

The Connection Between People, Their Way of Life and Invasive Species in New York

According to Early et al., 2016, New York is ground zero for the import of harmful invasive species into the United States and North America. As part of the 21st century global invasion risk, 17% of global land surface is highly threatened by new invasive species and the ports of New York place the Empire State at a very high threat level. This, combined with our freshwater connectivity (Erie Canal) and our world class fisheries, creates an extreme opportunity to spread harmful invasive species throughout North America and to import them from abroad.

The Lake Ontario fisheries provides food and income to individuals, families and water-based business's. This lake-based way of life occurs throughout the Great Lakes and locally along Eastern Lake Ontario. Charter captains provide income to support their families through the lake fishery as do river boat guides along our inland waters. Restaurants depend on locally caught perch, trout and bullhead. Numerous individuals provide family sustenance from our fisheries.

Terrestrial invasive species are of great concern to trail guides, natural history guides, agricultural producers and foresters who depend on healthy lands for their livelihood or to supplement their family income. These cultural factors, when combined with the economic benefits gained from nature-based recreation and tourism, not to mention the sense of calm and wellbeing gained from being in nature, dictate that providing healthy, sustainable natural resources remains a local, regional and global priority.

The partners of the St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management (SLELO PRISM) remain committed to protecting our region's natural areas for all who benefit and for all to enjoy.

Copies of this report can be obtained from the SLELO-PRISM website:

www.sleloinvasives.org

Under the menu item:
Resources/Information Sharing/Downloads / 2016 Annual Report

Cover photo: St. Lawrence River near Alexandria Bay By Kiersten Williams©

Strategic Accomplishments

SLELO PRISM Partners strive to protect the ecological integrity of the Eastern Lake
Ontario region and Northern New York's natural & cultural resources from the threat
of invasive species. In 2016 partners collaborated on making the following
accomplishments, a.k.a. strategic measures:



- Strived to create healthy, sustainable and resilient ecosystems to maintain lake and inlandbased ways of life.
- ◆ Completed our first season evaluating environmental DNA and underwater video as practical early detection tools for aquatic invasive species.
- Implemented our first aquatic invasive species spread prevention initiative at four strategic locations along Eastern Lake Ontario.
- ◆ Completed supplemental habitat restoration efforts along the Salmon River by planting Eastern White Pine (Pinus strobus) trees along the river corridor.
- ◆ Led a statewide workgroup to create a Restoration Addendum for inclusion in the New York State Rapid Response Framework.
- Supported the development of biological controls for water chestnut (Trapa natans), swallow-wort (Cynanchum spp) and Phragmites (Phragmites spp.).
- ◆ Completed early detection surveillance and suppression work on nine priority conservation areas within the PRISM region including nearly 47 miles of the east branch of Fish Creek to protect Oneida Lake.
- ♦ Significantly Increased participation on our volunteer surveillance network by 65%.

Nice Work Partners!

Acknowledgements

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Central and Western New York Chapter of The Nature Conservancy
As Host Organization



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

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The New York State Invasive Species Council

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

Why We're Involved

The Lake Ontario fisheries along with our terrestrial habitats provide food and income to individuals, families and nature-based business's directly affecting their wellbeing. This way of life occurs throughout the Great Lakes and locally along Eastern Lake Ontario.



Invasive species are a factor in the decline of 49 percent of all threatened or endangered species. (Pimentel 2004).



Invasive species are the second largest threat to biodiversity after habitat loss. (Pimentel 2004). But when considered as a type of habitat loss, invasive species then compete for first place (Williams, 2013).



Invasive species pose a "ground level" threat to whole systems, human health, municipal infrastructures, cultures and economies. (Williams 2013).

Evidence Based Conservation

The colonization of ecologically important natural areas by invasive species, negatively impacts the diversity and abundance of native flora and fauna requiring conservation to restore, sustain and create resiliency.

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Conservationists, in particular, realize the benefits of working together to achieve a natural resource goal; establishing a set of goals, objectives and strategies requires expertise and collaboration. SLELO partners have established a strong sense of collaboration and this collaboration is perhaps one of the leading components of our PRISM's success since our formal inception. Our efforts cannot be realized, however, without the support we receive from the Central and Western New York Chapter of The Nature Conservancy as our "host organization", the support we receive from iMapinvasives and from the New York State Invasive Species Coordination Unit and Invasive Species Council.

New Partner

In 2016 the United States Coast Guard Auxiliary became a new partner of the PRISM at the Cooperating Affiliate level of participation.

Strategic Approach

During our strategic planning phase, our partners recognized the importance of linking our specific strategies to our objectives, and subsequently linking our objectives to our goals. More importantly our partners recognized that by following this approach we increase the likelihood of success. This report reflects our calendar year 2016 accomplishments in direct relation to the seven goals identified by our partners.

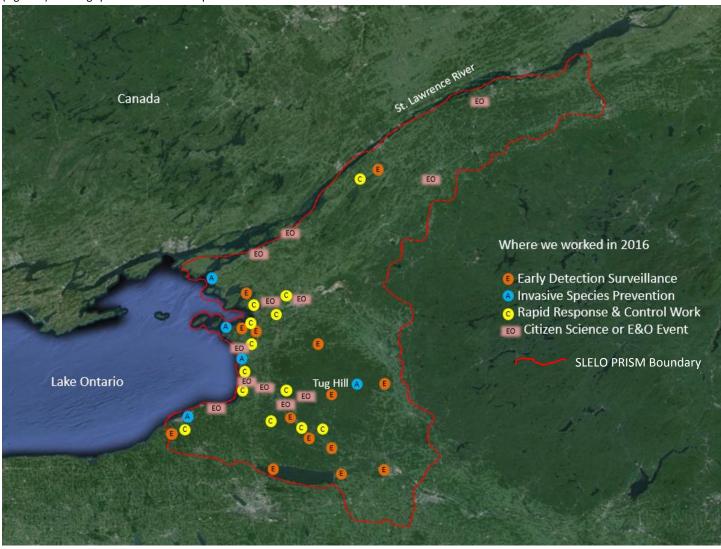
"Many of our accomplishments are achieved not by default, but through commitment and robust collaboration among our partners. The numbers tell a great story, but it's how we as a partnership set up our strategic plan and since everything is directly linked to this plan, it's safe to say our momentum remains strong. I hope you will be as pleased as I am with the progress that the partners of the SLELO PRISM have made in 2016. "



~**Rob Williams**PRISM Coordinator

Where we worked in 2016

(Figure 1) Showing spatial distribution of partner efforts.



In 2016 partners of the SLELO PRISM conducted prevention activities in five priority areas¹, completed early detection surveillance on nine Priority Conservation Areas and control work on eleven sites throughout the region (Figure 1). We collaborated on a combined 16 education / outreach and citizen science events many of which cannot be shown spatially but cover substantial areas and target audiences.

¹ Tug Hill, Oswego Harbor, Sackets Harbor, Henderson Harbor and Cape Vincent.

Eastern Lake Ontario Aquatic Invasive Species Spread Prevention

2016 marks the first season of an intense effort to reduce the introduction and spread of aquatic invasive species (AIS). Through a \$100k grant from the NYS DEC Invasive Species Spread Prevention Grants Program (NYS Environmental Protection Fund) four AIS stewardship specialists (Boat Launch Stewards), (Figure 2) were strategically placed at high use/high priority boat launches along Eastern Lake Ontario. Statistics collected in 2016 are presented in (Table 1).



Figure 2: Boat Launch Steward

- 1,031 boaters engaged.
- 14% from out of state/country.
- Aquatic organisms found on 26% of boats (early season), 41% (late season).
- 92% of all participants received AIS "Clean-Drain-Dry"
 literature.
- Top 3 travel routes identified:
 Route 3, Route 81, Route 12-E.
- Areas recently boated: Canada,
 Florida Keys, Alabama,
 Louisiana, Finger Lakes,
 Adirondack Lakes,
 Pennsylvania, New Jersey,
 Connecticut, Texas, Hudson
 River, Ohio River.

Participation with the New York State Invasive Species Advisory Committee

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. One special initiative in 2016 was to form a working group tasked with developing a Restoration Addendum that encourages land managers to implement post treatment site restoration. The working group led by the SLELO PRISM coordinator, created an addendum which was recommended for inclusion in the New York State Rapid Response Framework.

Early Detection

Timing is critical when responding to the initial detection of an emerging invasive species in any area. Detecting and responding to the invasion of an unwanted plant, animal or other organism before it can become established is the first step in eradicating or effectively managing a newly-arriving invasive species.

Environmental DNA

By convention, early detection of invasive species including aquatic invasive species typically relies on visual observation of the species causing harm or the symptoms thereof. Genuine early detection means detecting the presence of a species before it has the opportunity to populate and cause irreplaceable harm to the ecosystem of concern. In 2016 the SLELO Partners (Figure 3) participated in a special project that utilized environmental DNA as an early detection tool. Samples were collected from four strategic locations along Eastern Lake Ontario and analyzed for the following species:

Non-native species:

Northern snakehead (*Channa argus*)
Round goby (*Neogobius melanostomus*) (1)
Bighead carp (*Hypophthalmichthys nobilis*)
Black carp (*Mylopharyngodon piceus*)
Grass carp (*Ctenopharyngodon idella*) (2)
Silver carp (*Hypopthalmichthys molitrix*)

Native species:

Rock bass - (Ambioplites rupestris) (3) Lake herring- (Coregonus spp.) (4)

- Round goby was detected at all downstream sites as anticipated and two upstream sites.
- 2. Grass carp was detected in the Oswego River downstream site.
- Rock bass were detected at all downstream sites as anticipated and one upstream site.
- 4. Lake herring was detected at the Chaumont River downstream site.

Figure 3: Collecting eDNA samples.



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Priority Conservation Areas (PCA's)

In 2016, early detection surveillance was also conducted on nine Priority Conservation Areas (PCA's) including 50 forest pest Highly Probable Areas (HPA's), Table 2.

Table 2: Summary of Priority Conservation Areas where early detection took place in 2016.

Priority Conservation Area (PCA)	Number of Highly Probable Areas (HPA's) searched (terrestrial and aquatic)	Prevention Species Found	Target Management Species Found	Rapid Response or Management Response Conducted
West Branch Fish Creek	12	none	none	n/a
Oneida Lake & Three Mile Bay	7	none	Water chestnut	3 cubic yards hand-pulled
Whetstone Reservoir	34	none	none	n/a
Black Lake	5	none	Eurasian milfoil, European frogbit, purple loosestrife.	n/a
Salmon River Estuary	21	none	Water chestnut, Eurasian water milfoil, European frogbit, curly-leaf pondweed, yellow iris, knotweed.	7.25 cubic yards water chestnut hand-pulled, some European frogbit hand-pulled.
Mud Bay	17	none	Eurasian milfoil, curly-leaf pondweed, European frogbit, pale swallow-wort.	4 swallow-wort sites treated with herbicide
Chaumont Bay	9	none	Eurasian milfoil, curly-leaf pondweed, European frogbit, pale swallow-wort, phragmites.	1 swallow-wort site was treated with herbicide
Tug Hill I.S.P.Z.	27	none	Japanese knotweed, swallow-wort	2 sites treated with herbicide
Muskellunge Creek	1	none	none	n/a
Forest Pests (EAB, HWA, ALB)	50	none	n/a	n/a

Rapid Response, Control and Management

The SLELO PRISM response team consists of two individuals of which one is a New York State licensed herbicide applicator. Their job is to respond to invasive species that are in low abundance and control them to varying degrees. Multiple techniques are used to include manual, mechanical and chemical. Below is a summary of control work completed during the 2016 field season (Table 3).

Table 3: Summary of Control Work

Priority Conservation Area or Location	Species Controlled	Number of sites and treatment type
Multiple	Giant Hogweed *	23 sites herbicide
		10 sites root cut
Black River Trail	Swallow-wort	2 sites herbicide
Chaumont Barrens	Swallow-wort	26 sites herbicide
Deer Creek WMA	Phragmites *	25 sites herbicide
Eldorado/Black Pond	Swallow-wort	5 sites herbicide
Lakeview WMA	Swallow-wort	1 site herbicide
Limerick Cedars	Swallow-wort	3 sites herbicide
Little John WMA	Phragmites	8 sites herbicide
Mud Bay	Swallow-wort	4 sites herbicide
OBI-Couch Easement	Swallow-wort	4 sites herbicide
Selkirk Fen	Phragmites	2 sites herbicide
Three Mile Bay/Creek	Swallow-wort	3 sites herbicide
WMA		
Tryon Road	Swallow-wort	1 site herbicide
Tug Hill I.S.P.Z.	Swallow-wort,	2 sites herbicide
	knotweed	
Isthmus	Swallow-wort	1 site herbicide

^{*}To date 15 giant hogweed sites have been eradicated with no plant regrowth for 3 or more consecutive years.

^{*}Pale swallow-wort is the most common species being managed in the SLELO PRISM region.

Water Chestnut Control

Partners of the SLELO PRISM collaborated on the hand harvesting of countless water chestnut plants (*Trapa natans*) within the SLELO PRISM region. Noteworthy is that all sites are still producing plants, although some chemically treated sites show reduced abundance and new populations are being identified primarily in backwater, previously undetected areas. Numerous volunteers participated this year on water chestnut hand pulls sponsored by the New York State Department of Environmental Conservation, the SLELO PRISM and the Oneida Lake Association (Figure 4).

The amount of water chestnuts that were hand-harvested and reported in 2016 totaled: 767 bags or 192 cubic yards or 19,175 pounds (wet).



Figure 4: Volunteers at the Port Ontario water chestnut hand-pull event.

Conservation Outcomes from Control Activities:

Control efforts help reduce the spread of invasives and foster the growth of native species which support the ecological balance and health of our native habitats.

Education and Outreach

Engaging the general public on various issues related to invasive species is at the forefront of our long-term management effort. Increasing stakeholder and public awareness of invasive species and accompanying negative impacts along with management options is a goal of SLELO's educational efforts (Table 4).

In 2016 we exceeded our work plan education and outreach targets by 42%

Table 4: Education and outreach accomplishments in 2016.

2016 EVENTS	DATE/LOCATION	ETSIMATED # PEOPLE ENGAGED
SLELO Spring iMapInvasives Training	June 9, Watertown NY	26
Nursery/Landscape Industry Workshop	January 23, St. Lawrence CCE	15
Save the River Winter Env. Conference	February 6, Clayton NY	100
Pollinator Pathway Workshop	February 26, Channel 7 News	unknown
Pollinator Pathway Workshop II	March 5, Jefferson County CCE	53
Invasive Species in the Great Lakes	April 27, Gouverneur Central School	130
Invasive Species in New York State	April 8, Wells College	37
Black River Watershed Conference	June 8 th . Watertown	40
Salmon River Citizen Restoration	June 3, Pulaski	7
Fanwort Workshop	June 17, Williamstown	13
EAB Workshop	July 15, Wellesley Island	16
Lakeview Water Chestnut Pull	July 12, Lakeveiw WMA	15
Port Ontario Water Chestnut Pull	July 16, Pine Grove Boat Launch	20
Oswego Conservation Field Days	Sept. 15, Selkirk Shores State Park	98
Salmon River Falls Hike	Sept 17, Salmon River Falls	1
Integrated Pest Management Forum	Sept. 24, Akwesasne. St. Lawrence Co.	16
Salmon River Fish Hatchery Open House	Sept. 24, Altmar, NY	300 est.
Fort Drum Environmental Days	Sept. 27-28, Watertown/ Fort Drum	100 est.
Invasive Species that Impact on Fisheries	October 5, Mexico, NY	20
Potsdam Local Government Conference	October 13, Potsdam NY	45 est
Tug Hill Commission Local Gvnt. Conf.	March 17, Watertown, NY	50
HWA Workshop	November 12, Williamstown, NY	16
Derby Hill Bird Festival	Mexico NY	unknown
Cornell In-Service Conference	November 4	42
Total people engaged		1,153

Our Education and Outreach Committee also developed two new educational pamphlets and revised/reprinted 3,000 copies of our popular Invasive Species Handbook.

Cooperation

Working together towards a common cause is perhaps one of the SLELO Partnership's strongest attributes. Our partners 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. Highlights from 2016 include:

- > Seasonal employees from various partner organizations collaborated on various activities such as water chestnut hand pulls at multiple locations (Figure 5).
- Partners began preparing for our third Eastern Lake Ontario Invasive Species Symposium.
- Our Education and Outreach Committee collaborated to promote education and awareness activities.
- ➤ We implemented special projects through our partners to extend the work that is needed.
- > Partners continued to promote a cooperative forum at monthly meetings.
- Partners were invited to participate and/or volunteer at events/exhibits & public speaking engagements.



Figure 5: SLELO partners and teams.

Volunteer Surveillance Network

Volunteers are a critical aspect of invasive species activities throughout the Eastern Lake Ontario and St. Lawrence region. Voluntary participation in community activities such as invasive species surveying is important and is an accepted cultural form of reciprocity. Volunteering extends our early detection surveillance capacity and increases our effectiveness in conservation activities while at the same time provides for a valuable learning experience for volunteers. In 2016 an effort was made to increase the number of individuals participating in our volunteer surveillance network thus broadening our regional coverage. Newly established surveillance networks include: Fanwort Surveillance Network (6 volunteers searching 10 HPA's²), Emerald Ash Borer Surveillance Network (9 volunteers searching 13 HPA's) and our Hemlock Woolly Adelgid **Surveillance Network** (16 volunteers searching 15 HPA's) – Figure 6.

on our surveillance network.

Figure 6: Participants in our Hemlock Wooly Adelgid workshop who volunteered

Our partners achieved a 65% increase in our volunteer surveillance network in 2016

Citizen Science:

In 2016, 71 individuals participated in five citizen science events to include: Lakeview water chestnut pull, Salmon River Estuary water chestnut pull, Oneida Lake water chestnut pull, eDNA project and our aquatic invasive species spread prevention project.

² Highly Probable Area

Information Management

Providing and sharing information in a way that is easily accessible is an important aspect of regional collaboration. To manage and share information among SLELO partners and the public, and to maintain continuity in reporting, our partners maintained several initiatives in 2016 including:

- Field Reports: Standardized field reports were developed for all field activities. These reports are sent directly to partners and posted on the SLELO website.
- In-Situ Treatments Page: In 2016 treatment pages were added to our website that shares information and maps of rapid response and treatment areas within the PRISM.
- **iMapinvasives**: iMapinvasives is an effective database used for collecting invasives species information. In 2016 four trainings were provided engaging 72 participants.
- SLELO PRISM Website: The SLELO PRISM website has become an important medium for managing and sharing information. The popular site is used to: announce partner meetings, display field reports, share information on invasive species management and post relevant information. In 2016 our site was updated to a new software version.
- Quarterly Newsletter: Four issues of the SLELO PRISM newsletter were published in 2016. This was accomplished with a commitment from our Education and Outreach Committee along with our education and outreach coordinator Megan Pistolese.
- Partner Roundtable Reports: All partner meetings begin with a roundtable opportunity for partners to share information regarding invasive species. Meetings end with an open dialog.
- Participation with Statewide Webcasts: Partners participate in and facilitate monthly webcasts.

Ecological Restoration

Restoring and protecting the biological diversity of unique habitats and cultural resources from the negative impacts posed by invasive species is the core purpose for our work. This, and sustaining the habitat which supports rare, threatened or endangered species, is at the forefront of our mission. 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.³

Treatment Sites - General:

As a general practice and where appropriate, the SLELO team plants native grass seed to expedite the growth of ground cover so as to reduce the susceptibility of the site to the infestation of a non-native species. In 2016 just over 50,000 square feet (1.14 acres) was planted to native seed post treatment.

Salmon River Initiative:

In 2016, SLELO partners (Figure 7) conducted supplemental restoration along the Salmon River by planting eastern white pine trees (*Pinus strobus*). Seven volunteers assisted with planting 100 trees along the river.



Figure 7: Volunteers planting pine trees along the Salmon River

³ 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.

SLELO PRISM

2016 Special Projects

Kasoag Lake Post Treatment Monitoring:

Kasoag Lake is a 57 acre, man-made lake located in Oswego County in the Town of

Williamstown. Two aquatic invasive species Eurasian Milfoil (*Myriophyllum spicatum*) and fanwort (*Cabomba caroliniana*) (Figure 8), have begun to spread within this waterbody threatening downstream areas including Oneida Lake. In the spring of 2016 the Kasoag Lake Association applied aquatic herbicides to the lake but lacked necessary funding to conduct post-treatment monitoring. Funding for post treatment monitoring was provided by the SLELO



Figure 8: (Cabomba caroliniana) Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

PRISM in cooperation with the Oswego County Soil and Water Conservation District.

Play-Clean-Go Initiative:

In cooperation with the Thousand Islands Land Trust, the SLELO PRISM funded the



Figure 9: Brush Station Sign-TILT

fabrication of (40) invasive species interpretive signs (Figure 9) and boot brush off stations that have been installed at sensitive ecological areas across the region. These stations play a major role in limiting the spread of invasive species from one site to another by keeping boots and hiking gear free of seeds and plant fragments.

Permanent Knotweed Signs:

After completing a four-year project along the Salmon River to suppress Japanese knotweed and restore the river's corridor, SLELO partners determined it necessary to place weather resistant signs (Figure 10) in the kiosks at various sites along the river and elsewhere. Fifty signs have been installed throughout the region.



Figure 10: Knotweed Signs PRISM

Research Priorities

Water chestnut (*Trapa natans*) continues to pose a significant threat to the ecology of our waterways resulting in an ongoing strain to economic,

recreational and human resources. Researchers at Cornell University are currently conducting host specificity studies on a potential biological control indicating that (*Galerucella birmanica*) is a prime candidate for the control of water chestnut (*Trapa natans*).



In 2014, the SLELO PRISM submitted a research priority request to the New York State Invasive Species Coordination Unit resulting in a \$250,000 award to the New York Invasive Species Research Institute at Cornell University.

Swallow-wort (*Cynanchum spp.*) is one of our PRISM's most problematic invasive species. Field trials for a biological control are anticipated in the near future.



In 2015, the SLELO PRISM supported the continuation of research to identify a biological control for swallow-wort.

Phragmites (*Phragmites spp.*). The SLELO PRISM supported the continued research needed to further investigate a biological control for Phragmites via the NYS Dept. of Transportation.

Milestone [®] In 2016 the partners of the SLELO PRISM submitted a request for New York State to approve this herbicide for use in NYS. Approved in all other states except New York, Milestone is formulated for site restoration causing little or no damage to native plant species.

Japanese knotweed (Fallopia japonica). In 2016 partners of the SLELO PRISM submitted a request to further the research needed to bring a biological control for Japanese knotweed closer to approval.

Expenses by Function:

In 2016 program expenses were grouped together based on functional/programmatic categories (Figure 11). This allows for a general understanding of the current program focus and does not reflect a financial report.

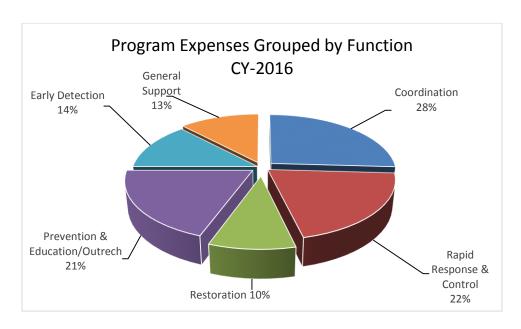


Figure 11: Program expenses grouped by function.

Rapid Response and Control includes: Licensed seasonal pesticide applicator and field technician, one

control related sub-award.

Coordination includes: Activities and expenses related to administering the program and

the Program Director.

Prevention

Education & Outreach includes: Full time educator. Events, supplies and materials, contracted special project x1.

Early Detection includes: Seasonal employees x2 to conduct early detection surveillance.

General Support includes: Travel, communications, etc.

Restoration includes: Seed, trees, live stakes.

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Figures with accompanying photo credits:

Figure 1:	Where we worked in 2016 showing spatial distribution of partner e	fforts.
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Figure 2: AIS Boat launch steward.

Figure 3: Collecting DNA samples. Photo by Rob Williams

Figure 4: Port Ontario Volunteer Water Chestnut Pull. Photo by Rob Williams.

Figure 5: Partners and teams. Photographer unknown.

Figure 6: Hemlock Woolly Adelgid Workshop Participants. Photo by Linda Brosch.

Figure 7: Volunteers restoring the Salmon River. Photographer unknown.

Figure 8: Fanwork (Cabomba caroliniana). Leslie J. Mehrhoff, University of Connecticut, Bugwood.org.

Figure 9: Boot brush signs. Thousand Islands Land Trust.

Figure 10: Japanese knotweed signs. SLELO PRISM.

Figure 11: Pie chart showing program expenditures by function. Created by Rob Williams.

Tables:

Table 1: Statistics collected from boaters along Eastern Lake Ontario, 2016.

Table 2: Summary of Priority Conservation Areas.

Table 3: Summary of Control Work.

Table 4: Education and outreach accomplishments in 2016.

Appendix A: List of Current PRISM Participants (**P**=Principal Partner, **A**=active, **I**=interested)

Adams, Dave	(IA)	New York State Department of Environmental Conservation Invasive Species Coordination Unit
Bertuch, Kathleen	(A)	Central New York Regional Planning and Development Board
Billhardt, Nichelle	(A)	Lewis County Soil and Water Conservation District
Bonanno, Sandy	(A)	Oswego County Environmental Management Council / Independent Contractor
Breheny, Kate	(A)	Save The River
Jim Brophy	(1)	Selkirk Shores State Park Manager
Brown, Matt	(1)	St. Lawrence County Soil and Water Conservation District
Chairvolotti, Joe	(IA)	Oswego County Soil and Water Conservation District
Covey, Julie	(1)	Ontario Bays Initiative, Consultant
Drosse, Richard	(A)	Oswego County Environmental Management Council
Durant, Michael	(1)	Lewis County Soil and Water Conservation District
Evans, Richard	(1)	United States Coast Guard, Eastern Lake Ontario/St. Lawrence Division
Freese, Robert	(A)	New York State Department of Environmental Conservation Pesticides Unit
Ganter, Travis	(A)	Fort Drum Military Installation
Garret, Linda	(1)	Tug Hill Tomorrow Land Trust
Gwise, Sue	(PA)	Jefferson County Cooperative Extension
Harvill, Jennifer	(1)	Tug Hill Commission
Hetzler , Paul	(A)	St. Lawrence Cooperative Extension.
Holzworth, Casey	(1)	New York State Parks, Recreation and Historic Preservation.
Hughes, Tom	(1)	New York State Parks, Recreation and Historic Preservation.
Malinowski, Kate	(A)	Tug Hill Commission
Malitz, Christina	(1)	Fort Drum Military Installation
Mazzochi, Irene	(A)	New York State Department of Environmental Conservation, Region 6
McDuff, Andy	(PA)	New York State Department of Environmental Conservation, Region 6
Miller, Rebecca	(PA)	New York State Department of Transportation
Parton, Bonnie	(A)	New York State Department of Environmental Conservation, Region 7
Payette Joshua	(PA)	New York State Department of Parks, recreation and Historic Preservation
David MacNeill	(PA)	Sea Grant New York
Ripka, Mary	(1)	The Nature Conservancy, CWNY
Roat, Brian	(PA)	The Nature Conservancy, CWNY
Sherwood, Christopher	· (I)	Forester, New York Power Authority
Shupe, Scott	(1)	Oneida Lake Association
Smith, Gerry	(1)	Audubon, CNY Chapter
Tibbles, Jake	(P)	Thousand Islands Land Trust
Williams, Rob	(A)	The Nature Conservancy, CWNY
Willbanks, Lee	(A)	Save The River

Appendix B: SLELO PRISM's Current Species Lists

PREVENTION SPECIES

✓ Mile-A-Minute Vine (Polygonum perfoliatum)
 ✓ Didymo (Didymosphenia geminate)
 ✓ Hydrilla (Hydrilla verticillata)

✓ Asian Long horned Beetle (Anoplophora glabripennis)

✓ Hemlock Woolly Adelgid (Adelges tsugae)

✓ Silver, Big Head and Grass Carp (Ctenopharyngodon spp.)
 ✓ New Zealand Mud Snail (Potamopyrgus antipodarum)

✓ Hemimysis (Hemimysis anomala) ✓ Asian Clam (Corbicula fluminea) ✓ Kudzu (Pueraria lobata) ✓ Feral swine (Sus scrofa Linnaeus) ✓ Porcelain Berry (Ampelopsis spp.) ✓ Water Soldier (Stratiotes aloides) ✓ Rusty Crayfish (Orconectes rusticus) ✓ Water Hyacinth (Eichornia crassipes)

TARGET MANAGEMENT SPECIES

✓ Fanwort

✓ Black & Pale Swallow-wort (Cynanchum spp.)✓ Water Chestnut (Trapa natans)

√ Giant Hogweed (Heracleum mantegazziamum)

(Cabomba caroliniana)

✓ Emerald Ash Borer (Agrilus planipennis)
 ✓ Phragmites (Phragmites australis)
 ✓ Purple Loosestrife (Lythrum salicaria)
 ✓ Japanese Knotweed (Polygonum cuspidatum)

✓ Glossy Buckthorn (*Rhamnus spp.*)

✓ Japanese Stiltgrass (Microstegium vimineum)
 ✓ Wild Chervil (Anthriscus silvestris)
 ✓ Leafy Spurge (Euphorbia esula L.)