

Adirondack Park Invasive Plant Program (APIPP) Overview and 2023 Accomplishments March 14, 2024

Tammara Van Ryn
APIPP Director



Today's Trail Map

- Introduction to APIPP
- APIPP's History and APA Connection
- 2023 Program Accomplishments
- 2024 Program Priorities
- Q&A

APIPP – The Adirondack PRISM

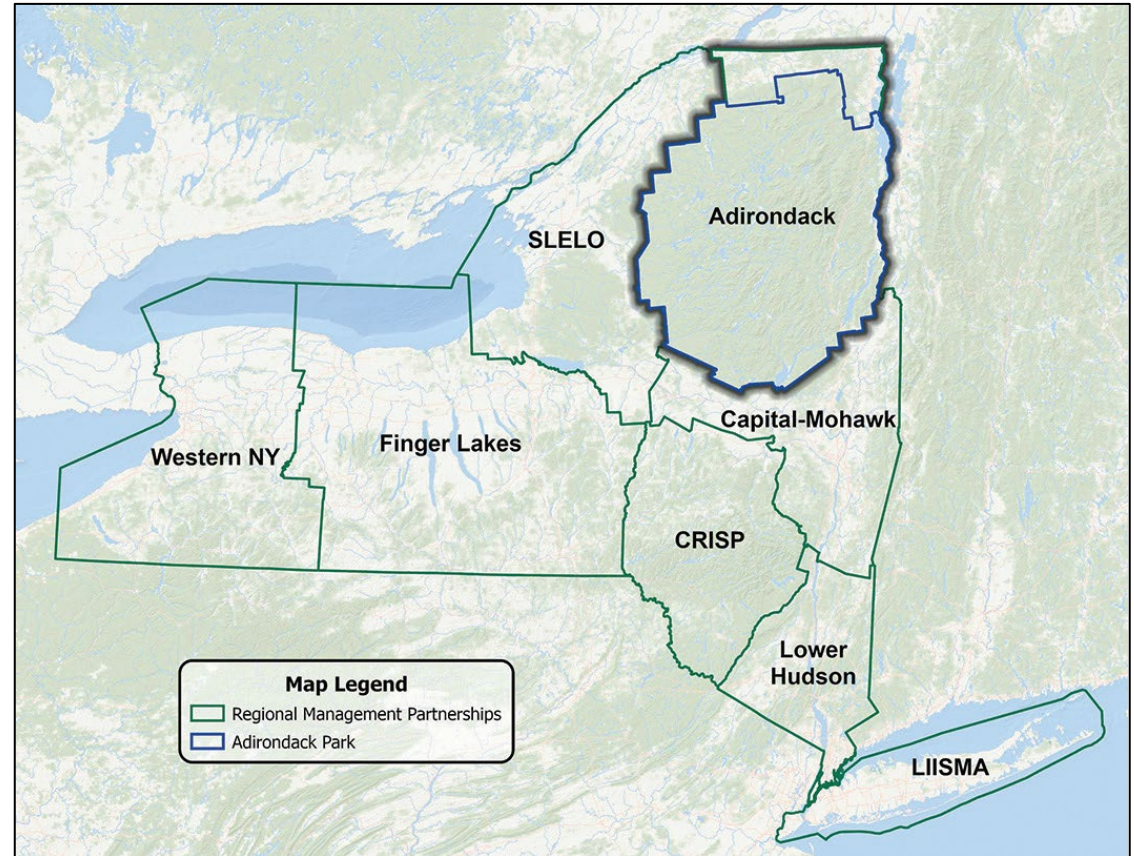
**The Adirondack PRISM
is one of New York's eight Partnerships for
Regional Invasive Species Management
(PRISM)**

Four founding partners in 1998:
NYSDEC, NYSDOT, APA, and TNC
Today 30+ partners and over 100 volunteers

Funding is provided, in part, from the
NYS Environmental Protection Fund as
administered by NYSDEC



**Department of
Environmental
Conservation**



Meet the APIPP Team

Becca Bernacki
Terrestrial IS Coordinator



Brian Greene
Aquatic IS Coordinator



Shaun Kittle
Communications Coordinator



Tammara Van Ryn
Program Director



Zack Simek
Conservation and GIS Analyst

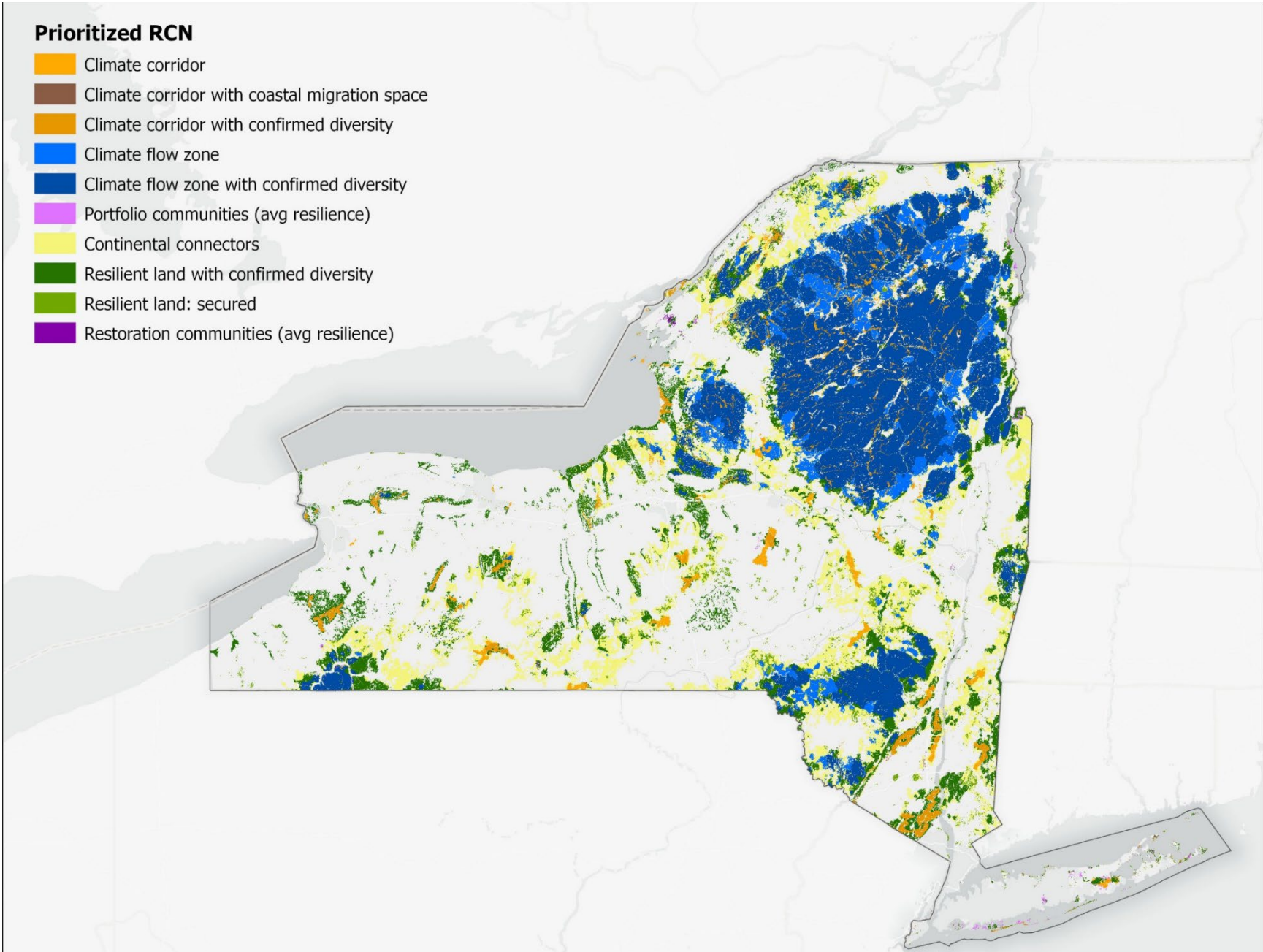


PLUS

**More 30 Partners
Over 100 Volunteers**

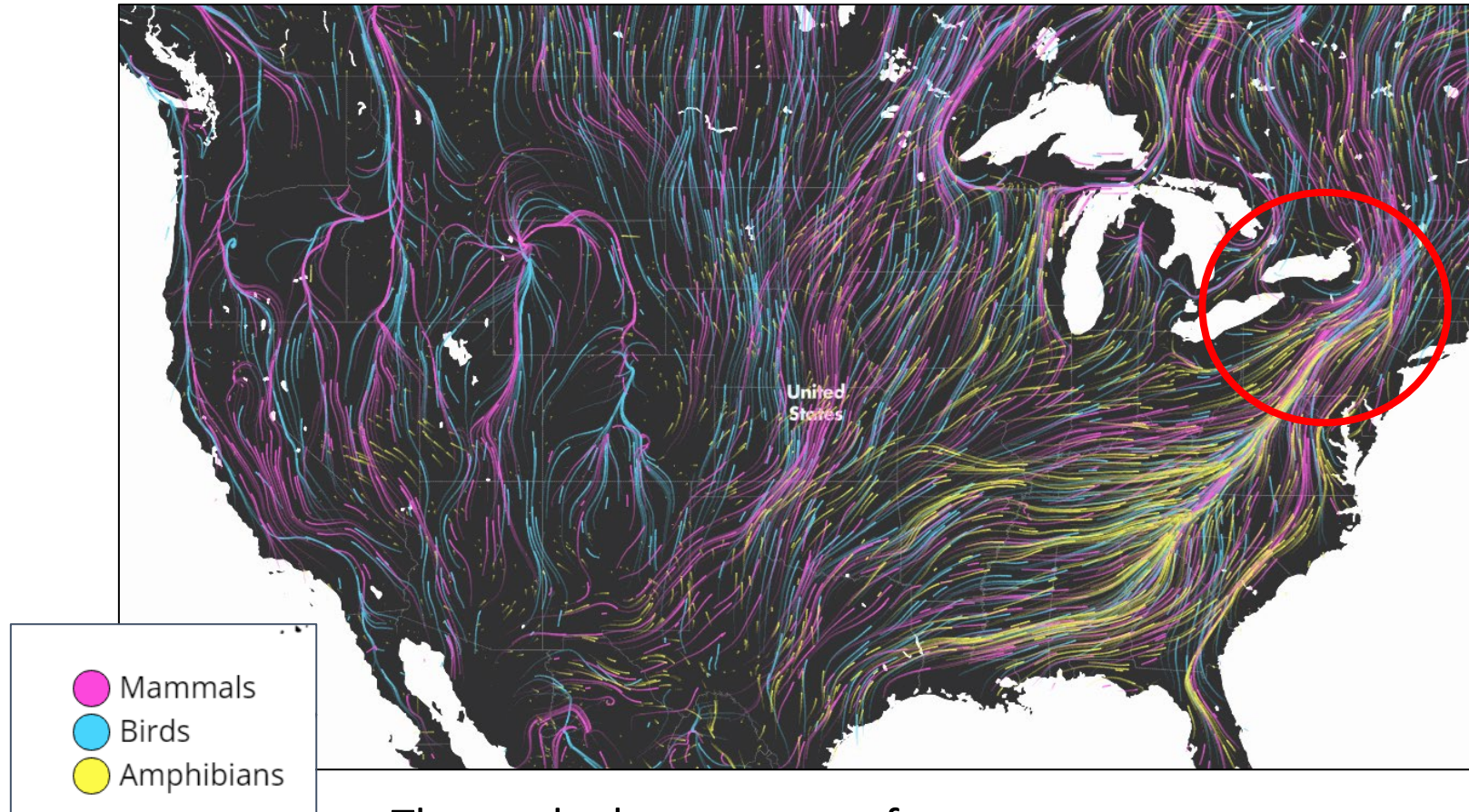


TNC'S Resilient and Connected Lands Network



Migrations in Motion

Natural Flow Patterns



The gradual movement of populations across the landscape in response to climate change

APIPP History

1998

1999

TNC Adirondack Invasive Plant Working Group and Survey

2001

First TNC, DEC, APA, and DOT Memorandum of Understanding

2002

2003

APA Adirondack Aquatic Invasive Plant Monitoring Project



2003

Adirondack Park Invasive Plant Program Named

2004

Second MOU Signed

- Federal Highways Administration Award
- Program funded by TNC, DEC, DOT

2005

NYS Invasive Species Task Force

- Recommends creation of PRISMs
- APIPP becomes the Adirondack PRISM hosted by TNC – the first PRISM!

2014

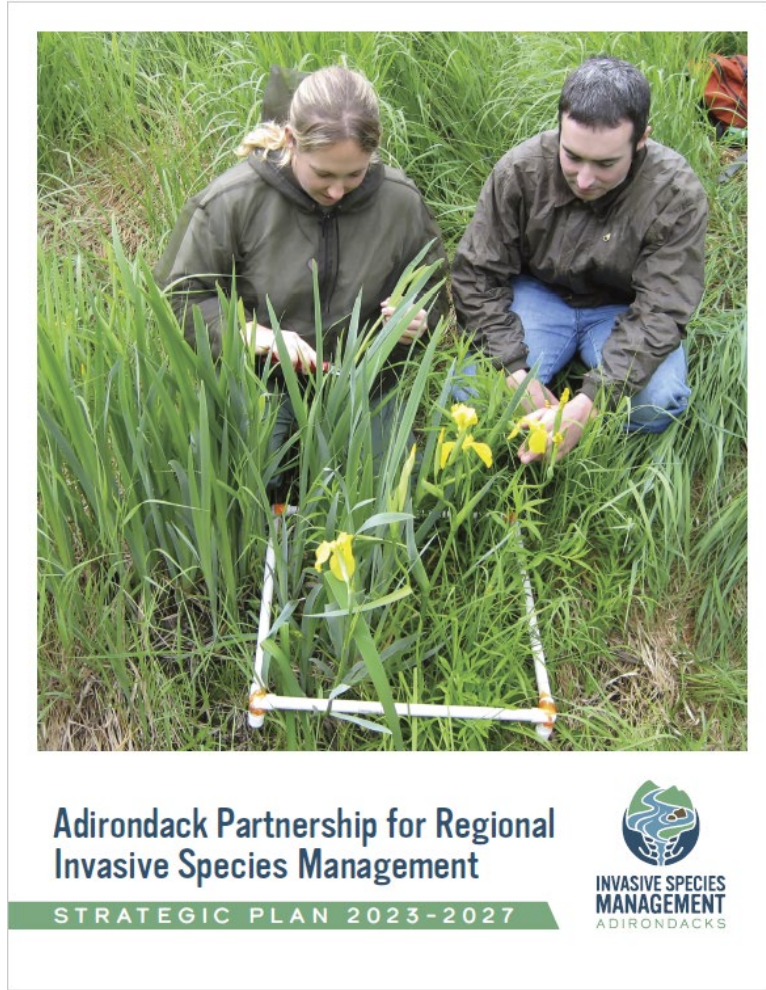
PRISM Network “Born”

EPF Support for the Adirondack PRISM

| | 2008 | 2014 | 2019 | 2024 |
|------------|---|--|---|---|
| Contract | \$1.3 million – 5 yrs | \$2.8 million – 5 yrs | \$3.9 million – 4.5 yrs (\$4.3 million 5yr equivalent) | \$4.6 million – 5 yrs |
| Staff | 3 FT 1 seasonal | 3 FT 2 seasonals | 4.7 FTE 4 seasonals | 4.7 FTE 3 seasonals |
| Milestones | <ul style="list-style-type: none"> • 2009 EPA award • 2011 1st TIS EDRR team • 2012 1st Summit | <ul style="list-style-type: none"> • 2014 Economic impact report • 2017 AIS prediction report • 1st AIS EDRR team • 1st NYS ISAW | <ul style="list-style-type: none"> • Added PT research and FT education & outreach staff • 2020 website overhaul • 2023 within lake vulnerability study • 2023 new strategic plan | <ul style="list-style-type: none"> • Increased eDNA • Phase out AIS EDRR team |



2023-2027 Strategic Plan Goals



Goal 1: Protect Adirondack PRISM lands from the most significant ecologic and economic impacts of terrestrial invasive plants and animals, including forest pests and pathogens

Goal 2: Protect Adirondack PRISM waters from the most significant ecologic and economic impacts of aquatic invasive plants and animals

Goal 3: Build knowledgeable and engaged communities that are empowered to act on invasive species issues

Goal 4: Engage in research and innovation to improve the monitoring and management of invasive species



Goal 1: Terrestrial Invasive Species Monitoring and Management



❖ Professional Crew and APIPP Permanent Staff



❖ Forest Pest Hunter Volunteers



❖ Campground Steward Program



❖ Seasonal Assistants

APIPP 2023 TIS Monitoring Highlights

- In 2023 APIPP surveyed
 - **41** NYSDEC campgrounds,
 - **150** recreational access points
 - Sections of over 30 Forest Preserve units, and
 - All or part of approximately **30** road corridors.
 - Over **2,800** assessments were recorded.
- Approximately **350** new terrestrial infestations were found.
 - A total of **7,566** mapped infestations



Megan G.(top), Leah S.(middle), and Becca T. (bottom) Seasonal Terrestrial Invasive Species Staff

APIPP 2023 Management Highlights

- Managed **~500 priority** infestations
 - Totaling almost **23 acres**
 - **75% of these were on public land**
- Documented the **absence** of invasives at **1,309** historically managed infestations!
 - **~64% of historically managed sites**
- **81%** of APIPP's priority terrestrial invasive species infestations are under **active management or have been successfully removed**



Early Detection and Rapid Response Crew from Invasive Plant Control, Inc



APIPP 2023 Forest Pest Highlights

- Released **4,500 biological controls** for **emerald ash borer (EAB)** and, with NYSHI, over **1,900 biocontrols** for **hemlock woolly adelgid (HWA)**
- Monitored traps for **EAB and spotted lanternfly (SLF)**
 - No positive findings
- Conducted surveys for **HWA, beech leaf disease (BLD), balsam woolly adelgid, and jumping worms**
- Worked with partners to **manage HWA** on Dome Island and LGLC's Clark Hollow Bay property
- Forest Pest Hunters
 - Entered over **1,000 observations** into iMapInvasives

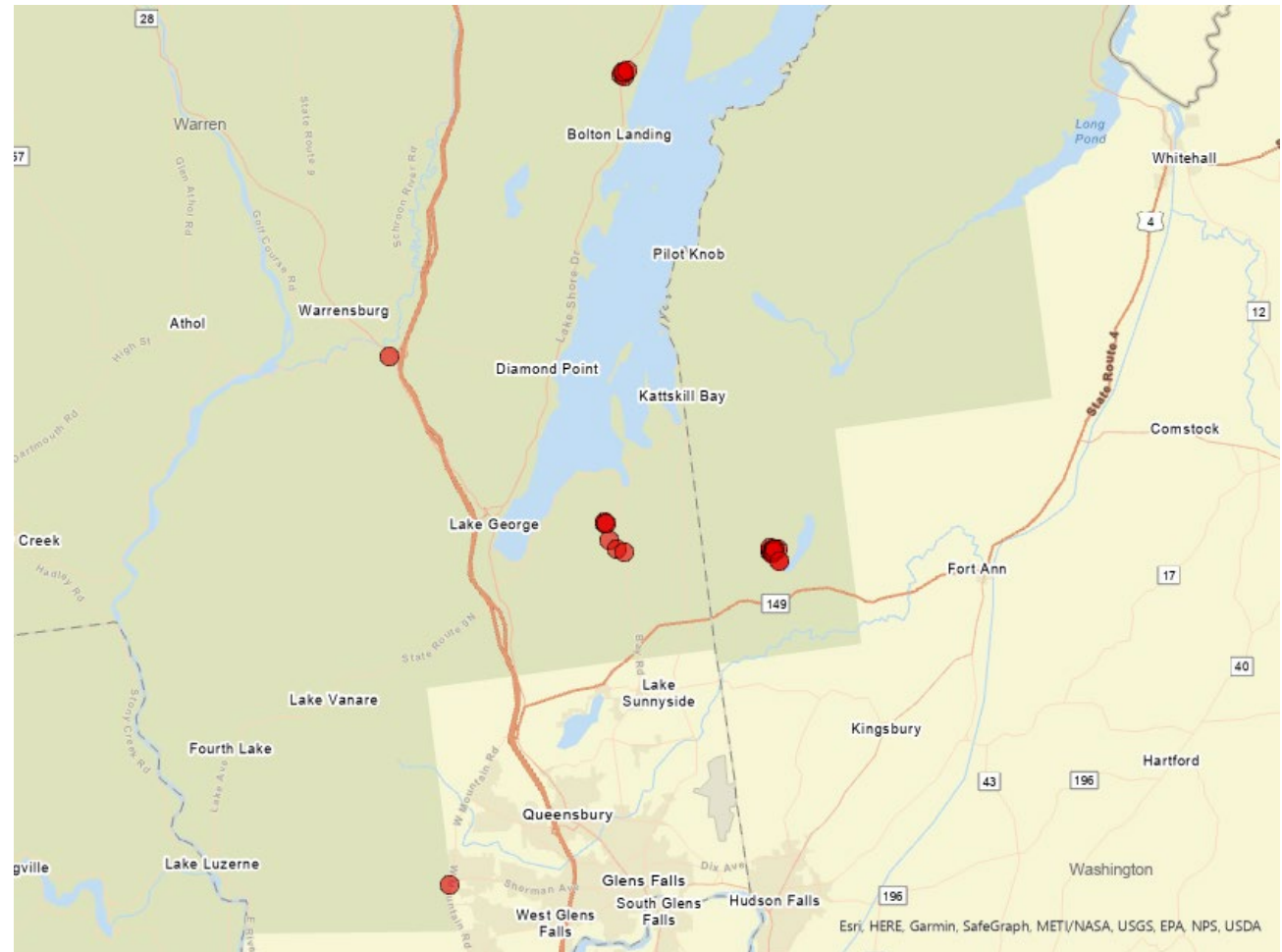
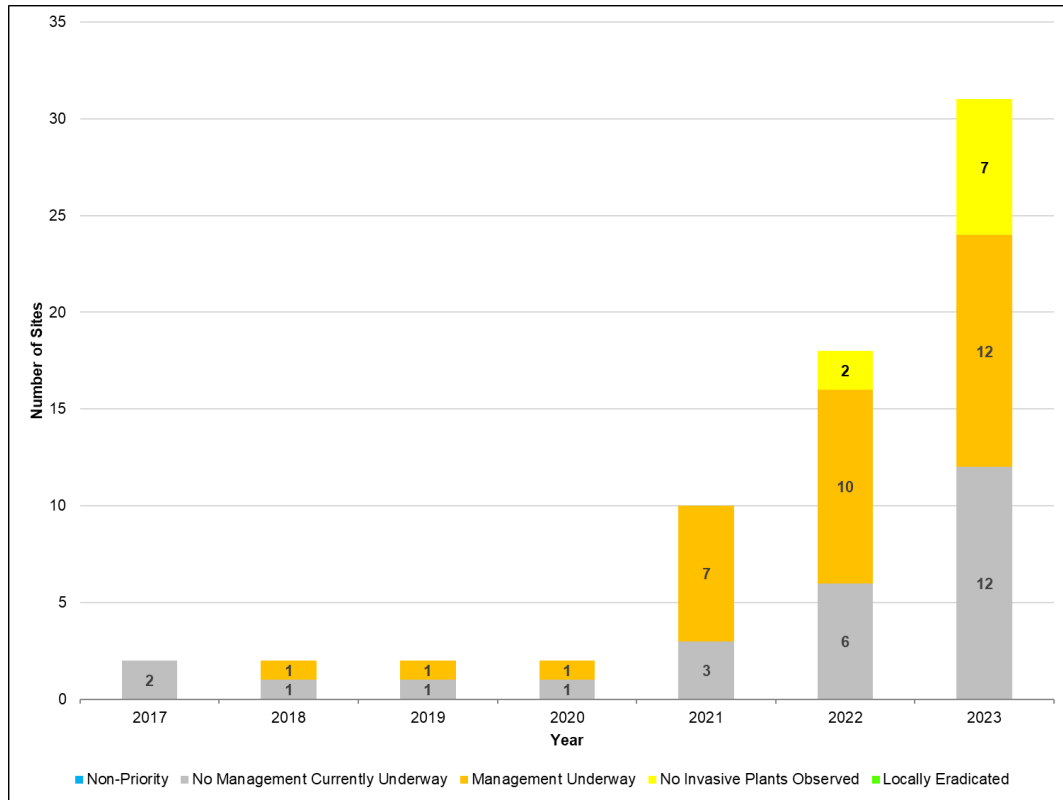


Forest Pest Hunter Dom surveying for HWA(right), Leah releasing EAB biocontrols (below)

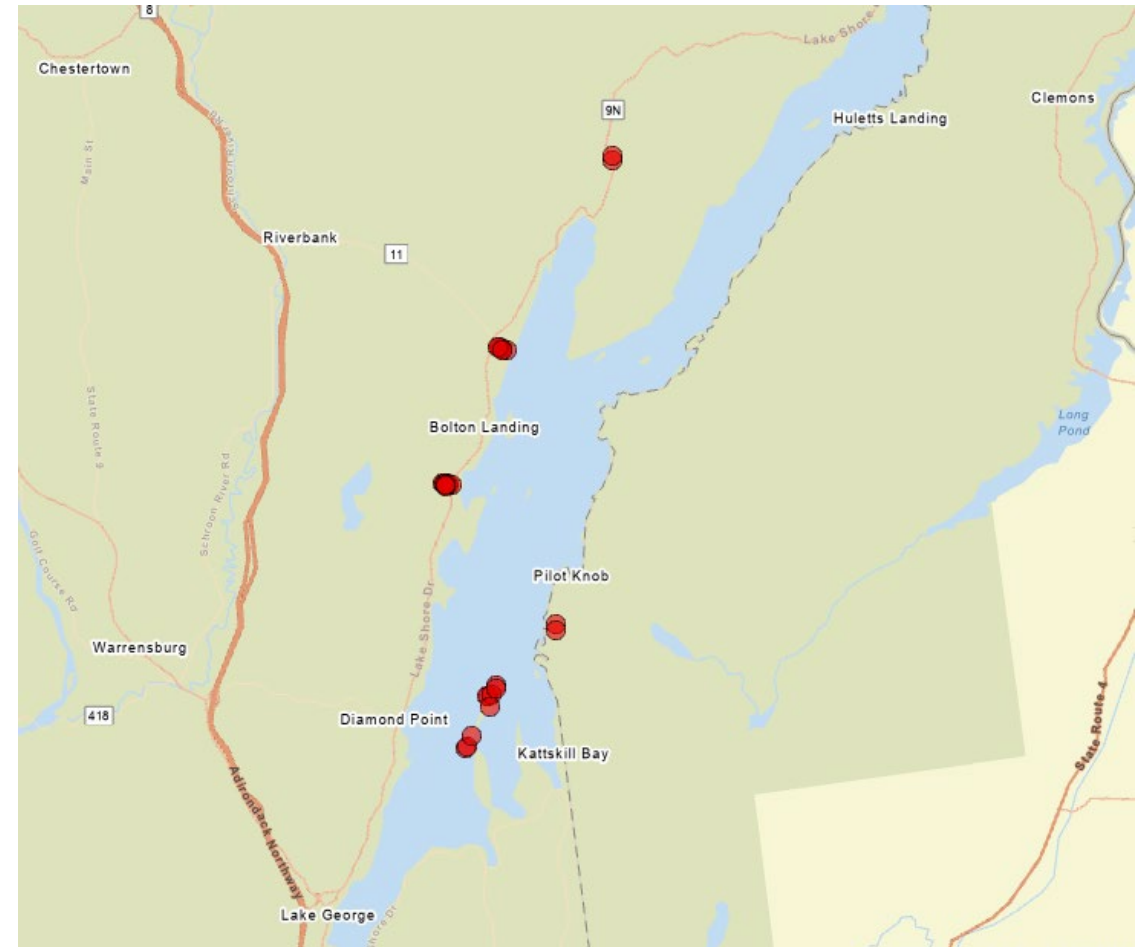
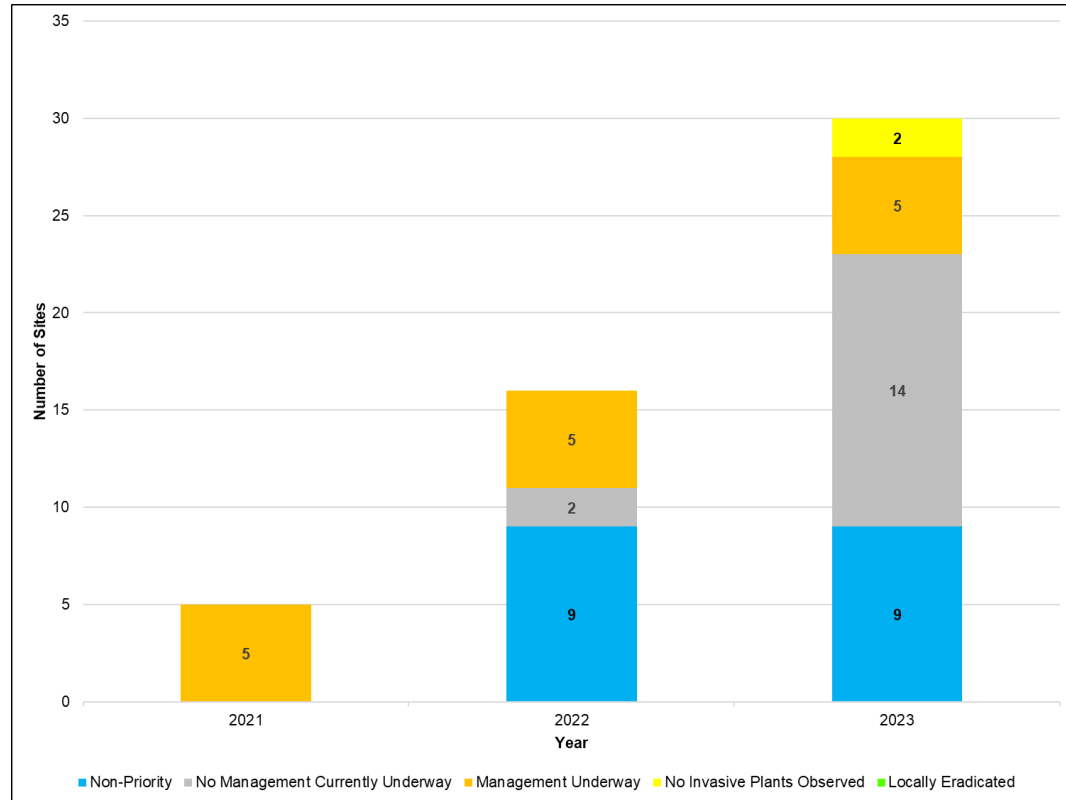


Tree-of-Heaven Now Tier 3

Implications for SLF!



Japanese Stiltgrass Becoming More Common



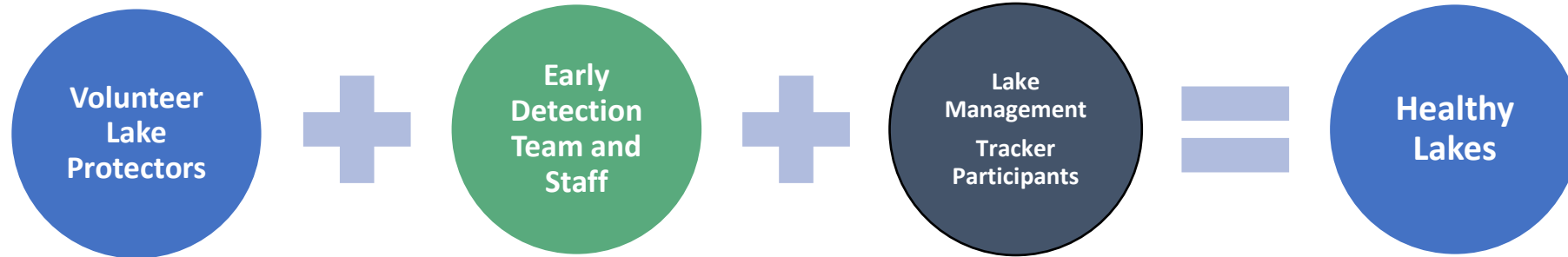
APIPP 2024 TIS Plans



Zack leads a training on HWA pesticide treatments

- Train new permanent and seasonal staff
- Monitor more than 1,000 sites
- Manage Forest Preserve and other lands
- Continue Forest Pest Hunters
- Develop Lake George Area Priority Hemlock Areas
- Provide information and assistance to partners and the public

Goal 2: Aquatic Invasive Species Monitoring and Management



2023 Project: eDNA monitoring

- Monitored 21 lakes with one monitoring location
- Partnered with Schroon Lake Associations and monitored nine locations across Schroon Lake
- Results indicate low levels of AIS and no new species to the region



2023 Project: Lake Champlain Boat Launch AIS removal

- 5 boat launches on Lake Champlain
- Over 3,300 pounds of EWM and CLP removed by DASH
- One year is not enough time to control AIS populations



2023 Monitoring: APIPP Staff

- Conducted:
 - 83 surveys on 55 waterbodies
 - Collected 70 eDNA samples
 - Discovered 16 new AIS introductions



2023 Monitoring: Early Detection Team

- 6th year of working with Adirondack Research
- Worked in the northern section of the PRISM
- Surveyed 36 waterbodies and discovered one new AIS introduction



Photo from Adirondack Research

2023 Monitoring: Lake Protectors

- Partners:
 - 23 groups
 - 37 surveys
- Volunteers:
 - 11 volunteers
 - 28 surveys

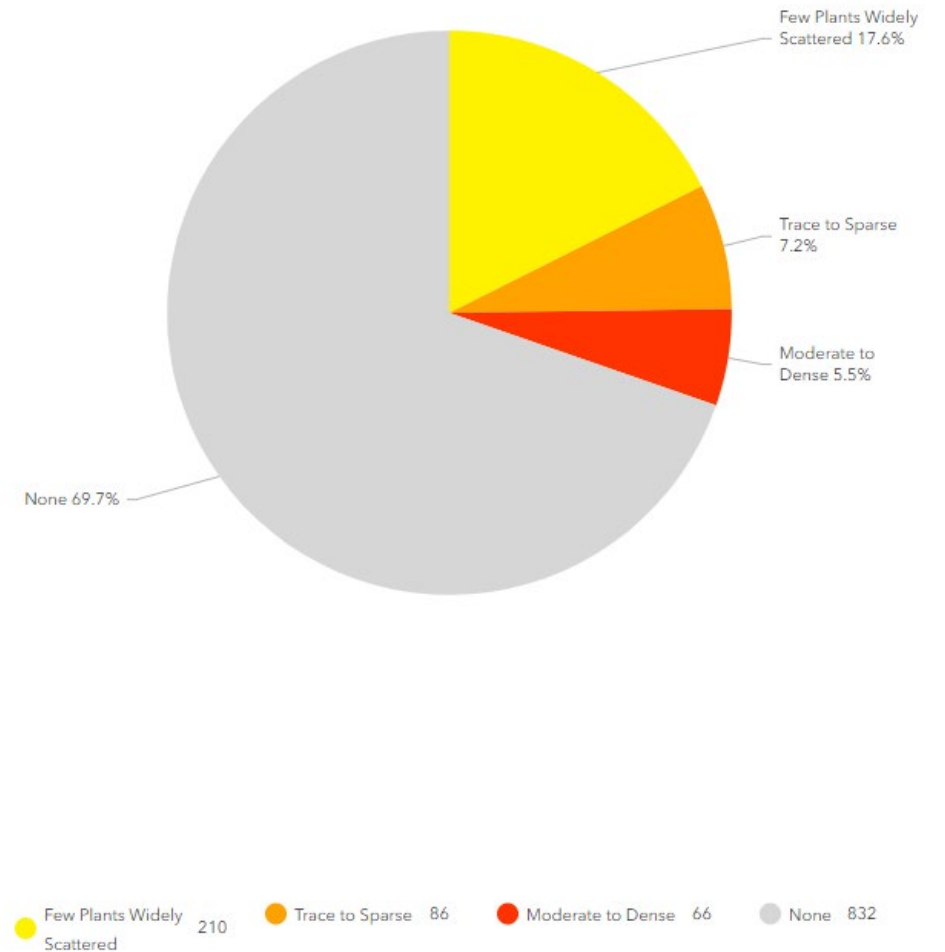


Photo from Lex Lanza

2023 Monitoring: Lake Management Tracker

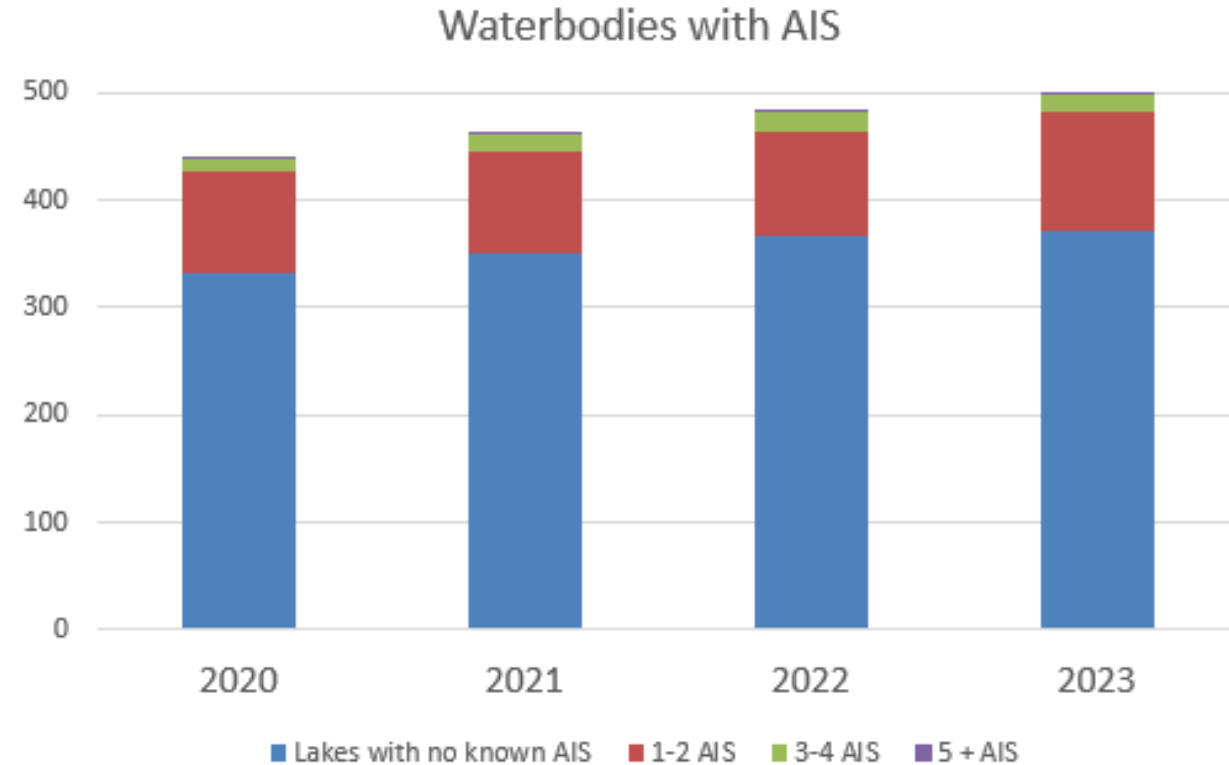
- 7 Lakes Participated
 - Upper Chateaugay Lake
 - Moody Pond
 - Lincoln Pond
 - Paradox Lake
 - Raquette Lake
 - Loon Lake
 - Friends Lake

- Over 1,200 observations!



2023 Overall Results

- 499 waterbodies monitored in 22 seasons
- 127 waterbodies with known invasions – 17 new infestations found, seven new waterbodies
- 75% of surveyed waterbodies have no observed AIS



APIPP 2024 AIS Plans

- Expand eDNA monitoring, compare with traditional visual monitoring
- Continue Lake Protectors and Lake Management Tracker
- Conduct ALAP water quality monitoring of lakes with milfoil management
- Continuing studies on Lake Champlain boat launch removal



Goal 3: Community Engagement

GOAL 3



- ❖ Workshops
- ❖ Presentations
- ❖ Outreach Materials
- ❖ Best Management Practices
- ❖ Media Articles

**Invasive Species
Best Management Practices**

**INVASIVE SPECIES
MANAGEMENT
ADIRONDACKS**

The Nature Conservancy

Updated July 2022

Contact Information
The Nature Conservancy's
Adirondack Park Invasive Plant Program
8 Nature Way, Keene Valley, NY 12943
(518) 576-2082 • www.adkinvasives.com

PREVENT THE SPREAD OF INVASIVE PLANTS & ANIMALS WHEN YOU CAMP, HUNT, HIKE, BIKE, AND HAVE FUN IN THE ADIRONDACKS

CLEAN
DIRT AND DEBRIS FROM FOOTWEAR, PETS, BIKES, AND GEAR AFTER EVERY OUTDOOR ADVENTURE

STAY
ON DESIGNATED TRAILS AND ROADS TO AVOID PICKING UP OR SPREADING INVASIVE PLANT SEEDS

USE LOCAL
HAY FOR HORSES AND CARRY OUT LEFTOVER ANIMAL FEED

BUY IT WHERE YOU BURN IT.

LEARN HOW TO PROTECT THE PLACES YOU LOVE BY VISITING WWW.ADKINVASIVES.COM

PROTECT YOUR FORESTS
FROM HARMFUL INVASIVE SPECIES

LEARN HOW TO PROTECT THE PLACES YOU LOVE BY VISITING WWW.ADKINVASIVES.COM

PREVENT THE SPREAD OF INVASIVE PLANTS & ANIMALS WHEN YOU BOAT, SWIM, FISH, AND PADDLE IN THE ADIRONDACKS

CLEAN
ALL PLANTS, MUD, AND DEBRIS OFF OF BOATS, TRAILERS, WADERS, AND FISHING GEAR

DRAIN
ALL WATER FROM BOATS, MOTORS, BAIT BUCKETS, TANKS AND HOLS

DRY
BOATS AND GEAR FOR FIVE DAYS OR POWER WASH USING HOT WATER BEFORE VISITING NEW WATERWAYS

DISPOSE
OF UNWANTED BAIT AND WORMS IN THE TRASH

FREE WASH STATIONS
CLEAN, DRINK, DRY IS THE LAW AND HIGH-PRESSURE HOT WATER BOAT WASH STATIONS ARE AVAILABLE FOR FREE THROUGHOUT THE ADIRONDACKS! FIND A SITE NEAR YOU WWW.ADKCLEANBOATS.COM

LEARN HOW TO PROTECT THE PLACES YOU LOVE BY VISITING WWW.ADKINVASIVES.COM

FIREWOOD ALERT!

Adirondack trees and forests need your help. You can prevent the unintentional spread of tree-killing insects and diseases — like the emerald ash borer — by simply buying local firewood near where you'll burn it. The forest will thank you!

BUY IT WHERE YOU BURN IT.

How to Help:

- Make safer firewood choices — buy local firewood at or near your destination, or buy heat-treated firewood ahead of time.
- Buy only what you'll need and use it all up by the end of your stay.
- If you already moved firewood, use it immediately. Do not take it home with you, and do not leave excess firewood on site.

You have the power to protect Adirondack forests.

PONTMOVE FIREWOOD.org The Nature Conservancy

PROTECT ADIRONDACK TREES
MOVING FIREWOOD CAN TRANSPORT TREE-KILLING INSECTS.

BUY IT WHERE YOU BURN IT.

If you're a regular weekend warrior for a trip — or just getting firewood for your stove — do nature a favor! Don't potentially transport invasive species.

- Buy locally harvested or heat-treated firewood.
- Be aware of firewood regulations.
- Tell your friends not to move firewood.

If you have already moved firewood, use it immediately. Do not take it home with you, and do not leave excess firewood on site.

PONTMOVE FIREWOOD.org



Education and Events

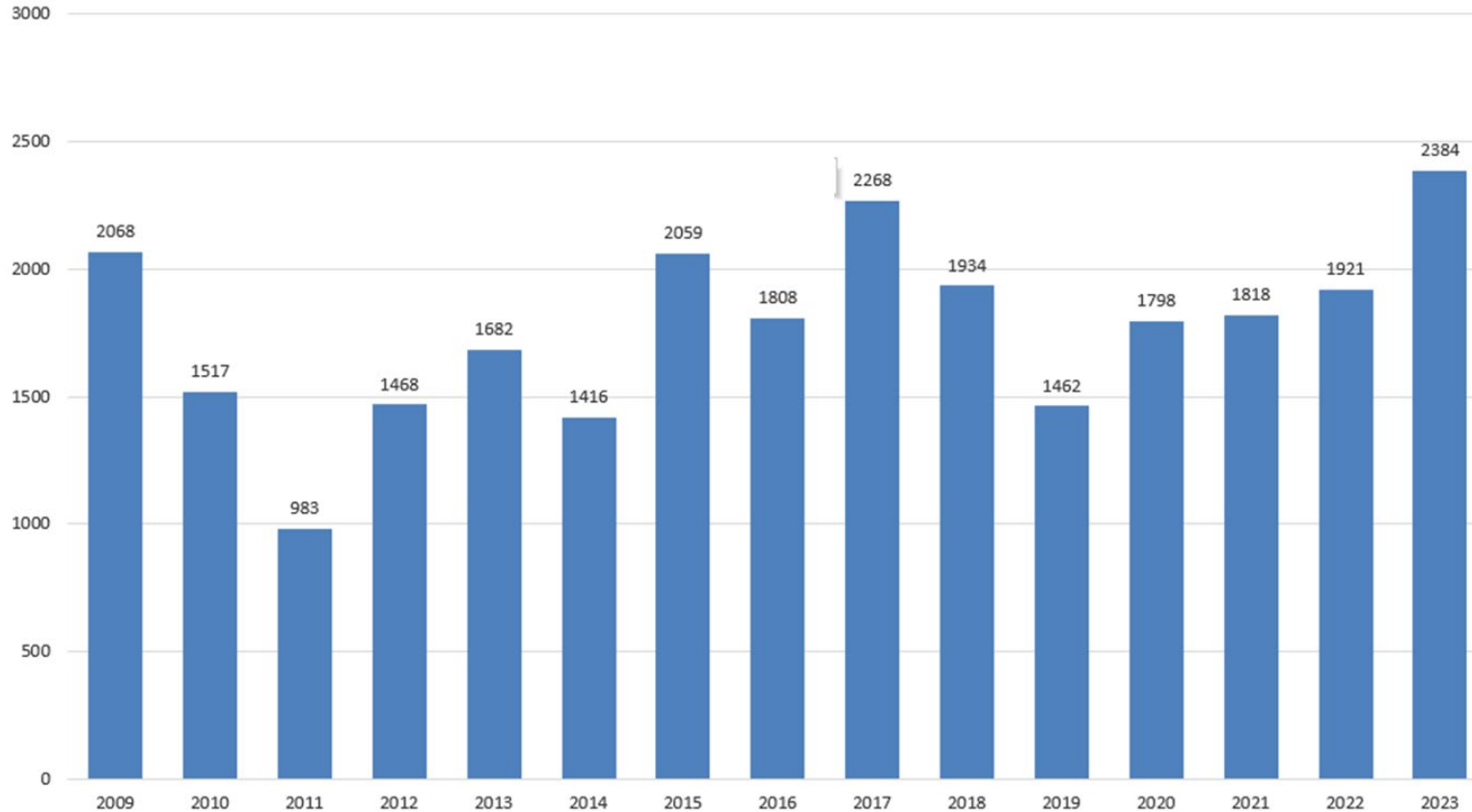


In 2023 APIPP staff participated in 53 events, including

- 23 trainings and workshops
- 10 webinars
- 8 events
- 3 classes

Audiences Reached

Audiences Reached



APIPP staff reached 2,384 people in 2023 through webinars, events, trainings, workshops, and other public engagements.



Events Aren't the Only Way We Reach People

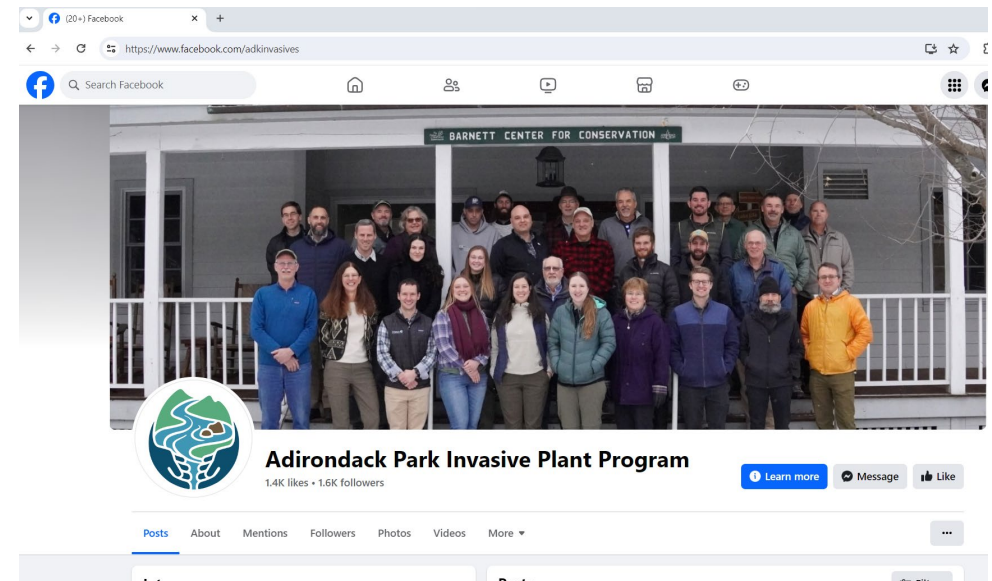
YouTube

- Channel started in June 2020
- 17,422 lifetime views
- 3,100 hours of watch time

- 1,329 watch hours in 2023

Social Media

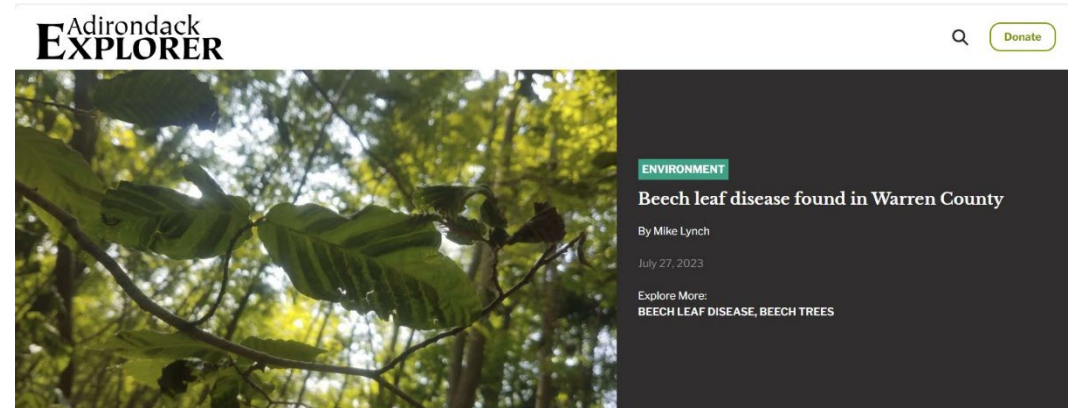
- Facebook: 1,621 followers
Instagram: 1,205 followers
- Facebook reach: 44,129
Instagram reach: 1,847



APIPP in the News



In 2023, APIPP had more than 50 mentions in print, online, and radio media. The media outlets included Adirondack Almanack, Adirondack Daily Enterprise, Adirondack Explorer, Adirondack Life Magazine, Albany Times Union, Lake George Mirror, Lake Placid News, Malone Telegram, Press-Republican, Post Star, WAMC, and Sun Community News.



Field Guide to Terrestrial Invasive Species of the Adirondacks

The field guide includes:

- 28 terrestrial invasive species
- Beginner plant identification
- Guide to reporting invasives using iMapInvasives
- Tips on invasive species management

BUSH HONEYSUCKLES

Lonicera spp.

NATIVE RANGE East Asia

DESCRIPTION Amur (*Lonicera maackii*), Morrow's (*Lonicera morrowii*), and Tartarian (*Lonicera tatarica*) honeysuckles are referred to as bush honeysuckles. All 3 species reach 6-15 feet tall with opposite leaves, hollow stems, and gray, shreddy bark. Bush honeysuckles flower in May or June with pink, white, or yellow blooms. In July or August, they produce clusters of red or orange berries.

HABITAT Bush honeysuckles prefer full sunlight and grow best in open and edge areas. Morrow's honeysuckle can grow in wetland habitats.

THREAT One of the first species to leaf out in the spring, bush honeysuckles have a competitive advantage over native shrubs and herbaceous plants.

MANAGEMENT For small plants, digging or grubbing up from the roots followed by drying or burning of the plant material is effective. For larger plants or infestations, herbicide treatments via cut-stump or foliar spray are effective.

FAST FACT

There are several native species of *Lonicera spp.* Invasive bush honeysuckles have hollow stems, native look-alikes do not.



JAPANESE BARBERRY

Berberis thunbergii

NATIVE RANGE Asia

DESCRIPTION Japanese barberry is a spiny deciduous shrub that reaches 6 feet tall. Leaves are small, teardrop shaped with smooth edges and are usually green. Ornamental cultivars with deep purple or yellow leaves are also available. Bark is gray with sharp, single thorns along the stem. Flowers are small, white-to-yellow, and bloom in April or May. Small, bright-red berries are present in fall. The inner roots and stem are vibrant yellow.

HABITAT Japanese barberry can dominate forest understories, edges, and riparian corridors, and it grows well in both full sun and shade.

THREAT Barberry is resistant to herbivory and creates dense thickets, creating excellent tick habitat.

MANAGEMENT For small plants, digging or grubbing up from the roots followed by drying or burning of plant material is effective. For larger plants or infestations, herbicide treatments via cut-stump or foliar spray can be effective.

FAST FACT

The green form is usually associated with shaded sites, while the purple form is more common in full sun.



INVASIVE SPECIES
MANAGEMENT
ADIRONDACKS

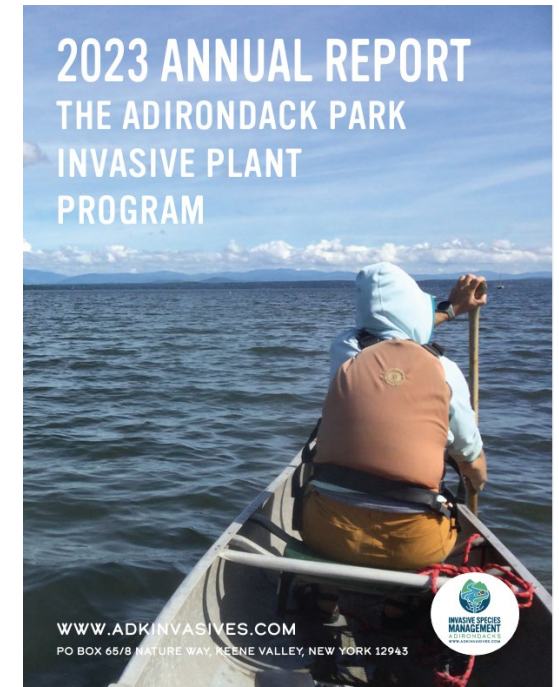
FIELD GUIDE TO TERRESTRIAL INVASIVE SPECIES OF THE ADIRONDACKS

Adirondack Partnership for Regional
Invasive Species Management



APIPP 2024 Community Engagement Plans

- 2023 Annual Report
- Webinar Series
- Spring Partner Meeting April 25
- ISAW Trivia Night June 5 at Raquette River Brewing
- Fall Summit
- Press Releases
- Outreach Materials



Goal 4: Research and Innovation



**Knotweed
Management**



**HWA
eDNA**



**Hemlock
Genome**



**EAB MaMA
Plots**



Knotweed Management Alternatives

Objective:

Evaluate chemical alternatives to glyphosate for the treatment of knotweed

| | Foliar (% v/v) | Injection (ml/stem) |
|--|-------------------|------------------------|
| Glyphosate (RoundUp Custom) | 3 | 3 |
| Imazapyr (Arsenal Powerline) | 1 | 3 |
| Aminopyralid (Milestone) | 0.75 | 1 |



Takeaways

- **Imazapyr and aminopyralid provided a comparable level of control to glyphosate**
 - However, they have different chemical characteristics and might not be appropriate for all sites

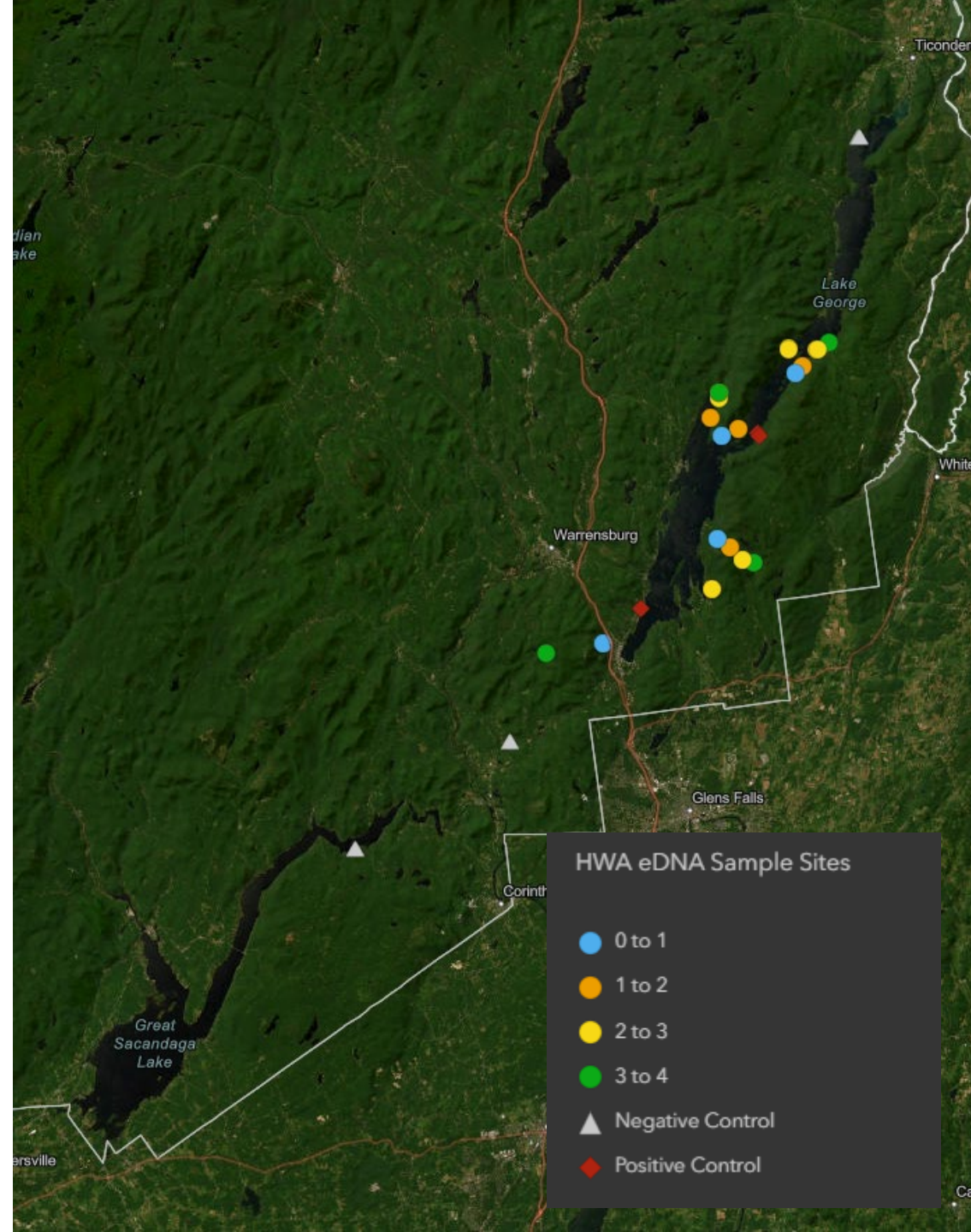
| | Formulations Available | Aquatic Approved | NY Restricted | Soil Residual Activity | Soil Mobility |
|--|------------------------|------------------|---------------|------------------------|---------------|
| Glyphosate <u>Ex:</u> RoundUp Custom, Rodeo, Accord XRT-II | Terrestrial & Aquatic | Yes | Some | No | No |
| Imazapyr <u>Ex:</u> Arsenal Powerline | Terrestrial & Aquatic | Yes | Some | Yes | Yes |
| Aminopyralid <u>Ex:</u> Milestone, Whetstone | Terrestrial | No | Yes | Yes | Yes |

HWA eDNA

Objective:

Evaluate the use of eDNA as an early detection tool for hemlock woolly adelgid.

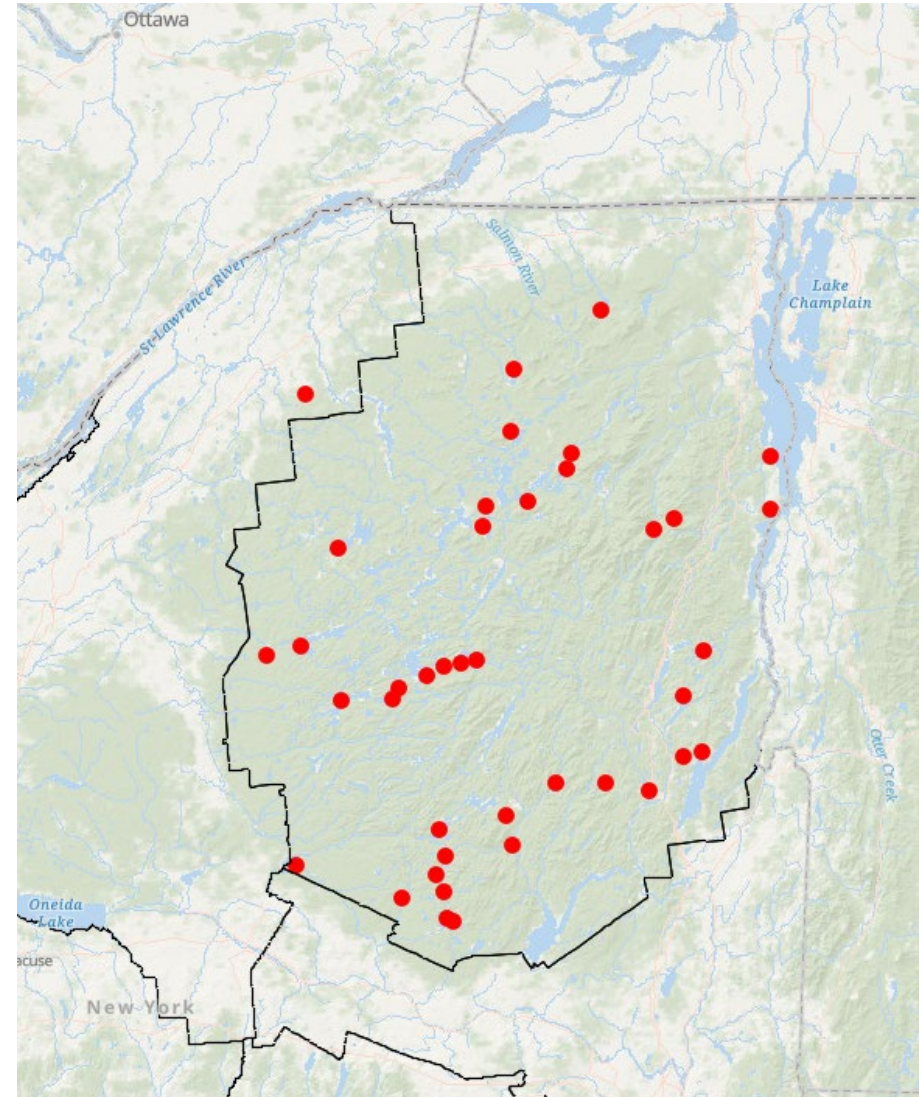
- Sampled 28 sites in 2022 & 2023
- Laboratory results are mixed
- Further work is needed to refine technique



Hemlock Genome Sampling

- Collected (20) samples for University of Connecticut

“To identify climate adapted genomic variation for seed banking and potential use in future breeding programs for assisted migration.”



Monitoring and Managing Ash Plots

- Long-term monitoring to identify “lingering trees”
- Five plots, white, green, and black ash



2022 Partner Data Dashboard

GOAL 1

Protect Adirondack PRISM lands from the most significant ecologic and economic impacts of terrestrial invasive plants and animals, including forest pests and pathogens



9

PARTNERS MONITORED

Most commonly monitored:

- Emerald ash borer
- Hemlock woolly adelgid
- Knotweed species
- Purple loosestrife

9

PARTNERS MANAGED

Most commonly managed:

- Garlic mustard
- Knotweed species
- Purple loosestrife
- Wild parsnip

GOAL 2

Protect Adirondack PRISM waters from the most significant ecologic and economic impacts of aquatic invasive plants and animals



10

PARTNERS MONITORED

Most commonly monitored:

- Curly-leaf pondweed
- Eurasian watermilfoil
- Variable-leaf milfoil
- Water chestnut

7

PARTNERS MANAGED

Most commonly managed:

- Curly-leaf pondweed
- Eurasian watermilfoil
- Variable-leaf milfoil

6

PARTNERS

Operated a boat steward program

187,363

Total Visitor Contacts

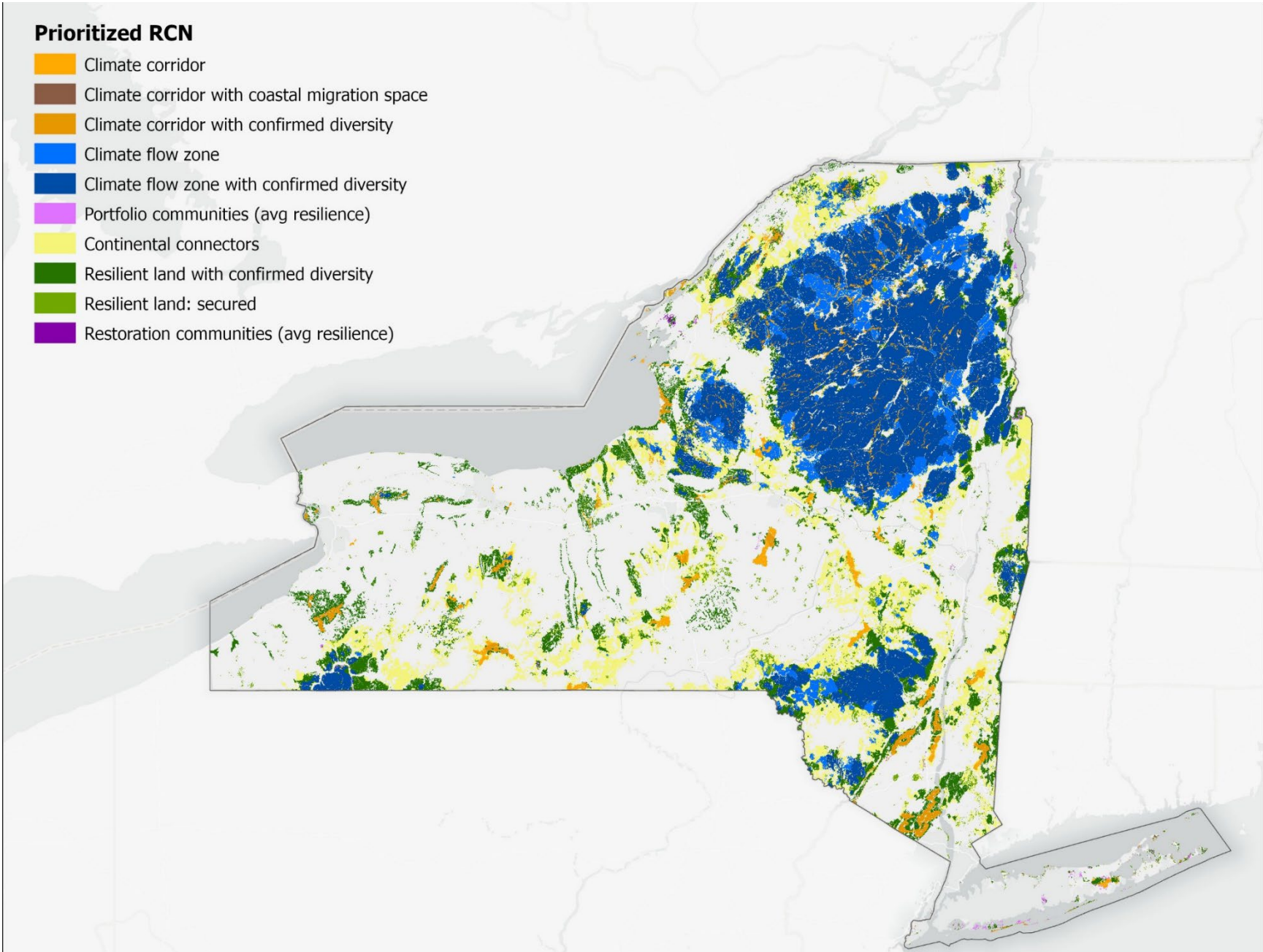
1,025

AIS Interceptions

88,851

Boats Inspected

TNC'S Resilient and Connected Lands Network



Importance of our Collective Work

FOUR WAYS CLIMATE CHANGE & INVASIVE SPECIES INTERACT



The effects of invasive species are often worsened by climate change



Climate change facilitates the spread and establishment of invasive species



Climate change makes ecosystems more susceptible to invasion



Invasive species reduce the resilience of ecosystems and communities to climate change

www.ADKinvasives.com
Facebook.com/ADKinvasives

