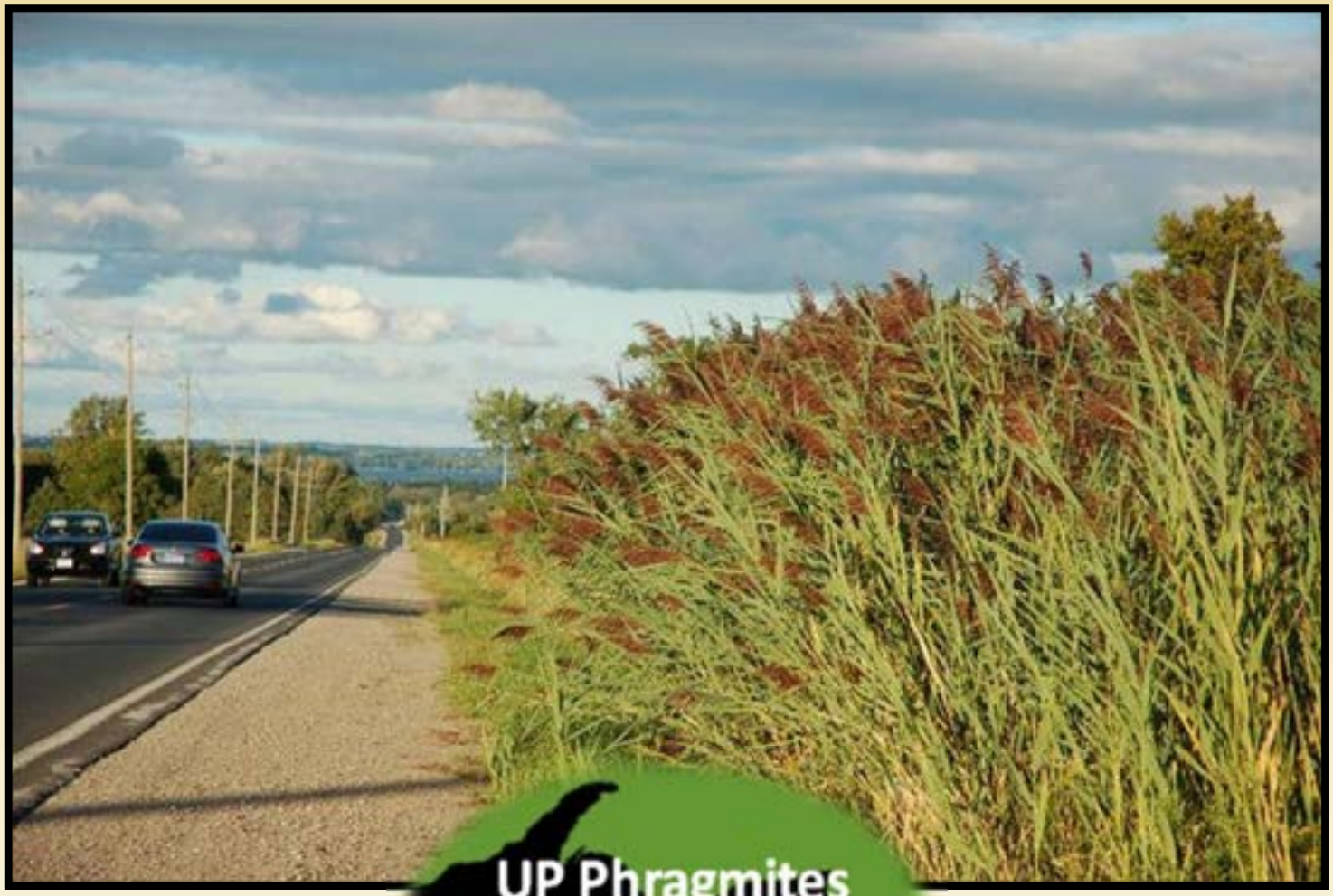
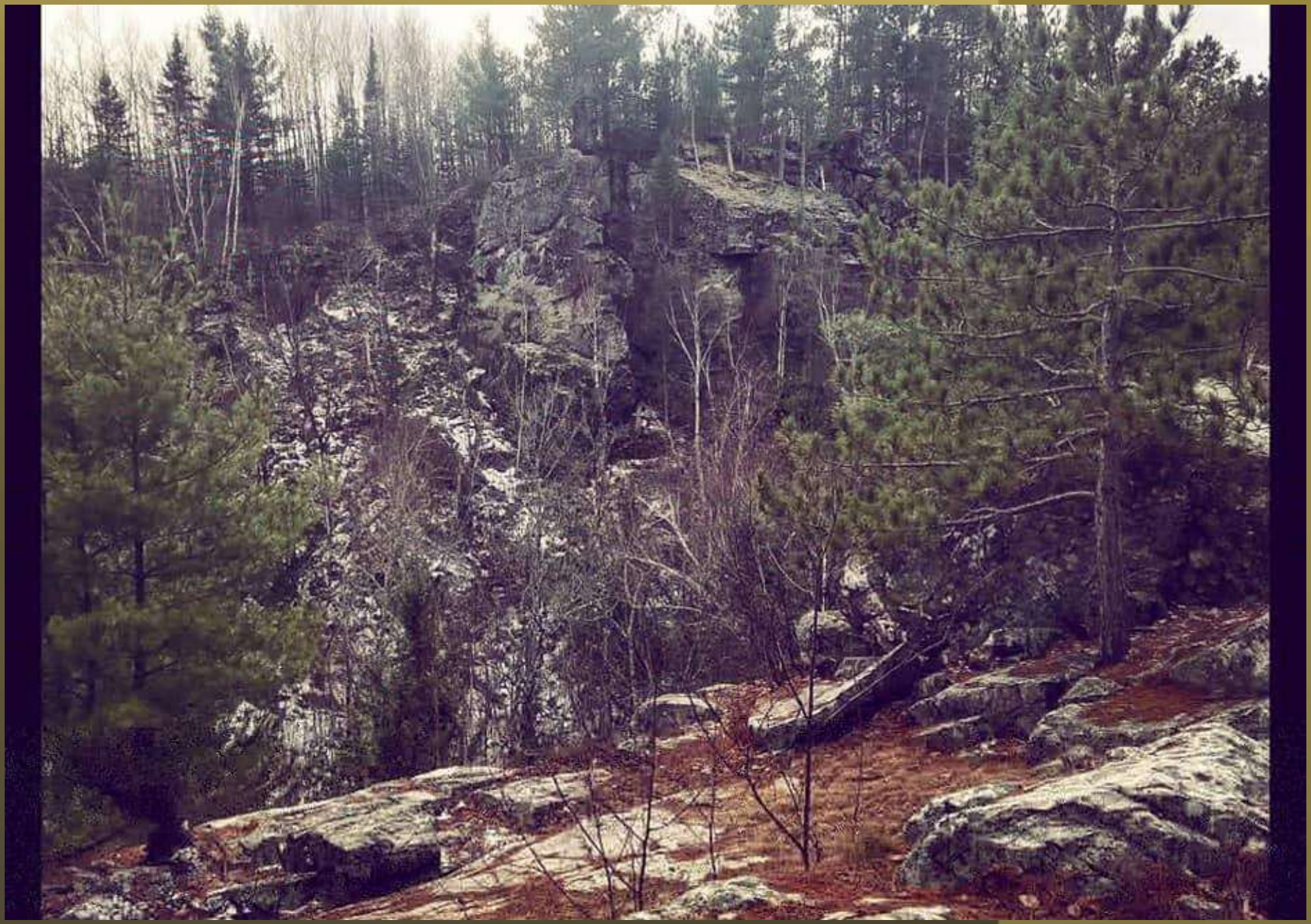
# U.P. Phragmites Coalition

***A collaborative approach to success***



## Our Focus: Michigan's UP "*Big Picture*"

*"Why are we managing invasive species?"*





***It's all worth fighting for…***

# What is Phragmites?

- Native to Europe and Middle East
- Introduced in the 1700's accidentally by contaminated ballast water
- Invades wetlands, shorelines, roadsides, and disturbed areas
- Chokes out all other native species and provide little to no habitat for wildlife

# Why is it a problem?

Invasive Phragmites impairs biodiversity, ecological functions and human use

- Outcompetes native vegetation and creates dense, thick stands.
- Spreads fast due to rhizomes and stolons
- Reduces wildlife habitat diversity, food and shelter
- Restricts access for swimming, fishing and other recreational activities.
- Blocks views at shorelines and roadways

# *"KEEP THE UP PHRAG FREE"*

- Invasive species, such as Phragmites, are less established across the UP, in comparison to other regional locations
- Many pristine, undisturbed locations
- Worth investing in **<u>early detection</u>** management and education
- UP invasive species dollars = best bang for the buck

# **Big Picture Approach:**
## *UP Phragmites Coalition*

- The need
- Where
- How
- Who

# A Brief History

- UP Phragmites Coalition *(est. 2013)*

  - The need existed for a coordinated approach to Phragmites management, especially along the Lake Michigan shoreline
  - Previous success with the garlic mustard RRIP-IT-UP project

- Funding – since 2013 over $2.7 million - *UP RC&D led*

  - $458,000 NFWF/GLRI
  - $964,922 EPA/GLRI
  - $210,282 MISGP
  - $59,100 USFS
  - $191,600 MISGP
  - $150,000 NFWF
  - $663,665 EPA/GLRI
  - $55,138 GLRI/CWMA

# A Brief History *(cont.)*

- Management partners (CDs/CISMAs), local municipalities, State/Federal/Tribal, private landowners
- Lake Michigan = primary infestations
- Outliers beyond Delta/Menominee Co. = top priorities
- Unable to treat above OHWM on Hiawatha National Forest

UP Phragmites Coalition

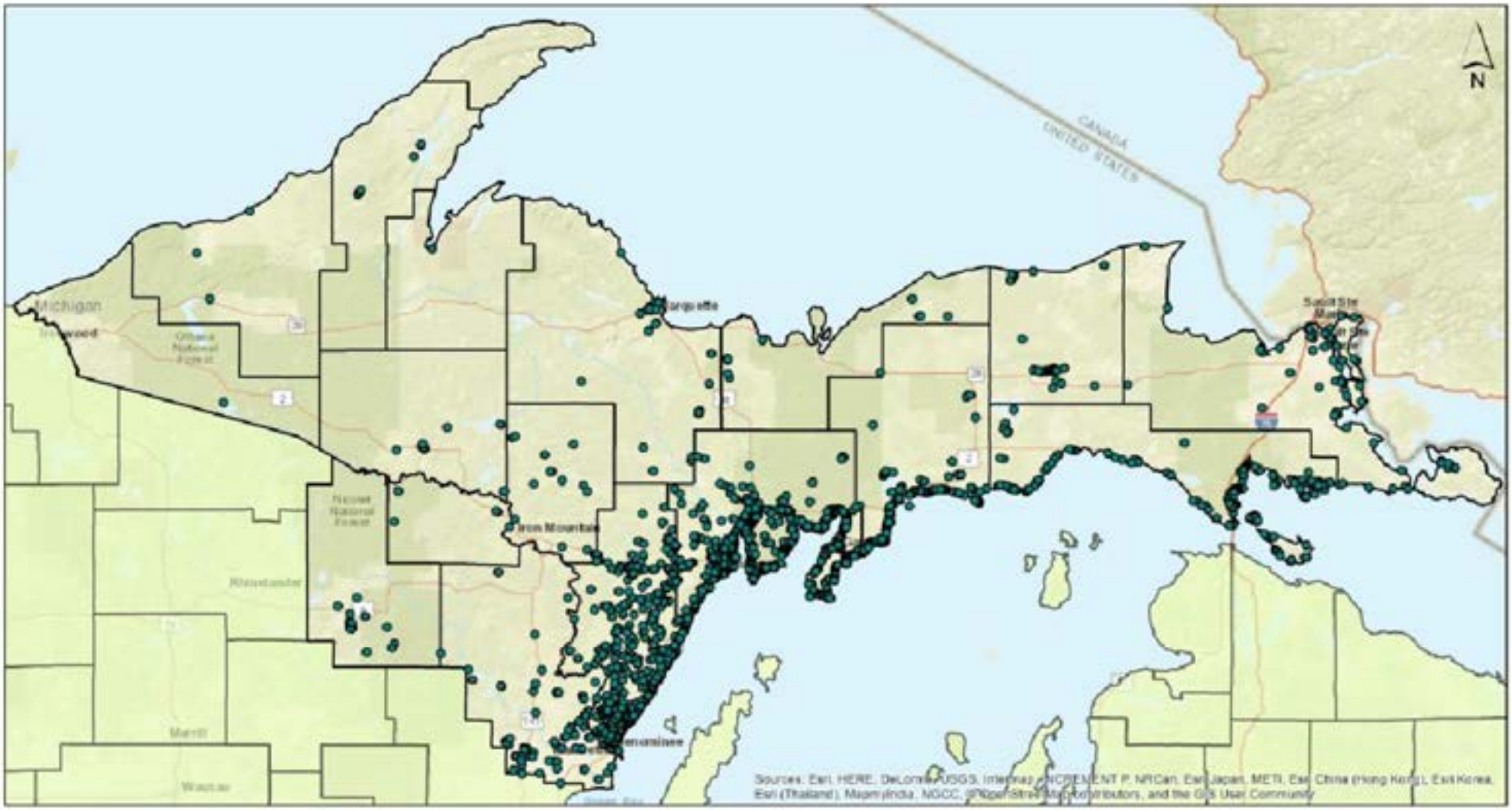
# Goals and Tasks

*Goal: To sustain management efforts and continue long term maintenance of invasive Phragmites in the Upper Peninsula.*

*Utilize uniform and standardized protocols across the UP to:*

- **Educate** – *uniform messaging*
- **Survey** – *The entire UP collecting data in unison – prioritization*
- **Treat** – *manual removal outlier sites*
- **Monitor** – *plots to measure treatment success*
- **Sustain** – *empower landowners and land managers to invest in healthy ecology of their properties, following grant funded efforts*

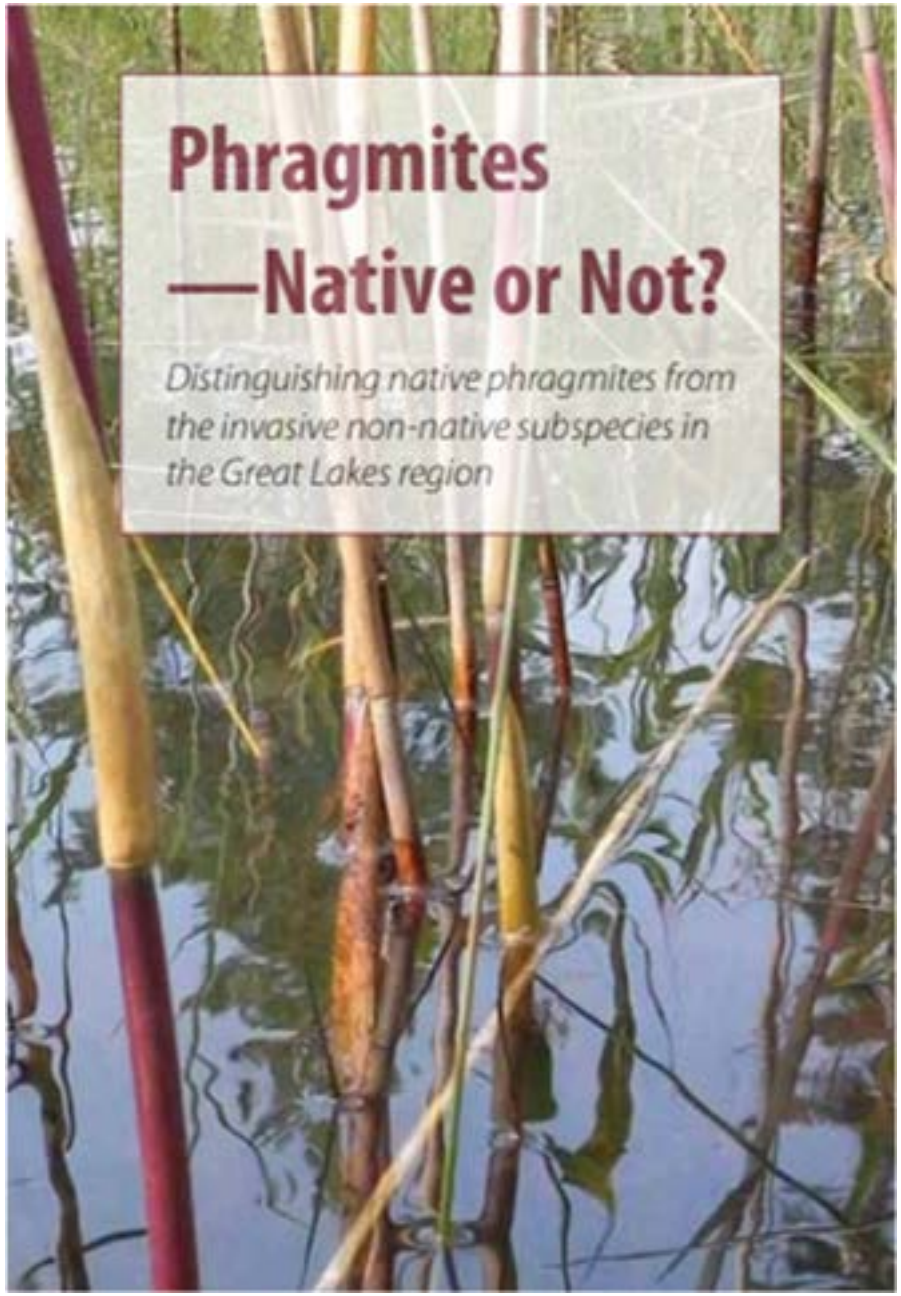
# Invasive Phragmites inventory across the UP



# Do we inventory only Invasive Phragmites?

- No, Native and Invasive stands are inventoried all across the UP
- It is key to be able to properly identify native from invasive Phragmites
- Recognizing the differences early drastically increases the opportunity for successful eradication of invasive Phragmites
- Investigating potential hybridization with various research institutes

| Characteristic | Native | Invasiv |
|---|---|---|
| |  |  |
| Stem color | Stem nodes are shiny and reddish-purple | Stem nodes a tan-green, dull an |
| |  |  |
| Leaf color | Lighter, yellow-green | Dark blue-gre |
| Rhizome | Yellow | White to light ye |
| Growth habit | Co-occurs with other plants | Tend towards ma dense, monotypic |
| Other | Leaf sheaths fall off during the winter, leaving bare stems standing in the spring | Leaf sheaths d not fall off, litt from the previo year has remnant leave |



# More than 500 Native Phragmites Stands have been mapped

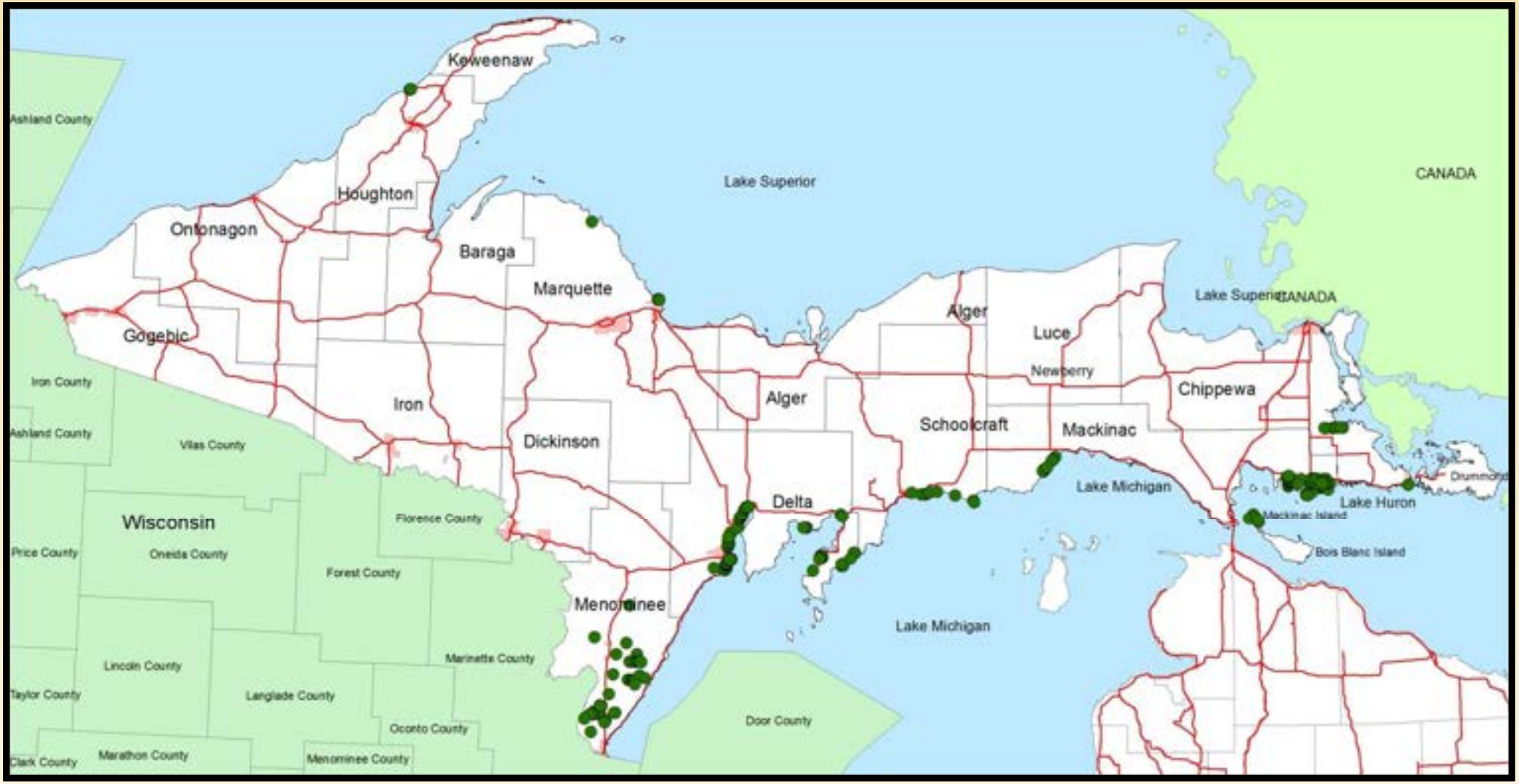


Table 3. Three examples of integrated, multiyear approaches to managing Phragmites.

| | | APPROACH 1 | APPROACH 2 | APPROACH 3 |
|---|---|---|---|---|
| Year 1 | Jan | | | |
| | Feb | | | |
| | Mar | | | |
| | April | | | |
| | May | | | |
| | June | | | |
| | July | herbicide treatment with imazapyr | | |
| | Aug | | OR | |
| | Sep | herbicide treatment with glyphosate or imazapyr/glyphosate combo | | |
| | Oct | | | mechanical treatment |
| | Nov | | | |
| | Dec | | | |
| Year 2 | Jan | | prescribed burn | |
| | Feb | | | |
| | Mar | | | |
| | April | | | |
| | May | | | |
| | June | | | |
| | July | prescribed burn | spot treat with imazapyr (if necessary) | |
| | Aug | | OR | |
| | Sep | spot treat with glyphosate or imazapyr/glyphosate combo (if necessary) | | |
| | Oct | | | |
| | Nov | | | |
| | Dec | | | |
| Year 3 | Jan | | | |
| | Feb | | | |
| | Mar | | | |
| | April | | | |
| | May | | | |
| | June | | | |
| | July | spot treat with imazapyr (if necessary) | | |
| | Aug | | OR | |
| | Sep | spot treat with glyphosate or imazapyr/glyphosate combo (if necessary) | | |
| | Oct | | | |
| | Nov | | | |
| | Dec | | | |

# Successful management & BMP's

TREATMENT methods:

- Herbicide
- Mechanical – mowing
- Drowning
- Burning


UP Phragmites Coalition

# “Fall & Phrag”


- Treatment occurs during translocation phase
- You may notice a flux people out in the marsh this time of year
- Phragmites is very easy to see and ID in fall – tall and fully flowered out = easier to report


TEREX

# Successful management of Phragmites in the UP



# “Phrag and Fowl”

- Phragmites does not provide beneficial habitat for ducks, geese, and other waterfowl
- Waterfowl hunters can help reduce the spread by not utilizing Phragmites for blinds
- Properly clean gear and equipment before moving to a new location

# Decontamination
# =
# Prevention

CLEAN DRAIN DRY™

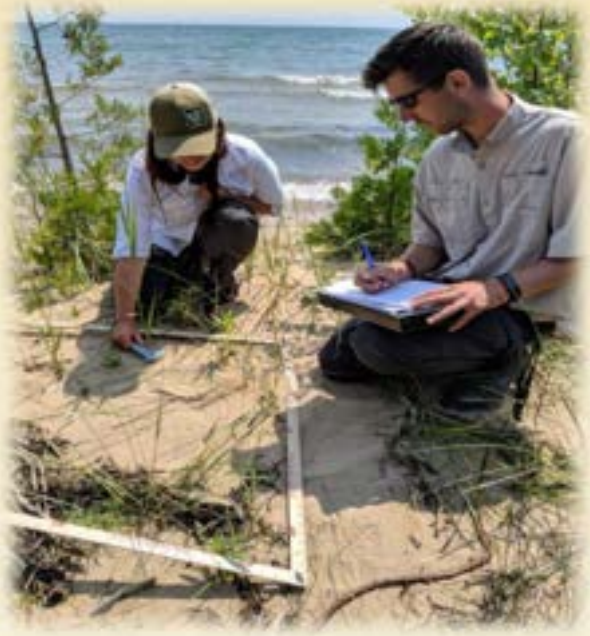
INITIATIVE

# Determining Treatment Success

PAMF

Phragmites Adaptive Management Framework

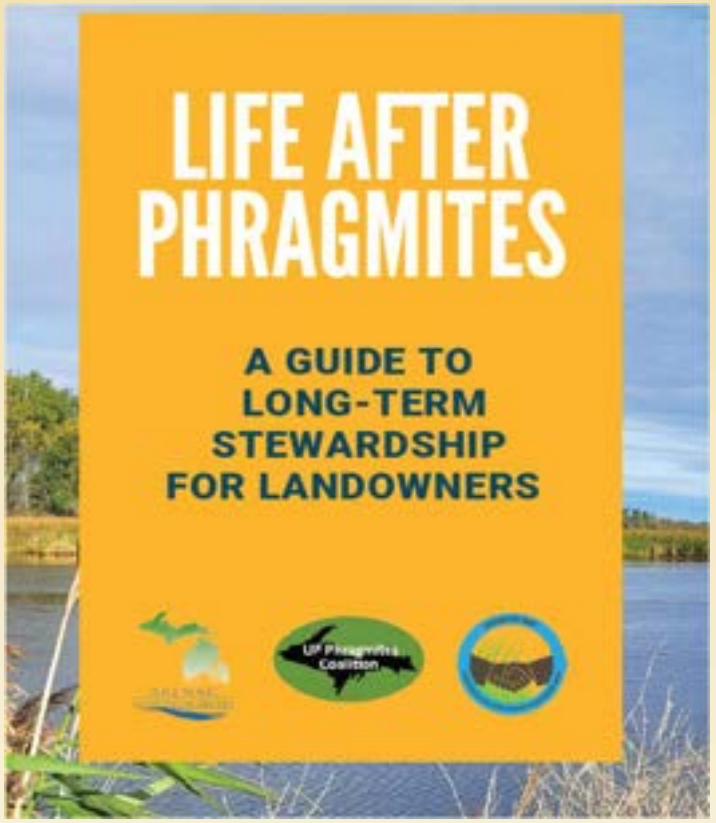
- 82 Pre-treatment Monitoring Plots with photo points established in 2015
- Post-treatment monitoring conducted prior to treatments
- Enrolled in PAMF in 2017 and participated in pilot monitoring program



# Is the Battle Won?

## *Is there "Life After Phragmites"?*

- Stay vigilant
  - Re-infestation from untreated neighbors
  - Re-infestation from other shores
  - Re-infestation via heavy equipment: excavating, grading, timber harvesting
- Landowner monitoring and responsibility
  - "Reprogramming our minds" from treatment to property maintenance



# UP Challenges

- Great Lakes water fluctuation
- VERY short treatment window in the UP (late Aug – killing frost)
- Remote sites = difficult access for treatment
- Very small infestations = high cost/acre – lack of contractors
- Potential to have other invasives move into post-treatment sites
- COVID – has impacted cost-share participation & in-person outreach/education

UP Phragmites Coalition

# **Partnership** has been the key to success

- Commitment from private landowners, municipalities, and partner organizations = sustainability
- Cross jurisdictional cooperation
- Phragmites management is not "one and done" – takes several years of treatment followed by monitoring
- Shifting mentalities from Phragmites treatments to property maintenance
- Bringing all 5 UP CISMAs together

## "The CISMA Model"

# CISMA Coalition Partners



THREE SHORES CISMA



**189 Collective Partners**

# CISMAs are your **LOCAL SOURCE** for everything invasive species

- CISMAs provide localized support to landowners and land managers
- Decisions are made at the local level
- Site visits, education/outreach, management, recommendations
- Available via phone, email, in person, virtual
- Provide resources for landowners
  - Assistance with management
  - Tool rentals
  - Access to strike teams
  - Outreach events


MInvasives
Michigan Invasive Species Coalition

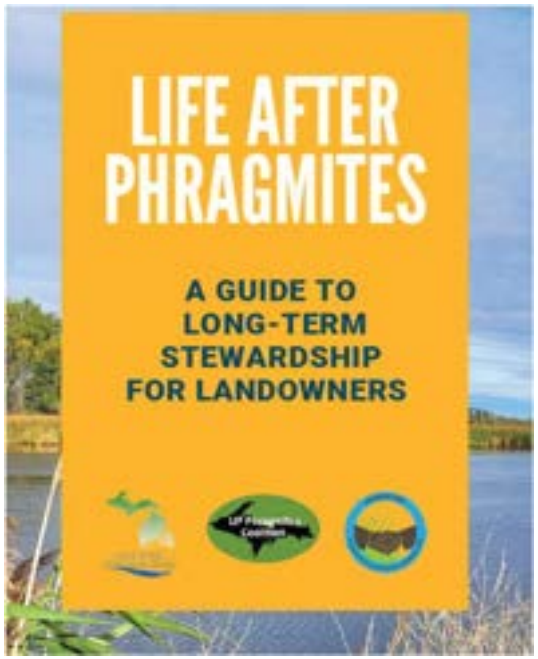
Visit the website to find YOUR local CISMA and reach out to get involved.

**Michiganinvasives.org**

# Continued efforts – *2023 and beyond*

UP Phragmites Coalition

- Funded through MISGP & NFWF SOGL: Cost-share program with Michigan landowners – expansion into Wisconsin
  - Seeking sustainability with landowner education & buy-in
- USFS HNF – completion of NEPA Fall 2019 = 2020 first year treating on Hiawatha National Forest – efforts will continue in 2023
- EPA/DNR (2022-2025) – strategically expand survey and treatment efforts to the Lake Superior watershed and interior Northern Lake Michigan watershed
- Pursuing NOAA and US FWS funding to carry out coastal wetland restoration efforts







# UP Phragmites Coalition Success

- Surveys – over 10,000 surface acres
- Treatments – 3,800+ acres of Phragmites have been treated
- Over 1 million individuals educated on Phragmites
- Landowner cost-share
- Partner commitments
- Outreach products (doorhangers, booklets, brochures, conference)

*We combat Phragmites because it's not a losing battle. It's all worth fighting for.*

# Questions?

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