Overview of *Hydrilla verticillata* in Cayuga Lake

Cayuga Lake Public Info Session
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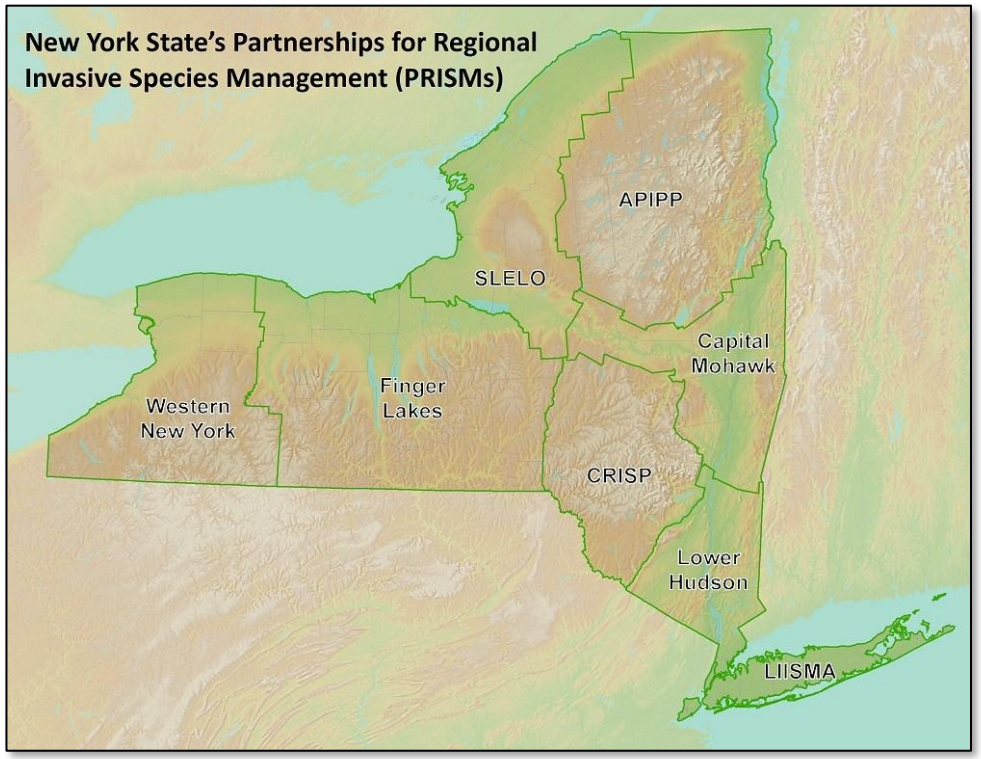

Translating knowledge and research about the Finger Lakes watershed into collaborative action

Program areas

- Contaminants
- Nutrients
- Watershed management
- **Invasive species**

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What's an Invasive Species?

An invasive species is one that is **non-native** to the ecosystem under consideration and whose introduction causes, or is likely to cause, **economic** or **environmental** harm or harm to **human health**.

Economic:

Impacts on agriculture, recreation, wood/forest products, trade/shipping, tourism, utilities (power plants) and management costs.

Environmental:

Impacts on biodiversity, structural diversity, natural processes, aesthetics, ecosystem function and services.

Human Health:

Impacts on soil, water and air quality, flooding, injury, and disease/illness.

Regional Context

Top lures at Cayuga Lake

August 28, 2019

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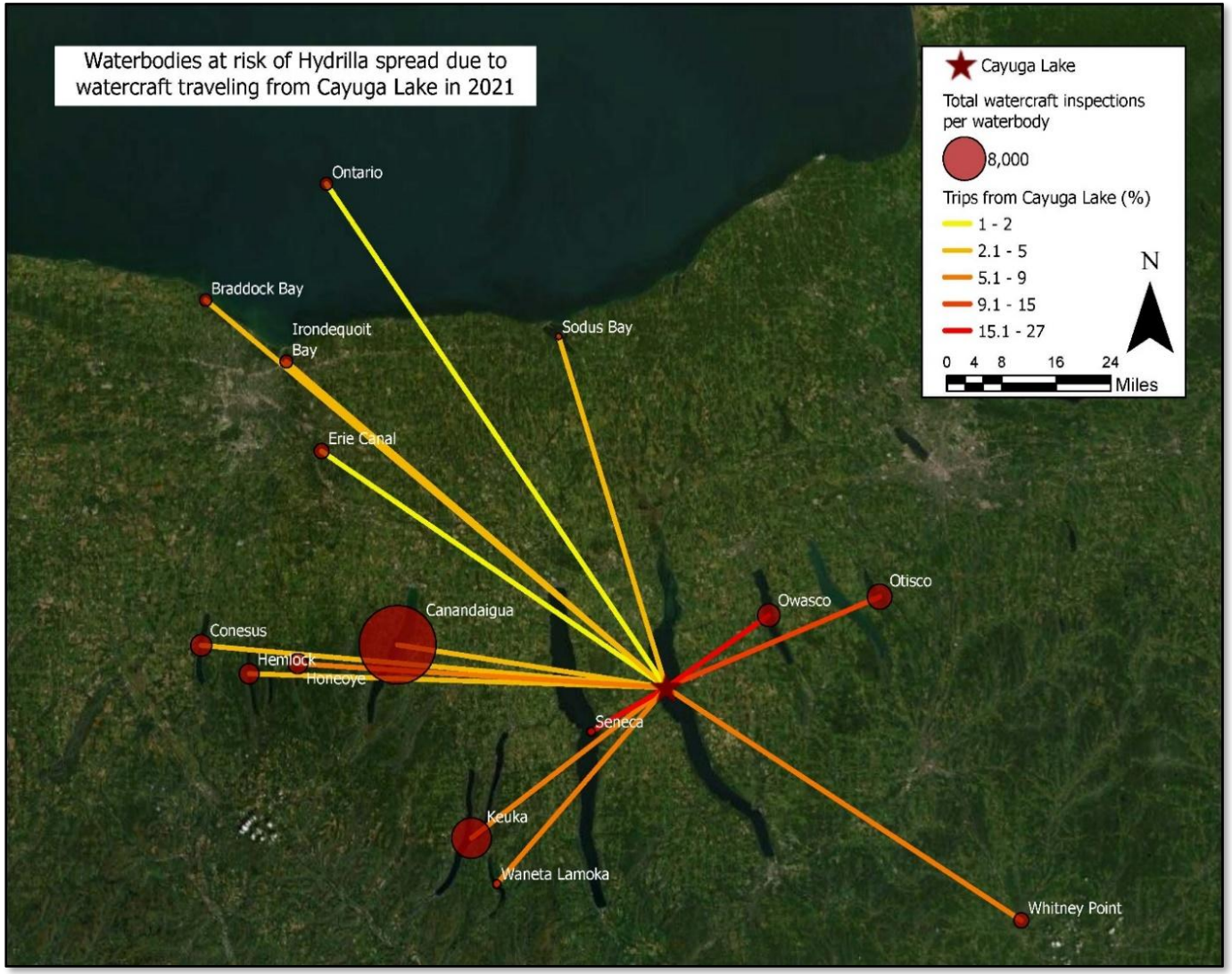
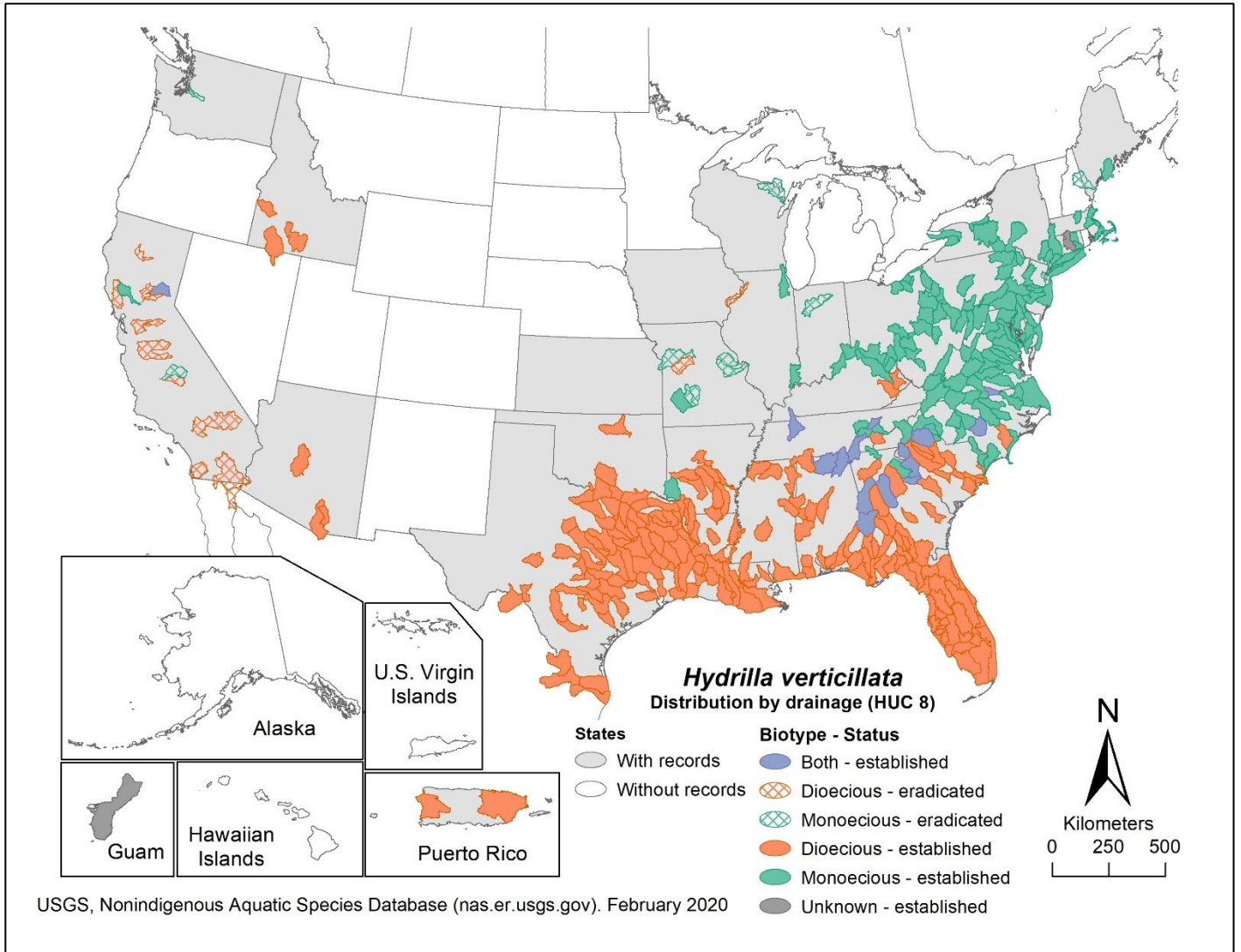


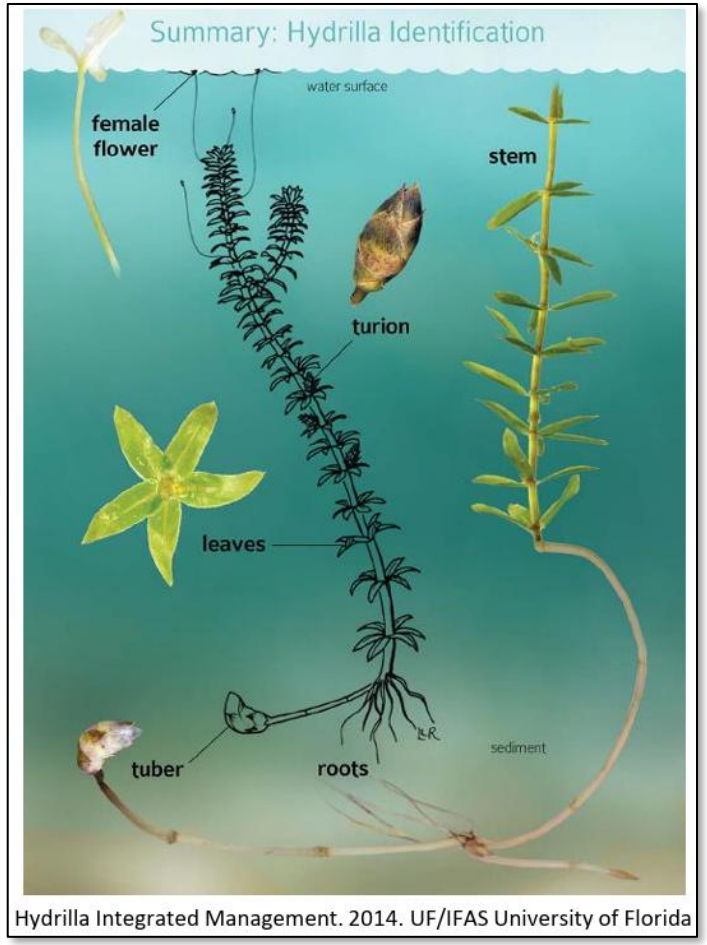
Hydrilla, Water Thyme (*Hydrilla verticillata)*

- Arrived ~1950 from the aquarium trade
- Native to Africa, Asia, Australia
- Broad habitat range
- Monoecious vs. dioecious

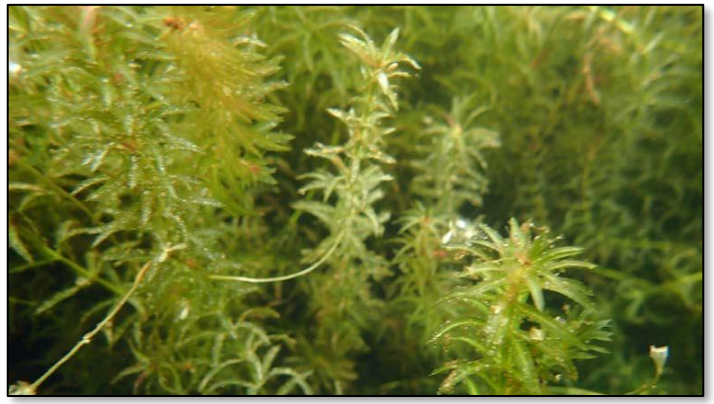


Hydrilla, Water Thyme (*Hydrilla verticillata)*

- Visibly serrated leaves in whorls of 3-8 (usually 5)
- Stems grow rapidly up to 25 feet, causing thick mats of vegetation
- Spreads by fragments, seeds, tubers, and turions



Hydrilla Integrated Management. 2014. UF/IFAS University of Florida



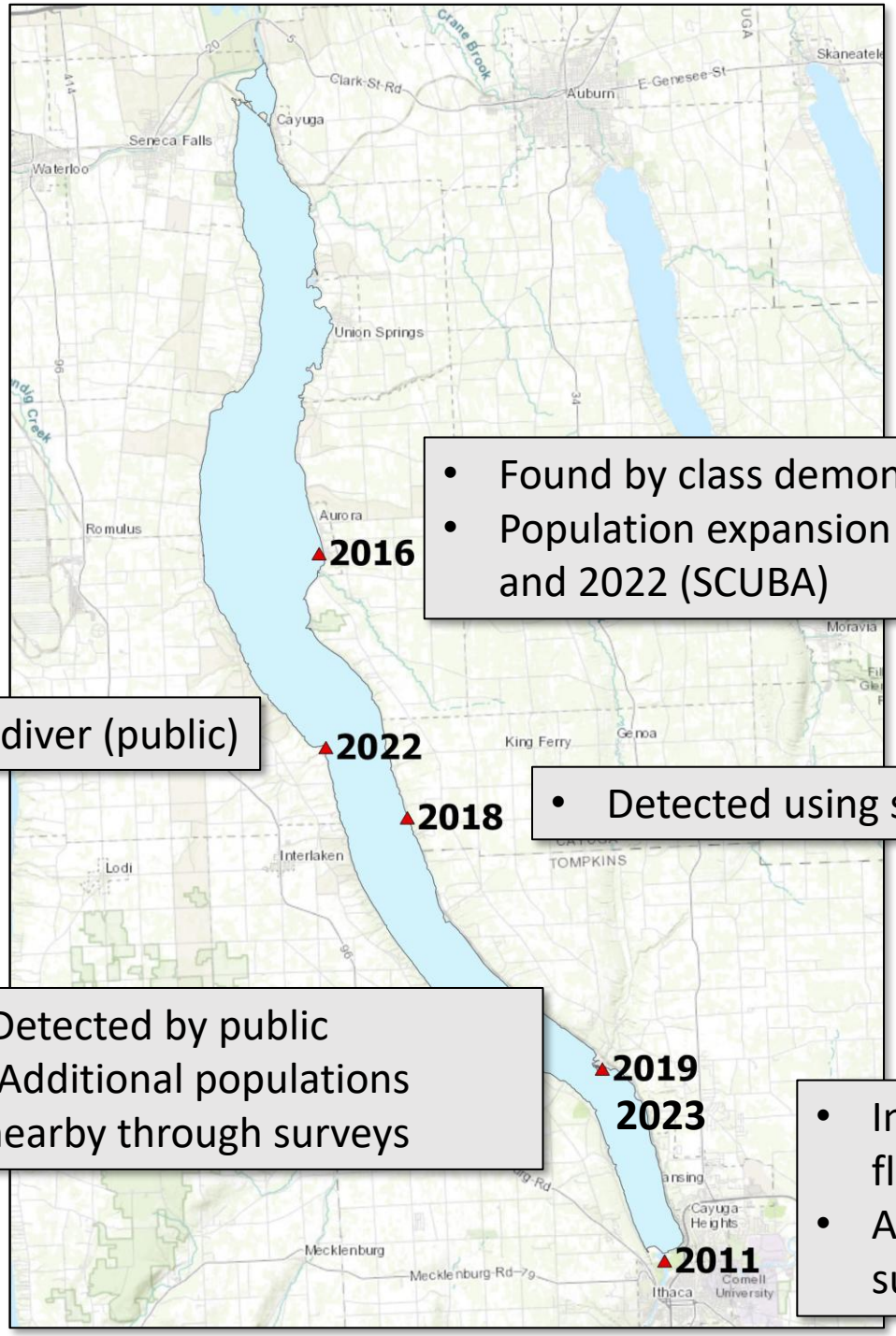
Threats and Impacts

Minimum and Maximum Estimated Annual Economic Loss Associated with the Establishment of Hydrilla in the Great Lakes

Resource Affected	Minimum Estimated Annual Economic Loss	Maximum Estimated Annual Economic Loss
Recreational Fishing/Angling	$(29,574,008)[1]	$34,814,477
Beach Use	$10,348,000	$31,206,000
Recreational Boating	$87,344,800	$422,887,200
Commercial Navigation/Dredging	$2,277,000	$9,776,250
Water Supply	not estimated	not estimated
Total	$70,395,792	$498,683,927

Notes: [1]This value is positive.

Detection History on Cayuga Lake



- Found by class demonstrating plant surveys (public)
- Population expansion observed in 2021 (rake tosses) and 2022 (SCUBA)

- Detected by SCUBA diver (public)

- Detected using single-transect 100 m perimeter survey

- 2019 - Detected by public
- 2023 – Additional populations found nearby through surveys

- Initial population found by the public – floating classroom
- Additional populations found through surveys

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Ithaca Inlet	S, CT, MT	S, CT, MT	S, CT	S, CT	S, CT	S, CT	S	S	S	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT
Ithaca SE Lake/Stewart Park		S	S, MT, CT	S, MT	S, CT	S	S, MT	S, CT, MT	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT	S
Ithaca Lighthouse, SW Lake		S	S	S	S, CT	S	S, MT	S	S, CT, MT	S, CT	S, CT	S, CT	S, CT	S, CT	S
Ithaca Fall Creek		S	S, CT	S, CT	S, CT	S, CT	S, CT	S	S	S, CT	S, CT	S, CT	S, CT	S, CT	S
Aurora						S	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT
King Ferry								S	S, MT, CT	S	S	S	S	S	
Lansing									S	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT
Sheldrake Point								S	S	S	S	S	S, CT	S, CT	S, CT

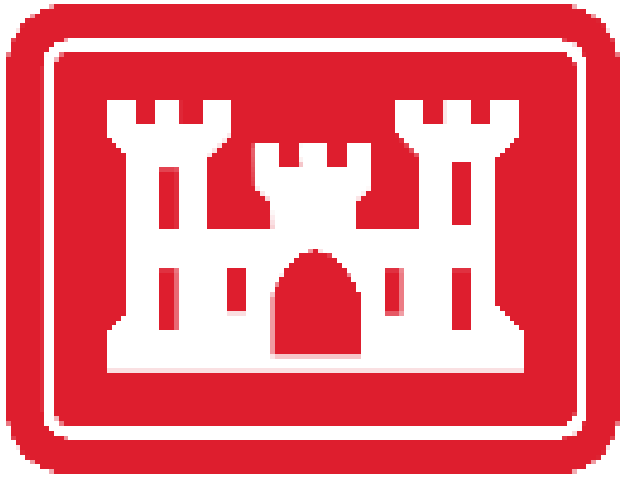
Hydrilla Not Detected

Hydrilla Detected

Site Not Sampled

S = Sampled
CT = Chemical Treatment
MT = Mechanical Treatment

Stakeholders



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How you can help:

- Report **hydrilla sightings** to FL-PRISM or DEC
  - Take good pictures!
- Get involved with **citizen science**
  - Macrophyte Survey Program
- Attend other AIS-related events (water chestnut pulls)

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Sign up for the **FL-PRISM listserv** to hear about upcoming events: