Restoring Native Habitats Through Invasive Species Management

Peter Zimmer

Stewardship Specialist

NYS OPRHP – Thousand Islands Region

Why does it matter?

- § 3.09(15) of the Parks, Recreation and Historic Preservation Law directs OPRHP to:
- “Enhance the natural resources within the State park, recreation and historic site system by providing habitat for various wildlife species, including endangered and threatened species of fauna through practices such as ecological restoration, wetland conservation and the planting of trees, shrubs and herbaceous plants indigenous to the area which act as food and protective cover for fauna. Selection of plant species or communities of species shall take into consideration the natural, ecological, historic, archaeological, aesthetic, and public use resources in the immediate areas as well as the management goals of the park or site”

Why does it matter?

- § 9-1705 of the Environmental Conservation Law establishes the New York Invasive Species Council to, among other responsibilities, coordinate State actions to phase-out uses of invasive species and expand the use of native species as alternatives to non-native species. OPRHP is a member of the council

Why does it matter?

- Natural Resources Directive: NR-POL-013
    1. Identify and maintain native plant populations and natural communities, improving the overall quality of habitat and biodiversity within State parks and historic sites
    2. Control the introduction and spread of invasive species to reduce competitive displacement and loss of habitat, focusing on invasive species that pose the greatest ecological and operational concerns within specific parks, sites, and regions of the state. Subject to the availability of funding and effective control strategies, implement invasive plant removal projects in priority locations
    3. …utilize native plants in all landscaping, re-vegetation, erosions control, and habitat restoration projects.

Why does it matter?

4. …landscaping and restoration projects should utilize native plants and seeds that are derived from NY State and ideally from that ecoregion within the state.
5. Develop partnerships and stewardship projects to increase OPRHP's capacity to prevent the introduction and spread of invasive plants and reduce their impacts on native plants.
6. Conserve populations and habitats of endangered, threatened, and rare plants and plant communities located within State parks and historic sites by reducing threat from invasive species.
7. Implement education, research, and monitoring projects that support native plant conservation and restoration.

Environmental Stewardship in Parks

- The goal of environmental stewardship is to ensure long term maintenance, protection, and resilience of ecosystems in order to protect the natural environment and support our mission and conservation laws. In conjunction with providing and protecting recreational and cultural resources, NY State Parks will protect biological diversity and ecosystems within the park system. By implementing projects that address environmental stewardship priorities, the Agency will work towards meeting this goal.

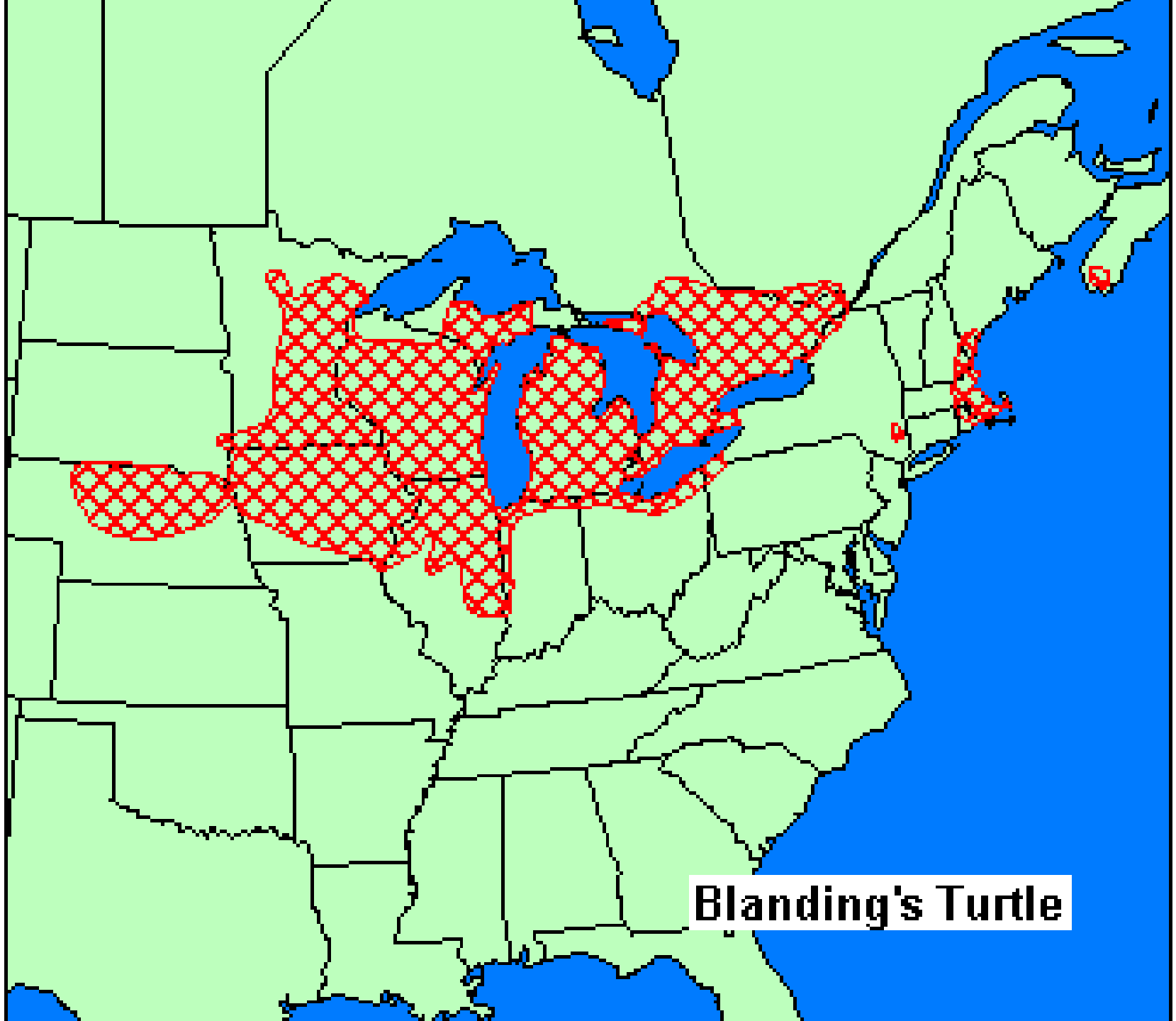

N
Legend
state park - outline
Miles
0
1
2
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Case in Point – Wellesley Island State Park

- Wellesley Island State Park is TI's largest camping complex (432 campsites, 10 cabins, 12 cottages, 150 slip marina, pavilion, and Nature Center)
- Total attendance records for the Park in excess of 200,00 patrons each year
- 31 Occurrences of Rare, Threatened, or Endangered species, animal assemblages
- 5 Significant Natural Communities
- ~1400 records on iMap Invasives

Blanding's Turtles (*Emydoidea blandingii*)

- NYS Threatened species
- Known to travel great distances (for a turtle) to nesting sites, to find mates, food, or new habitat
- Northern NY is on the edge of their range
  - Isolated populations in Southeastern NY
- Reach maturity at 14-20 years
- Most charismatic turtle


Blanding's Turtle

Threats to Blanding's Turtles

- Habitat Loss and Fragmentation – can be specifically caused by invasive Phragmites
- Road Mortality
- Illegal Collection and Persecution by humans
- Climate Change – may bring new diseases
- Gaps in Data


Wellesley Island State Park
Phragmites Treatment Plan
N
W
E
S
1.011 ac
0.346 ac
0.192 ac
0.229 ac
0.253 ac
0.389 ac
0.084 ac
0.092 ac
0.040 ac
0.786 ac
0.101 ac
0.347 ac
Legend
Phragmites (acreage)
state_park_boundary
0
400
800
1,600 Feet
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


WGS84
±16ft
44.31887, -76.02220
ft
±10ft
246
°,T
±15
SE158
Created with
free version of
GPS Camera 55
0.229 ac Patch Ad-hoc West side of Park Entrance Rd
Wellesley Island State Park, 44655–44799 Cross Island Rd, US
27-Sep-19 11:37:15


WGS84
±16ft
44.32544, -76.02410
ft
±13ft
264
°,T
±15
N2
Created with
free version of
GPS Camera 55
1.011 ac Pond Patch Ad-hoc Northernmost patch
Wellesley Island State Park, 44926–44936 Cross Island Rd, US
27-Sep-19 11:53:35


WGS84
±16ft
44.31876, -76.02217
ft
±10ft
254
°,T
±15
NE31
Created with
free version of
GPS Camera 55
0.346 ac Patch Ad-hoc NE of Park Entrance Rd
Wellesley Island State Park, 44655–44799 Cross Island Rd, US
27-Sep-19 11:57:06

Policy on Pesticide Reduction in State Parks and Historic Sites

Executive Order 4 (EO4), adopted in April 2008, establishes general state policy as well as specific guidance to minimize pesticide use by state agencies. Under EO4, specifications have been adopted by the Interagency Committee on Green Procurement and Sustainability regarding *Turf and Ornamental Management* and *Pest Management*. This policy is based on these specifications. However, OPRHP will go beyond the requirements outlined in the EO4 specifications by eliminating pesticide use to the maximum extent possible. Through the use of IPM, OPRHP will manage pests using mechanical, sanitary, cultural, or biological means with the use of chemicals to control pests as a last resort. Integrated Pest Management Services are currently available on New York State Contract (OGS/PSG Group 71010). OPRHP will adhere to these contract specifications along with guidance outlined in this policy.

Environmental Review and Permitting

- State Environmental Quality Review Act (SEQRA)

Part 617.4 (9) for actions involving historic resources or Part 617.4 (10) for action on Parkland reduce thresholds to 25% of any threshold in this section.

(6) activities, other than the construction of residential facilities, that meet or exceed any of the following thresholds; or the expansion of existing nonresidential facilities by more than 50 percent of any of the following thresholds:

(i) a project or action that involves the physical alteration[1] of 10 acres;

Notes: This is the most commonly used threshold for Type I actions in OPRHP facilities as it involves any project that will physically alter 2.5 or more acres of parkland (due to the reduced threshold for activities on parkland.)

Examples: where physical alteration is 2.5 acres or more for construction of new camping loop or cabin area, major reconstruction of an existing day use area, control of Phragmites using an herbicide or construction of a solar array/installation. The **expansion** of any existing non-residential facility that will require the disturbance of more than 1.25 acres (expanding a visitor center with additional parking).

Environmental Review and Permitting

- Permits
- Joint Application for Permit
  - Sent to NYS DEC (state regulated freshwater wetlands), USACOE, NYS OGS, NYS DOS
  - This project triggered 2 permits from NYS DEC – Article 24 and Article 15 Permits

Management

Management

- Foliar spray of Imazamox (Clearcast®)
- Fall, after Phragmites has flowered and before first killing frost and once Blanding's turtles are least active for the season
- Cut dead culms each winter/early spring
- Monitor throughout each growing season
- Collect seed from native species for restoration


WGS84
±16ft
44.31876, -76.02217
ft
±10ft
254
°,T
±15
NE31
Created with
free version of
GPS Camera
0.346 ac Patch Ad-hoc NE of Park Entrance Rd
Wellesley Island State Park, 44655–44799 Cross Island Rd, US
27-Sep-19 11:57:06


WGS84
±16ft 44.32544, -76.02410
ft
±13ft 264
°,T
±15 N2
Created with
free version of
GPS Camera 55
1.011 ac Pond Patch Ad-hoc Northernmost patch
Wellesley Island State Park, 44926–44936 Cross Island Rd, US
27-Sep-19 11:53:35

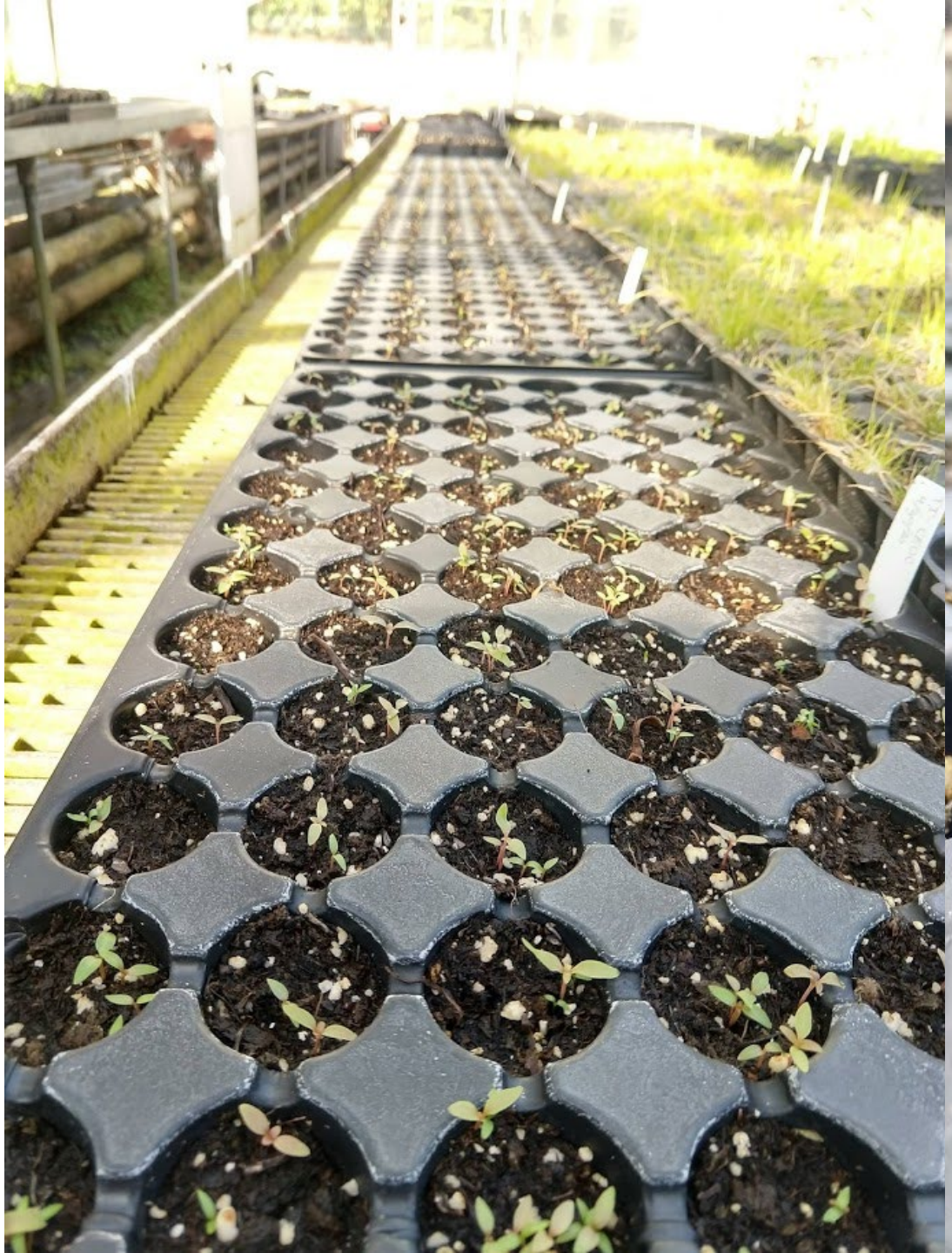

WGS84
±16ft
44.31888, -76.02199
ft
±10ft
247
°,T
±15
SE110
Created with
free version of
GPS Camera 55
0.389 ac Patch Ad-hoc East of Park Entrance Rd
Wellesley Island State Park, 44654–44798 Cross Island Rd, US 27-Sep-19 11:36:37

Restoration

- Partnered with OPRHP Plant Materials Program in FL
  - Shout out to Brigitte Wierzbicki, Dave Rutherford and more
- Developed native planting list
- Collected seed from the ecoregion (often from Wellesley Island)
- Much of this seed is then propagated at Sonnenberg Gardens
  - Some seed is cleaned and stored properly for long term storage
- This native, genetically appropriate plant material will then be planted in the treated areas (2022)

Common Name	Species	Project	Ecoregion
buttonbush	*Cephalanthus occidentalis*	BT	83c
silky dogwood	*Cornus amomum*	BT	83c
swamp rose	*Rosa palustris*	BT	83c
meadowsweet	*Spiraea alba*	BT	83c
arrowwood	*Viburnum dentatum*	BT	83c
nannyberry	*Viburnum lentago*	BT	83c
swamp milkweed	*Asclepias incarnata*	BT	83c
canada bluejoint grass	*Calamagrostis canadensis*	BT	83c
sedges	*Carex spp. (C. crinita, C. lacustris, C. lupulina, C. lurida, C. projecta, C. stricta, C. tuckermanii, C. vulpinoidea)*	BT	83c
flat-topped white aster	*Doellingaria umbellata*	BT	83c
three-way sedge	*Dulichium arundinaceum*	BT	83c
mana grass	*Glyceria (G. striata, G. canadensis)*	BT	83c
blue iris	*Iris versicolor*	BT	83c
swamp candles	*Lysimachia terrestris*	BT	83c
sensitive fern	*Onoclea sensibilis*	BT	83c
cinnamon fern	*Osmunda cinnamomea*	BT	83c
American water smartwee	*Persicaria amphibia*	BT	83c
mild water pepper	*Persicaria hydropiperoides*	BT	83c
arrow-leaved tear thumb	*Persicaria sagittata*	BT	83c
fowl bluegrass	*Poa palustris*	BT	83c
native knotweed spp.	*Polygonum spp.*	BT	83c
three-square bulrush	*Schoenoplectus pungens*	BT	83c
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	BT	83c
dark green bulrush	*Scirpus atrovirens*	BT	83c
common woolgrass	*Scirpus cyperinus*	BT	83c
marsh skullcap	*Scutellaria galericulata*	BT	83c
swamp goldenrod	*Solidago gigantea*	BT	83c
bur-reed	*Sparganium spp.*	BT	83c
steeplebush	*Spiraea tomentosa*	BT	83c
marsh fern	*Thelypteris palustris*	BT	83c
blue vervain	*Verbena hastata*	BT	83c


T1 - SPAL - 4
e/T - CAPE - 4




TI-ILVE