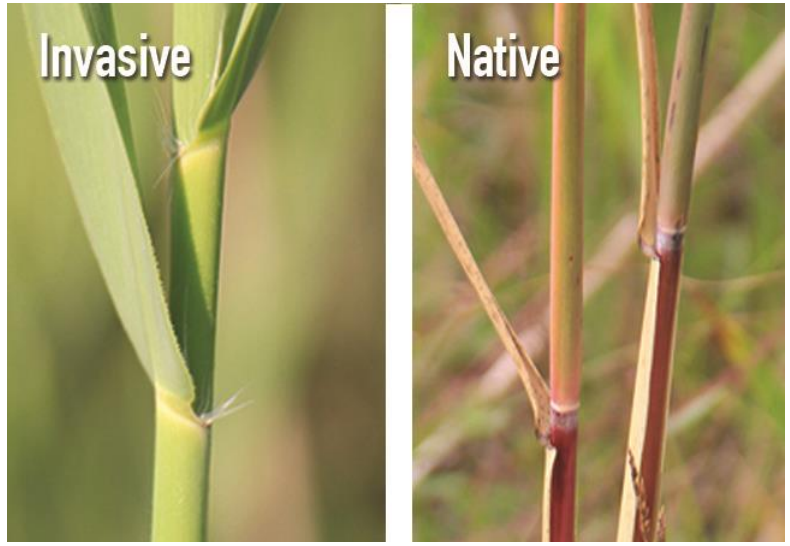
- Important to look at multiple features
- Some features are only visible during certain growth periods
- Key features include seed head size, stand density, stem colour etc
- If you are unsure, take close up images to reference later

	Native *Phragmites*	Invasive *Phragmites*
Stand height	No taller than 2 metres	Up to 5 metres (15 feet)
Stand density	Sparse, interspersed with native vegetation	Dense monoculture, up to 100% invasive *Phragmites*
Stem colour	Reddish-brown	Beige, tan
Stem texture	Smooth and shiny	Rough and dull
Stem flexibility	High flexibility	Rigid
Leaf colour	Yellow-green	Blue-green
Leaf sheaths	Fall off in fall, easily removed	Remain attached, difficult to remove
Lower glume	3.7–7 mm	2.6–4.2 mm
Flower timing	Early (July–August)	Intermediate (August-September)
Seedhead density	Sparse, small	Dense, large

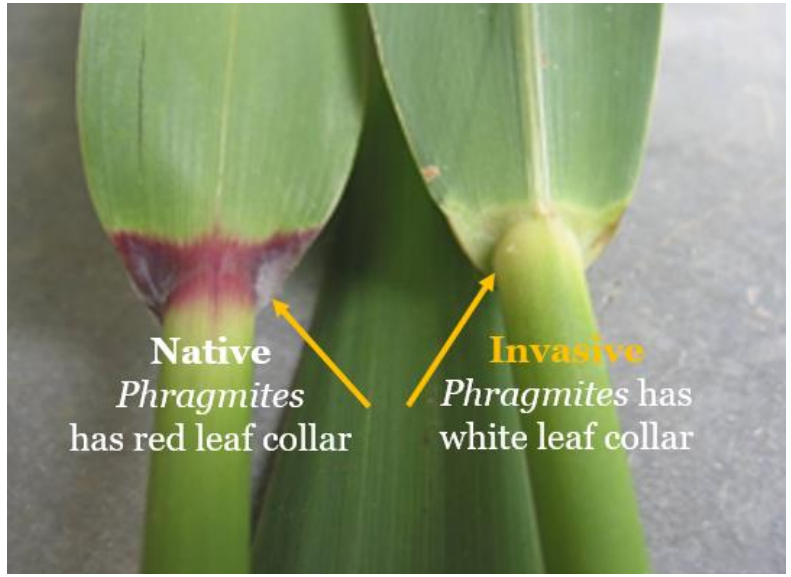
Invasive Phragmites - Best Management Practices 2011, Ontario

Native phragmites, red stems. CGS

Invasive Phragmites stems, tan-brown. Tip of the Mitt Watershed Council



Invasive vs native phragmites stems and leaf sheaths. Tip of the Mitt Watershed Council



Leaf collar comparison. SLEO PRISM

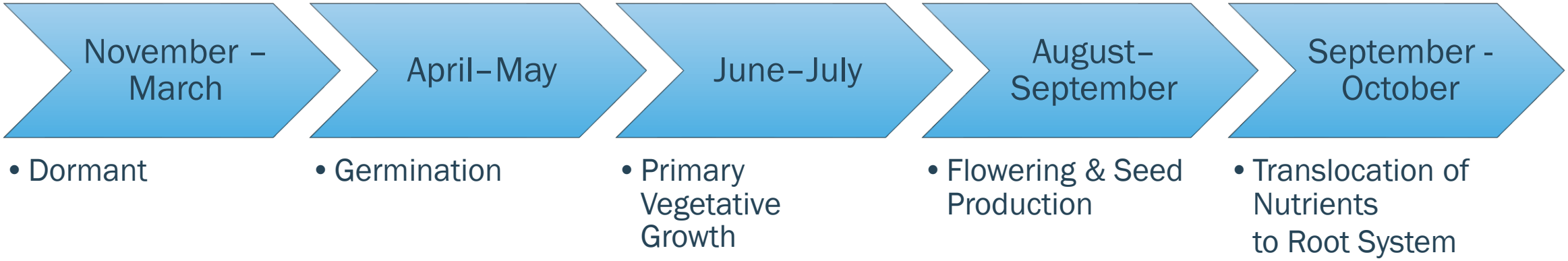
Seed head comparison. Tip of the Mitt Watershed Council

Invasive Phragmites seed heads. Jonathan Wilkins Guide, University of Maine

Root system of established stand. Wisconsin Wetlands Association

Native phragmites stand. CGS

LIFECYCLE


November – March
April–May
June–July
August–September
September - October
• Dormant
• Germination
• Primary Vegetative Growth
• Flowering & Seed Production
• Translocation of Nutrients to Root System

REMOVAL TECHNIQUES

Herbicide Application (Dry Sites Only)

- Glyphosate/Imazapyr
- Requires licensed/authorized applicator
- Late summer/early fall
- Can not be applied by hand-wicking – will kill all plants in treatment area
- Cannot be used over water (Habitat Aqua now approved by Health Canada)

Selective Cutting/Spading (Dry or Wet Sites)

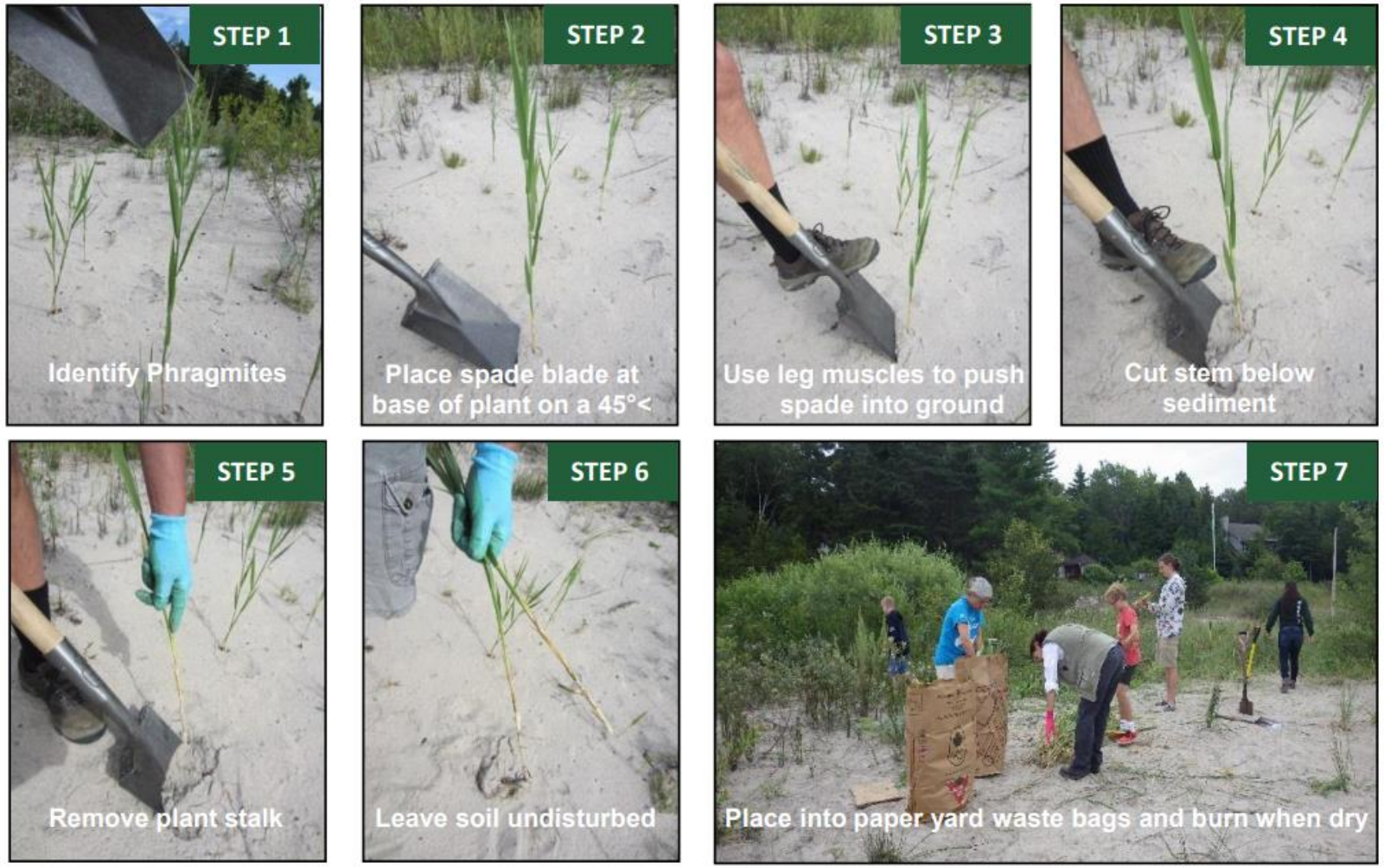
- Selectively cut stems just below soil
- Does not impact other native vegetation
- Requires no special equipment
- Labor intensive
- Requires specific disposal techniques (burn or landfill)

Other Techniques (Dry Sites Only)

- Tarping
- Prescribed burns

SPADING TECHNIQUE

- Developed by Professor Lynn Short, Humber College
- Can be used on dry land or in water
- Can be done multiple times throughout the growing season
- Best time to remove is when seed head is emerging
- If done too early, plant has more energy and more time to grow new shoots
- Cut stalks burned or buried in specially dug location in landfill (1m deep minimum)



Spading Removal Postcard. Ontario Phragmites Working Group

LOCAL CASE STUDY

MINNOW LAKE BOARDWALK REMOVAL

MINNOW LAKE TREATMENT AREA

- Bancroft Drive across from Carmichael Arena
- Minnow Lake Restoration Group applied for a Lake Stewardship Grant to complete removal
- CGS Environmental Planning Initiatives Regreening program staff completed removal and disposal
- Multi-year pilot project
- Used spading technique

POST REMOVAL - 2021

- Removal began early August
- Removal took 4 full days with ~20 staff
- Phragmites removed and disposed of in specially dug disposal location at landfill
- Native vegetation growing within phragmites stand

August 25, 2021

September 1, 2021

LINKS & RESOURCES

- Manitoulin Phragmites Project
- https://www.greatlakesphragmites.net/resources/webinars/
- https://www.ontario.ca/page/phragmites
- https://www.ontarioinvasiveplants.ca/wp-content/uploads/2021/05/OIPC_BMP_Phragmites_April302021_D10_WEB.pdf
- https://www.ontarioinvasiveplants.ca/wp-content/uploads/2021/06/Final-Phragmites-2021.pdf
- https://mnfi.anr.msu.edu/pdfs/phragmites-native-non-native.pdf
- https://www.watershedcouncil.org/phragmites.html
- https://www.sleloinvasives.org/invasives/tiered-species-list/phragmites/

Great Lakes PHRAGMITES COLLABORATIVE

ONTARIO PHRAGMITES WORKING GROUP

Invasive Species Centre

ONTARIO INVASIVE PLANT COUNCIL

QUESTIONS?

Contact Information

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