



**Department of
Environmental
Conservation**

NY Watercraft Inspection Steward Program Application (WISPA)

**NYS FOLA
May 3, 2019**

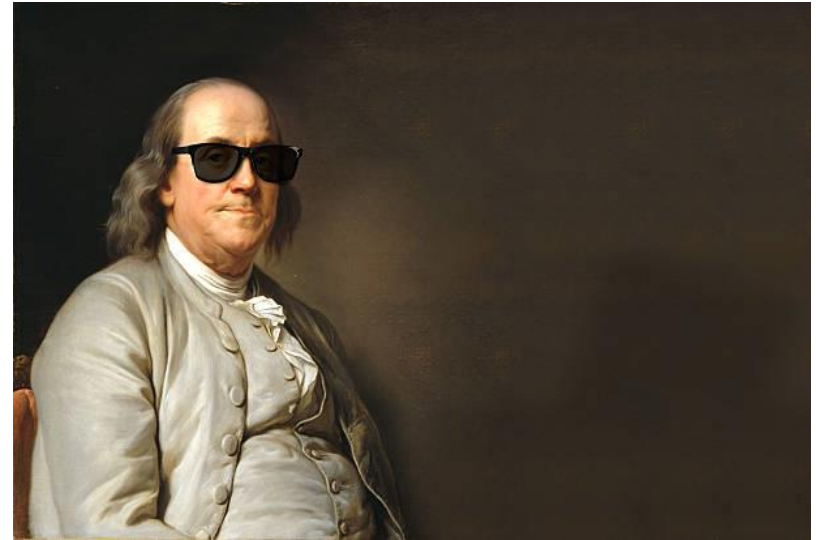
Aquatic Invasive Species Management Plan Goal



Stop the introduction and spread of aquatic invasive species into and within New York State's waters

Prevention is key

- Reduce economic, ecological, and human health impacts
- Or never have them happen at all!



Ben Franklin –the forefather of boat steward programs

The spectrum of prevention

Mandatory to voluntary



ThoughtCo



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Prevention: Regulatory Efforts

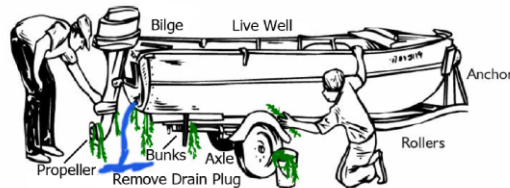
- Amendment to Article 3 of the Navigation Law – “AIS spread prevention signs at public boat launches”
- 6 NYCRR Part 59.4 (DEC) & 9 NYCRR Part 377.1 (Parks) – “AIS spread prevention regulations for boat launching/retrieving at DEC and Parks-owned sites”

PROTECT YOUR WATERS!

Prevent the Spread of Invasive Species

Invasive Plants and Animals Can Impact Boating, Fishing, Swimming and the Environment

REMOVE any visible mud, plants, fish or animals before transporting equipment.



ELIMINATE water from equipment before transporting.

CLEAN & DRY anything that comes into contact with water (boats, trailers, waders, equipment, dogs, etc.).

NEVER release plants, fish or animals into a body of water unless they came out of that body of water.



**STOP AQUATIC
HITCHHIKERS!**
www.ProtectYourWaters.net

For further information scan this QR code with a smartphone, or visit:
www.dec.ny.gov/animals/48221.html



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY, ALBANY, NY 12233-4753
www.dec.ny.gov

Prevention: Regulatory Efforts

6 NYCRR Part 575

“Regulated and Prohibited
Plants and Animals”

6 NYCRR Part 576

“Reasonable Precautions to
Prevent Spread of AIS”



Prevention:

- Revised AIS Management Plan released July 2015
- Watercraft inspection stewards becomes top priority for plan



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Prevention: Watercraft Inspection Steward Programs

- In the past programs have blinked in and out due to funding and capacity issues



Prevention: Watercraft Inspection Steward Programs

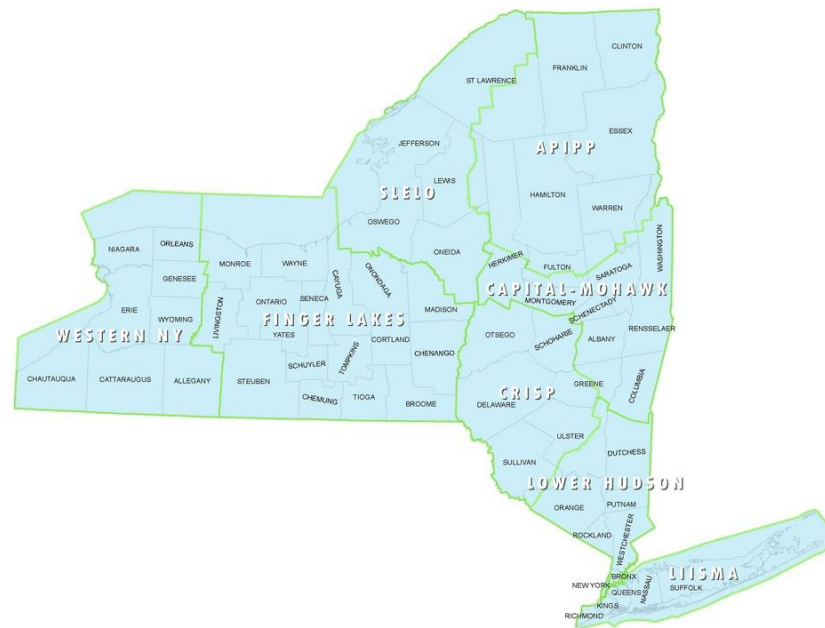
- AIS Spread Prevention Grants Program (2016)
- Invasive Species Grants Program (2019)



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Prevention: Watercraft Inspection Steward Programs

- Integrating into Partnerships for Regional Invasive Species Management (PRISM) contracts
- Additional contracts to cover locations not covered by PRISMs



Prevention: Watercraft Inspection Steward Program (WISP)

2019

- Coverage at more than 250 locations
- Increased coverage on the Hudson River and Mohawk River (26 locations)
- Increased coverage in the Catskills (22 locations)
- Including Lake George Park Commission and Lake George Association



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Prevention: Watercraft Inspection Steward Program (WISP)

2019

- Full scale boat steward programs for Western NY PRISM, St. Lawrence-Eastern Lake Ontario PRISM, and Finger Lakes PRISM
- Expansion of the ADK boat steward program (39 locations)
- Program standardization continues



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Message consistency

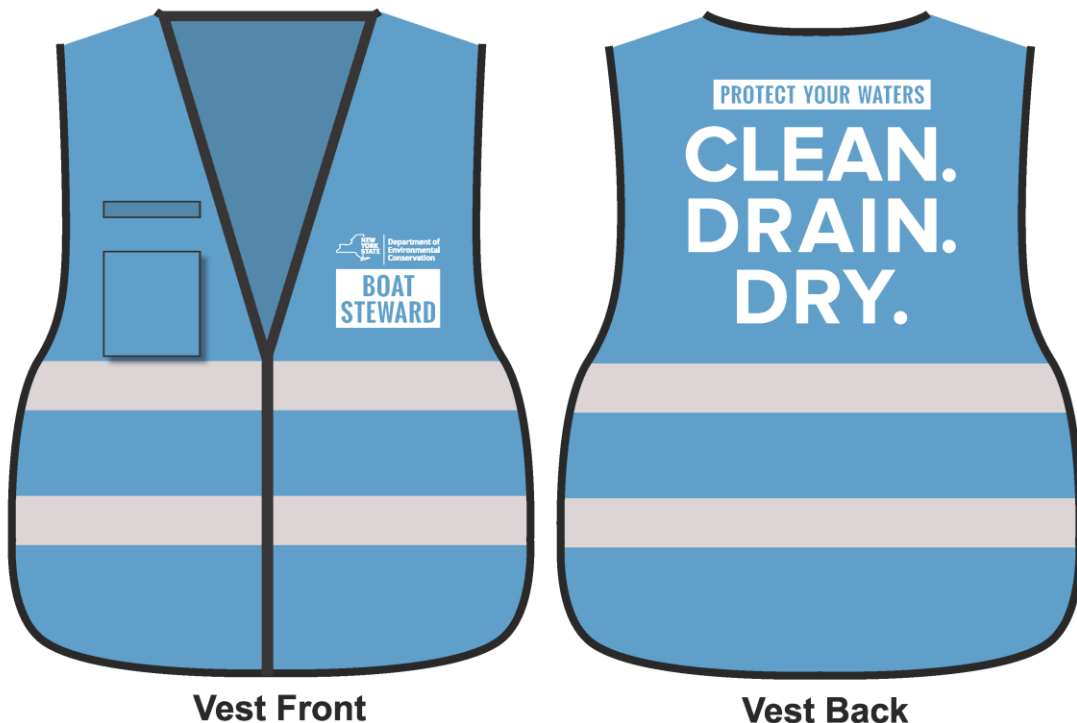
Standardized education and outreach products

Standardized training for stewards

Standardized signs

AIS disposal stations

Standardized uniforms



Prevention: Data standardization and centralized database (WISPA)

OPRHP, NYSDEC, and New York Natural Heritage Program (NYNHP) collaboration



The Survey

- Core of standardized questions
- Some customized questions as well
- Data can be saved in “outbox” until access to internet allows uploading to cloud



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Some cost estimates

Average boat steward salary =
\$15,000 per season
(\$15/hour)

Samsung Galaxy Tab A
(tablets + screen protector +
case) = \$100 to \$150



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More cost estimates

WISPA app = free download

ESRI GIS online license =
\$100

ESRI GIS software = *optional*



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Behavioral Change

- Working with behavioral psychologist
- Tweaking our existing messaging
- Asking for a commitment during WISPA survey
- Linking boaters to an in-depth survey
- **Knowing AIS awareness is not enough!!**



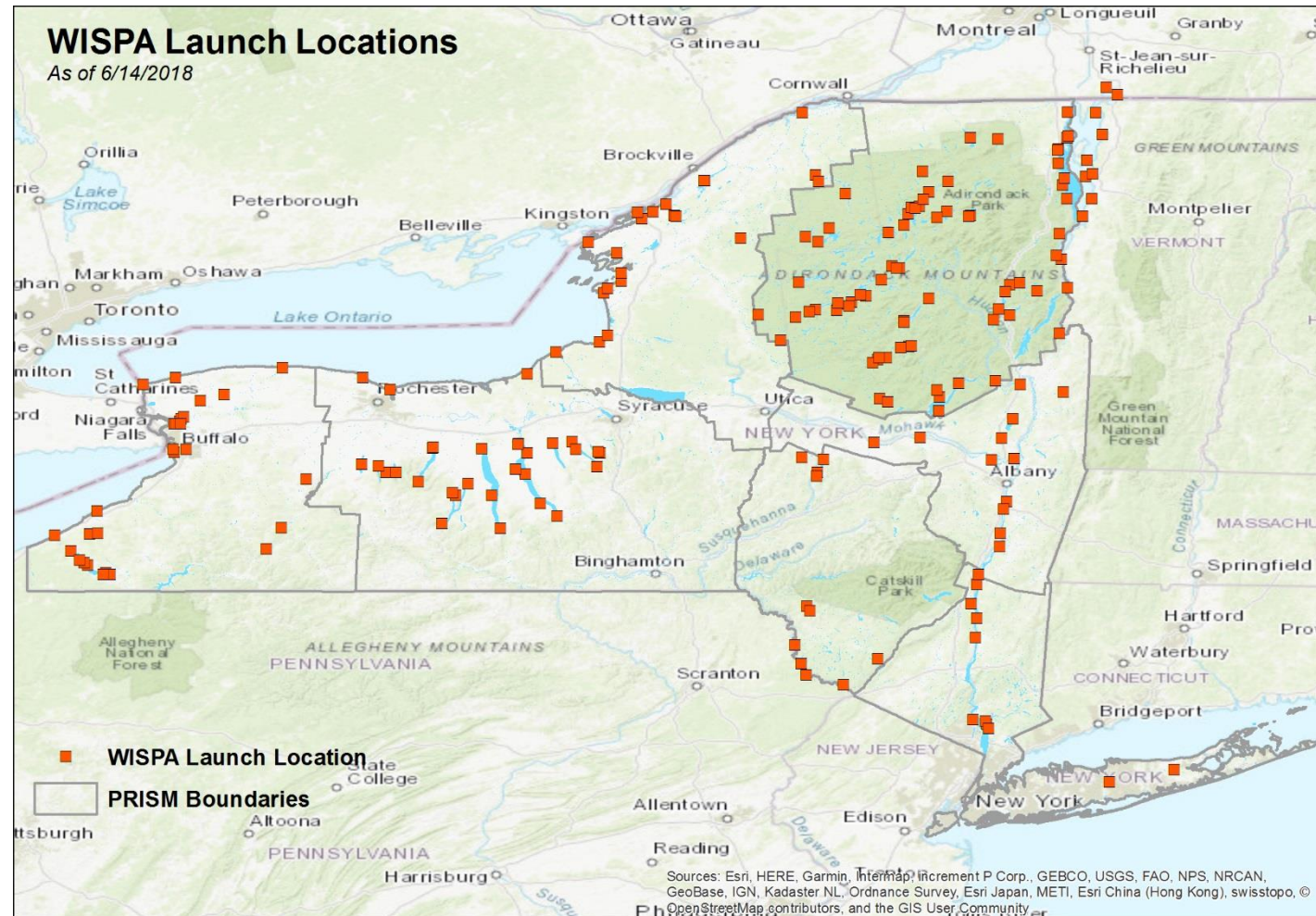
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More details about WISPA....



WISPA Launch Locations

As of 6/14/2018



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Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, OpenStreetMap contributors, and the GIS User Community

What Kind of Data Is Collected?

- **When** did the inspection occur?
- **Where** the boat launch and the steward were located?
- Was the watercraft **launching or retrieving**?
- What **type of watercraft** was inspected?
- Did the operator **agree to an inspection**?
 - If so, were **any species/debris detected** (if so, which species)?
- Was a Watercraft Decontamination performed?



How Does WISPA Work?

- **Survey123** - Field data collection survey application
 - *Requires internet connectivity for setup*
 - *Works offline once configured for data collection*
 - *Internet connectivity required for data upload*
- **ArcGIS Online**
 - Central GIS database
 - Data Dashboard
 - Data Editor Maps

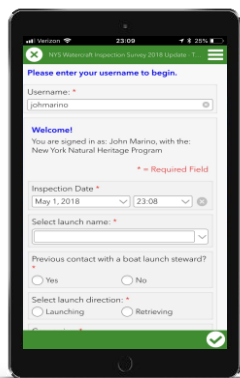


How WISPA Works

WISPA Data Collection

Survey123

- Tool which boat launch stewards use to collect and upload data

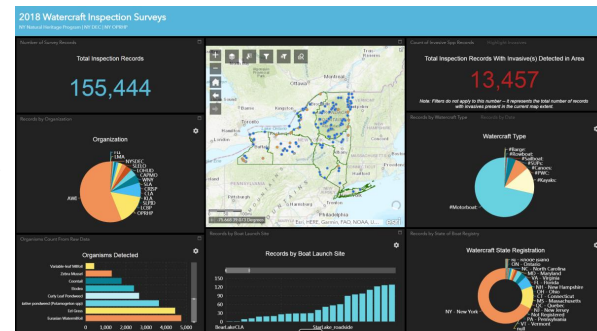


iPad Photo Credit: Wikimedia Commons user Netspy

ArcGIS
Online
NYSDEC

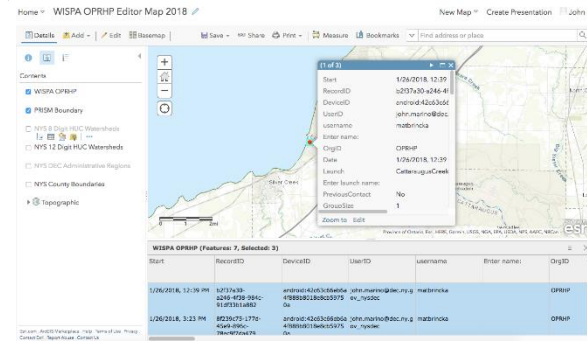
Dashboard

- Viewable by program coordinators
- Allows for view-only of all state data



Editor Map

- Configured for each organization
- Allows for data editing of own organization's data



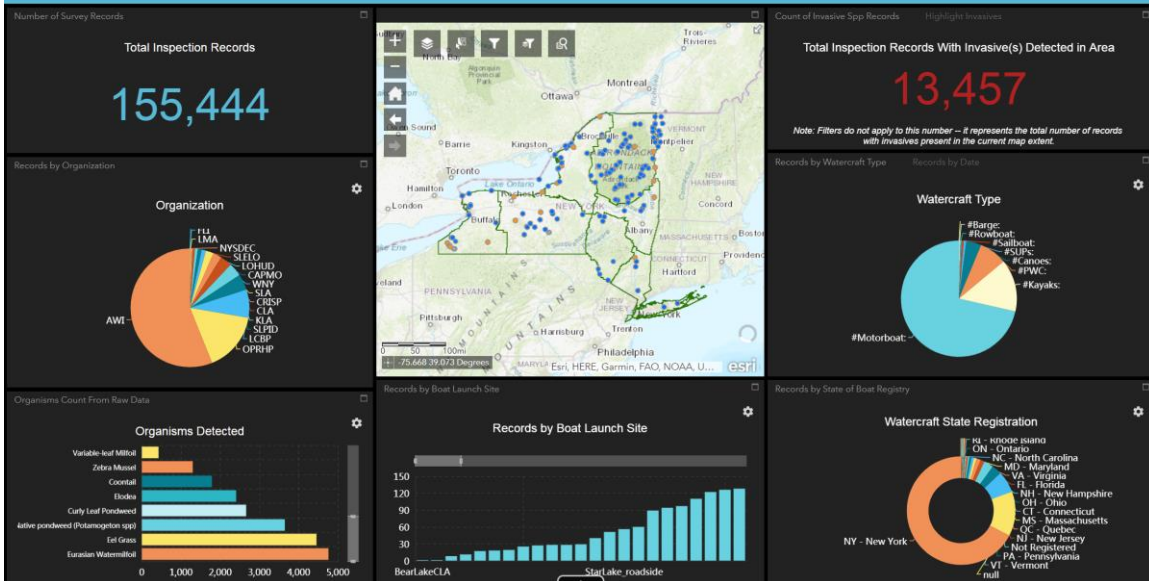
Data Viewing

Dashboard

- At-a-glance view of statewide data
- Filter by date or organization
- Data in charts and graphs match the data visible in the map

2018 Watercraft Inspection Surveys

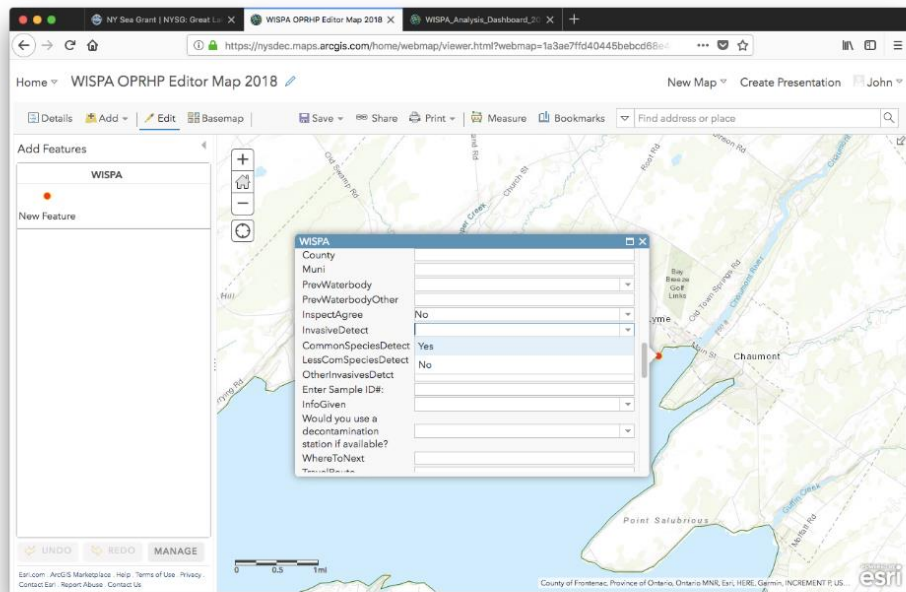
NY Natural Heritage Program | NY DEC | NY OPRHP



Data Editing

Editor Map

- View and edit all data submitted by stewards by organization
- Export data to different formats for detailed/custom analysis



WISPA Data Results 2018

As of Dec. 20, 2018

- **156,849** records collected
- **14,436** records with organisms detected
9.2% of total
- Watercraft:
 - 71.5% motorboat
 - 14.5% kayaks
 - 7.7% personal watercraft
 - 6.3% all others

Top Species Detected

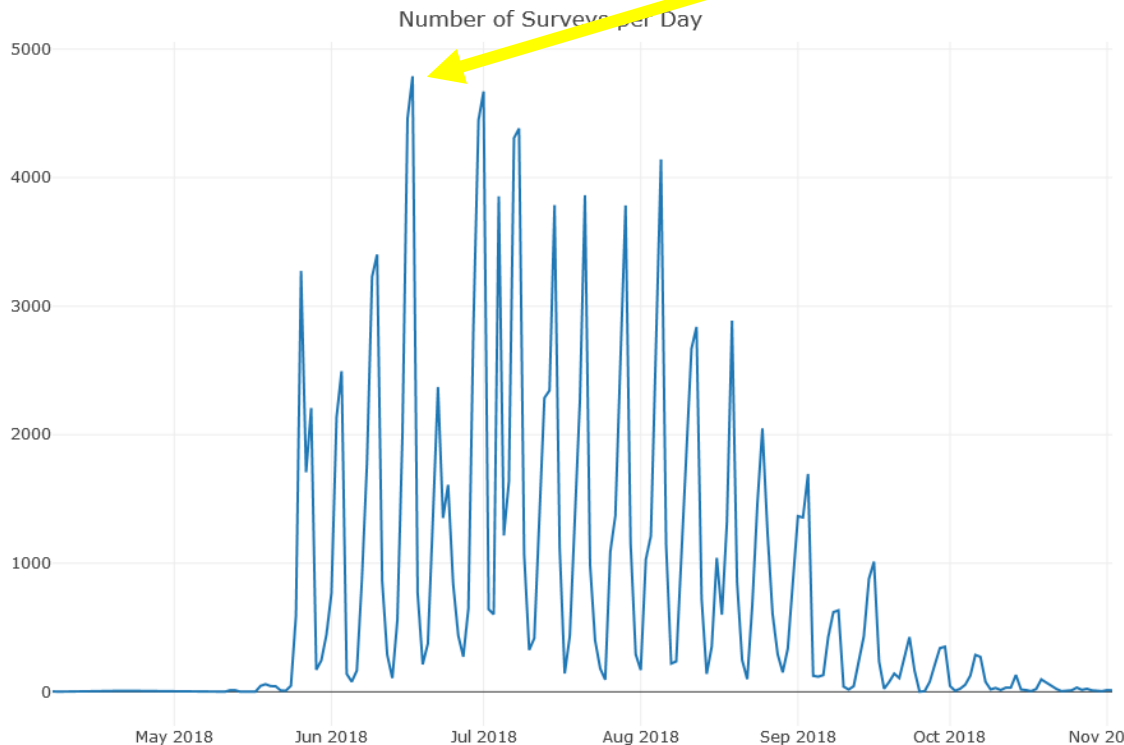
1. Eurasian Watermilfoil
(*Myriophyllum spicatum*)
2. Eel Grass/Water Celery (*Vallisneria americana*)
3. Native pondweed (*Potamogeton* spp.)
4. Curly Leaf Pondweed
(*Potamogeton crispus*)
5. Elodea (*Elodea* spp.)



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WISPA Data Results 2018

Inspection Date



Father's Day

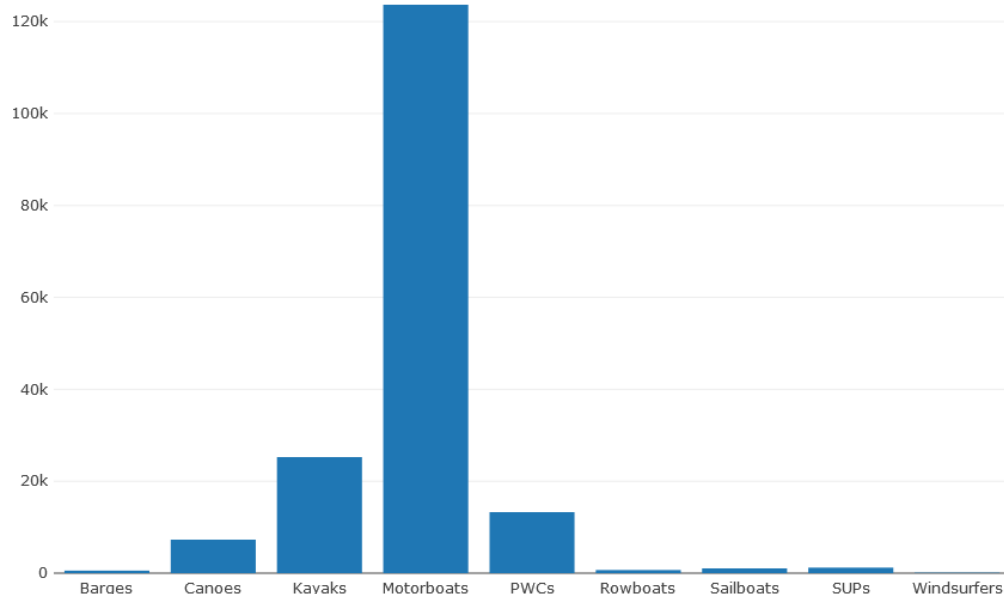


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WISPA Data Results 2018

Watercraft Type

Total Watercraft



Barges	567	0.3%
Canoes	7,303	4.2%
Kayaks	25,269	14.6%
Motorboats	123,674	71.4%
PWCs	13,276	7.7%
Rowboats	695	0.4%
Sailboats	1,031	0.6%
SUPs	1,199	0.7%
Windsurfers	113	0.1%

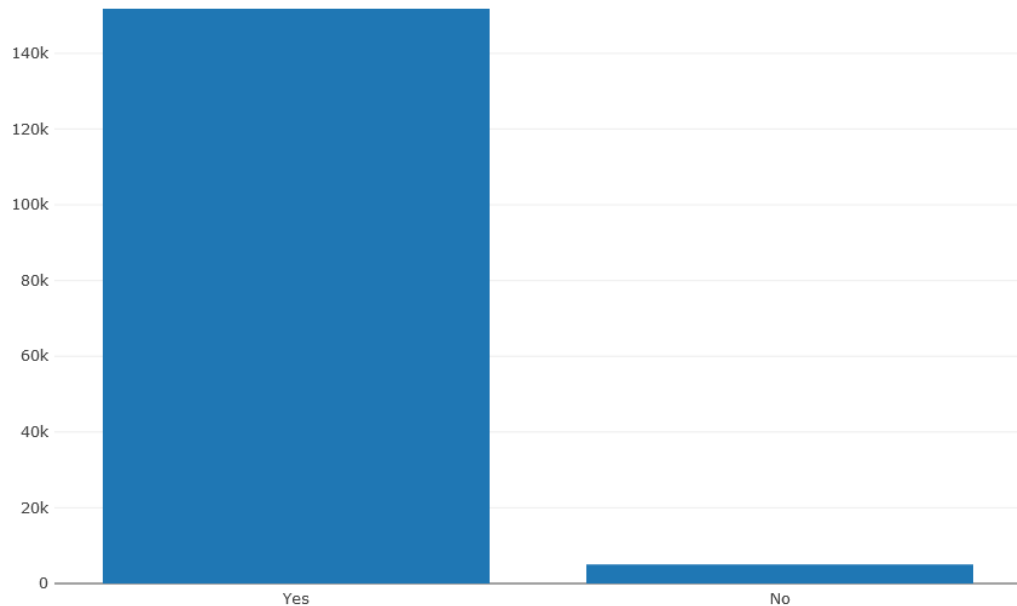


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WISPA Data Results 2018

Did The User Agree To An Inspection?

Watercraft User Inspection



Yes	151,771	96.8%
No	5,028	3.2%

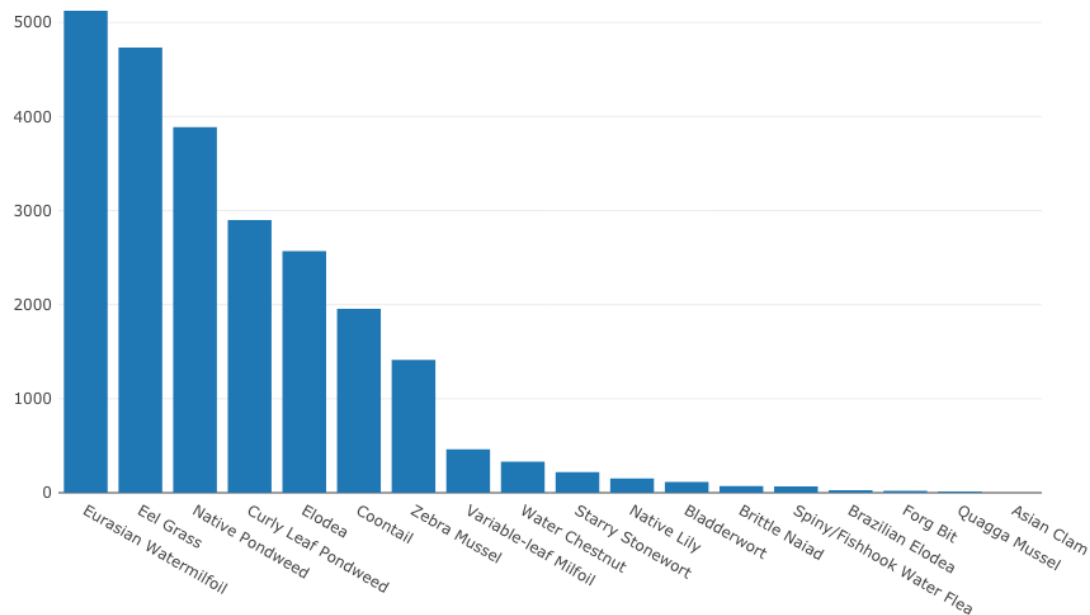


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WISPA Data Results 2018

Species Detected

Total Species Detected



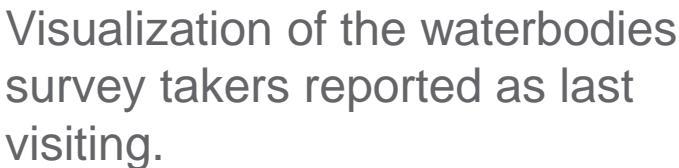
Eurasian Watermilfoil	<i>Myriophyllum spicatum</i>	5,124	21.29%
Water Celery/Eel Grass	<i>Vallisneria americana</i>	4,734	19.67%
Native Pondweed	<i>Potamogeton</i> spp.	3,887	16.15%
Curly Leaf Pondweed	<i>Potamogeton crispus</i>	2,899	12.05%
Elodea	<i>Elodea</i> spp.	2,569	10.68%
Coontail	<i>Ceratophyllum demersum</i>	1,954	8.12%
Zebra Mussel	<i>Dreissena polymorpha</i>	1,413	5.87%
Variable-leaf Milfoil	<i>Myriophyllum heterophyllum</i>	462	1.92%
Water Chestnut	<i>Trapa natans</i>	332	1.38%
Starry Stonewort	<i>Nitellopsis obtusa</i>	219	0.91%
Native Lily	Unknown <i>Nymphaeaceae</i>	152	0.63%
Bladderwort	<i>Utricularia</i> spp.	115	0.48%
Brittle Naiad	<i>Najas minor</i>	72	0.30%
Spiny/Fishhook Water Flea	<i>Bythotrephes longimanus</i>	68	0.28%
Brazilian Elodea	<i>Egeria densa</i>	27	0.11%
Forg Bit	<i>Hydrocharis morsus-ranae</i>	19	0.08%
Quagga Mussel	<i>Dreissena bugensis</i>	15	0.06%
Asian Clam	<i>Corbicula fluminea</i>	1	0.00%

WISPA Data Analysis

- Mid- and end-of- season reports for each participating organization
- “Spider” Diagrams
- “Hits” Analysis



“Spider” Maps



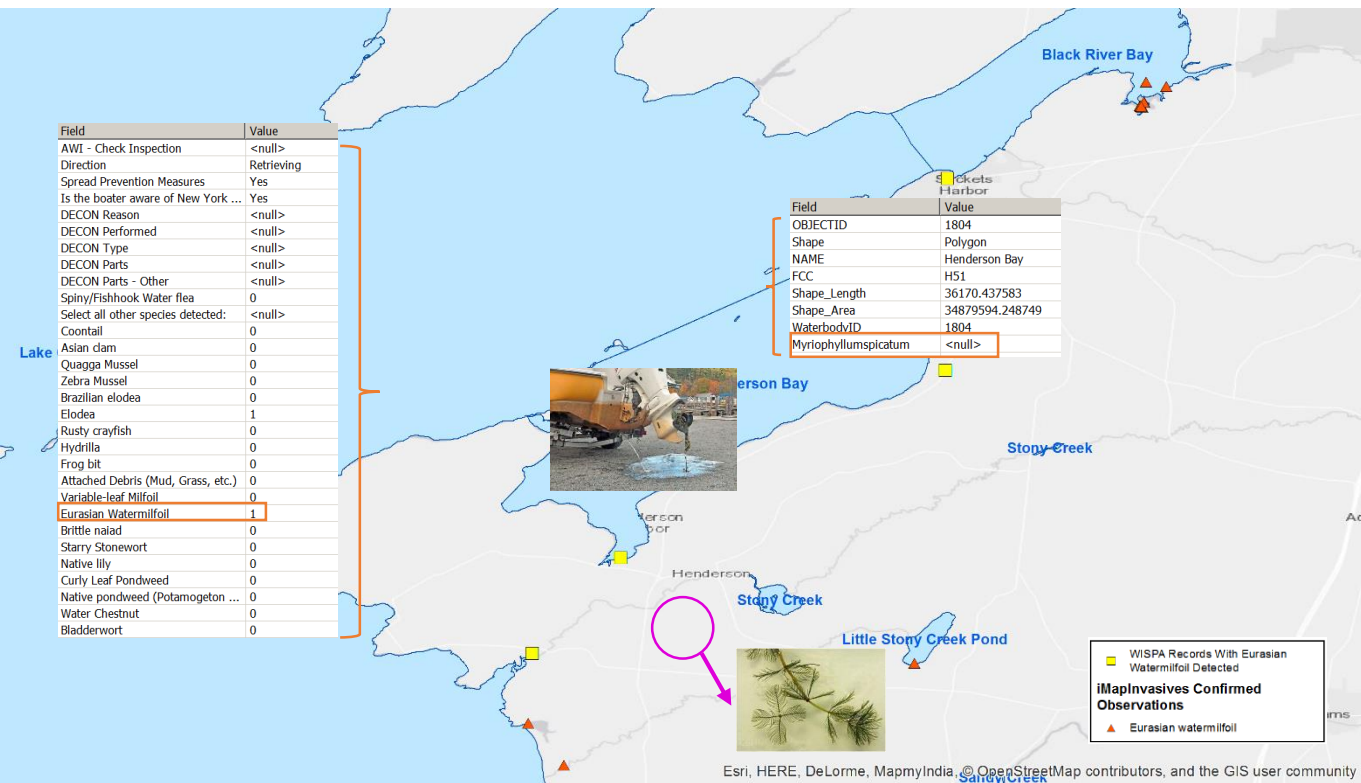
Created using ArcGIS Pro.

WISPA Data Analysis

“Hits” Analysis – *“Leads-in-Need-of-Obs”*

- Opportunity to compare iMapInvasives observation data to WISPA “hits” data
- Highlights areas in which aquatic invasive species are potentially under-reported in iMapInvasives

WISPA Data Analysis

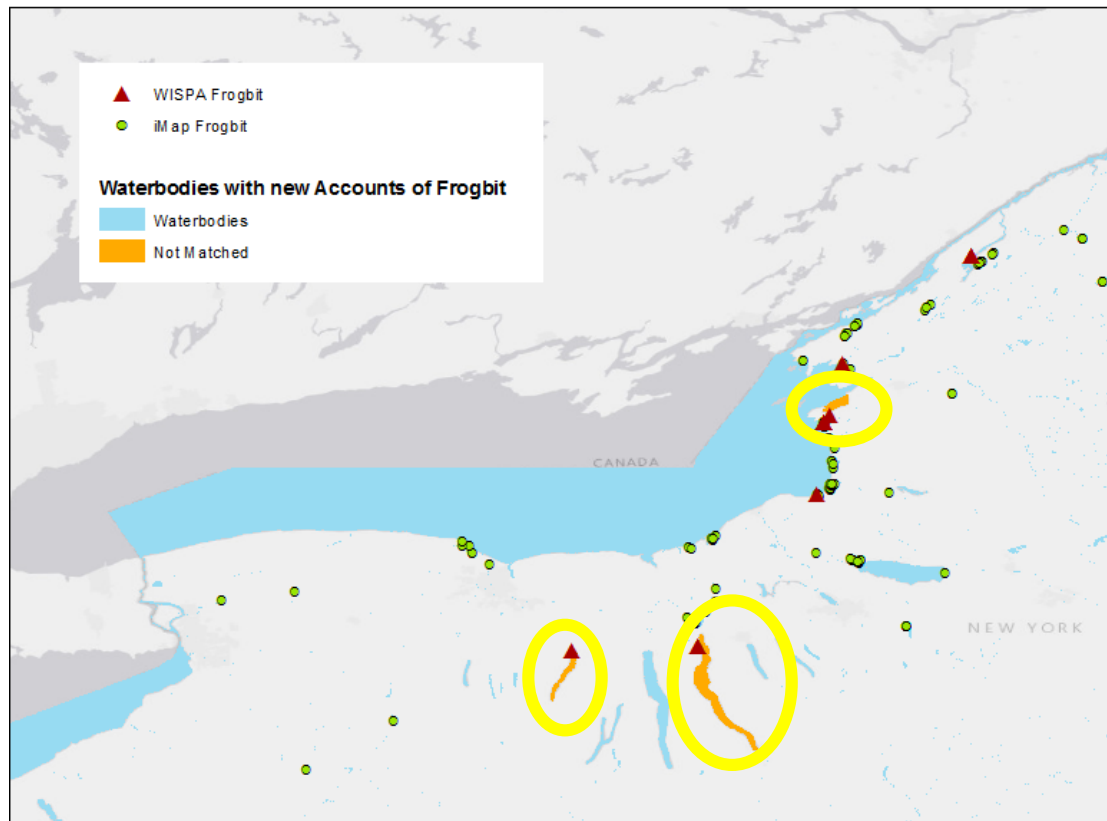


iMapInvasives:
No confirmed
observations of
Eurasian Watermilfoil
(*Myriophyllum spicatum*)
in Henderson Bay



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WISPA Data Analysis



Example “Hits” analysis output
“Leads-in-need-of-Obs”

European Frogbit
Hydrocharis morsus-ranae

How do you participate?

- Contact: imapinvasives@dec.ny.gov
- Subject: “WISPA”
- Possible future enhancements:
 - Email alerts for high-priority species
 - List of high-priority species by previous waterbody

Thank you!



Meg Wilkinson
Invasive Species Database Program Coordinator
NY Natural Heritage Program – iMapInvasives Team
meg.wilkinson@dec.ny.gov
iMapInvasives.org

Cathy McGlynn
AIIS Coordinator
Bureau of Invasive Species and Ecosystem Health
Invasive Species Coordination Section
catherine.mcglynn@dec.ny.gov

Special thanks to the following individuals for their contributions:
 Kadir Goz, former intern and SUNY ESF M.S. Candidate
 Forest Swaciak, current intern and SUNY Albany M.S. Candidate

The NY Natural Heritage Program is a partnership between the NYS Department of Environmental Conservation (NYSDEC) and the State University of New York College of Environmental Science and Forestry (SUNY ESF).



New York
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