

# 2015

## WNY PRISM Annual Report



Prepared By

Andrea Locke, WNY PRISM Coordinator

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*Cover Photo: 2015 WNY PRISM Native Planting and Habitat Restoration Tour: RiverBend Project Site (Buffalo Niagara RiverKeeper)*

## Mission

The WNY PRISM mission is to proactively identify, evaluate and address invasive species priorities in western New York using a coordinated partnership of local professionals, organizations and private citizens to improve, restore and protect local aquatic and terrestrial resources.



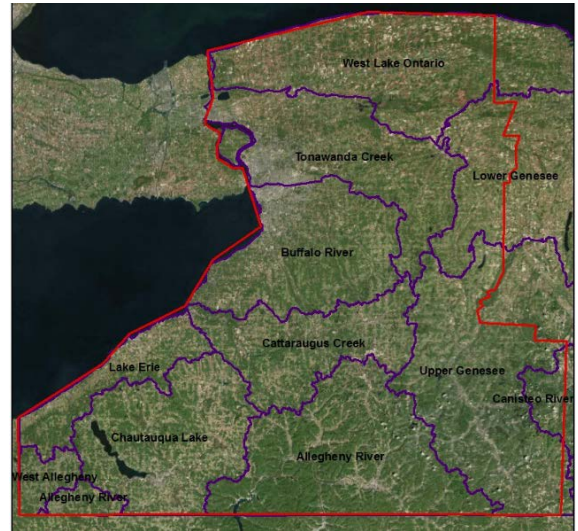
## Background

Recognizing the growing threat of invasive species, New York State (NYS) established the Invasive Species Task Force (ISTF), a multi-stakeholder working group made up of agencies, conservation organizations and business co-led by the NYS Departments of Environmental Conservation (DEC) and Agriculture and Markets (DAM), with the purpose to investigate invasive species issues and provide recommendations to the Governor and Legislature. The ISTF report, presented in 2005, identified 12 key recommendations which when implemented, would allow for NYS to effectively address invasive species.



Based upon the recommendations from the ISTF, NYS established the Invasive Species Council, Invasive Species Advisory Committee and formed the Office of Invasive Species Coordination within the DEC. Among the remaining 12 key recommendations was one that supported the creation of PRISMs, regional private-public partnerships designed to strategically deliver invasive species management functions. PRISMs coordinate invasive species management functions including coordinating partner efforts, recruiting and training citizen volunteers, identifying and delivering education and outreach, establishing early detection and monitoring networks and implementing direct eradication and control efforts. By spring 2014, eight PRISMs had been established, providing regional coverage for all of NYS. The Western New York Partnership for Regional Invasive Species Management (WNY PRISM) is one of these eight partnerships, and was established in January 2014. Funding for WNY PRISM is provided by the Environmental Protection Fund through a contract with DEC. WNY PRISM is hosted by the Great Lakes Center and is a sponsored program of the Research Foundation for SUNY Buffalo State.

WNY PRISM encompasses the counties of Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans and Wyoming. This area includes some of New York State’s most impressive natural features, such as Niagara Falls and the Niagara River, Lake Erie and Lake Ontario Shorelines, Forests of the Southern Tier, Zoar Valley, Iroquois National Wildlife Refuge, Letchworth State Park, and Chautauqua Lake. The Niagara River is a globally significant Important Bird Area with one of the world’s most impressive concentrations of gulls, with 19 species recorded. WNY includes major watersheds such as Lake Erie-Niagara River, Southwestern Lake Ontario, and Allegheny River, and is part of both the Great Lakes and Mississippi River Basins. The WNY PRISM region holds a population of over 1.55 million residents, and contains cultural and urban centers such as Buffalo, Jamestown, Lewiston, and Niagara Falls. Land dedicated to agricultural production includes over 1.4 million acres with an average farm size of 170 acres. This combination of geography, human factors and agriculture make WNY a globally unique and important place.



*Watersheds of western New York - USGS HUC 8 Watersheds.*

Once established, the WNY PRISM Office quickly began work to develop our regional partnership for the effective management of invasive species and to fulfill our ambitious Mission. In just two years, the WNY PRISM Network has grown to include over 60 Partner organizations including non-profits, universities, businesses, and local governments and agencies. Our many Partners bring together an incredible wealth of knowledge, drive and expertise in diverse fields including conservation, natural resources, habitat restoration, research, agriculture, urban planning, education and partnership building.



*Great Lakes Center at Buffalo State, faculty, staff, and students at the 2015 Open House held on May 8, 2015.*

WNY PRISM would like to thank our host organization, the Great Lakes Center at Buffalo State and the Research Foundation for SUNY at Buffalo State, as well as our State Partners from The New York State Invasive Species Research Institute, The New York State Invasive Species Coordination Unit, The New York State Invasive Species Council, and NY iMapInvasives. We would also like to thank our Steering Committee Members for the considerable time and effort they have committed to ensuring the success of WNY PRISM.

## WNY PRISM Steering Committee and Staff

### Steering Committee Members

<b>Alisia Vilonen</b>	New York State Department of Transportation
<b>Bob Smith</b>	New York State Nursery & Landscape Assoc., Chestnut Ridge Nursery
<b>Gregg Sargis</b>	The Nature Conservancy
<b>Helen Domske</b>	New York Sea Grant
<b>Jeff Diers</b>	Fredonia, Conewango Creek Watershed Association
<b>Jennifer Dunn</b>	New York State Department of Environmental Conservation
<b>Kerrie Gallo</b>	Buffalo Niagara Riverkeeper
<b>Lynn Greer</b>	United States Army Corps of Engineers
<b>Meg Janis</b>	New York State Office of Parks, Recreation and Historic Preservation
<b>Paul Fuhrmann</b>	Ecology & Environment, Inc.
<b>Robert Haltner</b>	United States Fish and Wildlife Service – Lower Great Lakes Office
<b>Shanna Shaw</b>	United States Department of Agriculture – Natural Resources Conservation Service
<b>Sharon Bachman</b>	Cornell Cooperative Extension of Erie County

### WNY PRISM Staff

#### **Dr. Christopher Pennuto**

Director

#### **Andrea Locke**

Coordinator

#### **Patricia Shulenburg**

Education and Outreach Assistant

#### **Mathew Bilz**

Invasive Species Management Assistant

#### **Lucy Nuessle**

Invasive Species Management Assistant

#### **Alexandra Wagner**

Invasive Species Management Assistant

## Introduction

Dear Partners,

WNY PRISM has seen considerable growth in 2015. As only our second year in operation, I am proud to see how much has been accomplished and how well we continue to set ourselves up for future success. WNY PRISM put forth an ambitious Work Plan for 2015, and I am excited to showcase our accomplishments and progress within this Annual Report. The WNY PRISM Annual Report is not only an opportunity to present our own highlights from the past year, it is also intended to provide an overview of all the incredible work our Partners are doing throughout the region. Much of our work wouldn't be possible without the efforts put forth by our Partners. As proud as I am of WNY PRISM and our entire staff, I am just as proud of the work you, our Partners, have accomplished this past year!

The WNY PRISM [2015 Annual Work Plan](#) provided the guidance for our work this past year, but was also designed to allow us to take advantage of unique opportunities that presented themselves. I can't say that we completed every action identified in our Work Plan in their entirety and to completion, as so many of our goals are long term and require to be built upon one another. However, WNY PRISM did address each planned action and set-up frameworks necessary to continue our growth.

The most significant growth WNY PRISM experienced in 2015 relates back to our strengthening Partnership Network. WNY PRISM continues to reach out to Partners, developing new relationships while continuing to build upon our old ones. We've also seen an increase in the number and variety of organizations, businesses, agencies and private citizens reaching out to WNY PRISM, eager to explore how we can work together. The connections made have led to unique opportunities and promises of a bright future. WNY PRISM became more involved within the entire region in 2015, working with Partners from each of our 8 counties. We've also begun to receive requests for assistance from organizations that found their way to WNY PRISM through word of mouth and our [website](#), connections we may not have otherwise been able to make.

Looking forward, I am confident that WNY PRISM will continue to grow, as we once again have an ambitious Work Plan. Our strategy is to build upon the programming that we've begun to develop, while developing new projects and programs to fill additional identified needs within the region. Some of the things we are most looking forward to for next year can be found throughout this report.

I would like to thank all of our Partners, whose dedication to invasive species management and education has led to the success of WNY PRISM. I would like to especially thank our Steering Committee Members, Working Group Members, Partners who have contributed to this Annual Report, and Partners who have worked with WNY PRISM on grant applications and invasive species removal projects. Without you, WNY PRISM would not continue to succeed.

Sincerely,  
Andrea Locke  
WNY PRISM Coordinator



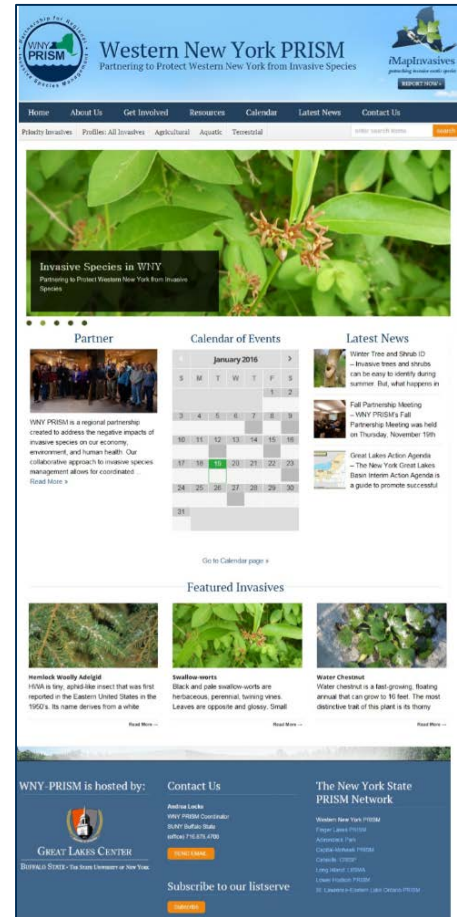
# Goals and Accomplishments

## 2015 Highlights

### WNY PRISM Website

WNY PRISM launched our website ([www.wnyprism.org](http://www.wnyprism.org)) in June, 2015. This considerable undertaking took over 6 months of planning and development. Input from all of our Partners was solicited in order to create a website that would meet the broad needs of the western New York region. Up-to-date information, single source of information and ease of use were the top Partner requests for a WNY PRISM website. We believe [www.wnyprism.org](http://www.wnyprism.org) addresses each of these, as well as many additional aspects that were identified by WNY PRISM and Partners. The website design was developed by My Digital Nature with whom we worked closely to ensure that the framework for the site would meet our regional needs from the moment we launched and well into the future.

Among our many website features, visitors will find a Calendar of Events, Latest News, Resources, Invasive Species Profiles and information on how to get involved. The Calendar of Events is updated regularly with invasive species related volunteer opportunities, trainings, festivals, webinars and meetings. The Latest News includes blog posts on PRISM activities, new research, Partner initiatives and many other topics. Best Management Practices, Field Guides, and information on Funding Opportunities can be found in our Resources section. An initial series of Invasive Species Profiles have been developed to provide more detailed information on species of concern and WNY PRISM priorities. Our Get Involved pages provide information for everyone from volunteers and citizen scientists to site managers, as well as those organizations that wish to become Partners and be more involved with PRISM efforts. Visitors to our website will also find WNY PRISM News and Reports, publications, regional priorities, and links to additional online resources.



The WNY PRISM website will continue to grow and add content, as we strive to meet the needs of our region. We will work to provide the most current and accurate information available, to ensure our regional invasive species management efforts remain effective and efficient.

### Regional Species Priorities

Early in 2015, WNY PRISM began the process of determining our regional invasive species priorities with the formation of Working Groups. Separate Terrestrial and Aquatic Invasive Species Working Groups were brought together and established priority species lists through a coordinated effort that included the use of NYS Invasiveness Rankings, western New York distribution data, broader landscape

distribution data, local expertise and other available information. Through this process, three species lists were created: Terrestrial, Aquatic, and Early Detection.

Terrestrial priorities include species that were primarily seen as management priorities by our Working Group. While some are widely distributed and well known within the WNY landscape, they continue to have significant negative impacts on our natural areas. Species identified should be strongly considered for removal in locations where they have the potential to spread and impact natural areas. In addition, many of these species pose an increased risk to habitat restoration sites as they establish quickly and further hinder the ability to establish native communities. As priorities, WNY PRISM will work to ensure land managers have the tools and technical assistance necessary to effectively manage these species.

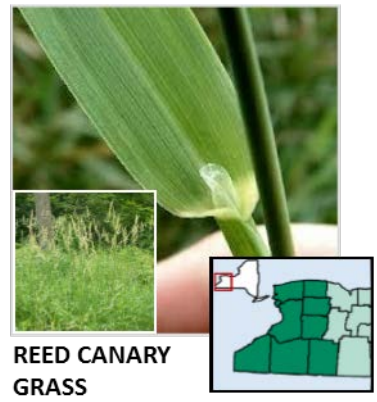
WNY PRISM’s aquatic priorities were selected using a similar method as were our terrestrial priorities. However, it was necessary to place an added emphasis on the availability of methods to manage species. In other words, a species needed to have an effective, associated action for management, within the capacity of WNY PRISM and our Partners, to be considered for our final list. Many aquatic species, while having significant negative impacts, are so well established within our waters, methods of removal, if they exist, are prohibitive. This is often due to the connectivity of our water systems and the non-target damage that would result from potential treatment. The species that were selected as our regional priorities have identified management actions that include removal or other types of control, prevention activities, or education and outreach.

Early detection priorities round out our regional species lists. In order to qualify as an early detection species, the species must occur on 3 or fewer sites within the WNY Region, based on current known infestation data. Each of these early detection species were originally identified as either a terrestrial or aquatic priority, but moved to the early detection list when it was determined they met this criteria. It is likely that a number of these species are already beyond the early detection stage and for this reason collecting better distribution and observation data will continue to be a priority for WNY PRISM.

As regional priorities, these species will provide a focus for WNY PRISM efforts. However, this does not exclude other invasive species from our scope of work. WNY PRISM will continue to address invasive species needs within the region, as our capacity allows. Priority species will also be revisited every few years. New invasive species are fast approaching and species currently known as early detection species may move beyond the threshold between early detection and established.

**Terrestrial Management Priorities**

- |                                |                        |
|--------------------------------|------------------------|
| 1. <i>Adelges tsugae</i>       | Hemlock Woolly Adelgid |
| 2. <i>Agrilus planipennis</i>  | Emerald Ash Borer      |
| 3. <i>Cirsium arvense</i>      | Canada Thistle         |
| 4. <i>Cynanchum louiseae</i>   | Black Swallow-wort     |
| 5. <i>Cynanchum rossicum</i>   | Pale Swallow-wort      |
| 6. <i>Lonicera spp.</i>        | Bush Honeysuckles      |
| 7. <i>Phalaris arundinacea</i> | Reed Canary Grass      |
| 8. <i>Phragmites australis</i> | Phragmites/Common Reed |
| 9. <i>Reynoutria spp.</i>      | Knotweeds              |
| 10. <i>Rhamnus cathartica</i>  | Common Buckthorn       |

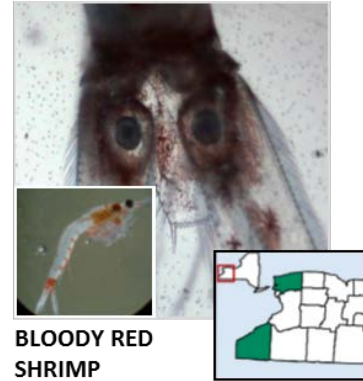


**REED CANARY GRASS**



## Aquatic Priorities

- |                                       |                   |
|---------------------------------------|-------------------|
| 1. <i>Corbicula fluminea</i>          | Asian Clam        |
| 2. <i>Hemimysis anomala</i>           | Bloody Red Shrimp |
| 3. <i>Hydrilla verticillata</i>       | Hydrilla          |
| 4. <i>Hydrocharis morsus-ranae</i>    | European Frog-bit |
| 5. <i>Orconectes rusticus</i>         | Rusty Crayfish    |
| 6. <i>Scardinius erythrophthalmus</i> | Rudd              |
| 7. <i>Trapa natans</i>                | Water Chestnut    |



## Early Detection Priorities – “Watch List”

- |                                       |                         |
|---------------------------------------|-------------------------|
| 1. <i>Anoplophora glabripennis</i>    | Asian Longhorned Beetle |
| 2. <i>Brachypodium sylvaticum</i>     | Slender False Broome    |
| 3. <i>Channa argus</i>                | Northern Snakehead      |
| 4. <i>Eichhornia crassipes</i>        | Water Hyacinth          |
| 5. <i>Hypophthalmichthys molitrix</i> | Silver Carp             |
| 6. <i>Hypophthalmichthys nobilis</i>  | Bighead Carp            |
| 7. <i>Microstegium vimineum</i>       | Japanese Stiltgrass     |
| 8. <i>Persicaria perfoliata</i>       | Mile-a-Minute           |
| 9. <i>Pistia stratiotes</i>           | Water Lettuce           |



Priority Species Photo Credits: Reed Canary Grass - WNY PRISM, Bloody Red Shrimp - (large photo) Department of Fisheries and Oceans Canada Archive, (small photo) NOAA Great Lakes Environmental Research Archive, Water Lettuce - Leslie J. Mehrhoff, UCONN, Bugwood.org.

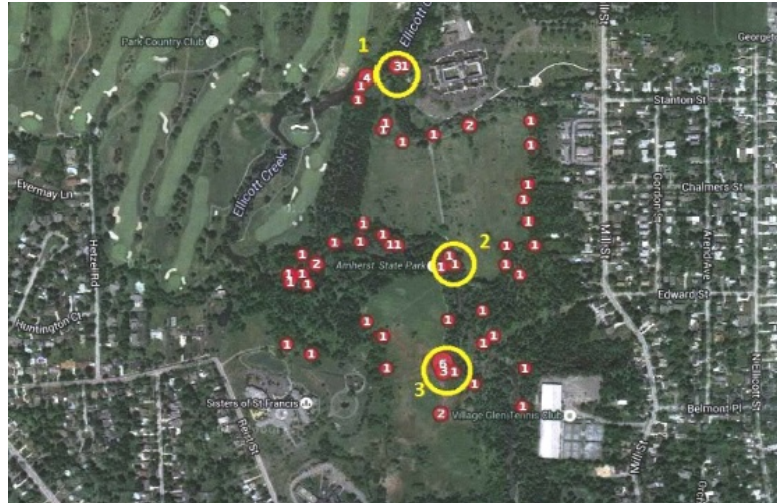
## Working with Municipalities

Based upon a significant identified need within the WNY Region, WNY PRISM, along-side our Education and Outreach Working Group, prioritized the development of resources for local governments and municipalities. This effort kicked off with a presentation to the Erie County Council of Governors in early spring, where WNY PRISM was able to bring attention to the necessity of including invasive species issues in local planning.

WNY PRISM developed an informational sheet that will serve as a resource for municipalities and those responsible for local planning. This document is not intended to replace the all-important conversation, but rather it is intended to serve as a reminder and something to have on hand when a question or concern comes in from their constituents. The Education and Outreach Working Group continued to address this issue with a plan for developing a series of toolkits/resources for municipalities. Our expectation is to begin 2016 with road crew best management practices, with future resources to include landscaping, management planning and education and outreach materials.



WNY PRISM continued our focus on working with municipalities as an extension of an effort to assist Amherst State Park (ASP) with mapping invasive species along the trails present on-site. Amherst State Park is an 80 acre parcel of land located in the Village of Williamsville and Town of Amherst. This site is partially owned by the state, partially owned by the Town of Amherst, and managed by a highly dedicated group of volunteers alongside the Town of Amherst. The WNY PRISM Crew surveyed the park and provided ASP volunteers with a written report on the species present, options for management and information for proposed educational efforts. We continued to assist with the development of educational signs that were placed at selected points along trails. These signs identified and provide information on invasive species that are present in those locations. Amherst State Park volunteers also created an impressive interactive invasive species map on their website (<http://amherststatepark.org/asp/welcome.html>).



Amherst State Park Invasive Species Map, yellow circles indicate areas to place educational signs. Map was developed using iMapInvasives online database.



Amherst State Park Invasive Species Educational Sign, developed by Gerald Wochadlo, Amherst State Park Volunteer.

WNY PRISM's partnership with Amherst State Park continued when the Town of Amherst asked WNY PRISM to participate in a newly formed Invasive Species Taskforce. One of the first items addressed by this Taskforce was identifying a location for a pilot invasive species removal program. The work ASP volunteers and WNY PRISM completed at Amherst State Park provided the Town of Amherst with the perfect location to focus their invasive species efforts, since the first steps towards creating a management plan were already in

place. Amherst State Park was selected as the location for a pilot invasive species removal program and we are looking forward to continuing our work with ASP volunteers and the Town of Amherst to implement a successful program.

## Partner/Network Coordination

*Establish a partnership network and communication for those involved in invasive species information and management within the WNY PRISM region. Facilitate opportunities for cooperation including sharing of information, personnel, equipment and expertise.*

Partnership and Network Coordination is at the core of WNY PRISM. It is through our relationships that we are able to fulfil our mission to address invasive species priorities in Western New York. Perhaps the most difficult of our Goals to measure, we've done so by seeing new Partners join with us and seeing an increase in the number of projects that involve WNY PRISM and multiple Partners. WNY PRISM found success building our network in 2015, which is demonstrated by our many related accomplishments. Efforts in 2015 focused both on meeting with new Partners and strengthening our relationships with those Partners we've been working with since early 2014. Our key strategies for building our network are identifying key Partners and Stakeholders within the western New York region, establishment and improvement of communication, sharing of information and resources, providing assistance and collaboration opportunities for those Partners seeking grant funding for projects, and coordinating with other PRISMs and the statewide network developed by the New York State's Office of Invasive Species Coordination. This statewide network includes the Invasive Species Research Institute (ISRI), iMapInvasives, and Cornell Cooperative Extension (CCE).

### *WNY PRISM Coordination*

- Hired 3 Invasive Species Management Assistants (Crew).
- Hired Education and Outreach Assistant.
- Developed Working Groups.
- Provided continuing education opportunities for staff including trainings and online resources.
- Provided the Great Lakes Center with information and articles for newsletters and annual report.
- Received general Letters of Support for WNY PRISM from Partners.
- Held 4 Steering Committee Meetings
- Held 2 Full Partnership Meetings.



*2015 WNY PRISM Seasonal Crew from left to right, Lucy Nuessle, Lexy Wagner, Patricia Schulenburg, Mathew Bilz.*

### *Regional Partnership*

- Attended Great Lakes Action Agenda Meetings and participated in coordinated efforts.
- Participated in WNY Emerald Ash Borer Taskforce Meetings.
- Provided 2 Letters of Support for USFWS as they sought funds for separate Education and Site Restoration Projects.
- Provided comments from WNY PRISM and Partners to DEC regarding General Permit GP-0-15-005, as a coordinated western New York effort.

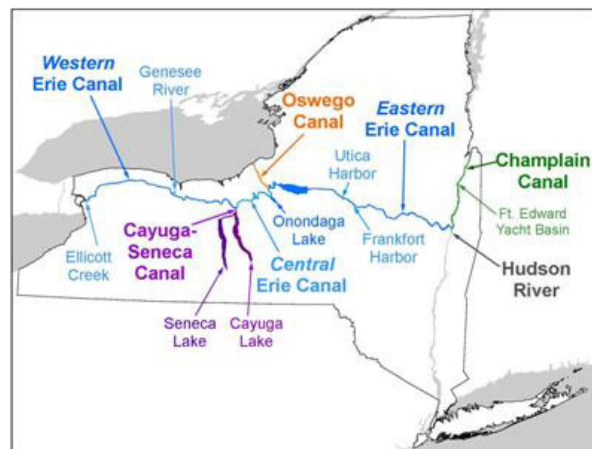
- Participated in the Town of Amherst Invasive Species Task Force.
- Participated in working group focused on development of WNY Native Plant Nursery, led by the Western New York Land Conservancy.

### Statewide PRISM Network

- Participated in Quarterly PRISM Leaders meetings and calls.
- Participated in Monthly New York State Invasive Species Speaker Series.
- Participated in Cornell Cooperative Extension Invasive Species In-Service.
- Participated in New York State Invasive Species Priority Setting Initiative led by the Invasive Species Research Institute.
- Worked closely with iMapInvasives on trainings and data uploads.
- Worked with PRISM Leaders on various efforts including:
  - Website development (FL-PRISM, APIPP)
  - Best Management Practices (LH PRISM, APIPP)
  - *Brachypodium sylvaticum* management (LIISMA, FL-PRISM)
  - Boot brush stations (FL-PRISM, ISC)
  - Pesticide 2ee development (LH PRISM, APIPP, CAP-MO)
  - Management resources for Partners and private landowners (APIPP, LIISMA)

### NYS Canal System Invasive Species Priorities

In 2015, WNY PRISM was given the opportunity to assist Energetics, INC. as they sought information on invasive species and the New York State Canal System. Energetics, INC. proposes to increase commercial traffic within the canal system, as an alternative to truck transport. However, there was a resulting concern about the potential for increased spread and impact of invasive species. Working in partnership with iMapInvasives, DEC, and FL-PRISM, WNY PRISM produced a report on invasive species present within the NYS Canal System, their potential for spread and further establishment, and prevention mechanisms that may be put in place.



Map of the NYS Canal System, photo credit: NYS Canal Corporation <http://www.canals.ny.gov/navinfo/>.

The report produced by WNY PRISM identified 9 species of high concern currently present within the canal system: hydrilla (*Hydrilla verticillata*), water chestnut (*Trapa natans*), starry stonewort (*Nitellopsis obtusa* L.), bloody red shrimp (*Hemimysis anomala*), brittle naiad (*Najas minor*), European frogbit (*Hydrocharis morsus-ranae*), Eurasian water-milfoil (*Myriophyllum spicatum*), scud (*Echinogammarus ischnus*) and round goby (*Neogobius melanostomu*). Also identified were 6 species currently found within the Great Lakes Basin, but not yet present in the canal system. These species include silver and bighead carp (*Hypophthalmichthys spp.*), tubenose goby (*Preterorhinus semilunaris*), northern snakehead (*Channa argus*), zander (*Sander lucioperca*), Asian clam (*Corbicula fluminea*) and faucet snail (*Bithynia tentaculata*).

## Information Management

*Collect, utilize and share information regarding invasive species management including species, pathways of invasion, surveys, infestations, control methods, monitoring, research, current efforts/projects and opportunities for partner collaboration.*

Ensuring that the Western New York Region has accurate and current information on invasive species and invasive species issues is a primary focus for WNY PRISM. The ability to manage invasive species on a regional and landscape scale requires a broad understanding of the issues at hand, as well as having resources available to assist with on-the-ground management and removal of established species. In 2015, WNY PRISM worked to improve upon the information available for our region by identifying research priorities, continuing our work with iMapInvasives, increasing content within our online platforms, and identifying contacts and resources for our Partners and Private Landowners including creation of a list of contractors available for invasive species removal work and sources of technical assistance. WNY PRISM continues to identify both information needs and how they may be addressed.

## Invasive Species Research Institute

WNY PRISM reached out to our Partners in 2015 to develop a list of research priorities for western New York and we received research topics from across our region. Once collected, suggestions were sent to the New York State Invasive Species Research Institute (ISRI), where they were combined with research priorities provided by other PRISM regions. Statewide suggestions were numerous and covered a wide diversity of study areas, but within them, themes emerged. Biocontrols, improved management options, monitoring advancements and predicting/projecting future invasions were among the top themes identified.



### *WNY PRISM Research Priorities*

- eDNA - increasing the number of markers/sequences available for testing.
- Increase research and funding for hemlock woolly adelgid biocontrols.
- Need to better quantify impacts of invasive species on tourism.
- Effectiveness of boat wash stations.
- Remote sensing/surveys - use of drone and aerial technology.
- Bat populations in WNY and white nose syndrome - are there any hibernacula not effected by white nose syndrome that we can protect?

Research priorities provided by other PRISMs included projecting invasive species distribution and abundance in light of climate change; creation of a statewide invasive species priority setting model; biocontrols for swallow-wort (*Cynanchum spp.*), knotweed (*Reynoutria spp.*), and phragmites (*Phragmites australis*); understanding and prediction of Pathways of Invasion; assessing control methods; developing control methods; and invasive species impact studies. The ISRI will work to further prioritize these research needs on a statewide level and seek opportunities to support and/or implement research projects.

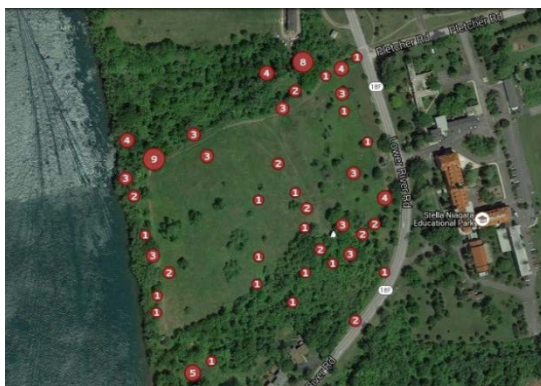
## iMapInvasives Initiative

In 2015, WNY PRISM continued to broaden our understanding of regional distribution of invasive species by working with iMapInvasives and Partners to submit observation data. We reached out to Partners for assistance in submitting observations for particular species that had noticeable and significant data gaps within iMapInvasives. One such species was lesser celandine (*Ranunculus ficaria*). This common species was inaccurately listed as an early detection species for WNY due to the low number of observations within iMapInvasives. Through mobilization of the WNY PRISM Crew and citizen scientists, we were able to show a more accurate distribution of lesser celandine within the region, moving the species beyond early detection status. A similar effort was put forth to fill data gaps with other common species, providing a far more accurate view of species distribution in WNY.



WNY PRISM Crew mapping invasive species as part of their early season training, at LaSalle Park in Buffalo.

WNY PRISM continued our efforts to train Partners, teachers and citizen scientists on how to use iMapInvasives. We held our Spring Blitz training, in partnership with iMapInvasives, at Buffalo Audubon Beaver Meadow Preserve. This event trained attendees in invasive species ecology, identification, basic iMapInvasives data entry, advanced project and survey use, and included a field session which introduced attendees to the new mobile observation tool. Additional trainings and workshops included presenting iMapInvasives to Buffalo Public School Teachers and presenting the tool as part of a Master Teacher's Course. Both efforts focused on demonstrating how iMapInvasives can be used in the classroom. We continued to work with teachers and the iMapInvasives team throughout the year to develop projects and lesson plans for classrooms.



Western New York Land Conservancy's Stella Niagara Preserve, invasive species map based on WNY PRISM Crew's survey, using iMapInvasives.

The WNY PRISM Crew mapped invasive species throughout the region, including 6 projects. Each project involved a Partner who is interested in using the collected data to inform management decisions moving forward. One such project included the mapping of trails at Bergen Swamp, home to the only known population of *Brachypodium sylvaticum* in WNY. The Bergen Swamp Preservation Society is no stranger to invasive species management. They have been treating phragmites for a number of years and are researching methods of effectively removing the *Brachypodium*. Mapping has provided a better distribution data on the *Brachypodium* infestation as well as provided information on additional

species that will be treated in the future. We also mapped invasive species at Stella Niagara Preserve, a new acquisition of the Western New York Land Conservancy. The Land Conservancy, based on our efforts and recommendations, added reed canary grass to their planned phragmites treatment shortly after our mapping. They plan to address additional invasive species in their management and restoration plans for the site, and have recently unveiled their Vision Plan for Stella Niagara.

## Regional iMapInvasives Report

- 550 Observations
- 12 Projects
- 61 Species
- 28 Observers
- 11 Organizations
- WNY PRISM Staff
  - 352 Observations
  - 6 Projects
  - 54 Species
  - Confirmed Project Observations



## Online Platforms

- **WNY PRISM Website:** [www.wnyprism.org](http://www.wnyprism.org) – WNY PRISM launched our website in June, 2015.
- **Listserve** – At the close of 2015, The WNY PRISM Listserve included 233 members, which is a 26% increase in the number of members over 2014. Information distributed through the listserve included PRISM updates, press releases, grant opportunities, job descriptions, invasive species information, research, regional projects, and information requests.
- **Facebook** – In 2015, WNY PRISM’s Facebook page was visited 354 times, posts reached 20,822 people and we received 68 additional page likes.
- **Twitter** – WNY PRISM’s twitter page had 41 tweets, 56 likes, and 42 new followers in 2015.
- **NYIS.info** – WNY PRISM continued to update our page on NYIS.info with links to our website and posting Steering Committee and Partnership Meeting Summaries.

## Addressing Additional Needs

Additional information needs have been identified by WNY PRISM Partners and our Working Groups. To address these, WNY PRISM has developed 2 Student Intern Projects designed to provide a learning experience for college students and fulfill professional internship requirements.

The first of our projects is focused on Aquatic Invasive Species (AIS) and spread prevention. Preventing the spread of AIS has become a focus throughout NYS and an emphasis has been placed on increasing prevention and educational efforts at boat launches and other recreational water access points. This project will focus on collecting information on public access boat launches, current boat stewardship programs, and organizations interested in implementing a boat stewardship or educational program. The second project is focused on Habitat Restoration and Invasive Species Removal Projects. Many projects have been implemented across WNY PRISM over the years, however information remains scattered. This project will involve collecting information on the following aspects of past and current invasive species management projects: project goals, target species, methods, partners involved, funding sources, follow-up monitoring and management, and lessons learned. Information will be used to assist project managers as they develop and implement future restoration projects.

## Education and Outreach

*Increase the public, partner, and stakeholder awareness, understanding and participation in invasive species issues and management within the WNY PRISM region, through effective educational and outreach efforts.*

It was a rewarding and busy year for WNY PRISM in regards to our robust education and outreach efforts. We successfully launched our new website [www.wnyprism.org](http://www.wnyprism.org), which is described in more detail within our 2015 Highlights section (page 7), and attended many community events and farmer's markets. We developed our new e-newsletter, which will be distributed twice a year. The first issue was released in spring 2015, with a second in the fall. Our newsletter provides information on current efforts, invasive species news, updates, and includes a Partner Spotlight. WNY PRISM also created outreach materials that will provide our region with information on our priority invasive species, and we proudly welcomed thousands of visitors to our display, workshops and presentations.



Community outreach efforts were focused on Partner Events throughout the region. We staffed displays at the Great Lakes Experience Festival, Reinstein Woods Fall Festival, 100<sup>th</sup> Anniversary Forest Fest in Genesee County, North Tonawanda Farmer's Market, and Clarence Hollow Farmer's Market. A unique event for us was the Great Blue Heron three-day music festival, held over the Fourth of July holiday weekend. Thousands of guests visited our table and enjoyed great music! The Great Blue Heron Music Festival has a long-standing history of emerald ash borer education and adhering to the recommendations of Don't Move Firewood campaigns and NYS firewood regulations. This was a great opportunity to be involved in this effort.



WNY PRISM Crew (Mathew Bilz, Lucy Nuessle, Patricia Schulenburg) at the Great Lakes Experience Festival in Dunkirk.

We worked with our Partners and Education and Outreach Working Group Members to ensure that a consistent invasive species message was presented across the region. Through our Partners, WNY PRISM distributed materials and information to 7 of our 8 County Fairs. Canal Fest of the Tonawandas, one of our most successful outreach events, saw WNY PRISM partnered with the NYSDEC and USACE to inform citizens about the Tonawanda Creel/Erie Canal Hydrilla Demonstration Project, and provided additional invasive species information. WNY PRISM also participated in the Great Lakes Awareness Day at the Aquarium of Niagara.



Hundreds of guests with their families toured the aquarium, watched the sea lion shows, and learned about Great Lakes ecology, including invasive species. Our efforts continued into the fall, when we participated in Buffalo Audubon Society's Environmental Exploration Career Day. This event brought together professionals from across the region and state to show the many opportunities available for high school students as they look toward entering college and finding a career.



WNY PRISM Display at Canal Fest of the Tonawandas.

## Education and Outreach Working Group

The formation of our Education and Outreach Working Group allowed for WNY PRISM to establish a much needed focus for our regional education efforts. The Working Group identified specific needs for continued education within the region, beginning with coordinated and consistent invasive species messaging. WNY PRISM addressed this by first taking a look at all of the print and online materials we have produced to ensure consistent branding through standardization of WNY PRISM logos and colors, terminology and formatting, along with the development of a WNY PRISM style guide. Second, we looked at external materials to ensure that we weren't providing information to our region with contradictory, outdated or otherwise detrimental information to our efforts. Third, we communicated with Partners on important messages such as prevention, early detection, effective management strategies and regional priorities. And finally, WNY PRISM worked to provide Partners within each of our Counties educational materials for their outreach efforts.

In addition to consistent messaging, the Working Group identified a need to provide assistance to local governments and municipalities. WNY PRISM's efforts to address this can be seen in more detail within our 2015 Highlights section of this report (pages 7-10).

## Priorities Fliers

Once WNY PRISM established our regional Terrestrial and Aquatic Species Priorities, the next step became getting word out to the public and our Partners. To do this, WNY PRISM placed the priorities on our website and began creating Invasive Species Profiles for those species that made our priority lists. We also created [Keep A Lookout! Fliers](#) for our terrestrial priorities and aquatic plant priorities. These fliers include pictures and written descriptions to assist with identification, and they include maps

based on current known distribution data. WNY PRISM Counties where the species has been confirmed present are highlighted, as well as adjacent counties within the FL-PRISM where the species has been confirmed. For those species not yet in or near our region, you'll find indications of how close these species are to WNY PRISM.

### **Invasive Species Awareness Week**

WNY PRISM coordinated and hosted several events for the 2<sup>nd</sup> Annual NYS Invasive Species Awareness Week (ISAW), which was held during the week of July 12 - 18, 2015. Events included a Community First Detector Invasive Pest Detection Workshop presented by the National Plant Diagnostic Network, held at Fredonia. Presenters came in from as far as Florida as citizen scientists and professionals received training on how to identify and submit samples for invasive forest pest species. Participants were provided with sampling kits and vouchers. We also partnered with the Western New York Land Conservancy for a volunteer workday at their Kenneglenn Scenic and Nature Preserve. Volunteers and Staff worked to remove bush honeysuckle (*Lonicera spp.*) from along trails within the preserve using tools such as the Uprooter, and pulled a small infestation of garden valeriana (*Valeriana officinalis*), which had begun to encroach from the roadside.



*Invasive Species Awareness Week Community Forest Pest Detection Workshop at Fredonia, presented by the National Plant Diagnostics Network.*



*WNY PRISM Native Plantings and Habitat Restoration Tour, Native Planting Site at Tiff Nature Preserve*

WNY PRISM hosted our first Native Planting and Habitat Restoration Tour during ISAW. The tour included visits to five restoration sites in the Buffalo area: Buffalo Niagara Riverkeeper's RiverBend, Erie County's Seneca Bluffs, Buffalo Creek Oxbow Wetland, Times Beach Nature Preserve, and Tiff Nature Preserve. Each of these restoration sites highlighted a different stage of restoration and management strategies based on their unique goals and site conditions. Guided tours were provided by Partners at some sites, while other sites made use of the provided tour guide, which included information for self-guided tours. Attendees also received, a book on native plants from Buffalo Niagara Riverkeeper, and information on WNY PRISM and invasive species.

*WNY PRISM hosted, participated, and/or provided support in planning for the following Education and Outreach Events held in 2015*

## Trainings and Workshops

Event	Partners	Date	Attendees
Buffalo Public School ISEP Workshop	BPS, Sea Grant	1/15/2015	35
Forest Pest 1 <sup>st</sup> Detector Training	RTPI	2/23/2015	15
Forest Pest 1 <sup>st</sup> Detector Training	CCE, Cornell	2/24/2015	30
23 <sup>rd</sup> Annual Rural Landowners Workshop	CCE	3/7/2015	100
iMapInvasives Training – Buffalo Audubon	BA, iMap	4/16/2015	16
IS Management Workshop	Buffalo Audubon	5/14/2015	17
Community 1 <sup>st</sup> Pest Detector Workshop	NPDN, Fredonia	7/14/2015	15
Day in the Life of the Buffalo River	Reinstein Woods	10/8/2015	25

## Outreach and Volunteer Events

Event	Partners	Date	Attendees
PLANT WNY Landscape & Nursery Tradeshow	CCE, CNLP	2/5/2015	300
Buffalo State Arbor Day	Buffalo State	4/21/2015	400
Great Lakes Center Open House	Buffalo State, GLC	5/8/2015	30
Chautauqua Lake Spring Lake Rally	CLWMA	5/9/2015	85
Great Lakes Experience Festival	USFWS	6/13/2015	3,000
North Tonawanda Farmer's Market		6/18/2015	300
Clinton Bailey Farmer's Market		7/2/2015	30
Great Blue Heron Music Festival		7/3/2015	6,500
Native Plant and Restoration Tour	BNR, Tiffy NP, Erie Co.	7/16/2015	26
Kenneglenn Volunteer Workday	Land Conservancy	7/17/2015	15
Canal Fest of the Tonawandas	DEC, BNR, USACE	7/19/2015	200,000
Downtown Country Market		8/25/2015	400
Great Lakes Awareness Day	Sea Grant	8/26/2015	1,000
100 <sup>th</sup> Anniversary Forest Fest	Genesee County	8/29/2015	100
Clarence Hollow Farmer's Market		9/5/2015	250
Reinstein Woods Fall Festival	DEC	9/19/2015	1,700
Environmental Exploration Career Day	Buffalo Audubon	9/19/2015	200
11 <sup>th</sup> Annual Environmental Summit	Daemon College	9/26/2015	85

## Presentations

Event	Partners	Date	Attendees
Erie County Water Quality Committee Mtg.	Erie County E&P	1/21/2015	20
Great Lakes Seminar – GLC 600	Buffalo State, GLC	2/11/2015	8
Bond Lake Park – National ISAW	Bond Lake	2/28/2015	18
2 The Outdoors Environmental Forum	2 The Outdoors – WGRZ	3/11/2015	75
Association of Erie County Governments		4/23/2015	40
Silver Lake Association Meeting		5/9/2015	32
EAB Public Information Meeting	CCE, WNY EAB Taskforce	6/3/2015	110
Rushford Lake Landowners Association		6/13/2015	55
Tropical Fish Club of Erie County		7/21/2015	45
NYSFOLA Western Region Meeting		10/17/2015	64
Great Lakes Center Open House	Buffalo State, GLC	11/13/2015	15

## Prevention

*Facilitate the prevention of new occurrence, spread and further establishment of invasive species within the WNY PRISM region through understanding of pathways of invasion and targeting of priority conservation areas. Prevention measures must address both the movement of invasive species in and out of the WNY PRISM region.*

WNY PRISM strives to maintain close communication with Partners on potential and emerging invasive species threats to our region, while also sustaining a public awareness of these issues. In order to do this, WNY PRISM encourages the sharing of information and the use of all tools available. National prevention campaigns such as Don't Move Firewood and Clean Drain Dry are integrated into our efforts and programming. Prevention efforts also tie-in strongly with our Education and Outreach programming, but include a greater emphasis on action steps.



## Aquatic Invasive Species

In recent years, the increased awareness over the growing threat of AIS has led to the desire to establish effective spread prevention programs. This is desire and need is especially great in the western New York region, where current efforts are limited in scope. In 2015, WNY PRISM worked closely with New York Sea Grant, NYS Parks, Recreation and Historic Preservation, and additional Working Group Partners to further develop train-the-trainer programs. This program was designed to provide Lake Associations and other volunteer groups with the background knowledge and tools necessary to develop watercraft inspection programs. WNY PRISM also reached out to Lake Associations in the region to begin conversations about the types of programs that may be appropriate for their individual situations.

## Terrestrial Invasive Species

Terrestrial invasive species effectively use many Pathways of Invasion. In order to address one such pathway threatening our protected natural area, WNY PRISM began developing a Boot Brush Station Pilot Program. With assistance from Partners, we took the first steps toward establishing boot brush stations at trailheads around the region. These stations will include educational signs and boot brushes that encourage hikers to clean mud and plant material from the bottom of their boots before entering and leaving the trails. Many Partners have shown interest in placing boot brush stations at their trailheads and WNY PRISM is looking forward to working with them in the coming year.

## 6 NYCRR Part 575: Prohibited and Regulated Invasive Species

In March 2015, new regulations went into effect which are intended to help control invasive species by reducing their introduction and spread. Under these regulations, DEC and DAM created a list of prohibited and regulated species for which it is now unlawful in NYS to knowingly possess with the intent to sell, import, purchase, transport, or introduce. WNY PRISM worked with Partners regionally and across the state to increase the awareness and understanding of these new regulations. The full terms including the list of prohibited and regulated species can be found on DEC's website, here: <http://www.dec.ny.gov/regulations/93848.html>.

## Early Detection and Rapid Response

*Develop effective early detection, assessment and rapid response protocol(s) for the WNY PRISM region including mapping procedures, volunteer training/involvement, Best Management Practices, permit regulations and response teams, and provide assistance to partners for implementation of recommended protocols.*

Early Detection and Rapid Response efforts truly began to take form for WNY PRISM in 2015. As we have improved our understanding of invasive species presence and distribution across the region, we've been better able to determine which species are early detection and further able to focus our efforts on projects that better meet our regional needs.



*Above: Hydrilla found during pre-treatment survey of Tonawanda Creek/Erie Canal. Left: Hydrilla sampling was done by using the rake toss method, photo provided by USACE.*

In 2015, WNY PRISM worked on a number of early detection projects with our Partners including assisting US Army Corps of Engineers (USACE), DEC and the US Fish and Wildlife Service (USFWS) on implementation of the Tonawanda Creek/Erie Canal Hydrilla Control Demonstration Project. Our Crew spent a couple of days working on boats doing pre-treatment surveys, and staffed the informational booth at Canal Fest of the Tonawandas alongside Partners. We also worked with DEC on their WAVE (Water Assessments by Volunteer Evaluators) Program. In addition to volunteers collecting benthic macroinvertebrates to assist in determining water quality of wadeable streams, they are now also encouraged to look for invasive species as part of their surveys. WNY PRISM developed and provided training and reference materials for volunteers that include many of our priorities and early detection species.

WNY PRISM continued our work with the Water Chestnut Working Group, assisting with coordination, planning and permitting for removal and survey efforts throughout the Southern Tier. The WNY PRISM Crew surveyed the Chautauqua Lake Outlet for invasive species, focusing on water chestnut (*Trapa natans*) and hydrilla (*Hydrilla verticillata*). Hydrilla was not found during this survey, but we did map and remove a single, small infestation of water chestnut. Our Crew also surveyed for oriental weatherfish (*Misgurnus anguillicaudatus*) in Ball Creek, where it has been periodically found, beginning in 2004. A single fish was found and removed during this survey.



*WNY PRISM Crew surveying for oriental weatherfish in Ball Creek, Chautauqua County. From left to right, Lexy Wagner, Dr. Christopher Pennuto, Lucy Nuessle.*

## Monitoring



iMapInvasives observation data for WNY PRISM Early Detection Species.

With the development of WNY PRISM's Early Detection Priorities came the opportunity to begin development of monitoring and rapid response protocols. Beginning this coming year, WNY PRISM will start monitoring selected sites where early detection species have been found. Throughout 2015, we collected information on qualifying sites and species to determine our monitoring list. Of particular interest is water hyacinth (*Eichhornia crassipes*), which has now been found in 2 separate locations within WNY. Interest in water hyacinth has increased in the past few years due to questions being raised about its ability to persist in northern climates. In 2014 and 2015, it was found in Tonawanda Creek and a Niagara County Park, respectively. In both cases, all individuals were manually

removed upon discovery. Initial steps for development of rapid response protocols for priority species were taken by our Working Groups. This process began with a review of available protocols and other models of response that may prove successful in WNY.

## Hemlock Woolly Adelgid

WNY PRISM began the year coordinating with Partners on Hemlock Woolly Adelgid (HWA) volunteer training and surveys. Among the numerous surveys conducted in Chautauqua County and other areas in WNY, the only new infestation found was in Fredonia, at the College Woodlot. This infestation was treated by SUNY Fredonia personnel. Post-control monitoring will continue at the College Woodlot, as well as at Fredonia's College Lodge, where HWA has yet to be detected. In response to the detection at Fredonia, WNY PRISM worked to bring an invasive pests workshop, presented by the National Plant Diagnostic Network, to campus during Invasive Species Awareness Week. Additional forest pest trainings were held in Genesee and Erie Counties earlier in the year, as part of Emerald Ash Borer Awareness Week. As 2015 came to a close, WNY PRISM continued to assist in providing volunteer training, including support for The High Allegheny Hemlock Partnership.

## Spotted Wing Drosophila

The WNY PRISM Crew assisted Erie County Cornell Cooperative Extension with their Spotted Wing Drosophila (SWD) monitoring program. The Crew spent 3 days over the course of 3 weeks collecting and counting traps set at an East Aurora, NY Farm. While SWD were identified within the traps, the number was low. Monitoring will continue in order to determine if populations are increasing. If populations near the threshold of impacting agricultural production, preventive practices may be considered for implementation.



WNY PRISM Crew member Lexy Wagner counting SWD traps with CCE of Erie County. Inset picture is a male SWD, found during monitoring.

## Management and Habitat Restoration

*Assist partners with control of invasive species (eradication, containment, suppression) on high priority conservation areas based on identified regional conservation targets. Assist with the establishment of long-term management and monitoring, and the restoration of impacted sites to healthy native vegetation, to provide increased resilience against future invasions.*

WNY PRISM's efforts towards management and habitat restoration followed two distinct strategies in 2015. First, WNY PRISM worked closely with our Partners to implement on-the-ground invasive species management projects, providing the much needed assistance to move these priority projects forward. In order to provide this service to our region, WNY PRISM needed to expand upon the capacity and abilities of our Invasive Species Management Crew. This was done through a dedication of time and resources to increase training for staff, which included training in the safe and effective use of herbicides. We also purchased new tools that allowed us to treat a broader list of species more effectively. As we continue to build our internal capacity for invasive species removal work, we look towards our Partners for continued assistance.

Our second strategy involves developing a broader understanding of management planning within our region and among our Partners. We held a management planning workshop at Buffalo Audubon's Beaver Meadow Preserve that was well received, and assisted multiple Partners with review of invasive species removal and habitat restoration plans. We were also involved in a number of planning efforts including that for Red Jacket Park and Seneca Bluffs with Erie County Department of Environment and Planning, and the Western New York Land Conservancy's Stella Niagara Preserve.

In addition to the field projects described below, WNY PRISM assisted Partners on a number of other efforts. WNY PRISM worked with Buffalo Niagara Riverkeeper with invasive species removal at RiverBend, a shoreline restoration project along the Buffalo River, and removed invasive shrubs from Kenneglenn Scenic and Nature Preserve, a property owned and managed by the Western New York Land Conservancy. We also assisted MARSB with their Ash Seed Collection Program by conducting regional outreach and coordination for location scouting and collection among volunteers. MARSB efforts were very successful in 2015, surpassing their goal of 150 collections from across the state with 220 total collections. The success of this program will ensure we don't lose the genetic diversity of our ash due to the devastation from the emerald ash borer.

### Knotweed Removal Project – Great Lakes Center

Japanese, giant and bohemian knotweed (*Reynoutria spp.*) are priority species for WNY PRISM. Standard treatments for knotweed, while having the potential to be very effective, also have a number of drawbacks. Mechanical methods, such as mowing may suppress this species, but this must be done continually and it comes with the added risk of spread. Manual removal of the entire root structure is time intensive and depending on the size of the infestation can be cost prohibitive and cause too much collateral damage. Foliar herbicide



*Stem-injection herbicide treatment*

treatments are less effective than would like and multiple broadcast treatments are required for many years before eradication is possible. The most promising treatment is the use of stem-injectors to inject herbicide directly into the hollow stem of the plant. The primary drawbacks to this treatment type include the amount of time necessary to treat each stem and the limitation on the number of stems per acre that can be treated, based on the label. In 2015, WNY PRISM purchased 2 stem-injectors and set-up a side-by-side comparison with foliar treatment using the knotweed infestation at the Great Lakes



The WNY PRISM Crew poses for a picture in the knotweed infestation at The Great Lakes Center.

Center as our research plot. This study will compare the effectiveness, direct financial cost and amount of time necessary to implement each treatment successfully. Designed and implemented by our Crew, the initial treatments took place in late August, just before they finished up for the year. This project will continue in 2016 as initial results will be observed and follow-up treatments will take place.

## Niagara Escarpment Preserve

In 2014, WNY PRISM conducted a thorough survey of the Niagara Escarpment Preserve, owned and managed by the Western New York Land Conservancy. In 2015, we followed up on that survey with invasive species removal. Working with Land Conservancy Staff, volunteers and the Niagara County Soil and Water Conservation District, our Crew spent two days removing invasive species using both mechanical and chemical methods. Target species included pale swallow-wort (*Cynanchum rossicum*), invasive shrubs, phragmites (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*) and purple loosestrife (*Lythrum salicaria*). Our crew was able to treat all of the pale swallow-wort, phragmites and reed canary grass found on-site using different methods of herbicide application. The small number of purple loosestrife plants found along the property line were removed manually. Work on invasive shrubs began on the upper forested portion of the preserve, moving down slope. Smaller shrubs were removed by hand pulling or with the use of the Uprooter, while larger shrubs were removed using a cut-stump method. WNY PRISM expects to continue working with our Partners at Niagara Escarpment Preserve in 2016, to follow-up with our treatments this year.



WNY PRISM Crew Member Lucy Nuesle spraying reed canary grass along the woodland edge at Niagara Escarpment Preserve.



## Galerucella Beetle Collection

In 2015, WNY PRISM had the opportunity to assist regional DEC staff with the collection of purple loosestrife biocontrol beetles, *Galerucella californiensis* and *G. pusilla*. Our Crew spent 2 days alongside DEC staff collecting these beetles from a nursery on the Tonawanda Wildlife Management Area. Wearing waders, the group walked through marshes searching for purple loosestrife plants. By shaking the stems of these plants, all insects on the plant would fall into a collection bucket. The desired *Galerucella* beetles were removed from the bucket using aspirator collection devices. Using this method, a total of 12,000 beetles were collected! Beetles were then shipped to organizations across the state who had requested them earlier in the year, to help combat purple loosestrife. With the number of beetles collected, DEC was able to fill all of their current orders, putting them in a great position to fill any last minute orders that may have come in!



WNY PRISM Crew collecting *Galerucella* beetles for purple loosestrife management.

## Tift Nature Preserve – Buffalo Museum of Science



2015 Phragmites treatment at Tift Nature Preserve - this photo was taken 3 weeks after the initial treatment, prior to a second treatment.

WNY PRISM worked on a number of invasive species removal projects with Tift Nature Preserve in 2015. Located a short distance from the WNY PRISM Office at the Great Lakes Center, and having a sizeable cache of stewardship equipment to work with, Tift Nature Preserve was an ideal location to hold the field portion of our Crew's herbicide training. With assistance from Tift Staff, we were able to gain experience with multiple application methods and tools, including cut-stump treatment, backpack spot spraying and stem injection. Phragmites and knotweed were our primary targets while working at Tift, but we also treated invasive shrubs such as bush honeysuckle (*Lonicera spp.*) and common buckthorn (*Rhamnus cathartica*), and took the opportunity to treat Canada thistle (*Cirsium arvense*) within our phragmites treatment areas. Treated areas including those along popular trails and adjacent to the visitor center. Our herbicide training was completed early in the summer, however we returned later to conduct a follow-up treatment on the phragmites as well as treat additional areas of knotweed. Our efforts were very successful as can be seen by our post (initial) treatment photo of the phragmites.

## Water Chestnut Removal - Jamestown Audubon Society

The WNY PRISM Crew spent a week with Jamestown Audubon Society this year working on the removal of water chestnut (*Trapa natans*) from Spatterdock and Big Ponds. Jamestown Audubon has been working for a number of years to remove the well-established water chestnut from their property. In 2015, the decision was made to start using herbicide on the larger infestation within Big Pond. As part of the greater water chestnut management plan, hand removal of those plants in Spatterdock Pond as well as those outliers within Big Pond was still required. When the Crew joined Jamestown Audubon's effort in mid-summer, the removal within Spatterdock was already nearly complete, so the Crew worked with volunteers and staff to finish up in there before moving over to Big Pond. In addition to the hand removal, the Crew also assisted with monitoring and mapping. Working outward from Big Pond, surveys were conducted to see if there had been any additional spread or new populations established. Luckily, the Crew did not find any new populations of water chestnut.



*Water chestnut removal from Spatterdock pond, filling laundry baskets and canoes before transferring to a disposal site.*

## Erie County Natural Habitat Parks



*WNY PRISM Crew Member Lucy Nuessle is spraying Japanese knotweed resprouts. Erie County mowed the site in preparation for our treatment.*

WNY PRISM worked closely with the Erie County Department of Environment and Planning (DEP) on a number of projects this year. We were involved in the planning process for the restoration of Red Jacket County Park, which will see shoreline restoration, invasive species removal, and native plantings beginning in 2016. We also worked together on our Native Plantings and Habitat Restoration Tour, where we highlighted Times Beach Nature Preserve and Seneca Bluffs Natural Habitat Park, two of Erie County's Parks. Seneca Bluffs was the focus of considerable attention for WNY PRISM and DEP in 2015. With a renewed desire from Erie County

to address invasive species issues at this site and all County Natural Habitat Parks, WNY PRISM became active in their capacity building and assisted with management planning and knotweed removal. WNY PRISM spent 2 days treating knotweed using foliar and stem injection treatments. This effort was facilitated by DEP who had arranged to have the knotweed dominated areas mowed prior to our treatment, allowing us to treat a much larger area. In addition to our primary target, we were also able to treat other management priorities including phragmites, Canada thistle and reed canary grass.

## 2016 Work Plan

Looking forward, WNY PRISM is well positioned to have another strong year and see even greater growth. We have once again put forth an ambitious Work Plan that expands upon our success from last two years. We will continue to grow our Partnership Network, provide information and coordination for our region, and continue to improve upon our current invasive species distribution data through use of iMapInvasives. We will take this a step further and identify priority species that are approaching our region. Working Groups will continue their efforts with the development of rapid response protocols, identification of priority conservation targets, and development of tools and resources for our education and outreach initiatives. We will also continue striving to meet the educational needs of the region by providing trainings and workshops, presenting on invasive species issues to local and regional groups, and participating in area festivals, events and farmer's markets.



*WNY PRISM Educational Display.*

In addition to the many projects already mentioned throughout this report that we'll be continuing with in 2016, we plan to identify Best Management Practices for our priority species, increase our Prevention education and messaging, filling additional information gaps in current species distribution data, and reaching out to Partners for assistance in identifying available educational programming and training needs.

Now that our [WNY PRISM website](#) is up and running, we will begin work on expanding and improving the content available. This will start with the creation of invasive species profiles for our remaining priority species and developing our Community pages, located at the top of our homepage. Our Education and Outreach Assistant will take on much of this work on the website, as well as work on improving our volunteer engagement and addressing gaps within our current outreach materials. We will bring on students and/or interns throughout the year to assist with various projects such as our Boot Brush Station Pilot Project and information management projects.

The WNY PRISM Crew will be back to work in 2016, traveling throughout the region and assisting our Partners with invasive species removal and mapping projects. We have received numerous requests from Partners for our Crew's assistance, and these requests once again highlight the need for increased capacity for invasive species removal within the region. In 2015, WNY PRISM pursued funds to assist with this by creating an Invasive Species Strike Team, but this effort remains unfunded. While our current Crew set-up allows for a certain level of assistance, creation of an Invasive Species Strike Team with an appropriate vehicle, expanded equipment and full-time Team Leader would significantly increase the size and scope of projects we would be able to implement. WNY PRISM will continue to pursue external funds to support this important initiative and asks for our Partner's continued support and assistance in doing so.

The WNY PRISM [2016 Work Plan](#) is available to download from our website.

## Partners

**Bergen Swamp Preservation Society** – Worked with WNY PRISM to map invasive species along publicly accessible trails, and the data were entered into iMapInvasives. Based upon WNY PRISM input, we identified and began removal of Canada thistle along the southern border adjacent to the sensitive wetland. A split plot study for the removal of *Brachypodium sylvaticum* was completed, having been conducted by a Byron-Bergen High School student and submitted to the Intel Science Talent Search. Off-trail mapping of invasive species was conducted as part of a large tree survey funded by BPS and conducted by SUNY Brockport.



*Brachypodium sylvaticum* photographed by WNY PRISM Crew while surveying Bergen Swamp.

**Buffalo Audubon Society** – We participated in the Garlic Mustard Challenge with Reinstein Woods and the WNY Land Conservancy. This allowed multiple participants, including 6 volunteers, to come to our Beaver Meadow Audubon Center over several weeks in the late spring. We also hosted a group of 25 – 30 students working with the Massachusetts Avenue Project. They removed honeysuckle from



*European Alder Removal at Buckhorn Island State Park  
Buffalo Audubon Society.*

approximately  $\frac{1}{4}$  of an acre on Tuesday August 11, 2016. We held an additional 4 volunteer days over the summer, continuing our work to remove honeysuckle from the site. We also worked on European Black Alder removal at Beaver Island State Park and Buckhorn Island State Park. Mechanical removal and cut-stump herbicide treatment took place on approximately 10 acres. Buffalo Audubon also assists with education and outreach efforts as we work to include invasive species messaging during many of our programs across the region.

**Buffalo Niagara RIVERKEEPER** – Events included the Buffalo Niagara Riverkeeper Boat Steward Program and a one of a kind Native Species Tour. Ninety-two days of boater outreach and inspection allowed for a total of 1,523 steward-boater engagements. In addition, twenty-two invasive species removal events were held at the Riverbend Phase I Habitat Restoration site along the Buffalo River that included 151 volunteers in total.

**Cornell Cooperative Extension – Erie County (CCE)** – Events and trainings held during 2015 included a 1<sup>st</sup> Detector Training for ALB, EAB, and HWA, Homeowner Workshop on EAB Management, Master Gardener General Meeting, an HWA and Weed Garden Cornell University Trip and A-Z Invasives Plantasia. CCE of Erie County was also involved with the Cornell Local Roads Program Stop NY Invasives Smartphone App and updated the WNY EAB Taskforce Brochure.

**Fredonia** – SUNY Fredonia continues to build Invasive Species education into the place-based science curriculum work with schools across the region. We have introduced the "Keep a Lookout!" materials into this work and hope to be building baseline data from iMapInvasives into the geospatial portions of the curriculum. We continue the focus on habitat restoration and stewardship, so once areas are located from these data, we hope to continue to add to the database as well as doing invasive abatement and monitoring of these efforts. Additional efforts included HWA monitoring and invasive species removal on Campus Woodlot and College Lodge.



*Water chestnut removal at Jamestown Audubon with WNY PRISM Crew and Volunteers.*

**Jamestown Audubon Society** – Jamestown Audubon Nature Center focused its Invasive Species efforts in 2015 on control of Water Chestnut. 21 volunteers contributed 224 hours in totally removing WC from one ten acre pond, while herbicide application plus hand pulling greatly reduced the population in the 47 acre pond. Support of PRISM Crew was instrumental in these hand-pulling successes.

**Nature Sanctuary Society of Western New York** – Work at Alexander Preserve included garlic mustard control and various treatments against goutweed present on-site. Manual removal of phragmites and bush honeysuckle was implemented at Conewango

Preserve, including the use of tarps to combat the phragmites. The Nature Sanctuary Society of Western New York has a strong volunteer presence with around 300 participating in activities here and at Fredonia.

**New York State Department of Agriculture and Markets (DAM)** – In 2015 New York State Department of Agriculture (NYSDAM) and Department of Environmental Conservation (DEC) enacted Part 575 Prohibited and Regulated species to address the current trend nationwide of preventing the spread of invasive species. This is an ongoing cooperative effort between both agencies to reduce the spread of invasives within New York State's native habit. Outreach has been a key component in spreading the word on this new regulation in the form of brochures, workshop presentations and Nursery/Greenhouse/Dealer site inspections by NYSDAM Horticultural Inspector staff. A key function of NYSDAM's mission is to protect the native habit of NYS through Nursery/Greenhouse/Dealers site inspection to prevent the introduction or spread of non-indigenous diseases, insects and plants. NYSDAM regulatory authority permits the Department to conduct site inspections at licensed Nursery/Greenhouse/Dealer establishments and to take the appropriate action when invasives are found in commercial trade.

**New York State Department of Environmental Conservation (DEC)** – DEC Great Lakes Program has been involved in the planning of several restoration projects that include invasive species treatment and management that will be initiated this summer 2016. Partners in this effort include the EPA, Erie County, City of Buffalo, Buffalo Niagara Riverkeeper, and US Army Corps of Engineers. The sites of these projects are along the Buffalo River and are titled Riverbend, Red Jacket Park, Katherine Street Peninsula, Bailey Woods, Bailey Peninsula, and more work at Seneca Bluffs. Most of the target species are knotweed, swallow-wort, and phragmites.

**New York State Department of Transportation (DOT)** – NYSDOT Region 5 follows invasive species best practices. In general, NYSDOT projects avoid disturbance of invasive plant species if possible. If avoidance is not practicable, controls are specified to prevent further spread of the plants. Typically this means excavating the plant and either disposing of it at an appropriate location off site or burying it on site. For smaller populations, herbicides are used for spot treatment. As a standard requirement, all projects include on-site equipment washing to clean equipment that comes in contact with invasive species to prevent plant parts, seeds or roots from leaving the construction site.



*NYS Parks Boat Stewards staffing the informational display at Canal Fest of the Tonawandas.*

**New York State Office of Parks, Recreation and Historic Preservation (Parks)** – NYS Parks employed an invasive species strike team for nearly 6 months surveying, mapping, removing invasive plants in the western portion of NYS parks. Over 13 different species of invasive plants were controlled. A team of forest health specialists also surveyed state parks in western NY for invasive tree pests both EAB and HWA. They held educational programs for park patrons and even did a climbing demonstration while surveying hemlocks for HWA. A couple parks in the Niagara Region also began treatment of significant ash trees for EAB.

**New York Sea Grant** – NY Sea Grant focused its efforts in Western New York on education and outreach. Five teacher workshops offered over 100 teachers the chance to learn more about invasive species, with many of them following-up with student-centered stewardship activities. Sea Grant staff shared AIS information and education materials to over 5,000 stakeholders through presentations, lectures and displays at regional programs and festivals.

**Niagara County Soil and Water Conservation District (SWCD)** – Treated 20 sites totaling approximately 4.7 acres in the Eighteen Mile Creek watershed to eradicate Japanese knotweed. Treatment included cutting the mature knotweed plants, allowing the plants to regrow and then spraying the new growth with Crossbow and/or Rodeo at least 2 times at each site. The sites will be monitored and treated in 2016, as it is anticipated that regrowth is likely and that it will take multiple years to eliminate the Japanese knotweed.

**PUSH Buffalo** - PUSH Buffalo's work surrounds making the City of Buffalo a stronger, more just, and healthy city for all. As a central part of that work, PUSH carries out sustainable native landscaping and stormwater management projects, as well as running a native plant nursery. In 2015 the PUSH Blue (stormwater management) crew carried out 130 Green Infrastructure installations all over the City of Buffalo. Due to the post-industrial and developmental heritage of much of the City, many lots



*WNY PRISM Crew Member Lexy Wagner at NY Sea Grant and Aquarium of Niagara Great Lakes Awareness Day.*

exhibited disturbed ecosystems with invasive species present. When putting in Green Infrastructure installations, identifying and addressing invasive species is central. The main species of concern for PUSH Blue has been Japanese Knotweed.

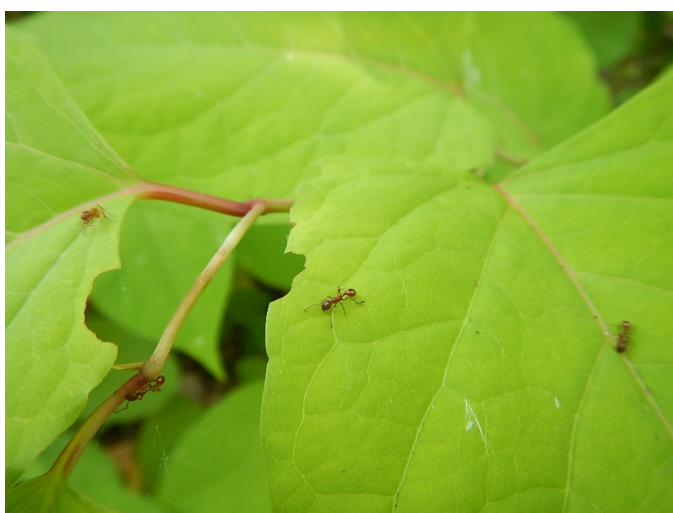


*Garlic Mustard Challenge at Reinstein Woods.*

**Reinstein Woods** – In partnership with DEC, Buffalo Audubon Society, and the Western New York Land Conservancy, Reinstein Woods coordinated the 2015 WNY Garlic Mustard Challenge. Through this challenge, more than 240 volunteers removed 1364 pounds of garlic mustard from 3 Nature Preserves; Buffalo Audubon’s Beaver Meadow, DEC’s Reinstein Woods, and WNYLC Kenneglenn Preserve. Reinstein Woods also continued a phragmites control project, retreated 22 ash trees with Tree-age to protect them from EAB, and had volunteers work on Japanese knotweed and multi-flora rose removal along trails.

**Roger Tory Peterson Institute of Natural History (RTPI)** - Throughout the winter season RTPI partnered with Jamestown Community College, the Chautauqua Watershed Conservancy, The Nature Conservancy, U.S. Forest Service, CCE of Chautauqua County and WNY PRISM to carry out a number of trainings and surveys for forest pests. Between February and March RTPI, JCC and CWC surveyed six sites, including over 1,500 Eastern Hemlock trees in search of Hemlock Woolly Adelgid. There were no signs of HWA in any of the sites, and each of them will be resurveyed this upcoming winter season. In addition, RTPI and CCE erected 15 signs within two sites attracting the attention of a number of winter outdoor recreationalists to learn more about HWA and EAB and how they can help slow the spread of each. Lastly, throughout the summer months RTPI had six high school students and two college students working along the Chadakoin River in Jamestown. Throughout the course of the summer 1.5 miles of the river’s shoreline was surveyed for invasive species and sightings were entered into iMapInvasives.

**Tiftt Nature Preserve, Buffalo Museum of Science** – Invasive species management and research is ongoing at Tiftt Nature Preserve with Japanese knotweed, phragmites, black swallow-wort, common buckthorn, honeysuckles and European fire ant (*Mymrica rubra*) targeted for control. 15,000 native wetland plants were planted on 1.5 acres where phragmites was eliminated. In collaboration with Buffalo State College, population surveys for the European fire ant were conducted and research on the use of buckthorn compared to native tree saplings by Lepidopteran larvae was published.



*Mymrica rubra photographed at Tiftt Nature Preserve.*

Western New York Land Conservancy – The Land Conservancy participated in the Garlic Mustard Challenge for the 5<sup>th</sup> year, welcoming 26 volunteers, pulling 222 lbs. over 2 days at Kenneglenn Nature Preserve. A volunteer workday aimed at pulling honeysuckle and buckthorn along trails was also held at Kenneglenn, in partnership with WNY PRISM during ISAW. The Land Conservancy also worked with WNY PRISM on mapping invasive species at the recently purchased Stella Niagara Preserve and conducting invasive species management at Niagara Escarpment Preserve. Target species included multi-flora rose, Japanese barberry, buckthorn, honeysuckle, purple loosestrife, reed canary grass, and phragmites.



*Volunteers gather during an invasive species removal workday held at Kenneglenn Scenic and Nature Preserve.*

United States Department of Agriculture National Resource Conservation Service (NRCS) – Through EQIP (Environmental Quality Incentives Program) or WHIP Wildlife Habitat Incentive Program) projects in the WNY PRISM area, an estimated 340 acres were treated for invasive species as a component of wildlife habitat or forestry management contracts. Primary target species included bush honeysuckles, multi-flora rose, common buckthorn, autumn olive, black locust, black and pale swallow-wort, spotted knapweed and garlic mustard in forested settings via mechanical and chemical methods. Additional invasive species management was conducted through the Wetland Reserve Program. Easement holders are implementing control on species including purple loosestrife, phragmites, Eurasian water-milfoil, curly leaf pondweed and hydrilla.

United States Fish and Wildlife Service – Lower Great Lakes Office – Cohosted the Erie Canal Teacher’s Workshop with NY Sea Grant on July 14, 2015. This event was for school teachers to learn about the history of the Erie Canal and learn about its role in the spread of invasive species. Nine interns and 3 volunteers assisted with our invasive species crew in 2015 and a total of 700 intern/volunteer hours were completed. Ongoing monitoring and removal of water chestnut (*Trapa natans*) is conducted in Tonawanda Creek/Erie Canal by our office and we have been involved with the post treatment monitoring of hydrilla as part of the Tonawanda Creek/Erie Canal Hydrilla Control Demonstration Project.



*USFWS Lower Great Lakes office designed a large high-resolution map illustrating the Great Lakes and their notorious historical invaders, in addition to invaders known to threaten the Great Lakes.*



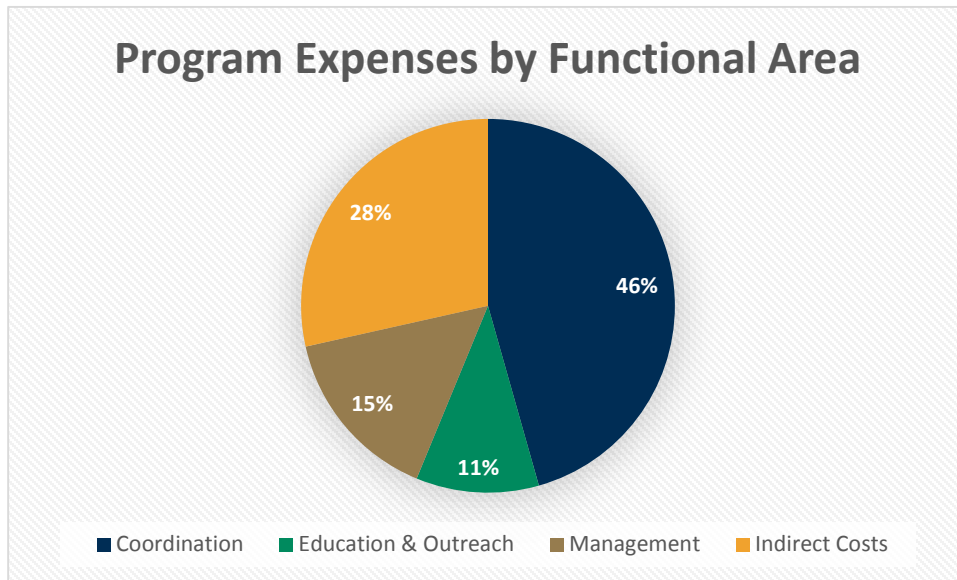
## Partners

Adirondack Park Invasive Plant Program (APIPP)  
Alfred State  
Amherst State Park (ASP)  
Bergen Swamp Preservation Society (BSPS)  
Buffalo Audubon Society  
Buffalo Niagara Riverkeeper (BNR)  
Capitol-Mohawk PRISM (Cap-Mo)  
Catskill Regional Invasive Species Partnership (CRISP)  
Certified Nursery Landscape Professionals (CNLP)  
Chautauqua Lake Association (CLA)  
Conewango Creek Watershed Association (CCWA)  
Cornell Cooperative Extension (CCE)  
Cornell Cooperative Extension of Allegany County  
Cornell Cooperative Extension of Erie County  
Cornell Cooperative Extension of Genesee County  
DEC Invasive Species Coordination Unit (ISC)  
Ecology & Environment, Inc. (E&E)  
Erie County Environment and Planning (ECEP)  
Erie County Soil and Water Conservation District (EC SWCD)  
Finger Lakes PRISM (FL-PRISM)  
Friends of Bond Lake  
Friends of Times Beach  
Genesee River Wilds  
iMapInvasives  
Long Island Invasive Management Area (LIISMA)  
Lower Hudson PRISM (LH PRISM)  
Master Gardeners  
National Plant Diagnostic Network (NPDN)  
Nature Sanctuary Society of Western New York (NSSWNY)  
New York Sea Grant

New York State Department of Agriculture and Markets (DAM)  
New York State Department of Transportation (DOT)  
New York State Invasive Species Research Institute (ISRI)  
New York State Office of Parks, Recreation, and Historic Preservation (Parks)  
Niagara County Soil and Water Conservation District (NC SWCD)  
Orleans County Soil and Water Conservation District (OC SWCD)  
Pine Woods Park  
PlayCleanGo!  
PUSH Buffalo  
Reinstein Woods  
Roger Tory Peterson Institute (RTPI)  
Rushford Lake Association  
Seneca Nation of Indians  
Silver Lake Association  
St. Lawrence Eastern Lake Ontario PRISM (SLELO)  
Stop Aquatic Hitchhikers  
SUNY Fredonia  
The Chautauqua Institute  
The Nature Conservancy (TNC)  
The Western New York Land Conservancy (Land Conservancy)  
Tifft Nature Preserve - Buffalo Museum of Science (Tifft)  
Town of Amherst  
United State Fish and Wildlife Service (USFWS)  
United States Army Corps of Engineers (USACE)  
United States Department of Agriculture  
National Resource Conservation Service (NRCS)  
Wyoming County Soil and Water Conservation District (WC SWCD)  
**And More!**

WNY PRISM would like to thank all of our Partners for all of their time and effort put towards invasive species management in western New York and their support of WNY PRISM.

## Summary of Project Expenses



Program expenses were grouped together by functional areas. This summary is intended to provide a general understanding of how WNY PRISM divided our time and resources in 2015, but is not intended to serve as a financial report.

Coordination	46%
Education and Outreach	11%
Management	15%
<u>Indirect Costs</u>	<u>28%</u>
	100%

### Coordination:

Activities and expenses related to our Partner/Network Coordination and Information Management Goals, including costs of administering the program, general office supplies, travel and conference related costs, and personnel costs for WNY PRISM Coordinator and Director.

### Education and Outreach:

Activities and expenses directly related to our Education and Outreach Goals, including personnel costs for the Education and Outreach Assistant, volunteer management, website development, travel related costs, supplies and materials.

### Management:

Activities and expenses related to our Prevention, Early Detection and Rapid Response, and Habitat Management and Restoration Goals, including personnel costs for the Invasive Species Management Assistants (3), travel related costs, supplies and materials.

### Indirect Costs:

Indirect Costs as determined by our host organization, The Research Foundation for SUNY Buffalo State.