# 2023

# WNY PRISM Annual Report

Prepared By
Andrea Locke, WNY PRISM Coordinator

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*Cover Photos: WNY PRISM's Walk and Talk at Cassadaga Lakes Nature Park, owned and managed by the Chautauqua Watershed Conservancy, was held on August 5, 2024.*

*All photos used in this annual report are property of WNY PRISM, unless otherwise cited.*

## Introduction


*WNY PRISM encompasses the eight western-most counties of NYS, including 5 major watersheds and 6,440 square miles.*

Invasive species are those which are non-native to the ecosystem under consideration, and whose introduction causes, or is likely to cause, economic or environmental harm, or harm to human health. Western New York is particularly at risk to the threat of invasive species due to the unique geographic and human characteristics of the region. Western New York is situated within both the Great Lakes Basin and Mississippi River Watersheds with extensive river systems connecting much of the landscape, and the diversity of natural ecosystems offer habitats that are inviting to a wide variety of invasive species. Western New York also has a long history of human development and has seen significant alterations to the landscape that have created a level of disturbance in which invasive species thrive. In addition, western New York is positioned along prominent pathways of invasion, such as well-traveled transportation corridors. Each of these factors have led to the increased likelihood for the establishment and spread of invasive species within the region.

WNY PRISM works to implement programs that address all aspects of the invasive species management needs of the region by forming strategic partnerships, developing resources, and increasing regional capacity. Established in 2014, WNY PRISM has quickly become a leader in invasive species management for the region and continues to expand and improve upon efforts.

WNY PRISM would like to thank our host organization, the Great Lakes Center at SUNY Buffalo State University, as well as the entire NYS Invasive Species Program for their continued support. We would also like to thank WNY PRISM's partners including the dedicated members of our Steering Committee and Working Groups. WNY PRISM looks forward to continuing to work together on our shared mission.

WNY PRISM is a sponsored program of the Research Foundation for SUNY Buffalo State University. Funding for WNY PRISM is provided by the Environmental Protection Fund through a contract with NYS Department of Environmental Conservation (DEC). Additional funding is provided through various federal, state and foundation grant programs.

## 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 community members to improve, restore and protect local aquatic and terrestrial resources.

## Operational Structure

WNY PRISM's operational structure consists of staff, a Steering Committee, and Working Groups. WNY PRISM also solicits information and feedback from partners and stakeholders, which factors strongly into the strategic decision-making process.

WNY PRISM staff include a Director, Coordinator, Program Managers, twenty-five to thirty seasonal staff and interns. The Steering Committee is comprised of a core group of individuals representing a variety of organizations, agencies, businesses and community members, and is representative of the invasive species management needs of the WNY PRISM region. Steering Committee meetings take place quarterly with additional communication and meetings held as needed.

Working Groups (Terrestrial, Aquatic, Education and Outreach) have been established and meet on an as-needed basis, focusing on the completion of specific tasks and projects.

Partner Meetings are held twice a year. The Spring Partner Meeting is held in April, ahead of the field season, and the Fall Partner Meeting is held in October. Working Groups and Partner Meetings are open to everyone; however, registration is sometimes required. For more information on WNY PRISM's operational structure, please see WNY PRISM's Operational Guidelines.

*WNY PRISM's Fall Partner Meeting was held on October 17 at the Buffalo Museum of Science's Tifft Nature Preserve. Twenty-five partners attended the meeting.*

## WNY PRISM Steering Committee

| | |
|---|---|
| Cornell Cooperative Extension of Erie County | Sharon Bachman |
| New York Sea Grant | Megan Kocher |
| NYS Department of Transportation | Leslie Moma |
| NYS Department of Environmental Conservation, Region 9 | Jennifer Dunn |
| NYS Office of Parks, Recreation and Historic Preservation | Aaron Heminway |
| Royal Fern Nursery | Jonathan Townsend |
| U.S. Army Corps of Engineers – Buffalo District | Kathleen Buckler |
| U.S. Department of Agriculture – Natural Resources Conservation Service | Mike Shaw |
| U.S. Fish and Wildlife Service – Lower Great Lakes Fish and Wildlife Conservation Office | Colleen Keefer |

## WNY PRISM Staff

**Dr. Christopher Pennuto**
Director

**Andrea Locke**
Coordinator

**Brittany Hernon**
Terrestrial Program Manager

**Rachel Taylor**
Community Science and Engagement

**Amanda Cooper**
Aquatic Program Manager

**Douglas Knoph**
Field Operations Manager

## Seasonal Staff

**Education and Outreach Assistant**
Tyler Burgess

**Invasive Species Management Assistants**
Alicia Addams・Tina Ni・Brianna Saylor

**Early Detection Survey & Monitoring Technicians**
Jason Kappan・Lindsay Piotrowski

**Lead Watercraft Inspection Steward/Environmental Educators**

Jessica Castellan · Rebekah Myers

**Watercraft Inspection Steward/Environmental Educators**

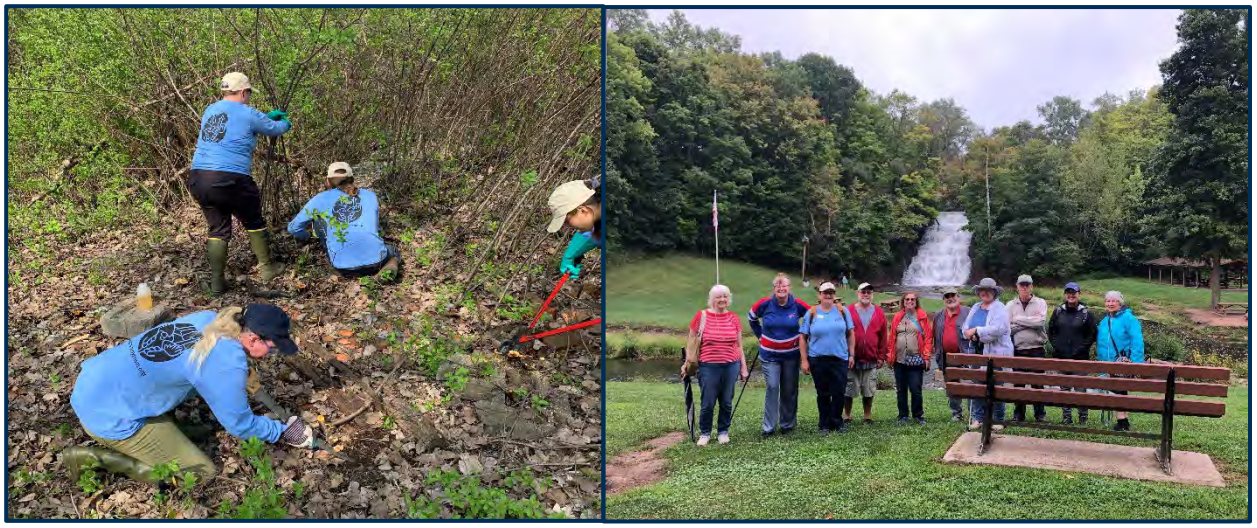
William Brown · Alec Cimini · Bryan Cirbus · Emma Clay · Jennifer Crane · Zachary Day · William DesJardin
Nathan Emery · Charles Weaver III · David Kramp · Andrew LaDuca · Bethany Mangioni · Henry Meeder
Samuel Palmieri · Emily Townsend · Logan Wray

## WNY PRISM 2023 Annual Report

WNY PRISM efforts are guided by the WNY PRISM Strategic Plan (2019-2024), which was developed through a year-long collaborative process involving regional partners in 2019, and updated in 2022. The original plan put forth an ambitious program designed to provide the framework by which the invasive species management needs of western New York may be met. The 2022 updates served to strengthen and expand upon the established framework by addressing shifted priorities, expanded programs and new opportunities. The strategic plan is further supported by the 2023 WNY PRISM Annual Work Plan that identified specific programs and tasks for which WNY PRISM would focus on in 2023.

The WNY PRISM Annual Report provides an overview of the projects and programs WNY PRISM implemented in 2023 and is organized based on the six goals associated with WNY PRISM's established core functions: Partner and Network Coordination, Information Management, Education and Outreach, Prevention, Early Detection and Rapid Response, and Management and Habitat Restoration. Most of the work described in this report is funded through the WNY PRISM contract with New York State and administered by the Department of Environmental Conservation. However, some projects receive funding through additional sources such as the Great Lakes Restoration Initiative and Greenway Ecological Standing Committee.

WNY PRISM is first and foremost a partnership organization and we rely upon strong partnerships to achieve success. Most of the projects highlighted in this report include support and assistance from partner organizations and in this way, the WNY PRISM Annual Report serves not only as a record of WNY PRISM activities but provides an overview of invasive species management efforts and priorities from across the region. For more information on the projects and programs mentioned in this report, or to view additional documents and resources, please visit www.wnyprism.org.

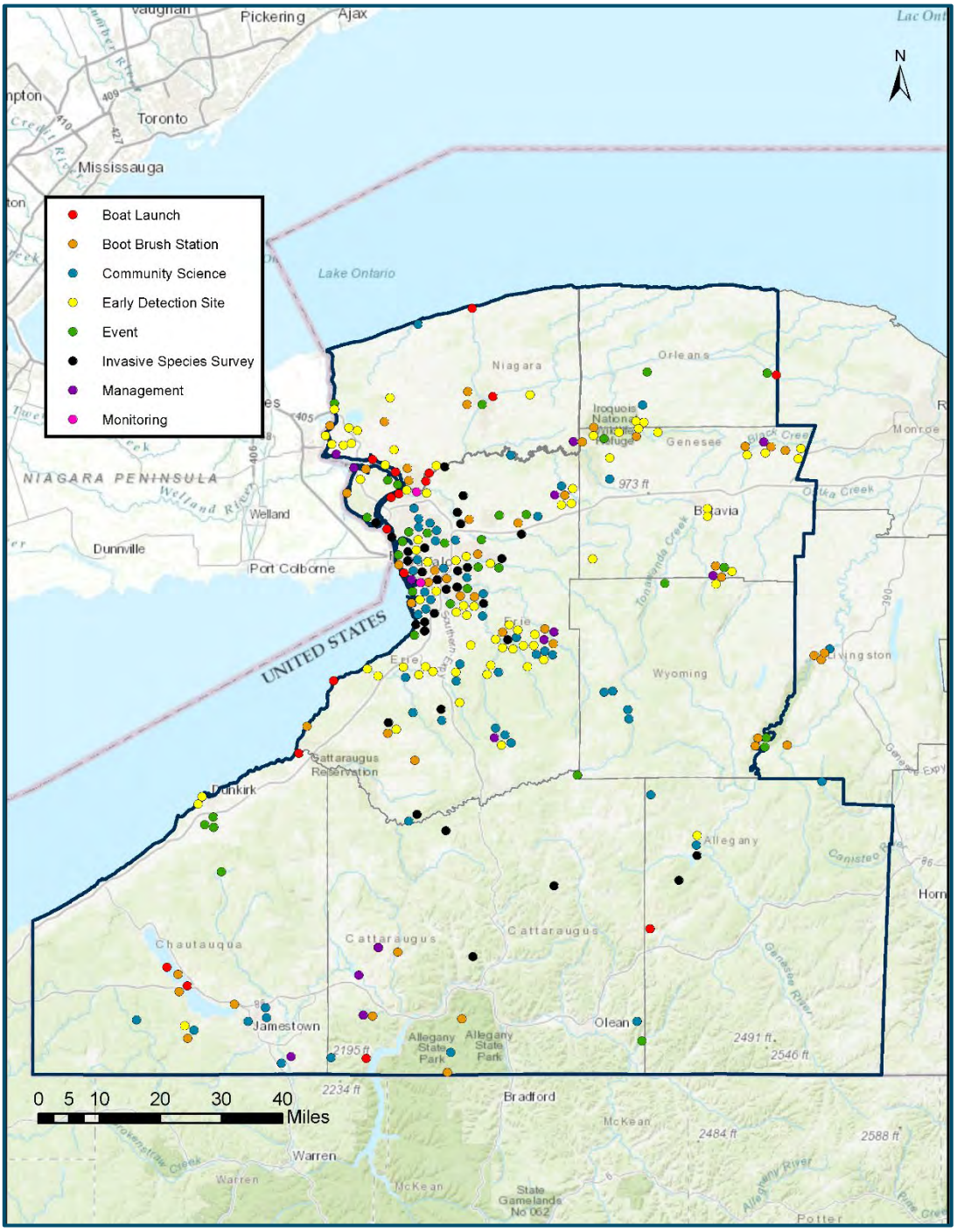


*The WNY PRISM Crew cut and treated buckthorn at Tifft Nature Preserve in May (left) and held a Walk and Talk at Holley Falls in August (right), where participants learned about the impacts of a wide variety of invasive species including swallow-wort.*

## WNY PRISM 2023 Program Highlights

- WNY PRISM has worked with **218** partners including **7 new partners** in 2023.
- Hired **24 seasonal staff members** – Invasive Species Management Assistants (3), Education and Outreach Assistant (1), Watercraft Inspection Steward/Environmental Educators (18), and Survey & Monitoring Technicians (2).
- Completed update of **WNY PRISM website**, including new functionality – www.wnyprism.org.
- Attended **NYS Invasive Species Expo**, staffing an informational table and presenting on invasive species messaging.
- Conducted a comprehensive review and **update of Tier Rankings** and **updated WNY PRISM priority species lists**.
- The **Crew Assistance Program** received **18 proposals** from **16 partners** and resulted in **16 completed projects** including **745.5 acres surveyed** and **45.88 acres treated**.
- **Terrestrial early detection surveys** were carried out at **36 sites** encompassing **4,000 acres** and **53.31 miles.**
- **Aquatic early detection surveys** were carried out at **5 sites,** encompassing **281 acres**.
- **Early detection** priority species removal efforts resulted in **34 sites managed** with a combination of herbicide and manual removal and efforts totaled **412.4 acres treated**.
- **6,809 records were uploaded** to iMapInvasives for the region, including **88 unique species**.
- The **top five recorded** invasive species for WNY PRISM were **Eurasian watermilfoil (936), curly-leaf pondweed (687), giant hogweed (402), bush honeysuckle (320) and Japanese stiltgrass (307).**
- **Giant hogweed** was the **top, not-detected species**.
- Tabled at **18 events**, delivered **14 presentations,** and held **4 Walk and Talks** and **10 workshops**.
- Events resulted in **2,745 direct contacts** and had **45,561 attendees**.
- Obtained **388 signatures** for WNY PRISM's **Pledge to Protect** program.
- WNY PRISM **Listserv added 37 subscribers**, maintaining **377 members**.
- WNY PRISM staff responded to **131 public inquiries**.
- Facebook posts **reached 33,570** individuals and WNY PRISM added **114 page likes**.
- Instagram posts **reached 17,391** individuals and **increased followers by 17%**.
- Developed **8 Boot Brush Stations** for partners – **48 Boot Brush Stations** have been installed across the WNY PRISM region since 2016.
- Completed **survey of boot brush stations** looking at condition of the station and invasive species presence.
- The Watercraft Inspection Stewardship Program achieved an **88.7% acceptance rate** with **610 interceptions** – the most encountered species were **curly leaf pondweed (319)** and **Eurasian watermilfoil (257)**.
- Boat Stewards had **51,567 total interactions** and conducted **14,565 boat inspections** working at **17 launches**.
- Stewards conducted **445 Walk-Up Surveys** and **120 Angler Surveys** – **no invasive species were observed**.

## WNY PRISM – Where We Work



## Partner and Network Coordination

*Goal: Effectively coordinate the WNY PRISM partner network and strengthen relationships to the benefit of all those impacted by invasive species and those involved with invasive species management.*

WNY PRISM works closely with partners and stakeholders across the region to address priority invasive issues. It is through partnership that we work to improve the effectiveness of invasive species management efforts, to increase awareness of invasive species issues and to engage both partners and community members in taking meaningful action.

Partner and network coordination begins with the WNY PRISM Steering Committee, which is comprised of member organizations, agencies, businesses and community members who represent the varied interests within the WNY PRISM region. The Steering Committee provides essential support for WNY PRISM efforts including the review and approval of strategic and species priorities, review of operational documents, and review of project proposals and requests. Several members also participate in WNY PRISM Working Groups. Terrestrial, Aquatic, and Education and Outreach Working Groups are used to address various programs and tasks that benefit from the regional, expert knowledge our partners can provide. Working groups are open to all those interested in supporting WNY PRISM efforts and meet on an as-needed basis.

WNY PRISM collaborated with seven new partners in 2023, bringing the total number of partners we've collaborated with through the years to 218. In addition to working with partners on shared projects, we help promote their programs and events through social media, newsletters, attended events, the WNY PRISM website, and the WNY PRISM Listserv, which offers additional opportunities for collaboration and feedback.

Community members play a vital role in the partnership. WNY PRISM staff responded to 131 public inquiries received through our website, email and by phone. This represents a significant increase from previous years, demonstrating improved public awareness of WNY PRISM and our resources. Topics were varied and ranged from observation reports, requests for presentations and management assistance, to questions about identification, best management practices, volunteer events, and job opportunities. The most common management questions were about knotweed (*Reynoutria* spp.), but we received questions regarding over two-dozen different species.

### Partner Meetings

WNY PRISM holds two Partner Meetings each year that serve as an opportunity for partners to interact with one another and learn about important regional news and updates. The Spring Partner Meeting was held at Woodlawn Beach State Park on April 27. Presentation topics included iMapInvasives, Lake Ontario coastal wetlands, and management of starry stonewort (*Nitellopsis obtusa*). WNY PRISM's Terrestrial Program Manager presented on some of the higher functions available within iMapInvasives

(iMap), beyond presence and distribution data. Guest presenter Aaron W. Heminway, Biologist 1, NYS Office of Parks, Recreation and Historic Preservation (Parks), discussed the encroachment of invasive cattail species into sedge meadow habitats within Lake Ontario's coastal wetlands, and guest presenter Lexie Davis, Natural Resources and Watershed Educator, Cornell Cooperative Extension – Yates County, presented on starry stonework management efforts in Keuka Lake, which have included extensive use of diver-assisted suction harvesting.

*WNY PRISM Spring Partner Meeting, held April 27, 2023. Guest presenter Lexie Davis discusses starry stonewort management at Keuka Lake.*

The Fall Partner Meeting was held at Tifft Nature Preserve on Tuesday, October 17. This meeting served as a 10-year anniversary celebration of WNY PRISM as we looked back on our achievements. Since our establishment in 2014, WNY PRISM has worked with over 200 partners and hired 142 summer staff positions, resulting in an even greater regional impact as many have gone on to work with partners. WNY PRISM has submitted 18,027 observations and 1,784 not-detected reports to iMapInvasives, averaging sixty-five unique species each year, and we completed 105 projects as part of the Crew Assistance Program. In just six years, the Watercraft Inspection Stewardship Program resulted in 79,620 watercraft inspection, 182,080 public interactions, and 4,961 invasive organisms being intercepted.

The Fall Partner Meeting also served as our Terrestrial and Aquatic Working Group Meetings, which met to discuss species priorities and Invasive Species Tier Rankings, which is discussed further in the Information Management section of this report. Twenty-two partners attended the spring partner meeting and twenty-five attended the fall partner meeting.

## Collaboration

WNY PRISM staff participate in and/or facilitate several local, statewide, and regional collaboratives to better provide support for the region we serve. WNY PRISM facilitates and/or participates in the following local, regional, and statewide collaboratives:

- AIS Lakes/Ponds Prioritization
- Buffalo State Arbor Day Committee
- Great Lakes Action Agenda
- Great Lakes Environmental Sciences PSM Advisory Board
- Great Lakes Hydrilla Collaborative

- Great Lakes Phragmites Collaborative
- Great Lakes Slender False Brome Working Group
- iMapInvasives Post-Treatment Working Group
- iMapInvasives Tools Planning - various
- Invasives Crayfish Collaborative
- Lake Erie Watershed Protection Alliance Watershed Advisory Committee
- NYS Aquatic Coordinators Working Group
- NYS Hydrilla Task Force
- NYS PRISM Education and Outreach Committee
- NYS Terrestrial Coordinators Working Group
- Phragmites Adaptive Management Framework
- Spotted Lanternfly Monitoring Group - AGM
- Swallow-wort Research Group
- Watercraft Inspection Stewardship Program App (WISPA)
- Watercraft Inspection Stewardship Program Manual Update
- WNY Forest Pest Task Force
- WNY Mile-A-Minute Working Group
- WNY PRISM Aquatic Working Group
- WNY PRISM Education and Outreach Working Group
- WNY PRISM Terrestrial Working Group
- WNY Spotted Lanternfly Working Group
- WNY Water Chestnut Working Group

## Grants/Funding

WNY PRISM provides support for partners seeking funds for invasive species management efforts. On our website, partners can find the Invasive Species Funding Guide for Western New York with information on available grant programs, and links for additional guides and tools to improve grant submissions. WNY PRISM also supports partners by providing review of management plans and proposals, and by providing letters of support. Letters of support were provided for eight projects focused on hemlock woolly adelgid, mile-a-minute, Japanese stiltgrass, early detection species surveys and management, general stewardship, and land acquisitions.

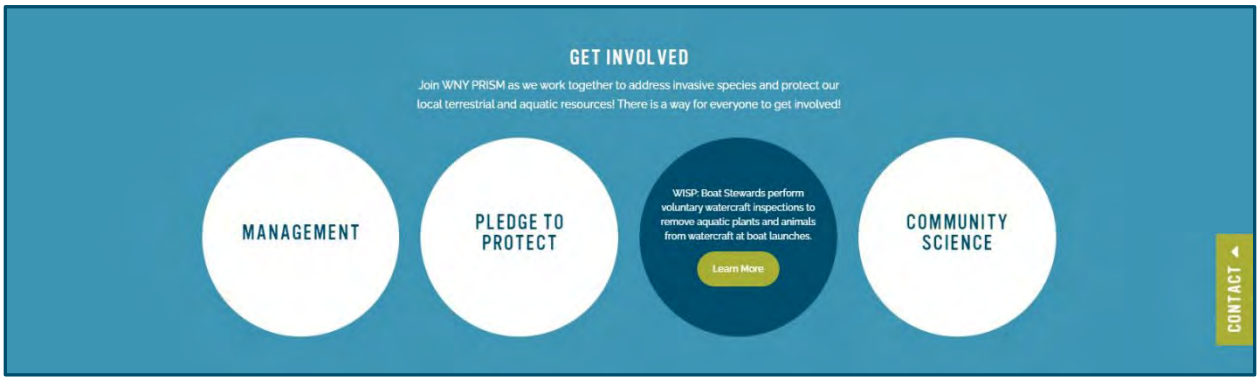
## Communications

WNY PRISM Website

After nearly a full year in development, the new WNY PRISM website went live on July 28, 2023. The new website improves visitor experience by offering increased functionality and by making it faster and easier to locate information. Streamlined menus clearly identify where information is located, and the new homepage highlights the most important, and oft requested, items including the events calendar

and a contact tab. New functionality includes a fully-integrated events calendar, which allows us to update information in real-time, should an event need to be canceled due to inclement weather or other unforeseeable issues. Event participants may now also register for events and complete volunteer paperwork from our website.

Additional content has also been developed to further improve usability of the site. This includes use of Web Map Services to serve multiple programs, such as for boot brush station and boat launch locations, and our invasive species profiles, which are in the process of having presence and distribution maps, using iMap, added. The Pledge to Protect Program has also seen some improvements to its online home with the ability for community members to pledge online. There is also a short quiz, should they be unsure which pledge is right for them. In addition, several program pages and resources saw updates this year including several invasive species profiles and resource guides.




WNY PRISM Listserv

The WNY PRISM Listserv is the primary means by which WNY PRISM shares invasive species information and resources with partners. In 2023, eighty-five emails were sent through the Listserv by WNY PRISM, iMapInvasives (iMap) and the New York Invasives Species Research Institute (NYISRI). WNY PRISM added thirty-seven subscribers in 2023 and maintains 377 listserv members.

WNY PRISM Listserv Email Breakdown:

- 27 event announcements
- 25 WNY PRISM eNews
- 18 news items
- 7 job opportunities
- 4 grant/funding opportunities
- 2 calls to action
- 2 information/data requests

The WNY PRISM eNews is a biweekly digest of invasive species news, grant information, job openings, professional development opportunities and public events. Several items included in the eNews, such as funding, events and job opportunities, are not sent individually and therefore not included in the individual category metrics.

## Information Management

*Goal: Establish WNY PRISM as the leading resource for invasive species management information and strategic planning. Ensure information is current, accurate, regionally appropriate and easy to access, and provide opportunities for improved data collection and partner collaboration.*

### Prioritization





Invasive Species Tier Ranking

The NYS Invasive Species Program developed a system to prioritize invasive species based on species presence and management strategies. The aim of this program is to provide a level of consistency across the state, while continuing to allow each PRISM to rank species based on their local need, impact, and threat level. The NYS Tier Ranking System identifies five tiers based on species abundance (presence and distribution), impact (including potential future impact), cost of control, and difficulty of control. WNY PRISM first adopted the tier system in 2019, using it to identify species priorities, inform management decisions, and assist in project selection. WNY PRISM has revisited the rankings and conducted comprehensive reviews of species and assigned tiers in both 2021 and 2023. This review involves looking at the suggested Tier Ranking for each species, based on the model used by iMap that includes presence data from multiple databases, and comparing that result to potential data gaps and local knowledge, and assessing the feasibility of management. An internal review took place ahead of the planned Terrestrial and Aquatic Working Group Meetings, held as part of WNY PRISM's Fall Partner Meeting, allowing staff to ensure the effective use of limited time during the meetings by presenting specific questions and discussion topics.

Based on Working Group discussions, several changes were made to previous expert tier ranks or the new model suggested tier. In most cases where a tier rank was changed, species were moved to a higher tier due to expert opinions being that the species was either more common within the region than the available data suggested, or due to the feasibility of management warranting the change.

Overall, nine species were added to WNY PRISM's list of ranked species. Five species were added to Tier 5/M, representing species for which more information is required to accurately place them. This may be either presence and distribution data, or other research questions. Grass carp (*Ctenopharyngodon idella*) and the red-eared slider (*Trachemys scripta*

*elegans*) were added at Tier 3, and goldfish (*Carassius auratus*) was added at Tier 4, while sticky sage (*Salvia glutinosa*) was added at Tier 2. The updated WNY PRISM Invasive Species Tier Rankings, including 156 ranked species, is available for reference.

Species Priorities

WNY PRISM maintains an Approaching Region Priority List and Early Detection Priority Species List, which provide guidance beyond the Tier Rankings for species prioritization. WNY PRISM prioritizes the survey, monitoring and management of these species, as well as education and outreach related to increasing regional awareness, and encouraging management.

Over the past few years, several of our approaching region priority species have been moved to the early detection priority list, which follows our established protocol for when they are confirmed present within the region and makes room for new species. For 2023, Himalayan balsam and wavy-leaf basket grass remained on the approaching region list, as did waterwheel. Additions included hardy kiwi, primrose-willow, kudzu, and parrot feather. These species are ranked very high by NYS and have established populations within 250 km of western New York. Each species has at least one primary pathway of invasion that could result in its arrival to the region, as well.

**Approaching Region Priority Species** – *species not yet present in WNY PRISM*

| | | |
|---|---|---|
| 1) | *Actinidia arguta* | Hardy Kiwi |
| 2) | *Aldrovanda vesiculosa* | Waterwheel |
| 3) | *Impatiens glandulifera* | Himalayan Balsam |
| 4) | *Myriophyllum aquaticum* | Parrot Feather |
| 5) | *Ludwigia peploides* | Primrose-willow |
| 6) | *Oplismenus undulatifolius* | Wavyleaf Basket Grass |
| 7) | *Pueraria montana* | Kudzu |

The early detection list saw the addition of goatsrue, spotted lanternfly (SLF), and red swamp crayfish. Goatsrue and spotted lanternfly were on the approaching region list prior to being confirmed in western New York in 2022, and therefore automatically added for 2023. Red swamp crayfish is a species we've been working on for a couple years and felt it warranted inclusion as we continue to focus efforts on management.

Due to the number of species added to the early detection priority list over the past few years, it was necessary to remove some species to maintain a list of ten species and ensure WNY PRISM had capacity and resources to put towards management. Japanese angelica tree (*Aralia elata*) and yellow floating heart (*Nymphoides peltata*) were removed from the list in 2023. WNY PRISM has been assisting Parks with removal of Japanese angelica tree for several years at Lake Erie State Park. In 2022, they let WNY PRISM know that the infestation is at a point where they can continue follow-up and no longer need assistance. The single known infestation of yellow floating heart is on private property and WNY PRISM staff have assisted the landowner with information on management options and connected them to contractors. We will continue to provide technical assistance and follow-up with the landowner as needed, but as both sites are not under active management by WNY PRISM, it was deemed appropriate to remove them. Both species remain Tier 2 priority species.

**Early Detection Priority Species** – *species present in WNY PRISM*

| | | |
|---|---|---|
| 1) | *Ampelopsis brevipenduculata* | Porcelain Berry |
| 2) | *Brachypodium sylvaticum* | Slender False Brome |
| 3) | *Cytisus scoparius* | Scotch Broom |
| 4) | *Eichhornia crassipes* | Water Hyacinth |
| 5) | *Galega officinalis* | Goatsrue |
| 6) | *Lycorma delicatula* | Spotted Lanternfly |
| 7) | *Microstegium vimineum* | Japanese Stiltgrass |
| 8) | *Persicaria perfoliata* | Mile-a-Minute Vine |
| 9) | *Pistia stratiotes* | Water Lettuce |
| 10) | *Procambarus clarkii* | Red Swamp Crayfish |

In addition, WNY PRISM maintains a Data Gap Species Priority List and five species were once again selected for 2023. Hemlock woolly adelgid (HWA) and tree of heaven remained on the list in support of continued local and regional survey and management efforts. Burning bush, lesser celandine and Callery pear were added this year due to the species being under-reported in iMap throughout the region.

**Data Gap Species Priorities** – *more information is needed on presence and distribution*

| | | |
|---|---|---|
| 1) | *Adelges tsugae* | Hemlock Woolly Adelgid |
| 2) | *Ailanthus altissima* | Tree of Heaven |
| 3) | *Euonymus alatus* | Burning Bush |
| 4) | *Ficaria verna* | Lesser Celandine |
| 5) | *Pyrus calleryana* | Callery (Bradford) Pear |

The priority species lists were again reviewed and updated ahead of 2024, leading to some additional changes. The approaching region list was reduced, to allow WNY PRISM staff to focus more attention on the identified species. Waterwheel was removed based on review of research that identifies habitat preferences that are uncommon in western New York, and kudzu was removed based on recommendations pertaining to the likelihood and method of potential establishment being of lower concern than the other species. For the early detection list, goatsrue was removed in favor of adding amur cork tree (*Phellodendron amurense*) based on goatsrue surveys demonstrating the species being beyond the capacity of WNY PRISM to effectively manage and amur cork tree's emergence in 2023.

## Surveys and Monitoring

Data Gap Surveys

WNY PRISM conducts invasive species surveys to address data gaps, and further inform management efforts, priorities and regional planning. Surveys consist of general inventories, often based on geographic data gaps, and species-specific efforts, which may focus on specific geographic areas where species of concern are more likely to be found. In 2023, data gap surveys were carried out by WNY PRISM seasonal staff and University at Buffalo students.

To address identified geographic data gaps, WNY PRISM surveyed six properties in Cattaraugus (4) and Allegany (2) Counties, totaling 1,016.3 acres and 26.15 miles. Sites mainly consisted of state forests and multiple use areas. During the geographic data gap survey at Moss Lake Preserve in Allegany County, a small patch of Japanese stiltgrass was found. Once data was collected for this early detection priority species, all plants were hand pulled and removed from the site.

Species specific data gap surveys focused on WNY PRISM's data gap species priorities. WNY PRISM's HWA Hunters program was implemented in the winter months to address the HWA species data gap and is discussed in more detail in the Community Science section of this report. WNY PRISM continued to promote and encourage the public to report tree of heaven through the year while seasonal staff focused on reporting this species during the iMap mapping challenge in July. As a result, one of our Survey and Monitoring Technicians was named a top reporter of tree of heaven during this statewide challenge.

*University at Buffalo students worked with WNY PRISM to fill a data gap for Callery pear.*

Students from the University at Buffalo, as part of an Invasion Ecology class, worked with WNY PRISM to conduct surveys for lesser celandine and Callery pear. Students were split into two teams, with each team focused on a different species. Twenty-six observations of lesser celandine and fifty-two observations of Callery pear were uploaded to iMapInvasives and WNY PRISM staff reviewed and confirmed the observations. Upon review, it was noted that 76.9% of the Callery pear observations were intentional plantings, often found in parking lots.

In the fall, WNY PRISM conducted species data gap surveys for burning bush, since this species is most easily identifiable with its bright red color at that time. Seventeen sites in Erie and Niagara Counties were surveyed for burning bush, totaling 2,293 acres and 34.7 miles. Intentional plantings were not recorded and burning bush was only found at one site, Tillman Road Wildlife Management Area.

WNY PRISM encourages partners and community members to assist with filling data gaps by providing training opportunities and using social media to remind and encourage people to survey. The total number of confirmed observations, including those submitted by WNY PRISM staff and partners, was eighty lesser celandine, forty-four tree of heaven, fifty-two Callery pear and seven burning bush.

Regional Data Report – iMapInvasives*

- 6,809 Total Records
  - 4,866 presence detected, confirmed
  - 413 presence detected, unconfirmed
  - 1,530 not-detected
- 10 Organizations submitted data
- 88 unique species

- 85 iMap users trained
- Presence Detected – Top 10
    - Eurasian Water-milfoil 936
    - Curly Pondweed 687
    - Giant Hogweed 402
    - Bush Honeysuckle 320
    - Japanese Stiltgrass 307
    - Hemlock Woolly Adelgid 255
    - Buckthorn 235
    - Multiflora Rose 218
    - Mugwort 127
    - Canada Thistle 122
- Not Detected – Top 10
    - Giant Hogweed 282
    - Hemlock Woolly Adelgid 132
    - Hydrilla 42
    - Water-lettuce 41
    - Common Water-hyacinth 38
    - Carolina Fanwort 31
    - Water Chestnut 29
    - Yellow Floating-heart 29
    - Broadleaf Water-milfoil 28
    - Starry Stonewort 28

*Top to Bottom: Bush honeysuckle, mugwort (common wormwood), and water chestnut.*

** The data provided is based on the iMapInvasives 2023 Annual Report for WNY PRISM.*

## Biocontrol

Hemlock Woolly Adelgid

WNY PRISM has continued to work with program partners, the NYS Hemlock Initiative, Parks and Erie County to identify appropriate sites and establish biocontrol agents for HWA in western New York. Hemlock woolly adelgid is a high priority target for regional partners and it has shown an increase in movement over the last few years. In 2022 the NYS Hemlock Initiative released silver flies (*Leucotaraxis spp.*), a biocontrol agent for HWA within Franklin Gulf County Park, and this year *Laricobius* beetles (*Laricobius nigrinus*), another biocontrol agent for HWA, were released in Zoar Valley Multiple Use Area.

*WNY PRISM assisted with a biocontrol release for HWA at Zoar Valley in November.*

In the fall, WNY PRISM began work with a Buffalo State University graduate student to develop a protocol using the Survey123 iMap Forest Pest Data Collection Tool to better

assess sites for the potential release of additional biocontrols. The project will see delineation of hemlock stands, and for each stand, data including presence or absence of HWA, average HWA density, percent of trees infested with HWA, live crown ratio and crown density, will be collected. The graduate student will continue to work in 2024, implementing surveys at several high priority preserves.

Swallow-wort

Pale and black swallow-wort (*Cynanchum rossicum, C. louiseae*), continue to be priority species for WNY PRISM and our partners, and WNY PRISM has supported the establishment of biocontrol research plots within the region by connecting members of the *Hypena opulenta* research and outreach teams with partners and appropriate sites. In previous years, plots were set up at Clarence Oak Openings and Holley Canal Falls, and this year we were able to identify a third site at Genesee County Park and Forest (GCPF). WNY PRISM received permission to place a research plot at GCPF and identified a volunteer able to monitor the plot.

Working with the NYISRI and Cornell Cooperative Extension (CCE), we were able to secure the materials necessary to set-up an enclosure and research plot. We worked directly with the New Jersey Department of Agriculture Beneficial Insect Lab to secure biocontrol agents. The agents, *Hypena opulenta* pupae, were received in June and immediately released. After several weeks of monitoring, the agents had not emerged from any of the three western New York plots. After reaching out to program partners it was discovered that other programs were seeing similar results. To assist in determining the issue, we collected samples from two western New York sites and provided them to Dr. Dylan Parry, SUNY Environmental Science and Forestry, for analysis, where they were determined to be non-viable. Recommendations for future releases included focusing on acquiring adults, rather than pupae.

In addition to supporting the biocontrol program, WNY PRISM worked with partners to develop alternative methods of control for swallow-wort. Based on work done in other states, WNY PRISM obtained a 2(ee) for use of Pathfinder II on swallow-wort and management plots were set-up at Akron Falls, so that we may monitor the results.

*Hypena opulenta, the swallow-wort biocontrol agent, was released at Genesee County Park and Forest as part of ongoing research efforts.*

## Education and Outreach

*Goal: Increase public and partner awareness, understanding and participation in meaningful and effective invasive species management activities.*

### Community Science Programs

WNY PRISM's Community Science Programs were developed to engage people with data collection in support of established priorities and associated programs. WNY PRISM coordinates an HWA Hunters Program, Trail Survey Program, and Spotted Lanternfly Monitoring Program, and each have contributed towards addressing invasive species issues. Data collected as part of the HWA Hunters Program contributed to the release of biological control at Franklin Gulf County Park in Erie County, and data collected as part of the Trail Survey Program was used to provide recommendations to the Town of Tonawanda for prioritization and management of invasive plant species detected along the Tonawanda Rails to Trails. The SLF trap monitoring conducted has supported statewide efforts to track and respond to SLF's spread, increasing the likelihood that new infestations in the region would be detected early.

Hemlock Woolly Adelgid Hunters

With the increasing presence and distribution of HWA in the western New York region, we have expanded our efforts to address this species establishing an official community science-based HWA Hunters Program in 2022. For the second year of the program, WNY PRISM continued to work with partners including CCE, Erie County, Craneridge Homeowners Association (Craneridge), and the NYS Hemlock Initiative to train volunteers to survey for HWA.

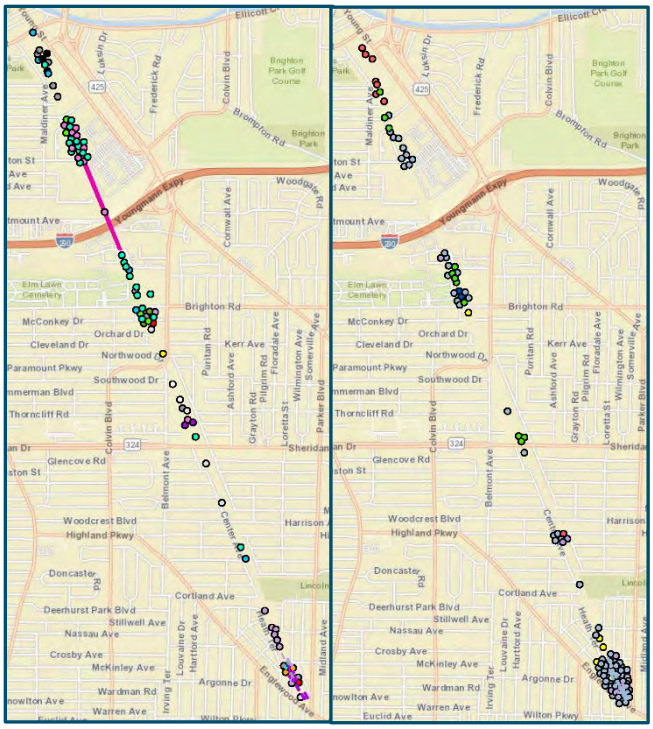
*HWA Hunters Training held at Chestnut Ridge on February 11, 2023.*

WNY PRISM held three trainings, which were a mix of in-person and online classroom trainings and field trainings. The classroom trainings covered hemlock identification, HWA ecology and identification, winter hiking safety, and included an iMap Mobile App tutorial, while the field trainings allowed participants to practice identification and use of the iMap Mobile App. The trainings were attended by forty-four community scientists.

In preparation for surveys, WNY PRISM compiled a list of forty prioritized survey areas using information from iMapInvasives, iNaturalist, and personal experience. The goal here was to ensure community scientists surveyed areas that were known to have hemlocks and to encourage participation by both seeking a stronger commitment to survey and giving them a greater sense of ownership of their survey location. Identified survey areas were located within all eight WNY PRISM counties and were appropriate for surveying during the winter. Twenty community scientists adopted a survey area and fifteen completed surveys, including two who had not adopted a

survey area. Together, 189 reports were submitted to iMap across twenty-seven properties. Community scientists self-reported 18.5 hours contributed to the program, and only one new HWA infestation was reported, which was on private property.

Trail Survey Program – Town of Tonawanda Rails to Trails




*Trail Survey Program iMap data - left map shows herbaceous species presence data and right map shows trees, shrubs and grasses. Data was collected in 2022 and 2023.*

The Town of Tonawanda Rails to Trails Survey was first developed in partnership with the Town of Tonawanda for implementation in 2020, as a pilot project for a more comprehensive Trail Survey Program. While the initial volunteer training was held in February 2020, the pandemic delayed the field training and surveys, and a relaunch of the program took place in 2022. The project was completed in 2023, after two years of survey efforts.

Many lessons were learned in 2022, but the most impactful was that the Survey123 tool we were initially using presented a barrier for community scientists. In 2023, we switched to the iMap Mobile App, which we felt would be less complicated than the Survey123 App, which required several steps and additional internet access to work properly. Community scientists were trained on how to use the iMap Mobile App and signed up to survey a section of the trail between June 29 and August 16. Seven community scientists completed eight of the ten identified trail sections, including all the priority segments, and submitted 130 presence records. A total of twenty-five volunteer hours were contributed. Fifteen unique species were recorded with the most frequently reported species being common buckthorn (54), cutleaf teasel (*Dipsacus laciniatus*, 22), knapweed spp. (*Centaurea* spp., 10), and honeysuckle spp. (8).

Spotted Lanternfly Monitoring Program

WNY PRISM established the Spotted Lanternfly Monitoring Program in 2022, receiving ten traps from the NYS Department of Agriculture and Markets (AGM). All our community scientists expressed interest in continuing to monitor their traps in 2023 and were allowed to keep their traps over the winter. This year, WNY PRISM requested an additional fifteen traps and in June 2023, gratefully received twenty. Fourteen additional traps were distributed, and a total of twenty-two traps were set up and monitored in Allegany (2), Chautauqua (1), Erie (16), Genesee (1), Orleans (1) and Livingston (1) Counties. One of our community scientists lived in Livingston County, which is part of the Finger Lakes PRISM, however all their traps were accounted for, and they supported us in working with this individual.

Most participants set up their trap(s) and uploaded their trap setup data to AGMs' Survey123 form independently, however the monitoring form was not available for those individuals without an ArcGIS Online account. Therefore, they were instructed to provide data to WNY PRISM via a Google Form, or by email, and we in turn provided that information to AGM. Traps were monitored at a minimum of every two weeks, but community scientists were instructed to report any observation of SLF immediately. The traps were removed in November and community scientists were allowed to keep them for next year.

No SLF were found as part of WNY PRISM monitoring efforts this year and approximately 32.5 hours were contributed by community scientists in 2023.

## Pledge to Protect


Traditional educational messaging for invasive species is focused on raising awareness but we recognize this is only the first step in fully engaging the public. To address this, WNY PRISM has developed, and continues to expand, our Pledge to Protect Program to help move people from awareness to action. The program centers on four campaigns: "*Play. Clean. Go.*", "*Clean. Drain. Dry.*", "*Don't Move Firewood",* and "*Know Before You Grow*". Each campaign includes messaging that consists of small steps that people can take to help manage invasive species and slow their spread. Steps include actions such as cleaning footwear before entering and upon leaving a trail or natural area, planting native plants, and removing organic material from boats and trailers.

| Pledge | Signatures |
|---|---|
| Clean. Drain. Dry. | 129 |
| Don't Move Firewood | 75 |
| Play. Clean. Go. | 69 |
| Know Before You Grow | 115 |

Community members may Pledge to Protect in one of two ways. They may visit our website, where they can sign onto one or all of the pledges, or they may sign one of our banners while at an outreach event or training. By signing onto one of the pledges, people are making a commitment to taking those simple steps to help manage invasive species. Those who sign a pledge receive a pocket card, with a reminder of their pledge and the steps they can take, as well as an "I Pledged to Protect" sticker. WNY PRISM received 388 commitments this year.

## WNY PRISM Events

Education and outreach events, whether held by WNY PRISM or our partners, offer an opportunity to reach a wide variety of audiences who have expressed interest in invasive species management and who are actively seeking more information. Events represent different models of engagement from more passive tabling to targeted presentations and workshops.

WNY PRISM tracks both direct contacts and event attendees as part of education and outreach efforts. Direct contacts include those with whom WNY PRISM staff or volunteers communicate with directly, as well as all participants in partner meetings, presentations, workdays, workshops and trainings. Event

attendees include those who may stop by our informational table and take outreach materials but with whom we did not have direct verbal communication.

WNY PRISM held and/or attended fifty-eight events, with at least one event in each county, and recorded 2,745 direct contacts and 45,561 attendees. Attendance numbers for larger events were either provided by the host organization or are estimates based on staff observations.

| **Partner Meetings** | **County** | **Direct Contacts** | **Date** |
|---|---|---|---|
| Spring Partner Meeting | Erie | 22 | 27-Apr |
| Fall Partner Meeting | Erie | 25 | 17-Oct |

| **Outreach Table/Display** | **County** | **Contacts/Attendees** | **Date** |
|---|---|---|---|
| Plant WNY CNLP Education Day | Erie | 47/210 | 3-Feb |
| Rural Landowners Workshop | Allegany | 23/75 | 4-Mar |
| Buffalo State Job & Internship Fair | Erie | 18/260 | 9-Mar |
| Buffalo State Arbor Day | Erie | 15/300 | 20-Apr |
| Party for the Planet – Buffalo Zoo | Erie | 128/647 | 22-Apr |
| Clarence Arbor Day | Erie | 29/60 | 29-Apr |
| Spring into Nature | Genesee | 130/307 | 6-May |
| North Tonawanda Kid's Fishing Derby | Erie | 30/83 | 17-Jun |
| Lockport Community Farmers' Market | Niagara | 58/200 | 8-Jul |
| Bidwell Conservation Day | Erie | 75/2,000 | 15-Jul |
| Orleans County Fair | Orleans | 113/26,000 | 27-Jul |
| Lewiston Art Festival | Niagara | 83/9,000 | 12-Aug |
| Conservation Day – Clarence Market | Erie | 69/500 | 26-Aug |
| Niagara Frontier Antique Boat Show | Erie | 39/1,000 | 9-Sep |
| Reinstein Woods Fall Festival | Erie | 416/2,300 | 16-Sep |
| NYS IS Expo – Community Day | Saratoga | 126/500 | 24-Sep |
| NYS IS Expo | Saratoga | 51/500 | 25-Sep |
| University of Scouting | Chautauqua | 34/387 | 7-Oct |


*WNY PRISM Tabling Events from left to right: Party for the Planet, Clarence Farmers' Market and Environmental Day Monarch Release (center two photos), NYS invasive Species Expo Community Conservation Day.*

| Presentations | County | Direct Contacts | Date |
|---|---|---|---|
| iMap – Getting the Most Out of iMap Data | Online | 30 | 25-Jan |
| Rural Landowners Workshop – Forest Pests | Allegany | 37 | 4-Mar |
| Rural Landowners Workshop – Pathways | Allegany | 21 | 4-Mar |
| UB Invasion Ecology – Lesser Celandine | Online | 6 | 20-Mar |
| UB Invasion Ecology – Callery Pear | Online | 5 | 24-Mar |
| Niagara Frontier Botanical Society | Erie | 21 | 11-Apr |
| ReLeaf Workshop | Erie | 50 | 8-May |
| WISP/Hydrilla Press Conference | Niagara | 6 | 9-May |
| Pathways of Invasion | Online | 37 | 8-Jun |
| Erie County Environmental Management | Erie | 11 | 17-Oct |
| Red Swamp Crayfish Project | Erie | 20 | 19-Oct |
| Red Swamp Crayfish Project | Erie | 16 | 20-Oct |
| Maple School and Trade Show | Wyoming | 15 | 9-Dec |
| NYS PRISM Webinars (7) | Online | 650 | Multiple |


*WNY PRISM held Terrestrial (left) and Aquatic (right) Invasive Species Management Workshops at SUNY Fredonia during NY Invasive Species Awareness Week.*

| Workshop/Training | County | Direct Contacts | Date |
|---|---|---|---|
| Winter Wildlife Ecology Day | Wyoming | 25 | 21-Jan |
| Craneridge HWA Training | Erie | 10 | 28-Jan |
| HWA Volunteer Survey Training | Erie | 13 | 11-Feb |
| Invasive Plant ID & iMap Training | Erie | 23 | 5-Jun |
| Terrestrial IS Management Workshop | Chautauqua | 14 | 7-Jun |
| Aquatic IS Management Workshop | Chautauqua | 20 | 7-Jun |
| Trail Survey Program - Classroom | Online | 3 | 14-Jun |
| Trail Survey Program – Field | Erie | 5 | 20-Jun |
| Monitoring and Managing Ash | Wyoming | 16 | 25-Aug |
| NYS IS Expo – Storytelling | Saratoga | 27 | 25-Sep |

| Volunteer Workdays | County | Direct Contacts | Date |
|---|---|---|---|
| Como Lake Park | Erie | 26 | 10-Jun |
| Letchworth Stewardship Day | Wyoming | 15 | 24-Jun |
| Soccer Complex JSG Removal | Erie | 18 | 19-Aug |
| Mill Road Park JSG Removal | Erie | 12 | 9-Sep |

| Walk and Talks | County | Direct Contacts | Date |
|---|---|---|---|
| Pfeiffer Nature Center – Eshelman | Cattaraugus | 20 | 3-Jun |
| Genesee County Park & Forest | Genesee | 24 | 26-Jul |
| Cassadaga Lakes Nature Park | Chautauqua | 27 | 5-Aug |
| Holley Falls | Orleans | 14 | 9-Sep |

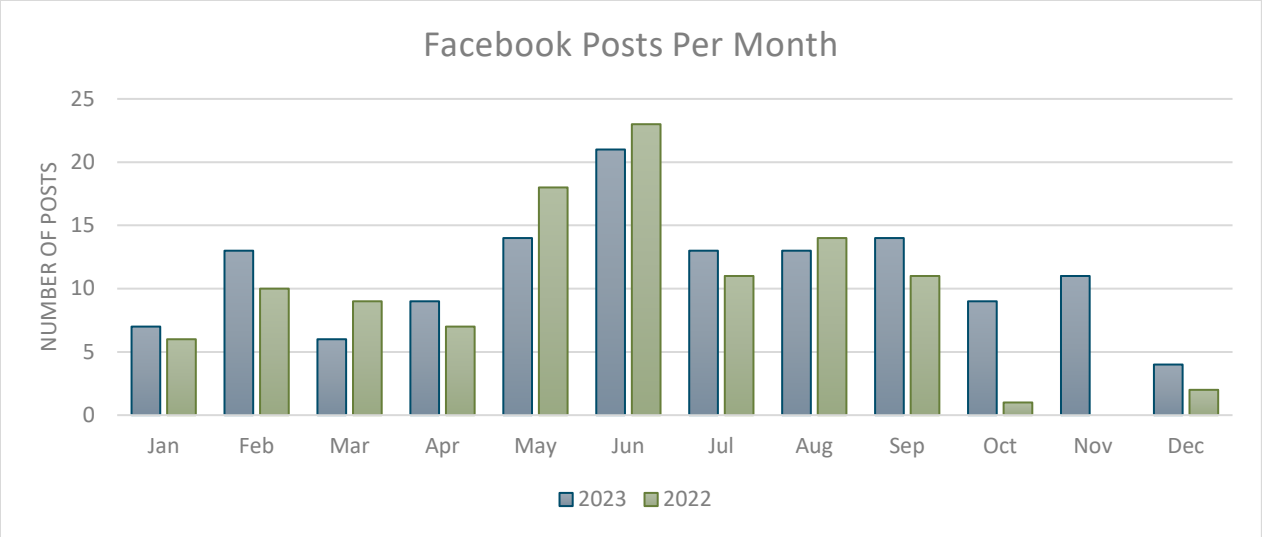
*Volunteers removed invasive species at Como Lake Park (left) and community members attended a Walk and Talk at Pfeiffer Nature Center (right), both held during NY Invasive Species Awareness Week in June.*

**Social Media Report**

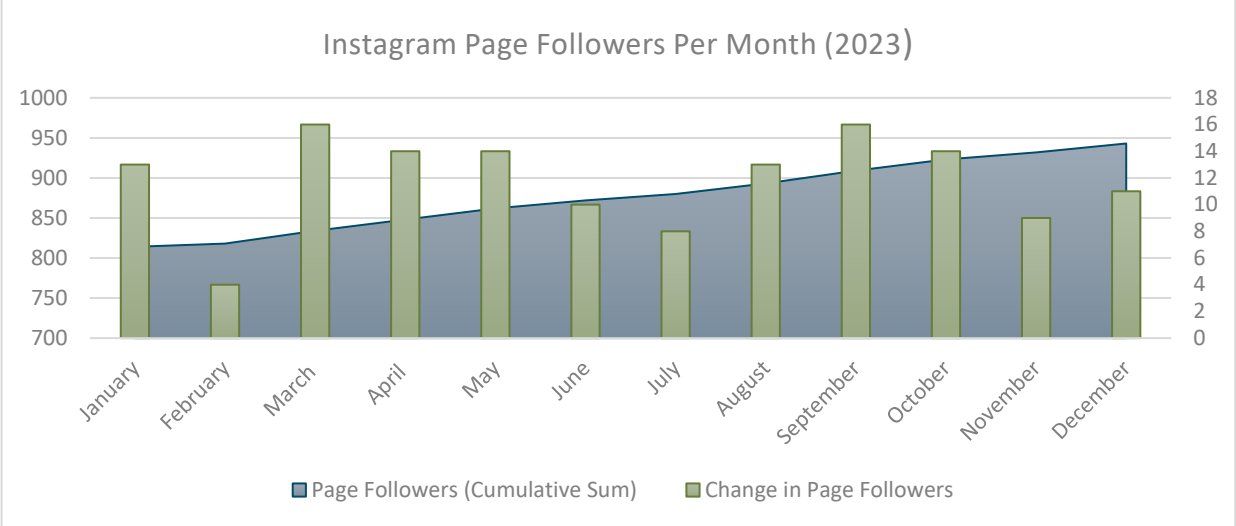
WNY PRISM's social media outreach continues to be a useful tool for sharing information, promoting WNY PRISM's resources, programs and projects, and providing community engagement and learning opportunities. Focus on social media platforms, Facebook and Instagram, remained consistent throughout the year and resulted in steady increases in followers for both.

In 2023, WNY PRISM gained 114 Facebook page likes and 162 followers, representing increases of 11% and 11.5%, respectively. We created 134 Facebook posts, a 20% increase from the number of posts made in 2022. Posting frequency was highest during June, while posting frequency lagged in December and March. This is due to an increased number of posts during NY Invasive Species Awareness Week in June, and a reduced number of events and overall activity from December through March. January and February are exceptions to this as we have an increased number of posts dedicated to hiring and program announcements, including the Crew Assistance Program and Boot Brush Station Program application windows, and our summer job postings.

Facebook posts ranged in topic from news, ecology, and project updates, to events and calls to action. The most frequent topics for Facebook posts were news items and events, including both WNY PRISM and partner events. However, the most popular posts, based on engagement metrics, were those that focused on our work in the field.




WNY PRISM's Instagram has 943 followers, representing an increase of 17% from 2022, and posts reached 17,391 people. Instagram post topics include similar categories as Facebook posts, as were the top performing categories, though PRISM News edged out "PRISM at Work" posts slightly. Instagram post timing followed a similar trend to Facebook with the most posts in June, again due to NY Invasive Species Awareness Week, and a decreased number of posts during the traditional "off-season".



## Prevention

*Goal: Prevent the introduction of invasive species to the WNY PRISM region, limit the spread of invasive species within the region and limit the movement of invasive species established in WNY PRISM to other regions.*

### Watercraft Inspection Stewardship Program

Boats, trailers and other watercraft have long been recognized as a vector for the spread of aquatic invasive species. Plants and animals can be transported between bodies of water when species become attached to watercraft and are subsequently moved to another location where they become dislodged. WNY PRISM coordinates a regional Watercraft Inspection Stewardship Program (WISP) to help reduce the spread of invasive species, to raise awareness and to engage the public in taking spread prevention action. Watercraft Inspection Steward/Environmental Educators (Stewards) are placed at boat launches throughout the western New York region, from Memorial Day through Labor Day, to educate the public on the importance of spread prevention, to perform voluntary inspections and to remove visible aquatic plants and animals from watercraft.

*Boat Steward Alec Cimini inspected a kayak at West Canal Park and Marina.*

The WNY PRISM region has over eighty public launches and fishing access points, and therefore it is necessary to work through a prioritization process to determine which launches should be staffed. Launches are selected through regular evaluation of launch usership, aquatic invasive species presence and distribution, risk of spread, opportunities for education and outreach, and how closely the launch aligns with WNY PRISM priorities. Seventeen launches were selected for staffing with one launch, Sturgeon Point, requiring two Stewards. Sixteen Stewards and two Lead Stewards were hired, bringing the total number of Stewards to eighteen. The Steward hired to staff Onoville Marina left their position early in the season and it remained unfilled, despite efforts to find a replacement.

| Boat Launch | Body of Water | Interactions | Inspections | Interceptions |
|---|---|---|---|---|
| Amherst Veterans | Erie Canal | 1,694 | 1,276 | 3 |
| Bemus Point* | Chautauqua Lake | 2,553 | 807 | 51 |
| Black Rock Canal | Black Rock Canal | 1,036 | 446 | 47 |
| Cuba Lake | Cuba Lake | 3,882 | 1,519 | 49 |

| | | | | |
|---|---|---|---|---|
| Gratwick Riverside | Niagara River | 1,537 | 654 | 30 |
| Griffon Park | Niagara River | 1,851 | 821 | 1 |
| Hanover Town | Cattaraugus Creek | 3,304 | 1,162 | 10 |
| Holley Canal Falls | Erie Canal | 182 | 44 | 0 |
| Isle View | Niagara River | 1,834 | 348 | 19 |
| Nelson C. Goehle | Erie Canal | 544 | 281 | 0 |
| Niawanda | Niagara River | 620 | 333 | 15 |
| North Tonawanda Botanical Gardens | Erie Canal | 1,926 | 1,504 | 4 |
| Olcott Harbor | Lake Ontario | 5,164 | 2,254 | 102 |
| Onoville Marina | Allegheny River | 581 | 180 | 0 |
| Prendergast Point* | Chautauqua Lake | 2,657 | 1,059 | 209 |
| Sturgeon Point | Lake Erie | 1,508 | 593 | 56 |
| West Canal | Erie Canal | 3,228 | 1,915 | 14 |

**Prendergast Point and Bemus Point are staffed by both WNY PRISM and the Chautauqua Lake Association - numbers include WNY PRISM data only.*

Stewards surveyed 17,147 watercraft, inspected 15,215 watercraft, submitted 14,655 WISPA (Watercraft Inspection Survey Program Application) surveys and achieved an 88.73% acceptance rate, which represents an increase of over 4% from 2022. The discrepancies between watercraft surveyed, watercraft inspected and submitted surveys can be accounted for by Stewards submitting surveys without conducting an inspection, such as when a boater declines an inspection, Stewards being too busy at the launch to engage with everyone, or Stewards submitting a survey that includes multiple watercraft, such when a group of kayakers are launching together.


*Boat Steward Bethany Mangioni staffed the Wide Waters Marina in Lockport.*

During an inspection, Stewards remove all organic matter from watercraft, including native and invasive species. Stewards identified and removed 610 individual, invasive organisms (interceptions) from inspected boats. The most intercepted invasive species was curly-leaf pondweed (*Potamogeton crispus*, 319), followed closely by Eurasian watermilfoil (*Myriophyllum spicatum*, 257). Additional species intercepted include zebra mussel (*Dreissena polymorpha*, 24), brittle naiad (*Najas minor*, 4), starry stonewort (2), European frog-bit (*Hydrocharis morsus-ranae*, 2), *Hydrilla* (*Hydrilla verticillata*, 1) and quagga mussel (*Dreissena bugensis*, 1). The total number of inspected watercraft with interceptions was

1,679, representing 11% of total watercraft. Of the 11%, 81.24% were retrieving boats and 18.75% were launching boats, demonstrating the importance of cleaning boats when the leave the water.

Stewards are present at their assigned launches Thursday – Sunday, from Memorial Day through Labor Day. While this mirrors the busiest times at the busiest regional launches, Stewards can't be present every time someone launches or retrieves a boat. Therefore, it is important to instill within the community an understanding of the importance of conducting their own inspections. As part of the WISPA survey, Stewards ask boaters to take the "Clean. Drain. Dry." Pledge, a pledge to take spread prevention measures on their own. The survey results showed that 73.47% of people agreed to commit to taking spread prevention measures and 13.23% had previously committed. In addition, 70.5% of boaters took spread prevention action prior to launching their boats. This number has increased over the years as more people have become familiar with the program and the "Clean. Drain. Dry." message.

Angler and Walk-up Surveys

The WISPA survey is a powerful tool that allows watercraft inspection programs statewide to share data on inspections and interactions. However, there are opportunities beyond just interacting with boaters at the launches. Two surveys, Angler and Walk-up Surveys, were developed to accompany the WISPA survey and capture information from a broader group of recreationists that use a launch.

The number of Angler and Walk-Up Survey submissions is heavily dependent upon the location and layout of individual launches. Launches with heavier boat traffic, such as Sturgeon Point and Onoville Marina, are not set up for other members of the public to walk through or fish from the docks. In addition, Stewards are often busy talking with boaters and unable to interact with other visitors. However, launches that are adjacent to a popular park or walking trails may have many more interactions with non-watercraft launch visitors, regardless of the level of boat traffic.

Stewards submitted 120 Angler and 445 Walk-Up Surveys, recording direct interactions with 991 launch visitors. The highest number of Angler Surveys were submitted from Wide Waters Marina, along the Erie Canal in Lockport, and the highest number of Walk-Up Surveys were submitted from Niawanda Park, along the Niagara River in the City of Tonawanda. No invasive species were found during Angler Survey equipment inspections, and moisture was only detected on three pieces of equipment. Of those surveyed for the Walk-up Survey, only 15.8% were familiar with any invasive species, continuing to demonstrate the importance of raising awareness of invasive species and spread prevention.

## Boot Brush Station Program

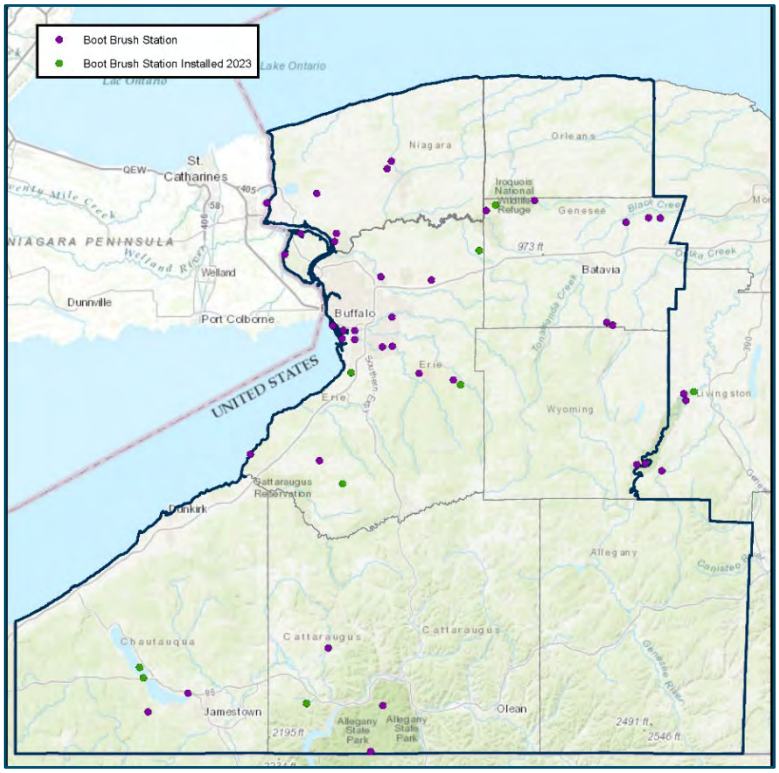
WNY PRISM's Boot Brush Station Program has been highly successful, with forty-eight boot brush stations being placed since the program began in 2016. The program aims to improve regional spread prevention efforts by providing partners with the signs and building materials necessary to install boot brush stations at popular trailheads and public access areas on their properties. The signs provide information on invasive species and advice on how visitors can help stop the spread of invasive species by cleaning off their footwear before and after hiking.

Due to the continued popularity of the program, WNY PRISM has developed an application process for requesting a boot brush station. We provide between 6-8 boot brush stations each year, depending

upon funding. In exchange for receiving a boot brush station partners agree to both install and maintain the stations, which generally includes cleaning the sign and replacing the brushes. Brush replacement frequency depends on level of use, which can be highly variable between sites.

In 2023, we received eleven applications from eight partners, and selected eight sites. The selected sites were Camp Timbercrest, Penn Dixie Fossil Park & Nature Reserve, Onondaga Escarpment Unique Area, Hunters Creek Park, Chautauqua Fish & Wildlife Management Area – Tom's Point, Clear Lake Wildlife Management Area, Long Point State Park – Point Trail, and Iroquois National Wildlife Refuge – Kanyoo Nature Trail.

WNY PRISM staff worked with partners to tailor the signs to each site by including partner logos and selecting appropriate species to feature. Selected species may be those that partners are actively managing or those that hikers are most likely to encounter on the trail. We strongly encourage the inclusion of an early detection species as the primary species, to help increase awareness of these high priority species, but don't require it. The most often selected early detection species was Japanese stiltgrass while the most popular non-early detection species selected was knotweed.



*WNY PRISM Boot Brush Station Locations.*

Partners received their supplies in May, which include the sign, boot brush, lumber and necessary hardware, and were tasked with installing the boot brush stations prior to New York Invasive Species Awareness Week (ISAW), which began Monday, June 5. Partners provided WNY PRISM with photos and GPS points for each station, which were used to promote the new boot brush stations and encourage people to seek them out.

**Boot Brush Station Surveys**

WNY PRISM's Boot Brush Station Program has resulted in the installation of forty-eight boot brush stations across the region since 2016, and in 2023 we conducted a survey of those boot brush stations to assess their condition and identify nearby invasive species. Forty-six of the forty-eight boot brush stations were surveyed, with one station unable to be surveyed due to construction taking place on-site and the second because it was installed after the survey took place.

To assess boot brush station condition and maintenance needs, the overall condition, sign condition and boot brush condition were assessed and rated using the following scale: 1- not usable; 2- damaged, but usable; 3- normal wear and tear; 4- good; 5- like new. Any damage, wear, or other things of note were described as appropriate, which helped identify specific issues such as missing components.
Every station installed within the last four years (24) was in good or like new condition. For those installed in 2018 and 2019, eight were in good or like new condition, one saw normal wear and tear and one was not usable. No boot brush stations were installed in 2017 and those installed in 2016 ranged from not usable to normal wear and tear. Two stations were missing signs, and three stations were missing boot brushes. One station was missing both the sign and boot brush, although the structure was still present. Overall, seven stations had damaged, but usable, boot brushes and while ten signs had damage, readability was only moderately impacted for three of the signs.


*Genesee County Park and Forest – Wetland Trail boot brush station condition survey. The station was installed in 2018 and remains in good condition.*

To determine invasive species presence, a survey was conducted within a 10-foot radius of each boot brush station. All observed invasive species within that radius, as well as any that could be seen and identified visually from within that 10-foot radius, were recorded. Each species was recorded once and the distribution of each species was noted.

A trail survey was conducted to determine invasive species presence along the first 100 feet of the trail whose trailhead was nearest to the boot brush station. Each survey was completed by walking down one side of the trail and returning on the other side, following our standard trail survey protocol. When an invasive species was observed, the observation was entered into the iMap Mobile App. If different populations (> 40 feet from each other) were observed of the same species along the trail, each were reported. If individual plants of the same species and from the same population (within 40 feet of each other) were observed, only one report was submitted.

*WNY PRISM completed a Boot Brush Station Survey for 46 stations installed in the region.*

Invasive species were present at thirty-eight of the forty-six locations and present along trails at forty-three of the forty-six locations. At each location, if a species was observed in the survey plot (in the vicinity of the boot brush station), 92% of the time, it was also observed along the trail.

## Early Detection and Rapid Response

*Goal: Develop an effective early detection program and associated protocols that provide for reporting, assessment, and response efforts.*

The WNY PRISM early detection program addresses the survey, removal and spread prevention of Tier 2 and Tier 1 species, with a focus on established early detection species and approaching region species priorities. WNY PRISM's Early Detection Priority Species represent those that pose the greatest threat to the region while also being species for which a goal of eradication is feasible based on current species presence and distribution, and management capabilities. Several changes were made to the early detection list for 2023 including the removal of Japanese angelica tree and yellow floating heart, and the addition of goatsrue, spotted lanternfly and red swamp crayfish.

Early Detection Priority Species

| | | |
|---|---|---|
| 1. | *Ampelopsis brevipendunculata* | Porcelain Berry |
| 2. | *Brachypodium sylvaticum* | Slender False Brome |
| 3. | *Cytisus scoparius* | Scotch Broom |
| 4. | *Eichhornia crassipes* | Water Hyacinth |
| 5. | *Galega officinalis* | Goatsrue |
| 6. | *Lycorma delicatula* | Spotted Lanternfly |
| 7. | *Microstegium vimineum* | Japanese Stiltgrass |
| 8. | *Persicaria perfoliata* | Mile-a-Minute |
| 9. | *Pistia stratiotes* | Water Lettuce |
| 10. | *Procambarus clarkia* | Red Swamp Crayfish |

WNY PRISM early detection sites, those with known infestations of early detection priority species, are placed into four categories: **Active**, **Inactive**, **Partner** and **Eradicated**. **Active** sites are those WNY PRISM staff members and/or volunteers visit each year to survey for and remove plants. **Inactive** sites are those for which WNY PRISM is unable to carry out management. This is most often due to capacity limitations, but also may be due to an inability to safely access a site or due to a lack of permission. **Partner** sites are those actively managed by WNY PRISM partners and **eradicated** sites are those identified as presumed eradicated based on WNY PRISM's early detection site monitoring protocol.

Early detection monitoring sites (i.e., sites where previous removal efforts resulted in no remaining plants) are monitored annually by WNY PRISM. If removal efforts have resulted in individuals not being found for three consecutive years, the site will then be monitored every other year for up to five or seven years, depending on the species. If no individuals are found after the final survey year, the site is presumed eradicated and removed from WNY PRISM's site monitoring list. If at any point additional plants are found, the site resets to active management, and annual monitoring will begin again the following year.

Terrestrial early detection survey efforts focused on porcelain berry, slender false brome, goatsrue, and Japanese stiltgrass from the early detection priority list, and amur cork tree, another Tier 2 species in the region. Surveys were carried out at thirty-six sites throughout the region, encompassing over 4,000

acres, and Survey Technicians surveyed 53.31 miles. One new porcelain berry, two new goatsrue and three new Japanese stiltgrass sites were found as a result of early detection survey efforts and other program efforts.

Slender false brome manual removal was carried out at four sites and led to the removal of thirteen bags of plants, while herbicide treatment was carried out at two sites that encompassed 222.35 acres. Japanese stiltgrass hand-pulling was implemented at twenty-two sites resulting in the removal of 23 bags of plants. Herbicide treatment was carried out at five total Japanese stiltgrass sites, including two sites where hand-pulling was also implemented, resulting in 25.34 acres treated. Goatsrue manual removal was carried out at one site and included the removal of six bags of plants from 0.09 acres.

Three volunteer removal workdays focused on priority early detection species were held. Volunteers learned about invasive species while they helped to remove plants. One workday, held at Letchworth State Park, focused on slender false brome removal, and volunteers removed twelve of the thirteen total bags of slender false brome removed this season. Two workdays, held at Mill Road Park and the West Seneca Soccer Complex, focused on Japanese stiltgrass and volunteers removed ten of the twenty-three total bags of Japanese stiltgrass removed this season.

Aquatic early detection efforts focused on water hyacinth and water lettuce. Three water lettuce and two water hyacinth sites were each surveyed twice during the field season, and no plants were found. A new water hyacinth site was discovered by a partner at Dunkirk Harbor, and all plants were removed at this site.

### Terrestrial Early Detection Species

Porcelain Berry – 1 active, 1 inactive

Porcelain berry was first reported in the WNY PRISM region in September 2020 by a community scientist. At the time porcelain berry was a Tier 1 and approaching region priority species, so it was moved to the early detection list. There is one known active porcelain berry site in the WNY PRISM region, in Delaware Park, an Olmsted Park in Erie County, and one inactive site at Canadaway Creek Nature Sanctuary, in Chautauqua County, which was first reported, and then mapped by WNY PRISM, in 2023. The single porcelain berry was manually removed at Delaware Park.

*Porcelain berry was reported in Chautauqua County in 2023 and WNY PRISM conducted a site visit to confirm the report and complete a site assessment.*

Slender False Brome – 4 active, 2 partner, 6 inactive

Slender false brome continued to be a focus of WNY PRISM's early detection efforts. Manual removal efforts took place at four sites, Carlton Hill Multiple Use Area (Carlton Hill), Iroquois National Wildlife Refuge, Letchworth State Park and Trestle Park. Just over thirteen bags of slender false brome were removed across the four sites that encompassed 1.33 total acres. One volunteer workday was held in support of slender false brome removal efforts. The workday, held at Letchworth State Park and in partnership with the Friends of Letchworth, resulted in twelve (of the thirteen) bags being removed.

Herbicide treatments took place at Genesee County Park and Forest and Bergen Swamp and was carried out in mid-June with follow-up in late July to early August. Slender false brome was treated along all trails within the 220-acre Genesee County Park and Forest and along the Pocock Trail and entrance at Bergen Swamp.

WNY PRISM staff continued to visit slender false brome pre- and post-treatment management plots, first established in 2018 at Genesee County Park and Forest. The twenty-five plots were evenly distributed among the control, manual removal, mechanical removal, herbicide treatment and mechanical/herbicide treatment areas. Average slender false brome percent cover in these plots before any treatment was implemented was 67.2 ± 21.2%. Those treatment methods were implemented, along with an untreated control from 2018 – 2019. From 2020 – 2023, the entire infestation including the control was treated with herbicide, which was determined to be the Best Management Practice for the site.

*A volunteer helped remove slender false brome at Letchworth State Park during a workday held in partnership with the Friends of Letchworth.*

In 2023, the average slender false brome percent cover ahead of treatment was 1.1 ± 2.5%. Following data collection, all plants were treated with herbicide twice during the season. In 2020, data was collected in ten plots in the Inspiration Point slender false brome infestation at Letchworth State Park, ahead of herbicide treatment. The slender false brome percent cover in these plots before treatment was implemented was 49.0 ± 21.9%. In 2023, the average slender false brome percent cover after 2 years of herbicide treatment and 1 year of minimal manual removal and scattered herbicide treatment was 7.1 ± 18.8%.

Scotch Broom – 1 partner

Scotch broom is present at a single known site within the region, at Letchworth State Park, and is under the management of Parks. WNY PRISM continues to prioritize surveys and raise awareness for this species to ensure new populations are detected before a potential 30-year seed bank can be established. No new sites were reported in 2023.

Goatsrue – 1 active, 5 inactive

Goatsrue was moved to the early detection priority list from the approaching region list in 2022, when it was confirmed in the region by WNY PRISM staff after following up on herbarium collections and partner reports. Additional survey efforts were taken in 2023, resulting in two new sites being found. To determine the feasibility of management, manual removal efforts were implemented at Hyde Park, where six bags were removed from 0.09 acres.

At the end of the season, WNY PRISM staff reviewed goatsrue to consider if the species should remain on the early detection list. It was determined that the size of the known infestations and a seedbank viability of up to ten years made eradication not feasible, and it was recommended to the working groups and steering committee to remove the species in favor of other priorities.

Spotted Lanternfly – 1 partner

Spotted lanternfly was first reported in the region in 2022, within the City of Buffalo. This remains the only confirmed site and is managed by AGM. WNY PRISM efforts regarding spotted lanternfly include outreach efforts and the Spotted Lanternfly Trap Monitoring Program, which you can find more information about in the Community Science section of this report.

Japanese Stiltgrass – 25 active, 5 partner, 8 inactive

*Japanese stiltgrass treatment took place along steep slopes at Chestnut Ridge.*

Japanese stiltgrass was hand-pulled at twenty-two sites covering a total of 159.52 acres and resulted in the removal of twenty-three bags of plants. Two Japanese stiltgrass removal volunteer workdays contributed to this effort.

Herbicide treatment of Japanese stiltgrass was carried out in five parks: the East Aurora American Legion, Chestnut Ridge County Park, Franklin Gulf County Park, Hunters Creek County Park and Mossy Point Preserve. The Crew carried out herbicide treatment in July with follow up treatment in late August and early September. Japanese stiltgrass herbicide treatment encompassed 25.34 acres. New infestations of Japanese stiltgrass were found at each of these sites and treated. The new infestations were likely the result of erosion and weather patterns, mowing equipment and/or trail construction. Japanese stiltgrass control efforts looked effective in previously treated areas, but the new infestations added to the challenge of treating this species.

Three new Japanese stiltgrass sites were found as a result of survey efforts. One was found during a Crew Assistance Program survey at the East Aurora Water Resource Recovery Facility, but this infestation was too dense for manual removal and continued off the property boundary along Cazenovia Creek.

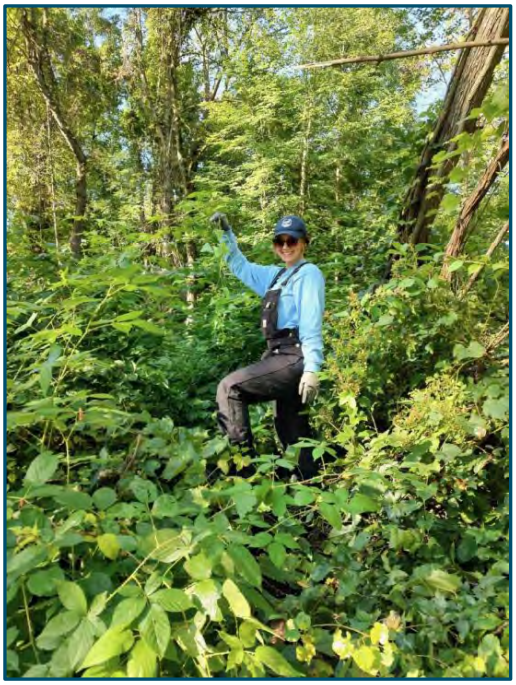
Japanese stiltgrass was also found at Moss Lake Preserve during a data gap survey and at David and Margaret Naetzker Preserve during early detection survey efforts. All plants were hand-pulled from both sites since the populations were at a manageable size.

Japanese stiltgrass surveys, management and volunteer workdays were supported by additional funding through the Great Lakes Restoration Initiative and U.S. Forest Service.

Mile-A-Minute – 1 partner, 1 eradicated

The Mile-a-Minute Working Group includes SUNY Brockport, DEC and partners from Finger Lakes PRISM, and is facilitated by WNY PRISM. Management efforts in WNY PRISM are focused on infestations in the Oakfield area. The single identified site is located at Oak Orchard Wildlife Management Area (Oak Orchard) and includes satellite populations that are present on two adjacent private properties. A second site in Cattaraugus County is considered eradicated.

The team from SUNY Brockport has continued to coordinate management efforts at Oak Orchard. WNY PRISM staff worked alongside the SUNY Brockport team for six days during June – October manually removing mile-a-minute and resulting in 937 vines removed from Oak Orchard and 3,971 vines removed from the surrounding properties. A total of 3.86 acres were surveyed and managed with hand removal.



*Mile-a-minute was found and removed amidst dense vegetation at Oak Orchard.*

## Aquatic Early Detection Species

Water Hyacinth – 2 active, 1 partner, 1 inactive, 4 eradicated

Water hyacinth has been present in the region since 2001 and has been found in Chautauqua, Niagara and Erie Counties. Survey and management efforts began in 2014, initially led by partners. WNY PRISM began expanding these efforts in 2016. There are currently two active sites for WNY PRISM: Oppenheim Park and Tonawanda Creek. WNY PRISM staff spent a total of 142 hours surveying 98.6 acres across both sites, visiting each in both July and August. No plants were found at either site. Eradicated sites include Bull Creek, Ellicott Creek, Ransom Creek and Unity Island.

In September 2023, the Chautauqua Watershed Conservancy (CWC) found a small population of water hyacinth in Dunkirk Harbor off a public boat launch entering Lake Erie. An early detection assessment was completed, and it was confirmed that all plants at this site were removed by CWC at the time of observation.

Water Lettuce – 3 active, 1 inactive

Water lettuce has been observed at four sites in WNY PRISM. Three sites are active while the fourth, present on private property, is currently inactive. WNY PRISM staff spent 280 hours surveying a total of 182.4 acres at the three sites for water lettuce, which were each surveyed in both July and August. The species was not found this year.

Red Swamp Crayfish – 1 partner

Red swamp crayfish were discovered in the WNY PRISM region in 2020, at the Park School of Buffalo (Park School). At the time, ten individuals were caught in a small pond on the property. WNY PRISM's Director, Christopher Pennuto, initiated a trapping program with students from the Park School in 2020, and has now added select Buffalo State University students to the trapping effort. In 2021, the WNY PRISM Crew installed fencing around the pond at the Park School to contain the species and prevent it from spreading to new areas. In 2022 and 2023, two Buffalo State University students trapped animals throughout the summer, and conducted a retail shop survey in the region for invasive crayfish occurrence. To date, nearly 1,200 red swamp crayfish have been removed from the pond. In 2023 alone, the team collected around 900 crayfish. Of those collected, six were native species: three white river crayfish (*Procambarus acutus*) and three calico crayfish (*Faxonius immunis*). The rest collected were red swamp crayfish. With the collection of the native species, management and further survey efforts are being re-evaluated.

*Boat Stewards assisted with early detection site monitoring for water hyacinth and water lettuce (left), and Buffalo State University students assisted the Park School of Buffalo with trapping red swamp crayfish.*

## Additional Species

*Hydrilla*

*Hydrilla* (*Hydrilla verticillata*) is a Tier 2 species in the WNY PRISM region and a high priority target for regional, state and federal partners, who are leading removal and monitoring efforts. Since herbicide treatment is necessary for *Hydrilla* management, and WNY PRISM is unable to carry out such treatments, our efforts have primarily involved supporting partners through survey assistance and outreach.

WNY PRISM continued to work with U.S. Army Corps of Engineers – Buffalo District (USACE), DEC and U.S. Fish and Wildlife Service - Lower Great Lakes Fish and Wildlife Conservation Office (USFWS) on the Tonawanda Creek/Erie Canal *Hydrilla* Demonstration Project, a multi-year project aimed at eradicating *Hydrilla* and providing information for the development of Best Management Practices. In support of the project, WNY PRISM Stewards provided outreach to members of the public at staffed launches along the Erie Canal throughout sampling and treatment efforts and assisted with post treatment surveys.

In addition, WNY PRISM staff participated in a multi-agency press conference, held in May, to bring awareness to *Hydrilla* and the Watercraft Inspection Stewardship Program by presenting on the threat of *Hydrilla*, demonstrating how to complete a watercraft inspection, and encouraging the public to be on the lookout for *Hydrilla* and to report it if they find it.

Carolina Fanwort

Carolina fanwort (*Cabomba caroliniana*) is a Tier 1 species in the WNY PRISM region. In June, partners with Tifft Nature Preserve reached out with a suspected finding of Carolina fanwort in Lake Kristy on the preserve. An early detection survey was conducted at the site and led to the identification of the species as the native white water-crowfoot (*Ranunculus aquatilis* var. *diffuses*). The species look very similar with the main difference being that the leaves on white water crowfoot grow alternate along the stem and Carolina fanwort grows opposite.

*WNY PRISM conducted a site visit to look into a report of Carolina fanwort - it was determined to be the native look-a-like, white water-crowfoot.*

Japanese Angelica Tree

Japanese angelica tree is a Tier 2 species in the WNY PRISM region, with one known location at Lake Erie State Park in Chautauqua County. It was first reported in 2018 by Parks and treatment began in 2019. WNY PRISM assisted with treatment for three years, from 2019 – 2021, after which Parks took over management. Management efforts have been very successful and in 2023 only four seedlings and saplings were found and removed.

Amur Cork Tree

Amur cork tree is a Tier 2 species in the WNY PRISM region. WNY PRISM staff completed site assessments for amur cork tree at the two known locations in the region, Akron Falls County Park (Akron Falls) and Delaware Park. As part of the Crew Assistance Program, the WNY PRISM Crew carried out cut stump treatment for amur cork tree at Akron Falls. The Crew treated over sixty trees in a 0.23-acre stretch along the creek.

Seven additional sites in close proximity to Akron Falls were surveyed for amur cork tree, and no plants were found. Amur cork tree management at Delaware Park was out of WNY PRISM's capacity for 2023, and additional permissions are needed for future management at this site. The amur cork tree infestation at Delaware Park is about 0.50 acres and is comprised of seedlings, saplings and large, mature, fruit bearing trees.

*Amur corktree was cut and treated at Akron Falls.*

## Approaching Region Species Efforts

An effective early detection program dedicates time and resources to survey and monitoring efforts for approaching region species, so new priority invasive species can be detected early. In 2023, all species on the approaching region list were included in the Crew invasive species ID training, so staff were familiar with these species should they be encountered during fieldwork. In addition, resources were made available to partners to provide training for their staff and invasive species profiles were created for those species not already on the WNY PRISM website. No Approaching Region Priority Species were found in the WNY PRISM region in 2023.

Approaching Region Priority Species

1. *Actinidia arguta* Hardy Kiwi
2. *Aldrovanda vesiculosa* Waterwheel
3. *Impatiens glandulifera* Himalayan Balsam
4. *Myriophyllum aquaticum* Parrot-Feather
5. *Ludwigia peploides* Primrose-willow
6. *Oplismenus undulatifolius* Wavyleaf Basket Grass
7. *Pueraria montana* Kudzu

## Management and Habitat Restoration

*Goal: Assist with management planning and project implementation focused on long-term, sustainable projects that provide resilience against future invasions, and provide improved ecosystem function and services. Supported efforts will be based on WNY PRISM identified priorities through primarily technical assistance and training, with project implementation assistance when capacity allows.*

### Crew Assistance Program

The Crew Assistance Program (CAP) continues to be one of WNY PRISM's most successful programs, improving invasive species management across the region by assisting partners with invasive species surveys and mapping, invasive species removal, habitat management, and restoration projects. It offers valuable opportunities for partners to work alongside WNY PRISM's experienced staff and trained seasonal crew to learn about invasive species management and gain experience using removal methods and equipment.

*The WNY PRISM Crew, including the Invasive Species Management Assistants and Survey and Monitoring Technicians completed invasive species identification training in the field, ahead of starting work on projects.*

From 2016 – 2023, WNY PRISM received 123 project proposals, averaging fifteen per year. The fewest received was eight, in 2017, and the most was twenty, in 2019. Proposals have been received for projects in all eight counties within our region, the most of which being for projects within Erie (51), Chautauqua (24) and Niagara (22) Counties. Project proposals involve new and ongoing projects and have included projects on which WNY PRISM had previously worked. WNY PRISM selected and completed 105 projects from 2016 – 2023.

The 2023 Crew Assistance Program Request for Proposals was released on Tuesday, December 13, 2022, and the closing date was set for Friday, January 27, 2023, giving partners six weeks to prepare and submit project proposals. Eighteen proposals, submitted by sixteen unique partners from five counties in the WNY PRISM region were received. Each was reviewed and prioritized based on our established review criteria and assessed based on the project's ability to fit within our capacity. Sixteen projects, consisting of five survey and mapping projects and eleven removal and restoration projects were selected for 2023.

The selected surveys were mostly general invasive species site inventories however, one survey focused on using the Survey123 iMap Forest Pest Data Collection Tool for an in-depth HWA site assessment. Selected removal projects focused on sixteen different species and included bush honeysuckle, common

buckthorn, giant hogweed (*Heracleum mantegazzianum*), knotweed, *Phragmites* (*Phragmites australis*) and water chestnut (*Trapa natans*).

The 2023 Crew Assistance Program resulted in 745.5 acres surveyed and 45.88 acres managed. Reports for each of the sixteen completed projects were provided to partners and included a summary of the completed work, results and recommendations for future management actions.

**Survey and Mapping Projects**

Crew Assistance Program survey and mapping projects serve the purpose of providing partners with a basis for which to identify strategies and build a management plan. Surveys primarily consist of general invasive species site inventories, though species focused surveys are also conducted, such as in the case of the HWA survey at Franklin Gulf County Park. WNY PRISM primarily uses the iMap Mobile Advanced tool to collect and manage data and provides each partner with a written summary of the survey and a map. The project summary includes an overview of how the survey was conducted and what was observed, provides management recommendations, and provides information on how to access the data within iMap.

| Project Site | Partner Organization | Acres Surveyed |
|---|---|---|
| Cazenovia Park | Buffalo Olmsted Parks Conservancy | 58.1 |
| Delaware Park | Buffalo Olmsted Parks Conservancy | 88.5 |
| East Aurora WRRF | Erie County Department of Environment and Planning - Division of Sewerage Management | 6.72 |
| Franklin Gulf County Park | Erie County Bureau of Forestry | 356 |
| Penn Dixie | Penn Dixie Fossil Park & Nature Reserve | 62.1 |
| South Park | Buffalo Olmsted Parks Conservancy | 149.3 |
| Southtowns AWTF | Erie County Department of Environment and Planning - Division of Sewerage Management | 24.78 |

<u>Buffalo Olmsted Parks Conservancy</u>

Three sites were surveyed as part of the Buffalo Olmsted Parks Conservancy (Olmsted) invasive species mapping project: Cazenovia Park, Delaware Park and South Park. Cazenovia Park is an 83-acre park located in South Buffalo and the survey provided an updated invasive species inventory for the park. The Crew surveyed 58.1 acres of trail, natural areas and riparian areas along Cazenovia Creek. Delaware Park is a 350-acre park in Buffalo that is a multi-use recreational park that contains a historical Japanese garden, golf course, Hoyt Lake, and seven miles of footpaths, in addition to a large, forested area and meadow. The Crew surveyed 88.5 acres of trails and within the forested area. South Park is a 156-acre park located in Buffalo, near Lackawanna. This site includes an arboretum, golf course, South Park Lake and the Buffalo and Erie County Botanical Gardens. This survey provided a baseline invasive species inventory in the park, which was then used to drive Olmsted prioritization efforts for future management. The Crew surveyed 149.3 acres of the park.

Erie County Division of Sewerage Management

The Erie County Department of Environment and Planning – Division of Sewerage Management submitted proposals to have two of their sites surveyed for invasive species. The East Aurora Water Resource Recovery Facility is bordered by forested areas and the East Branch of Cazenovia Creek, with residential land on the north side of the facility. The Crew surveyed 6.72 acres of the property and along Cazenovia Creek. Of note was a dense patch of Japanese stiltgrass found along the creek.

The Southtowns Advanced Wastewater Treatment Facility, located in Hamburg adjacent to Woodlawn Beach State Park, will be upgrading their facility in the coming years and information on invasive species presence on the site will be used to inform construction and spread prevention efforts. The Crew surveyed 24.78 acres.

*The Crew completed surveys at Penn Dixie Fossil Park and Nature Reserve (left) and Franklin Gulf County Park (right).*

Penn Dixie Invasive Species Survey – Penn Dixie Fossil Park & Nature Reserve

Penn Dixie Fossil Park and Nature Reserve (Penn Dixie), located in Blasdell, contains a rock quarry, where one can dig up many fossils of ancient aquatic organisms, and wetlands and large wooded areas known to be breeding and nesting sites for birds. Penn Dixie is planning to include invasive species management as part of their programming moving forward. This survey was selected to provide a baseline invasive species inventory from which a site management plan could be developed. The Crew surveyed 62.1 acres in the wooded areas of the park.

Hemlock Woolly Adelgid Survey in Franklin Gulf County Park – Erie County Bureau of Forestry

Franklin Gulf is a 631-acre undeveloped park located in Eden and North Collins, NY. This park has over 350 acres of mature hemlock forests, and along with those, infestations of HWA. In 2022 the NYS Hemlock Initiative released silver flies (*Leucotaraxis* spp.), a biocontrol agent for HWA. This project was selected to conduct an in-depth site assessment of the hemlock stands to help with prioritization of future HWA management efforts. The Crew surveyed 356 acres of hemlock stands throughout the park.

The Crew used the Survey123 iMap Forest Pest Data Collection Tool for the site assessment. The Crew delineated hemlock stands in the park, and for each stand data was collected on presence or absence of HWA, average HWA density, percent of trees infested with HWA, live crown ratio, and on crown density. Maps were created to assist with stand prioritization for future management efforts. This data will help Erie County determine which stands are a priority for pesticide treatment and will help the NYS Hemlock Initiative determine future biocontrol release sites within the park.

**Removal and Restoration Projects**

The prioritization criteria for removal and restoration projects under the CAP focus on species selection, conservation targets, sustainability, and partnership. Invasive species priorities include Tier 2 species, however projects focused on Tier 3 and Tier 4 species are often selected, when the project successfully addresses the other criteria. WNY PRISM looks for projects where we can work with our partners to achieve long-term, sustainable management success on high priority conservation lands, and where the projects can support improved capacity for partner efforts moving forward.

Eleven removal projects were selected, representing six new projects and five that WNY PRISM has previously assisted with. Species targets included amur cork tree, swallow-wort, slender false brome, *Phragmites*, knotweed, giant hogweed, invasive shrubs, water chestnut, wild parsnip (*Pastinaca sativa*), and mile-a-minute, in addition to several species that were treated as secondary targets.

| **Project Site** | **Partner Organization** | **Management Activity** | **Acres Managed** |
|---|---|---|---|
| Akron Falls County Park | Erie County Bureau of Forestry | Cut Stump, Foliar Spray | 0.25 |
| Bergen Swamp | Bergen Swamp Preservation Society | Clip-and-Drip, Foliar Spray | 2.86 |
| Camp Timbercrest | Girl Scouts of Western New York | Foliar Spray | 0.16 |
| Cattaraugus and Erie County Giant Hogweed Sites | NYS DEC Giant Hogweed Control Program | Foliar Spray | 1.13 |
| Craneridge | Craneridge Homeowners Association | Clip-and-Drip, Cut Stump | 0.042 |
| Elm Creek Site 16 | Cattaraugus County Department of Public Works | Manual Removal | 4.56 |
| Genesee County Park and Forest | Genesee County Department of Parks, Recreation & Forestry | Foliar Spray, Manual Removal | 5.02 |
| Niagara County | Niagara County Soil & Water Conservation District | Foliar Spray, Stem Injection | 4.5 |
| Oak Orchard WMA | SUNY Brockport | Manual Removal | 3.86 |
| Tifft Nature Preserve | Buffalo Society of Natural Sciences | Cut Stump, Foliar Spray | 9.6 |
| Tonawanda WMA | NYS DEC Region 8 | Cut Stump, Foliar Spray | 13.9 |

Akron Falls Park Invasive Species Assistance – Erie County Bureau of Forestry

Erie County Bureau of Forestry requested assistance for management of amur cork tree, periwinkle (*Vinca minor*) and pale swallow-wort at Akron Falls County Park in Akron, NY. The Crew treated a 0.024-acre periwinkle infestation located across the road from a privately owned rock garden, which was identified as the source of the infestation. Despite the proposal indicating only a couple amur cork tree being present on-site, pre-treatment surveys along Murder Creek led to the discovery of considerably more. Over sixty trees were treated in a 0.23-acre stretch along Murder Creek, with sizes ranging from 1 to 8-inch diameter. The oldest tree cut showed sixteen years of growth.

*Akron Falls Park is a well-loved park located in Erie County and was the site of a Crew Assistance Program project in 2023.*

The final component of this project involved testing the effectiveness of Pathfinder II (triclopyr) for pale swallow-wort management. WNY PRISM obtained a 2(ee) recommendation, based on recommendations and work completed in other states. The Crew established a $1m^2$ test plot and foliar treated all pale swallow-wort in the plot with Pathfinder II. Follow-up monitoring will be conducted to determine treatment effectiveness in 2024.

Invasive Plant Removal at Bergen Swamp – Bergen Swamp Preservation Society

*Phragmites post-treatment monitoring photo.*

The Bergen Swamp Preservation Society (Bergen Swamp) requested assistance for the management of slender false brome and to further push back *Phragmites* out of pristine habitat in the preserve. Bergen Swamp is designated as a National Natural Landmark and is home to rare habitats, plant communities and species that represent important conservation targets.

The Crew foliar treated slender false brome using a management strategy of spraying ten feet off both sides of the Pocock Trail, starting from the back and moving towards the front entrance area. Able to successfully complete the 10-foot foliar treatment on day one of the project, the Crew took another pass completing twenty feet off the trail on both sides for slender false brome. A total of 2.35 acres was treated along the Pocock Trail and entrance. Later in the season, the Crew returned to treat *Phragmites* infestations using the clip-and-drip method, treating 0.51 acres. Post-treatment monitoring data was collected from the 2022

*Phragmites* management areas, which showed little to no regrowth of *Phragmites*, and a 5-to-10-foot buffer where the herbicide systematically killed uncut *Phragmites* surrounding the cut plants.

Knotweed Removal at Girl Scout Camp Timbercrest – Girl Scouts of Western New York

The Girl Scouts of Western New York requested management assistance to control knotweed at Camp Timbercrest and the adjacent Town of Randolph property. Camp Timbercrest acquired permission from the Town of Randolph, so treatment was able to be carried out on both sides of the property line. The knotweed was mowed four weeks prior to treatment by members of the Friends of Timbercrest. This improved the effectiveness of the treatment by reducing the surface area and ensuring the plants were actively growing at the time of treatment. Several dense patches separated by sections of other vegetation were foliar sprayed.

WNY Giant Hogweed Control – NYS DEC Giant Hogweed Control Program

The NYS DEC Giant Hogweed Control Program requested assistance with herbicide treatment of giant hogweed at sites in Erie and Cattaraugus Counties. The Crew was able to dedicate four days to this work and assisted in treatments for this species which continues to be a NYS priority due to human health impacts. The Crew treated giant hogweed alongside the Giant Hogweed Control Team, treating a total of 1.13 acres along Buffalo Creek and Forks Creek. Sites ranged from sparse to dense cover and included large, mature plants alongside seedlings.

*The Crew worked with the NYS DEC Giant Hogweed Program Crew to treat giant hogweed at sites in Erie and Cattaraugus Counties.*

Craneridge Woodlands & Habitat Project – Craneridge Homeowners Association

The Craneridge Homeowners Associated (Craneridge) requested follow up herbicide treatment in pilot invasive species plots managed in 2022. WNY PRISM conducted an invasive species inventory on site in 2021, and Craneridge used the survey data to create invasive species pilot plots where the community would implement invasive species management and native planting. In 2022, WNY PRISM treated invasive shrubs with herbicide in these pilot plots.

This year, the Crew revisited the pilot plots, which showed little regrowth, and carried out cut stump treatment of multi-flora rose (*Rosa multiflora*) with Pathfinder II in a very small section. The Crew also treated a 0.042-acre *Phragmites* infestation using the clip-and-drip method. Craneridge has a Woodlands and Habitat Committee focused on protecting the woodland environment on site and partnering with local organizations to increase native biodiversity and remove invasive species, and these efforts will continue in the future.

Conewango Watershed Dam Site 16 & 16A Water Chestnut Mitigation – Cattaraugus County Department of Public Works

The Cattaraugus County Department of Public Works (DPW) requested continued assistance with water chestnut manual removal. WNY PRISM and the Western New York Water Chestnut Working Group assisted with management of these sites in the past, and in 2022 partnered with the DPW and DEC to re-survey and implement removal of water chestnut in both areas. This project allowed for continued removal at Site 16 in 2023. Although a Crew Assistance Program project, the Aquatic Program Manager and Boat Stewards were deployed to assist, spending two days working with the DPW and NYS DEC to survey for and manually remove water chestnut at Site 16. They removed 710 pounds of water chestnut over 4.56 acres as part of this project.

*WNY PRISM Boat Stewards assisted with water chestnut removal at Elm Creek Dam Site 16.*

Wild Parsnip Removal at Genesee County Park and Forest – Genesee County Department of Parks, Recreation & Forestry

Genesee County Park and Forest requested assistance with treatment of wild parsnip (*Pastinaca sativa*) near the entrance and visitor center at the park. The Crew spent two days chemically and manually treating wild parsnip in two priority areas. Chemical treatment involved foliar treatment of wild parsnip and manual removal involved cutting of wild parsnip flowers and seedheads, which was required when continued inclement weather on identified project days prevented chemical treatment to be completed before plants produced flowers. All manually removed plant material was bagged up and properly disposed of. A total of 5.02 acres of wild parsnip were managed at Genesee County Park and Forest.

Niagara County Japanese Knotweed Eradication Project – Niagara County Soil & Water Conservation District (NCSWCD)

WNY PRISM has worked with NCSWCD since 2017 to assist with their ambitious project focused on eradicating knotweed from Niagara County. This project has funding secured to allow for long term sustainability, and measurable progress has been seen at the treated sites. Those factors contribute to the repeated selection and participation in this work from year to year. In 2023, the Crew worked alongside NCSWCD staff for three days at multiple sites within Niagara County, using stem injection and foliar spraying to treat Japanese knotweed. WNY PRISM treated 4.5 acres of knotweed across the three days.

Monitoring and Control of Mile-a-Minute in Western NY – SUNY Brockport

A team led by SUNY Brockport has focused on management of the only known mile-a-minute population in the WNY PRISM region. WNY PRISM has assisted with removal efforts in previous years, but in 2023 SUNY Brockport asked for additional assistance with manual removal at Oak Orchard WMA and a few surrounding properties for multiple days throughout the field season. Mile-a-minute is a priority early detection species in the WNY PRISM region, and it is important to prevent this species from spreading to new areas.

The WNY PRISM Survey and Monitoring Technicians worked alongside the SUNY Brockport team for six days from June – October to hand pull mile-a-minute. Since mile-a-minute has staggard germination, it is necessary to survey for and remove plants throughout the growing season to work towards eradication. The removal work began in Oak Orchard WMA which was split into eight sections from previous management research work. Over the course of six visits, 937 vines were removed from the WMA, and over the course of four visits, 3,971 vines were removed from the surrounding residential properties. WNY PRISM treated 3.86 acres of mile-a-minute.

Tifft Invasive Plant Maintenance – Buffalo Society of Natural Sciences

WNY PRISM has assisted at Tifft Nature Preserve with invasive species control and native planting in the past through the Crew Assistance Program and through several grants, the most recent of which concluded in 2022. Over the years there has been measurable success with invasive species management and native restoration on site, and there are plans for continued work in the future. Those factors contribute to the repeated selection and participation in this work from year to year.

*Buckthorn removal at Tifft.*

The WNY PRISM Crew began with a follow up herbicide treatment in the Mosquito Junction area, which required only a spot treatment of woody species. Foliar treatment of common buckthorn, bush honeysuckle, and tree-of-heaven was carried out over 7.77 acres, and cut stump treatment of buckthorn and autumn olive (*Elaeagnus umbellata*) was carried out along the

edge of Beth Pond, by the Vernal Pool restoration site, with a total treatment area of about 0.0013 acres. The Crew also foliar treated *Phragmites* over 1.83 acres. In total, 9.6 acres were treated across four days.

Afforestation on Tonawanda Wildlife Management Area – NYS DEC Region 8

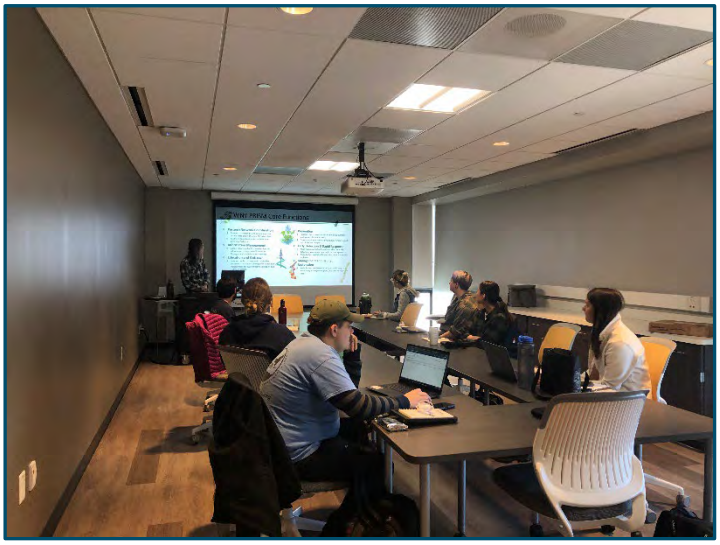
The New York State Department of Environmental Conservation requested assistance with management of invasive shrubs and yellow flag iris (*Iris pseudacorus*) in fields at Tonawanda Wildlife Management Area (WMA). These fields are planned for afforestation through tree planting and natural succession, and invasive species management is an integral step in this process.

The Crew was joined on-site by DEC staff including a Wildlife Biologist and several Foresters and Technicians, who assisted with the project by operating chainsaws and brushcutters to cut large invasive trees and shrubs along the forested area. Once cut, the stumps were treated by WNY PRISM staff. Smaller resprouts of invasive shrubs and yellow flag iris in the mowed areas were foliar treated. A total of 13.90 acres were treated throughout the five target areas at the WMA.

## Habitat Management and Restoration Projects

Charles E. Burchfield Nature & Art Center Survey (Burchfield) – Survey Training

Burchfield is a 19-acre property located along Buffalo Creek in West Seneca with trails that pass through wooded areas, meadows, gardens, and along the creek. At the beginning of the field season, the Crew participates in invasive species ID training and survey training, in the classroom and in the field. The Crew practiced an invasive species inventory at this site since it is not far from the Buffalo State University Campus, and it also has good cell reception should they need assistance with questions during the survey. The Crew surveyed 15.8 acres of the trails and along the creek as part of this survey training exercise.



*WNY PRISM seasonal staff attended an invasive species identification training before heading out to the field to practice.*

The Crew recorded twenty-one invasive species as part of this inventory survey. The most common invasive species in the park included multi-flora rose, bush honeysuckle, common buckthorn, mugwort (*Artemisia vulgaris*) and dames rocket (*Hesperis matronalis).*

Woodlawn Beach State Park – Survey Training and Project Support

Woodlawn Beach State Park is a 107-acre park located in Blasdell, NY, on the shore of Lake Erie. The park is located next to the Southtowns Advanced Wastewater Treatment Facility (AWTF), the location of a Crew Assistance Program invasive species inventory survey. Additional WNY PRISM staff members needed training on invasive species ID and data collection before completing boot brush station surveys, so they joined the Crew on the inventory survey at AWTF, and continued training at Woodlawn Beach State Park. The Crew surveyed twenty-five acres and recorded thirteen species. The most common invasive species recorded were bush honeysuckle, knotweed, and mugwort.

Kenneglenn Scenic and Nature Preserve - Herbicide Training

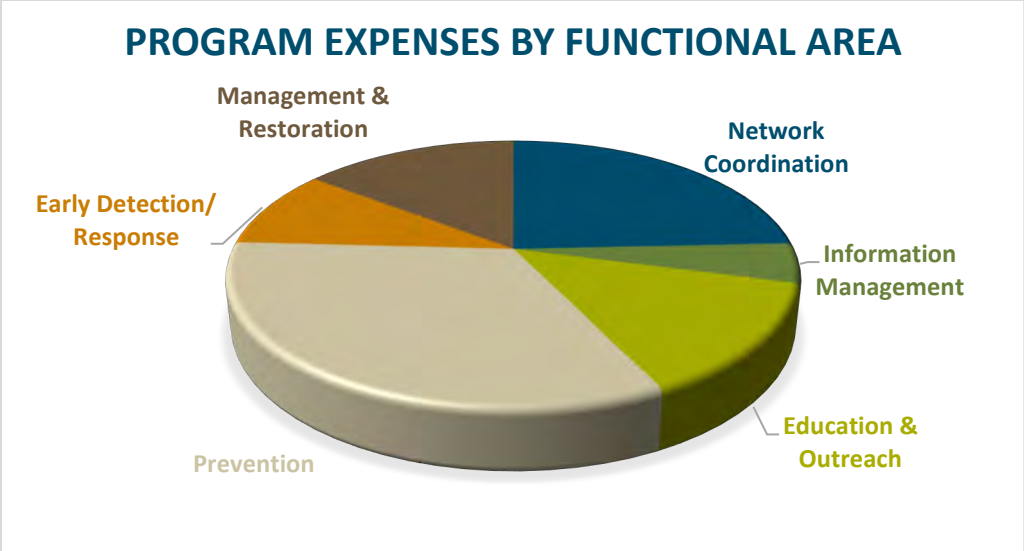
Kenneglenn Scenic & Nature Preserve (Kenneglenn) is in Wales and owned by the Western New York Land Conservancy. This 131-acre preserve is adjacent to Hunters Creek County Park and Mossy Point Preserve. WNY PRISM has focused on Japanese stiltgrass removal at all three sites while also assisting with other invasive species removal activities. The Crew carried out a day of herbicide training at Kenneglenn on May 17. They focused on foliar treatment of bush honeysuckle and multi-flora rose along the trail system and cut-stump treatment of the same invasive shrubs in a meadow restoration area.

Tifft Nature Preserve - Herbicide Training

Tifft Nature Preserve is located in Buffalo, NY and operated by the Buffalo Society of Natural Sciences. This 264-acre preserve is located on the Outer Harbor and has been the focus of invasive species management and native plant restoration for many years. WNY PRISM has assisted with invasive species management work, focused on shrubs, and planted native species alongside volunteers on site. Ahead of the Crew Assistance Program project located at this site later in the season, the Crew carried out one day of herbicide training at Tifft Nature Preserve on May 16. They focused on cut-stump of common buckthorn in an area adjacent to the maintenance building.

*The Crew treated periwinkle at Akron Falls (upper left), learned invasive species identification at Reinstein Woods (right), and removed water chestnut from Audubon Community Nature Center (lower left).*

## Summary of Program Expenses




This summary of program expenses is intended to provide a general overview of how WNY PRISM divided time and resources in 2023. Expenses were grouped together by Goal/Core Function. Many of WNY PRISM's activities fall within multiple functional areas and effort was taken to place expenses appropriately. This is not intended to serve as a financial report.

Partner/Network Coordination (24%) – Program administration, grant management, partner communication, working groups and committees, hiring, messaging and marketing.

Information Management (5%) – Data collection and management, prioritization, resource development and outreach, non-early detection survey and monitoring, and research support.

Education and Outreach (14%) – Community science programs, pledge to protect campaign, outreach, workshops and trainings, volunteer management, website and social media management, and materials development.

Prevention (33%) – Watercraft Inspection Stewardship Program, boot brush stations, horizon scanning, resource/materials development and outreach.

Early Detection/Rapid Response (10%) – Early detection site monitoring and management, surveys, partner communication, data management, data collection protocols, working group facilitation, research support and outreach.

Management & Habitat Restoration (15%) – Crew Assistance Program, pre and post treatment monitoring, removal, restoration, development of best management practices, partner communication, data collection and management, resource development and outreach.

## WNY PRISM Partners (new partners in **bold**)

Adirondack Park Invasive Plant Program
Alfred Farmers Market
Alfred State College
**Allegheny Highlands Council - Boy Scouts of America**
American Association of Pesticide Safety Educators
American Legion Post 362
Amherst Conservation Advisory Council
Amherst Public Library
Amherst State Park
Arcade Chamber of Commerce
**Association for Conservation of Recreational and Natural Spaces (ACORNS)**
Audubon Community Nature Center
Belmont Farmers Market
Bergen Swamp Preservation Society
Buffalo and Erie County Botanical Gardens
Buffalo Audubon Society
Buffalo Museum of Science
Buffalo Niagara Heritage Village
Buffalo Niagara Waterkeeper
Buffalo Olmsted Parks Conservancy
Buffalo Science in the Pub
Buffalo Sewer Authority
Buffalo Women of Environmental Learning & Leadership (BWELL)
Buffalo Zoo
Byron-Bergen Central Schools
Canal Village Farmers Market
Capital Region PRISM
Catskill Regional Invasive Species Partnership
Cattaraugus County Department of Public Works
Cattaraugus County Highway Department
CCE of Allegany County
CCE of Erie County
CCE of Genesee County
CCE of Niagara County
CCE of Orleans County
CCE of Wyoming County
Certified Nursery Landscape Professionals
Chautauqua County Forest Pest Taskforce
Chautauqua Institution
Chautauqua Lake & Watershed Management Alliance
Chautauqua Lake Association
Chautauqua Watershed Conservancy
Chautauqua-Conewango Consortium
Christ the King Seminary - Diocese of Buffalo
Citizens Coalition for Wildlife and Environment
City of Buffalo
City of Dunkirk
City of Lockport
City of Niagara Falls
City of North Tonawanda
City of Tonawanda
Clarence Hollow Farmers Market
Conewango Creek Watershed Association
Cornell University
Craneridge Association
Daemen College
Don't Move Firewood
Eastern Monarch Butterfly Farm
Eckert Herbarium
**Ecological Research Institute**
Elmwood Village Farmers Market
Environmental Protection Agency
Erie Canal Harbor Development Corporation
Erie County 4-H Club
Erie County Agricultural Society
Erie County Department of Environment and Planning
Erie County Department of Parks, Recreation and Forestry
Erie County Soil and Water Conservation District
Faun Lake Association
Federated Garden Clubs of New York
Finger Lakes PRISM
Finger Lakes Regional Watershed Alliance
Fox Valley Farmers Market
Friends of Bond Lake
Friends of Iroquois National Wildlife Refuge
Friends of Letchworth State Park
Friends of Reinstein Woods
Friends of Times Beach
Friends of Unity Island
Gardens Buffalo Niagara
Genesee Country Farmers Market

Genesee County Agricultural Society
Genesee County Park and Forest
Genesee County Soil and Water Conservation District
Genesee River Wilds
Girl Scouts of Western New York - Camp Timbercrest
Grand Island Conservation Advisory Committee
Grand Island Memorial Library
**Grassroots Gardens WNY - Tyler Street Community Garden**
Great Lakes Action Agenda
Great Lakes Center at SUNY Buffalo State
Great Lakes Hydrilla Collaborative
Great Lakes Media
Great Lakes Phragmites Collaborative
Great Lakes Restoration Initiative
Greystone Nature Preserve
Groundworks Buffalo
Habitattitude
Hamburg Farmers Market
Hikerbabes Community: Western New York Chapter
Illinois-Indiana Sea Grant
Invasive Species Advisory Committee
Invasive Species Coordination Section
Invasive Species Council
Jamestown Community College
Jamestown Farmers Market
Jamestown Garden Club
Ken-Ton School District
Lake Erie Seaway Trail Center
Lake Erie Watershed Protection Alliance
Lily Dale Assembly
Lockport Community Market
Lockport Public Library
Long Island Invasive Management Area
Lower Hudson PRISM
M&T's Think Green Resource Group
Master Forest Owners
Master Gardeners
Master Naturalists
National Plant Diagnostic Network
Natural Resources Conservation Service – USDA
Nature Sanctuary Society of Western New York
New York Farm Bureau
New York iMapInvasives Program
New York Invasive Species Research Institute
New York Natural Heritage Program
New York New Jersey Trail Conference
New York Sea Grant
New York State Turfgrass Association
Niagara County Parks
Niagara County SWCD
Niagara Frontier Antique & Classic Boat Club
Niagara Frontier Botanical Society
Niagara River Greenway
Niagara University
NIASMA
North American Invasive Species Management Association
North Buffalo Farmers Market
North Tonawanda City Market
NYS Canal Corporation
NYS Classic Fishing Tournaments
NYS Department of Agriculture and Markets
NYS Department of Environmental Conservation
NYS Department of Transportation
NYS Federation of Lake Associations
NYS Hemlock Initiative
NYS Office of Parks, Recreation, and Historic Preservation
NYS Thruway Authority
Olean Farmers Market
Onondaga Environmental Institute
Ontario Invasive Plant Council
Orchard Park Library
Orleans County Soil and Water Conservation District
**Outside Chronicles**
Panama Rocks
Penn Dixie Fossil Park & Nature Reserve
Perry Farmers Market
Pfeiffer Nature Center
Plant WNY
Play. Clean. Go.
PUSH Buffalo
Reinstein Woods
Research Foundation for SUNY Buffalo State

Richmond Memorial Library
Riverside Community High School
Roger Tory Peterson Institute
Rushford Lake Association
Saint Bonaventure University
Salamanca Farmers Market
Science Demands Action
Seneca Nation of Indians
Silver Lake Association
Silver Lake Water Quality Group
South Towns Garden Club
St. Lawrence Eastern Lake Ontario PRISM
Starry Stonewort Collaborative
Stop Aquatic Hitchhikers
Strykersville Senior Citizens
SUNY Brockport
SUNY Buffalo State University
SUNY College of Environmental Science and Forestry
SUNY Fredonia
The Nature Conservancy
The Park School of Buffalo
**The Stewardship Network**
**Gloves for Good**
Tifft Nature Preserve
Town of Amherst
Town of Aurora
Town of Bergen
Town of Boston Conservation Advisory Council
Town of Byron
Town of Cheektowaga
Town of Clarence
**Town of Clarence Conservation Advisory Council**
Town of Eden – Conservation Advisory Board
Town of Hanover
Town of Holland
Town of Newfane
Town of Tonawanda
Town of Tonawanda – Youth, Parks & Recreation
Town of Tonawanda Public Library - Kenmore Branch
Town of West Seneca
U.S. Army Corps of Engineers – Buffalo District
U.S. Department of Agriculture – Animal and Plant Health Inspection Service
U.S. Department of Agriculture – National Resources Conservation Service
U.S. Fish and Wildlife Service – Lower Great Lakes Fish and Wildlife Conservation Office
University at Buffalo
University of Georgia
Village of Allegany
Village of East Aurora
Village of Holley
WBFO 88.7 NPR
West Seneca Chamber of Commerce
**West Seneca Lions Club**
Western New York Land Conservancy
WGRZ Channel 2
WNY Forest Pest Taskforce
Wyoming County Soil and Water Conservation District