



## Finger Lakes

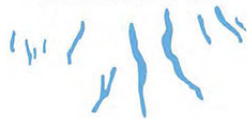
### Partnership for Regional Invasive Species Management (PRISM)

#### 2021 Year in Review



HOBART AND WILLIAM SMITH COLLEGES

FINGER LAKES  
INSTITUTE



*Funding for Finger Lakes PRISM is provided through the New York State (NYS) Environmental Protection Fund (EPF) and administered as a contract through the NYS Department of Environmental Conservation (NYSDEC) to Hobart and William Smith Colleges.*



# Finger Lakes PRISM

## Finger Lakes PRISM

### Vision

Finger Lakes PRISM preserves the biodiversity of our natural communities through the prevention, detection, and control of invasive species.

### Mission

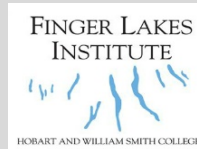
Our mission is to reduce the introduction, spread, and impact of invasive species by working collaboratively with partners to implement effective education, outreach, and control measures.

### 2021 Summary

The Finger Lakes PRISM consulted with CC Environment and Planning to update our 5-year strategic plan. The result is a more succinct plan with measurable goals and outputs. The Finger Lakes PRISM and Finger Lakes Institute at Hobart and William Smith Colleges have been charging through our work plans and objectives. What follows is a small representation of what we've accomplished since January 1, 2021. While we have much more to finish before year's end, we are proud of the work we've undertaken to prevent the spread and impact of invasive species in the Finger Lakes.



## Finger Lakes Institute



*The Finger Lakes Institute (FLI) is based at Hobart and William Smith Colleges in Geneva, NY. Dedicated to the promotion of environmental research and education about the Finger Lakes and surrounding environments, FLI is well-suited to house and guide Finger Lakes PRISM. In collaboration with regional partners and state and local government offices, the goals of the FLI are to:*

- Advance, coordinate, and disseminate scientific understanding about the Finger Lakes region.
- Provide professional experience for the next generation of environmental researchers, educators, and policy makers
- Enhance understanding of environmental issues.
- Promote sustainable development.
- Create and disseminate educational resources and opportunities.

*FLI goals are achieved through four primary program areas: 1) Research; 2) Education; 3) Community outreach; and 4) Watershed stewardship.*



**Finger Lakes Institute Invasive Species Team includes:** Hilary Mosher, Finger Lakes PRISM Coordinator; Sam Beck-Andersen, AIS Program Manager; Kathryn Monacelli, Hydrilla Project Manager; David Carr, Starry Stonewort Project Manager; Nadia Harvieux, Education Project Manager; Josh Neff, Hydrilla Field Team Lead; Matt Gallo, Terrestrial Program Outreach Coordinator; Sydney VanWinkle, Giant Hogweed Field crew and Invasive Species Technician; Megan Harris, AIS Program Coordinator; Morgan Crouch, Watercraft Steward Program Coordinator; Caleb Truscott, Watercraft Steward Program Biology Coordinator; Trevor Massey, Field and Lab Manager; Evan Helming, Laboratory Technical Director; Lisa Cleckner, Director, Finger Lakes Institute

# Finger Lakes PRISM

## Goal 1. Prevention

Prevent the introduction and spread of IS to new areas within the region through targeted prevention efforts for vectors and pathways of transmission.

Finger Lakes PRISM recognizes prevention as the most important way to reduce cost and ecological and human health impacts from IS. It is *the cornerstone* of all our programming. Prevention is built into all projects and is the **KEY** to our success in the region.

### Prevention programs INCLUDE:

- Watercraft steward programs;
- Spotted lanternfly campaign (SLF);
- Trainings, workshops, hands-on-events, iMapInvasives programs, and presentations engaging stakeholders
- Social media targeting audiences in the Finger Lakes and beyond



### KEY OUTPUTS:

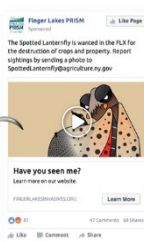
- WATERCRAFT STEWARD PROGRAM- 27 stewards, 4 lead stewards, 2 regional and 1 biology coordinator
- **41,194** watercraft inspected; **82,711** interactions with people
- **21** launches covered on **14** waterbodies
- NEW! **7,795** new boater engagements where boaters answered 'no' to previous steward contact
- OUTREACH numbers were impressive! We reached **3,587** people across **96** different programs. This includes: 8 trainings (94 ppl); 20 tabling events (1,778 ppl); 19 webinars (785 ppl); 4 in-person presentations (109 ppl); 7 workshops (120 ppl); 36 hands-on events (663 ppl); and 2 iMapInvasives trainings (38 ppl).

### Spotted Lanternfly Campaign

In 2021, SLF's presence was felt across the Finger Lakes. In response to this growing threat, the PRISM mobilized an aggressive education and outreach campaign built around prevention initiatives and responses to established populations.

While the NYS Dept. of Agriculture and Markets (AGM) managed the eradication efforts in Ithaca and Broome County, PRISM funded the creation of outreach collateral including posters, wine tags, teaching tools, and more. Since this summer, we have distributed over 6,000 materials to more than 170 partners across the region. The Finger Lakes PRISM has brought SLF instruction to the classroom through our collaboration with Sam + Lin Designs with their SLF 'maker-kits', an experiential learning opportunity for K-6 students.

**OUTCOME:** New invasions to the region are prevented to the greatest extent practicable.





## Goal 2. Early Detection/Rapid Response

Implement early detection and rapid response measures to identify new IS to the area and respond to mitigate the effects.

Early detection and rapid response (ED/RR) are critical to controlling the spread of IS and managing impacts. The Finger Lakes PRISM engages in multiple ED programs and seeks funding to complete additional ED work in the region. With 17 counties and 7.3M acres, it is impossible to detect IS across all landscapes. ED and RR are crucial to effective management.



Map of point-intercept surveys in 2021

### Macrophyte Surveys

To detect high-priority aquatic invasive species (AIS), point-intercept surveys target areas susceptible to AIS via recreational activities. In 2021, ten field staff surveyed areas around waterbody access points for AIS and the two most dominant AIS were Eurasian watermilfoil and starry stonewort (SSW). No new Hydrilla populations were detected.

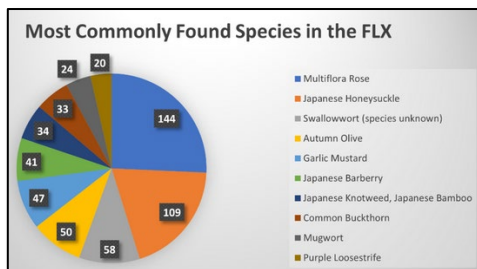
Hydro-acoustic, water chemistry, and macrophyte data were also collected across six waterbodies, in close proximity to a boat launch or marina. Data was collected at 18 locations on six waterbodies with macrophyte points taken along the hydro-acoustic transect for a total of 105 rake tosses. BioBase-processed data were analyzed to calculate environmental factors including substrate hardness and macrophyte biovolume across sample areas.

### Citizen Science Early Detector Programs

Building on our pilot from 2020, the PRISM continued developing its trail survey, a program where volunteers survey trails to increase our detection networks for high priority IS. In 2021, 20 volunteers reported 903 observations (63 unique spp) in 13 counties across NY.

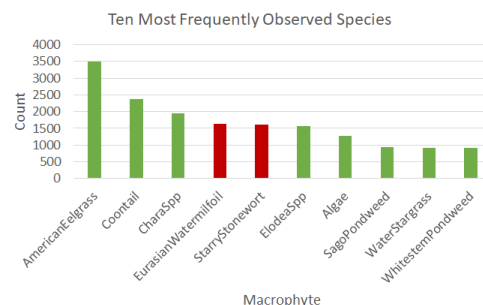


BioBase survey sites in 2021 across 6 waterbodies and example maps of data processed by BioBase, and displayed using R showing biovolume and bottom hardness at Union Springs, on Cayuga Lake.



### KEY OUTPUTS:

- **MACROPHYTE SURVEYS**- our field crew conducted over 16,300 rake tosses across 14 waterbodies in 10 counties.
- **VOLUNTEER PROGRAMS** engaged volunteers for early detection programs (trail survey= 20; macrophyte survey =28)
- **GIANT HOGWEED** field crew surveyed over 232 acres for high priority IS
- **SLF CAMPAIGN** targeted Broome County Parks where interns from Binghamton University surveyed for IS and set and monitored SLF traps



# Finger Lakes PRISM

Photo credit: Jennifer Kozlowski



The Finger Lakes Macrophyte Survey Program completed another year of volunteer sampling. This year, the program had a facelift with a new sampling tool and outreach kit. Our partnership with the Rochester Institute of Technology will be surveying participants to determine the effectiveness of our recruitment and retention strategies for this program.



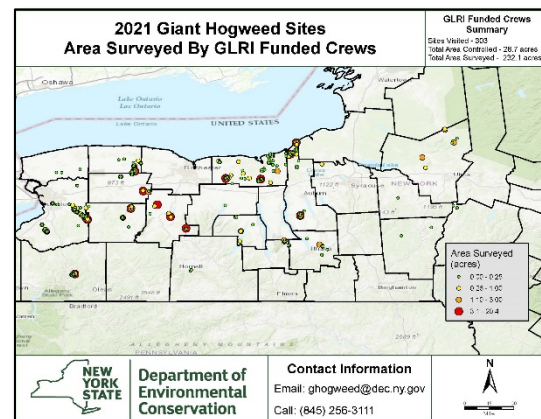
Photo credit: Megan Harris

## Giant Hogweed Program

Finger Lakes PRISM staff work alongside the NYSDEC giant hogweed

team in the Great Lakes basin. USDA NRCS and Finger Lakes PRISM funded this survey and control project. During 2021, the field crew was able to survey 232 acres across three PRISMs for giant hogweed and other high priority invasive species.

**OUTCOME:** Priority conservation targets are protected from new IS infestations.



## Goal 3. Partnerships, Education, Information

Build partnerships and networks that leverage effective public education efforts and facilitate the sharing of information,

Partnerships are the foundation of Finger Lakes PRISM. Partners and communication networks are vital to effective education, outreach and advancement in the prevention and management of IS.

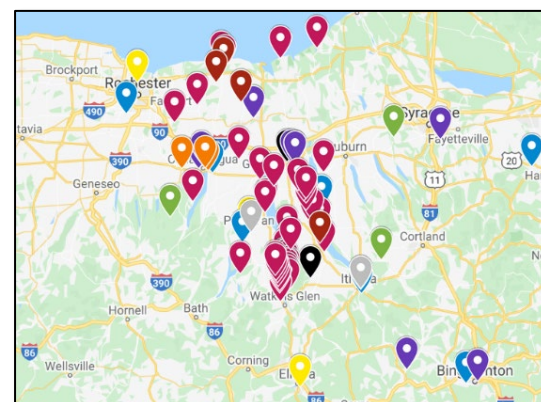
### SLF Campaign

The PRISM has delivered outreach materials to partners across the Finger Lakes. The SLF map shows the diverse stakeholder base for these materials. Other key partners include Broome County Parks (BCP), Binghamton University (BU), and the Broome Cornell Cooperative Extension (CCE). Since March 2021, PRISM has delivered presentations to the BU Urban Ecology course (n=40), BU interns working at BCP (n=6), and CCE Master Gardener program (n=89).

### Federal, State, and Regional Participation

The Finger Lakes PRISM participates in a wide variety of federal, state, and regional projects for such IS issues as Hydrilla management, hemlock woolly adelgid containment, and SLF updates as well as participating in national meetings such as the Great Lakes Panel on Aquatic Nuisance Species (ANS) and the ANS Task Force.

Our Great Lakes Basin Starry Stonewort (SSW) Collaborative has made huge inroads with key activities such as: hosting four webinars engaging 149 people from across the Great Lakes on topics such as SSW impacts on ecosystems as well as control and management techniques such as chemical treatment and Diver Assisted Suction Harvesting (DASH).



**Map of Locations the PRISM has Delivered SLF Outreach Materials to as of 11/9.** Each Color represents a different type of organization (Dark Red – Cidery, Magenta – Winery, Orange – Brewery, Yellow – CCE, Green – Environmental, Blue – University, Purple – Government, Black – For Profit, Grey – Misc.)





# Finger Lakes PRISM

## Partnership is Action!

Conesus Lake Rapid Response- The Conesus Lake Association and PRISM positively identified SSW during a macrophyte survey, the first report for Conesus. The Conesus Lake invasive species response plan was activated including training, creating maps and grids for volunteer rake tosses, and conducting an on-the-water training for volunteers.

Keuka Lake AIS Workshop- Working with Yates County CCE staff, a workshop was held to help the Keuka Lake Association (KLA) and its partners assess their AIS needs and provide tools to manage their projects and activities efficiently and effectively. The workshop was

attended by several organizations that work to protect Keuka Lake. A final report summarized the workshop and made recommendations for key strategies for KLA; this serves as a model for other lake associations to address their AIS and volunteer programs.

Keuka Lake DASH- The FL-PRISM provided funding for the KLA to complete a pilot study using DASH targeting the removal of SSW.

The work was completed by Integrated Lake Management (ILM) over a period of five days

in August. Results will be published at the December PRISM meeting.



**OUTCOME:** Finger Lakes PRISM is the regional leader in IS management facilitating active partners, effective public education, and information networks.

## Goal 4. Control and Restoration

Control invasions through eradication, containment, suppression, and restoration targeting high priority conservation areas.

PRISM has identified effective control measures for many IS even as more develop. These measures, followed by restoration, can successfully manage some IS impacts. Resource constraints are a significant challenge so targeting high priority conservation areas and species are key. Below are some pictures of our high-profile control projects in the region.



Volunteers: SLELO PRISM Watercraft Stewards, Oneida Lake Association, and Oswego SWCD. Photo Credit: Megan Harris



Water Chestnut on the Genesee River where 940 lbs. of Water Chestnut were removed. Photo Credit: Megan Harris

### KEY METRICS

#### Water chestnut project

- 15 sites across 25 days and engaged 69 volunteers
- 10,471 lbs. of Water Chestnut removed
- 5 acres of Hydrilla controlled at Finger Lakes Marine Service on Cayuga Lake
- Giant hogweed was controlled on 28.7 acres by FLI staff
- Gypsy moth were controlled over 150 acres via aerial spray; 2 workshops for the Canandaigua Lake Association to scrape gypsy moth egg masses
- Diver-assisted suction harvesting pilot control of SSW in Keuka Lake
- Control of HWA across 2 acres at a high-trafficked Scout Camp in Naples, NY

# Finger Lakes PRISM

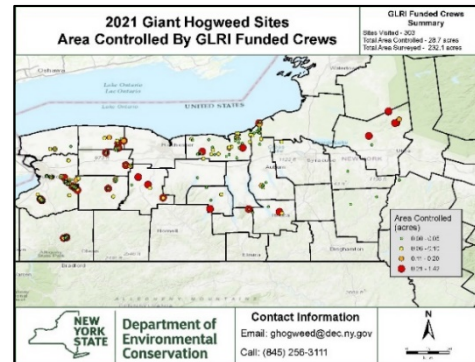
**OUTCOME:** The occurrence and impact of highly IS are reduced in priority conservation areas.



Five acres were treated with fluridone during six weekly herbicide applications during July and August.



Hydrilla was controlled on Cayuga Lake, in a private marina.



Giant hogweed was controlled by Finger Lakes PRISM staff across three PRISMs in 2021. 28.7 acres were controlled.

## Goal 5. Funding and Support

Secure funding and legislative support from federal, state, and local governments.

accomplish our mission in alignment with our vision. Strategies to garner funding and support must be targeted, dynamic, and consistent.

The Finger Lakes PRISM continually seeks ways to increase external funding and provide support to partner projects. During the 2021 fiscal year, Finger Lakes PRISM received funding to help NYS Parks delineate and control invasive species across 5 wetland locations. Funding for this project (\$40,000) will continue for two years and greatly increases the capacity to mitigate the impacts of invasive species in threatened wetland systems. Additionally, Finger Lakes PRISM secured funding from the Upper Susquehanna Conservation Alliance (\$11,500) to survey for and control invasive species in Broome County Parks, an area particularly susceptible to SLF. Finger Lakes PRISM submitted a proposal for the USDA Landscape Scale Restoration proposal



(in review: \$149,652), and has provided letters of support for Ontario County hemlock control and restoration. Finger Lakes PRISM will provide training and resources to volunteers and field crews on this project. Finally, the Finger Lakes PRISM has worked with the NY Integrated Pest Management (IPM) Program at Cornell University, the Northeast IPM program, and NY AGM on programming to inform officials and municipalities on our emergency response to SLF. A webinar, targeting municipal and elected officials, private industry and the general public had over 400 registrants who received information and resources about SLF. This event featured how to sign up to 'adopt a trap' and a link to the webinar recording can be found on [www.fingerlakesinvasives.org](http://www.fingerlakesinvasives.org).

**OUTCOME:** Adequate funding and consistent support ensures effective IS management across Region.





The Finger Lakes Partnership for Regional Invasive Species Management (Finger Lakes PRISM) is a collaborative program designed to address the threat of invasive species. Housed within Hobart and William Smith Colleges' Finger Lakes Institute (FLI), the program is one of eight across New York that focuses on managing invasive species, developing detection programs, employing response efforts, providing education programs and outreach, and working with communities. PRISM programs are administered through the New York State Department of Environmental Conservation.

Hobart and William Smith are nationally recognized liberal arts colleges defined by a longstanding focus on educating across academic disciplines and an intellectual environment that cultivates faculty and student connections. With a strong commitment to inclusive excellence, the Colleges have a distinguished history of interdisciplinary teaching and scholarship, curricular innovation and exceptional outcomes. Hobart and William Smith provide robust programs in career development, study abroad, service, leadership and athletics. There are 45 majors and 68 minors. With an enrollment of 2,241, more than 60 percent of students study abroad through the No. 1 global education program in the country and all participate in community service. Located in the heart of the Finger Lakes region, Hobart and William Smith enjoy a lakeside campus on the shore of Seneca Lake. Originally founded as two separate colleges (Hobart for men in 1822 and William Smith for women in 1908), Hobart and William Smith students share the same campus, faculty, administration and curriculum.

## Contact:

### **Hilary R. Mosher**

Coordinator, Finger Lakes-PRISM  
Finger Lakes Institute  
Hobart and William Smith Colleges  
300 Pulteney Street,  
Geneva, NY 14456  
(315) 781-4385  
mosher@hws.edu  
fingerlakesinvasives.org



**Department of  
Environmental  
Conservation**