Leveraging iMapInvasives for your Lake

NYSFOLA Annual Conference 2022

"Maximizing Your Lake Data"

iMapInvasives

Sharing information for strategic management

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New York Natural Heritage Program

Coordinated invasive species efforts across New York

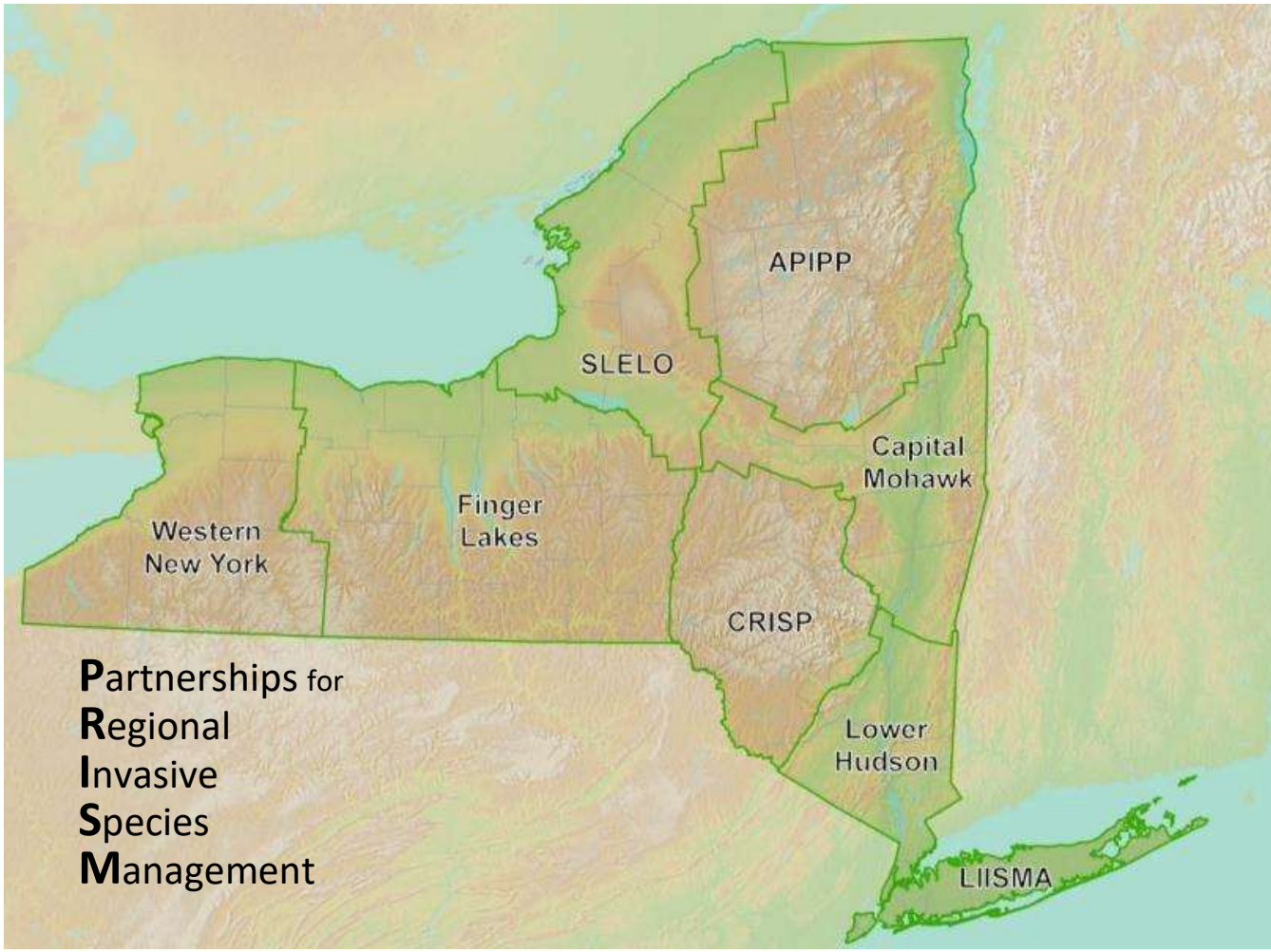
- Invasive species council
  - NYS Agency programs
- Advisory Committee
- Research Institute
- Information sharing
- PRISMs = Regional hubs

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE OF OPPORTUNITY | Agriculture and Markets

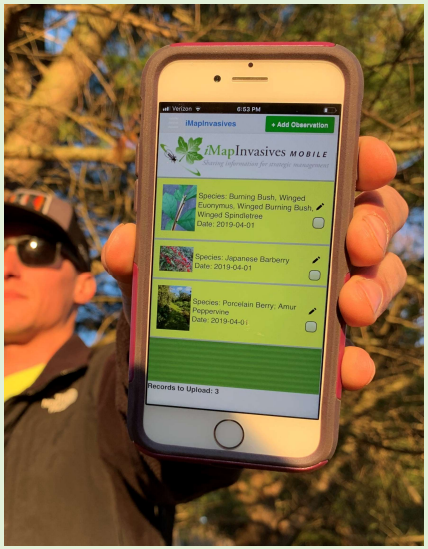
NEW YORK STATE | Parks, Recreation and Historic Preservation

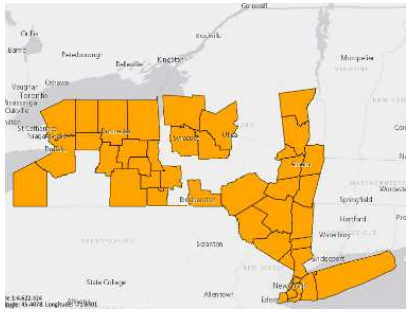
New York Natural Heritage Program



*i*MapInvasives as the NYS Invasive Species Database

iMapInvasives is an online and mobile, GIS-based data management system used to support state agencies, conservation partners, and the public working on invasive species issues.





Species Distributions and Reports

Early Detection Alerts

Web Map Services

Tracking Control Efforts and Results

NatureServe

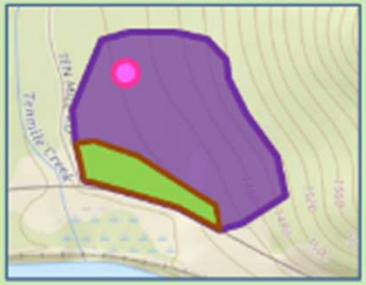
New York Natural Heritage Program

Types of data within iMapInvasives

Presence

What did you find?

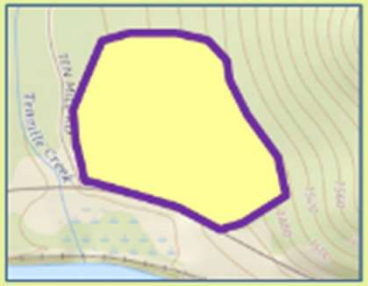
Location(s) (polygon, line, or point) that document one or multiple species present per location



Not Detected

What didn't you find?

One or more species looked for but not found.

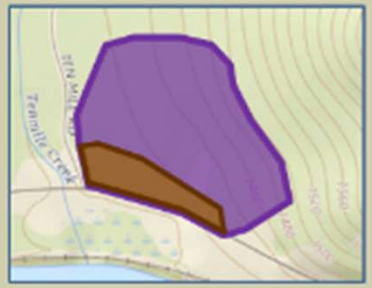


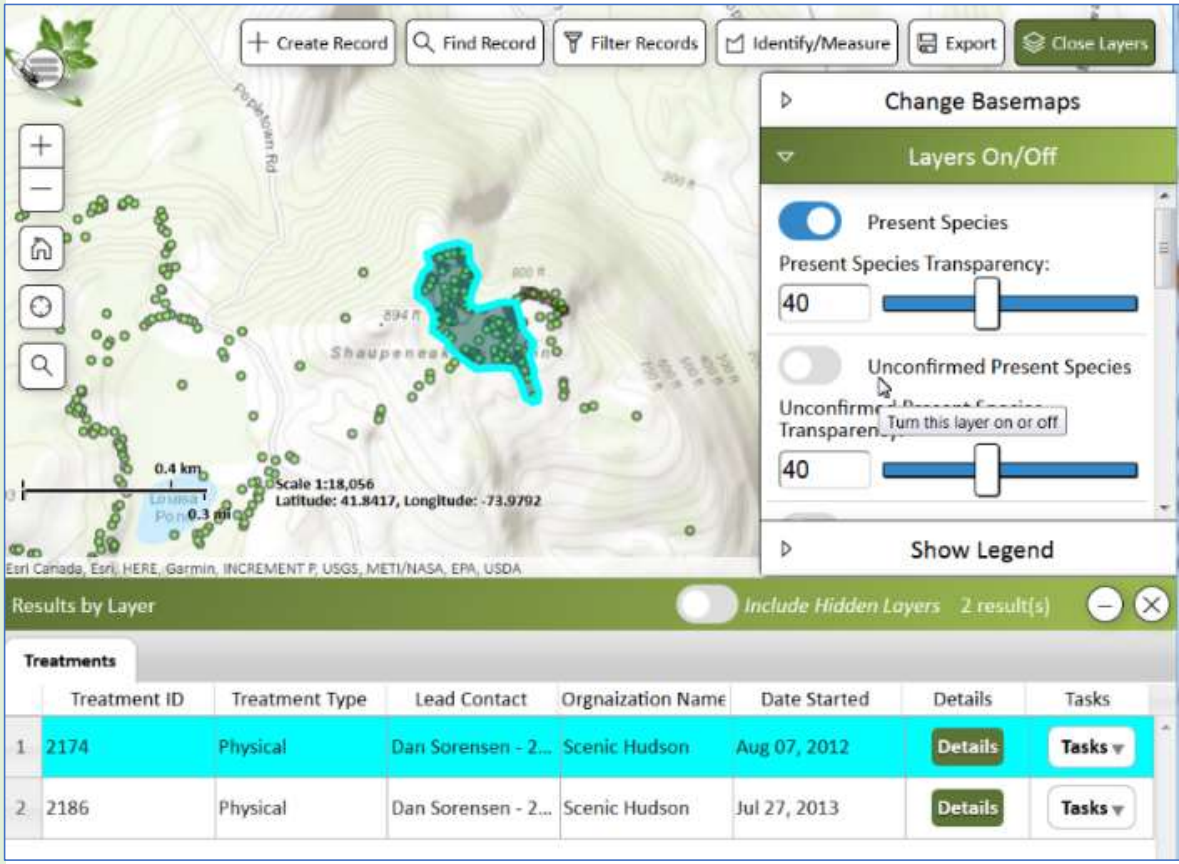
Treatment

What did you treat?

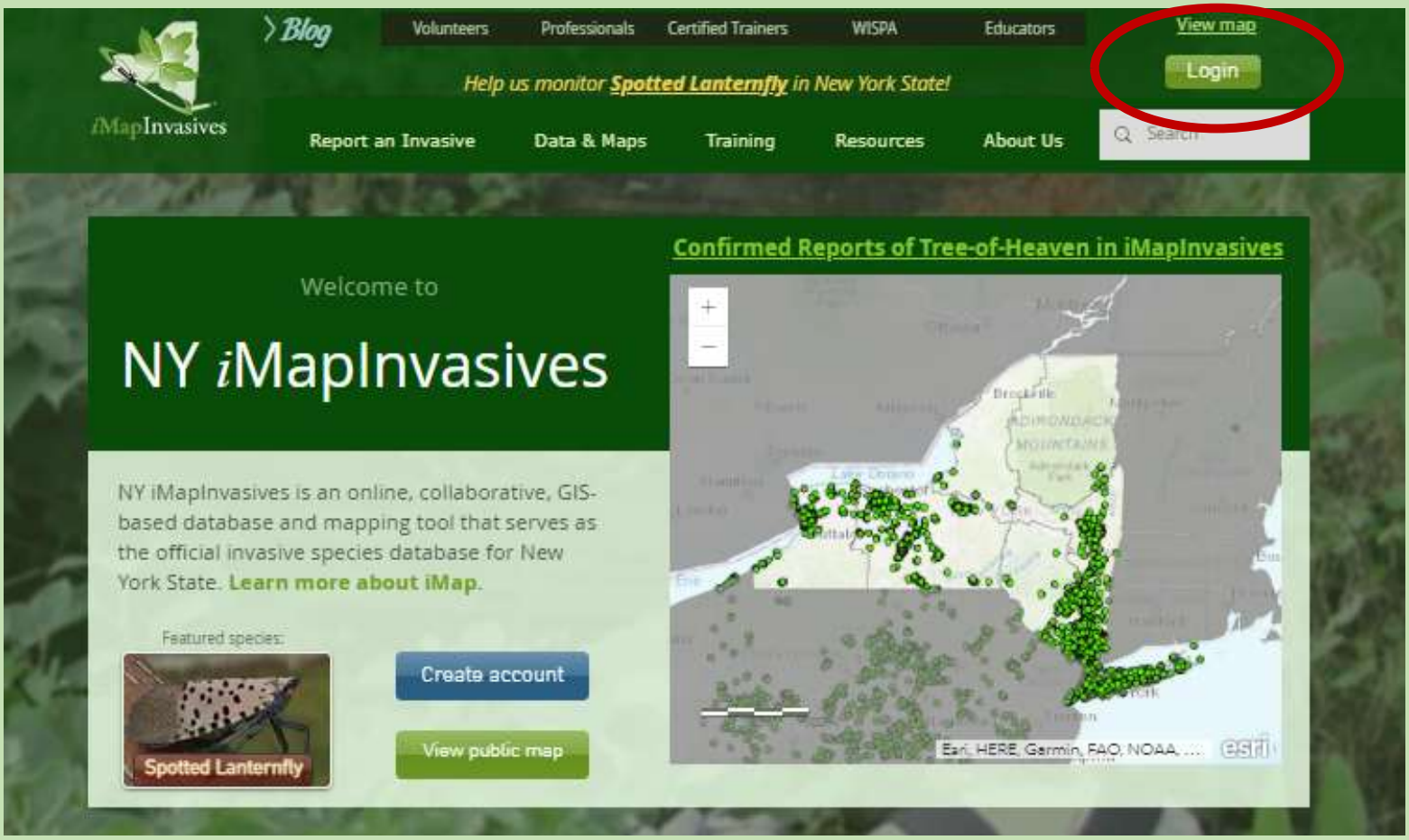
Polygon(s) within, or same area as, the parent Searched Area record

- mechanical, chemical, or biological



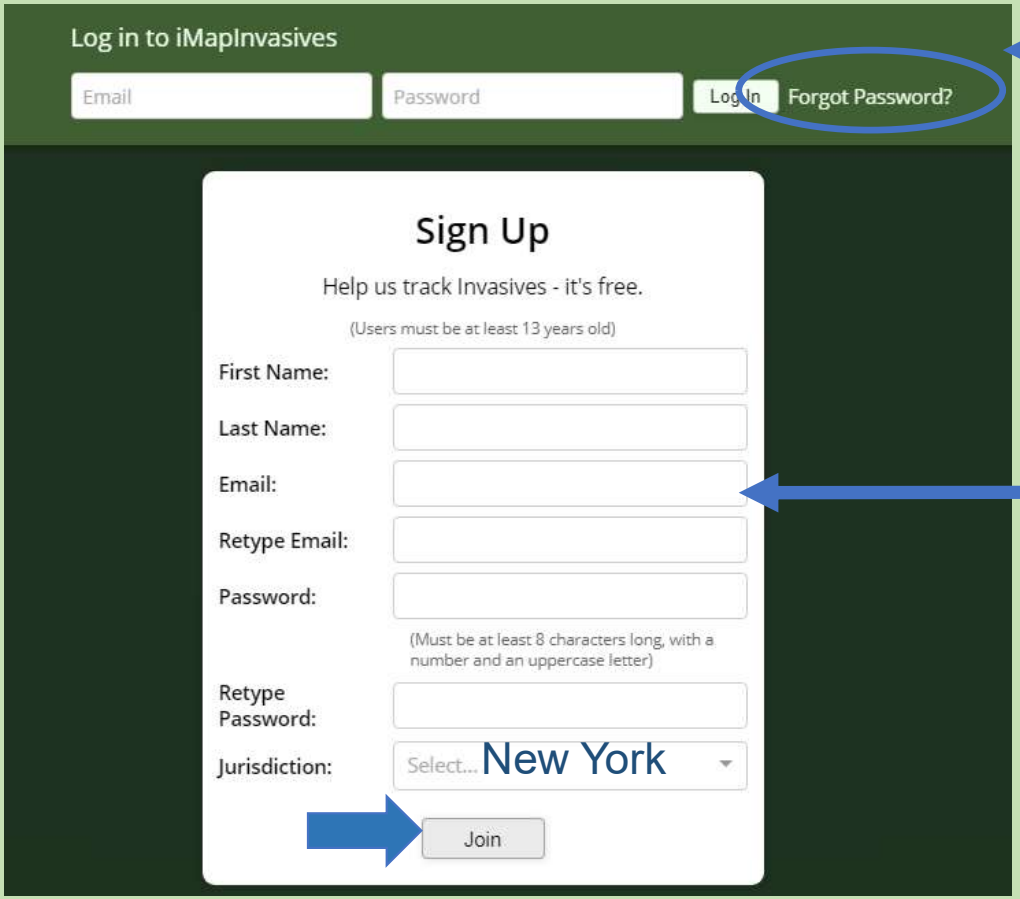


www.NYimapinvasives.org



Create Account/Login

imapinvasives.natureserve.org



Login (if you have account)

Create Account

Check email for link ("click here"), click open the User Agreement.

Read User Agreement and accept

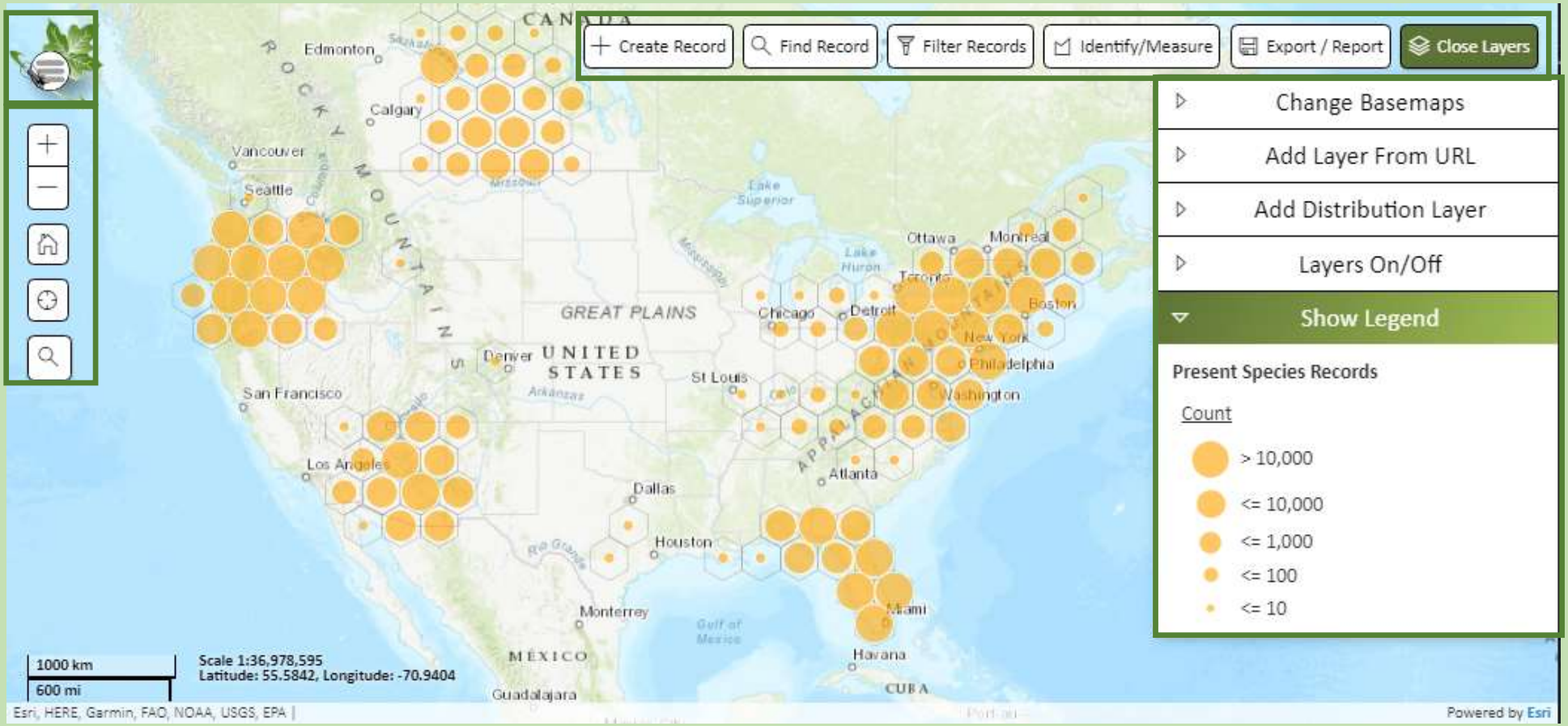
iMapInvasives Online

Main Menu

Action Tools

Navigation

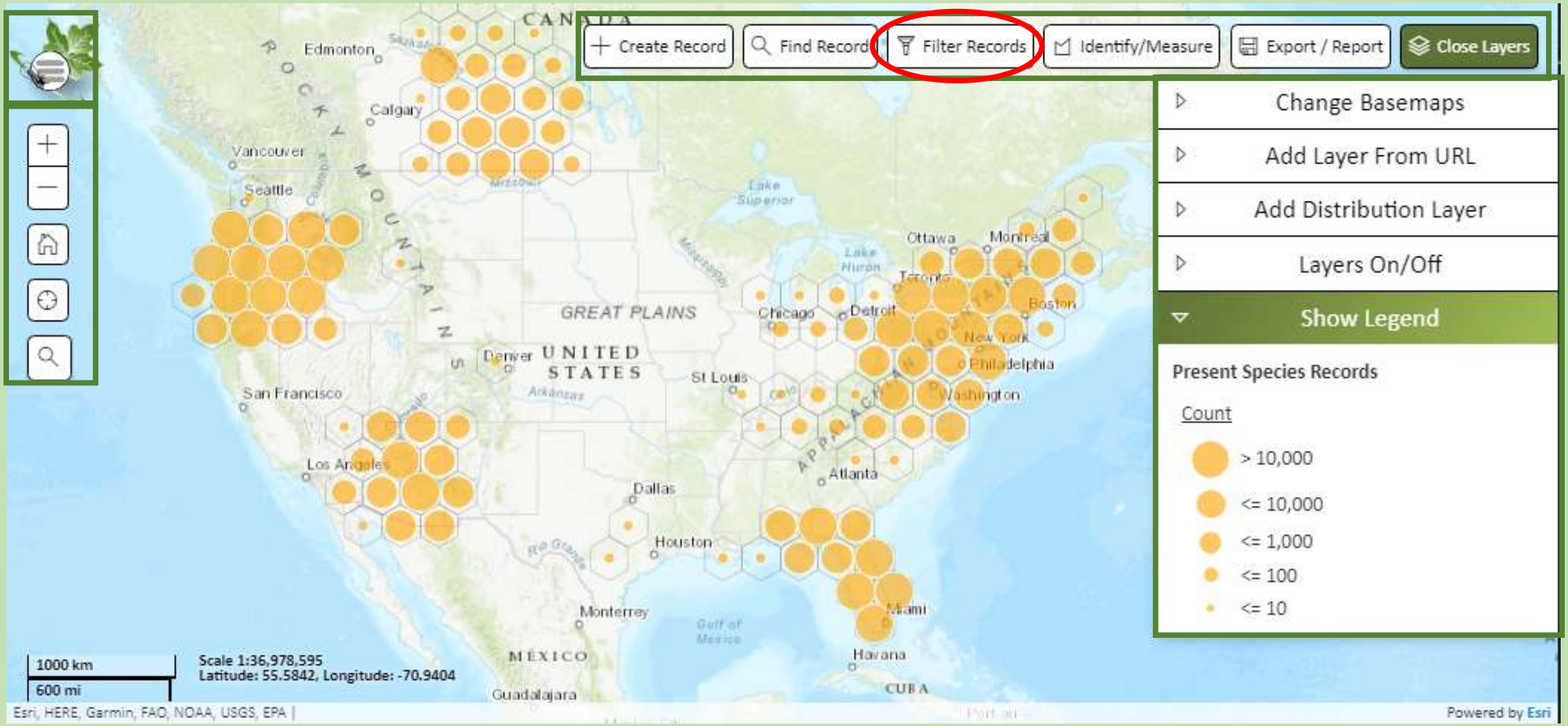
Geographic Layers



iMapInvasives Online: Viewing Data

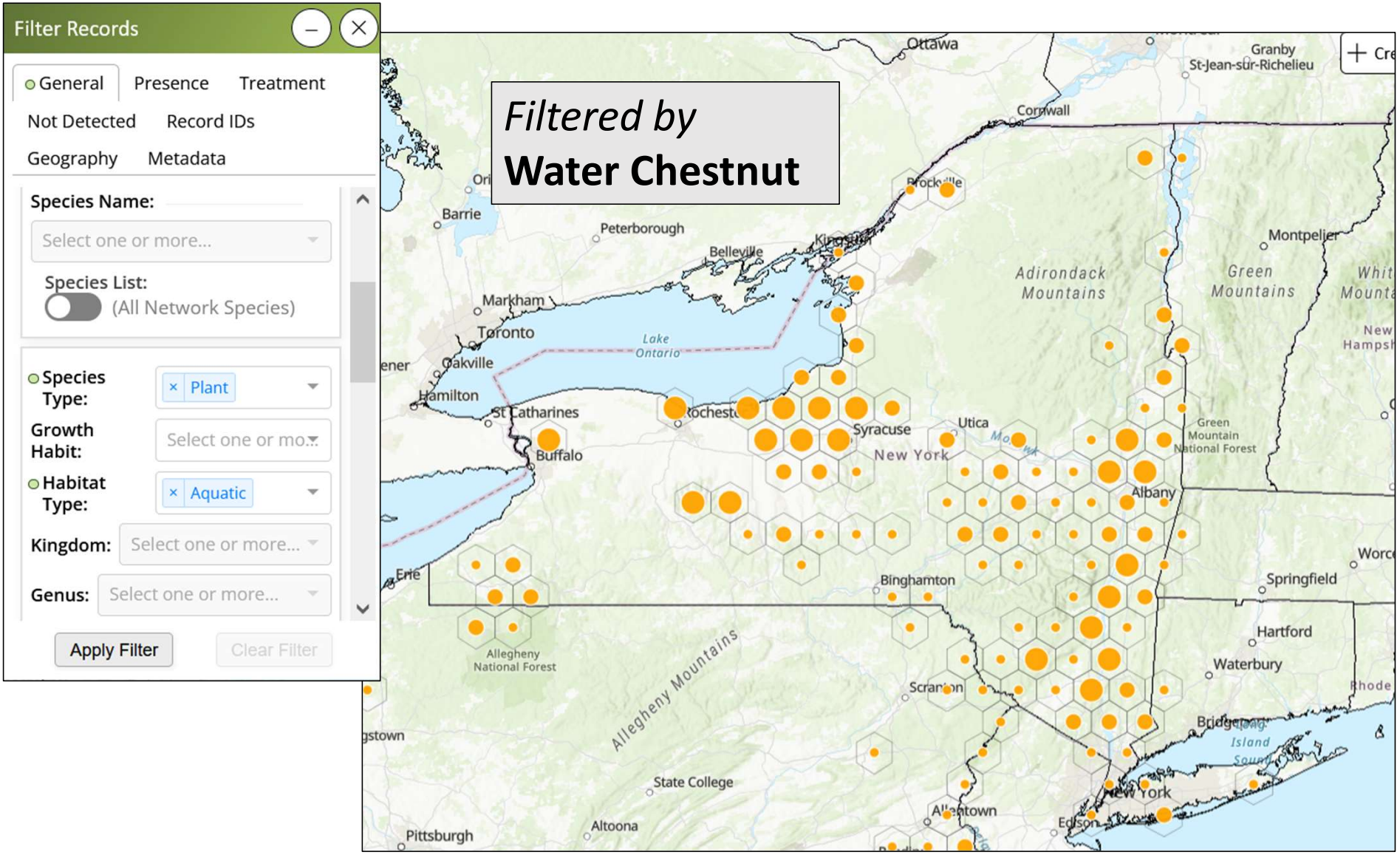
Main Menu

Action Tools



Navigation

Geographic Layers


Filter Records
General
Presence
Treatment
Not Detected
Record IDs
Geography
Metadata
Species Name:
Select one or more...
Species List:
(All Network Species)
Species Type:
Plant
Growth Habit:
Select one or mo...
Habitat Type:
Aquatic
Kingdom:
Select one or more...
Genus:
Select one or more...
Apply Filter
Clear Filter
Filtered by
Water Chestnut
Ottawa
Granby
St-Jean-sur-Richelieu
Cornwall
Barrie
Peterborough
Belleville
Kingston
Markham
Toronto
Oakville
Hamilton
St Catharines
Buffalo
Lake Ontario
Syracuse
Utica
New York
Adirondack Mountains
Green Mountains
Montpelier
Green Mountain National Forest
Albany
Binghamton
Springfield
Hartford
Waterbury
Erie
Allegheny National Forest
Allegheny Mountains
Scranton
State College
Altoona
Pittsburgh
Allentown
Edison
New York
Long Island Sound

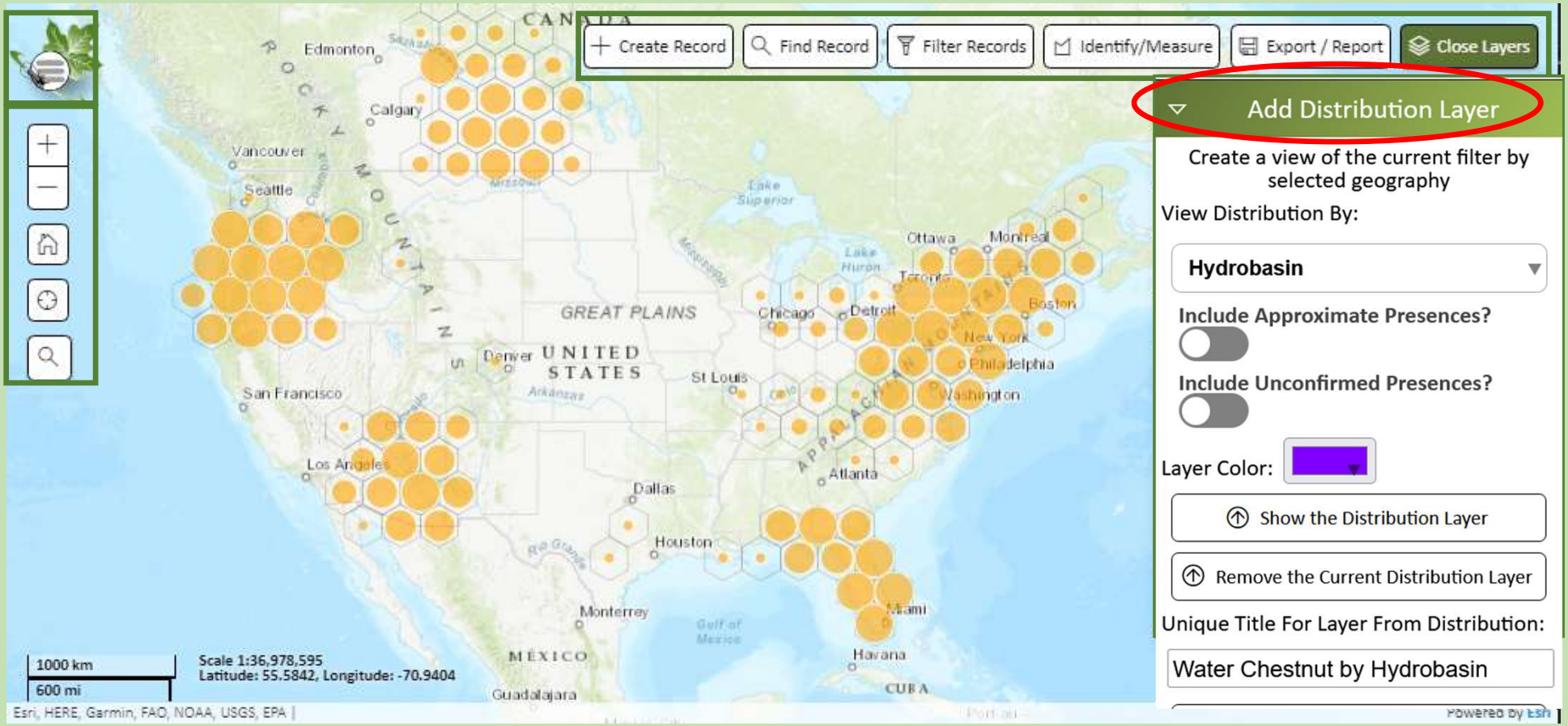
iMapInvasives Online: Distribution Maps

Main Menu

Action Tools

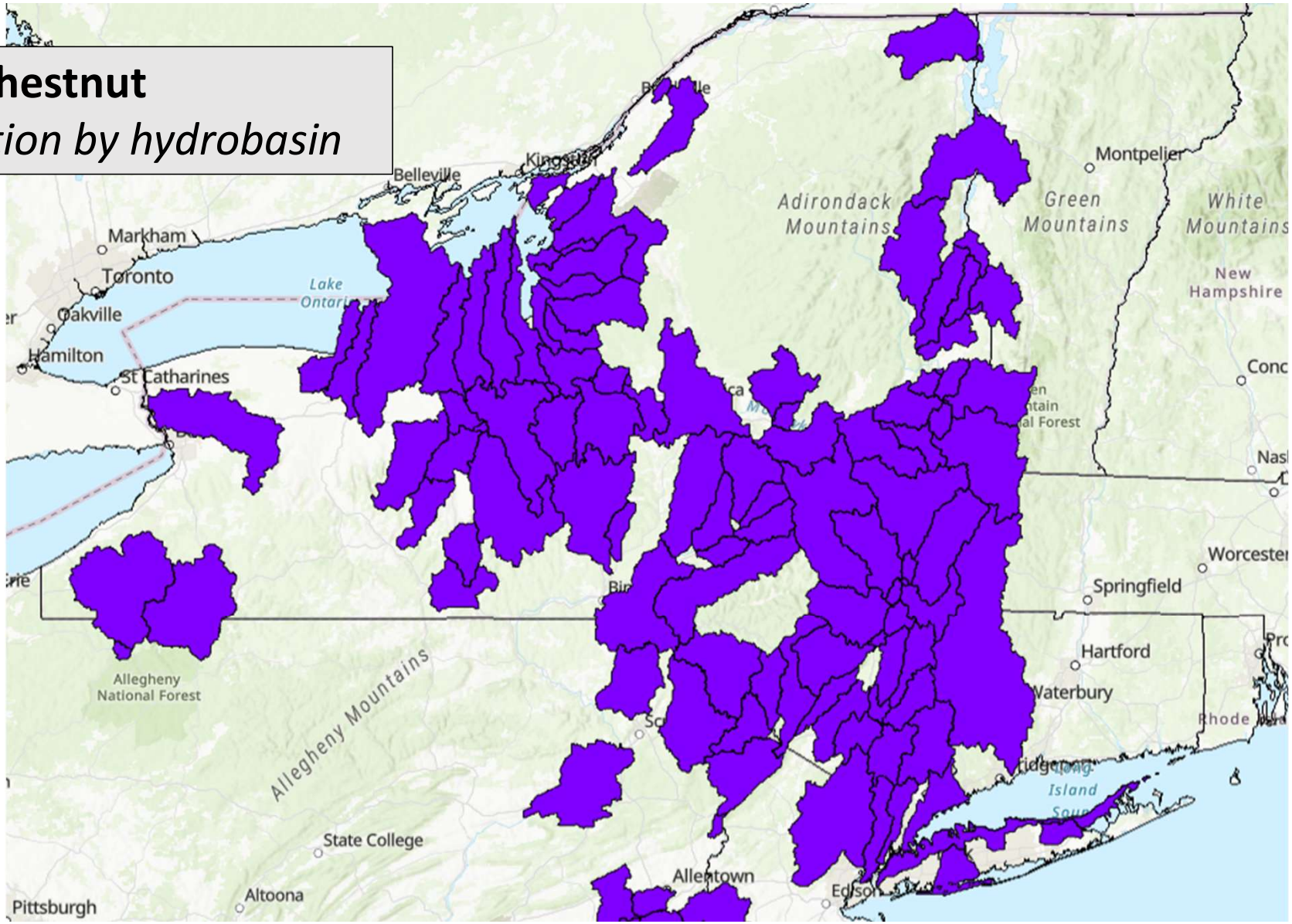
Navigation

Geographic Layers



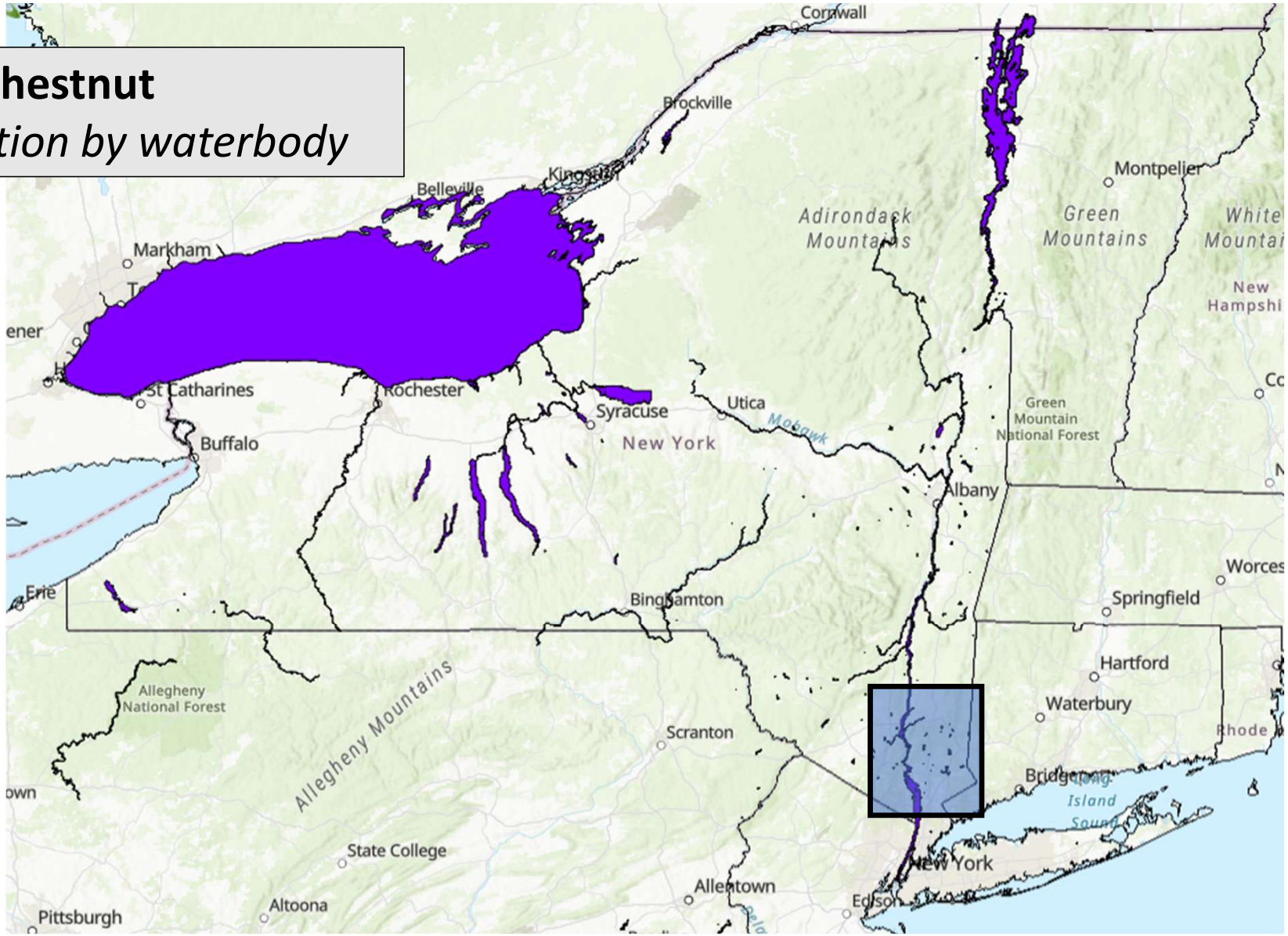
Water Chestnut

Distribution by hydrobasin



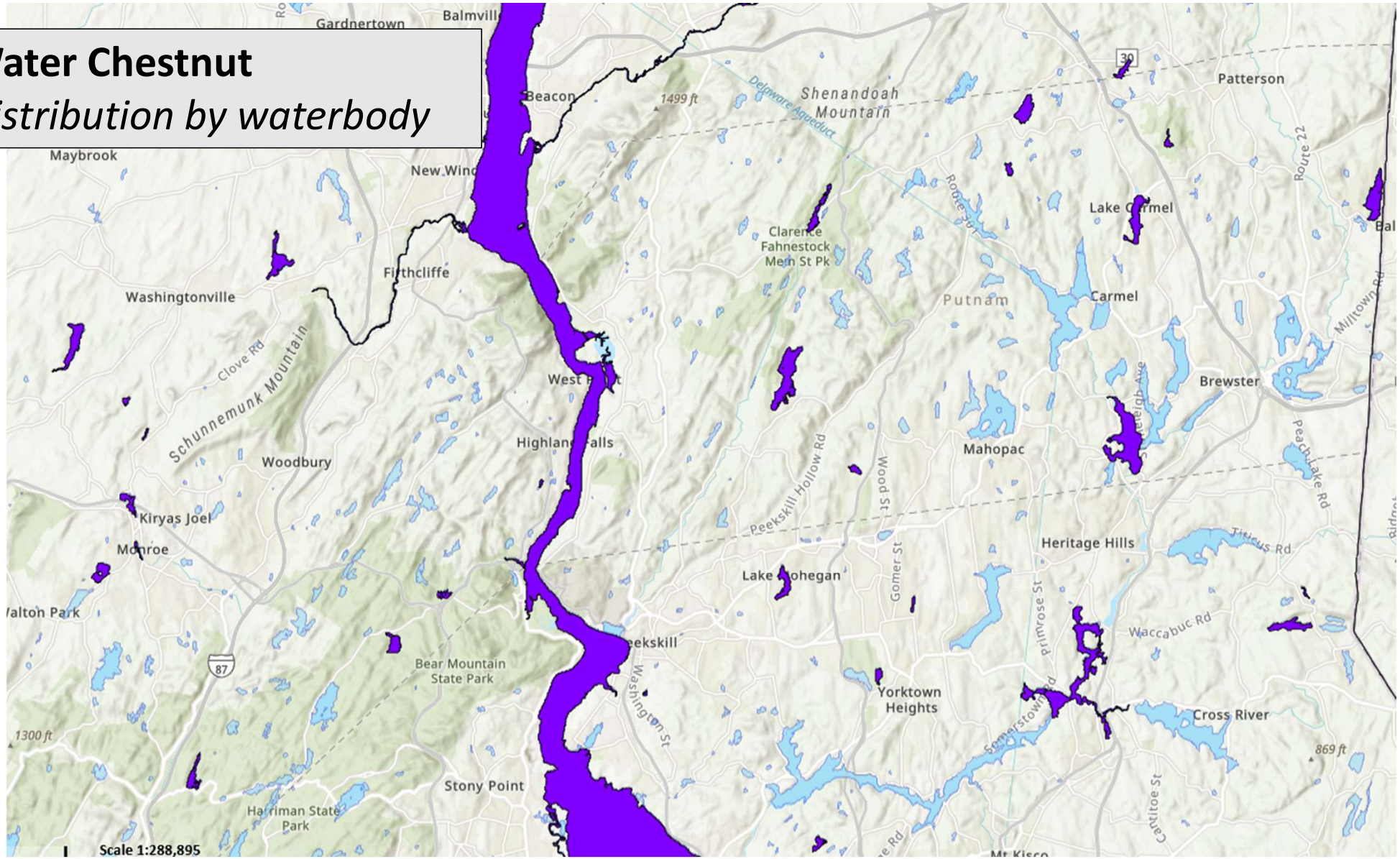
Water Chestnut

Distribution by waterbody



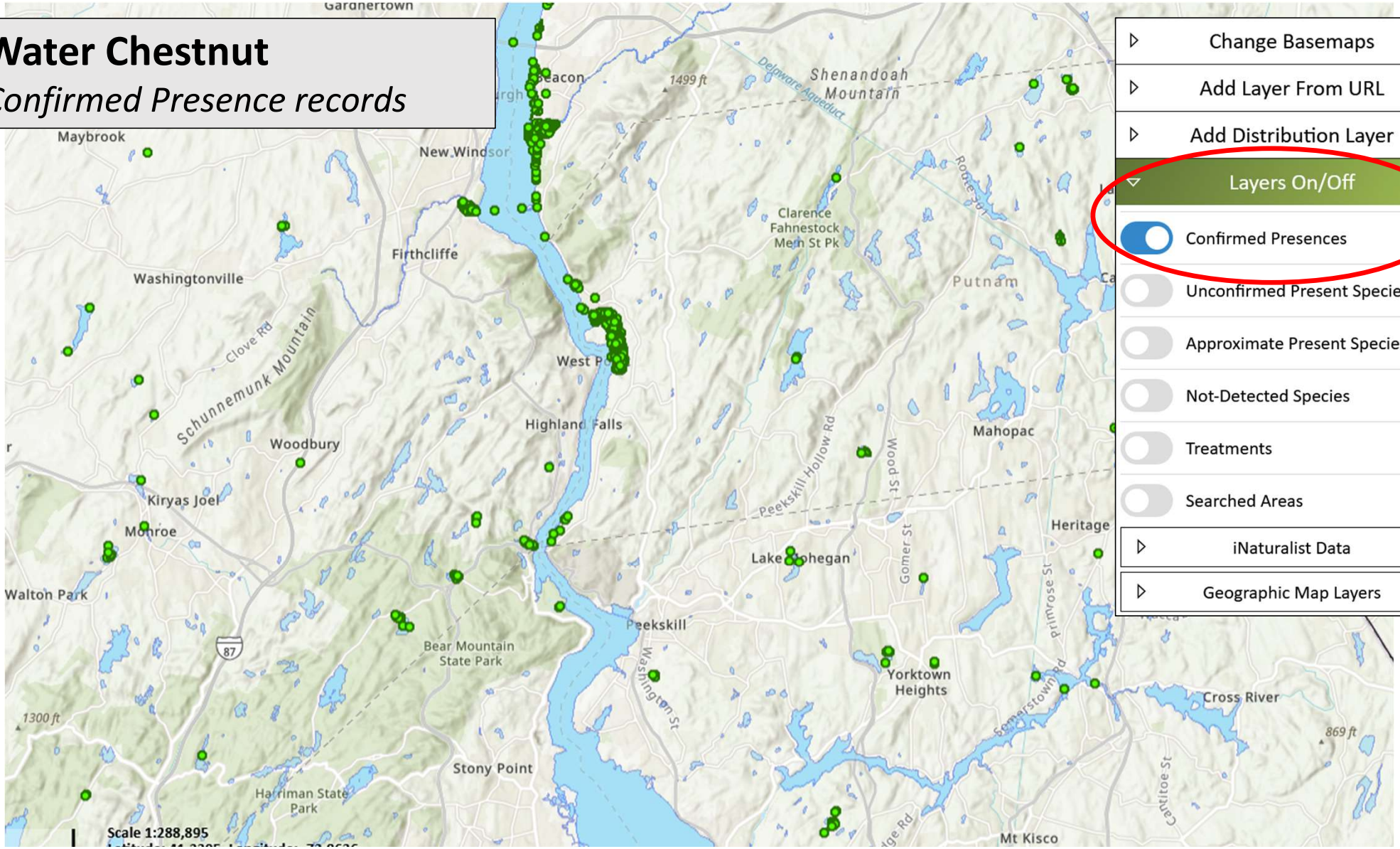
Water Chestnut

Distribution by waterbody



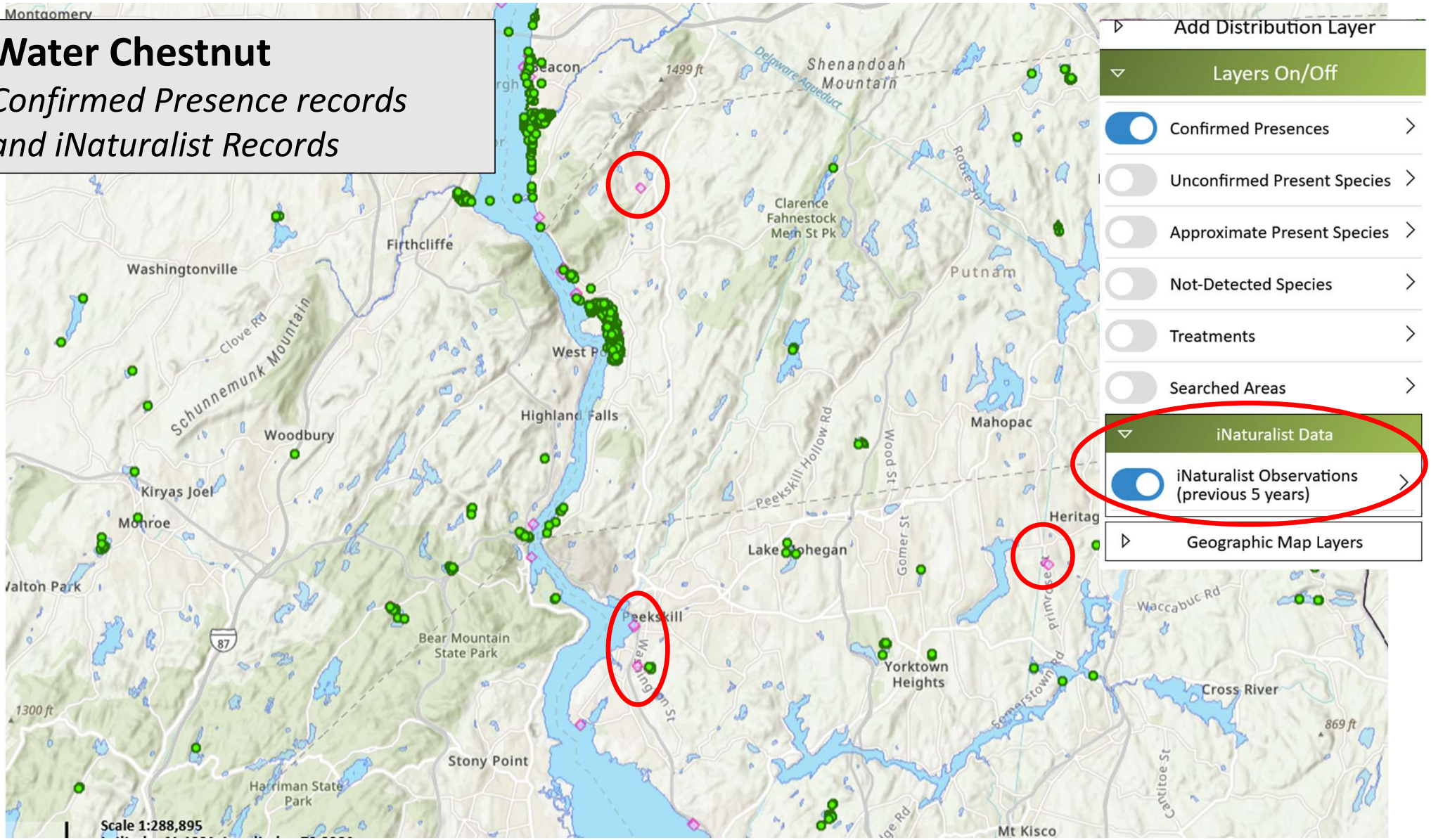
Water Chestnut

Confirmed Presence records

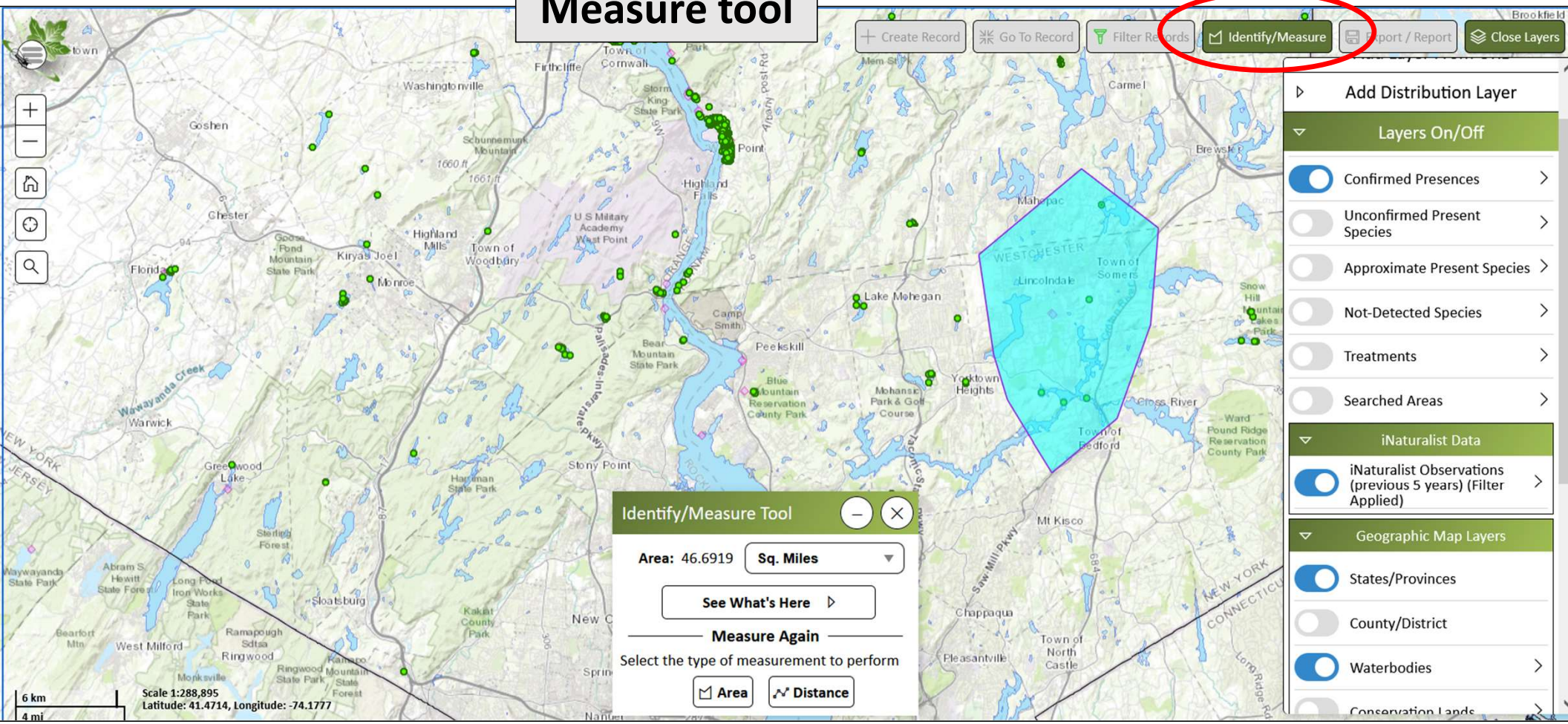


Water Chestnut

Confirmed Presence records and iNaturalist Records

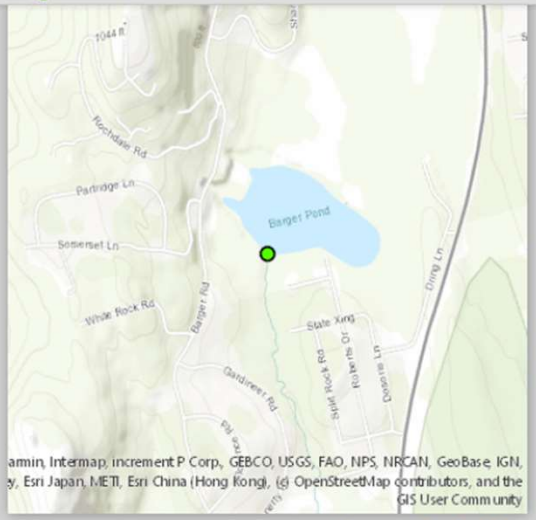


Identify / Measure tool



Presence Record

Edit



Latitude: 41.35873 ° Longitude: -73.81472 °

Go To Map

Presence #1139723

Date:	6/1/2021
Observer:	Alejandro Reyes - 3777
Organization:	Northeast Aquatic Research (NEAR)
Time Searched:	5m
Species Found:	Water Chestnut

Go to Searched Area page to enter/view more information

Geographical Information

1 Species Present

Water Chestnut

Trapa natans

(Trapaceae Family)

See Less

Photos of Present Species:

1/1

Confirmed

Not Confidential

Under Treatment

General Reference Info

Reference Photo:

Measure | Export / Report | Close Layers

Change Basemaps

Add Layer From URL

Add Distribution Layer

Layers On/Off

- Confirmed Presences
- Unconfirmed Present Species
- Approximate Present Species
- Not-Detected Species

Show Legend

Identify/Measure Resul

a max of 1,000 records per tab)

Confirmed Presences

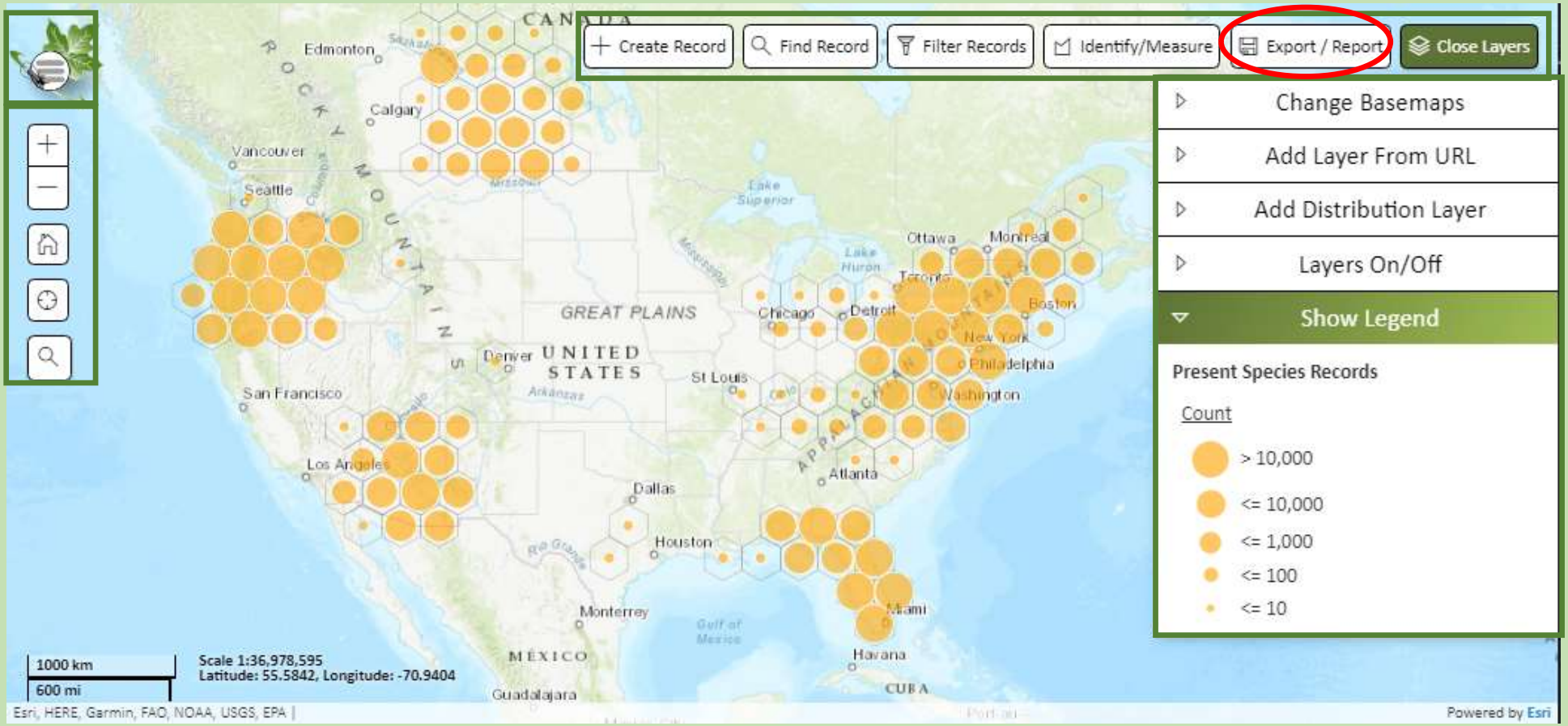
	Presence	on Name	Details	Tasks
1	418905	artment of Env...	Details	Tasks
2	425825	artment of Env...	Details	Tasks
3	488826	logical Survey (...	Details	Tasks
4	533438	artment of Env...	Details	Tasks

5 result(s)

iMapInvasives: Analysis Reports

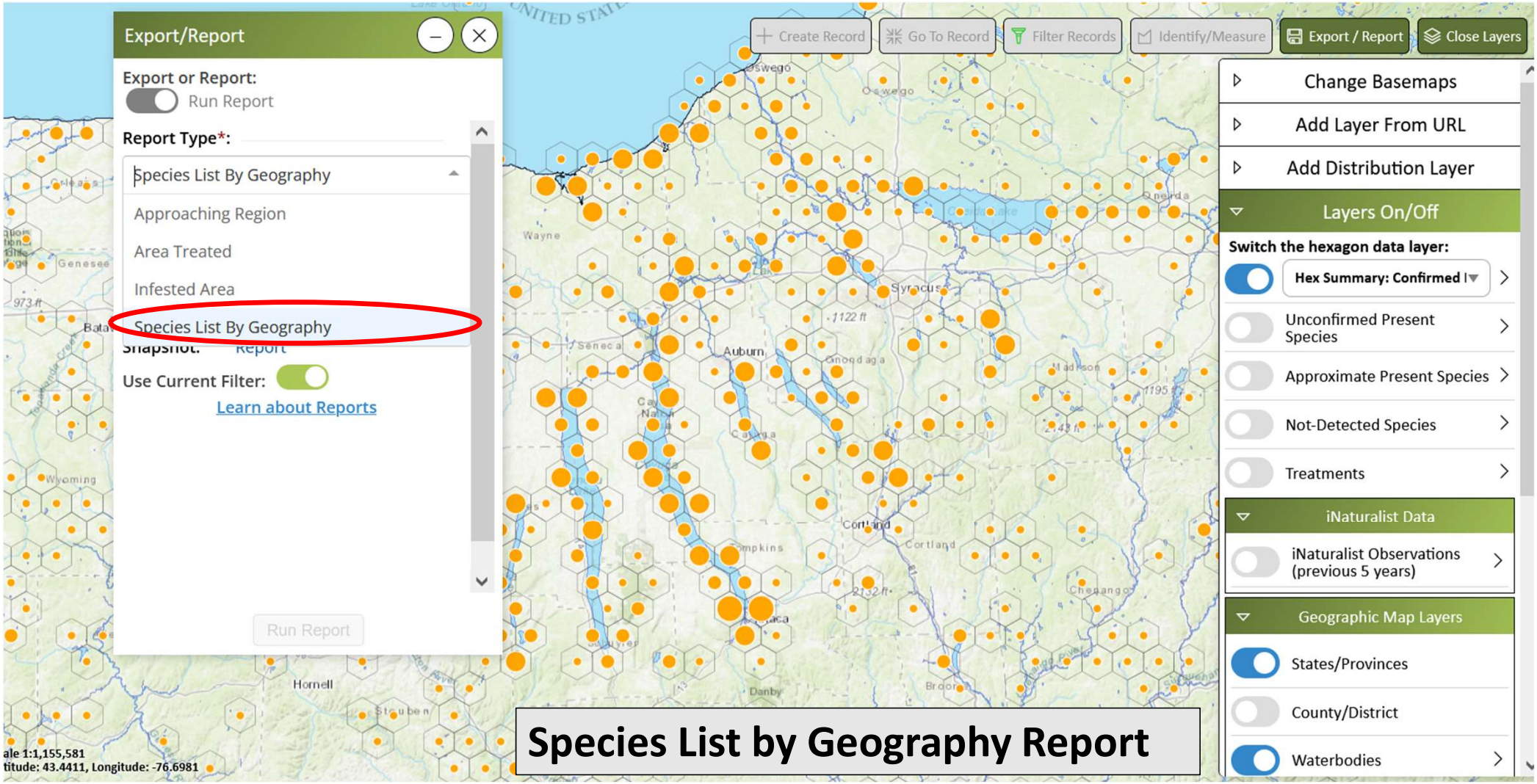
Main Menu

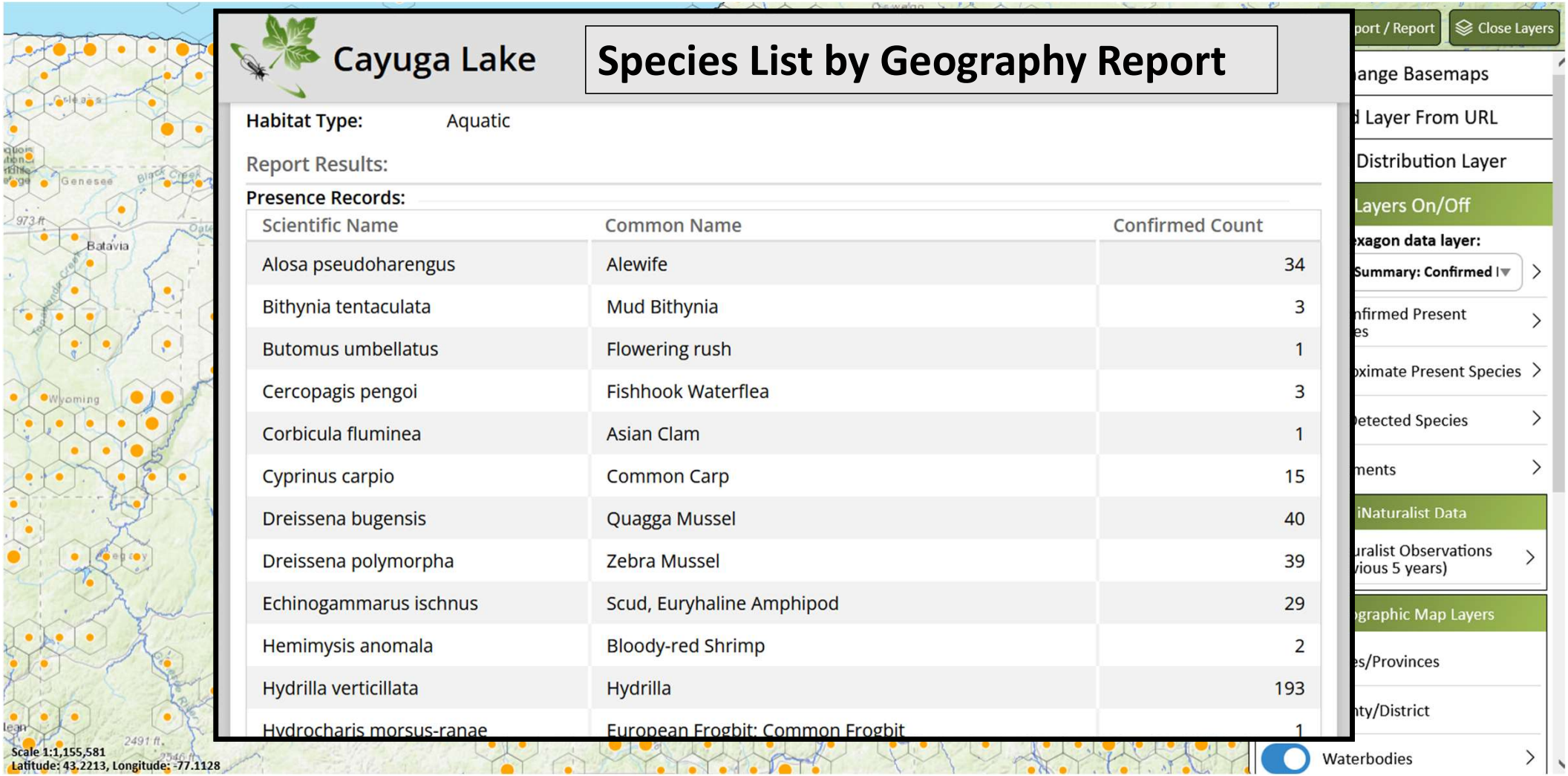
Action Tools



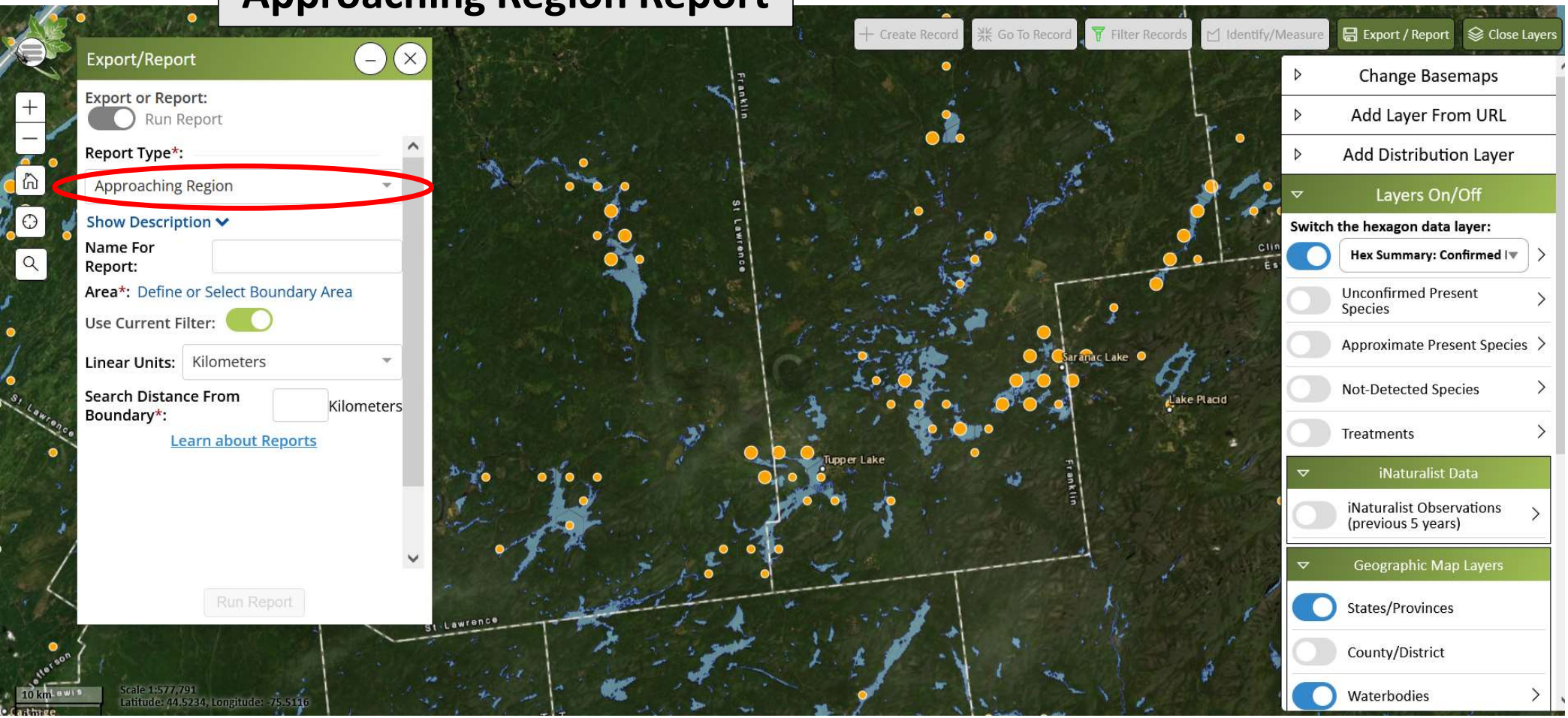
Navigation

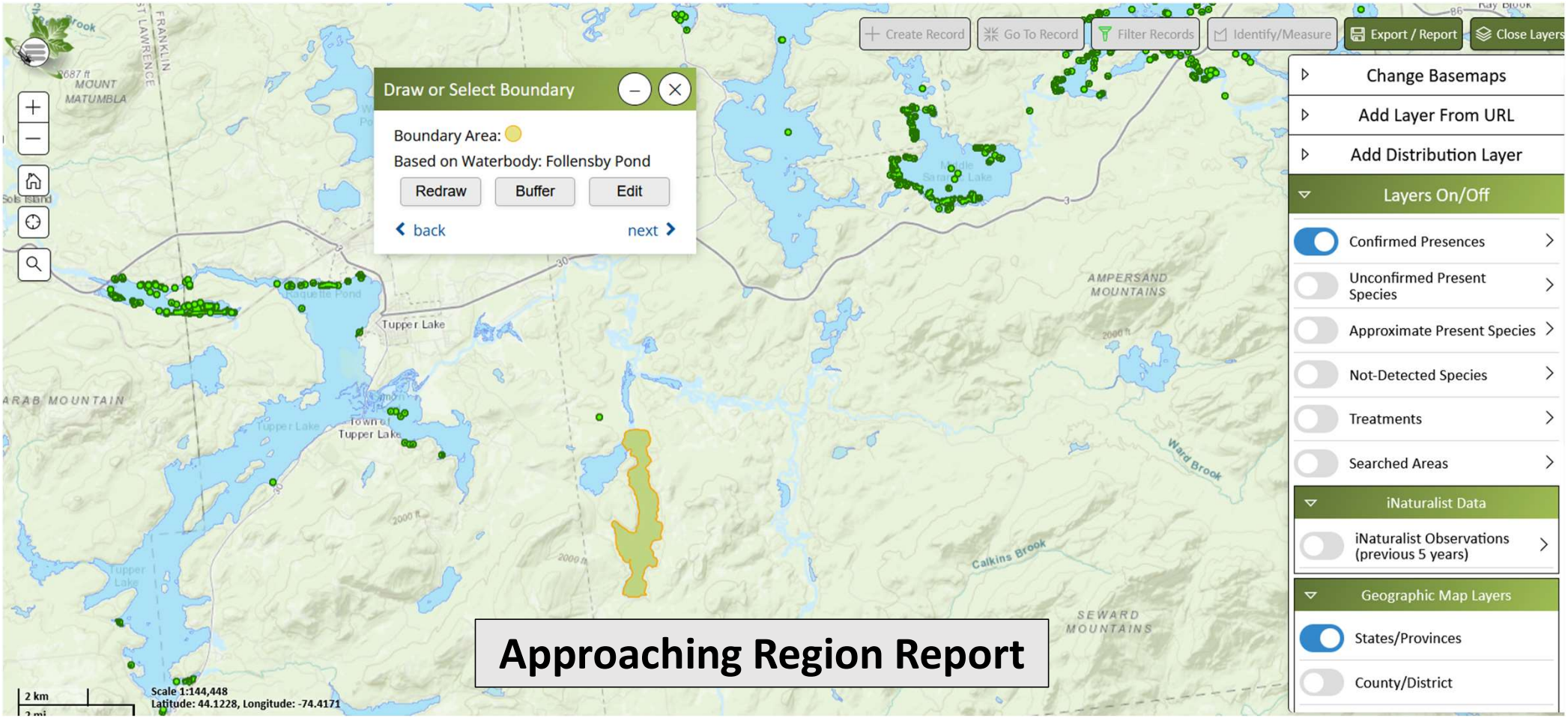
Geographic Layers


Export/Report
Export or Report:
Run Report
Report Type*:
Species List By Geography
Approaching Region
Area Treated
Infested Area
Species List By Geography
Use Current Filter:
Learn about Reports
Run Report
Create Record
Go To Record
Filter Records
Identify/Measure
Export / Report
Close Layers
Change Basemaps
Add Layer From URL
Add Distribution Layer
Layers On/Off
Switch the hexagon data layer:
Hex Summary: Confirmed
Unconfirmed Present Species
Approximate Present Species
Not-Detected Species
Treatments
iNaturalist Data
iNaturalist Observations (previous 5 years)
Geographic Map Layers
States/Provinces
County/District
Waterbodies
Species List by Geography Report


Cayuga Lake
Species List by Geography Report
Habitat Type: Aquatic
Report Results:
Presence Records:
Scientific Name | Common Name | Confirmed Count
Alosa pseudoharengus | Alewife | 34
Bithynia tentaculata | Mud Bithynia | 3
Butomus umbellatus | Flowering rush | 1
Cercopagis pengoi | Fishhook Waterflea | 3
Corbicula fluminea | Asian Clam | 1
Cyprinus carpio | Common Carp | 15
Dreissena bugensis | Quagga Mussel | 40
Dreissena polymorpha | Zebra Mussel | 39
Echinogammarus ischnus | Scud, Euryhaline Amphipod | 29
Hemimysis anomala | Bloody-red Shrimp | 2
Hydrilla verticillata | Hydrilla | 193
Hydrocharis morsus-ranae | European Frogbit; Common Frogbit | 1
Close Layers
Layer From URL
Distribution Layer
Layers On/Off
Summary: Confirmed
Waterbodies
Batavia
Wyoming
Scale 1:1,155,581
Latitude: 43.2213, Longitude: -77.1128

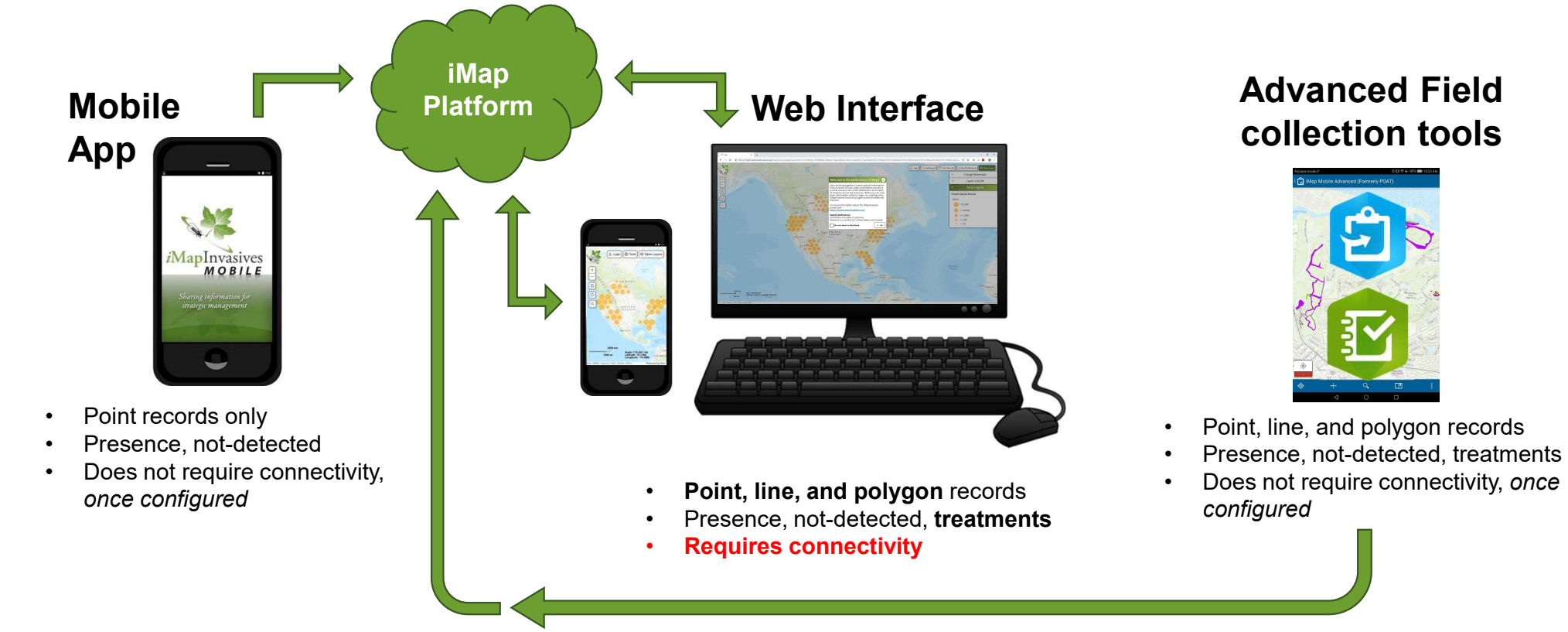
Approaching Region Report





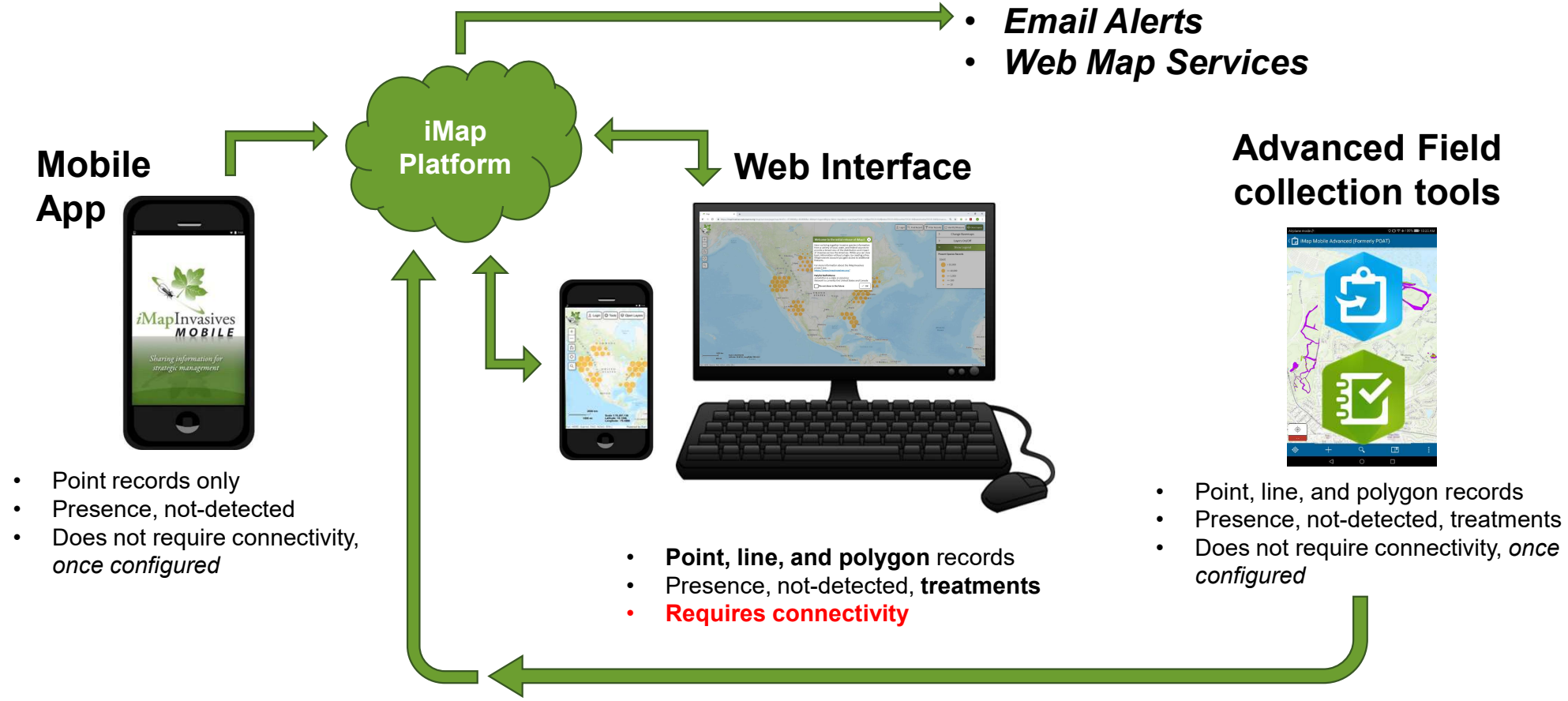
Approaching Region Report

iMapInvasives: Entering Data



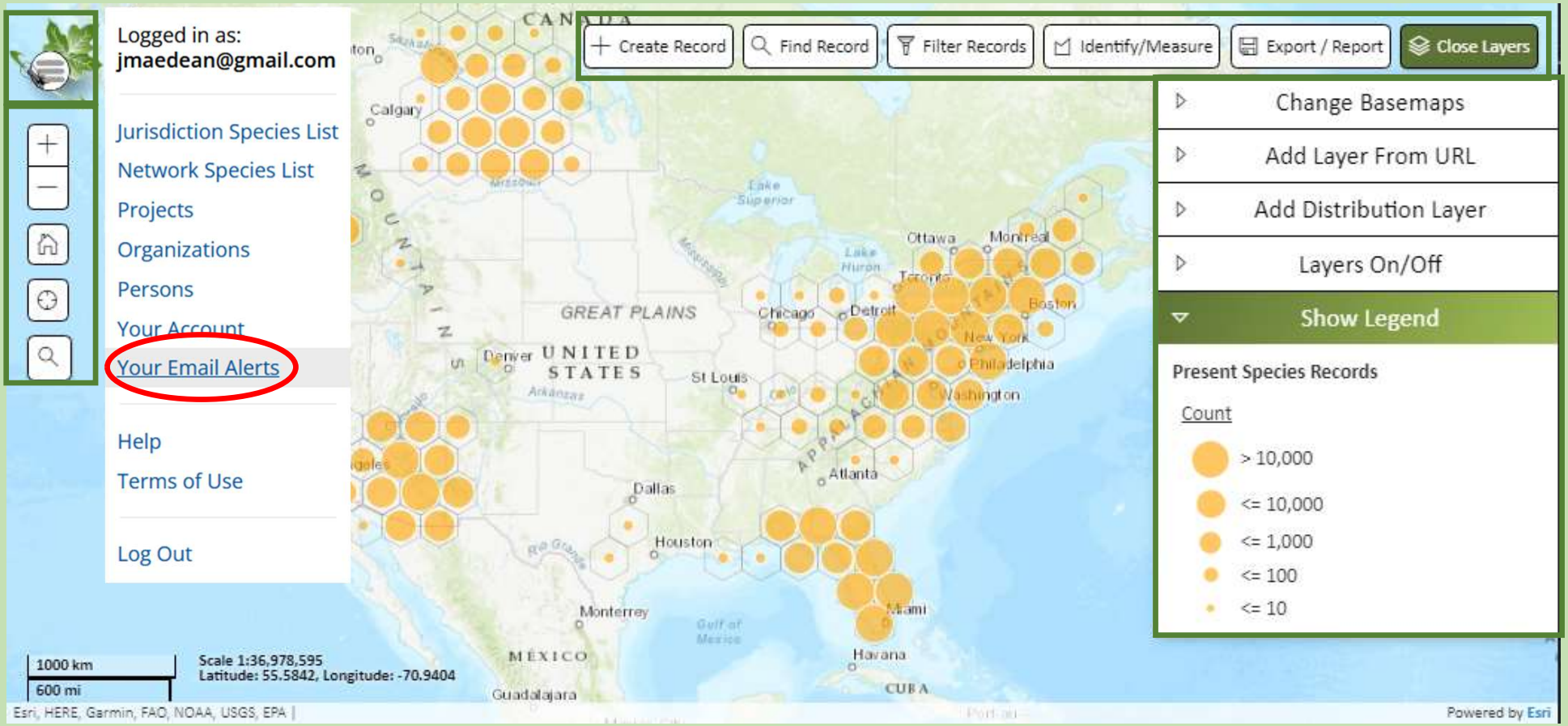
**Data goes to ArcGIS Online and is then cross-walked to iMap database*

iMapInvasives: Using the Data



**Data goes to ArcGIS Online and is then cross-walked to iMap database*

iMapInvasives: Email Alerts



Email Alerts : *Communicating important findings*

New reports go into iMapInvasives as *Unconfirmed*

Regulated or High Priority Species

Alerts sent to state authorities

Verified by expert

Other Invasive Species

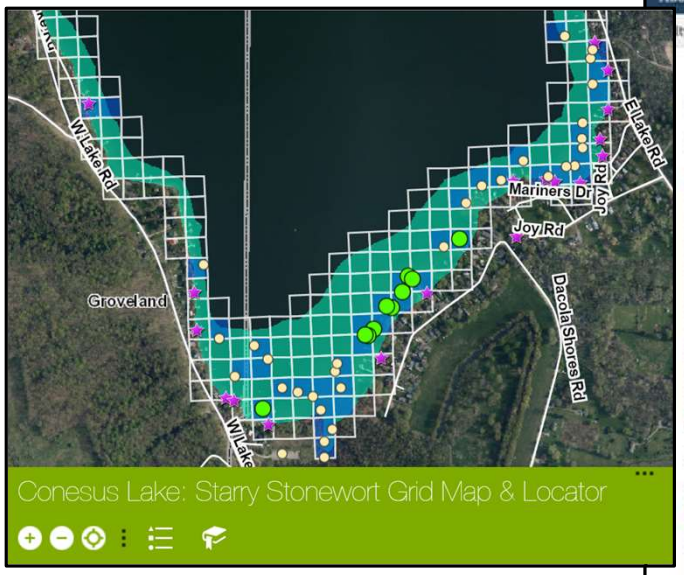
Reviewed by state administrator and Confirmers Network

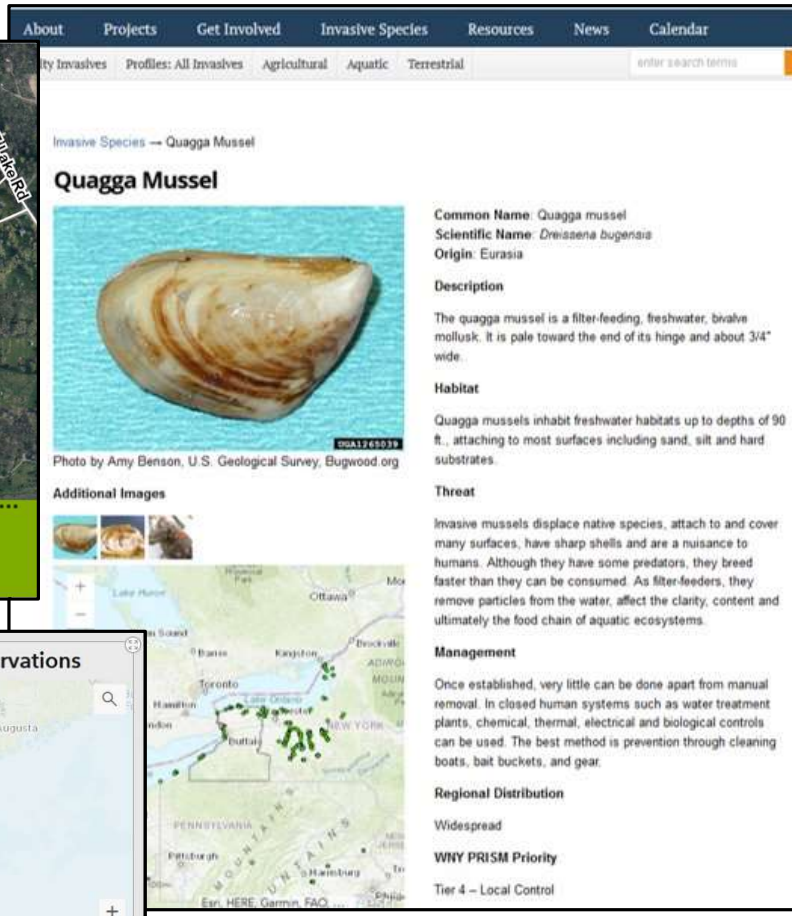
Set to “confirmed” in iMapInvasives

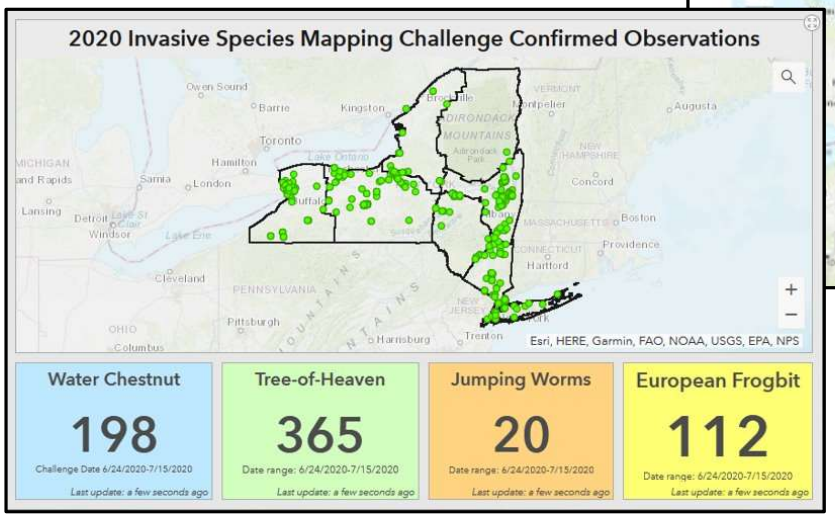
User email alerts

Web Map Services

Connect to live iMapInvasives data directly from online and desktop GIS software using the iMap3 WMS

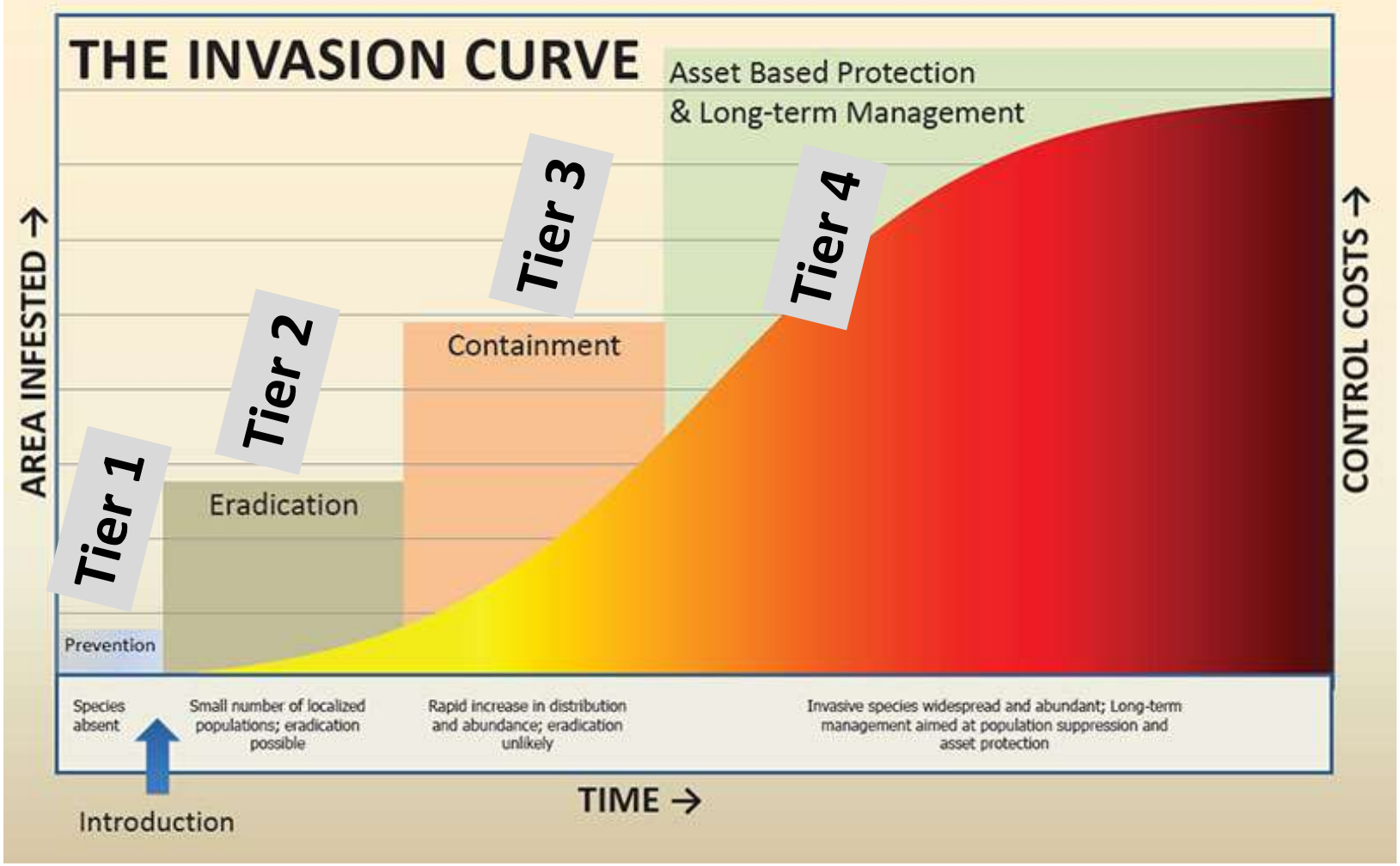






Invasive Species Tiers

A data-driven method for creating invasive species lists



Impact (current and future)	Difficulty of Eradication / Cost of Control Abundance (in PRISM plus Buffer)			
	None in PRISM	**Low**	**Medium**	**High**
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. West Virginia Department of Commerce	**TIER 2** *Eradication* Eradication / Full containment may be feasible Photo by T. Bodner	**TIER 3** *Containment* Strategic management to contain infestations and slow spread in PRISMs 	**TIER 4** *Local Control* Established / Widespread in PRISM; only strategic, localized management. theportugalnews.com
Unknown	**X**	**TIER 5** *Monitor* Species that need more research, mapping, and monitoring to understand their invasiveness.		

New York State Invasive Species Tiers Table

www.nyimapinvasives.org/data-and-maps

Geography: ☑ Statewide ☐ APIPP ☐ CRP ☑ CRISP ☑ Finger Lakes ☑ Lower Hudson ☑ LIISMA ☑ SLELO ☑ WNY ☐ **Select All Geographies**

Taxa Type: ☑ TP Terrestrial Plant ☐ TA Terrestrial Animal ☐ AA Aquatic Animal ☑ AP Aquatic Plant ☑ M Microorganism ☐ **Select All Taxa Types**

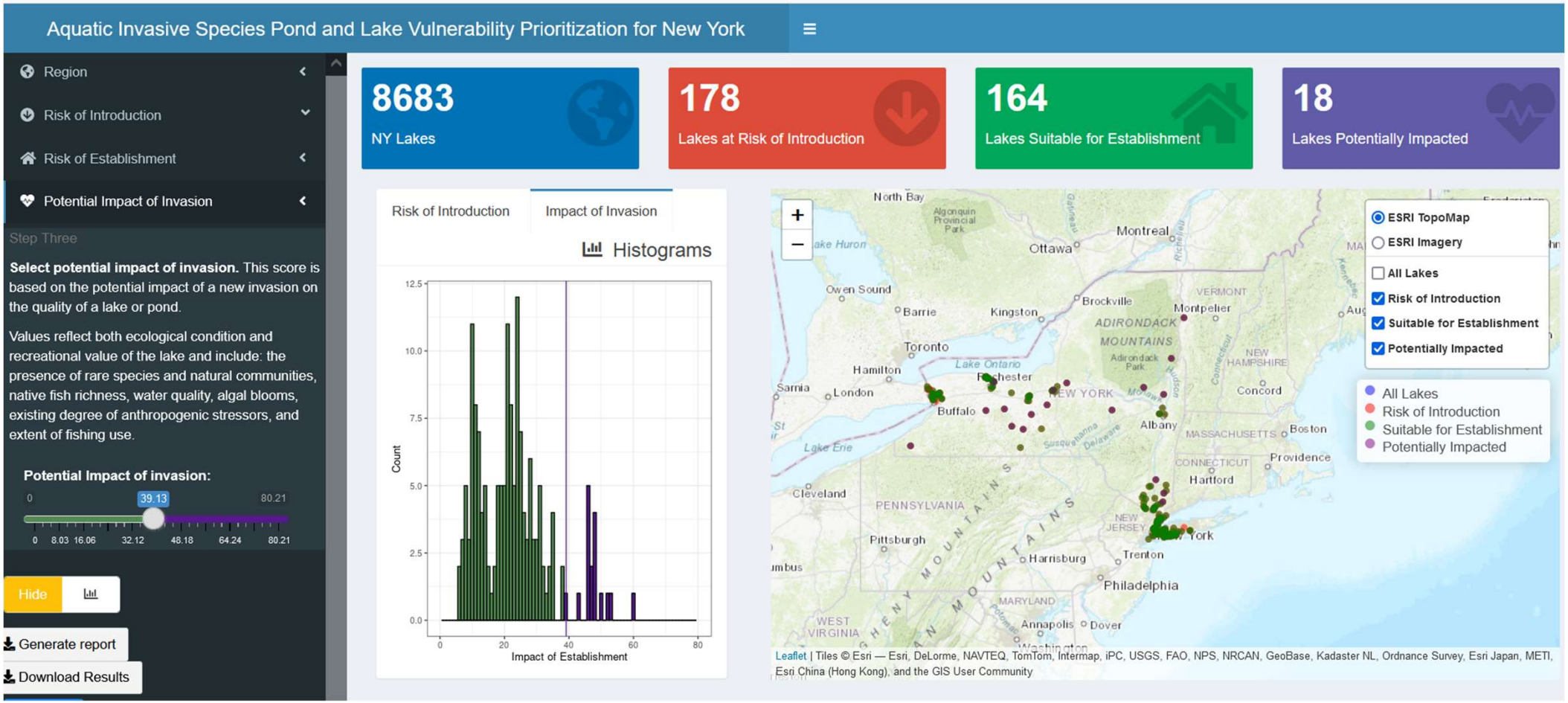
Tier Value: ? ☑ 1 ☑ 2 ☑ 3 ☑ 4 ☑ 5 ☑ Untiered ☑ Buffer ☑ *(Blank)* ☑ **Select All Tier Values**

Show 10 entries

Search Table:

Species Information			Invasiveness Ranks		State Tier	PRISM Tier					
Common Name	Scientific Name	Type	Ecological	Socio-Economic	NYS	CRISP	Finger Lakes	Lower Hudson	LIISMA	SLELO	WNY
Amur maple	*Acer ginnala*	TP	Moderate	Insignificant Positive	*Untiered*	*Untiered*	4	5	5	*Buffer*	*Untiered*
Japanese maple	*Acer palmatum*	TP	Moderate	Moderate Positive	*Untiered*	*Untiered*	*Untiered*	5	5	*Untiered*	*Untiered*
Norway maple	*Acer platanoides*	TP	Very High	Insignificant Positive	4	4	4	4	4	4	4
Sycamore maple	*Acer pseudoplatanus*	TP	High	Not assessed	4	1a	2	3	4	1	5
Japanese chaff flower	*Achyranthes japonica*	TP	High	Not assessed	1b						
Hardy kiwi	*Actinidia arguta*	TP	High	Insignificant Positive	2	1a	1a	2	2	1	2
Silver vine	*Actinidia polygama*	TP	Unknown	Low Positive	*Untiered*	*Buffer*	*Buffer*	2	1a		

Aquatic Invasive Species Pond and Lake Vulnerability Prioritization Tool *(coming soon!)*



Thank you!

www.nyimapinvasives.org

imapinvasives@dec.ny.gov

Funding:
NYS Environmental Protection Fund through
NYS Department of Environmental Conservation

iMapInvasives
Sharing information for strategic management

ESF
State University of New York
College of Environmental Science and Forestry

NEW YORK STATE OF OPPORTUNITY
Department of Environmental Conservation