

Finger Lake PRISM Year in Review 2017/2018



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Review Finger Lakes- PRISM

- 7.3 million acres and 17 Counties
- 2,351,253 people
- >40 state parks & historic sites
- Five of 17 major NYS watersheds
- Four regional planning boards, two DEC regions, and five DOT regions
- Federally threatened spp.:
 - American hart's-tongue fern
 - Bog turtle
 - Chittenango ovate amber snail
 - Leedy's roseroot
- Many strong partners
 - Lake associations
 - County water quality committees
 - Zoos, nature centers, museums, etc.
 - Finger Lakes National Forest
 - NYS, county, and local parks

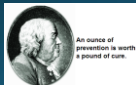
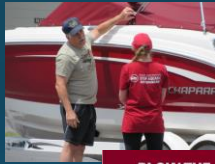
SO MANY
INVASIVES!!



Prevention=Protection = \$\$ Saved

How to #Stoptheinvasion!

- Watercraft steward program
- Play, Clean, Go Partnership
- Education and outreach
- Early detection through surveys
- KNOWLEDGE IS POWER! Know your invasives, attack early on the curve



An ounce of prevention is worth a pound of cure.



BLOW THE WHISTLE ON CANADA THISTLE.
Give Invasive Species The Brush Off.



Watercraft Inspections- 2017

17 launches covered
35,468 boats inspected
79,084 people engaged
Highest launch saw an avg 69 boats/day



May-Sept 2017
5% ↓ in low temp
2.5% ↓ in high temp
193% in precip



Outreach Examples



SIGNS:

50+ bootbrush stations across the region- more stations this year!
18 species with content for signs



Billboards in strategic locations Contracting for 2018!

Engagement

iMap trainings, workshops, presentation, and k-12 teacher trainings on IS

Volunteer and Outreach Specialist: Patty Wakefield-Brown

Over 5,000 people engaged!



Early Detection Work

- Mile-a-minute in Livingston Co.
- Hydrilla Hunters
- FLI Macrophyte Pilot Project
- HWA in Ontario and Steuben Co.



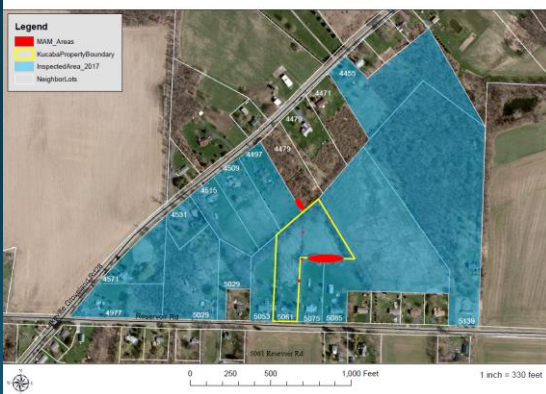
EDRR- Mile-a-minute Vine, Livingston County, NY



>1500 plants have been pulled, (~100,000 seeds)

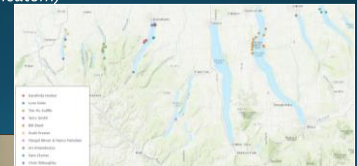


Mile-A-Minute Survey Area 2017 (09/13/17)
Town of Geneseo



FLI Macrophyte Pilot Project

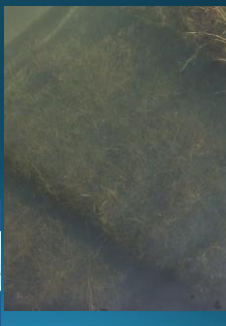
- Project Lead: Patty Wakefield-Brown
- No water chestnut (*Trapa natans*) or Hydrilla (*Hydrilla verticillata*)!!
- Starry stonewort (*Nitellopsis obtusa*) in Canandaigua and Cayuga
- Curly-leaf pondweed (*Potamogeton crispus*) and Eurasian water-milfoil (*Myriophyllum spicatum*)



Finger Lakes Macrophyte Survey Program Volunteers.

Prevention, Monitoring, and EDRR

- Many programs to monitor for key AIS
 - Citizen science programs
 - Watercraft steward programs
 - Hydrilla hunters training
 - AIS training and mapping
 - AIS Strike teams
 - And more!
- What is an effective response plan?



Programs and funding to increase capacity



2017 Funding and Projects

- **\$40,000** awarded from US. Forest Service from GLRI funds on Ganondagan Historic Site (2017-2019)
- **\$39,999** awarded from US. Forest Service from GLRI funds for invasive species control on Finger Lakes National Forest (2017-2019)
- **~\$900,000** awarded for **two** EPA GLRI proposals (1) control Hydrilla in Aurora and (2) establish a Starry Stonewort collaborative (2017-2019)

> \$1M in funding for IS this FY*

Greatly increase the capacity of FL-PRISM to address IS in FL

*Does not include in-kind contributions like volunteer hours



Water Chestnut Highlights

EPA GLRI Invasive Species Control Award
Timeline: 2016-2018

Project Manager: Kate Des Jardin, MS

AWARD: \$516,367

2017 Outputs:

- 774.8 acres controlled across 16 sites
- 3,198 acres surveyed across 25 sites
- 15 volunteer pulls
- Education and outreach



2017 Field Season:
1,210 volunteer hours!

Giant Hogweed Highlights

Timeline: 2016 - 2019

Project Manager:

HRM

AWARD: \$263,002

GH Program 2017:

30 acres controlled,

91.6 acres surveyed

Total Giant hogweed sites managed (control and monitor) during 2015-2017 field seasons in Monroe and Wayne Counties.

County	2015	2016	2017	Percent Change
Monroe	121	126	147	+21.48%
Wayne	154	164	186	+20.77%
Total	275	290	333	+19.78%



Photos of giant hogweed burn - 3 days to 3 days initial exposure. Photo credit: Bob Kinnberg



SSW Collaborative Award

Working together to find ways to prevent and control this silent invader

2016 EPA GLRI Foundations for Invasive Species Collaborations

Timeline: fall 2017-fall 2019

Project Manager: TBD

\$~300,000 awarded

Work with others in GLB



Hydrilla Control in Cayuga Lake

2016 EPA GLRI Invasive Species Control

Timeline: fall 2017-fall 2019

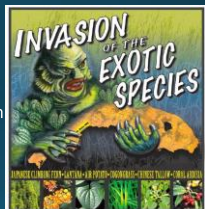
Project Manager: TBD

Control Hydrilla across 30 acres in Aurora

Engage five partners in community outreach

Eyes on the water for increased EDRR!

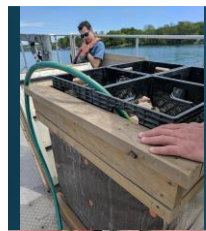
AWARD: \$598,960



Hydrilla in Aurora

CASE STUDY in Facilitation:

Strong need to coordinate with partners, county agencies, legislatures, municipalities, grant writing, talking points, meetings, presentations, etc.



Categorization Project

		Invasive Species Tiers			
		Standardized species lists for each PRISM			
		Difficulty of Eradication / Cost of Control Abundance (in PRISM plus Buffer)			
		None in PRISM	Low (Eradication/Full containment may be feasible)	Medium (Strategic management to contain infestations and slow spread in PRISM)	High (Established/abundant in PRISM, only strategic localized management)
Impact (Current and future)	Very High or High	TIER 1 Early Detection/Prevention Highest level of early detection survey efforts should conduct delineation surveys and assign to appropriate Tier if detected. a) Inside buffer, but not in PRISM b) Outside PRISM and buffer, but close (within 100m) to PRISM c) Far outside PRISM and buffer (not in east NGL, but introduction pathway exists)	TIER 2 Early Detection Highest level of early detection survey efforts should conduct delineation surveys and assign to appropriate Tier if detected. a) Inside buffer, but not in PRISM b) Outside PRISM and buffer, but close (within 100m) to PRISM c) Far outside PRISM and buffer (not in east NGL, but introduction pathway exists)	TIER 3 Containment Target strategic management to slow the spread, as likely too widespread for eradication, but where surrounding regions could be at risk if left unattended. For plants, use the PRISM's Possible eradication candidate only if adequate resources and effective control methods available.	TIER 4 Local Control Eradication from PRISM not feasible; focus on localized management over time to contain, exclude, or suppress to protect high-priority resources (like rare species or restoration events). Be strategic when deciding if/when to control.
	Medium	Evolution (Medium Impact) Further evaluate impacts and PRISM measures to see if the species should be assigned to one of the other lists. If this species could feasibly become high impact with climate or other environmental changes, consider moving to the appropriate High Impact list based on abundance. If too little is known, consider moving to "Monitor".			
	Unknown	X Monitor Species that need more research, mapping, and monitoring to understand their invasiveness. This includes naturalized species and established only species that are known to be invasive in other regions but are not yet invasive here. Invasiveness may change with environmental or genetic changes. Should monitor populations in a regular basis to see if they are starting to become invasive and assign to appropriate Tier if invasive infestations detected.			

Buffer: An area within the PRISM that surrounds the PRISM and is used to monitor for early detection of invasive species. Buffer areas are used to monitor for early detection of invasive species. Buffer areas are used to monitor for early detection of invasive species.

Impact: Use the PRISM-specific invasiveness ratings if available, or use NYS ranks (see table for rating scales). For species that are not ranked yet, or PRISM-specific adjustments of state ranks are deemed necessary, use expert opinion and document justification. Low-impact species not included since cannot justify spending resources to control these.

Abundance: This is left as a qualitative metric, since assigning standardized values to categories is not feasible due to the diversity of species dispersal strategies and data gaps.

This ranking system takes into account populations that have escaped into natural areas, but not intentionally (and legally) distributed individuals. For example, a landscape planting would not be counted.

Scientific Name	Common Name	NYS Rank	Tier	Scientific Name	Common Name	NYS Rank	Tier
Aldrovanda vesiculosa	waterwheel		1	Neogobius melanostomus	Round Goboy	H	3
Egeria densa	Brazilian waterweed		1	Trapa natans	Water Chestnut	VH	3
Gambusia affinis	Western Mosquitofish	VH	1	Adelges tsugae	Hemlock woolly adelgid	VH	3
Gambusia holbrooki	Eastern Mosquitofish	VH	1	Brachypodium sylvaticum	Slender Falsebrome	VH	3
Ludwigia peploides	Floating primrose-willow, creeping water primrose	VH	1	Cynanchum louiseae	Black Swallowwort	VH	3
Myriophyllum aquaticum	parrotfeather, Brazilian milfoil		1	Cynanchum rossicum	Pale Swallowwort	VH	3
Nymphaeaceae	Yellow Floating Heart	H	1	H. mantegazzianum	Giant Hogweed	H	3
Potamogeton	Asian Longhorn Beetle	H	1	Microstegium vimineum	Japanese Stiltgrass	VH	3
Anoplophora glabripennis	spotted lanternfly		1	Butomus umbellatus	Flowering Rush	H	3
	beech leaf disease		1	D. stramonium	Opium Poppy	VH	3
	thousand canker disease		1	Cercopagis pengoi	Fishhook Water Flea	VH	4
Cabomba caroliniana	Fanwort	H	2	Cipangopaludina chinensis	Chinese Mystery Snail	VH	4
M. anguillicaudatus	Oriental Weatherfish	VH	2	Corbicula fluminea	Asian Clam	H	4
Euphorbia esula	Leafy Spurge	H	2	Dreissena polymorpha	Zebra Mussel	VH	4
Persicaria perfoliata	Witchgrass	VH	2	O. streitformis bugensis	Quagga Mussel	VH	4
	oak wilt		2	Hemionys anomala	Bloody Red Shrimp	H	4
	porcelainberry		2	Myriophyllum	Eurasian Watermilfoil	VH	4
	impatiens		2	Najas minor	Brittle Nead, brittle watermoss	H	4
Bitthynia tentaculata	Faucet Snail	H	3	Nitellopsis obtusa	starry stonewort	H	4
B. cederostris	Spiny Water Flea	VH	3	Oncorhiza	Rusty Crayfish	H	4
Hydrilla verticillata	Hydrilla	VH	3	Potamogeton crispus	Curly Leaf Pondweed	H	4
Hydrocharis morsus-ranae	European Frogbit	VH	3	Agrostis planifolius	Emerald Ash Borer	VH	4
Myriophyllum	Variable-Leaf Watermilfoil	VH	3	Reynoutria japonica	Japanese Knotweed	VH	4
heterophyllum	Watermilfoil	VH	3	Ficaria verna	Lesser celandine, fig buttercup	VH	4
				Lythrum salicaria	Purple Loosestrife	VH	4
					Jumping worms		4
					tree of heaven		4
					privet		4
					wild parsnip		4

Increasing Networking (examples)

Working Groups:

- Brachypodium Working Group
- Statewide Hydrilla Calls
- Hydrilla Task Force for Cayuga Lake, Aurora

Project Meetings/Conference/Presentations

- ISAC Comprehensive Management Plan Workshop, August, 2017
- USACE Starry Stonewort Meeting, Oconomowoc, WI, Sept. 2017
- Great Lakes Meeting Presentation, Ann Arbor, MI, Nov. 2017
- Cornell In-service Presentation, Ithaca, NY, Nov 2017
- NEAPMS Conference, New Castle, NH, January 2018
- USACE Meeting/tour of lab facility, Vicksburg, MS, January 2018



2017 FINGER LAKES RESEARCH CONFERENCE

Threats to the Finger Lakes

November 17, 2017
Vandeventer Room
Sundsvall Campus Center

2017 Finger Lakes Research Conference: Threats to the Finger Lakes

Schedule

Time	Registration and poster set up
8:30-8:45 a.m.	Welcome and Overview Lisa B. Clesceri, Director, Finger Lakes Institute at Hobart and William Smith Colleges
8:45-9:15 a.m.	Keweenaw Lake Fisheries Management Brad E. Hammers, Aquatic Biologist, Division of Fish, Wildlife, and Marine Resources, NYDEC
9:15-9:45 a.m.	Pharmaceuticals and Microplastics in Cayuga Lake Matthew Peggion and Kathryn Seewang, Ithaca Area Watershed Treatment Facility
9:45-10:15 a.m.	An Unprecedented Benefits of the Round Goboy Invasions: the Salmonella Vitellina P87 Matt Fata, Graduate Student, The College at Brockport, State University of New York
10:15-10:45 a.m.	Break
10:45-11:15 a.m.	Characterizing the Ecological Niche of Invasive Round Goboy in Cayuga Lake Sueh A. Serbi, Assistant Professor, Cornell University
11:15-11:45 a.m.	Allelopathy of Round Goboy in North America Robin Smith, Ph.D. Candidate, The New York Botanical Garden
11:45 a.m.-12:15 p.m.	Agricultural Programs to Protect Wayne County's Watersheds Lindsey Genteschlag, District Manager, Wayne County Soil and Water Conservation District
12:15-1 p.m.	Lunch

Content Strategy for FLPRISM Recommendations

1. Formalize partnerships
 - 2-3 categories
 - Clear benefits/duties
2. Develop content strategy
 - Define audience and segments
 - Sources, subjects, streams
 - Create syndication/affiliate program (endemics, general media)
 - Multiple content-types (text, images, video, etc.)
3. Establish best practices program
 - Clearinghouse operations
 - Recommended standards of operation
4. Implement monthly dashboard
 - Focus on reach and engagement
 - Target 50% increase in social media likes over 12 months (to build reach)
 - Target 5x reach, 2x engagement
 - Target 2x page views on site

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Design Items

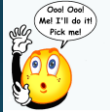
- Partnerships
- Content Strategy
- Best Practices Program
- Monthly Dashboard



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Finger Lakes Management Strategies

- We cannot afford a 'sit and wait' tactic to invasive species mgmt
- Proactive approach -best chance at the lowest cost- but are we just putting out fires with the current capacity?
- Education and outreach- key to a successful program
- How to allocate resources?
- Many impediments and gaps in engagement



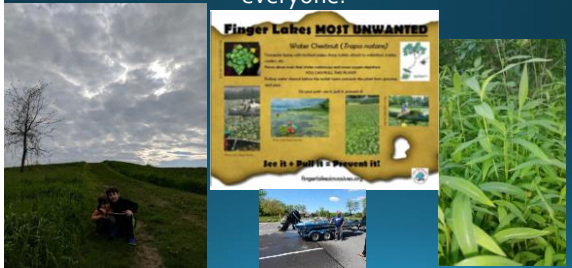
Next Steps

- NYISAW Project Planning- July 8-14
- Steering Committee and Working Group Members
 - Engage additional participants?
 - Engagement and logos- sharing information, etc.
- Spring PRISM meeting
- 2018-2019 Annual Plan
- NCTE for 2018, plans for Finger Lakes PRISM contract
- NCTE for water chestnut project
- April 1, Patty 0.50FTE PRISM, 0.50FTE giant hogweed- increase outreach capacity!
- Work with Dylan and Brittany to increase capacity and reach
- Capitalize on field projects to collect water quality and AIS data
- OTHER PRIORITIES?



Finger Lakes PRISM-
MISSION: To reduce the introduction, spread and impact of invasive species within the Finger Lakes PRISM region through coordinated education, detection, prevention and control measures.

Partnering to safeguarding our resources for everyone!



Acknowledgements

- FL-PRISM is funded by the EPF through NYSDEC
- Water Chestnut project is funded through an EPA GLRI award
- Giant hogweed project is funded through a cooperative agreement with NRCS-USDA

Thank You

- Dr. Lisa Cleckner and the Finger Lakes Institute as host for FL-PRISM
- Katie Des Jardin, Water Chestnut Project Manager, FLI
- Patty Wakefield-Brown, Outreach and Volunteer Specialist, FLI
- The grant-funded field crew
- Our partners!

