

# Partnership for Regional Invasive Species Management Capital Region

2019 Annual Report



## Acknowledgements

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### A Special Thanks to:

The Cornell Cooperative Extension of Saratoga County Host Organization

**Cornell Cooperative Extension**  
Saratoga County

The New York State Department of Environmental Conservation



The New York State Department of Agriculture and Markets



The New York State Invasive Species Council and Invasive Species Advisory Council and Legislator

*The numerous partner organizations and their representatives who contribute their expertise, time and resources to the development and success of the Capital Region PRISM.*

Copy of this report can be obtained from the Capital/Mohawk PRISM website:

<http://www.capitalmohawkprism.org/>

Table of Contents

<b>Executive Summary</b>	4
<b>Introduction</b>	6
<b>Education and Outreach</b>	9
<b>Prevention</b>	13
<b>Early Detection</b>	16
<b>Rapid Response, Control, and Management</b>	19
<b>Cooperation and Coordination</b>	23
<b>Information Management</b>	29
<b>Annual Work Plan Summary</b>	33
<b>Annual Budget Summary</b>	37
<b>Appendices</b>	39
Geography	41
Vector Management	47
Natural Resources	48
Invasive Species Prevention Zone	49
Education and Outreach Contacts	50
Friends and Partners Served by the Capital Region PRISM	53

### MISSION STATEMENT

***“Detect, prevent, and control invasive species, through direct action and education, to protect biodiversity, the natural environment, economy, and quality of life.”***

### Partnership for Regional Invasive Species Management of the Capital Region

The Adirondack Park Invasive Plant Program, Capital Region, St. Lawrence-East Lake Ontario and Long Island Partnerships for Regional Invasive Species Management (PRISM) and the New York State Department of Environmental Conservation (NYSDEC) are proud to announce the debut of 4 new PRISM logos as well as a statewide parent logo.

The design effort has produced a suite of fresh and modern logos that will improve the recognition and continuity of the PRISM network, while also showcasing the uniqueness of each region. The logos were designed using a similar style with each framed by a set of hands acknowledging the shared effort and partnerships that make our PRISM network successful. The Capital Region PRISM logo is inspired by John Boyd Thacher State Park, a landscape rich with forests and water resources, which anchors and reflects the Capital Region as a whole. The PRISM will be referenced as the Partnership for Regional Invasive Species Management of the Capital Region. The Capital Region PRISM would especially like to thank the Adirondack Park Invasive Plant Program and the New York State Department of Environmental Conservation for making the logos come to fruition.



The Capital Region PRISM is set to launch several exciting invasive species initiatives and expansions that we are certain will make a difference over the coming years. Collaboration with our partners is key to our success and we want to share these efforts and invite you to embrace these initiatives. Our staff includes a full time Lead, Terrestrial, and Aquatic Invasive Species Coordinators with a part time Education and Outreach specialist. The core members making up the Capital Region PRISM have strengths in each individual area of expertise and together we have a solid foundation to deliver a diverse suite of approaches to help manage invasive species in the Capital Region.



The PRISM initiated a new approach towards the management of invasive species when conducting early detection, rapid response, and control strategies. Our team identified Priority Conservation Areas (PCA's) across the Capital Region for surveys and treatment. PCA's are parcels of public property that are ecologically significant and are at a high risk of invasion. PCA's have been identified in the eleven counties making up the Capital Region PRISM and will be visited in some cases on a yearly schedule and others in a bi/triennial rotational schedule.



In 2019, A total of 31 sites were surveyed in ten of the surrounding counties. In addition 17 sites were targeted and treated for emerging and high threat species in five of those counties. Species of concern in removal targets, Japanese stiltgrass (*Microstegium vimineum*), Japanese angelica tree (*Aralia elata*), and mile-a-minute weed (*Persicaria perfoliata*). Outside of these areas, our work efforts have been focused on engaging our partners with potential threats and assisting them in managing such populations. Survey and treatment reports from the PRISM and our partners can be found on our web site [www.capitalmohawkprism.org](http://www.capitalmohawkprism.org) under the report tab.



A preventative watercraft inspection and survey program was implemented across the Hudson and Mohawk River Valleys. The Aquatic Invasive Species Spread Prevention Program is designed to deploy watercraft inspection stewards at boat launches throughout the region. The PRISM through Cornell Cooperative Extension of Saratoga County is administering the program on behalf of the New York State Department of Environmental Conservation. In year one 13,411 individuals were educated about aquatic invasive species spread prevention and clean drain dry practices. A total of 8,475 boat inspections were completed and 346 AIS were intercepted as a result.



In 2019 the PRISM conducted and participated in 74 events reaching just shy of 3000 direct participants. In addition, the PRISM developed a suite of best management practice factsheets on widespread invasive species for partner and public use. The Capital Region PRISM and partners hosted 29 events during the 6<sup>th</sup> annual Invasive Species Awareness week. The team was also successful in recruiting 43 subscribers to listserv, 200 new followers on Instagram, and noted a 20% increase in website views on our home page.

The Capital Region Partnership for Regional Invasive Species Management (PRISM) exists to fight the threat of invasive species in and around the Capital Region of New York State (NYS). NYS Environmental Conservation Law [9-1703 (1)] defines invasive species as non-native species that can cause significant harm to the environment, economy, or to human health. Invasive species are a form of biological pollution that come from around the world. The rate of invasion is growing rapidly due to the increase of international trade and climate change. In response to this growing problem, NYS established an Invasive Species Task Force in 2003. The NYS Invasive Species Task Force recommended building and funding a network of partnerships to prevent or minimize the harm caused by invasive species to New York's environment in its 2005 report to the Governor and legislature. To act on that recommendation, the NYS Department of Environmental Conservation (DEC) contracted the administration of eight PRISMs across the state.



The Capital Region Partnership for Regional Invasive Species Management (PRISM) is hosted by the Cornell Cooperative Extension of Saratoga County. The PRISM is financially supported through the New York State Department of Environmental Conservation via the Environmental Protection Fund. The Capital Region PRISM was fully funded in 2018 with the contract continuing until 2023.

The Capital Region PRISM is a not-for-profit quasi-government agency. The office is staffed with a full time Terrestrial, Aquatics, and Lead Coordinator. PRISM seasonal staff includes part time educators and interns from affiliated colleges and universities in the New York State Capital Region. The Capital Region PRISM provides services in eleven counties throughout the Capital Region: Albany, Columbia, Montgomery, Rensselaer, Schenectady, and portions of Fulton, Greene, Herkimer, Saratoga, Warren, and Washington.

The PRISM welcome and partners with members from academic institutions, government agencies, municipalities, not-for-profit organizations, private preserves and parks, land trusts, conservancies, lake associations, agricultural institutions, local businesses, environmental groups and citizen scientist from the community at large. These partners are dedicated in slowing the spread of invasive species and protecting our environment. The PRISM delivers a host of functions to address invasive species impacts, including, but not limited to:

- Coordinating partner efforts regarding invasive species management
- Provide for networking opportunities across domains through partner meetings.
- Delivering education and outreach to government agencies, not-for-profits, and private entities
- Recruiting and training volunteers with woods walks, workshops, and iMapInvasives trainings
- Establishing early detection and monitoring networks for invasive species
- Implementing eradication and control efforts
- Developing and implementing effective restoration methods for areas that have been degraded by invasive species and where suppression or control has taken place
- Provide funds for invasive species work through a Request for Proposals (RFP) process and deliver Memorandums of Understanding (MOU's) for work to be executed on behalf of the PRISM based on prioritization needs
- Aid and assist partners in developing a Framework for Response in which management practices are realistic, cost-effective, and measurable<sup>1</sup>

Invasive species are regionally ranked into a tiered system based on presence identification(s) within the PRISM. Invasive species are also prioritized based on a state-assigned threat score. A species threat score is determined by its ecological impact, biological characteristics and dispersal ability, ecological amplitude and distribution, and difficulty of control. Based on these categories, some invasive species are more aggressive with higher threat scores than others. For more information, consult the [NYS Ranking System for Evaluating Non-Native Plant Species for Invasiveness](#). The tier ranking system is described outlined below and is designed to align with the invasion curve model.

**Tier 1 – Early Detection/Prevention:** Species is not in PRISM yet, with anticipated high or very high impacts. Highest level of survey efforts for detection.

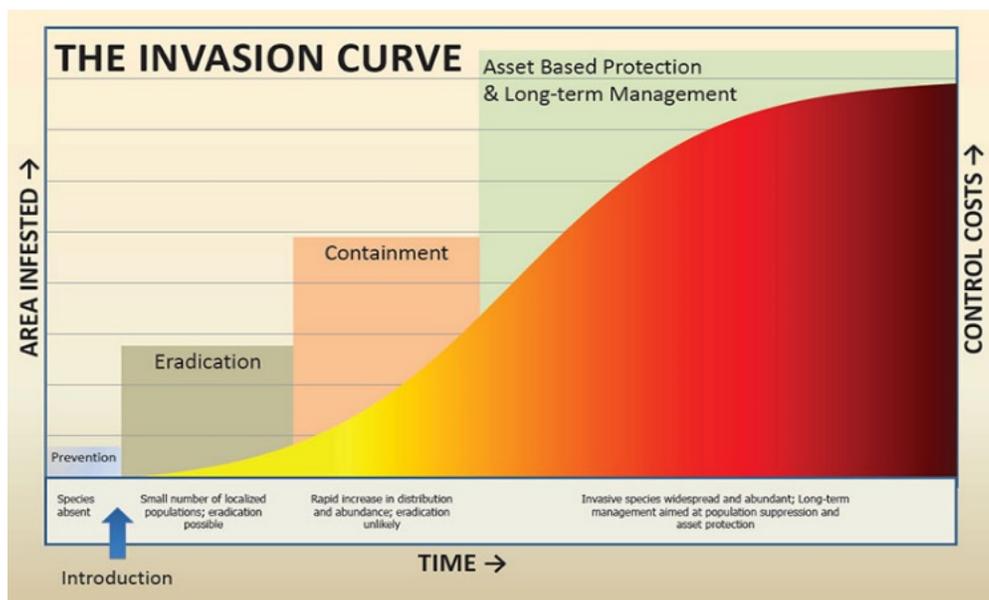
**Tier 2 - Eradication:** High and very high impact species with low enough abundance to make eradication feasible within the PRISM. Highest level of response efforts.

**Tier 3 – Containment:** High and very high impact species that are likely too widespread for eradication, but low enough abundance to think about regional containment.

**Tier 4 – Local Control:** Well-established species with high and very high impacts. Eradication efforts not feasible at this time.

**Tier 5 - Research:** Species in or surrounding the PRISM that need more research, mapping, and monitoring to understand invasiveness and impacts.

The Invasion Curve model delineates the cost of management over time as a species proliferates. As the graphic illustrates, as a species is allowed time to succeed in a new setting, its population is allowed to increase, which greatly increases the management costs for a given species.



Source: USDA Forest Service 2005 Invasive Plant Environmental Impact Statement

## EDUCATION AND OUTREACH

***Increase public awareness and knowledge of invasive species that can cause significant harm to the environment, economy, and human health.***

The Capital Region PRISM worked throughout 2019 to deliver education and outreach materials to a variety of groups in order to provide a better understanding of invasive species and their impacts. The PRISM collaborated with partners and stakeholders, upheld a social media presence, and provided assistance to communities, organizations and others in order to reach their goal of increasing public awareness and knowledge of invasive species.

Educational materials, such as factsheets, resource guides, manuals, and presentations, were developed and promoted with the aid of the Education and Outreach Committee and PRISM interns. These resources were shared with PRISM partners and stakeholders to distribute throughout the Capital Region. Materials from the NYSDEC Bureau of Invasive Species and Ecosystem Health, Department of Agriculture and Markets, and other agencies and partners were also shared with the PRISM to be distributed.

Overall, in 2019, the PRISM reached 2,955 direct contacts using various outlets including lectures, forums, tours and demonstrations. The PRISM was also involved with training natural resource professionals on invasive species identification, management, and the usage of iMapInvasives to encourage them to spread their knowledge with their own audiences and partners. The Hudson and Mohawk River Valleys Aquatic Invasive Species (AIS) Spread Prevention Program reached 13,411 individuals with Clean Drain Dry messaging for that specific program.



Capital Region PRISM tabling event at Moreau Nature Fest, 2019.



Capital Region PRISM Forest Resiliency Workshop.

The Capital Region PRISM also held and participated in popular events that drew in indirect contacts. Indirect contacts are informal estimates of audiences reached at large outings. The PRISM for example reached an estimated total of 34,292 indirect contacts while tabling at the Altamont, Saratoga and Washington County fairs. For a comprehensive list of the number of indirect and direct contacts reached throughout the year, please see Appendix F.

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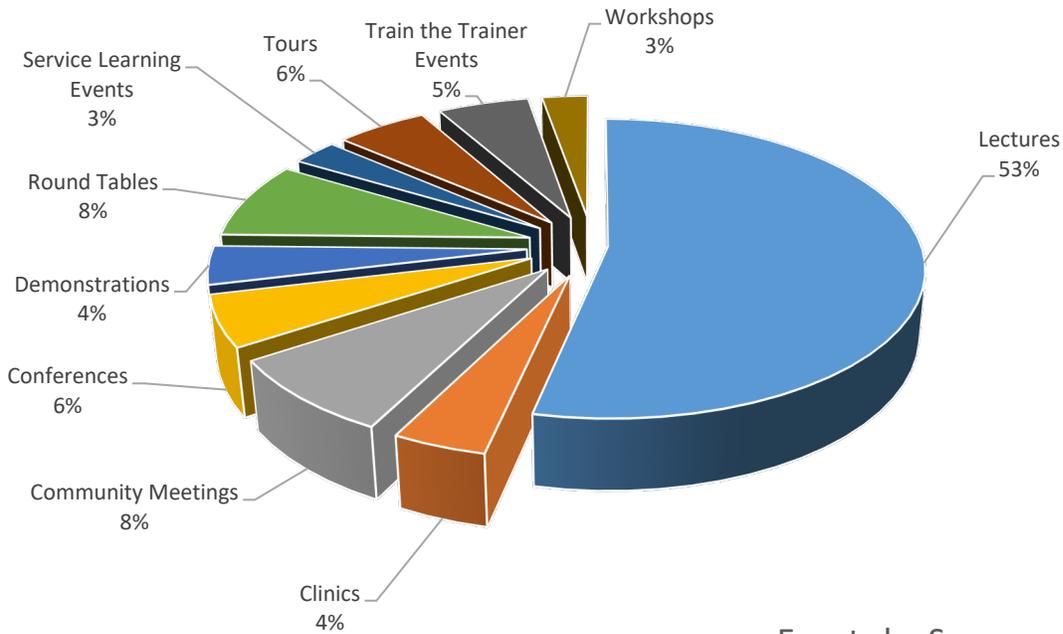
**74 Total Events**

**2,955 Direct Contacts**

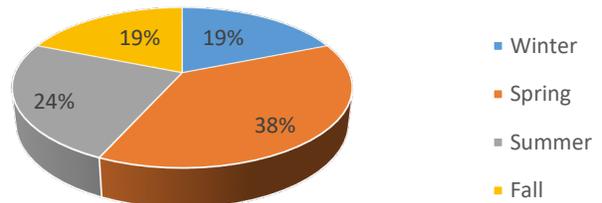
**53% Lecture**

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**Types Education and Outreach Events held in the Capital Region PRISM**



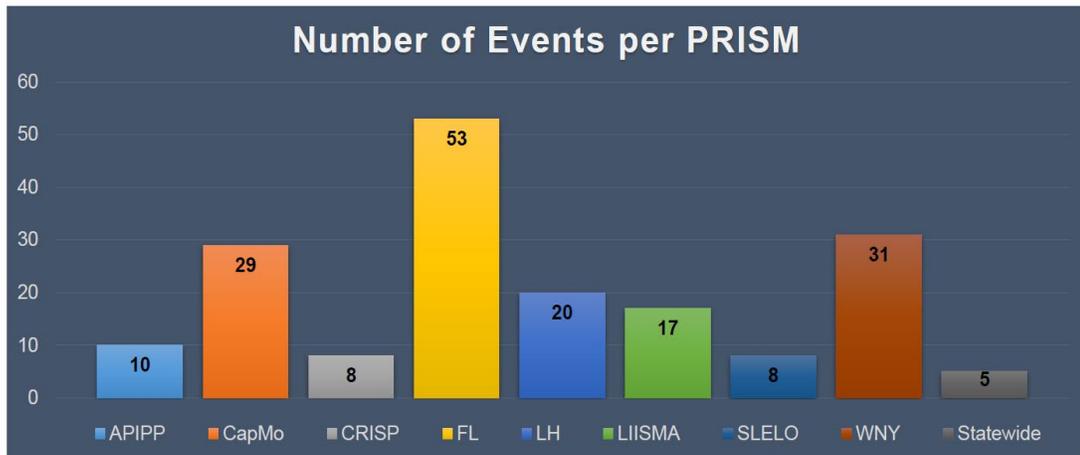
**Events by Season**



### Invasive Species Awareness Week

New York States 6<sup>th</sup> annual Invasive Species Awareness Week (ISAW) campaign was held from July 7<sup>th</sup> to the 14<sup>th</sup> in 2019. ISAW is an initiative put in place by the Invasive Species Council, Invasive Species Advisory Committee, and the eight PRISM partnership networks across the state in order to promote education and outreach regarding invasive species and the harm they can cause to the environment, economy, and human health.

Across the state, there were 181 events held during ISAW that reached a wide variety of age groups and education levels. The types of events ranged from citizen science survey and monitoring programs to invasive species removal projects along with presentations and tabling outings. Specifically in the Capital Region PRISM, there were 29 events that occurred during ISAW and each county within the PRISM had an associated event. Some of these events included a roadside invasive species lecture at Saratoga Springs Public Library, a surveying and removal event at Moreau State Park Invasive Species Prevention Zone, and an iMapInvasives train-the-trainer event at Five Rivers Environmental Center.



ISAW Events broken down by PRISM region. Figure sourced from Emma Antolos, Education and Outreach Coordinator, NYSDEC.

### **Saratoga Library Roadside Invasive Lecture**

*During ISAW week, the Capital Region PRISM partnered with the Saratoga Springs Public Library to put on an invasive species presentation for the general public. The presentation focused on identification of common roadside invasive species in the Capital Region, including wild parsnip (*Pastinica sativa*) and purple loosestrife (*Lythrum salicaria*). A total of 36 people attended this lecture and had access to various educational materials provided by the PRISM.*

### **Woodlawn Preserve Removal Event**

*At the end of ISAW week, the Capital Region PRISM worked with the Friends of Woodlawn Preserve in Schenectady County to remove invasive species from the preserve. Yellow iris (*Iris pseudacorus*) and cypress spurge (*Euphorbia cyparissias*) were hand-pulled and bagged for solarization outside of the preserve. The removal served as a working and learning event for citizen scientist in the community.*

### **Moreau Lake State Park iMapInvasives and Identification Workshop**

*The Friends of Moreau and Moreau Lake State Park Education and Outreach Staff participated in an Invasive Species Identification and iMapInvasives Workshop. The workshop focused on the identification of common and emerging invasive species found in or threatening the park. Participants learned how to use the iMapInvasives Mobile app and create treatment reports in the desktop platform. In the second part of the workshop, a survey was conducted in highly probable areas as a team. The Capital Region Terrestrial and Aquatics Interns were present at the park and surveyed portions of the park as well. The training resulted in park staff actively removing new seedlings of invasive plants as identified throughout the season. The training was a model of instructional delivery with other related park and preserves across the Capital Region in 2019.*



## PREVENTION

***Prevent the introduction of invasive species into the region.  
Recruit and train volunteers in invasive species identification, monitoring, management,  
and prevention techniques.***

The Capital Region PRISM works hard to prioritize high risk areas, monitor species distribution, and create partnerships that aid in the prevention of invasive species outbreaks. Prevention is achieved by identifying species of concern and educating the public on identification and management through presentations, tabling events, and partner trainings. The PRISM has a Steering Committee and four subcommittees (Agriculture, Aquatics, Conservation, and Education/Outreach) that meet two to four times a year to develop goals and targets and to present work that has been completed. Collaboration with committees and partners as well as outreach and training events ensures our ability to reach people from all over the PRISM.

Other efforts included funding awareness measures. Funding was provided to the Montgomery County Soil and Water Conservation Department to produce a mobile billboard for invasive species outreach. In addition a series of invasive species awareness signs have been designed to be posted along the Canalway Trail system in Montgomery County. A similar strategy was deployed by The Schenectady County Invasive Species Committee (SCISC) in 2018, in which five boot brush stations were constructed for County Forest Preserves. The PRISM will continue to promote the use of boot brush style postings with the PlayCleanGo® initiative to bring awareness to the public and prevent the spread of invasive species at highly probable areas.

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### ***Aquatic Invasive Species Spread Prevention Program (AISSPP)***

*13, 411 individuals educated  
8,475 watercraft inspected  
346 confirmed AIS during  
inspections (2.34% of all watercraft)*

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Steward Ralph Green during boat steward training at Norrie Point Environmental Center.

## Hudson and Mohawk Rivers Aquatic Invasive Species (AIS) Spread Prevention Program

In 2018, the New York State Department of Environmental Conservation solicited an Invitation for Bid on the AISSP program for the Hudson and Mohawk River valleys and the Capital Region PRISM applied. After careful consideration from the New York State Department of Environmental Conservation of all bidders and factors, the Capital Region PRISM was awarded the contract and thus began administering the program. This program intends to foster collaboration and coordination among state agencies and partners to minimize the harm aquatic invasive species (AIS) cause to waters in the Hudson and Mohawk River valleys and throughout New York State.



Boat steward Cora Delucia at the Waterford boat ramp.

In 2019, the Capital Region PRISM hired 18 watercraft inspection stewards who were placed at 23 designated launch locations along the Hudson and Mohawk Rivers. These individuals helped prevent the spread of aquatic invasive species by delivering AIS spread prevention education and outreach to boaters, conducting courtesy boat, trailer, and equipment inspections, and showing boaters how to inspect and remove plants and organisms from their equipment.

Both the Hudson and Mohawk Rivers are critically important waterbodies for the Capital Region. The two rivers support a multitude of native species, both aquatic and terrestrial, and provide numerous recreational opportunities for the general public. The Hudson, in particular, boasts a unique brackish ecosystem as a tidal estuary, making it an important component for ecosystems throughout eastern New York State.

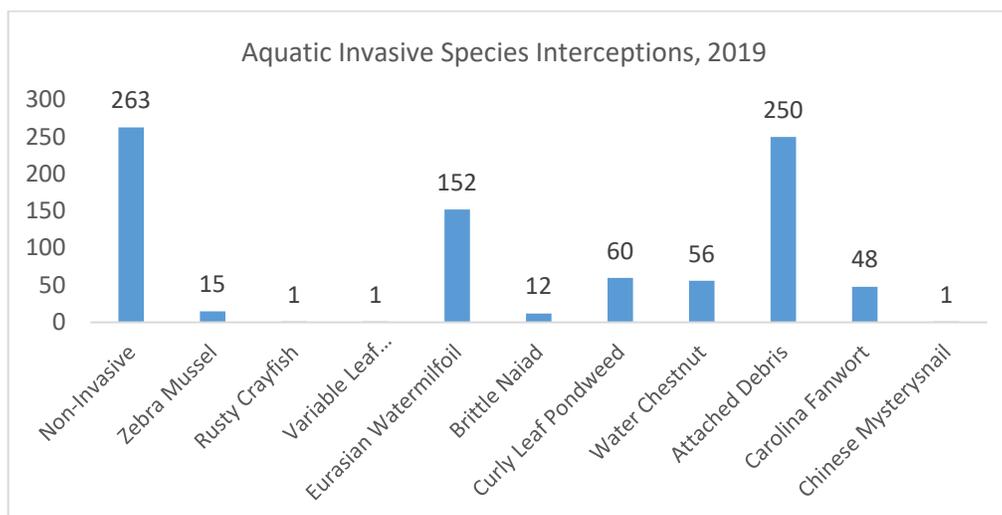
Unfortunately, over the past few decades, invasive species have plagued both waterways and have caused numerous issues for our native species. Currently, over 120 aquatic non-native and invasive species have been found within the Hudson River estuary, making it a source point for AIS within the Capital Region PRISM. Thus, the implementation of a boat steward program that actively engages and educates the public regarding spread prevention measures was imperative.

## 2019 AISSPP Metrics

Boat Type	Number of Boats Observed	Primary Activity Performed	Percentage
<i>Barge</i>	0	<i>Commercial</i>	0.86%
<i>Canoe</i>	337	<i>Fishing</i>	29.46%
<i>Kayak</i>	4379	<i>Recreation</i>	68.52%
<i>Motorboat</i>	3160	<i>Government</i>	0.69%
<i>Personal Watercraft</i>	385	<i>Research</i>	0.47%
<i>Rowboat</i>	70		
<i>Sailboat</i>	31		
<i>Stand-up Paddleboard</i>	109		
<i>Windsurfer</i>	4		

The greatest observation for watercraft on both the Hudson and Mohawk Rivers came in the form of kayaks. Motorboats were the second greatest observed vessel followed by , personal watercraft, canoes, stand-up paddleboards, rowboats, sailboats, and windsurfers. There were no observations of barges from the AISSPP stewards in 2019. Unexpectedly, recreation was the primary activity performed at most launch locations (68.52%) followed by fishing (29.46%), commercial (0.86%), government (0.69%), and research (0.47%).

A large percentage of the species observed on launching and retrieving watercraft were non-invasive, or native. The most common invasive species found on watercraft were Eurasian watermilfoil (*Myriophyllum spicatum*), curly leaf pondweed (*Potamogeton crispus*), and water chestnut (*Trapa natans*). In year one of the program 13,411 individuals were educated about aquatic invasive species spread prevention and clean drain dry practices. A total of 8,475 boat inspections were completed and 346 AIS were intercepted as a result.



# EARLY DETECTION

**Rapidly detect new invaders and control the spread by prioritizing species, pathways, and highly probable areas.**

Early Detection

Early detection with rapid response provides the best opportunity to address invasive species before they cause significant damage to the environment. Early identification with rapid response can lead to cost effective management strategies. In 2019, the Capital Region PRISM and partners recorded detects and non-detects for several species including hemlock woolly adelgid (*Adelges tsugae*), Japanese angelica tree (*Aralia elata*), Japanese stiltgrass (*Microstegium vimineum*), kudzu (*Pueraria montana*), mile-a-minute (*Persicaria perfoliata*), and Siebold’s Viburnum (*Viburnum sieboldii*). Once identified, the timing of treatment response is critical to neutralizing the potential harm of these emerging invasive species to prevent further spread. Species of concern that the PRISM is surveying and/or monitoring are listed in the table below.

The PRISM initiated a new approach towards the management of invasive species when conducting early detection, rapid response, and control strategies. Our team identified Priority Conservation Areas (PCA’s) across the Capital Region for surveys and treatment. PCA’s are parcels of public property that are ecologically significant and have a high threat from invasion. These factors among others were combined together by The New York State Natural Heritage Program to generate a prioritization map with a comprehensive score. Sites that have an ecological significance above 10 in the Capital Region PRISM are considered a priority conservation area. These hot spots are then used to visualize and identify areas to be monitored more frequently based on priority in the region.

PCA’s along with other targeted areas will be scheduled for survey and treatment work. PCA’s have been identified in the eleven counties making up the Capital Region PRISM and will be visited in some cases on a yearly schedule and others in a bi/triennial rotation to maximize early detection potential.

Top Species of Concern	
Japanese Stiltgrass	Chinese Silver Grass
Porcelain Berry	Wintercreeper
Japanese Spirea	Double-file Viburnum
Japanese Angelica Tree	Sticky Sage
Mile-A-Minute	Siebold's Viburnum
Giant Hogweed	Scotch Broom
Shrubby Bushclover	Linden Arrow-wood
Lesser Celandine	Kudzu
Small Carpetgrass	Amur Corktree
Japanese Virgin's Bower	Shrubby Bushclover
Hydrilla	Waterwheel

Highly probable areas are places of high human traffic such as roads, railways, foot trails, and parking lots. These areas are also prioritized for monitoring and management due to the likelihood of exposure to invasive species. In 2019 a total of 31 sites were surveyed in ten of the surrounding counties. In addition, 17 sites were targeted and treated for emerging and high threat species in five of those counties.

County	Surveys
Albany	6
Columbia	2
Fulton	2
Greene	3
Rensselaer	1
Herkimer	2
Saratoga	11
Schenectady	2
Warren	2
Washington	3
<b>Total</b>	<b>34</b>



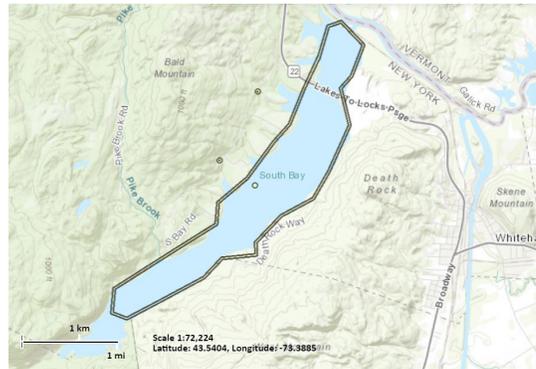
Lauren Mercier checking for new growth on riverside hemlock (note the native azaleas).

### Hemlock Woolly Adelgid

In the spring, the Capital Region PRISM participated in an HWA Lake Survey Program with a volunteer charged by the Cornell Hemlock Initiative in an effort to slow the spread of the Adelgid to the North. Targeted water bodies where known hemlock tree stands exist were surveyed. The Capital Region PRISM focused on areas to the North next to the Adirondack Blue Line. The Adirondack Park Invasive Plant Program focused on areas in the southern reaches of their territory on the blue line in the same timeframe as a partnership. The southeastern stretch of the blue line from Whitehall to Corinth, New York had no detections of HWA. However, the southern area of the blue line around Rockwood Lake State Forest will need a more comprehensive survey in the future.

### HWA Lake Survey areas in the Capital Region PRISM:

- Hudson River corridor from the Sherman Island Boat Launch, Moreau Lake State Park including Lake Bonita (Saratoga County)
- Rush Pond, Gurney Lane Recreation Area, Butler Pond and the Van Duesen Preserve (Warren County)
- South Bay (Washington County)
- Rockwood Lake State Forest Area (Fulton County)



South Bay Washington County HWA Lake Survey.

### **Kudzu**

In September of 2019 kudzu, or Japanese arrowroot (*Pueraria montana var. lobate*), was reported at Dutchman’s Landing on the Hudson town of Catskill; Green County. Kudzu is new to the Capital Region PRISM and demonstrates the range expansion of invasive species with climate change. This kudzu location will be targeted for rapid response in 2020.



Kudzu. (Photo credit: iMapInvasives, Jessica Kathe, OPRHP.)

### **Mile-a-Minute**

A second reported case of mile-a-minute (*Persicaria perfoliata*) was reported late in September by iMapInvasives observer Emily Debolt at Grafton Lakes State Park. The invasive vine was found in a landscaped planting near the newly constructed welcome center. Capital Region PRISM will be participating in a monitoring response with the Grafton Lakes State Park staff.



Mile-a-Minute. (Photo credit: iMapInvasives, Emily Debolt, OPRHP.)

## RAPID RESPONSE, CONTROL, AND MANAGEMENT

***Control invasive species by using best management practices, through eradication, containment, exclusion, and suppression. Management includes post treatment monitoring and restorative efforts.***

### **Rapid Response and Control**

The Capital Region PRISM utilizes and recommends a “Framework for Response” developed by The Nature Conservancy, which is a guide to help natural resource managers prioritize potential projects related to invasive species management. “A framework for response helps to assess the relative threat of the species of management interest, determine the potential risks to conservation, economic, and the social assets if the infestation is left untreated.” <sup>1</sup>(Jordan, Sargis, Schwager, Smith, & Zimmerman, 2011).

The “framework for response” is also used in conjunction with Integrated Pest Management (IPM) when making management decisions. IPM is an adaptive ecosystem-based approach that focuses on multiple control options targeting invasive species to prevent, eradicate, contain, or suppress populations. IPM integrates best management practices across a broad spectrum while using a range of techniques. The framework of response helps to guide management decisions that result in outcomes that are achievable, cost effective, and measurable (Jordan et.al.2011). Integrated Pest Management strategies are the tools to deliver that framework of response.

The first step in determining if a control project should proceed is determining if the invasive plant is or has the potential to cause significant ecological impact or harm to human health, the economy, or other values. Early identification of emerging populations is key when limiting the negative impacts of invasive species in most cases. Pre-treatment assessments of infestations are imperative when conducting removal projects. Assessments should take into consideration current costs along with benefits to the future environment as monitored through post treatment applications.



### Japanese Stiltgrass Daniels Road State Forest

The 523-acre Daniels Road State Forest is an ecologically significant forest community. The presence of wetland and mixed hardwood forest are characteristic features of the property. Saratoga Mountain Bike Association (SMBA) maintains an extensive trail system throughout the state forest. The presence of Japanese stiltgrass (*Microstegium vimineum*) (JSG) was found at the monitoring site in 2018 and is in the second year of treatment.

The state forest access road and parking area is infested with Japanese stiltgrass. The current treatment response is to contain and eradicate the plant from the highly probable area. Stiltgrass is found along the roadside edges and decreases in abundance and/or density as you transect away from the road and other related areas. Signs were posted at trail kiosks alerting the public of the presence of the invasive plant. The JSG has not appeared to have entered the forest at this time. Japanese stiltgrass may have been unintentionally introduced in unclean gravel used to improve road access to parking lots and the entrance to the forest. The presence of Japanese stiltgrass at this location is the third known occurrence of the invasive in the Capital Region PRISM where gravel was brought in for access road improvement.



Daniels Road State Forest Parking Area and JSG Control.



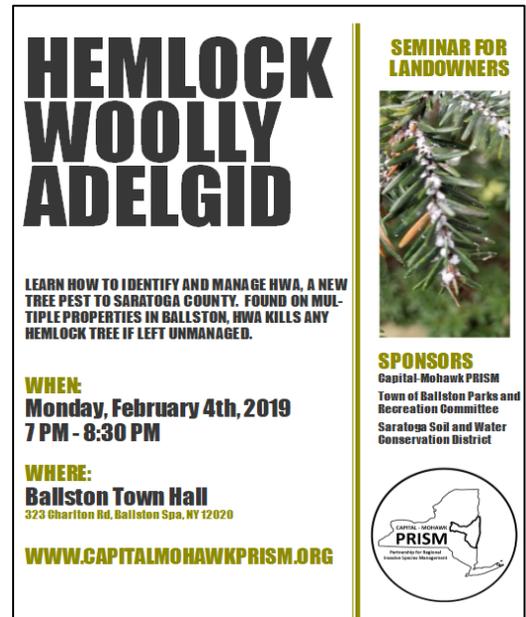
Photo Credit: JSG, Kristopher Williams.

### Mile-A-Minute Five Rivers DEC Environmental Center

Mile-a-minute (*Persicaria perfoliata*) is under treatment and actively being monitored at the Five Rivers DEC Environmental Center. In 2018, a small infestation was reported by one of Anik Gibeau's staff. A rapid response activity occurred in that year. Post monitoring treatment also occurred in 2019. A six person crew resurveyed the Vlomankill trail at the center. The second eradication treatment resulted in a smaller number of plant specimens being pulled in year two. The source of infestation was most likely brought in by contaminated soil or crusher run stone used to make trail and culvert improvements.

### Hemlock Woolly Adelgid Anchor Diamond Point

The Capital Region PRISM partnered with NYS DEC and the Town of Ballston Spa to address a hemlock woolly adelgid (*Adelges tsugae*) infestation at Anchor Diamond Park in Saratoga County. The original detection was observed by Lily-Anne Trainor, one of the Capital Region PRISM interns in June of 2018. Treatment occurred in April of 2019. The PRISM coordinated efforts between the Town of Ballston Spa and the New York State DEC to make the treatment possible. A pesticide treatment of both imidicloprid and dinotefuran was applied by five applicators from the DEC Giant Hogweed Team. The PRISM also coordinated an education and outreach program for the residents of Ballston Spa to bring awareness to the community at large. Jessica Cancelliere from the DEC Forest Health Research lab was a guest speaker.



**HEMLOCK WOOLLY ADELGID**

LEARN HOW TO IDENTIFY AND MANAGE HWA, A NEW TREE PEST TO SARATOGA COUNTY. FOUND ON MULTIPLE PROPERTIES IN BALLSTON. HWA KILLS ANY HEMLOCK TREE IF LEFT UNMANAGED.

**WHEN:**  
Monday, February 4th, 2019  
7 PM - 8:30 PM

**WHERE:**  
Ballston Town Hall  
323 Charlton Rd, Ballston Spa, NY 12020

[WWW.CAPITALMOHAWKPRISM.ORG](http://WWW.CAPITALMOHAWKPRISM.ORG)

**SEMINAR FOR LANDOWNERS**



**SPONSORS**  
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### Water Chestnut Pull on Fish Creek



On June 29<sup>th</sup>, 2019 at 8:00 a.m., over 50 volunteers gathered at the Kayak Shak in Saratoga Springs to pull invasive European water chestnut (*Trapa natans*) from Fish Creek, the outlet of Saratoga Lake. This was part of a multi-year process to reduce the impact of invasive water chestnut on Fish Creek as well as open up the waterway to recreationists. An identification presentation of water chestnut along with best methods for removal occurred before the event took place. Volunteers focused their efforts on new patch locations of water chestnut before moving to a much larger historic patch later in the day. Over 60 cubic feet of water chestnut was removed from Fish Creek.

## Weaver Lake Common Frog-bit

Weaver Lake is a geomorphically shallow lake housing valuable plant and animal habitat located in the Town of Warren in Herkimer County, right next to the border of the Catskill Regional Invasive Species Program. The aquatic floating plant species common frog-bit (*Hydrocharis morsus-ranae*) is an emerging species in Otsego and Fulton County region that was discovered in Weaver Lake in the past few years. Common frog-bit is a tier 2 species with a rare occurrence in the Capital Region PRISM. Three percent of Weaver Lake is covered by the frog-bit. In order to further prevent the spread of the high threat species into other ecologically significant waterbodies, a collaboration of partners will be needed to slow and stop the infestation. Currently, the Capital Region and CRISP PRISM, SUNY Oneonta, and Otsego County Conservation Association have partnered together to continue to survey, assess, and remove common frog-bit in the region.

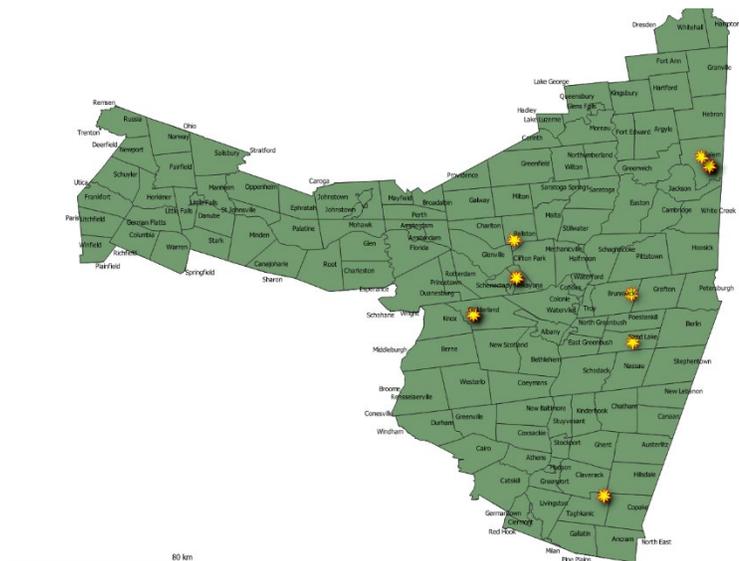


Common Frog-Bit is free floating in waterbodies.

## Giant Hogweed Treatment

Giant Hogweed removal continues today across the region and the populations are manageable. Management has been done in partnership with the Saratoga SWCD and the NYSDEC. Last year 17 locations were mechanically treated and monitored over a five county area.

County	Treatments
Albany	4
Greene	1
Saratoga	8
Schenectady	3
Washington	1
<b>Total</b>	<b>17</b>



## COOPERATION AND COORDINATION

***Share resources, including funding, personnel, equipment, information, and expertise. An essential part to achieving success of prevention of invasive species is to identify partners and stakeholders to improve opportunities for sharing resources.***

### Partners, Coordination, Cooperation

Partners are an integral to the Capital Region PRISM in reaching a common goal to slowing the spread of invasive species. An essential goal of the Capital Region PRISM is to identify and assist stakeholders to improve opportunities for sharing of resources while delivering up to date practices for prevention and management. Collaborating with partners on projects, programs, and events while sharing resources, data, and research will save time and efforts. Continually increasing partner capacity is key to the success of the PRISM.

#### Strategies:

- *Provide opportunities for partners to give updates on resource work at PRISM Partner meetings.*
- *Enable networking through PRISM partner meetings, working groups, list-serve, and other like avenues*
- *Encourage participation of partners in Invasive Species Awareness Week (ISAW)*
- *Promote the Capital Region PRISM throughout the region in order to recruit new partners.*

Our partners are at the forefront of regional invasive species research and development of best management practices. Partners can access and contribute to our collective knowledge on regional invasive species management issues. The Capital Region PRISM welcomes members from academic institutions, government agencies, municipalities, not-for-profit organizations, private preserves and parks, land trusts, conservancies, lake associations, agricultural institutions, local businesses, environmental groups and citizen scientists from the community at large. Partners are dedicated in slowing the spread of invasive species and protecting our environment.

The PRISM holds meetings for partners up to three times a year. Full partner meetings occur in spring and winter with a smaller working group as needed mid-to-late season. The Capital Region PRISM serves on other related invasive species committees within the region to further objectives of partner related organizations. Involvement with these entities and efforts will allow the PRISM to better assist the region by providing important connections and improved communications. In 2019, the PRISM assisted with partners across multiple domains. Please note our partner and committees list in the Appendix G.

In 2019, the Capital Region PRISM, with the guidance and support of the Steering Committee, released contract service dollars to fund invasive species partner projects across the Capital Region based on the PRISM’s 2019 Work Plan. A total of \$53,456.55 was appropriated for Request for Proposals (RFP’s) and Memorandum of Understandings (MOU’s). Funding for such projects originated from the Environmental Protection Fund through the NYSDEC.

The type of work executed by partners included early identification and surveying, control and management projects, restoration, and education efforts. Work was performed in the aquatic and terrestrial realms by municipalities, accredited academic institutions, preserve managers, and citizen scientists across the region. The 2019 calendar year was the second time the PRISM released contract service dollars for funding of partner related work.

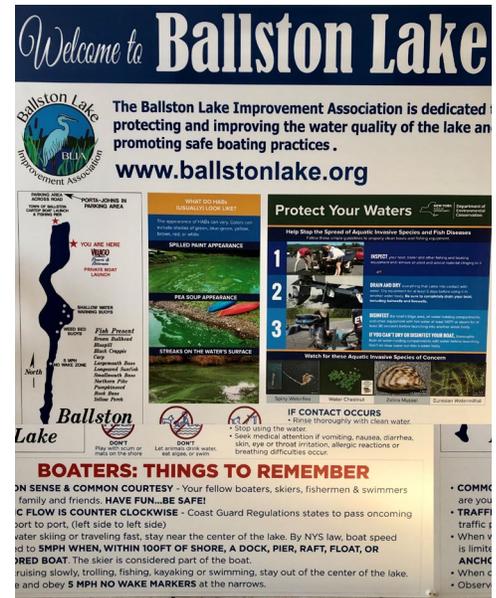
<i>Request for Projects</i>	<i>Award</i>
1. <i>Ballston Lake Improvement Association</i>	<i>\$3,800.00</i>
2. <i>Columbia Land Conservancy, Inc.</i>	<i>\$7,411.00</i>
3. <i>Edmund Niles Huyck Preserve, Inc.</i>	<i>\$9,214</i>
4. <i>Siena College</i>	<i>\$9,320</i>
5. <i>The Friends of the Woodlawn Preserve</i>	<i>\$3,000.00</i>
 <i>Memorandum of Understanding</i>	
6. <i>Friends of Tivoli Lake Preserve and Farm, Inc</i>	<i>\$5,020.00</i>
7. <i>Montgomery County Soil &amp; Water Conservation District</i>	<i>\$9,400.00</i>
8. <i>Siena College</i>	<i>\$12,980.00</i>

**Contracted Projects**

**Ballston Lake Improvement Association (BLIA): AIS Survey and Outreach**

The Ballston Lake Improvement Association (BLIA) utilized an RFP to hire a firm to undertake an aquatic vegetation survey in Ballston Lake during 2019. The frequency and richness of aquatic plant species were evaluated using a point intercept (rake toss) at each grid point intersection. All species located at that point were recorded with water depth. A total of 125 points were surveyed. A total of 44 aquatic plant species were reported for Ballston Lake. This number greatly exceeds the 15 species typically reported for moderately productive lakes in our region.

Eurasian watermilfoil (*Myriophyllum spicatum*), curly-leaf pondweed (*Potamogeton crispus*), and water chestnut (*Trapa natans*) were the only identified invasive species. The result of the study will be used to develop an AIS treatment plan for 2020. The contractor for the project and PRISM provided recommendations on future management and outreach actions for Ballston Lake. BLIA also used the PRISM grant to enhance public awareness regarding invasive species. An AIS awareness sign was constructed that stressed boat cleaning and plant removal. A public workshop was held in May teaching residents on native and invasive AIS identification. Educational pamphlets and a newsletter were also crafted and released to the public. The newsletter included essays on lakeside property maintenance and septic system care for phosphorous reduction.



**Columbia Land Conservancy: Siegel-Kline Kill Restoration Project**

Siegel-Kline Kill Public Conservation Area is located near the center of the town of Ghent. The site encompasses 55 acres and includes 1.5 miles of trails. The property includes a variety of habitat features: more than 1,800 feet of frontage along the Kline Kill as well as forest and meadow habitats.

The work completed at the Siegel-Kline Kill provided the Columbia Land Conservancy (CLC) with an excellent opportunity to build upon recent work to rehabilitate a meadow formerly overrun with invasive species. In 2018, CLC and volunteers removed several tons of invasive plants and hired a contractor to install native plantings.



In 2019, the meadow was further restored to prevent incursions of invasive weeds from returning to the preserve. The CLC used the restoration project to educate volunteers at a workday event and executed a landowner workshop for individuals interested in conducting such work on their own land through CLC’s newly-launched LEARN (Landowner Education and Resources Network) programming.

## The Edmund Niles Huyck Preserve: Rapid Response and Control of Invasive Species in Priority Conservation Areas

A 2018 biological survey of the Huyck Preserve identified and mapped the flora and ecological communities found on the property. In that survey and the time since, 38 terrestrial invasive plants and two aquatic invasive plant have been found at the Huyck Preserve. Using best management practices and methods tested by PRISM partners, work was conducted to eliminate or prevent the spread of small, discrete local populations of Tier 1-4 species especially within high priority ecological areas in 2019. Management focused on manual and mechanical methods of removal at prioritized locations.

Species of Concern Targeted and Treated
<b>Bishop's goutweed</b> ( <i>Aegopodium podagraria</i> )
<b>Yellow archangel</b> ( <i>Lamiaeum galeobdolon</i> )
<b>February daphne</b> ( <i>Daphne mezereum</i> )
<b>False spiraea</b> ( <i>Sorbaria sorbifolia</i> )
<b>Common barberry</b> ( <i>Berberis vulgaris</i> )
<b>Japanese knotweed</b> ( <i>Reynoutria japonica</i> )
<b>Burning bush</b> ( <i>Euonymus alatus</i> )
<b>Pale swallowwort</b> ( <i>Vincetoxicum rossicum</i> )
<b>Eurasian watermilfoil</b> ( <i>Myriophyllum spicatum</i> )
<b>Curly-leaf pondweed</b> ( <i>Potamogeton crispus</i> )



In conjunction with the stewardship efforts, the staff also worked to engage the public by building a volunteer invasive species steward base and by adding invasive species lessons and programs to their education and outreach activities. The Huyck preserve ultimately hosted two stewardship education events as a way of engaging and educating the public. In addition, the Huyck Preserve create an “Aquatic Monitoring Team” of volunteer stewards to monitor Lake Myosotis, Lincoln Pond, and Ten-Mile Creek for water chestnut (*Trapa natans*) and other aquatic plant invaders.

The Huyck Preserve was robust and comprehensive in its efforts to manage the 2055-acre preserve. At the end of the contract year, several more actions were identified by the Executive Director, Dr. Anne Rhoads, including outreach signs that could be placed strategically at terrestrial and aquatic points of human vectors, management of high threat species with updated approaches from recent research, and the development of an invasive species management plan for inclusion in the preserves land management plan.

## Siena College: Invasive Species Survey with Conservation Priority Recommendations

Sienna College worked with the Town of Colonie Conservation Advisory Council, Albany County Office of Natural Resource Conservation, Mohawk Hudson Land Conservancy, and Albany Heritage Site to coordinate invasive species survey efforts at several key natural areas in the Town of Colonie. Fifteen sites were surveyed in 2019 at a local scale effort to identify the distribution and abundance of terrestrial and aquatic invasive plant species. A total of twenty-four invasive plant species were observed across the fifteen sites.

The majority of the invasive plant species documented are ranked as tier 4, local control species. Localized management over time of these species may be desired to contain, exclude, or suppress individual populations to meet local management goals. Those should be considered on a case-by-case basis. Siena documented one tier 2 species: Amur honeysuckle (*Lonicera maackii*). The tier 2 Amur honeysuckle warrants the highest level of response effort, as well as delineation surveys to determine the full extent of the invasion.

Two of the sites Siena surveyed warrant special consideration as having high conservation value in the town. Both sites have unusually low numbers of invasive species on the property (Ashford Glen Preserve) or have invasive species concentrated at a small portion of the property, with much of the property free from invasive species (Ann Lee Pond).

Educating and engaging local public officials and citizens are important mechanisms to create a larger force to combat invasive species on all scales. Two sites owned by the Town of Colonie have been identified for such activities. The Crossings and the Mohawk Hudson Bike Trail are sites that have an abundance of invasive species and have heavy use by the public. These sites are excellent opportunities for public engagement.

### Multiflora Rose *Rosa multiflora*



Mary Beth Kolozsvary

- Introduced in 1866 from Japan as an ornamental plant
- Identify by long, arching canes that have thorns on them. In the spring there are white to pink flowers on the end of the twig in clusters. The petiole is fringed.
- Form thickets that can't be easily penetrated.

## The Friends of the Woodlawn Preserve: Schenectady Pine Barrens Preserve Tier 2 Invasive Control

The Friends of the Woodlawn Preserve operates as a non-profit organization dedicated to the re-establishment, protection and preservation of a forever wild pine barren environment within the tract of land known as the Woodlawn Preserve in Schenectady County. The property is near the Albany Pine Bush.



The Friends applied for an RFP to remove a few high threat species from the preserve that were in low abundance: multiflora rose (*Rosa multiflora*), Japanese knotweed (*Reynoutria japonica*), Siberian elm (*Ulmus pumila*), yellow iris (*Iris pseudacorus*) and cypress spurge (*Euphorbia cyparissias*). In addition to the removal of species, a preserve walk was held showcasing the completed work while educating participants.

## Memorandum of Understanding (MOU's)

### Friends of Tivoli Lake Preserve and Farm, Inc.: Invasive Species Awareness and Manual Eradication

The outreach project provided an introduction to invasive species within the Tivoli Lake Preserve through educational workshops including a plant walk and a manual eradication work day. The manual eradication targeted oriental bittersweet (*Celastrus orbiculatus*), autumn olive (*Elaeagnus umbellata*), and multiflora rose (*Rosa multiflora*) along the lake access path within the Tivoli Lake Preserve. The project was also implemented to increase public safety and accessibility to Tivoli Lake trail system. Tivoli Lake Preserve and Farm is situated in the second largest urban preserve in New York State and serves an environmental justice community. The Friends of Tivoli are invested in the cultivation of communal stewardship. The programming of workdays and educational opportunities within the local community help to reach this achievement. Sheep are also used as a management control to remove common reed (*Phragmites australis*) in the preserve. The flock provides an interesting opportunity for education and community engagement.





## INFORMATION MANAGEMENT

*Collect, utilize, and share information regarding surveys, infestations, control methods, monitoring, and research.*

As new threats emerge and strategies are developed to combat issues, the Capital Region PRISM is capable of delivering up to date expertise while providing collaborative support throughout the partner network and to the general public. Information regarding known problematic species and their management is constantly renewed and then shared back into the public at large, with partners, state agencies, and academic institutions. Feedback from stakeholders is received by the Capital Region PRISM and is then integrated back into the annual work plan or quarterly work objectives. Depending on the nature of emerging concerns, these threats can change the focus of the PRISM in prioritizing management objectives and more often results in changes to outreach efforts.

Information sharing, including emerging species notifications, best management practices, research, survey reports, and outreach updates, are a critical component of collaboration to help slow or stop the spread of invasive species and protect the environment. In 2019, the Capital Region PRISM provided and delivered information through various platforms (listed below) to reach partners in the Capital Region.

- Capital Region PRISM Website, Social Media Accounts, Listserv
- Posting of PRISM and partner field reports for historical reference and public knowledge
- Partner meetings with round table reports, updates, requests, and presentations
- Participation and collaboration on PRISM Sub-Committees and Partner Steering Committees
- Events planned in collaboration with the NYS Education and Outreach Committee for ISAW
- NYS DEC Clearinghouse for invasive species information
- Participation with statewide PRISM monthly webcasts

The Capital Region PRISM website provides a resource in which invasive species and related content can be shared to a wider audience. Information shared on the website includes PRISM and partner events, methods to report invasive species and related concerns, survey and management reports, partner project reports, tier lists, early detection priorities, and watch list with descriptions. Additional resources like best management practices, a framework of response for prioritization, and land or lake management plan outlines are also shared. Funding opportunities are also posted on the homepage for the PRISM. The Capital Region PRISM website had 8,126 page views in 2019, which is a 20% increase from 2018.

The PRISM uses a variety of platforms to share information with the public. Social media outlets, including Facebook and Instagram, are effective methods for disseminating information. The PRISM's social media pages allow the public to access up to date information on events and information regarding invasive species in the Capital Region. On average, the PRISM's Facebook content reached 76 people's screens per day and the PRISM Instagram page gained over 200 followers in the past year. In addition, content related to the PRISM website is shared through our host network webpage through Cornell Cooperative Extension of Saratoga County, [ccesaratoga.org](http://ccesaratoga.org). The different modalities in platforms helps the PRISM to share information to a wider audience.

The Capital Region PRISM listserv is increasing in numbers and is an effective means of communication between partners and like entities for information sharing. Common topics sent through the listserv include press releases, job opportunities, grant programs, educational events, volunteer opportunities, invasive species information, and meeting announcements. Funding opportunities and events occurring in the region are also sent through the listserv. The current listserv has 223 members with 43 new additions in 2019. Members of the listserv are invited to share content and disseminate information in their network circles.

iMapInvasives is an online mapping tool utilized by PRISM staff, partners, and the general public to collect data regarding the distribution of invasive species in the Capital Region. The New York iMapInvasives database has been a longstanding partner of the Capital Region PRISM. In 2019, the Natural Heritage Program of New York released iMapInvasives 3.0, with increased functionality such as survey, treatment, and pesticide reporting. The inclusion of a polygon tool has also been critical in delineating survey and management work efforts in the PRISM and with partners.

#### **iMapInvasives Capital-Mohawk PRISM In House Metrics 2019**

<b>Records by Species Type*</b>	<b>2019*</b>	<b>Total* 2010-Present</b>
<b>Terrestrial Animal</b>	<b>55</b>	<b>354</b>
<b>Aquatic Animal</b>	<b>15</b>	<b>2,324</b>
<b>Terrestrial Plant</b>	<b>3,875</b>	<b>17,891</b>
<b>Aquatic Plant</b>	<b>122</b>	<b>902</b>
<b>Not Detected</b>	<b>123</b>	<b>625</b>
<b>TOTAL</b>	<b>4,190</b>	<b>22,096</b>

The PRISM and partners executed a number of iMapInvasives training events throughout the Capital Region. These trainings encourage preserve managers and citizen scientists to report and help alert natural resource managers of infestations. The new functionality of iMapInvasives 3.0 has an advanced capability which has resulted in resource managers utilizing the tool to guide their management practices.

### 2019 Training Classes

Date	Trainer	Training Class Name	Location
2/13/2019	Jennifer Dean	2019 - Siena Conservation Biology Class	Albany
5/6/2019	Spencer Barrett	2019 Saratoga Master Gardener's iMap 3 Training	Ballston Spa
5/15/2019	Kristopher Williams	Aquatic Invasive Species Vessel Inspection Stewards	Staatsburgh
5/23/2019	Bob Stromberg, Emma Antolos, Meg Wilkinson	Help Detect Invasive HWA on Hemlocks & Spotted Lanternfly w/Smartphone App	Saratoga Springs
7/8/2019	Kristopher Williams	2019 - Wilton Wildlife Preserve iMap Training	Wilton
7/9/2019	Kristopher Williams	2019 - Moreau State Park iMapInvasives Training	Moreau
7/12/2019	Kristopher Williams	Switzkill Farm Lodge iMap Mobile App and Desktop	Albany
8/2/2019	Gwen Temple , Lauren Mercier	DEC Five Rivers Education Center Staff Training	Albany
8/2/2019	Gabriela Wemple and Meg Wilkinson	2019 - Schenectady County Invasive Species Council – Training	Schenectady
8/14/2019	Kristopher Williams	Huyck Preserve Staff iMapInvasives Training	Albany
9/5/2019	Kristopher Williams	Friends of Tivoli Lake Preserve and Farm Training	Albany
9/17/2019	Jennifer Dean, Sundas Rehman	2019 - Friends of Woodlawn Preserve - Mobile App Training	Schenectady
10/15/2019	Bob Stromberg, Kristopher Williams	iMap Mobile App Training	Saratoga Springs

### iMapInvasives Bulk Uploads and Partners

Records by Data Entry Method* (Presence Only)	2019*	Total* 2010-Present
Bulk Upload	2	9,042
Mobile App	3,811	7,754
On-line	256	4,680
<b>TOTAL</b>	<b>4,069</b>	<b>21,476</b>

The PRISM would like to especially thank the New York Natural Heritage Program and iMapInvasives team for their collaboration in helping the PRISM and partners in reporting invasive species infestations, including bulk uploads and alerts to new species in the region.

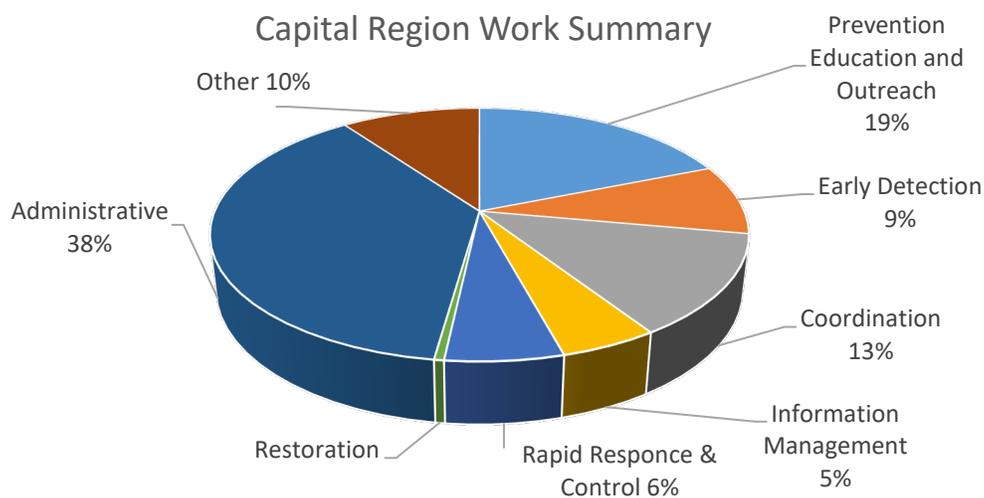
Top 10 Organizations Submitting Bulk Uploads	Observations 2010-Present*
Albany Pine Bush Preserve Commission	2,267
United States Geological Survey (USGS) - Nonindigenous Aquatic Species (NAS)	1,570
New York Natural Heritage Program (NYNHP)	1,299
Huyck Preserve and Biological Research Station	985
NYS Department of Environmental Conservation (Hudson River Estuary Program)	849
United States Fish and Wildlife Service (USFWS)	101
New York State Department of Environmental Conservation (Lands and Forests)	96
State University of New York at Oneonta	90
New York State Museum	70
Lower Hudson (LH) PRISM	64

Species Name	Date Entered
<i>Persicaria extremiorientalis</i> , Far-eastern smartweed	11/15/2019
<i>Pueraria montana var. lobata</i> , Kudzu	9/1/2019
<i>Sedum acre</i> , Gold-moss	9/14/2019
<i>Sedum sarmentosum</i> , Stringy Stonecrop	8/8/2019
<i>Viburnum plicatum</i> , Japanese Snowball	6/21/2019
<i>Viburnum sieboldii</i> , Siebold's Viburnum	5/21/2019



## ANNUAL WORK PLAN SUMMARY

The Capital Region PRISM was ambitious in executing its 2019 Work Plan while delivering on the PRISM's 5 year strategic plan. In 2019, the PRISM was staffed with a full time Lead, Terrestrial, and Aquatics Coordinator. In addition, the staff included two part time educators and two seasonal interns. The Hudson and Mohawk River Valleys Aquatic Invasive Species (AIS) Spread Prevention Program staffed 18 boat stewards. All together, the PRISM staffed 25 employees throughout the 2019 calendar year across a large part of Eastern New York State leading to the delivery of a successful program.



The percentage of work executed and delivered in the PRISM was diverse and dependent on the time of year, needs of the community, and calls for action alongside the 2019 Work Plan. Eight major categories of work are deployed to meet the goals, objectives, strategies and anticipated outcomes of the PRISM's Strategic Plan. The work performed by the core staff of employees, not including the boat stewards, are summarized in the graph above and outlined below.

### **1. Prevention, Education, and Outreach: 19%**

Prevention by awareness is the first line of defense in invasive species management. The most effective strategy against high threat species is to prevent them from ever being introduced and established. Preventive measures typically offer the most cost-effective means to minimize or eliminate environmental and economic impacts. Prevention relies on a diverse set of tools and methods, especially public education, to raise awareness of invasive species issues and reduce the chance of

unintentional and intentional introductions. Increased awareness will, over time, lead to better environmental decisions and inspire actions to help stop the introduction and spread of invasive species. Target groups for prevention and education measures include academia, conservation practitioners, community and volunteer groups, non-profit agencies, government agencies, municipalities, industry leaders and associations, educators, and citizen scientists from all age groups.

#### Delivery Examples:

- *Invasive species prevention awareness campaigns (such as ISAW)*
- *Comprehensive workshops*
- *Presenting at lecture series, tabling at public events, and conducting woods walks*
- *Stewardship training days with targeted audiences such as park and/or preserve staff*
- *Outreach and delivery of awareness by AIS Boat Stewards*
- *Development and construction of outreach materials for distribution including: traveling displays, exhibits, pamphlets, identification cards, factsheets, resource guides, and presentations as a panelist*

### **2. Early Detection: 9%**

The Capital Region PRISM has identified and established Priority Conservation Areas (PCA's) in conjunction with the Conservation Committee. PCA's are designated areas that have a high comprehensive score, are ecologically significant, and have a high risk for invasion. Early detection of emerging species with subsequent rapid response is key in controlling infestations. Early detection and rapid response is the next highest priority after prevention as it represents the point on the invasion curve where treatment is most effective.

#### Delivery Examples:

- *Identification and surveys of Priority Conservation Areas and Highly Probable Areas*
- *Executing increased surveys and removals in ISPZ Moreau Lake State Park (ISPZ)*
- *Deployment of RFP funds for early detection and rapid response proposals*
- *Assisted data collection and reporting from field work executed by PRISM Coordinators, Interns, and Educators with partners at requested locations across the region*

### **3. Coordination: 13%**

Coordination and collaboration occurred across jurisdictions, municipalities, agencies, and partners. The PRISM acted as an information hub and an organizing force in the region to connect like-minded people to achieve common goals regarding invasive species related activities. Coordination facilitates opportunities for sharing resources, including funding, personnel, equipment, technical information, solutions to complex problems, and expertise. Collaboration can occur on-site, through in-person

meetings, conference calls, workshops, board meetings, and can sometimes involve multiple agencies coming together and sharing resources for a common goal.

Delivery Examples:

- *Drafting of a new partners initiative and agreement*
- *Inclusion with multiple regional Steering Committees*
  - Hudson River Estuary Program/Cornell University
  - New York State DEC Releaf
  - Environmental Monitoring and Management Alliance (EMMA)
  - Rensselaer Water Quality Coordinating Committee

#### **4. Information and Management: 5%**

Involves the collection, utilization, and sharing of data.

Delivery Examples:

- *Identification and sharing of alternative non-pesticide treatment options for partner groups*
- *Sharing of resources and knowledge with other government agencies like the NYS Department of Agriculture and Office of Parks, Recreation, and Historic Preservation*
- *Development, collaboration, and sharing of best management practices and management plans with partners and associates. Providing a recommended framework of response.*
- *New York State Invasive Species Research Institute (NYSISRI)*
- *Participation in the NYSDEC Regional Clearinghouse*
- *Geographic Information Systems data sharing, iMapInvasives, WISPA, OAT, and SAS data programs.*

#### **5. Rapid Response and Control: 6%**

Rapid response to new threats is imperative to protect our natural ecosystems in a cost-effective way.

Rapid response is a follow-up to early detection and is paramount in stopping the spread of new invasive biologic threats to our region before they have a chance to proliferate.

Delivery Examples:

- *Mile-a-Minute and Japanese Stiltgrass outbreaks*
- *Perform removal and eradication activities in a timely manner using the most feasible solution*
- *Undertake containment projects to prevent established tier 2 and 3 infestations from further spread, often done at the edge of the geographic range.*
- *Perform suppression projects to reduce the density and scale of the species.*

#### **6. Restoration: 1%**

Restoration should consider best management practices for the given climate zone. Restoration requires the development and implementation of effective methods for areas that were degraded by invasive species where suppression or control has taken place, often involving the replanting of areas with

appropriate native species. Rapid response removals should always consider restoration practices with post treatment monitoring.

Delivery Examples:

- *Providing native and resilient plant resources and recommendations for partners*
- *Funding partner restoration project at the Siegel Kline Kill Preserve*

### **7. Administrative: 38%**

Administrative duties are core functions to keep the day-to-day operations flowing and short and long term projects moving forward. Administrative work includes the following duties:

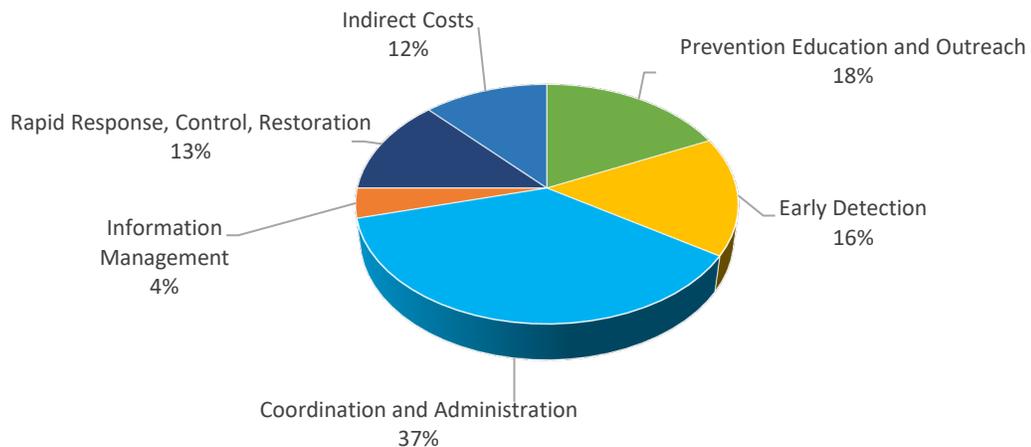
- *Programming Development: Planning of education and outreach events including the development of technical presentations, resource guides, factsheets, etc.*
- *Collaborative planning and efforts with partners*
- *Manage and oversee the contractual work provided by PRISM contract holders.*
- *Internal staff and team meetings.*
- *Manage web page and social media accounts and create and distribute press releases.*
- *Confirmation of iMapInvasives points.*
- *Develop site specific management plans for removals and surveying.*
- *Report work executed through annual, quarterly, and scouting reports.*

### **8. Other: 10%**

Other work includes professional development for staff; host-specific training; human resource meetings; interviewing of employees and interns; employee and intern on-boarding and training; time sheet management; community service; and mentoring.

The annual budget summary of program expenses is intended to provide a general overview of how the Capital Region PRISM allocated time and resources in 2019. Program expenses were grouped together by the PRISM's core functions: prevention, education and outreach, early detection, coordination, information management, rapid response, control and restoration. The budget also accounts for supplies, equipment, travel, contract service dollars, and general support. The summary includes indirect costs as determined by Cornell Cooperative Extension of Saratoga County, the host of the PRISM. The activities of the PRISM fall within multiple categories and a general effort was taken to place expenses in the most appropriate category. The summary described here is not a financial report.

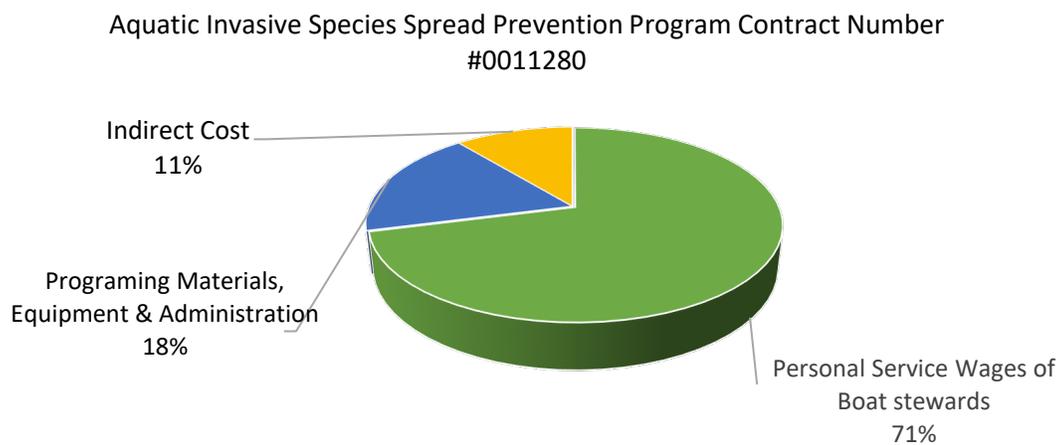
### Approximate Expenses Grouped by Core Function



- Prevention (18%) - Activities and expenses related to prevention, education and outreach included related personnel costs, boat stewardship program management, travel, supplies, website and online resources management, materials development, and other special projects.
- Early Detection ( 16%) - Activities and expenses related to Early Detection including related personnel costs, site assessments, monitoring, outreach, travel, and supplies.
- Coordination ( 37%) - Activities and expenses related to partner and network coordination including the cost of administering the program with full time staff.
- Information Management (4 %) - Activities and expenses related to information management including related personnel costs, survey, monitoring, prioritization, research, outreach, and supplies.
- Rapid Response, Control and Restoration (13 %) - Activities and expenses related to habitat management, including related personnel costs, internships, planning, travel, and equipment..
- Indirect Costs ( 12%) - Indirect Costs as determined by the Cornell Cooperative Extension

The Hudson Mohawk River Valleys Aquatic Invasive Species Spread Prevention Program contract number #011280 administered by the Capital Region PRISM through Cornell Cooperative Extension of Saratoga County on the behalf of the New York State Department of Conservation kept a separate budget for the 2019 programming year. Funding for the program was derived through the Environmental Protection Fund and was administered to hire 18 seasonal watercraft inspection stewards to slow the spread of aquatic invasive species.

The front loaded contract in year one is summarized in the graph below. A total of \$157,144.78 was spent in 2019 to administer the program. Personal services most with boat steward wages and fringe benefits accounted for 71% (\$111,715.13) of the dollars spent. The front loaded contract in year one used 18% (\$28,592.71) of the funds to purchase training materials, education and outreach supplies, tablets, and uniforms. The Cornell Cooperative Extension of Saratoga County, PRISM’s host organization, claimed 11% (16,836.94) in indirect costs. The program effectively delivered prevention strategies to the public while protecting the environment of New York State. The program finished the year with a balance of .02% (\$3,164.00) as a credit to be applied to year two replacement cost for equipment.



## APPENDIX A: ABOUT THE PRISM

### PRISM STRUCTURE

The Capital Region PRISM is hosted by the Cornell Cooperative Extension of Saratoga County (located in Ballston Spa, New York) and is staffed by one PRISM Coordinator, one Terrestrial Coordinator, and one Aquatics Coordinator. There is additional funding for an Education and Outreach Coordinator, who may be hired in the coming year. Various organizations, including land trusts, conservation groups, and municipal entities, oversee and manage natural areas that are invaded or have the potential of being compromised with invasive species. These organizations have historically been invited to become partners of the PRISM and to take part in a PRISM committee. A full list of PRISM partners is available in Appendix 1. The PRISM has a Steering Committee and four subcommittees (Agriculture, Aquatics, Conservation, and Education/Outreach) that meet two to four times a year to advise PRISM staff.

#### Steering Committee:

Key partners from the NYSDEC, Department of Agriculture and Markets, Office of Parks, Recreation and Historic Preservation, Department of Transportation, Saratoga Soil and Water Conservation District (SWCD), Albany Pine Bush Commission, National Park Service, and Natural Heritage Program make up this committee. The Steering Committee works with PRISM coordinators to follow the five-year strategic plan process, develop and guide the annual work plan, and connect with each of the subcommittees. Each member of the PRISM Steering Committee is also a representative to one or more of the PRISM subcommittees. The Steering Committee is also responsible for reviewing PRISM contracts, the Request for Proposal (RFP) process, and major changes in PRISM structure. The PRISM steering committee generally meets about four to five times a year to review progress of the annual work plan and to assist in the development of the annual work plan.

#### 2019 Steering Committee Members

<i>Dustin Lewis</i>	<i>Saratoga County Soil and Water Conservation District</i>
<i>Robert Cole</i>	<i>NYS Department of Environmental Conservation</i>
<i>Linda White</i>	<i>National Park Service</i>
<i>Neil Gifford</i>	<i>Albany Pine Bush Preserve</i>
<i>Thomas Allgaier</i>	<i>NYS Department of Agriculture and Markets</i>
<i>Margaret Kelly</i>	<i>NYS Department of Agriculture and Markets</i>
<i>Loretta McNamee</i>	<i>NYS Department of Transportation</i>
<i>Matthew Brincka</i>	<i>NYS Office of Parks, Recreation, and Historic Preservation</i>

## PRISM Subcommittees:

**Agriculture Committee:** *This committee focuses on best management practices and recommendations that will be most effective for the agricultural community. Participants from the SWCDs, Department of Agriculture and Markets, and the Cornell Cooperative Extension identify high priority agricultural pests and work to communicate their importance to the farming public.*

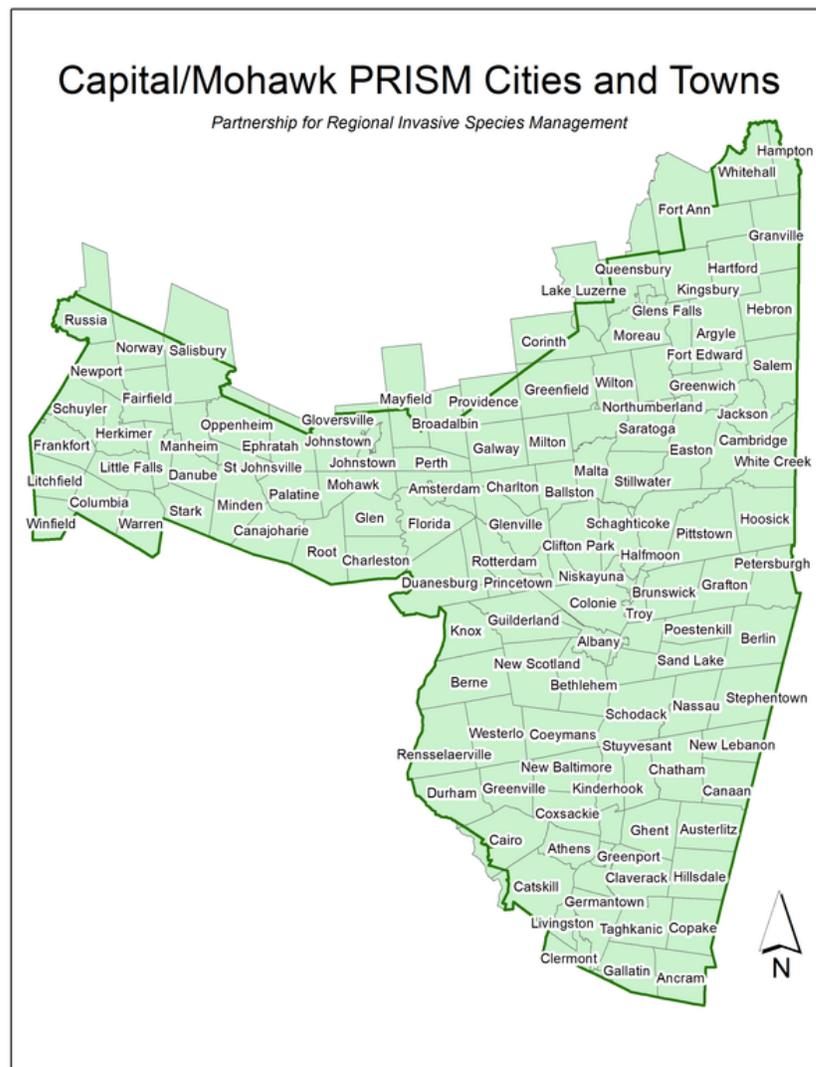
**Aquatics Committee:** *Aquatic professionals focus on priority invasive species identified in aquatic ecosystems within the PRISM and to develop an early detection list and protocol for early detection/rapid response species within the PRISM. Additionally, this committee has assisted in prioritizing areas to provide watercraft launch steward coverage.*

**Conservation Committee:** *Partners on this committee work to identify priority species to focus on within the PRISM area that may put conservation areas at a higher risk. Key efforts of this committee include developing a tier system priority list and reviewing the annual Terrestrial work plan. This year, the committee has taken on a new task of identifying a site for an Invasive Species Prevention Zone in the Capital region.*

**Education/Outreach Committee:** *This committee develops, prioritizes, and compiles existing educational/curriculum materials for use within the PRISM region. The committee has an additional focus on event planning for the annual New York State Invasive Species Awareness Week.*

## APPENDIX B: GEOGRAPHY

The Capital/Mohawk PRISM encompasses the following geographic area: Herkimer, Fulton, Saratoga, Warren, and Washington Counties south of the Adirondack Park forest preserve boundary, portions of Greene County that are outside of the Catskill Park forest preserve boundary, and all of Albany, Schenectady, Montgomery, Rensselaer, and Columbia Counties. The region covers approximately 3,148,326 acres or 4,919 square miles. “Cropland, forestland, pastureland, comprise the major land uses in New York including the Capital Region. These land uses receiving the majority of the conservation treatment that address our soil, water, air, plant, and animal resources.”<sup>2</sup>



The Capital Region PRISM geography is composed of several different landscape regions. The Hudson Mohawk Lowlands and Taconic Mountains are the two main regions. To a lesser degree the PRISM also rests within portions of the Champlain Lowlands and Allegheny Plateau. Each landscape has different bedrock, elevation, and drainage basin characteristics. All the major landscapes in New York have been influenced by prior glacial periods over large time scales. The differences in bedrock, soil compositions, elevation and latitude all play a role in the biota found within each landscape.

The Nature Conservancy similarly has created ecoregions for New York State. “The distribution of plant and animal species in New York closely corresponds with eco-regional boundaries. These areas of ecological homogeneity are defined by similarities in soil, physiography, climate, hydrology, geology and vegetation.”<sup>3</sup> The PRISM contains portions of four ecoregions, described below.

**Great Lakes Ecoregion:** Formed during the last glacial advance 14,000 years ago, this region is characterized by gently rolling, low level landscapes and flat lake plains. The region’s climate is influenced by the Great Lakes and has an astonishingly high level of biodiversity and unique habitats.

**High Allegheny Plateau Ecoregion:** Defined by a broad series of high elevation hills that form a plateau rising to 1,700-2,100 feet. It extends in the north from the Great Lakes Plains of Lake Ontario to the ridge and valley region of the Central Appalachians to the south, and from the Lake Erie Plain in the west to the Hudson River Valley.

**Lower New England-Northern Piedmont Ecoregion:** Lies along the mid- to southeastern portion of New York. The limestone valley is defined by low mountains and lakes throughout.

**St. Lawrence-Champlain Valley Ecoregion:** Characterized by mountain streams, deltas and marshes that line the shores of the St. Lawrence River and Lake Champlain.

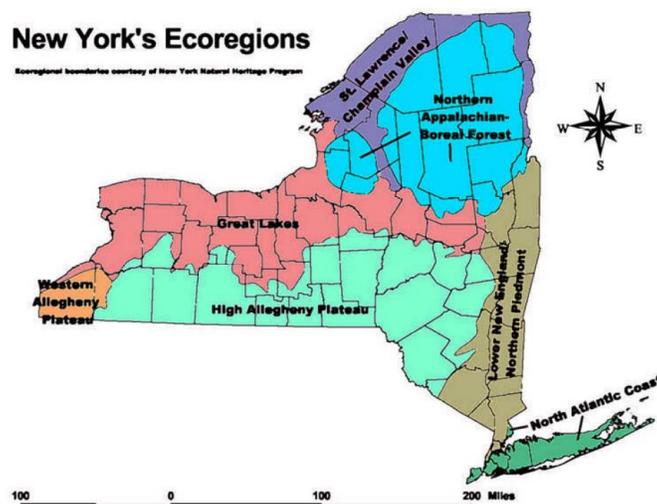


Image provided by NYSDEC

The Capital Region PRISM Boundary drains water from four watershed regions. The Upper Hudson and Mohawk drainage basins fill the greatest percentage of the PRISM. A small portion of the Champlain and Lower Hudson watershed are tied to the PRISM. The interconnectivity, fluid dynamics, and incursion of transportation on these water bodies creates a unique risk for spread for invasive species.

“The Upper Hudson River Watershed originates in the Adirondack Mountains and flows south to the Hudson River confluence with the Mohawk River at the Troy Dam. The watershed lies primarily in New York State River but also drains a portion of southwestern Vermont and a small part of Massachusetts. The Upper Hudson Watershed makes up about one-third of the larger Hudson River Basin, which also includes the Mohawk River Watershed.”<sup>4</sup>

**Location:**

- Most of Saratoga, Washington and Warren Counties,
- Much of Essex\* and Hamilton Counties\*, and
- Portions of northern Rensselaer and northeastern Fulton Counties.

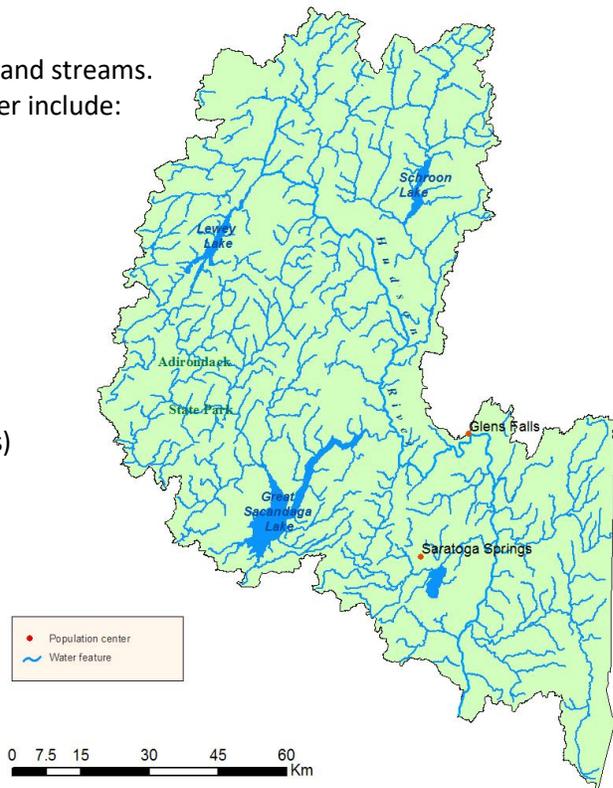
**Size:** 4,620 square miles of land area within New York State

**Rivers and Streams:** 7,140 miles of freshwater rivers and streams. Major tributary watersheds to the Upper Hudson River include:

- Sacandaga River\* (1,740 river/stream miles)
- Schroon River\* (822 miles)
- Fish Creek (551 miles)
- Hoosic River (533 miles)
- Batten Kill (334 miles)

**Lakes, Ponds and Reservoirs:** 229 significant freshwater lakes, ponds, and reservoirs (76,940 acres) including:

- Great Sacandaga Lake Reservoir (26,800 acres)
- Indian Lake\* (4,465 acres)
- Saratoga Lake (4,030 acres)



\*Not in the PRISM

Image provided by NYSDEC: <http://www.dec.ny.gov/lands/53678.html>

“The Lower Hudson Watershed makes up about 40% of the larger Hudson/Mohawk River Basin which is one of the largest drainage areas on the eastern seaboard of the United States. Most of this 12,800 square mile basin lies in New York State. The Lower Hudson Watershed extends from the Battery at the southern end of Manhattan to the Troy Dam at the confluence of the Mohawk River. Along this entire 153 mile reach the Hudson is actually a tidal estuary, rather than a river.”<sup>5</sup>

**Location:**

- Most of Westchester\*, Putnam, Orange\*, Ulster\*, Columbia and Albany Counties;
- Much of western and central Dutchess\*, eastern Greene, and southern Rensselaer Counties; and parts of Manhattan\*, Bronx\*, Rockland\*, Sullivan\*, Schoharie and Schenectady Counties.

**Size:** 4,982 square miles of land area within New York State (excluding the Upper Hudson and Mohawk River Watersheds, which are addressed separately).

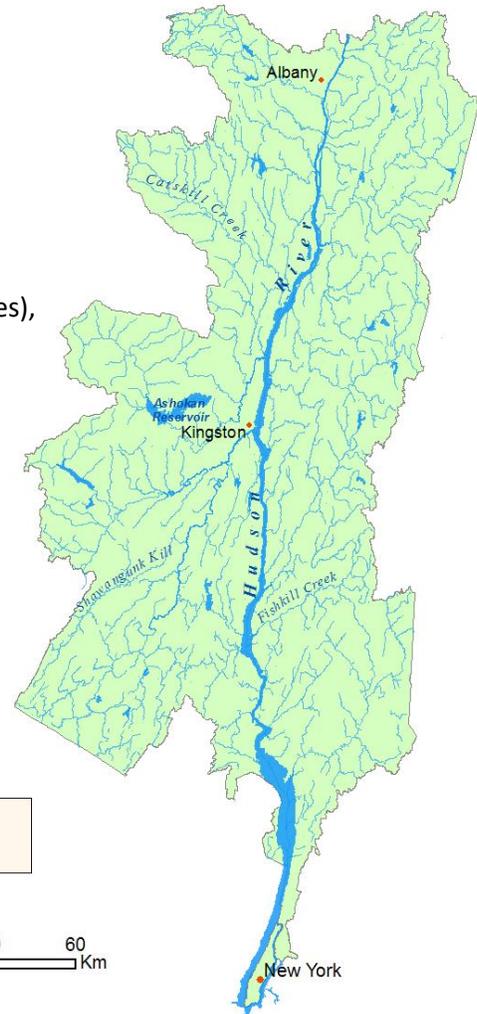
**Rivers and Streams:** 8,861 miles of freshwater rivers and streams. Major tributary watersheds to the Hudson River Estuary (excluding the Upper Hudson and Mohawk Watersheds) include:

- Rondout/Wallkill Rivers\* (1,584 river/stream miles)
- Stockport/Kinderhook Creeks (1,077 miles)
- Catskill Creek (927 miles)
- Esopus Creek (631 miles)
- Croton River\* (607 miles)

**Lakes, Ponds and Reservoirs:**

324 significant freshwater lakes, ponds, and reservoirs (37,676 acres),

- Ashokan Reservoir\* (8,060 lake/reservoir acres)
- Rondout Reservoir (2,024 acres)
- New Croton Reservoir \*(1,949 acres)
- Alcove Reservoir\* (1,363 acres)
- Cross River Reservoir\* (899 acres)
- Muscoot/Upper New Croton Reservoir\* (770 acres)



\*Not in the PRISM

Image provided by NYSDEC: <http://www.dec.ny.gov/lands/53749.html>

“The Mohawk River Watershed lies entirely within the borders of New York State. The Mohawk River originates in the valley between the western Adirondacks and the Tug Hill Plateau and flows 140 miles to the east where it joins the Hudson River. The Mohawk Watershed comprises about one-quarter of the larger Hudson River Basin. Sections of the Mohawk River also serve as the New York State Barge (Erie) Canal.”<sup>6</sup>

**Location:**

- All of Montgomery County;
- Most of Schoharie County\*;
- Much of Schenectady, Greene, Fulton, Herkimer and Oneida\* Counties; and
- Parts of Albany, Saratoga, Delaware\*, Otsego\*, Hamilton\*, Madison\* Lewis Counties\*.

**Size:** 3,460 square miles of land area, all within New York State.

**Rivers and Streams:** 4,086 miles of freshwater rivers and streams.

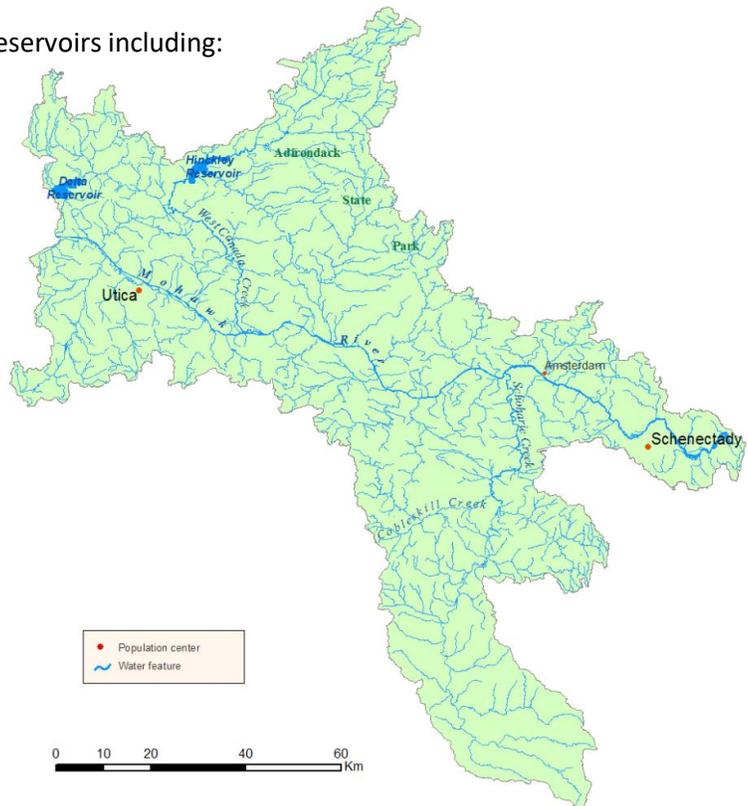
Major tributary watersheds to the 140 miles of the Mohawk River include:

- Schoharie Creek (1,650 river miles)
- West Canada Creek (1,165 miles)
- East Canada Creek (515 miles)

**Lakes, Ponds and Reservoirs:**

135 significant freshwater lakes, ponds, and reservoirs including:

- Hinkley Reservoir (2,684 acres)
- Delta Reservoir\* (2,376 acres)
- Peck Lake\* (1,426 acres)
- Schoharie Reservoir\* (1,132 acres)



\*Not in the PRISM

Image provided by NYSDEC:

<http://www.dec.ny.gov/lands/53752.html>

“The Lake Champlain Watershed (8,234 square miles) drains the area between the Adirondack Mountains in northeastern New York State and the Green Mountains in northwestern Vermont. The long, narrow and deep lake has its outlet at its northern end where it flows through the Richelieu River into Quebec and empties into the Saint Lawrence River.”<sup>7</sup>

**Location:**

- Most of Clinton\* County,
- Much of Essex\* County,
- Southwest portion of Franklin\* County,
- Eastern portion of Warren County, and
- Northern portion of Washington County.

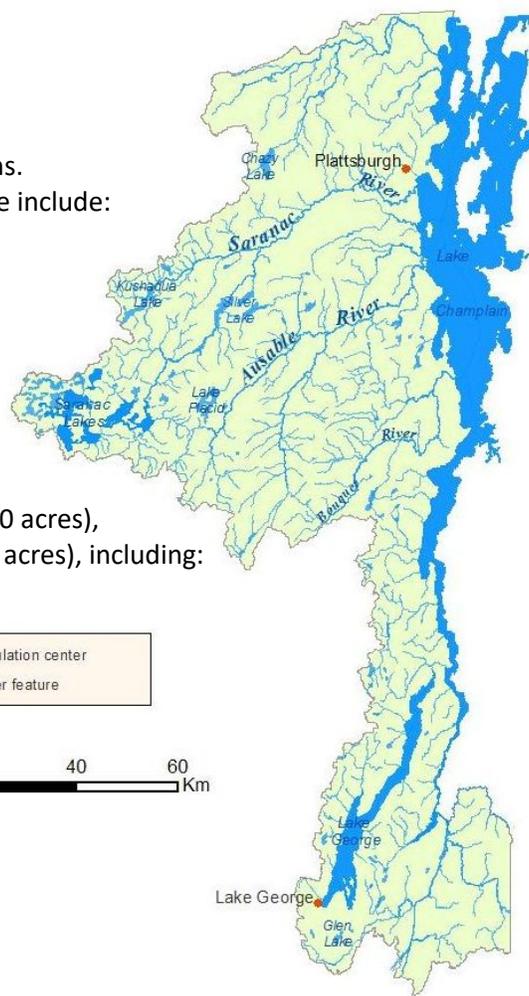
Size: 3,050 square miles of land area within New York State.

**Rivers and Streams:** 4,883 miles of freshwater rivers and streams.  
Major tributary watersheds to Lake Champlain in New York State include:

- Ausable River\* (767 river miles)
- Saranac River\* (662 miles)
- Great Chazy River\* (545 miles)
- Boquet River\* (532 miles)
- Mettawee River\* (390 miles)
- Ticonderoga Creek/Lake George\* (380 miles)

**Lakes, Ponds and Reservoirs:** Excluding Lake Champlain (278,480 acres), 235 significant freshwater lakes, ponds, and reservoirs (159,302 acres), including:

- Lake George\* (28,523 acres)
- Upper Saranac Lake\* (4,844 acres)
- Lower Saranac Lake\* (2,145 acres)
- Lake Placid\* (1,954 acres)



\*Not in the PRISM

Image provided by NYSDEC: <http://www.dec.ny.gov/lands/53650.html>



## APPENDIX C: VECTOR MANAGEMENT

The vectors of invasive species spread in the region include major highway corridors and interstate exchanges, including an extensive county and town highway network. Three canal systems (Erie, Champlain, and Feeder) transect a major part of this region and act as additional pathways for invasive species to be transported. Along the Hudson River, three major ports are available to ocean-going cargo ships: Albany, Catskill, and Troy. The Mohawk River, due to a history of development and connectivity to the Great Lakes, represents a major vector for both aquatic and terrestrial invasive species.

Albany is a major shipping thoroughfare in NYS, with north/south and east/west rail lines allowing species to be introduced and dispersed from shipments and freight. Many of the shipping destinations include, but are not limited to, the river ports, CSX Rail Yard, and Albany International Airport. Unfortunately, warehouse locations are often a great harboring and/or breeding ground for many invasive species that have arrived to NYS.

Areas often developed and/or disturbed by human activities can result in increased populations of invasive species. Once established, these invasive species can proliferate into natural setting. Approximately 451,202 acres (14 percent) within the PRISM are considered disturbed, recently modified by human activities, or developed. Unfortunately, there is often a disconnect between industry and land managers on the role that development has in proliferating the spread of invasive species.

Managing the ability of invasive species to move throughout these various land types is a chief concern of the PRISM. More information on how that prevention is accomplished in the region is covered in the following sections.



## APPENDIX D: NATURAL RESOURCES

The 3,148,326 acres within the Capital Region PRISM are rich in natural resources. The landscape of the PRISM consists of a mosaic of forest lands, developed urban space, waterways and lakes, and agricultural areas, which contribute to a diverse production of timber, crops, recreational opportunities, and biodiversity. These three million acres are home to important migratory pathways, rare and endangered plants and animals, and a wide variety of every day New Yorkers. The geographic diversity ranges from very rural farm and woodlands to highly populated urban areas. Woodland habitat in the 11-county PRISM area make up 1,743,262 acres.

Over 166,000 acres of the PRISM encompass hydrologic areas – wetlands and surface water bodies. The aquatic resources of the Capital Region are a major consideration when thinking about the issues of invasive species. The Hudson and the Mohawk rivers intersect in Albany and both have been used for trade, recreation, and sustenance, predating colonial settlement. Though the presence of these rivers is a major draw to the region, they act as major vectors for new species to enter the PRISM and threaten our native flora and fauna.

The agricultural resources of the Capital Region are vast with 889,680 acres of farmland. Agricultural products are an important export that can be threatened by the proliferation of invasive species. Notably, the spotted lanternfly (*Lycorma delicatula*), a new invasive insect species to NYS with large agricultural impacts, was first detected in the PRISM this year in Albany County. The PRISM, the Department of Agriculture and Markets, and the NYSDEC are all dedicated to keeping an eye on this insect to find any breeding populations in the state. More information on the spotted lanternfly and the PRISM's actions to monitor the region is available in the Terrestrial Invasive Species Program Report Section.



## APPENDIX E: INVASIVE SPECIES PREVENTION ZONE

### *Moreau Lake State Park*

An Invasive Species Prevention Zone (ISPZ) is a formal designation for a natural area that is dominated by native species and is known to support exceptional biodiversity concentrations as defined by the New York Natural Heritage Program. Invasive species prevention zones are areas greater than 500 acres with very limited intrusions from invasive species. Typically an ISPZ is also an area highly susceptible to the introduction of invasive threats from multiple vectors. The presence of significant habitats, rare, threatened or endangered species found within the designated area merits an additional layer of protection to preserve the existing ecology.

#### Invasive Species Prevention Zone Goals:

- Prevent, detect, and rapidly respond to new invasions.
- Implement control efforts of old infestations and restore natural ecosystem functions.
- Monitor and evaluate successes and failures of invasive species management activities.
- Educate the public about invasive species and their effects on our environment.
- Preserve the existing and unique ecology of the designated area.

The PRISM assessed multiple sites for ISPZ designation through a set of defining criteria and variables. Through the advisory of the Conservation Committee, NYSDEC and members of the Office of Parks Recreation and Historic Preservation (OPRHP), the PRISM has designated Moreau Lake State Park as the region's first ISPZ. Moving forward, the PRISM will generate an invasive species surveys and removal plans, in a partnership with OPRHP, for the park in its entirety. Programs using best management techniques, integrated pest management protocol and collaboration of both resource managers and citizen scientists will be integrated into the invasive species management of the ISPZ to protect the unique region.

## APPENDIX F: EDUCATION AND OUTREACH CONTACTS

### Direct Contacts Reached

#### Clinics

Event	Date	Individuals Reached
Huyck Preserve Stewardship Day	10/20/2018	5
Emerging Field Report	12/13/2018	11
Friends of Tivoli Lake Preserve and Farm	08/31/2019	16
Little Troy Park Meeting	11/07/2018	14
Buckingham Pond Conservancy Board Meeting	02/25/2019	7
Flower and Garden Show	03/23/2019	80
Buckingham Pond Conservancy Annual Meeting	04/07/2019	26
Empire State Farmers' Market	07/10/2019	19
ISAW Education and Outreach Kids Day	07/13/2019	200
	<b>Total</b>	<b>378</b>

#### Conferences

Saratoga County Planning and Zoning Conference	02/06/2019	590
Mohawk Watershed Symposium	03/22/2019	170
Capital District Garden and Flower Show	03/24/2019	114
NYSFOLA Conference	5/3/2019	109
	<b>Total</b>	<b>983</b>

#### Demonstrations

Buckingham Pond Conservancy Spring Clean-Up	04/14/2019	26
AIS Module for Saratoga Middle School	5/6/2019	115
ISAC Invasive Species Advisory Committee	06/13/2019	34
	<b>Total</b>	<b>175</b>

#### Lectures

Friends of Schoharie Crossing Presentation	10/23/2018	7
Eld's Training for Invasives	10/25/2018	13
Aquatic Invasive Species Lecture at The Darrow School	11/01/2018	18
Schenectady High School Presentations	11/29/2018	80
Invasive Species Education High School	11/30/2018	89
Hemlock Woolly Adelgid Work Shop	12/15/2018	41
Capital Area Bedding Plant	01/08/2019	51
Natives vs. Invasives	01/09/2019	17
HWA Seminar for Landowners	02/04/2019	15
Benefits of Native Garden Design	02/28/2019	12

HWA iMap Training	03/01/2019	6
Siena Guest Lecture	03/06/2019	24
Burden Lake Association Presentation on AIS	03/07/2019	23
Turf and Landscape Pest Management	03/07/2019	36
Ballston Spa Envirathon	03/14/2019	5
Capital District Garden and Flower Show	03/22/2019	89
Benefits of Native Garden Design	03/23/2019	10
PRISM Partners' Meeting	04/02/2019	28
Gallway High School Lecture	04/05/2019	13
Clifton Park Womens' Group	04/08/2019	40
Master Gardener Saratoga CCE	04/08/2019	19
New Baltimore Conservancy Presentation AIS	04/10/2019	26
UCall Union College	04/25/2019	47
Forest Health Work Shop	04/26/2019	25
AIS Presentation for Ballston Lake Improvement A.	05/01/2019	17
Road Side Invaders	05/01/2019	25
Hemlock Conservation for Land Trusts	05/03/2019	21
Norrie Point Boat Steward Training	5/15/2019	28
Master Forester Owner Program	05/21/2019	31
Saratoga Lake Protection and Improvement Q&A	06/02/2019	25
Thompson's Lake Association Annual Meeting	06/21/2019	39
ISAW iMap Training Wilton Wildlife	07/08/2019	7
ISAW iMap Training Moreau State Park	07/09/2019	6
Roadside Invasive Species	07/10/2019	36
Education and outreach Union College STEP	07/11/2019	17
iMapInvasives Training with Albany SWCD	07/12/2019	23
Wildlife Research High School Program	08/01/2019	12
Columbia-Greene Lakes Coalition Meeting	08/09/2019	24
Master Gardener Program	10/11/2018	38
	<b>Total</b>	<b>1025</b>

#### Round Table

PRISM Partners Meeting	10/23/2018	27
Friends of Moreau State Park	03/11/2019	26
Schenectady County Historical Society Meeting	03/19/2019	5
I Love My Park Committee	03/20/2019	9
Master Forest Owner Program	06/10/2019	14
ReLeaf New York	06/25/2019	13
	<b>Total</b>	<b>94</b>

### Service Learning

I Love My New York Park Day	05/04/2019	121
Paddle Around Burden Lake	08/03/2019	6
	Total	127

### Train the Trainer

New York Logger Trainer Program	07/31/2019	5
iMap Training Huyck Preserve Staff	08/14/2019	4
Train the Trainer Hemlock Initiative	09/24/2019	6
Master Forest Owner Volunteers	09/25/2019	25
	Total	40

### Tours

Ballston Spa Envirathon	04/09/2019	6
Woodlawn Preserve Woods Walk	04/13/2019	16
Schenectady County Forest Preserve Woods Walk	05/11/2019	4
Paddle Around Long Lake	08/23/2019	8
	Total	34

### Workshops

HAW IMap Training	11/05/2018	12
Water Chestnut Pull on Fish Creek with Saratoga PLAN	06/29/2019	52
	Total	64

### Indirect Contacts Reached

Event Type	Name/Description	Date(s)	Individuals Reached
Media - Internet	Capitalmohawkprism.org	10/01/18 – 19	8150
Media - Internet	Facebook	10/01/18-19	14352
Media - Internet	Instagram	10/01/18-19	29450
Media - Internet	LISTERV	10/01/18-19	4140
Media - Print Media	NYFOA Newsletter	10/12/19	500
Public Tabling and Outreach	Saratoga County Fair	07/23/2019 - 07/28/2019	12750
Public Tabling and Outreach	Altamont Fair	08/13/2019 - 08/18/2019	8600
Public Tabling and Outreach	Washington County Fair	08/19/2019 - 08/25/2019	12942
AISSPP Outreach with Boat Surveys	Mohawk and Hudson Rivers	5/2019 - 9/2019	13,416

## APPENDIX: G FRIENDS AND PARTNERS SERVED BY THE CAPITAL REGION PRISM

### PRISM PARTNERS

Adirondack Lakes Alliance, Inc.  
Adirondack Mountain Club - Albany Chapter  
Adirondack Watershed Institute  
Albany County Soil and Water Conservation District  
Albany County Soil and Water Conservation District  
Albany Pine Bush Preserve Commission  
Appalachian Mountain Club - Albany Chapter  
Audubon NY  
Babcock Lake Estates  
Ballston Lake Improvement Association  
Bowman Lake Association  
Buckingham Pond Conservancy  
Burden Lake Association  
Columbia Land Conservancy  
Columbia-Greene Lakes Coalition  
Cornell Cooperative Extension  
Cossayuna Lake Improvement Association  
Darin Freshwater Institute  
Davey Tree  
Dig The Falls  
Duane Lake Association  
ECOS: The Environmental Clearing House  
Environmental Monitoring and Management Alliance (EMMA)  
Friends of Moreau Lake State Park  
Friends of Tivoli Lake Preserve and Farm, Inc.  
Friends of Woodlawn Preserve  
Hudson River Estuary Program Cornell University  
Kelly Adirondack Center  
Kinderhook Lake Corporation  
Lake George Land Conservancy  
Little Troy Park  
Long Lake Homeowners Association  
Mohawk River Watershed Coalition  
Mohawk-Hudson Land Conservancy  
Montgomery County Soil and Water CD  
National Grid  
Nature Conservancy Albany  
New Baltimore Land Conservancy  
New York Forest Owners Association  
New York Logger Training Union College  
New York State DEC ReLeaf Program  
New York State Invasive Species Research Institute  
NY iMapInvasives  
NY Natural Heritage Program  
NY ReLeaf Program  
NYS Department of Agriculture and Markets  
NYS Department of Environmental Conservation  
NYS Department of Transportation  
NYS Federation of Lake Associations  
NYS Hemlock Initiative  
NYS Nursery and Landscape Association  
NYS Office of Parks, Recreation, and Historic Preservation  
Otsego County Conservation Association  
Queechey Lake Club  
Rensselaer County Soil and Water Conservation District  
Rensselaer Land Trust  
Rensselaer Land Trust  
Rensselaer Water Quality Coordinating Committee  
Saratoga County Soil and Water Conservation District  
Saratoga Lake Protection and Improvement District  
Saratoga National Battlefield (NPS)  
Saratoga PLAN  
Schenectady County Historical Society  
Schenectady County Invasive Species Council (SCISC)  
Siena College  
Skidmore College  
Sleepy Hollow Lake, Association of Property Owners  
Sterling Environmental Engineering  
SUNY Oneonta  
The Edmund Niles Huyck Preserve  
The Farm on Peaceable Pastures  
The Friends of the Woodlawn Preserve  
The Nature Conservancy

The Sacandaga Mohawk Flotilla/United States  
Coast Guard Auxiliary  
Thompson's Lake Association  
Town of Ballston Spa  
Union College

United States Department of Homeland  
Security  
University at Albany, SUNY  
Upper Hudson Watershed Coalition  
US Geological Survey  
Wilton Wildlife Preserve & Park

## Citations

<sup>1</sup> Jordan, Marilyn; Sargis, Gregg; Schwager Kathy; Smith, Hilary; Zimmerman, Chris; (2011) *An Invasive Plant Management Decision Analysis Tool. Version 1.1.*; The Nature Conservancy, Brookhaven National Laboratory.

<sup>2</sup> USDA Natural Resources Conservation Service.  
<https://www.nrcs.usda.gov/wps/portal/nrcs/main/ny/technical/landuse/>

<sup>3</sup> NYSDEC. <https://www.dec.ny.gov/animals/9402.html>

<sup>4</sup> NYSDEC. <https://www.dec.ny.gov/lands/48041.html>

<sup>5</sup>NYSDEC. <http://www.dec.ny.gov/lands/48367.html>

<sup>6</sup>NYSDEC. <https://www.dec.ny.gov/lands/48041.html>

<sup>7</sup>NYSDEC. <https://www.dec.ny.gov/lands/48369.html>