

An aerial photograph of a coastal landscape. In the foreground, a wide, light-colored sandy beach runs diagonally from the bottom left towards the middle right. Behind the beach is a line of green dunes and wetlands, with some water visible in the background. The sky is a clear, pale blue. The text is overlaid on the left side of the image.

# Developing a Comprehensive Invasive Species Management Plan

**For the Eastern Lake Ontario Dunes and Wetlands Area**

**SLELO PRISM Special Project**

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Co-Chair Eastern Lake Ontario Dune Coalition

Restoration Project Manager, Cardno



# OVERVIEW OF THE PROJECT

- Dunes Foundation
- Significance of the ELO Dunes and Wetlands System
  - Threatened/endangered species
- Targeted Invasive Species
- Methods and Mapping
  - Stakeholder engagement
- Outcomes
- Preliminary field data
- Next Steps



# ELO DUNES FOUNDATION

- Volunteer Board of Directors
- Projects
  - Dune Traffic Signage
  - 2016: PIPL Volunteer Program
  - 2020: NYSDEC Non-Ag Non-Point Source Planning Grant
    - Shoreline Feasibility Study
  - 2021 SLELO PRISM Special Project



[www.easternlakeontariodunesfoundation.com](http://www.easternlakeontariodunesfoundation.com)



# ELO DUNES AND WETLANDS AREA

- 17 miles of freshwater barrier beach
  - National Natural Landmark
  - Audubon Important Bird Area
  - Significant Coastal Fish and Wildlife Habitat
  - Proposed National Marine Sanctuary
- Recreation and Tourism
- Ecosystem Services
  - Protective barrier beach





# SIGNIFICANT SPECIES AND HABITATS

Common Name	Scientific Name	Comments
Pirate Perch	<i>Aphredoderus sayanus</i>	Rare fish fairly uncommon in NY inland of the coast. This occurrence represents one of three occurrences in inland waters of NYTD
Least Bittern	<i>Ixobrychus exilis</i>	A state-threatened bird whose breeding occurrences are uncommon and whose non-breeding occurrences are critically imperiled.
Black Tern	<i>Chlidonias niger</i>	A state-endangered species whose range is restricted to less than 15 sites and 150 pairs of breeding pairs.
Caspian Tern	<i>Sterna caspia</i>	A species whose only breeding population occurs on Little Galloo Island in eastern Lake Ontario. It is susceptible to death by exposure to Botulism-E toxin.
Noctuid moth	<i>Abagrotis barnesi</i>	The only recorded occurrence of this species in NY.
Bogbean Buckmoth	<i>Hemileuca sp.</i>	One of three known occurrences in NY. All occurrences in Oswego County.
Champlain Beachgrass	<i>Ammophila breviligulata</i>	One of two known locations for this species in NY.
Rough Aven	<i>Geum laciniatum</i>	One of three known locations for this species in NY.
Sand Dune Willow	<i>Salix cordata</i>	Only known area for this species in NY.
Dunes		Largest and most extensive freshwater dunes in NY.
Silver Maple-Ash Swamps		Excellent examples of this community type. Pristine and high quality swamps.

# SIGNIFICANT SPECIES AND HABITATS



Great Lakes piping plover  
Federally endangered



Low sand cherry  
NYS endangered



Dune willow  
NYS threatened



Champlain beachgrass  
NYS endangered



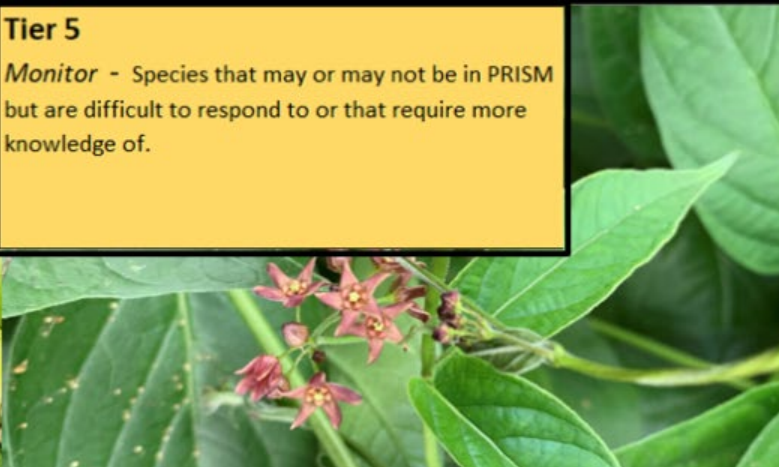
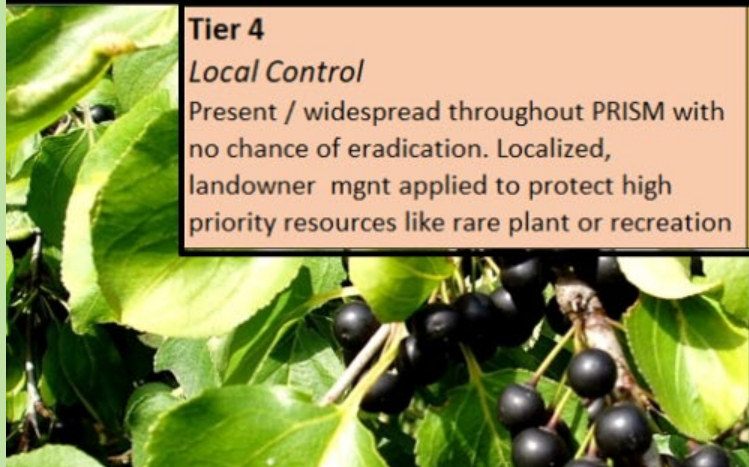
# SLELO TIERED SPECIES LIST



**Tier 1**  
*Prevention/Early Detection Spp.*  
Not in PRISM, but within 100 mile buffer or introduction pathway exists. Highest level of early detection survey efforts.

**Tier 2**  
*Eradication*  
Present in PRISM, but at low abundance making eradication feasible within Priority Conservation Areas (PCA's).

**Tier 3**  
*Suppression*  
Too widespread for eradication from PRISM. Targeted management to suppress the population within Priority Conservation Areas (PCA's).



**Tier 4**  
*Local Control*  
Present / widespread throughout PRISM with no chance of eradication. Localized, landowner mgmt applied to protect high priority resources like rare plant or recreation

**Tier 5**  
*Monitor* - Species that may or may not be in PRISM but are difficult to respond to or that require more knowledge of.

## Tier 2 Eradication

Porcelain Berry

## Tier 3 Suppression

Common+ Glossy Buckthorn

Swallow-worts

Japanese knotweed

Japanese stiltgrass

Oriental bittersweet

Phragmites

Wild chervil

Amur Honeysuckle\*

## Tier 4 Local Control

EAB

Purple loosestrife

Spotted knapweed

Wild parsnip



# WHY IS THIS IMPORTANT ?

- Outcompete native protected plants
- Poor dune stabilization
- Impact protected species habitat

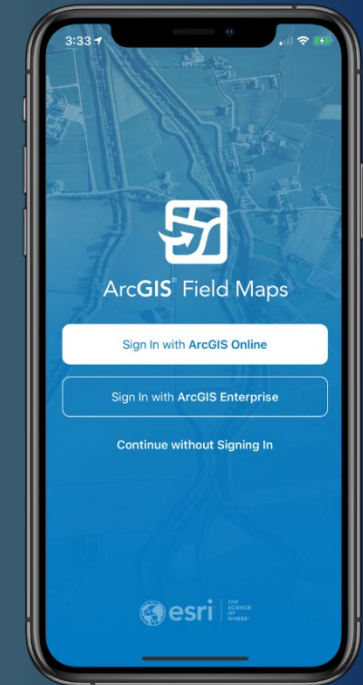
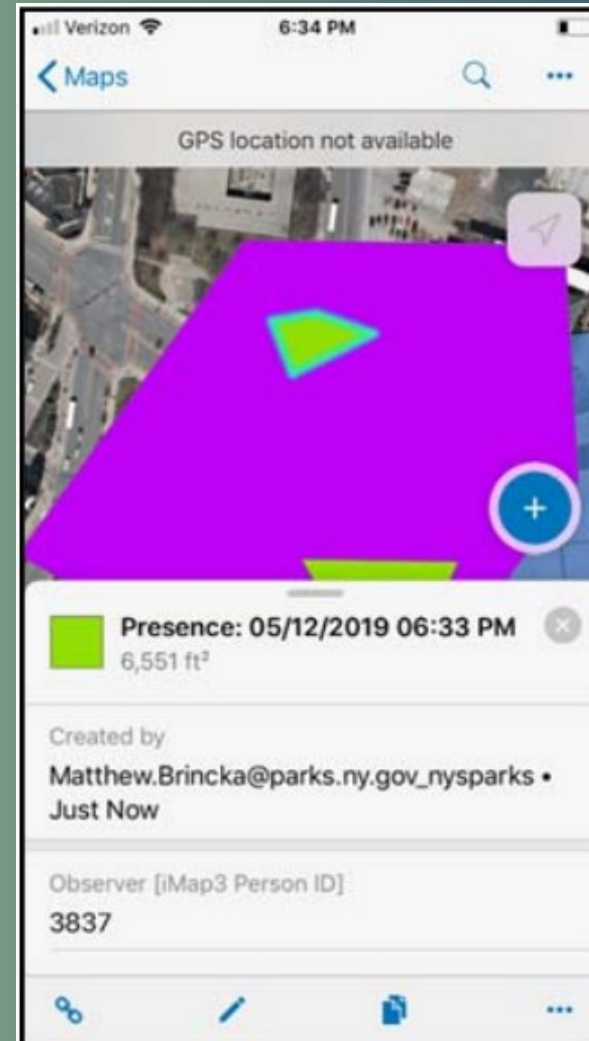




# METHODS AND MAPPING

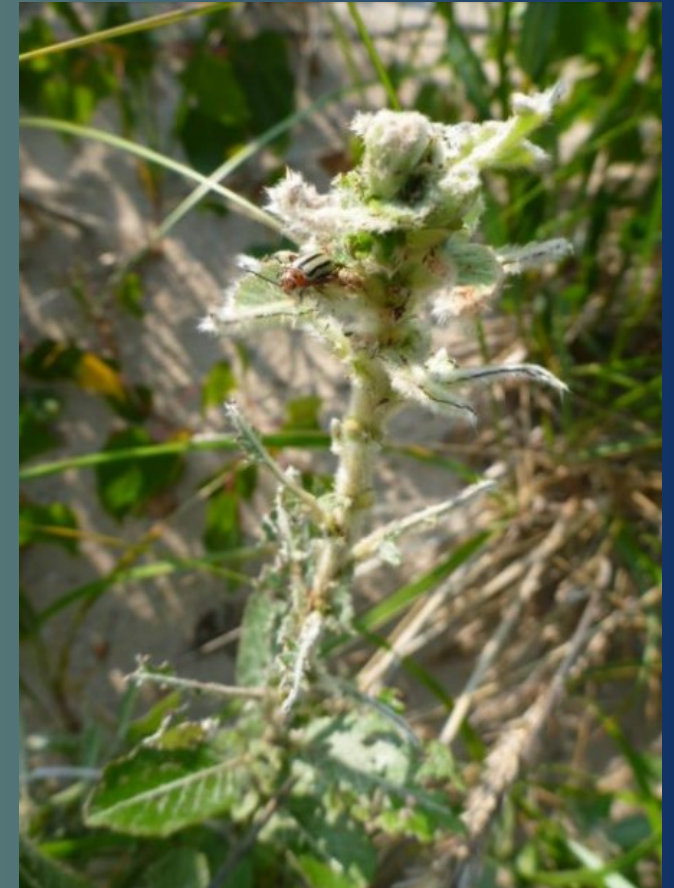
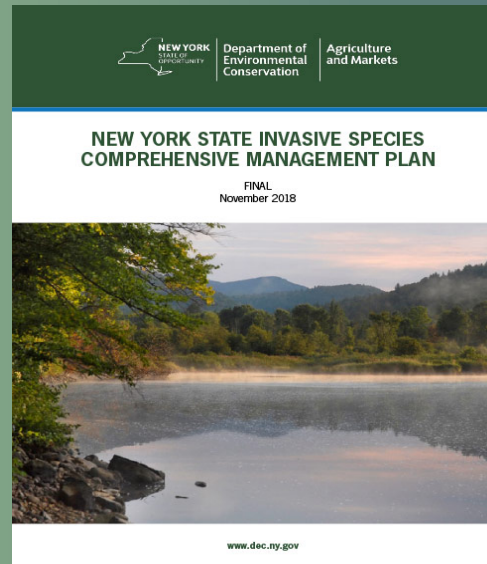
- Priority survey areas
- Identify reporting gaps
- Identify under reported species
- GIS mapping: iMap Mobile Advanced
- Public land managers and private landowners
- Literature review of current management practices

Resource Environment Solutions



# OUTCOMES AND DELIVERABLES

- Fill in reporting gaps
- Evaluate current invasive species management practices
  - Make recommendations
- Recommend future restoration projects and practices
  - Dune willow restoration
- Working document for land managers





# PRELIMINARY FIELD RESULTS



Low sand cherry (NYS endangered)  
Spotted knapweed





# PRELIMINARY FIELD RESULTS CONT.



Sand dune willow (NYS threatened)  
Phragmites



Sand dune willow (NYS threatened)  
Phragmites



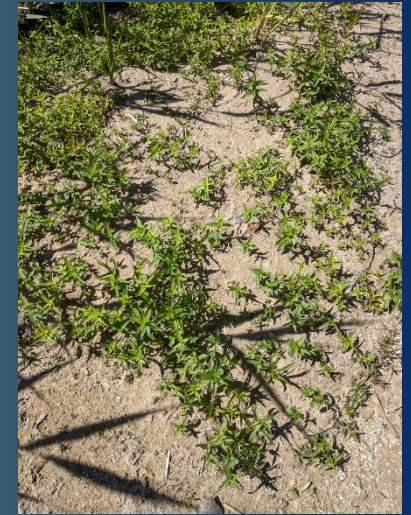
Spotted knapweed  
Champlain beachgrass (NYS endangered)



# PRELIMINARY FIELD RESULTS CONT.



Great Lakes piping plover habitat  
Federally endangered




**Top Left:** Amur  
honeysuckle  
**Top Right:**  
Emerging purple  
loosestrife  
**Bottom Left:**  
Phragmites



# NEXT STEPS

- Stakeholder Input
  - Priority survey areas for highest conservation need
  - Species reporting gaps
  - Literature review of current practices
- Complete survey fieldwork, draft and finalize plan
- Present results
- Apply for funding for wetlands component



 NFWF

**Full Proposal Project Narrative**

**Instructions:** Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed seven (7) pages; font should be 12-point Times New Roman. Do not delete the text provided below. Once complete, upload this document into the on-line application as instructed.

1. **Funding Category:** Highlight the funding category that best describes the proposed project. 1) *Restore and Enhance Stream and Riparian Habitat*, 2) *Restore and Enhance Coastal Habitat*, 3) *Expand Green Stormwater Infrastructure in Great Lakes Communities*, 4) *Maintain and Enhance Benefits of Habitat Restoration through Invasive Species Control*, 5) *Restore and Preserve Natural Areas and Biodiversity in Wisconsin's Lake Michigan Watershed*, 6) *Accelerate Implementation of Conservation Practices and Regenerative Agriculture on Working Lands*.
2. **Context:** Briefly describe the project context in terms of current conditions, opportunities for improvement, and relevance to existing conservation plans or strategies. Refer to documentation that supports alignment with plan/agency priorities (links to documents are encouraged). Additionally, applicants with existing SOGL grant(s) are encouraged to provide a brief status update for active project(s) including the following elements: 1) overview of project activities conducted to date and progress toward outcomes/metrics; 2) identify how the proposed project does/does not intersect with or build upon previously funded SOGL work; 3) address any issue(s) that may impact project outcomes and how they are being addressed.
  - a. **Streams Additional Guidance:** For barrier removal projects, please include documentation of consultation with the sea lamprey control program (see RFP for more details).
  - b. **Coastal Habitat Additional Guidance:** If the proposed work will occur in a priority coastal wetland monitored by the Coastal Wetland Monitoring Program [www.greatlakeswetlands.org/map](http://www.greatlakeswetlands.org/map), use the interactive map features to find the site number and name (e.g., 1732 - Waukegan Bay Area Wetland) and indicate them here.
  - c. **Invasive Species Control Additional Guidance:** Describe the previously completed habitat restoration project that your proposed work is intended to sustain or enhance. The description should include 1) original project objectives as compared to actual outcomes; 2) total acre restored; 3) cost of the restoration; 4) primary funding source (specifically if funds were invested by SOGL or GLRI); and 5) present-day condition of the site, including current invasive control and maintenance efforts and existing threats to the quality of the restored habitat.

The Eastern Lake Ontario Dunes and Wetlands Area (ELODWA) is a 17-mile (5,800 acres) barrier beach and wetland ecosystem designated as a Natural Heritage Area, Audubon Important Bird Area, Significant Coastal Fish and Wildlife Habitat, National Natural Landmark, and proposed National Marine Sanctuary. The project sites include non-federal wetlands monitored as part of the Great Lakes Coastal Wetland Monitoring Program. There are rare and significant natural communities identified by the NY Natural Heritage Program including Great Lakes Dunes, Sand Beach, and Shallow Emergent



# ACKNOWLEDGEMENTS

- SLELO PRISM
- The Nature Conservancy
- Participating private landowners
- Public land managers
  - NYS Department of Environmental Conservation
  - NYS Office of Parks, Recreation & Historic Preservation
  - The Nature Conservancy
  - NY Natural Heritage Program
  - Eastern Lake Ontario Dune Coalition



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Questions ?