

# Early detection and rapid response to *Phragmites australis* subsp. *australis* in Bayfield County, Wisconsin



Miles Falck, Wildlife Biologist  
Dara Olson, Aquatic Invasive Species Coordinator



***1854***

***1842***

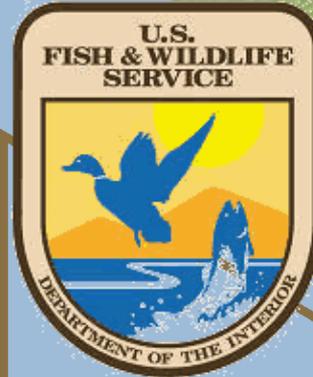
***1837***

***1836***



1854

1842



1837



1836



Michigan  
DNR





54

1842



1836

1837





*1854*



*1842*



*1836*



*1837*

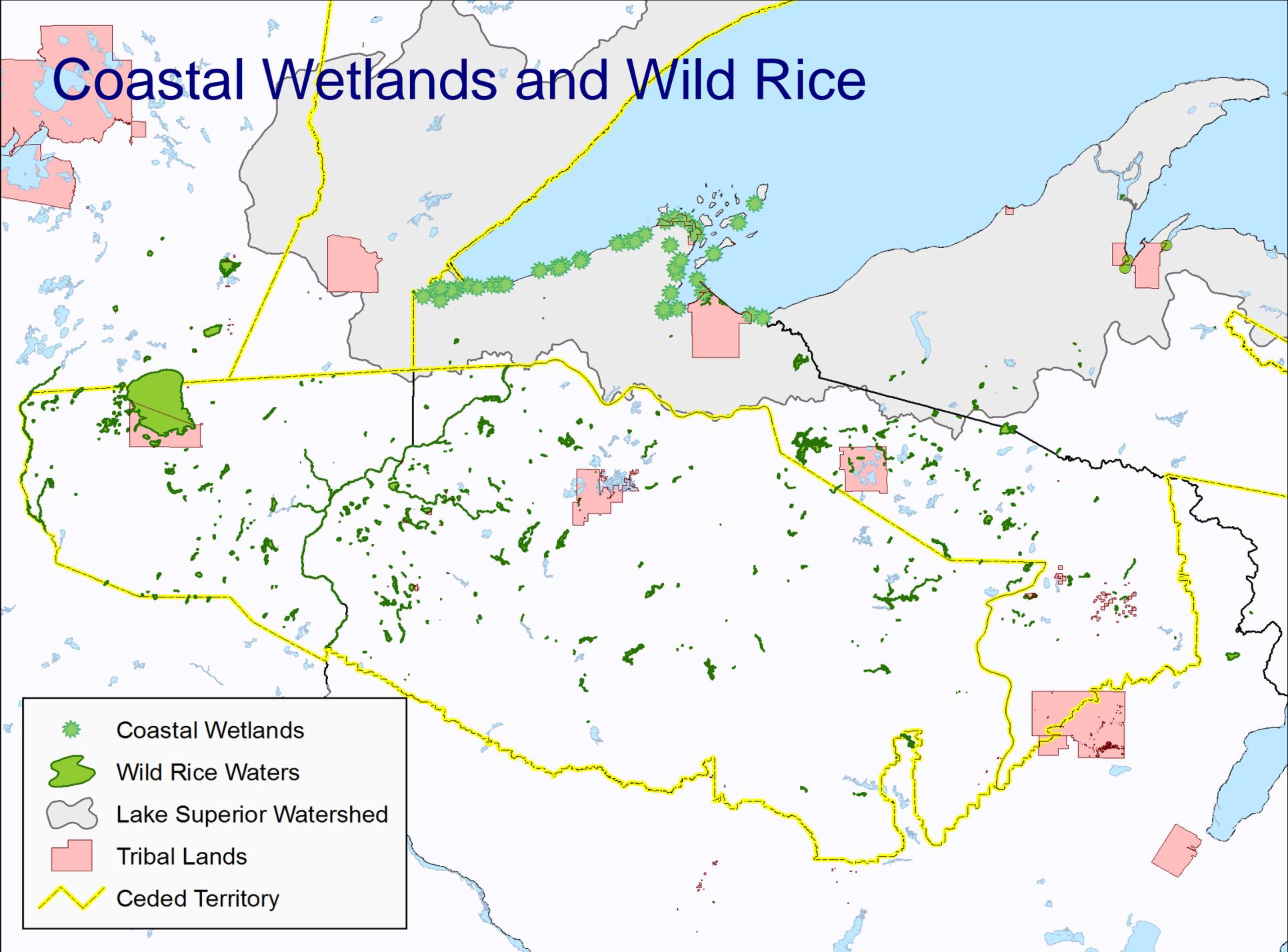


# *Phragmites australis* subsp. *australis*

- Threat to Coastal Wetlands & Wild Rice

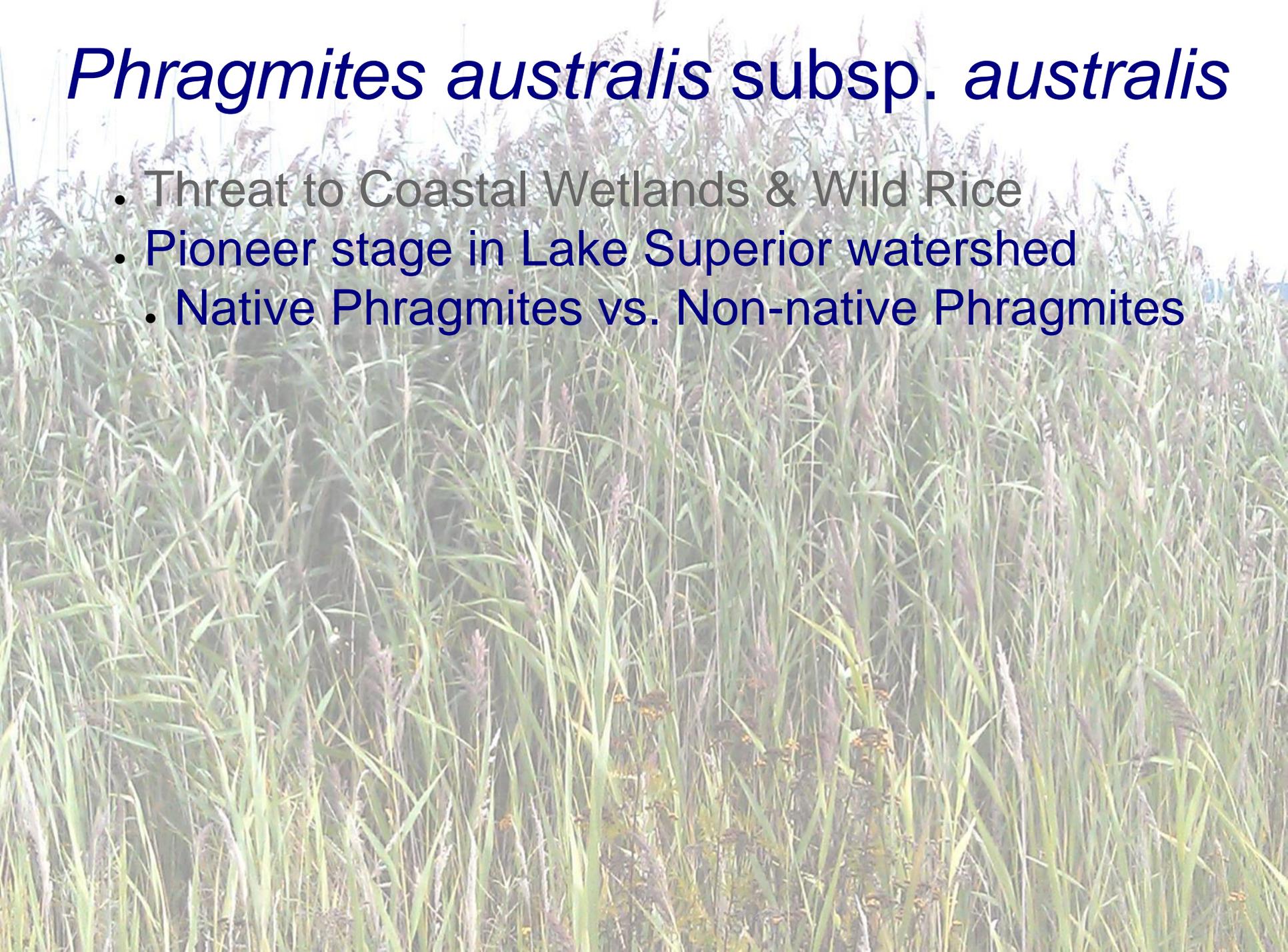


# Coastal Wetlands and Wild Rice

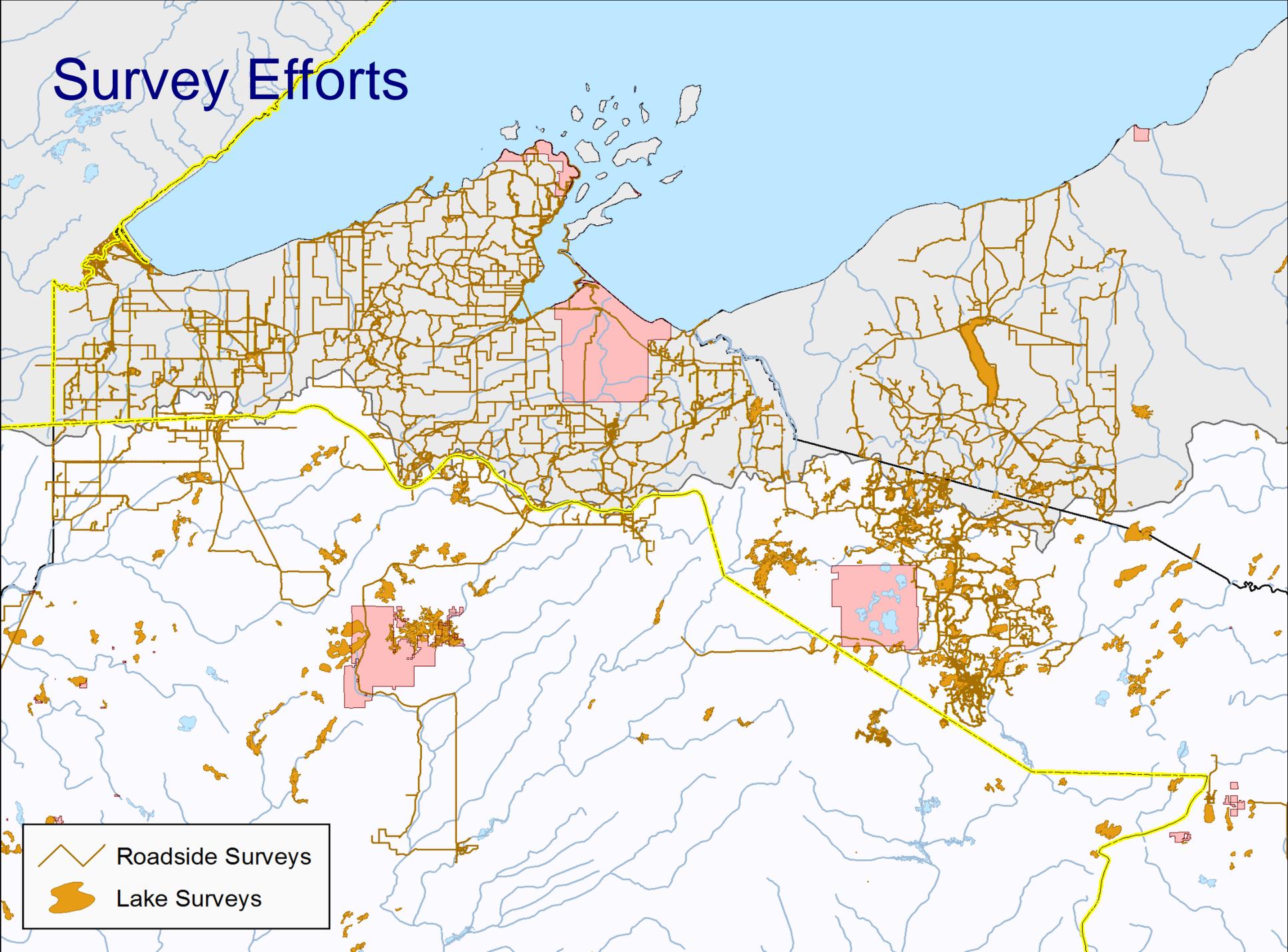


# *Phragmites australis* subsp. *australis*

- Threat to Coastal Wetlands & Wild Rice
- Pioneer stage in Lake Superior watershed
- Native *Phragmites* vs. Non-native *Phragmites*



# Survey Efforts



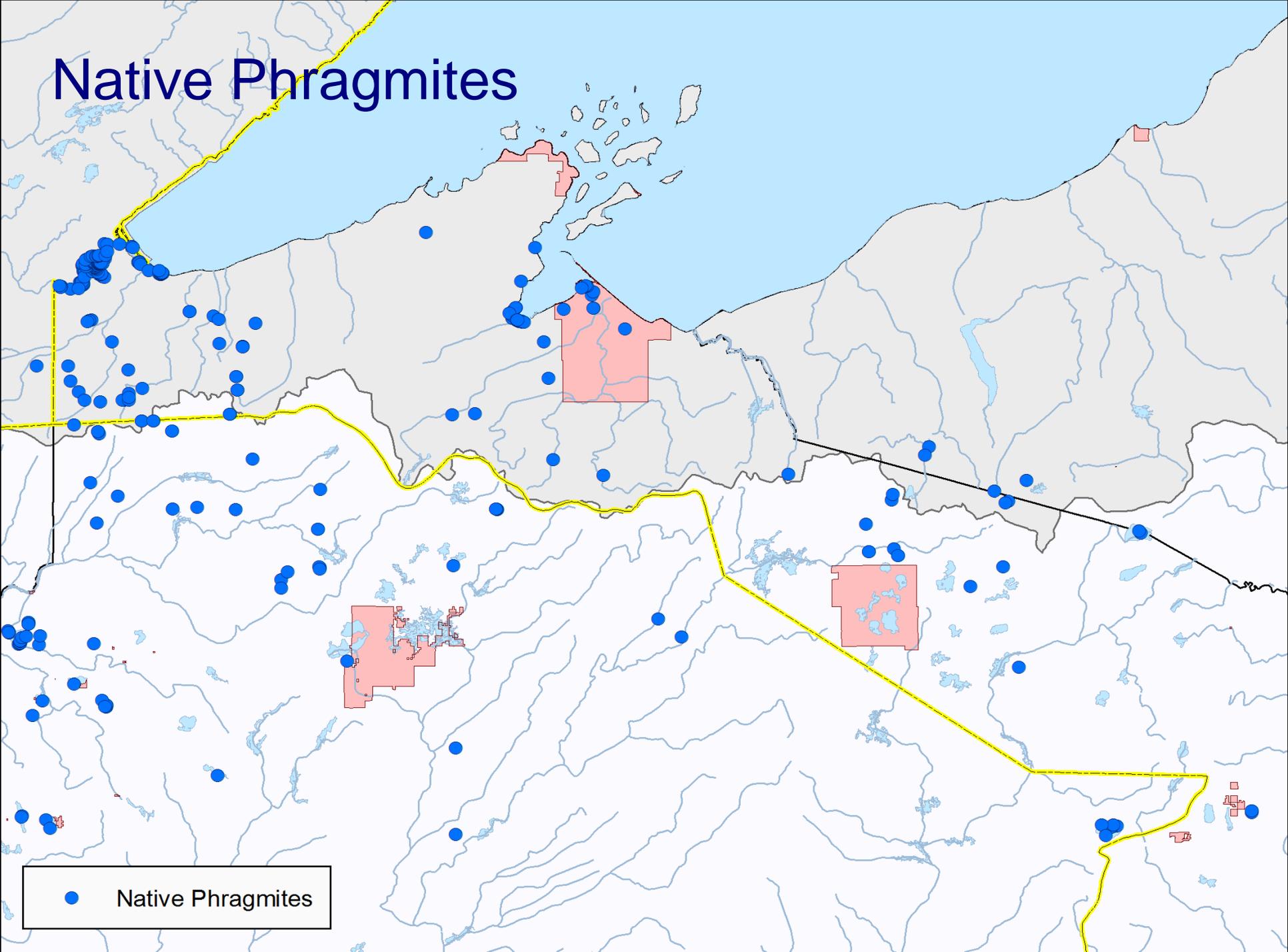
Yellow line

Roadside Surveys



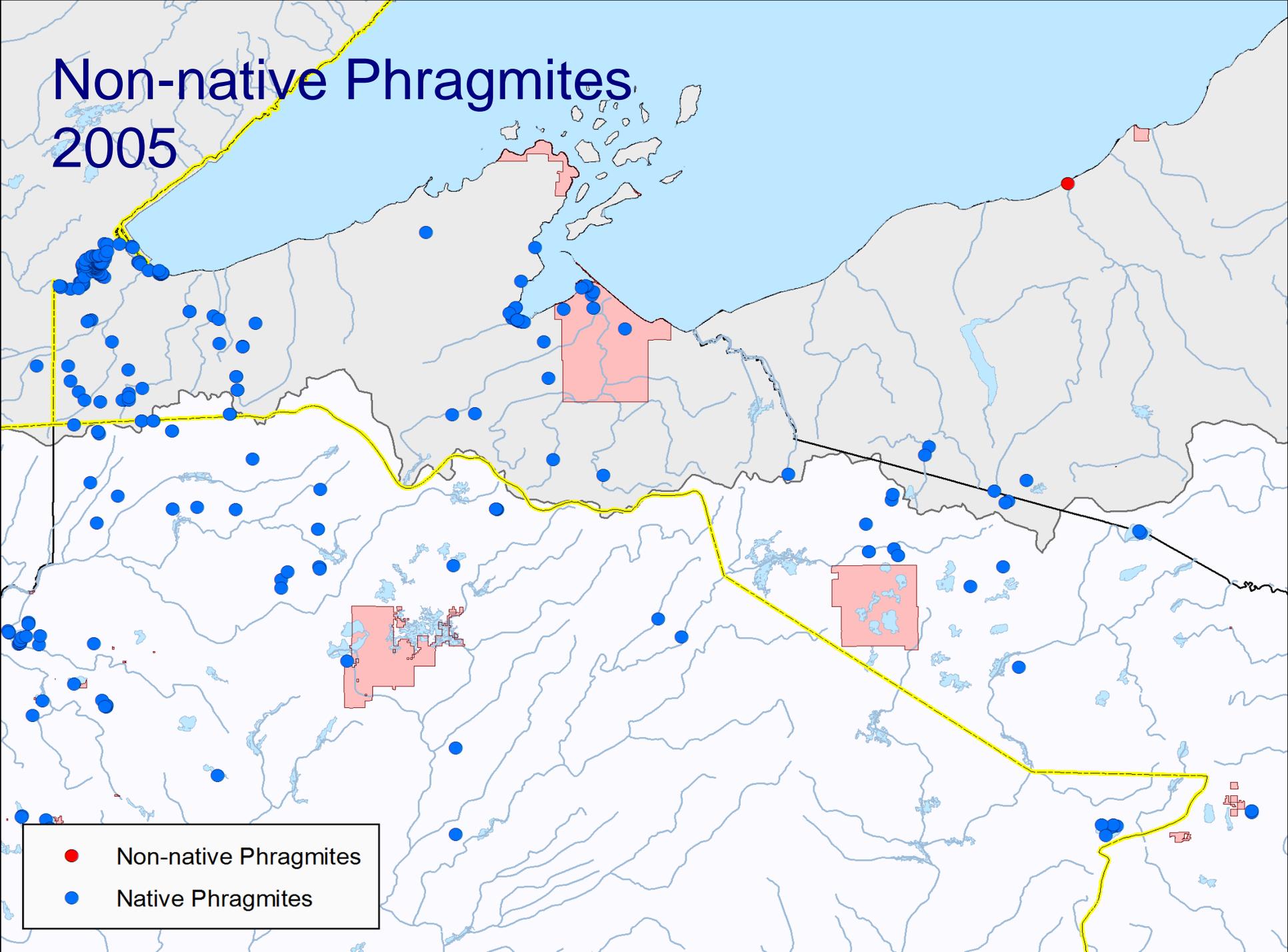
Lake Surveys

# Native Phragmites

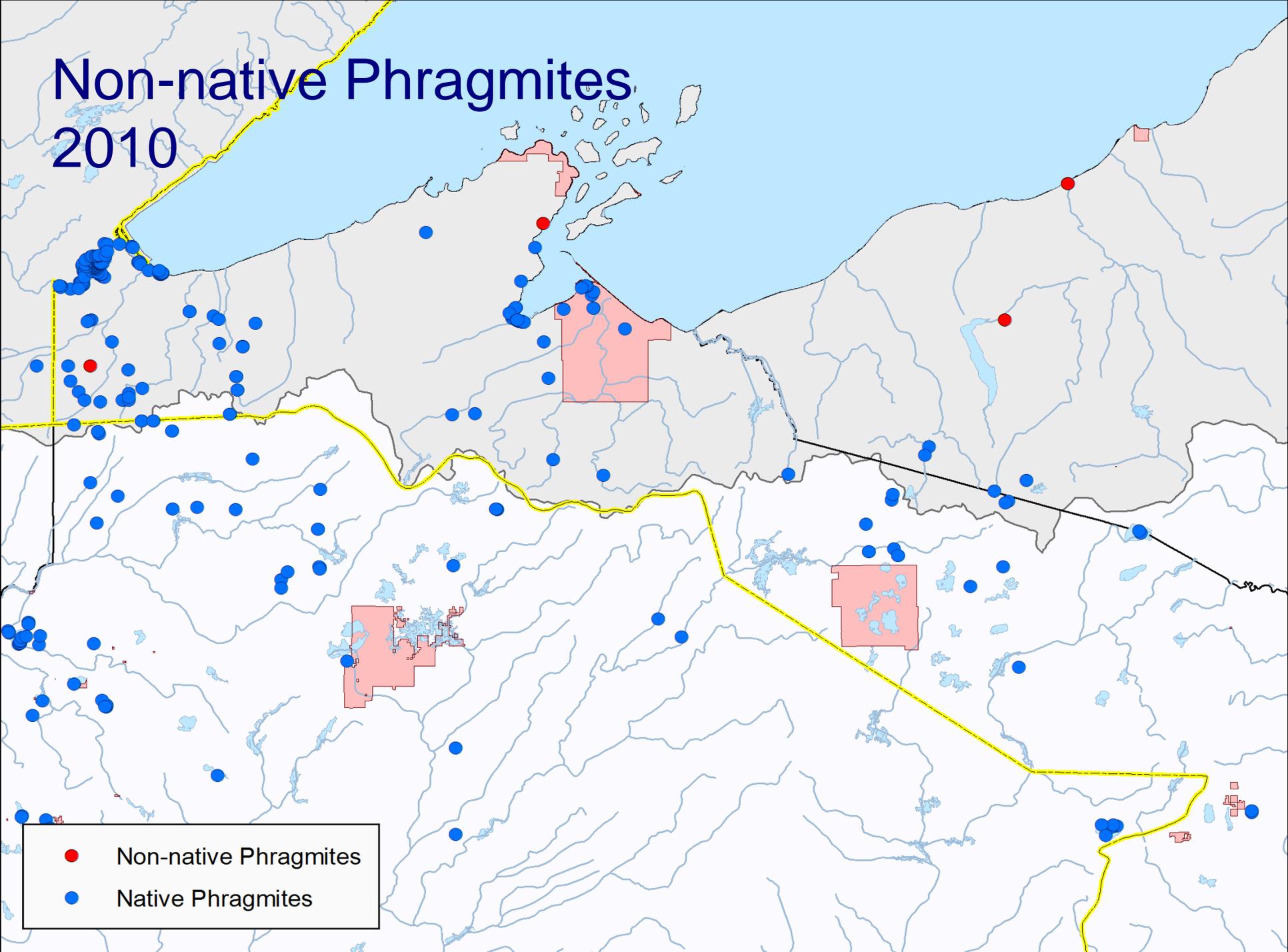


● Native Phragmites

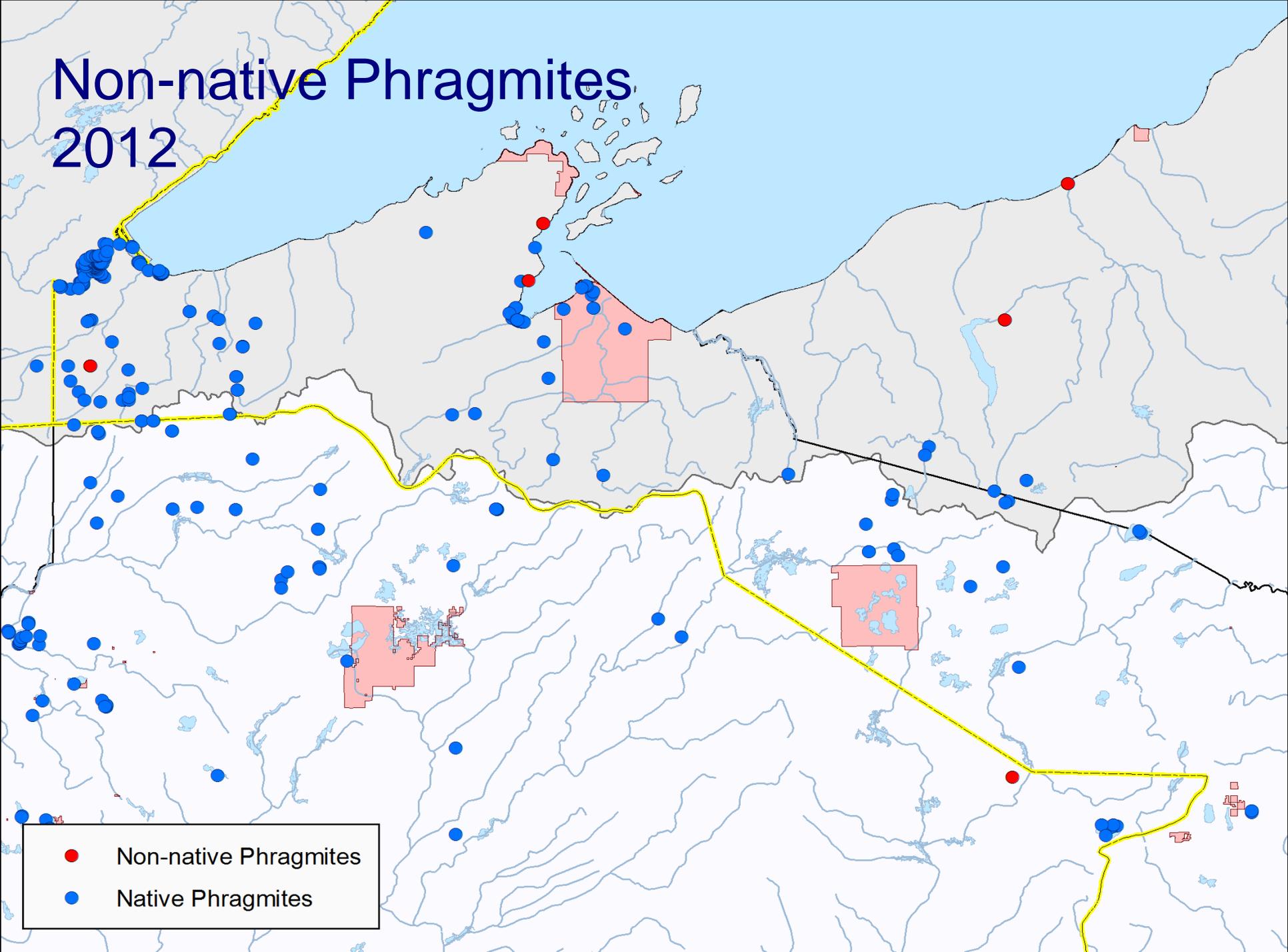
# Non-native Phragmites 2005



# Non-native Phragmites 2010



# Non-native Phragmites 2012



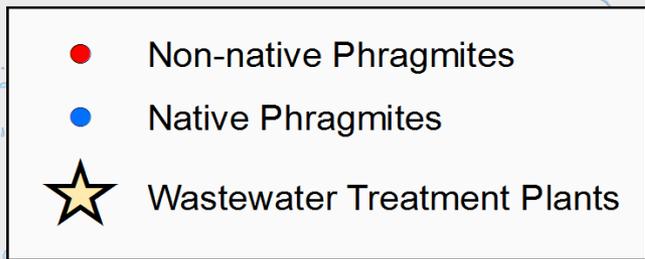
● Non-native Phragmites

● Native Phragmites

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- Threat to Coastal Wetlands & Wild Rice
- Pioneer stage in Lake Superior watershed
- Native *Phragmites* vs. Non-native *Phragmites*
- **Chequamegon Bay**
  - **Surveys & Management Response**
  - **GLIFWC, Red Cliff, NCWMA, NPS, Municipalities**
  - **WWTPs remain a seed source**

# Wastewater Treatment Plants

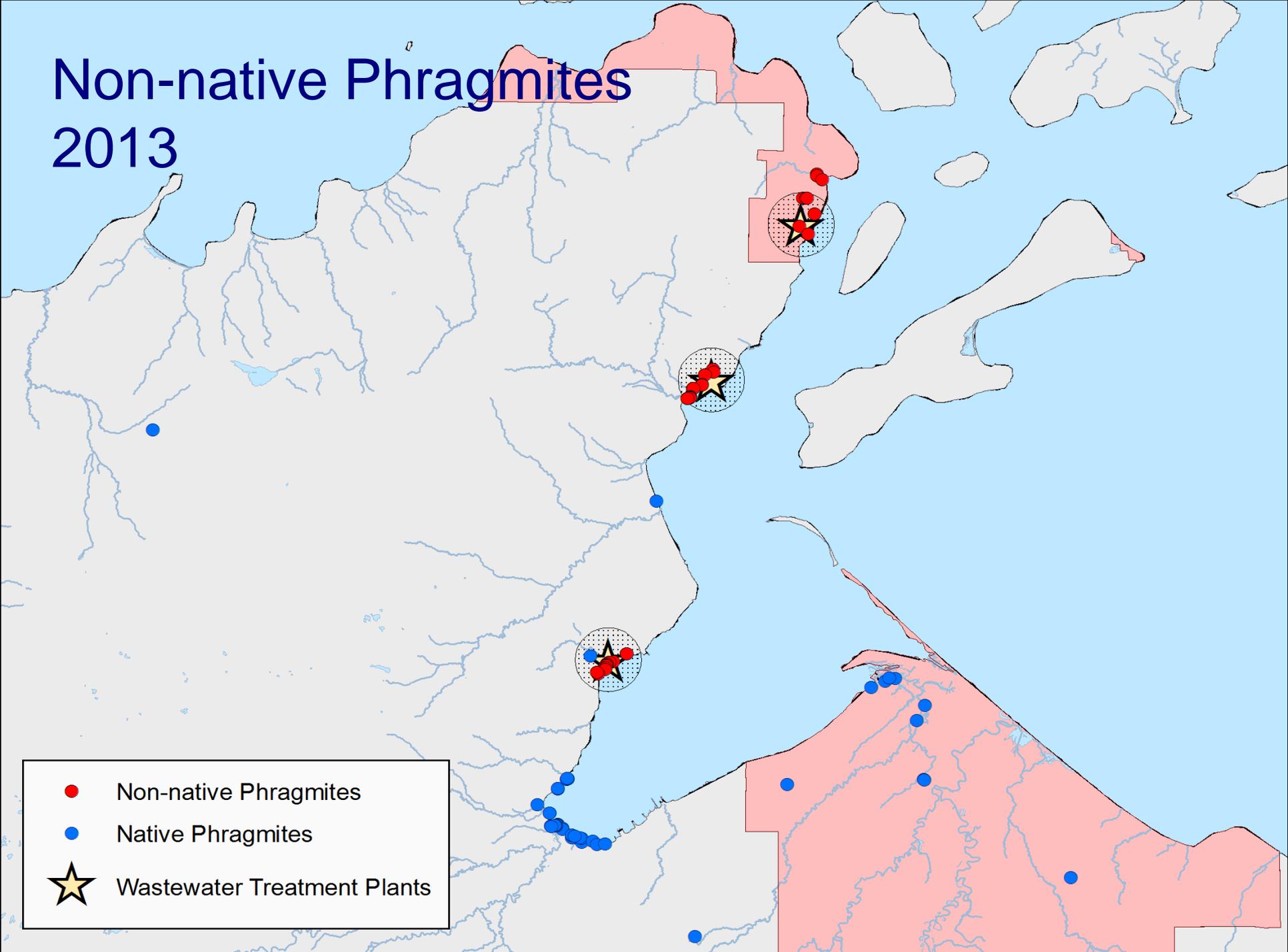


# Reed Bed at Washburn WWTP



# Non-native Phragmites 2013

- Non-native Phragmites
- Native Phragmites
- ★ Wastewater Treatment Plants





ATV Trail in Washburn

# Washburn WWTP: Seed Source



● Non-native Phragmites

# Vectors: Equipment



● Non-native Phragmites

# Vectors: ATVs



● Non-native Phragmites

# Vectors: Stolons, Rhizomes

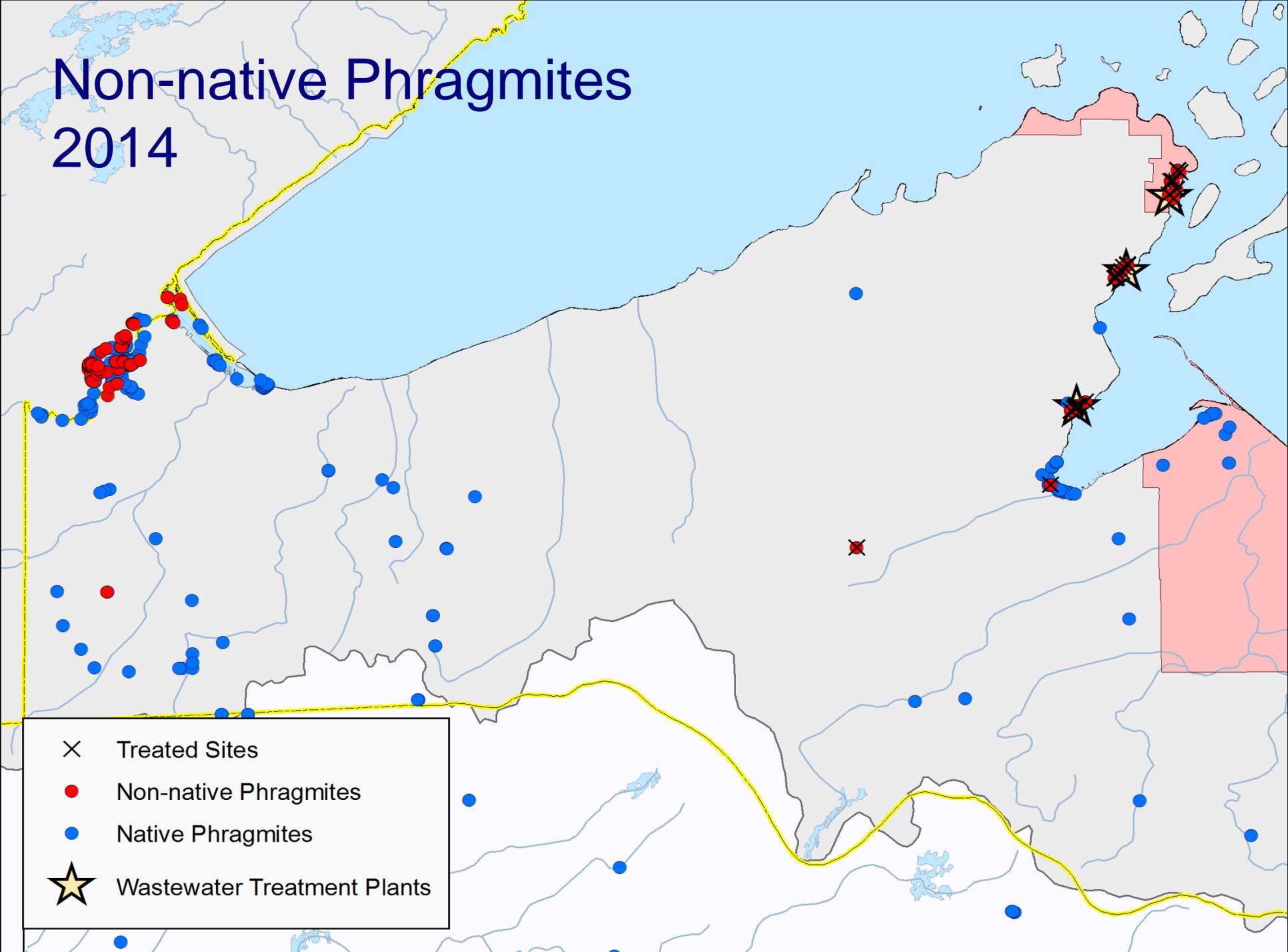
● Non-native Phragmites



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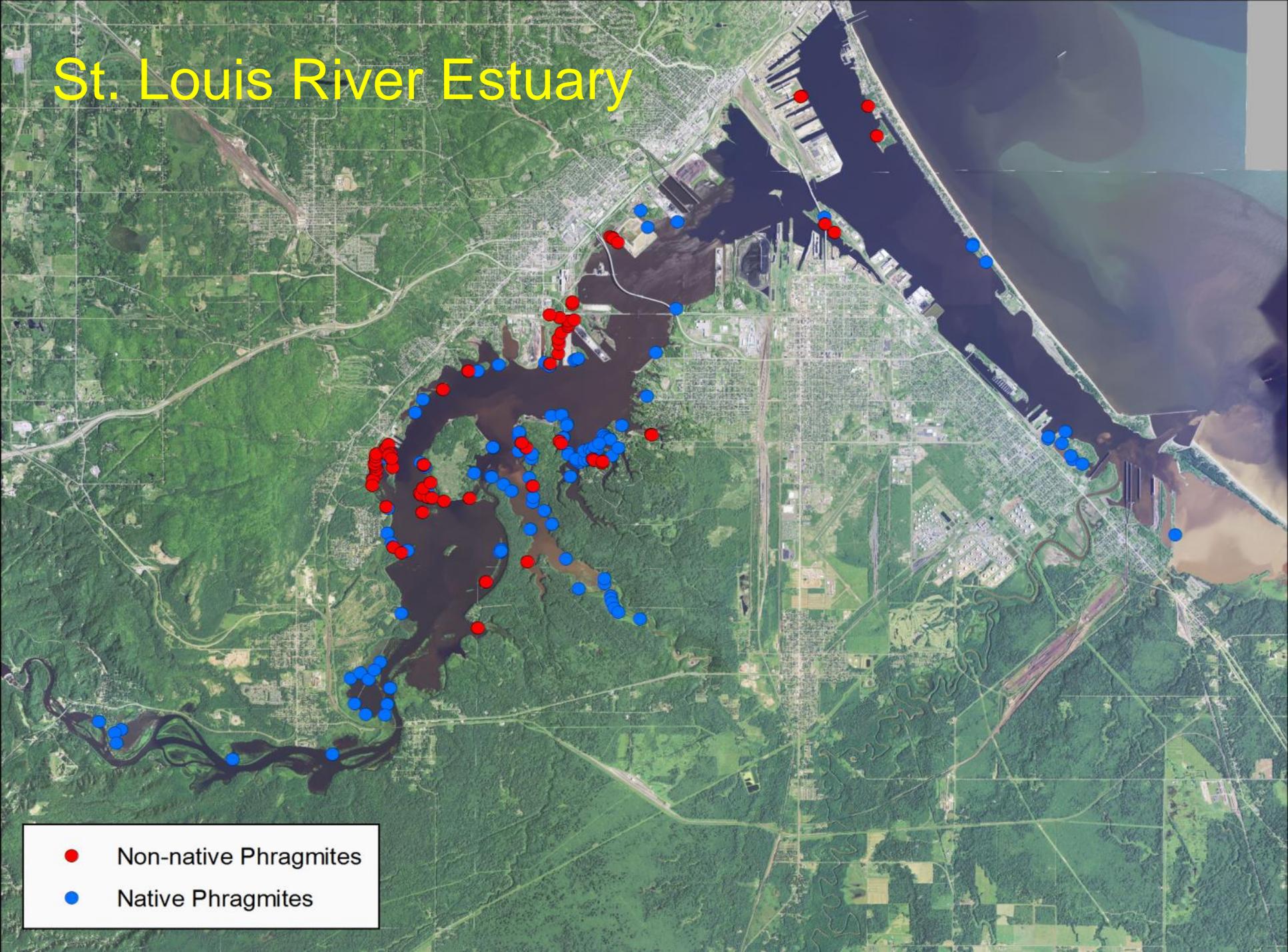
- Threat to Coastal Wetlands & Wild Rice
- Pioneer stage in Lake Superior watershed
- Native Phragmites vs. Non-native Phragmites
- Chequamegon Bay
  - Surveys & Management Response
  - GLIFWC, Red Cliff, NCWMA, NPS, Municipalities
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- **Ceded Territory – Verification**
- **Duluth - Superior**
  - Shoreline survey completed
  - Response planning initiated
  - GLIFWC, WDNR, MDNR, NERR
  - MN Sea Grant, Douglas County, City of Superior...

# Non-native Phragmites 2014



# St. Louis River Estuary

- Non-native Phragmites
- Native Phragmites



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