

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









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

GIVE INVASIVE SPECIES THE BRUSH OFF

Play One Go

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

CLEAN.DRAIN.DRY.
BOATS, TRAILERS & GEAR STOP INVASIVE SPECIES

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!

Finger Lakes MOST UNWANTED

CELEBRATE NEW YORK'S 4th ANNUAL INVASIVE SPECIES AWARENESS WEEK

July 9-15, 2017

70 events!

"Invasive Species Reality Check"
Where Are We & Where Do We Need to Go

www.stoptheinvasionny.com

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)





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

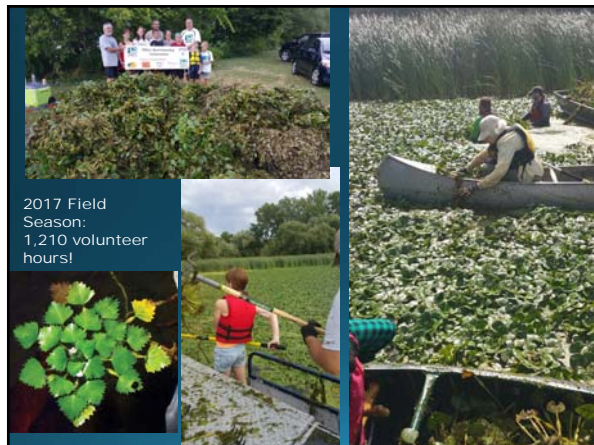
Project Manager: Kate Des Jardin, MS

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.



Photos of giant hogweed burn: 3 days to 7 days initial exposure. Photo credit: Bob Klenberg



County	2015	2016	2017	Percent Change
Monroe	121	126	147	+21.48%
Wayne	154	164	186	+20.77%
Total	278	290	333	+19.78%

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



Starry Stonewort



An algae that forms thick, dense mats on lake bottoms

Starry stonewort!?!
Oh, FUDGE!!



Hydrilla Control in Cayuga Lake

2016 EPA GLRI Invasive Species Control

Timeline: fall 2017-fall 2019

Project Manager: TBD

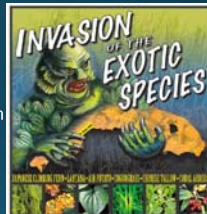
Control Hydrilla across 30 acres in Aurora



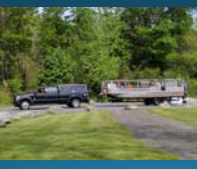

Engage five partners in community outreach

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.

Invasive Species Tiers		Standardized scores lists for each PRISM			
		Difficulty of Eradication / Cost of Control Abundance (in PRISM plus Buffer)			
		None in PRISM	Low (Evaluation) Full containment may be feasible	Medium (Strategic management to contain infestations and slow spread in PRISM)	High (Established/Unmanaged in PRISM, only strategic localized management)
Impact (Current and Future)	Very High or High	TIER 1 <i>Early Detection/Prevention</i> Highest level of early detection survey efforts. Should restrict infestation surveys and assign to appropriate Tier if detected. (1) Inside buffer, but not in PRISM (including PRISM and Buffer, but close to PRISM). (2) For outside PRISM and buffer (not in next 100 ft), but in collection pathway exists.	TIER 2 <i>Containment</i> Highest level of early detection survey efforts. High impact species with low enough abundance and suitable treatment method available to make eradication feasible within the PRISM. Need additional survey to determine extent.	TIER 3 <i>Containment</i> Target strategic management to slow the spread, as little has been assessed for evaluation, but many surrounding regions could be at risk if left unattended. For plants use the IPMIST. Possible eradication conditions only if adequate resources and effective control methods available.	TIER 4 <i>Local Control</i> Evaluation from PRISM and feasible. Resource-limited management over time to control, exclude, or suppress to protect high priority resources. Use rare species or restoration assets. Be strategic when deciding if / where to control.
	Medium	(Evaluate (Medium Impact)) Further evaluate impacts and PRISM resources to use if the species should be assigned to one of the other tiers. If this species could feasibly become high impact with climate or other environmental changes, consider moving to the appropriate High Impact zone based on abundance. If low little is known, consider moving to "Monitor".			
	Unknown	X	TIER 5 <i>Monitor</i> Species that need more research, mapping, and monitoring to understand their invasiveness. This includes naturalized species and introduced 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 on a regular basis to see if they are starting to become invasive and assign appropriate Tier if invasive infestation detected.		

Buffer: An area chosen by the PRISM that surrounds the PRISM and takes in certain resources, status and protection. Most PRIMs are using about 100 miles as the buffer.

Impact: Use the PRISM specific invasiveness rankings if available, or use NYS ranks (see nys.info for weighting ranks). 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 show current justify spreading resources to control them.

Abundance: This is left as a qualitative metric. Once existing standardized values are categorized as too feasible due to the density 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 hemlock spot planting would not be ranked.

Scientific Name	Common Name	NYS Tier Rank Status			
Aldrovanda vesiculosa	waterwheel	1	Neogobius melanostomus	Round Goby	H 3
Egeria densa	Brazilian waterweed	1	Trapa natans	Water Chestnut	VH 3
Sambusia affinis	Western Mosquitofish	VH 1	Adelges tsugae	Hemlock woolly adelgid	H 3
Sambusia holbrooki	Eastern Mosquitofish	VH 1	Brachypodium sylvaticum	Slender Falsebrome	VH 3
Udmania pectinacea	Floating primrose-willow	VH 1	Cynanchum louiseae	Black Swallowwort	VH 3
Myriophyllum aquaticum	creeping water primrose	VH 1	Cynanchum rossicum	Pale Swallowwort	VH 3
Myriophyllum spicatum	parrotfeather, Brazilian milfoil	1	H. mantegazzianum	Giant Hogweed	H 3
Nymphaeaceae	Yellow Floating Heart	H 1	Microstegium vimineum	Japanese Stiltgrass	VH 3
Potamogeton amplifolius	New Zealand Mud Snail	H 1	Butomus umbellatus	Flowering Rush	H 3
Anoplophora glabripennis	Asian Longhorn Beetle	H 1	Cercopagis pengoi	Fishhook Water Flea	VH 4
	spotted lanternfly	1	Cipangopaludina chinensis	Chinese Mystery Snail	VH 4
	beech leaf disease	1	Corbicula fluminea	Asian Clam	H 4
	thousand canker disease	1	Dreissena polymorpha	Zebra Mussel	VH 4
Cabomba caroliniana	Fanwort	H 2	D. rostriformis bugensis	Quagga Mussel	VH 4
M. anguillicaudatus	Oriental Weatherfish	VH 2	Hemimysis anomala	Bloody Red Shrimp	H 4
Euphorbia esula	Leafy Spurge	H 2	Myriophyllum spicatum	Eurasian Watermilloil	VH 4
Persicaria perfoliata	Minute-weed	VH 2	Najas minor	Brittle Naiad, brittle water nymph	H 4
	oak wilt	2	Nitellopsis obtusa	starry stonewort	H 4
	porcelainberry	2	Oreocetes rostratus	Rusty Crayfish	H 4
ardimine	impatiens	2	Potamogeton crispus	Curly Leaf Pondweed	H 4
Bithynia tentaculata	Faucet Snail	H 3	Agrilus planipennis	Emerald Ash Borer	VH 4
S. Cederstroemi	Spiny Water Flea	VH 3	Reynoutria japonica	Japanese Knotweed	VH 4
Hydrilla verticillata	Hydrilla	VH 3	Picaria verna	Lesser celandine, fig buttercup	VH 4
Hydrocharis morsus-ranae	European Frogbit	VH 3	Lythrum salicaria	Purple Loosestrife	VH 4
Myriophyllum heterophyllum	Variable-Leaf Watermilfoil	VH 3		Jumping worms	4
				tree of heaven	4
				privet	4
				wild parsnip	4

Increasing Networking (examples)

Working Groups:

- Brachyodinium 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**

Schedule

8 a.m.	Registration and poster set up
8:30-9:45 a.m.	Welcome and Overview Lisa B. Chokwe, Director, Finger Lakes Institute at Hobart and William Smith Colleges
9:45-10:15 a.m.	Keweenaw Fisheries Management Brad E. Homans, Aquatic Biologist, Division of Fish, Wildlife, and Marine Resources, NYDEC
10:15-10:45 a.m.	Pharmaceuticals and Microplastics in Cayuga Lake Matthew Pirog and Kathryn Sawney, Ithaca Area Wastewater Treatment Facility
10:45-11:15 a.m.	An Unexpected Benefit of the Round Goby Invasion: The Salmonine Virus PBY Matt Fatta, Graduate Student, The College at Brockport, State University of New York
11:15-11:45 a.m.	Break
11:45-12:15 p.m.	Characterizing the Ecological Niche of Invasive Round Goby in Cayuga Lake Sarah A. Seitz, Assistant Professor, Cornell University
12:15-12:45 p.m.	Altogether robust in North America Robin Smith, Ph.D. Candidate, The New York Botanical Garden
12:45-1:15 p.m.	Agricultural Programs to Protect Wayne County's Watersheds Lindsay Gendron, District Manager, Wayne County Soil and Water Conservation District
1:15-1:30 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

Design Items

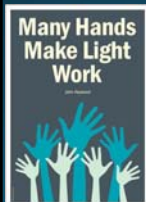
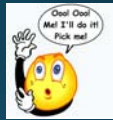
- Partnerships
- Content Strategy
- Best Practices Program
- Monthly Dashboard



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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?
- 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!
