2020 Annual Report

SLELO PRISM

Protecting our lands and waters from the impacts of invasive species

INVASIVE SPECIES MANAGEMENT
St. Lawrence - Eastern Lake Ontario

SLELO PRISM

Copies of this report can be obtained from the SLELO-PRISM website: www.sleloinvasives.org

Cover photo:

Fish Creek Wetland. St. Lawrence County New York
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The Nature Conservancy

SLELO PRISM

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Acknowledgements

Bridgette Dawley, Document Review

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A Special Thanks To:
The New York State Legislature
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The Nature Conservancy as Host Organization

The New York State Department of Environmental Conservation,
Invasive Species Coordination Section

The New York State Invasive Species Council and
The New York State Department of Agriculture and Markets

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

INVASIVE SPECIES MANAGEMENT
ST. LAWRENCE-EASTERN LAKE ONTARIO PARTNERSHIP

Table of Contents

2020 Strategic Accomplishments

Above: Urban tree planting. City of Watertown NY. ©TNC-M. Pistolese

- *Assisted with restoration efforts on Tug Hill by planting an additional **8,500** climate-adaptable, forest pest resistant trees.*
- *Intercepted aquatic invasive species on **1,243** occasions preventing their spread to and from other North American waterbodies.*
- *Utilized innovation such as (biological controls and eDNA) to protect our lands and waters.*
- *Engaged with **35** virtual education and outreach events across a five-county region directly engaging **39,578** individuals.*
- *Prepared an Urban Forest Sustainability Guidebook for cities.*

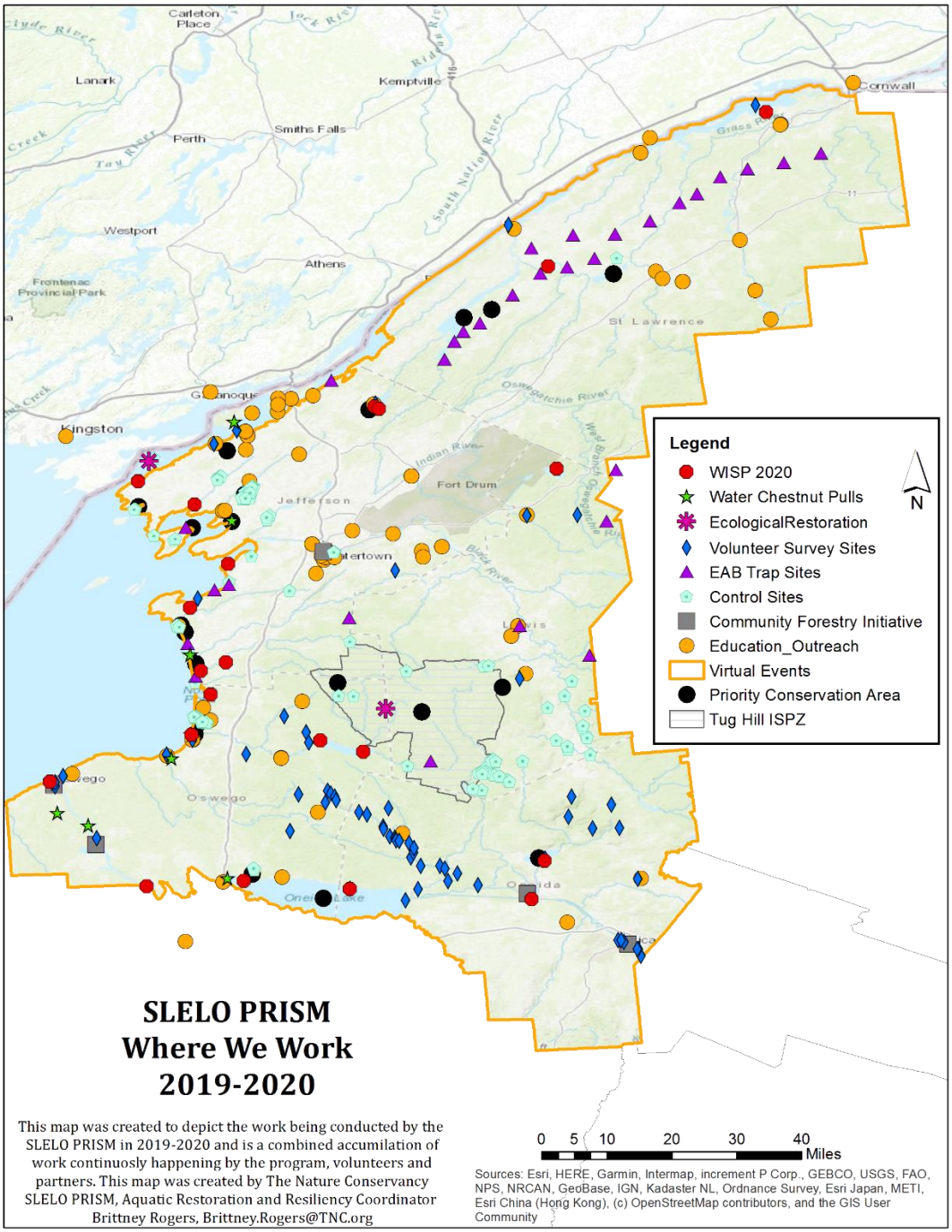
Conservation Impact

Invasive species of plants, animals, insects and microorganisms are among the most serious threats to the health of our lands and waters. Invasive species are opportunistic and almost always out-compete, damage, or replace native species resulting in serious disruptions in ecosystem processes and balance. These processes include such things as the interdependency on food and habitat, hydrology, carbon release, nutrient cycling, natural succession, soil erosion and water quality.

A recent assessment by our PRISM and The Nature Conservancy regarding *connectivity* resulted in metrics that suggests that the 478 acres that our partnership directly manages results in a total landscape protection of some 5.7 million acres. In the context of prevention, what we do in the core forest of Tug Hill, such as preventing the establishment of a forest pest, along with forest restoration, helps to protect the entire 750,000-acre forest, does it not? What we do in the Oswego River and the Erie Canal with aquatic invasive species spread prevention serves to protect the Finger Lakes, the Hudson and Mohawk Rivers, Oneida Lake and nearly all connected waterways. In addition, our eDNA and watercraft inspection work in the St. Lawrence River, Thousand Islands and coastal waters serves to protect Lake Ontario and beyond. Now, multiply this by all eight PRISMs across New York State.

Our work has far greater impact than just within our own regional footprint. By protecting and promoting native species we are in fact creating more resilient landscapes. Resilient to changes in climate, stresses by non-native species and stresses by human encroachment.

Where We Worked In 2020

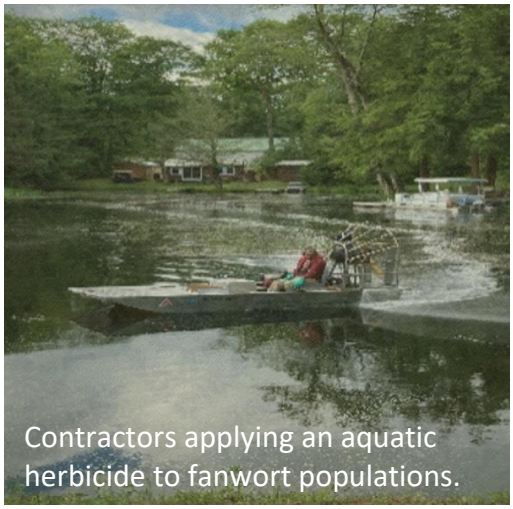


Special Initiatives I

Kasoag Lake Fanwort Suppression

In cooperation with the Kasoag Lake Conservation Association, DEC and subcontractors, 29.5 acres of remnant fanwort populations were successfully treated. This effort not only restores Kasoag Lake but helps to protect Oneida Lake from nomad fanwort.

A prior assessment by the SLELO Early Detection Team conducted on the 17-mile Fish Creek which connects Kasoag Lake to Oneida Lake, found no fanwort populations downstream of Kasoag Lake.



Contractors applying an aquatic herbicide to fanwort populations.

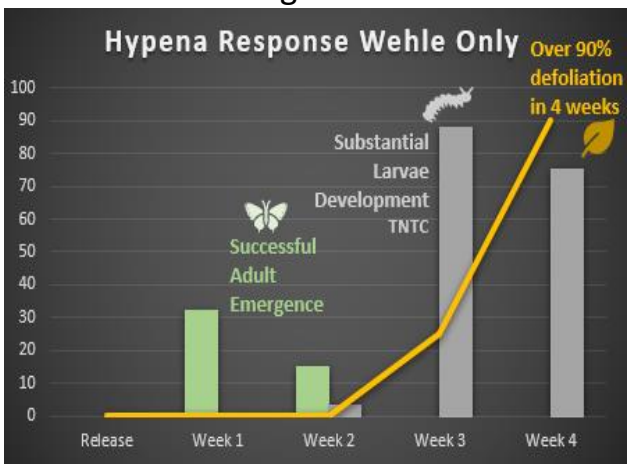
Urban Forest Sustainability Initiative

In recognition of the importance healthy trees play in our communities, our Terrestrial Restoration and Resiliency Coordinator Robert Smith along with DEC and several partners have developed an initiative to help our communities sustain urban forest health by maintaining diverse, climate adaptable and invasive species resistant trees. Over the coming years our partnership will be providing guidance resources to cities that will better enable these communities to develop Urban Forest Sustainability Plans that include an insight on climate adaptability, carbon storage, tree diversity and invasive species components. Copies of our Urban Forest Sustainability Guide can be retrieved here: Urban Forest Sustainability .

Special Initiatives II

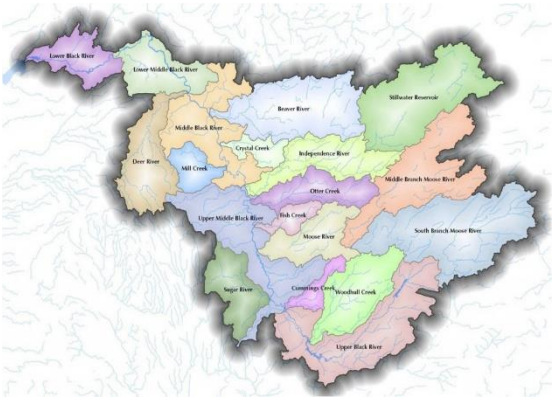
Successful Release of Biological Controls

In partnership with the Thousand Island Land Trust, the New York State Invasive Species Research Institute, SUNY Environmental Science & Forestry, USDA, the University of Rhode Island, ELOSC and volunteers, four release cages were established in the Thousand Islands Region of New York. Cages were populated with *Hypena opulenta*, a moth native to the Ukraine that defoliates pale swallow-wort plants. Adults emerged, egg and larval development occurred and nearly 100% defoliation occurred in two of the cages within 4 weeks.



Above: Stages of Hypena opulenta development at Wehle Forest. R.Williams

Black River Trail Feasibility Study



Above: Black River Watershed. Public commons.

The Black River Trail is a 4.5-mile riparian trail that connects the Black River and upland agricultural fields. It is unique in nature and host to many native flora and fauna. SLELO Partners have established that a feasibility study would need to occur to inventory the current species populations and distributions including invasive species along the riparian corridor to determine if ecological restoration measures would be beneficial. This study is underway.

Special Initiatives III

Aquatic Macrophyte Nutrient Analysis and Carbon

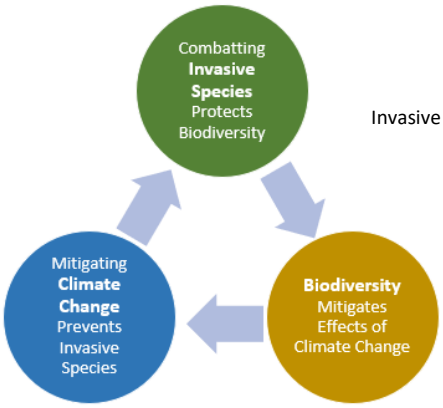
Annually, PRISM's across New York hand-harvest thousands of pounds (tons) of water chestnut plants (*Trapa natans*). By knowing the nutrient content of the plant material, we can better understand the potential implications this species may have on internal nutrient loading and its effects on water quality and harmful algae blooms. Additionally, knowing the carbon content of the plants may help us to better inform managers as to proper disposal of unwanted *Trapa* plants so as not to release carbon into the atmosphere.

This year Aquatic Restoration and Resiliency Coordinator Brittney Rogers furthered our understanding of the nutrient relationships of *Trapa natans* by delivering several presentations. Nutrient content is evaluated at the Cornell Nutrient Analysis Lab (CNAL).

Eastern Lake Ontario AIS Tributary Assessment

In 2020, SLELO subcontracted with Rootz LLC® to complete a tributary assessment on three tributaries along Eastern Lake Ontario to include: Sandy Creek, South Sandy Creek and Deer Creek. This effort resulted in a more comprehensive understanding of the aquatic and riparian health of these tributaries. Aquatic invasive species (AIS), including some noteworthy native species, were assessed.

Recommendations for potential restoration measures were also made as part of this assessment.
The report can be found at: SLELO Resources/AIS



Invasive Species Centre

Prevention

Goal Number 1

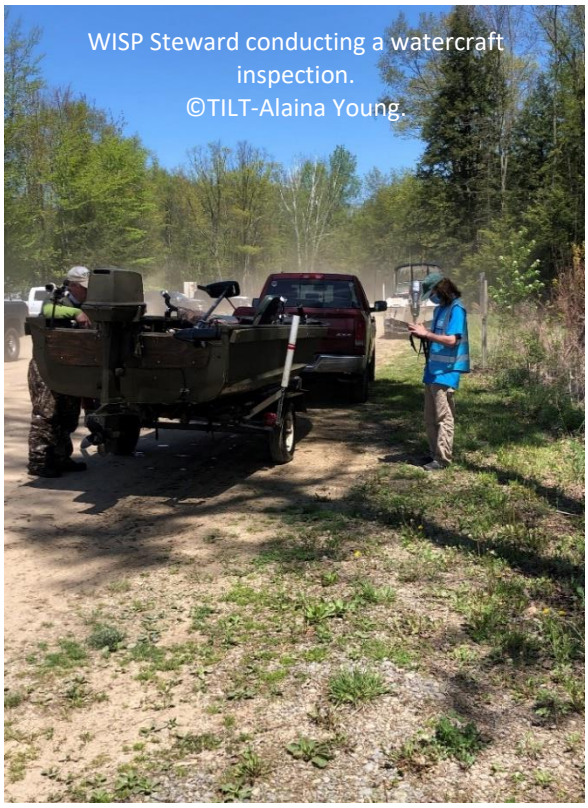
Healthy Freshwater

Watercraft Inspection Steward Program (WISP)

In 2020, SLELO PRISM partnered with the Thousand Islands Land Trust (TILT) to co-administer our Watercraft Inspection Steward Program and to expand our program to 27 high-use boat launches, from as far north as Massena and south to Rome by hiring 10 stewards.

2020 Metrics Include:

- 10,598 Surveys completed
- 1,243 AIS interceptions*
- 2,222 total organisms intercepted**
- 95.6% Participation rate
- 27,375 People reached
- 85% committed to clean, drain, and dry their equipment in the absence of a steward.
- 19% of boats registered outside of New York
- Largest group size 14 people



WISP Steward conducting a watercraft inspection.
©TILT-Alaina Young.

This program helps to prevent the spread of aquatic invasive species to and from waterbodies across North America.

Species known to be invasive in New York State.

***Some of which may be non-native or invasive in other parts of North America.*

Advisory Boards

Participation

New York ISAC

The New York State Invasive Species Advisory Committee (ISAC) was formed to provide information, advice and guidance on invasive species issues to the New York State Invasive Species Council. This includes discussions and recommendations regarding the prevention of invasive species introductions into New York State along with spread prevention across PRISM regions. In 2020, the SLELO PRISM Manager became The Nature Conservancy's representative to ISAC and retired his role as Secretary and PRISM Representative.

North America ISAC

This year marks the first year of our participation on The Nature Conservancy's North American Invasive Species Advisory Committee. The SLELO PRISM Manager engages with this ISAC for shared representation and to address shared concerns for invasive species issues.

NY-ISAC Meeting Albany, NY
©Renee' St. Jacques

Early Detection

Goal Number 2

Priority Conservation Areas

There are currently 25 Priority Conservation Areas or PCA's within the SLELO region. These are areas that have ecological significance or that are host to rare native species. To maximize efficiency, each PCA is scouted on a two-year rotation by our terrestrial and aquatic coordinators. The detailed final report can be found on our website at: SLELO PRISM Field Reports.

In 2020 the following PCA's were searched for Tier 1 and Tier 2 species along with notable native species. **131 Terrestrial and aquatic Highly Probable Areas (HPA's) were searched.** [1]

Chaumont Barrens
Deer Creek Marsh WMA
Black Pond WMA
Oneida Lake/Three Mile Bay
Black Lake
Chaumont Bay
Salmon River Estuary
Lakeview WMA

No Tier-1 Species Were Observed in 2020

[1] See Appendix (A) for SLELO Tiered Species List

Rare Species Finds

This year, while conducting field surveys and early detection searches on Priority Conservation Areas, our team observed several un-common or rare native species. These observations are important in that they confirm that these species have survived in their natural state despite changes in the environment. Observing these species supports biological diversity and validates our work. Two rare terrestrial plants and one fish were encountered while conducting early detection searches.

Twinleaf (*Jeffersonia diphylla*)

This plant is considered imperiled in New York State because of rarity or highly vulnerable to extirpation from New York State due to biological or human factors.[2]

Green Dragon (*Arisaema dracontium*)

This plant is considered as an exploitable vulnerable species in New York. Common in many areas of the state but possibly rare in other areas.[3]

Pirate Perch (*Aphredoderus sayanus*)

In New York, Pirate Perch are only found in two areas: tributaries to the Great Lakes and on Long Island. Pirate perch are classified as a species of greatest conservation need (Ibid).[4]

[2] New York Natural Heritage Rare Plant Status, Stephen Young 2019
[3] New York Natural Heritage Rare Plant Status, Stephen Young 2019.
[4] NYS DEC Fish Atlas

Innovation & Early Detection

Goal Number 2+

Environmental DNA

Above: Brittney Rogers prepares a DNA sample for analysis. ©TNC-Rob Williams

Partners of the SLELO PRISM along with The Nature Conservancy and the Department of Microbiology and Immunology at Cornell University have implemented early detection efforts using environmental DNA or eDNA which is a highly specialized process for determining the presence of genetic material released by both invasive and native aquatic animals. Using eDNA is an innovative early detection tool at the molecular level.

2020 sample sites included: Black River, Erie Canal, Oswego, Oneida and Seneca Rivers, Sandy Creek, South Sandy Creek, Deer Creek, Chaumont Bay and Chaumont River.

2020 species included:

Rock Bass – native – control (*pending*).
Cisco – native (*pending*).
Tench – non-native (*pending*).
Northern Snakehead – non-native (*pending*).
Asian Carp Group – non-native (*pending*).
Asian Swamp Eel – non-native (*pending*).
Round Goby – non-native (*pending*).

Project reports are available on our website at:
SLELO Reports eDNA

Rapid Response Control & Management

Goal Number 3

Summary of 2020 Control Work

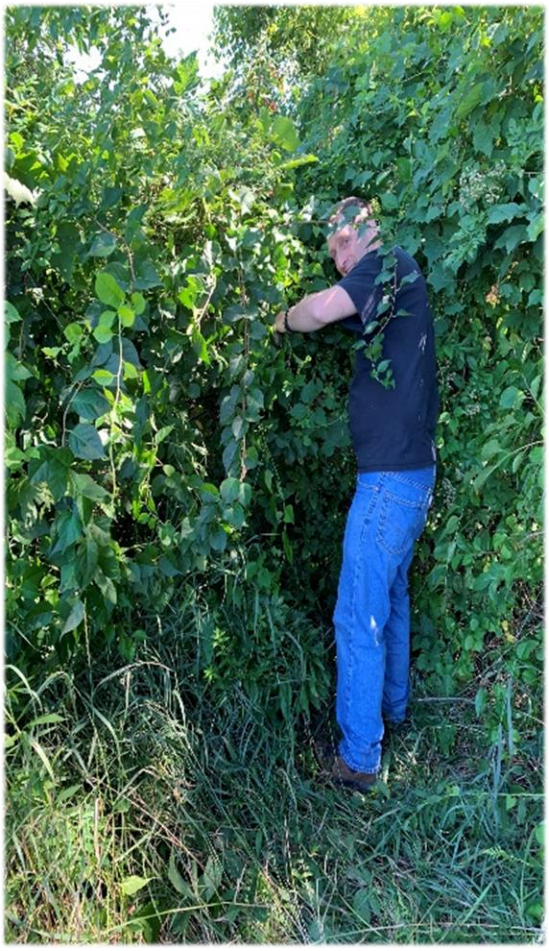
Giant Hogweed:
43 Sites -no germination
11 Sites root cut
10 Sites herbicide control
2 Sites -no permission
2 New sites reported by DEC

Swallow-wort:
72 sites being managed
13 PCAs
73.75 acres managed

Japanese Knotweed:
5 sites being managed
2 PCA's
0.20 acres managed

Phragmites:
5 sites being managed
2 PCA's
0.59 acres managed

Oriental Bittersweet:
1 site managed by NYS DEC



Above: Terrestrial Coordinator Robert Smith inspecting oriental bittersweet at Lakeview WMA. Photo: ©TNC-Brittney Rogers

52% of all hogweed plants are controlled manually to reduce the use of herbicides

Education, Outreach and Citizen Science

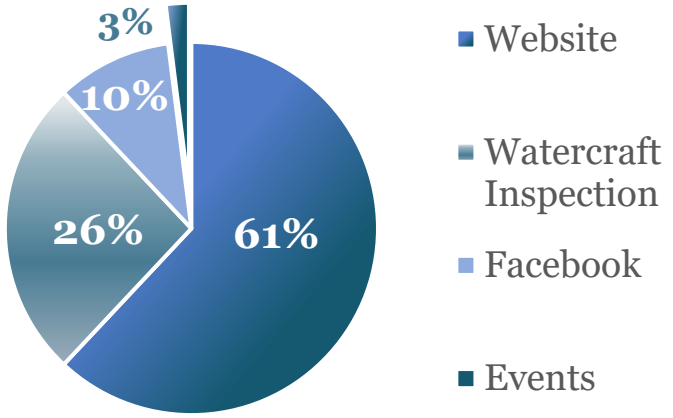
Goal Number 4

Increasing public awareness and influencing behavior on invasive species issues is a goal of SLELO's educational efforts. Due to this year's global biological pandemic, our outreach efforts were shifted to virtual engagements through webinars and social media campaigns.

The SLELO Education/Outreach Committee is a group of committed partners who volunteer their time and contribute their expertise to provide support for invasive species outreach initiatives. Participating on this committee are:

- Megan Pistolese, Committee Lead
- Sue Gwise-Jefferson County CCE
- Irene Mazzocchi- DEC Region 6
- Emily Sheridan- DEC Region 6
- Carla Fowler- Tug Hill Commission
- Alaina Young- TILT
- Peter Zimmer- OPRHP
- Maria Cipullo- OPRHP
- Maria MoskaLee- DEC Region 7
- Lauren Eggleston - Save the River
- Heidi Sourwine- IRLC
- Haley Sylvan-Thompson Park Zoo
- Patricia Shulenburg-Cardno
- Gabby Padewska- OPRHP

2020 Education & Outreach Metrics



A Closer Look at the Stats:

39,578 people directly engaged in invasive species awareness via social media, website views, events, and watercraft inspections.

298 Facebook posts were created.

35 events were held in 2020 (including virtual engagements).

National and International Exposure was Received at the Following Conferences:

- *North American Invasive Species Management Association (NAISMA) Conference*
- *Upper Midwest Invasive Species Conference*
- *Cornell Cooperative Extension Agriculture, Food & Environmental Systems In-Service*

Cooperation
Goal Number 5

Working together towards a common cause is perhaps one of the SLELO Partnership's strongest attributes. Our partners[5] are interested in the subject matter, there is a tremendous amount of expertise within the partnership, and we are engaged, motivated and work extremely well together. In 2020 we faced challenges whereby social distancing as the result of the current public health situation prevented many in-person activities. Cooperative highlights from 2020 include:

- We collaborated on biological control releases of *Hypena opulenta* with; the New York Invasive Species Research Institute, United States Department of Agriculture, SUNY Environmental Science and Forestry, the University of Rhode Island, the Thousand Islands Land Trust, the Eastern Lake Ontario Swallowwort Collaborative and local volunteers.

- In 2020 we began advising the **City of Syracuse** on proposed interventions for Japanese knotweed and buckthorn species in Syracuse Parks.

- Our Education and Outreach Committee collaborated to promote virtual education and awareness activities, including planning for the 2021 Eastern Lake Ontario Invasive Species Symposium.

- We implemented special projects through our partners to complement our invasive species work.

- Our Volunteer Surveillance Network (**VSN**) continued with searches for tench, hemlock woolly adelgid, emerald ash borer and spotted lanternfly.

- We engaged in virtual meetings of PRISM Leaders, NY ISAC, TNC ISAC and numerous virtual trainings.

[5] See Appendix B for SLELO's List of Partners

Information Management

Goal Number 6

Simple Aquatic Survey for Professionals

Simple Aquatic Survey for Professionals (SAS Pro), a Survey123 field collection tool, developed by New York Natural Heritage Program was created to facilitate standard data collection of aquatic invasive species surveys across New York State. The survey includes fields for rake toss sampling, water depth, site observations and other incidental detections with a species list containing both invasive and native plants. Data is collected in a manner which facilitates an automated cross-walk procedure into iMapInvasives, saving staff from both SLELO and iMapInvasives time of working through bulk uploads. This tool allows coordinate points to be recorded and images collected to be directly connected to the specific survey sample. This survey tool was primarily used for aquatic field surveys.

iMapInvasives Mobile Advanced

iMapInvasives Mobile Advanced (iMMA) allows digital data collection in the field that will seamlessly upload with iMapInvasives. The data collected in the field includes searched areas, presence or absence of species, treatment or management information and more. By utilizing the same tool for both field surveys and control efforts we are equipped to more rapidly share accurate information between SLELO field staff and subcontractors. Data collected is first uploaded into a TNC ArcGIS Online server where it can be reviewed. Once complete, the server will copy the data over to iMapInvasives. This reduces data collection redundancy while giving SLELO more in-depth options in the field. This survey tool is primarily used for terrestrial field surveys and our treatment and control records.

Ecological Restoration

Goal Number 7

Restoring and protecting the biological diversity of unique habitats from the negative impacts posed by invasive species is a core purpose for our work. Areas that have been treated for invasive species may be considered as disturbed areas and can be restored more effectively with intentional planting of native species augmenting the resiliency of these sites.[6]

Treatment Sites – General

As a general practice and where appropriate, the SLELO team plants native grass seed to expedite the growth of ground cover to reduce the susceptibility of the site to the infestation of a non-native species. Annual ryegrass (*Lolium spp.*), perennial ryegrass (*Lolium perenne*) and little bluestem (*Schizachyrium scoparium*) is used as a standard, recovery seed mix. In some instances, native tree seedlings have been planted along with live staking using resident plant material.

Tug Hill Forest

The SLELO PRISM assisted The Nature Conservancy with restoration efforts on Tug Hill following invasive species suppression. One goal is to enhance species diversity by planting tree seedlings from 26 different species over two years. Legacy trees include; sugar maple and red spruce. Northern edge species included oaks, native pine and hickory[7]. In 2020 8,500 seedlings were planted.

Carleton Island

After supressing populations of swallowwort, areas were over-seeded with 10 to 12 lbs/acre of annual ryegrass, perrenial ryegrass and little bluestem.

[6] Salon P.R. and C. F. Miller. 2012. A Guide to: Conservation Plantings on Critical Areas for the Northeast USDA, NRCS, Big Flats Plant Materials Center, Corning, NY.

[7] Sargis Gregg. 2018 Improving the health and resilience of our forests. Powerpoint.

Innovation

Goal Number 8

Underwater (Submersible) Remote Operated Vehicle

Underwater or submersible remote operated vehicles (ROV's) are used to support underwater tasks. They allow operators to capture photo and video footage to inspect and monitor for aquatic flora and fauna, both native and non-native in ports, harbors, habitats and other aquatic environments.

This season SLELO purchased a submersible ROV with the intent to access aquatic environments for the purpose of conducting observations and inventories of native and non-native aquatic plants, fish and other invasive species.

Environmental DNA

Partners of the SLELO PRISM along with The Nature Conservancy and the Department of Microbiology and Immunology at Cornell University have implemented early detection efforts using environmental DNA or eDNA which is a highly specialized process for determining the presence of genetic material released by both invasive and native aquatic animals. Using eDNA as an early detection tool continues to be incorporated into our work.

Above: eDNA Field Sampling Equipment.
©TNC/Brittney Rogers

Records by Species Type*	2020 Observations	Total 2012 to Present
Animal Insect - Terrestrial	136	177
Animal Other Invertebrate - Aquatic	2	190
Animal Other Invertebrate - Terrestrial	0	3
Animal Vertebrate - Aquatic	1	2,527
Animal Vertebrate - Terrestrial	0	10
Plant - Aquatic	123	2,089
Plant - Terrestrial	517	9,704
TOTAL	*779*	*14,700*
Records by Data Entry Method	**2020**	**Total 2010 to Present**
Bulk Upload	185	10,151
Mobile App	324	997
On-Line	80	3,474
NatureServe Survey 123	0	0
iMMA	117	148
SAS Pro	0	0
Forest Pest	0	0

*Confirmed and unconfirmed

Date	Trainer	TRAINING CLASSES & Class Name	# Trained
25-Jan-20	Megan Pistolese	HWA Guided Walk	6
27-Jan-20	Jennifer Dean	Advanced iMap Topics for SLELO Partners	11
10-Feb-20	Megan Pistolese	Hemlock Woolly Adelgid Guided Walk	5
15-May-20	M. O'Neill & M.Pistolese	Harnessing the Power of iMap Tools / Citizen Science	17
4-Aug-20	F. Williams & M.Pistolese	Project WHIRL	16
29-Dec-20	Megan Pistolese	Protect Your Hemlocks	10
7-Mar-20	Linda Gibbs	Hemlock Woolly Adelgid Walk and Talk	6
3-Mar-20		Hemlock Woolly Adelgid Walk and Talk	10
15-May-20	Mitchell	VSN Story Map Webinar	20
4-11-Aug-20	IRLC	WHIRL	14
29-Oct-20	C.Marschner, F.Williams, MP	Protect Your Hemlocks	10

Top 10 Reported Species in 2020		New to County (Non-native) Species Reported in 2020	
Species Name	Observations**	Species Name	County
Gypsy Moth	131	Watercress	Jefferson
Water Chestnut	87	Brown Star Thistle	Jefferson
Buckthorn	74	Eastern Helleborne	All SLELO Counties/Region wide
Giant Hogweed	59	Stringy Stonecrop	Jefferson
Oriental Bittersweet	39	Bishops Goutweed	Jefferson
Purple Loosestrife	35	Butter and eggs	Jefferson, Lewis
Honeysuckle (*spp.unknown*)	30	Amur Honeysuckle	Lewis
Morrow's Honeysuckle	29	Gold moss	Oneida
European Common Reed	28	Musk thistle	Oneida
Japanese knotweed	22	Tall hawkweed	Oswego
		Tubenose goby	St. Lawrence

** Some observations are found outside of Priority Conservation Areas and may not be align with the SLELO Tiers

Research Priorities

The New York Invasive Species Research Institute (NYISRI) periodically requests research related items that are evaluated and prioritized. Those deemed most feasible are considered for development. Recent research requests submitted by the SLELO PRISM include:

Biological Control Rearing Facility

To develop and sustain large-scale biological control rearing facilities as biological controls are approved.

Carbon Loss Model:

To develop a carbon loss model which estimates the amount of carbon released into the atmosphere as the result of deforestation by invasive forest pests and pathogens. This can be used to determine the potential impacts on climate change as a result of deforestation.

Expanded Invasive Macrophyte Nutrient Analysis

To gain a better understanding of the impact that aquatic invasive plants (AIP) have on internal nutrient loading of lakes and embayment's and the potential of AIP's to facilitate harmful algae blooms and carbon storage.

Pheromone Based Bait

A new research item submitted was for the development of a species-specific pheromone-based bait and netting protocol for confirmation, capture and removal of invasive fish.

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Black River Watershed Map. Public Commons

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Page 21. Sketch of Plant. Public Commons

Page 22. ROV. Courtesy of QYSEA
eDNA Supplies. ©TNC/Brittney Rogers

Page 23. iMap Metrics. Courtesy of Colleen Lutz, NYS DEC

Appendix A: SLELO PRISM's Current Species Tiers

Tier 1 - Prevention/Early Detection Species - Not in PRISM, but within 100-mile buffer or introduction pathway exists. Highest level of early detection survey efforts.

Asian Longhorned Beetle - (*Anoplophora glabripennis*)
Hemlock Woolly Adelgid - (*Adelges tsugae*)
Hydrilla - (*Hydrilla verticillata*)
Kudzu - (*Pueraria montana* var. *lobata*)
Mile-A-Minute Vine - (*Persicaria perfoliata*)
Silver, Big Head and Grass Carp
Slender False Brome - (*Brachypodium sylvaticum*)
Spotted Lanternfly - (*Lycorma delicatula*)
Water Lettuce - (*Pistia stratiotes*)
Water Hyacinth - (*Eichhornia crassipes*)
Water Soldier - (*Stratiotes aloides*)

Tier 2 – Eradication Species - Present in Prism, but at low abundance with suitable treatment methods available to make eradication feasible within Priority Conservation Areas (PCA's).

Asian Clam – (*Corbicula fluminea*)
Fanwort - (*Cabomba caroliniana*)
Giant Hogweed - (*Heracleum mantegazzianum*)
Hemimysis - (*Hemimysis anomala*)
Porcelain Berry - (*Ampelopsis glandulosa*)
Spiny Water Flea - (*Bythotrephes longimanus*)
Tench - (*Tinca tinca*)

Tier 3 -Suppression Species - Too widespread for eradication from PRISM, but some areas remain unaffected. Targeted management to suppress the population within Priority Conservation Areas (PCA's).

Black & Pale Swallow-wort - (*Vincetoxicum* spp.)
Common Buckthorn - (*Rhamnus cathartica*)
Glossy Buckthorn - (*Frangula alnus*)
Japanese Knotweed - (Reynoutria japonica)
Japanese Stiltgrass - (Microstegium vimineum)
Oriental Bittersweet – (*Celastrus orbiculatus*)

Phragmites/Common Reed – (*Phragmites australis*)
Rusty Crayfish - (*Orconectes rusticus*)
Starry Stonewort - (*Nitellopsis obtusa*)
Tree-of-heaven - (*Ailanthus altissima*)
Water Chestnut - (*Trapa natans*)
Wild Chervil - (*Anthriscus sylvestris*)
Yellow Iris - (*Iris pseudacorus*)

Tier 4 - Local Control Species - Present and widespread throughout PRISM with no chance of eradication. Localized (landowner) management applied to protect high priority resources like rare plant or recreation assets.

Curly Leaf Pondweed - (*Potamogeton crispus*)
Emerald Ash Borer - (*Agrilus planipennis*)
Eurasian Water Milfoil - (*Myriophyllum spicatum*)
European Frogbit - (*Hydrocharis morsus-ranae*)
Feral Swine - (*Sus scrofa*)
Leafy Spurge - (*Euphorbia virgata*)
Purple Loosestrife - (*Lythrum salicaria*)
Round Goby - (*Neogobius melanostomus*)
Spotted Knapweed – (*Centaurea stoebe* ssp. *micranthos*)
Wild Parsnip - (*Pastinaca sativa*)
Zebra/Quagga Mussel - (Dreissena spp.)

Tier 5 – Species - Species that may or may not be in PRISM but are difficult to respond to or that require more knowledge of.

Appendix B: List of Current PRISM Partners

Principle Partners:

- New York State Department of Environmental Conservation
- The Nature Conservancy
- Cornell Cooperative Extension
- New York State Department of Transportation
- New York State Department of Parks Recreation and Historic Preservation
- Sea Grant of New York
- Thousand Islands Land Trust

At-Large Partners:

- St. Lawrence County Representative, Cooperative Extension
- Jefferson County Representative, vacant
- Lewis County Representative, Soil & Water Conservation District
- Oneida County Representative, vacant
- Oswego County Representative, Soil & Water Conservation District

Cooperating Affiliates:

- Ducks Unlimited
- Tug Hill Tomorrow Land Trust
- Tug Hill Commission
- Fort Drum Military Installation
- Save The River Organization
- Audubon Central New York
- Private Consultant
- New York Power Authority
- CNY Regional Planning and Development Board
- United States Coast Guard Auxiliary
- Indian River Lakes Conservancy
- St. Regis Mohawk Tribe at Akwesasne
- Algonquin to Adirondacks Collaborative | A2A