

# CapMo PRISM

## CAPITAL / MOHAWK

### Partnership for Regional Invasive Species 2017 ANNUAL REPORT



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Host Organization:

**Cornell Cooperative Extension of Saratoga County**

*Capital / Mohawk Partnership for Regional Invasive Species Management*

# CapMo PRISM 2017 Annual Report

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*Cornell Cooperative Extension of Saratoga County*  
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## TABLE OF CONTENTS

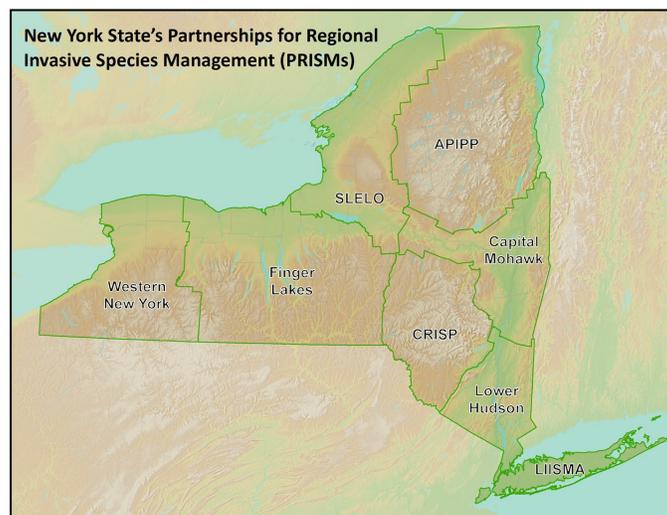
1. Partnerships for Regional Invasive Species Management .....	4
2. Geographic Region .....	5
3. Natural Resources .....	7
4. Partner/Network Coordination & Cooperation .....	8
5. Education and Outreach .....	10
6. Invasive Species Awareness Week (ISAW) .....	15
7. Citizen Science & Monitoring .....	16
8. Prevention .....	18
9. Early Detection & Rapid Response .....	21
10. Control Management & Restoration .....	22
11. Research .....	25
12. Collaboration & Cooperation .....	27
13. Information Management .....	29
14. Capital/Mohawk PRISM Program Expenses .....	30

## Partnerships for Regional Invasive Species Management

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. They are a form of biological pollution that comes from around the world. Their rate of invasion is growing due to increasing international trade and climate change. A wide variety of species negatively impact many sectors of our world: our ecosystems, including all natural systems and managed forests; our food supply, including agricultural products and harvested wildlife, fish and shellfish; our built environments, including landscaping, infrastructure, industry, gardens and pets; and our economy, recreation and human health.

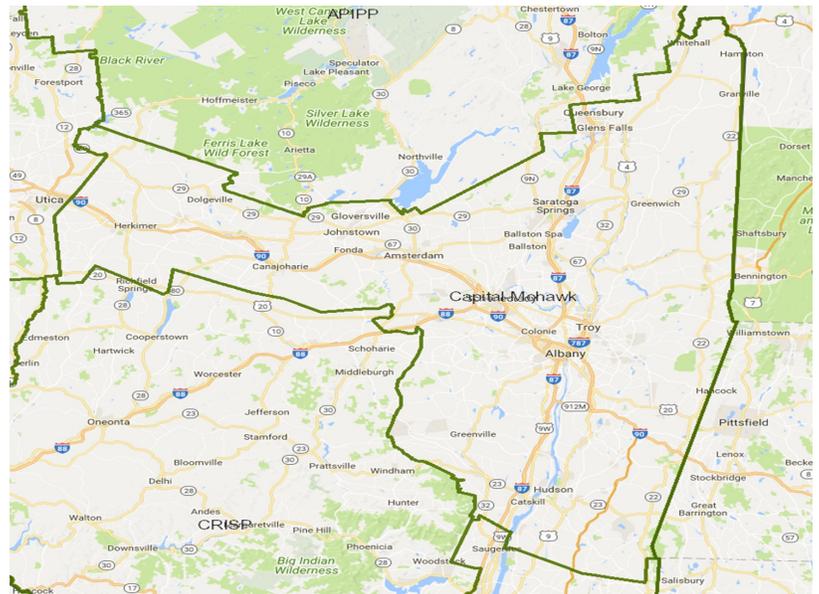
Responding to this growing problem, New York State is implementing recommendations of the New York Invasive Species Task Force (ISTF) established under legislation passed in 2003. The ISTF's 2005 report (available at <http://www.ny.gov/animals/6989.html>) led to a 2008 statute, known as Title 17 of ECL Article 9, which established the New York Invasive Species Council and Invasive Species Advisory Committee. The Council of nine state agencies is co-led by the New York State Departments of Environmental Conservation and Agriculture and Markets. Among the Council's numerous statutory responsibilities is:

*“support(ing) within available funds and encourage(ing) Partnerships for Regional Invasive Species Management [PRISMs] in their efforts to address invasive species through coordination, recruitment, and training of volunteers, education, early detection, rapid response, eradication, research, and planning”*





The pathways of opportunities for invasive species in this region comprises of major highway corridors and interstate exchanges, including I-87, I-88, I-90, I-787, Routes 4, 5, 9, 9W, 20, 29, 32, 67, 155, and 443; not to mention the extensive county and town highways throughout the region. Three canal systems (Erie, Champlain, and Feeder) transect a major part of this region as additional pathways for invasive to be transported; including the convergence of the Hudson and Mohawk Rivers and their various tributaries. Along the Hudson River, three major ports are available to ocean going cargo ships - Albany, Catskill, and Troy. Furthermore, north/south and east/west rail lines juncture in the Capital Mohawk PRISM area, allowing for further opportunities of invasive species to be introduced and dispersed from shipments and freight. Many of the shipping destinations, include, but not limited to the river ports, CSX Rail Yard, and Albany International Airport; several transportation hubs in the area that deliver to a myriad of distribution warehouses throughout the PRISM region. The major highways, railways, transfer hubs, and shipyards bestow on the area as locations for distribution centers for major companies to transport cargo from all over the world. Unfortunately, warehouse locations are often a great harboring and/or breeding grounds for many invasive species that have arrived to New York State.



The geographic diversity ranges from very rural farm and woodlands to highly populated urban areas covering a total of 4,919 square miles or 3,148,326 acres. Woodland acres in the 11 county area are a total of 1,942,100 acres, and farmland comprises of 939,263 acres. Over 166,000 acres encompass hydrologic areas – wetlands, and surface water bodies.



## Natural Resources

The Capital Mohawk PRISM area is rich in natural resources. Within this region, a critical role in protecting and managing lands that are used for farms, forests, parks and preserves, that encompass over three million acres, including acreage of lands that are developed, roadways, or waterbodies. Forest and farmlands managed properly can provide diversified value for wildlife, improved water quality, clean air, stable soil, recreational opportunities, scenic landscapes, and an increase in healthier ecosystems, to sustain the future of natural resources within this region. The counties involved within the Capital Mohawk PRISM feature farmer/owners, absentee/owners and recreationists (boaters, hunters, anglers, and hikers), and many large businesses/industries. Unmanaged farmlands and forestlands are opportune locations for the encroachment of invasive species. The landscape is becoming more and more fragmented, and ecological systems are rapidly changing.

Several of the waterbodies and waterways within this eleven county area have been inflicted with aquatic invasives for many years. Agencies and lake associations have given their best efforts to the management and control of aquatic invasive species at various levels, but the interconnection of pathways including recreational users are just new opportunities for aquatic invasives to be introduced every day.

Various organizations, including land trusts, conservation groups, land conservancies, and municipal entities in this region, oversee and manage natural areas that are already compromised or have the potential of being compromised with invasive species out-competing the native vegetation and ecosystems.

Partner organizations within the PRISM have been removing and controlling invasives across the landscape for a number of years, their time consuming efforts are highlights to some of the landscape restoration that can be achieved.

## **Partner/ Network Coordination & Cooperation**

The Capital / Mohawk (CapMo) PRISM Partners have completed year five, and final year of the first round of funding for the PRISM(2013-2017). The CapMo PRISM is hosted by Cornell Cooperative Extension of Saratoga County located in Ballston Spa, NY and is staffed by one coordinator. The strength of the PRISM has been with its partners, especially through the strong support of several subcommittees to move coordinated efforts forward. In 2017, through NYS Department of Environmental Conservation, CapMo received a small grant through US Fish and Wildlife that supported two temporary positions that began in May; an aquatic invasive species (AIS) coordinator and an AIS watercraft launch steward. Additionally, with the use of contract funds, and working with Cornell Cooperative Extension Association of Herkimer County, a terrestrial invasive species (TIS) coordinator (temporary position) was hired in October.

### ***Capital/ Mohawk PRISM Sub-committees (working groups):***

**Steering Committee:** includes key partners from NYS Department of Environmental Conservation, NYS Department of Agriculture and Markets, NYS Department of Transportation, NYS Soil and Water Conservation District (SWCD), County Soil and Water Conservation Districts, National Park Service, Natural Heritage Program, and American Wildlife Conservation Foundation. The steering committee developed prior to the CapMo PRISM being funded. Five years prior to a contract, the PRISM was lead by a volunteer coordinator (Peg Sauer), the core group of individuals that met through those initial years became the current steering committee. The individuals representing these organizations and agencies, bring a strong commitment and diverse expertise to the committee. The steering committee works with the PRISM coordinator to follow the five-year strategic plan process, to develop and guide the annual work plan, and to connect with each of the subject matter subcommittees (Agriculture, Aquatics, Conservation, and Education/Outreach). Each person that is on the PRISM Steering Committee is also a representative to one or more of the CapMo PRISM subcommittees.

*The committee structure is designed not to have a term commitment, but rather for the individual, based on interest, or given expertise to assist with a particular project at that specific time. This short-term involvement is more manageable for many of the partners to participate.*

**Agriculture Committee:** partners work to identify priority species that inhibit or compete with the growth or production agricultural crops within the region. Through species prioritization, management and control methods, this committee focuses on best management practices and recommendations that will be most effective for the agricultural community.



**Aquatics Committee:** focuses on priority invasive species identified in aquatic ecosystems within the CapMo PRISM and to develop an early detection list and protocol for early detection/rapid response species within the CapMo PRISM. Additionally, efforts of this committee have assisted in prioritizing areas to provide watercraft launch steward educational programs.

**Conservation Committee:** works to identify priority species to focus on or be on the watch for within the Cap/Mo PRISM area that may put conservation areas at a higher risk with the spread of invasive species within those areas. Key efforts have been developing a tier system priority list that can be used by all committees and PRISM partners.



**Education/Outreach Committee** are partners within the CapMo PRISM area that develop, prioritize, and compile existing educational/curriculum materials for use within the PRISM region. Additionally, the committee coordinates and assists in planning educational/outreach opportunities and events throughout the CapMo PRISM.

## Education and Outreach

In 2017, the Capital/Mohawk PRISM continued to increase awareness regarding the concept of a PRISM, invasive species education, and getting new partners to participate. Additionally, the aquatic invasive species watercraft education/outreach launch steward program increased to two additional sites in the PRISM.

### CapMo PRISM staff highlights for 2017 program year:

- ◆ Over 5,438 individuals participated through various educational presentations (programs, lectures, hands-on-training); including: Master Gardener Trainings (seven counties), Capital District Flower and Garden Show, forest owner groups, preserve associations, hiking groups and 4-H clubs as examples.
- ◆ 81,033 individuals have attended various events where CapMo PRISM has had an invasive species educational display and/or exhibit; including places such as Sundae on the Farm, Farmers Markets, Capital District Flower and Garden Show, and four County Fairs, to name a few.
- ◆ Numerous other partner groups, such as, garden clubs, cooperative extension associations, county soil and water conservation districts, local schools/colleges, and conservation groups requested from the PRISM educational outreach material for their events or displays. Building the capacity of the PRISM, includes sharing of educational information concerning invasive species - including ways to identify, control, manage, and hopefully eradicate invasive species. It is also an important means to educating local officials, landowners, homeowners, gardeners, and others at local events.



- ◆ For the fourth year, the Capital Mohawk PRISM was very fortunate to have an education and outreach intern, Jessica Holmes (SUNY Cobleskill), along with two aquatic invasive species watercraft education/ outreach launch steward interns, Liz Sammons (SUNY ESF) and Pam Aprillino (SUNY Hudson Valley). The Aquatic Invasive Species (AIS) program was led by our newly funded AIS Coordinator position (Leah Gorman). Funding for the AIS coordinator and one launch steward position came through a small grant via the US Fish and Wildlife Service (USFWS). The other launch steward position was through the SUNY ESF (Environmental Science and Forestry) NYS DEC (Department of Environmental Conservation) internship program. The education / outreach intern position was funded through the PRISM contract.



Education outreach at the launches for the 2017 took place this year at: Round Lake, Lock 7, Freeman’s Bridge, Schodack Island, and Hudson Municipal Launch. Educational materials were developed including waterproof pressed plant plates. Additionally, several lake associations participated in trainings and water chestnut pulls.

## Events/Workshops/Presentations/Programs that CapMo PRISM staff were involved with in 2017

*(Note: these are just examples and do not reflect the entire gamut):*

- ◆ Five County Regional Planning Conference, Saratoga Springs
- ◆ NYS Sportsmen's Education Workshop
- ◆ Spring Garden & Flower Show at Hudson Valley Community College
- ◆ Forest Pest Outreach Workshop for 'Master' CCE Volunteers
- ◆ Environmental Field Days (Albany & Saratoga counties)
- ◆ Envirothon
- ◆ Hemlock Woolly Adelgid Monitoring Training (3x)
- ◆ Sportsmen's Federation Meetings
- ◆ Invasive Species programs for local officials and planning boards
- ◆ iMapInvasives Trainings for citizen science volunteers
- ◆ Events such as: Sundae on the Farm, Fall Festivals, and Farmers Markets
- ◆ Hands-on aquatic invasive species workshops for lake associations
- ◆ County Fairs ( Altamont, Saratoga, Columbia, and Washington)
- ◆ Master Forest Owner Volunteer Training
- ◆ Master Gardener Volunteer Training (3x for 8 counties)
- ◆ Friends of Moreau State Park & Schodack Island—Fall Festival Events
- ◆ Individual presentations for groups, such as, garden clubs, hiking clubs, and conservancy organizations
- ◆ New York Forest Owner Woodswalks (Saratoga County)





The following activities are from **partner organizations** or individuals on the various educational/outreach activities that they conducted in 2017:

- ◆ Siena College (*Mary Beth Kolozsvary & Jean Mangun*) Through their various courses and labs , integrate invasive species into the overall curriculums to their students. Additionally, they are advisors to the Environmental Club that hosts various invasive species events on campus each year. Additionally, over the summer two students worked with Jennifer Dean to develop a prioritization model for the region which will be used to determine scouting locations in the 2018 field season.
- ◆ Union College (*Jeff Corbin*) - covers invasive species fairly extensively throughout the courses he teaches, works with local high school students on research projects related to invasive species, and is an active member with the Schenectady County invasive species committee.
- ◆ Steve Young (Conservation Committee & State Botanist) - has been working with the Friends of Woodlawn Preserve leading invasive species identification walks and uploading the results into iMapInvasives.
- ◆ Queechy Lake Club (*Elizabeth Janes*)- continues to provide AIS educational material to members of Queechy Lake Association and promotes citizen science through the use of iMapInvasives with the homeowners in the area.
- ◆ Jennifer Dean (NYNHP) - provided educational programs for land trusts and organizations such as Rensselaer Plateau Alliance and Friends of Dyken Pond for them to consider invasive species in their stewardship plans - reporting protocols, data tracking, and focusing on specific species.
- ◆ Schenectady County Invasive Species Committee- developed flyers regarding Emerald Ash Borer (EAB) and Hemlock Wooley Adelgid (HWA) for posting at public areas in the county including trailheads, libraries, and municipal buildings. Provided an HWA general informational meeting to the public, an iMapInvasives training to volunteers for HWA monitoring,

and an invasives species program for municipal officials and planners. The committee also participated in several community events including Mabee Farm events, the Schenectady Greenmarket, and the Cornell Cooperative Extension Central Park Plant Sale.

- ◆ Saratoga National Historic Park (Linda White) - Photographic displays of invasive species as well as before and after treatments. Additionally, working with the Northeast Temperate Network for the National Park Service in conjunction with Penn State has developed a “Surveillance Monitoring Field Guide for Early Detection of Invasive Species”, for Saratoga NHP. Provided public walks with an emphasis on invasive species and management. Also provided a program to the Fort Orange Garden Club concerning invasive species.
- ◆ Partners from the Cornell University Integrated Pest Management (IPM) program worked with Capital Mohawk PRISM partners to provide the Third Annual NYS Integrated Pest Management conference to bring together a wide range of speakers that addressed the scope of the invasive species problem. How many invasive species are already here? What’s the risk of new invaders? What we can do about it? As New York State is a hotspot for invasive species—at risk ecosystem services, human health, food security, and New York’s abundant natural areas. The conference was held at Siena College, and had over one hundred attendees.





## ***Invasive Species Awareness Week (ISAW)***

July 2-8, 2017 was proclaimed as Invasive Species Awareness Week across New York State. The mission of the New York Invasive Species Awareness Week (ISAW) is to promote knowledge and understanding of invasive species and the harm they can cause by engaging citizens in a wide range of activities across the state, and empowering them to take action to help stop the spread.

ISAW is comprised of various outreach initiatives and events led by the NYS PRISM program and partner organizations across the state. Activities include interpretive walks, invasive plant removal and restoration projects, displays, webinars, radio programming, and more.

***Locally, CapMo PRISM partners provided*** a 51% increase in events to our area over ISAW 2016. Throughout the week, CapMo PRISM partners provided over 29 events including, but not limited to: invasive species removal projects (4); guided informational/educational invasive species awareness hikes; iMapInvasives citizen science data collection projects, aquatic invasive species identification events with lake associations; four workshops and an integrated pest conference (IPM); and many educational exhibits at public events, just to name a few examples. We are preparing for ISAW 2018, and looking for more partners to be involved!



**Citizen Science & Monitoring** - *involving everyday people with the opportunity to collect data and collaborate toward a common goal.*

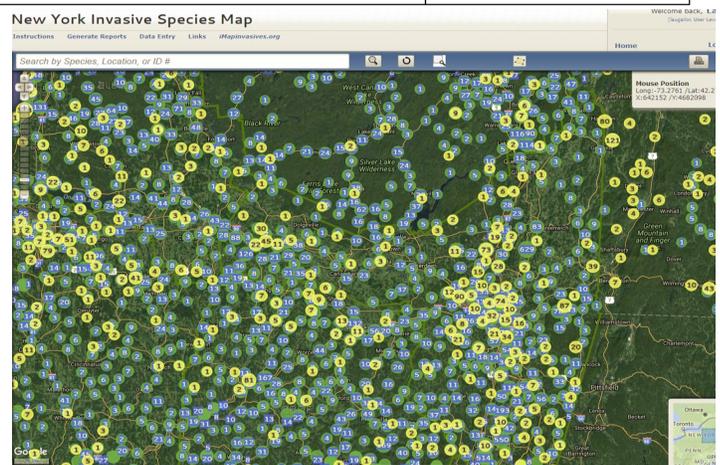
### iMapInvasives Data Base

The use of the New York iMapInvasives database has been a supportive tool in determining the areas that still need inventory, this information gives us a baseline data of invasive species that are within the CapMo PRISM region. In 2017, several trainings were conducted to help promote this vital tool in tracking all taxonomy of invasive species. Twelve trainings were provided in 2017 that included the basics of collecting observations through the use of a smart phone app, up through the advanced user application levels. Trainings also included for not detected species for both Water Chestnut and Hemlock Wooley Adelgid.

#### 2017 Training Classes (127 People Trained)

Date	Trainer	Training Class Name	Location
2/2/2017	Erin Brady	2017 - Thacher State Park HWA Training	Voorheesville
2/10/2017	Laurel Gailor	2017 - Schenectady County SCEAC-SCIC HWA Survey	Saratoga
3/13/2017	Jennifer Dean	2017- Siena College Conservation Biology Class	Albany
3/27/2017	Jennifer Dean	2017 - BOCES Capital Region Teacher Training	Latham
4/27/2017	Laurel Gailor	2017 - Myers Center BOCES Training	Saratoga Springs
5/17/2017	Meg Wilkinson	2017 - CapMo PRISM Training	Fonda
6/2/2017	Jennifer Dean	2017 - NYFA Friday Field Trip Mobile App Training	Schodack
6/16/2017	Laurel Gailor	2017 - CCE Columbia Green MGV Training	Hudson
7/14/2017	Meg Wilkinson	2017 - Five Rivers iMap Mobile App Training	Delmar
8/9/2017	Jennifer Dean	DEC Hale Creek App Training	Gloversville
8/22/2017	Emily Caboot	Living Environment Institute - Five Rivers 2017	Delmar
9/9/2017	Emily Caboot	2017 - ADK, HWA Workshop	Gloversville

Chart information provided by: iMapInvasives/NYNHP



## CAPITAL-MOHAWK PRISM METRICS 2017

Observation Records (by type)	2017*	Total* 2010-Present
Aquatic Animal	23	2,350
Terrestrial Animal	5	18
Insect	121	319
Aquatic Plant	118	1,026
Terrestrial Plant	937	11,342
<i>Not Detected: HWA</i>	127	143
<i>Not Detected: Water Chestnut</i>	2	4
<b>TOTAL</b>	<b>1,333</b>	<b>15,202</b>
Observation Records (by Data Entry Method)	2017 *	Total* 2010-Present
Bulk Upload	209	9,451
Mobile App	886	1,724
On-line	260	4,027
Advanced data	2017 **	Total* 2010-Present
Assessment - Animal	3	6
Assessment - Insect	1	5
Assessment - Plant	26	867
Survey	14	75
Treatment	1	43
Infestation Management Records	0	4



Chart information provided by:

*iMapInvasives/NYNHP*

\* Data entry date as of 12/12/2017

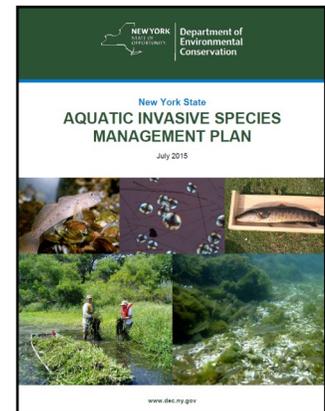
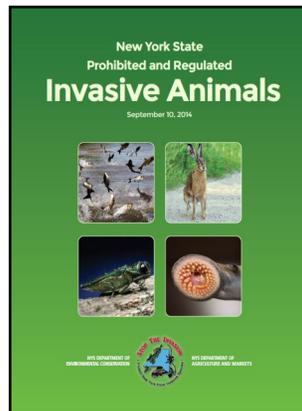
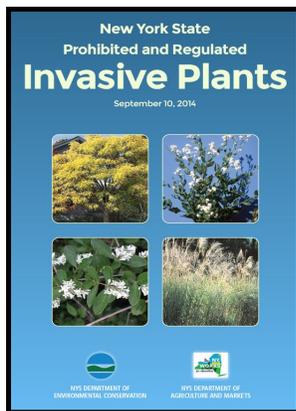
\*\* Data entry date as of 12/1/2017

*Not Detected* records are included in the Total

Top 10 Organizations Submitting Bulk Uploads	Observations 2010-Present*
Albany Pine Bush Preserve Commission	2,267
U.S. Geological Survey - Nonindigenous Aquatic Species Program	1,611
New York Natural Heritage Program (NYNHP)	1,298
National Grid	958
New York State Department of Environmental Conservation (Hudson River Estuary Program)	907
New York State Department of Environmental Conservation (NYS DEC)	907
New York Flora Association	890
New York State Department of Environmental Conservation (Bureau of Fisheries)	316
Brooklyn Botanic Garden	126
US Fish and Wildlife Service	101

**Prevention** - *Although considered the first line of defense for invasive species moving into an area, often the best efforts and management practices will not stop invasive species from becoming established.*

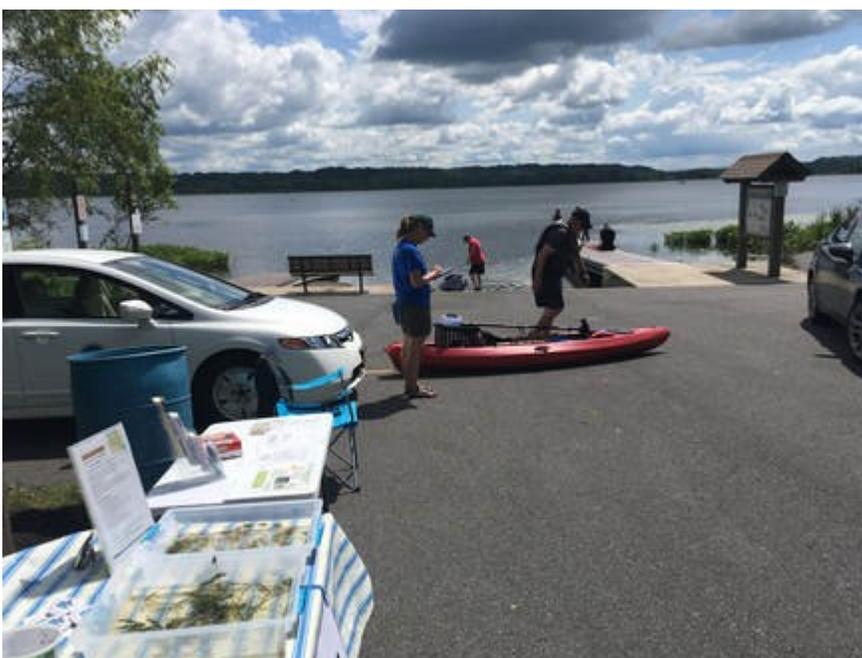
Through the various education/outreach efforts this year, the Capital/ Mohawk PRISM supported various partners with providing a multitude of printed materials to audiences throughout the region; as well as continuing to provide updated information on 6 NYCRR Part 575 and Part 576 regulations.



For these documents or for further information regarding regulations, refer to the New York State Department of Environmental Conservation link:

<http://www.dec.ny.gov/regulations/93848.html>

### **Spread Prevention:**



2017 Watercraft Education/ Outreach Launch Steward program. At the Round Lake site, a display of common aquatic plants found in the lake are on display to educate users of the launch.

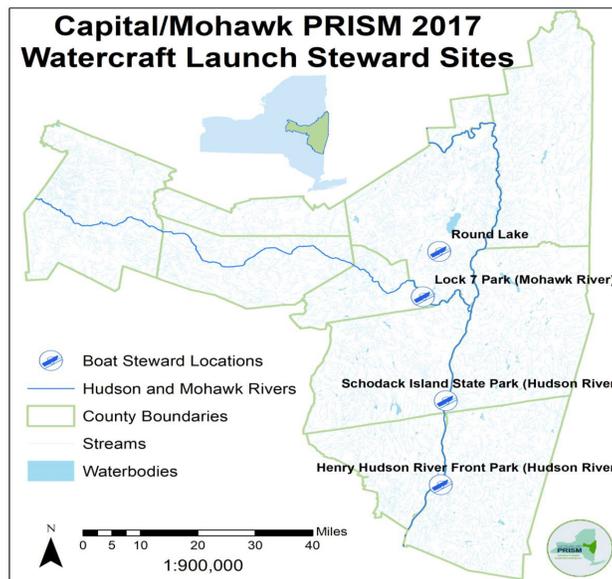
## Early Detection -

### **CapMo PRISM AIS Watercraft Steward Program:**

Although the Launch Steward program is generally an education/ outreach program, it also is an early detection and spread prevention mechanism for AIS species that may be entering or leaving a waterbody.

For 2017, the efforts of having a watercraft steward at Round Lake, Freeman’s Bridge, Lock 7, Schodack Island, and City of Hudson Launches was well received. A total of 2,145 watercraft surveyed and 362 AIS intercepted (Eurasian watermilfoil, water chestnut, curly leaf pondweed, zebra mussels, and brittle naiad).

*The complete 2017 Watercraft Steward Launch reports can be viewed at: [www.capitalmohawkprism.org/reports.html](http://www.capitalmohawkprism.org/reports.html)*



The following information reflects the highlights of the data collected at each location.

#### **Round Lake: Off of Route 9, Village of Round Lake**

1515 watercraft (23 days at launch)

994 surveys completed

318 AIS Intercepted

1746 Launch users



**CapMo PRISM AIS Watercraft Steward Program:**



**Freeman's Bridge:** off of Route 50, Glenville

118 watercraft surveyed (8 days at launch)

240 launch users reached

318 AIS Intercepted

**Lock 7 (Mohawk River):** off of Rosendale Road, Niskayuna

179 watercraft surveyed (13 days at launch)

345 launch users reached

32 AIS intercepted



**Schodack Island State Park:** off of 9J, Schodack Landing

309 watercraft surveyed (35 days at launch)

746 launch users reached

9 AIS intercepted

**City of Hudson Municipal Launch:** off of Water St., Hudson

101 watercraft inspected (18 days at launch)

242 launch users reached

10 AIS intercepted



**Early Detection & Rapid Response** - *early detection is imperative to slowing the spread and further prevention of a harmful species. Prioritizing species, pathways, and high probable areas are imperative for reducing the spread.*

**Audubon NY, Columbia/Greene County area** (David Decker)

During 2017 through volunteer workdays, volunteers have contributed around 300 hours to pull invasive species on Audubon Sanctuaries in the Capital-Mohawk region. These volunteers were primarily students that were promoting investment in the native ecosystems by the young people living in the region. The area treated, approximately four acres of land, will continue to be monitored over the next several years to assess treatment success. This Audubon sanctuary also installed a deer enclosure, in order to protect native plants from the heavy browsing that deer contribute to the ecosystem. This occurs due to the lack of presence of historical predators. This over browsing leads to higher infestation of invasive species, as deer will not typically feed on the non-native species.

**Schenectady County Environmental Advisory Committee (SCEAC)**  
- **Invasive Species subcommittee** (Mary Werner)

One of the committee's biggest accomplishments for the year include the rapid response treatment completed at the Plotterkill Preserve in order to protect the hemlock stand there from Hemlock Woolly Adelgid (HWA). This project was completed as a partnership between the DEC Forest Health Unit, SCEAC, and the Capital-Mohawk PRISM, where 250 trees, within 9.8 acres were sprayed for long term protection from the invasive insect. The committee has pivoted from the end of that project, putting together a hemlock management plan for Schenectady County. The committee also helped to procure three DEC Urban Forestry Grants totaling \$100,000 to take stock of the suburban/urban tree health in Glenville, Schenectady, and Rotterdam. Over the 2017 calendar year, the members of this committee have invested over 700 hours of volunteer time towards invasive species education, control, and management.



**Saratoga National Historic Park (SNHP)** (Linda White): Three areas within the SNHP were inventoried and treatment began during the 2017 field season. Species of focus included *Centaurea jacea* (Brown Knapweed) the dominant species, *Centaurea biebersteini* (Spotted Knapweed), *Cirsium vulgare* (Bull Thistle), *Cirsium arvense* (Canada thistle). (Treatment methods for these species can be found in the control and management section).

Early detection surveys for **Hydrilla (*Hydrilla verticillata*)** took place by the aquatics invasive species coordinator in the lower part of the upper Hudson River, south of the Federal (Troy) Dam, south to Hudson, including many of the tributaries as well.

**Control, Management and Restoration** - *three very important efforts in the reduction and impacts of an invasive specie.*

An assessment of the impact invasive species have on a particular ecosystem is important to determine what management tools to effectively implement. Too often, invasive species are well established and too widespread over the landscape or in a particular ecosystem to focus resources on the ability to contain or eradicate them completely from a particular area.

From a management standpoint, various control methods not only provide a comparison of the effectiveness of treatment, but it also develops a cadre of control methods for others to implement.

### **Aquatic Invasive Species**

With the expansion of the Capital Mohawk PRISM Aquatic Invasive Species (AIS) program, efforts were made with several lake associations and other organizations in the efforts to reducing the impact of aquatic invasive species in lake ecosystems.

As reported from partner organizations:

#### **Cossayuna Lake Improvement Association (CLIA)**

The CLIA developed education and outreach materials for its constituents on how to identify their invasive plants (Eurasian watermilfoil, curly leaf pond weed, and water chestnut) from the native plants in the lake. They had 10 volunteers involved in invasive species programs, contributing about 190 hours of time. In the 2017 season they hand pulled 3 acres of water chestnut and had 56 acres of curly leaf pondweed and Eurasian watermilfoil chemically treated.



## **Kinderhook Lake Corporation (KLC) (Daniel Langer, KLC Vice President)**

Water Chestnut Hand-pulling Event: Over 5-acres of water chestnut annually clogs the north end of Kinderhook Lake, a 350 acre lake in northern Columbia county. To help curb the spread of this aquatic invasive weed, volunteers have been hand-pulling water chestnuts in early June. Hand-pulling has made a difference, as each spring the bed of water chestnuts is slightly smaller than the previous year. In 2017, the event was attended by 22 volunteers, the largest group of volunteers since the annual event started several years ago. The volunteers in their non-motorized vessels, armed with gloves, rakes, boxes, and bags, removed and disposed of approximately 1.5 acres of water chestnuts in less than 3 hours. We were pleased this year that Leah Gorman from the Capital Mohawk PRISM was available to help with this important event. Next year, two hand-pulling events will be scheduled to hopefully double the quantity of weeds removed.

## **Giant Hogweed Removal**

As a partner with NYS Department of Environmental Conservation, the hogweed removal program within the CapMo PRISM region was turned over to PRISM staff in 2016. However, PRISM staff assisted the NYSDEC forest health team in previous years. Over the past two years, County Soil and Water Conservation Districts (Saratoga and Greene), have supported this project assisting in the mechanical removal of the plants in the region.

Initially throughout the Capital Mohawk region, five sites were mechanically treated over a five county area. Fortunately through digging individual plants, two of the sites have had zero plants at those locations over the last two years and have been monitor only sites. Monitoring of zero plants at a site, continues for at least five years. On the other three sites, the plant numbers have been reduced by more than half each year. The sites are checked in mid to late June prior to the umbels developing, any plants found (juvenile through adult) are then dug out about a foot below the root collar. A second site inspection is done mid August as a follow-up to be sure plants were not overlooked. This method has been quite effective in reducing the giant hogweed numbers in the region.

The 2017 growing season brought us to treat only 3 of the previous sites. Plant numbers have been reduced to 74 plants at all sites. Within 2-3 more seasons, these locations should be monitoring sites as well.



**Hoosic River:** Water Chestnut pull with the Rensselaer Land Trust at the Johnsonville Dam launch site; third annual pull to clear a path for canoe and kayak access to the main part of the river. The Hoosic River drains directly into the Hudson River near the City of Troy.



### **Saratoga National Historic Park (SNHP) (Linda White)**

Sixty acres of fields and roadsides containing *Centaurea jacea* (Brown Knapweed) the dominant species, *Centaurea biebersteini* (Spotted Knapweed), *Cirsium vulgare* (Bull Thistle), and *Cirsium arvense* (Canada thistle) were treated with herbicide Clean Slate (Clopyralid) with foliar application using boom sprayers mounted to UTV's.

Areas containing *Centaurea jacea* (Brown Knapweed), *Centaurea biebersteini* (Spotted Knapweed), *Lonicera sp.* (Bush Honeysuckle), *Rhamnus cathartica* (European buckthorn), *Rosa multiflora* (Multiflora rose), and *Lythrum salicaria* (Purple loosestrife) using 10 rented goats that were fenced and moved throughout 3 park sites consisting of 2.7 acres. Vegetation was heavily browsed, but woody vegetation was preferable. The Purple loosestrife was not touched.

A third treatment that included *Lonicera spa.* (Bush Honeysuckle), *Rosa multiflora* (Multiflora rose), and *Rhamnus cathartica* (European buckthorn). 1.5 acres, along the park tour road, were cut in the fall using a brush hog and then cut stumps were sprayed with a 2% solution of the herbicide Round-Up Pro, using a backpack sprayer.

Post monitoring will continue in the spring and summer of 2018. The *Centaurea* exhibited the typical dieback a few days after application. The woody vegetation that the goats browsed resprouted throughout the sites that they were located.



**Research** - provides a basis for invasive species action. Treatment and technology provide a means of developing ways to manage and control invasive species. These treatment and technology tools may be cultural, biological, physical, or chemical.

### **Round Goby environmental DNA (eDNA)**

Biologists with the regional US Geological Survey (USGS), Troy office are working on a project using environmental DNA as well as traditional fisheries methods to monitor the extent of round goby (*Neogobios melanostomus*) in the Mohawk River. The fish is yet to be found east of Utica, therefore not in the PRISM. It, however, is believed to be only a matter of time until the round goby expands its range.



### **Water Chestnut Bio Control:**

Dr. Bernd Blossey's research lab at Cornell University, is working on a biological control for water chestnut (*Trapa natans*) using the Asian leaf beetle, *Galerucella birmanica*. They are using local invaded areas of the Mohawk River as control sites for water quality monitoring associated with their research. Hopefully their results will lead to the release of these beetles for water chestnut management in the near future.



<http://news.cornell.edu/stories/2016/08/herbicides-cant-stop-invasive-plants-can-bugs>

**Research** - provides a basis for invasive species action. Treatment and technology provide a means of developing ways to manage and control invasive species. These treatment and technology tools may be cultural, biological, physical, or chemical.

## New York State Hemlock Initiative (NYSHI) at Cornell University

The New York State Hemlock Initiative has been a valuable partner of the Capital Mohawk PRISM, working to combat the spread of the invasive tree pest, Hemlock Woolly Adelgid, whose range stretches through the center of the PRISM region. This year, the program opened a new research lab at Cornell University in partnership with the NYS Department of Environmental Conservation in order to raise biocontrol insects in captivity including the *Laricobius nigrinis* (Coleoptera: Derodontidae), *Leucopis argenticollis*, and *Leucopis piniperda* (Diptera: Chamaemyiidae) beetles with the intention of releasing these across the state. The challenge is growing colonies of live insects in the lab because of the availability of food. These predators rely on populations of Hemlock Woolly Adelgid (HWA) for survival.

NYSHI agreed to present at the first CapMo Partner Meeting of 2018, and we also look forward to hosting a HWA Scouting Intern through the NYSHI and Cornell University, who will look to address data gaps that we have in this pests population in the summer of 2018.



<http://news.cornell.edu/stories/2017/11/cornell-dec-launch-new-hemlock-pest-biocontrol-lab>

From left, Assemblywoman Barbara Lifton; Kenneth Lynch, executive deputy director of the New York State Department of Environmental Conservation; Mark Whitmore, forest entomologist at Cornell; and Kathryn J. Boor '80, the Ronald P. Lynch Dean of the College of Agriculture and Life Sciences, look at a container for rearing a Hemlock Woolly Adelgid in a Cornell lab.

**Collaboration and Cooperation** - *an essential part to achieving success in combating invasive species.*

We all appreciate partnerships and if it weren't for all those involved at the various levels, we would not have come as far as we have in three years. Thank you all!

A listing of partners that are known to us... (these are not in any particular order):

- Cornell Cooperative Extension
- NYS Department of Environmental Conservation
- NYS Department of Agriculture & Markets
- County Soil & Water Conservation Districts
- NYS Office of Parks, Recreation and Historic Preservation
- NYS Department of Transportation
- Saratoga National Historic Park
- NY Natural Heritage Program
- The Nature Conservancy
- Albany Pine Bush Preserve Commission
- New York Federation of Lakes Association
- Rensselaer Land Trust
- Friends of Woodlawn Preserve
- Columbia Land Conservancy
- Kinderhook Lake Corporation
- Queeche Lake Club
- NYS Nursery and Landscape Association
- Siena College
- SUNY Albany, Cobleskill, and Hudson Valley
- Audubon NY
- Sterling Environmental Engineering



*... omissions to the list are not intentional, please let us know if you would like to be included in future listings. Thank you all for all of your contributions to preventing the spread of invasive species!*

## ***Collaboration and Cooperation continued ...***

- ◆ Cornell University
- ◆ Siena College
- ◆ Union College
- ◆ SUNY Albany
- ◆ SUNY Cobleskill
- ◆ SUNY Hudson Valley
- ◆ Skidmore College
- ◆ Upper Hudson Watershed Coalition
- ◆ Mohawk River Watershed Coalition
- ◆ ADK - Albany Chapter
- ◆ AMC - Albany Chapter
- ◆ NY Audubon Chapter
- ◆ NY ReLeaf program
- ◆ Davey Tree
- ◆ National Grid
- ◆ Mohawk-Hudson Land Conservancy
- ◆ Scouts (Boy & Girl)
- ◆ 4-H Youth Development
- ◆ CCE Master Gardener volunteers
- ◆ CCE Master Forest Owner volunteers
- ◆ CCE Master Naturalist volunteers



**Information Management** - bring everything together education/outreach, early detection/rapid response, prevention, management & control, and restoration to advance the collaborative efforts of the PRISM.

- ◆ Use of iMapInvasive database for collecting online information as well as a location to review collective species observations, project surveys, and treatment data. This system is also designed to provide email alerts for early detection and rapid response efforts. A valuable tool that is accessible and straightforward to use especially with citizen science projects
- ◆ Capital/Mohawk PRISM dedicated website: [www.capitalmohawkprism.org](http://www.capitalmohawkprism.org)



**Capital / Mohawk PRISM Mission Statement**

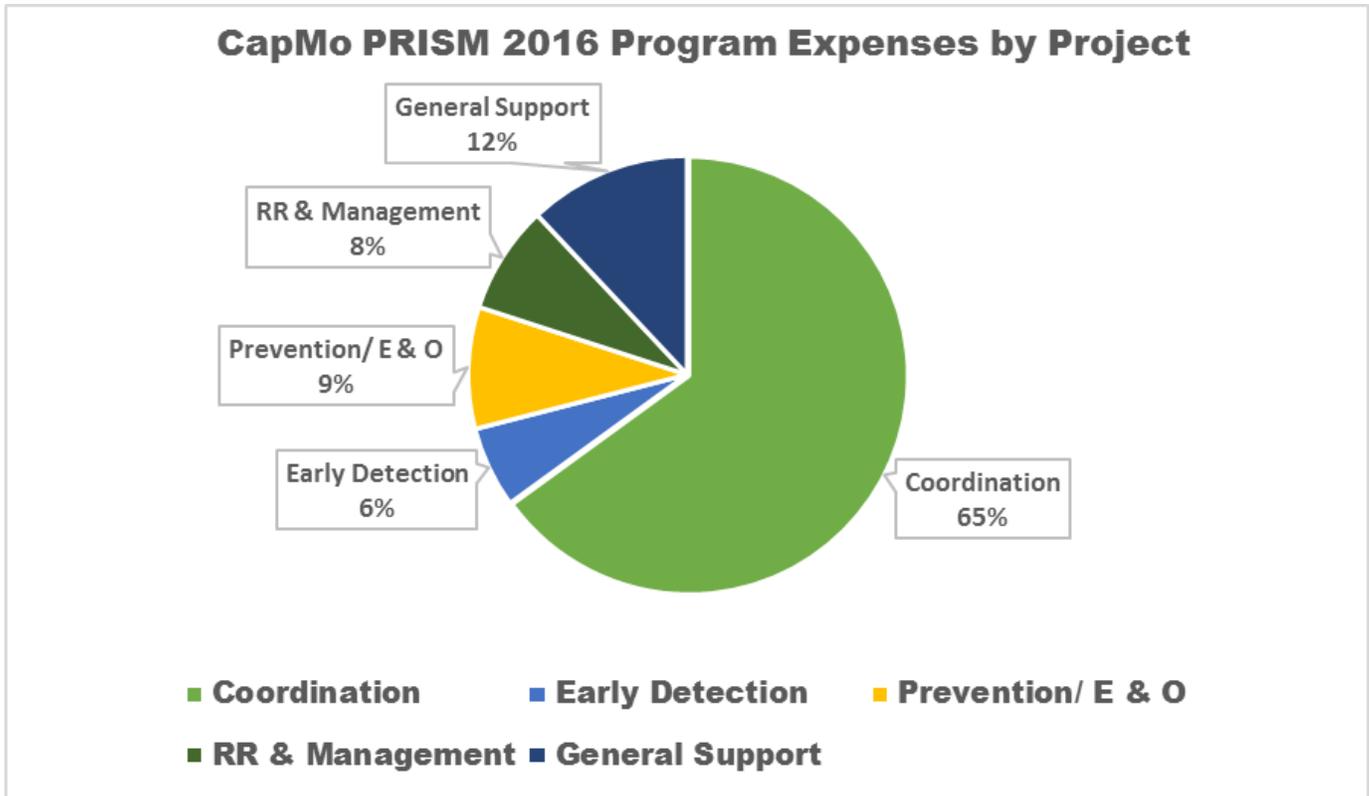
*"Detect, prevent, and control invasive species through direct action and education to protect biodiversity, the natural environment, economy, and quality of life."*

- ◆ PRISM partner list serve is a means of informing partners of timely information, such as funding opportunities, upcoming seminars or workshops, and new species to be on the lookout for in the area.
- ◆ Capital/Mohawk PRISM Facebook page: CapMoPRISM ~ We are very appreciative of a couple of dedicated individuals on the Education/Outreach Committee, and staff that actively post information regarding PRISM events, updates, and findings that would be of interest to PRISM partners.
- ◆ PRISM partner meetings offer an opportunity to network and share projects, current research, and species impacting areas. Quarterly partner meetings are designed to incorporate a guest presenter; give committees and opportunity to meet, and share committee reports; a time to roundtable events, projects, and other information relevant to invasive species education, management and control.

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## Annual Budget



**Coordination** - Expenses and activities related to administering the program and program (65 %) coordinator.

**Prevention/ Education & Outreach (E&O)** - Expenses and activities related to project (9 %) including portion of intern stipend, supplies, materials, and displays.

**Early Detection** - Expenses and projects related to early detection activities. A portion of (6 %) intern stipend, supplies.

**Rapid Response (RR), Management** - Expenses and activities related to project(s) and any (8 %) subcontracts or partner proposals

**General Support** - Expenses related to communications, travel, etc. (12%)

Total: 100%

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