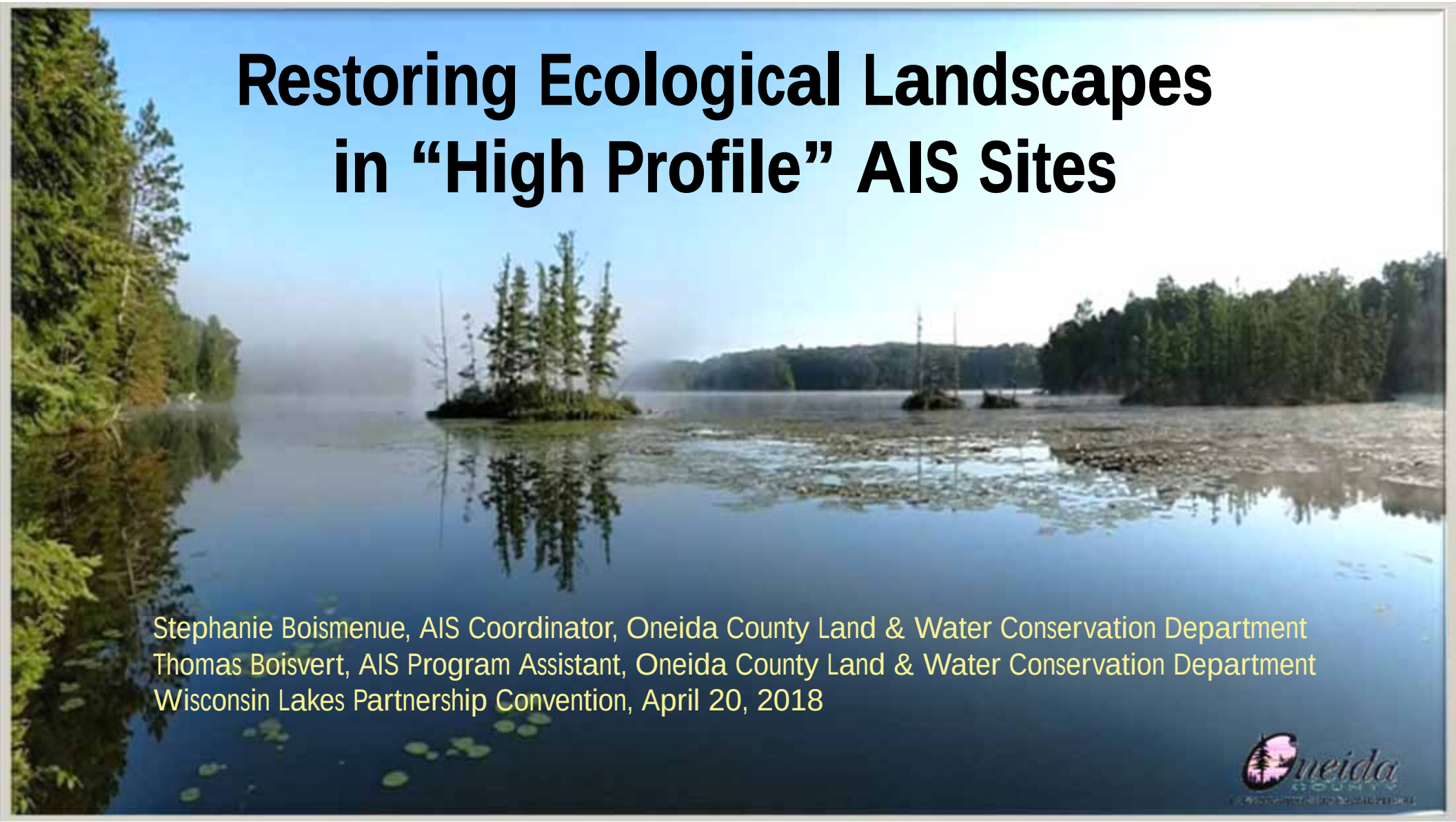
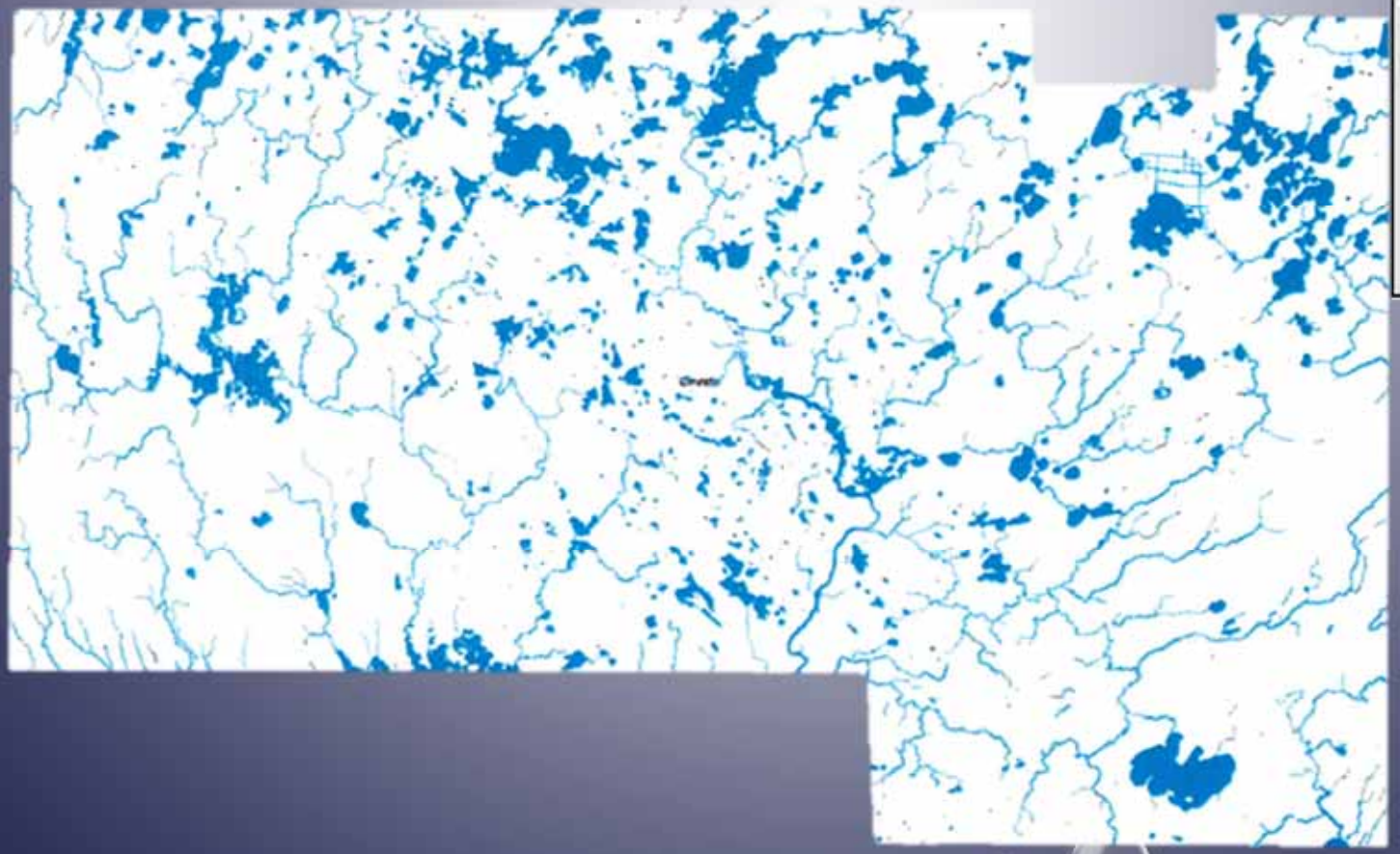
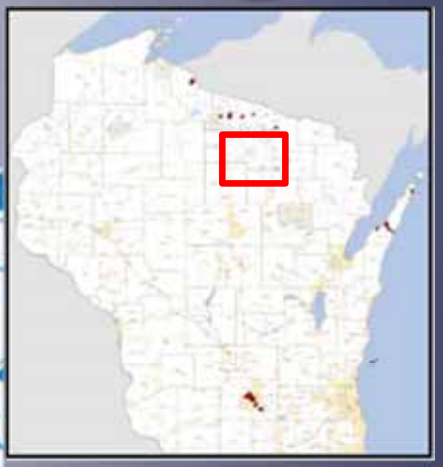
Restoring Ecological Landscapes in "High Profile" AIS Sites



Stephanie Boismenue, AIS Coordinator, Oneida County Land & Water Conservation Department
Thomas Boisvert, AIS Program Assistant, Oneida County Land & Water Conservation Department
Wisconsin Lakes Partnership Convention, April 20, 2018

Welcome to Oneida County, where we live, work, and play on water!





Desired Outcomes

Contain, control, manage, eradicate, rehabilitate, and restore two high profile AIS sites:

- Yellow Iris along the shoreline at the Boom Lake boat landing, Hodag Park, Rhinelander.
- Phragmites site located at the bottom of a highway drainage ditch.
- Native plants used at both sites were grown by Oneida County Land & Water.

Seed Sowing Party

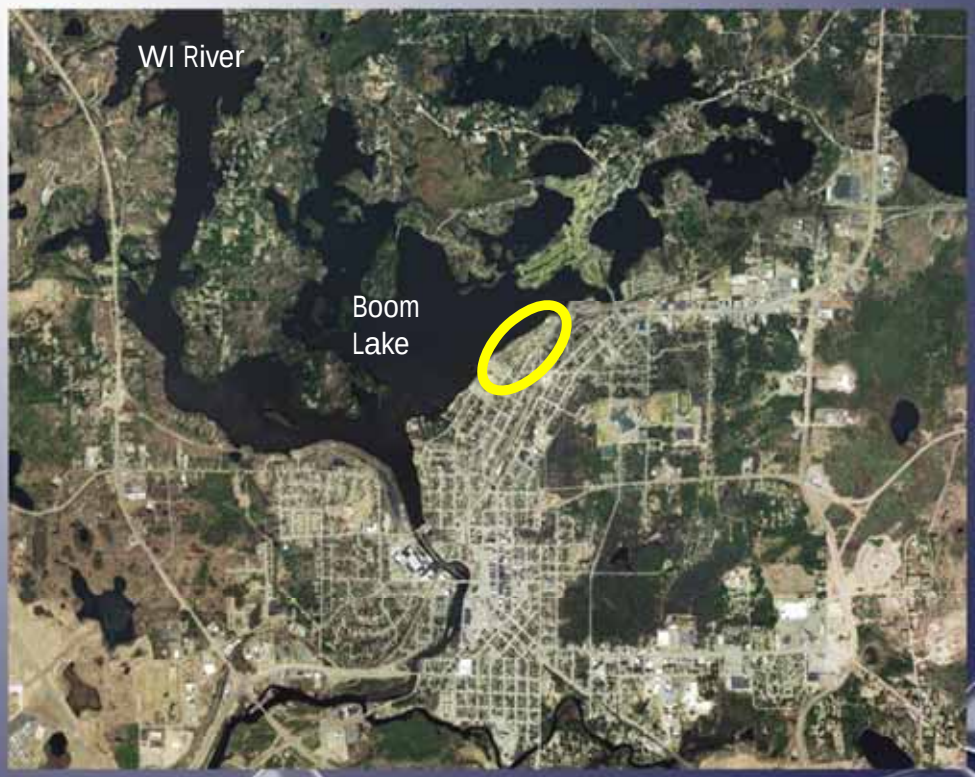
- Blue Flag Iris
- Joe-pye Weed
- Blue Vervain
- Swamp Milkweed
- Cord Grass


Restricted Aquatic Invasive Species
Yellow Flag Iris (Iris pseudacorus)
MUGSHOT
Oneida County AIS

Yellow Iris Restoration Site at Boom Lake Boat Landing, Hodag Park, Rhinelander

Why is this a “High Profile” site?

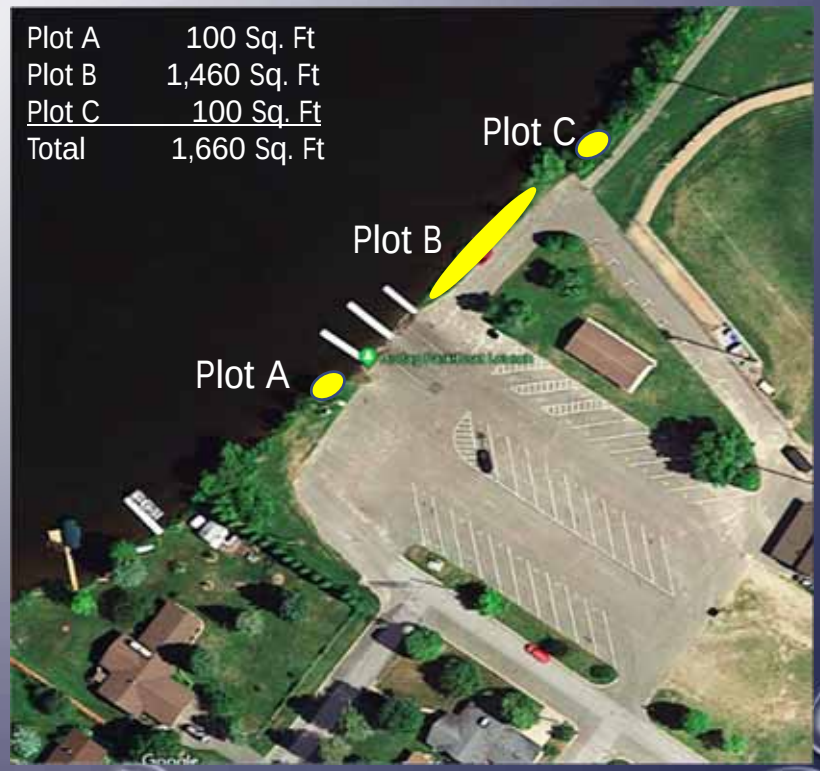
- The site is located at a heavily used boat landing.
- Hodag Park (32 acres) is the heaviest used recreational facility in the county.
- Park is located in a residential area.



Yellow Iris Restoration Site at Boom Lake Boat Landing, Hodag Park, Rhinelander

Hodag Park features:

- 5 paved boat launches & 25 trailer stalls,
- 3 docks and1public fishing pier,
- PFD's are available for kids – for free,
- Baseball/softball diamonds, park shelters, concession stands, playground equipment, and a swimming beach,
- Dogs are allowed in the park…. Yay!




Site B

Oneida County Aquatic Invasive Species (AIS) Team Presents

Aquatic Explorer Field Day

A Youth Hands-on Field Event

Exploring the Science Within Our Lakes




Connecting Youth to Lakes through:
*Youth Citizen Science
*AIS Monitoring
*Water Quality Monitoring
*Shoreline Habitat Restoration
*AIS Superstars
*Clean Boats, Clean Water







Site B – 2014 (L) and 2017 (R)


Phragmites Site Restoration Project, Rhinelander, WI
2014
2015
2016

Phragmites Restoration Site
Highway 8 West, Rhinelander

2013, Identified a 0.05-acre pioneer population of the non-native Phragmites australis.

Phragmites Restoration Site
Highway 8 West, Rhinelander

- The site is located in a wetland habitat at the bottom of a concrete run-off ditch, along Highway 8 just west of Rhinelander.
- The site extends across both WDOT highway right-of-way property and private property.

Phragmites Restoration Site
Highway 8 West, Rhinelander

Rapid Response Control Strategy:

- Work closely with partners, government organizations, and landowners to coordinate management plan and efforts
- Oneida County Land & Water provided monitoring, mapping, reporting, and data entry

Oneida County Land & Water developed a restoration plan to suit the needs of the sites habitat and ecosystem.

- Observe ecological health and complexities. Observations serves as a benchmark for evaluating the success of the restoration project.

Phragmites Restoration Site
Highway 8 West, Rhinelander

- OCLWCD's goal:
  - Provide rapid response, control, and removal of the Phragmites stand using both herbicide treatment (provided by WDNR), and manual removal (provided by OCLWCD).
  - Prevent it from spreading to new areas.
  - Remove biomass of dead standing stalks after herbicide treatments.
  - Restore the site to its natural wetland/marshy habitat by planting native plants.
  - Educate citizens about Phragmites.
  - Engaging school groups and volunteers in restoration efforts
  - Continue monitoring for Phragmites regrowth, monitor native plant development, and reevaluate the site to determine follow-up management.

Phragmites Restoration Site
Highway 8 West, Rhinelander

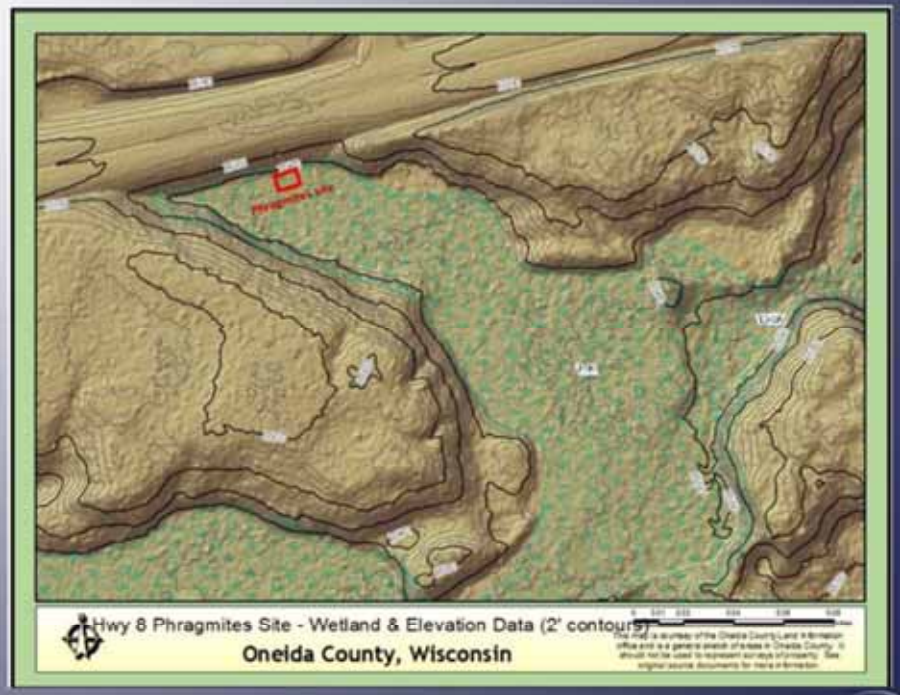
From 2014-2017, OCLWCD's AIS Team visited the site 15 times to:

- Determine the efficacy of both herbicide applications,
- Monitor for new growth,
- Prepare the site for a second herbicide application by removing the biomass of dead, standing culms (stems),
- Implement restoration activities.

Timeline of Completed Actions	(Completed by):
07/28/14 – Site monitored	OCLWCD
08/02/14 – Site monitored	OCLWCD
09/22/14 – Herbicide treatment	WDNR
10/07/14 – Site monitored	OCLWCD
04/15/15 – Site monitored	OCLWCD
04/27/15 – Manual removed	OCLWCD
05/21/15 – Biomass removed	OCLWCD
06/23/15 – Site monitored	OCLWCD
09/18/15 – Herbicide treatment	WDNR
10/01/15 – Site monitored	OCLWCD
06/16/16 – Site monitored	OCLWCD
07/06/16 – Site monitored	OCLWCD
08/17/16 – Site monitored	OCLWCD
09/14/16 – Site restoration: phase 1	OCLWCD
06/01/17 – Site monitored	OCLWCD
07/12/17 – Site monitored	OCLWCD
10/13/17 – Site monitored & restoration: Phase 2	OCLWCD

Phragmites Restoration Site
Highway 8 West, Rhinelander

- Observations concluded:
- Site was located at the bottom of a roadside ditch and therefore the restoration plants would have to be tough enough to withstand being the first receiving entity of runoff flowing down the concrete drainage channel from Highway 8 above.
- In addition, runoff could potentially carry with it contaminates, including road salt.
- Other considerations included selecting native species appropriate to the area and habitat, species that could establish quickly, would improve the health and function of the ecosystem, provide stabilization to the erosion-prone site, and attract pollinators.
- Site had to be herbicide-free for one year before planting young plants.



Pre-herbicide treatment.
(Boismenue, 7/8/14)

Post-herbicide treatment.
Herbicide applied 9/22/14.
(Boismenue 4/15/15)

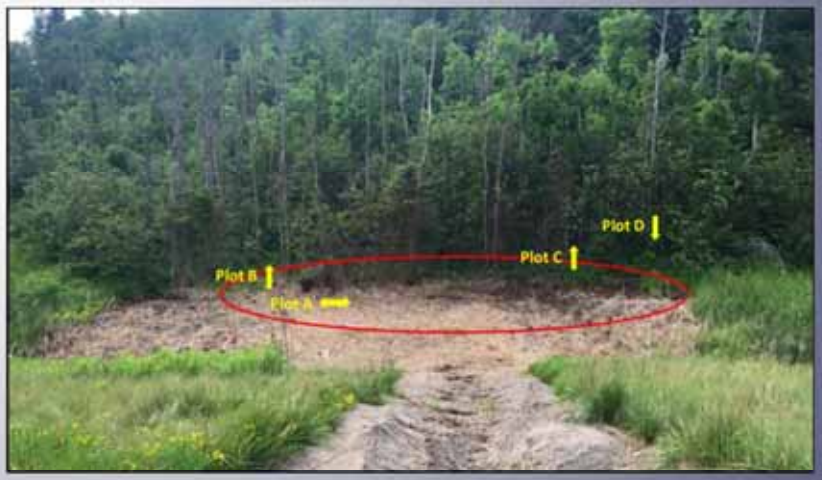
4/27/15 Phragmites manual removal project.
(Photo by Michele Sadauskas)

4/27/15 Phragmites manual removal project.
(Photo by Steph Boismenue)

Cutting and bagging seed heads. (Photo by Michele Sadauskas)

John is using a garden a sickle to cut the stalks at their base.

(Photo by S. Boismenue, 4/27/15)



- Site visit 6/23/15: New growth and plots labeled.
  - Plot A: 0 live plants. (45.61942657, -89.48020553)
  - Plot B: 5 live plants, max height of 4 feet, 4 inches. (45.61939439, -89.48012274)
  - Plot C: 9 live plants, max height of 4 feet, 6 inches. (45.6193422, -89.48023085)
  - Plot D: 9 live plants, max height of 5 feet, 7 inches. (45.619344, -89.480374)

- Second herbicide treatment applied 8/18/2015

Restoration Day – September 14, 2016

- Planted over 200 2” native plant plugs
  OCLWCD collected native seeds the prior fall
  - Cordgrass
  - Blue Vervain
  - Blue Flag Iris
  - Joe-Pye Weed

Benefit: Provides a cost effective, bountiful supply of restoration plants.

Restoration Day
9/24/16

July 2017

Final Thoughts

Benefits of removing biomass before the second herbicide treatment:

- Improved access to the center area within the site,
- Exposed green vegetation, and
- Allowed the herbicide application to reach/penetrate any new growth.
- Exposing green vegetation allowed the herbicide applicator to identify the invasive Phragmites from native vegetation, thus avoiding applying the herbicide to native plants within the treatment site.


Thank You