SLELO PRISM

St. Lawrence Eastern Lake Ontario Partnership for Invasive Species Management

"Teaming Up to Stop the Spread of Invasive Species"

2023 Winter Newsletter

1-Million+ Acres of Connected Land and Waterscapes are benefited by the invasives species work completed in the SLELO region.

About the Cover

SLELO PRISM – Rob Williams and Megan Pistolese-Shaw

Scientists predict a 6th extinction crisis, because of habitat loss and, in particular, climate change [(1)]. Invasive species are the second largest threat to biodiversity after habitat loss[(2)].However, considering that invasive species alter ecosystem function and reduce habitat we can consider them to be a form of habitat loss. The climate of Northern New York is predicted to rise 3°F by 2080 [(3)], giving us seasonal temperatures resembling that of West Virginia and North Carolina by the end of the century. Therefore, protecting our lands and waters from the impacts of invasive species while simultaneously addressing the impacts of a changing climate go hand-in-hand.

Our host organization, The Nature Conservancy has identified a network of resilient and connected landscapes that if protected will enhance the resiliency of these habitats against climate change and other external stressors. By applying this concept of connected landscapes, we can see that the invasive species work done in the SLELO region serves to protect between 1 to 5 million acres of connected land and waterscapes respectively based on the extent of connectivity applied. For example, what we do in the Oswego River serves to protect the Finger Lakes; why- because these waterbodies are connected via the Erie Canal which also connects Oneida Lake, Lake Ontario, and hundreds of miles of inland waterways within New York. What we do in the core forest of Tug Hill helps to protect the entire 750,000-acre forest supporting the health of the Algonquin to Adirondack or Frontenac Arch, and the entire Blue Ridge to Boreal (Appalachian) forest system; why - because they are all connected.

Aerial view of the SLELO region ©TNC

This large-scale connectivity concept expands the benefit that our work has far past backyard conservation and brings into perspective the gravity of our impact.

Enhancing the impact of invasive species prevention and management at this large-scale, requires collaborations and partnerships. New York's PRISM network, in collaboration with the NYS DEC, many state agencies, and partners are in a unique position to lead the way towards preventing and managing invasive species well beyond backyard conservation into large-scale connected land and waterscapes. Invasive species management enhances the resiliency of our lands and waters against climate change and biodiversity loss.

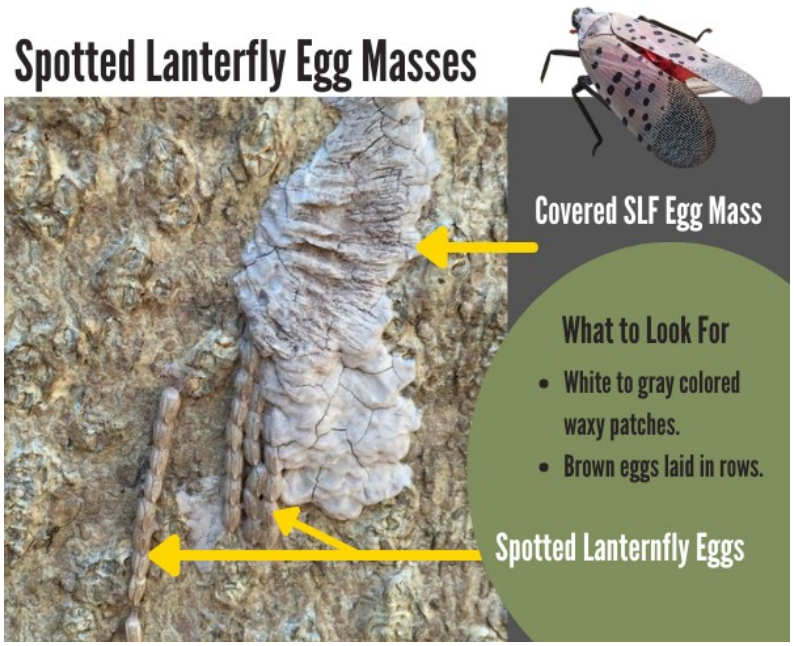
Protector's Activity

SLELO PRISM-Megan Pistolese-Shaw

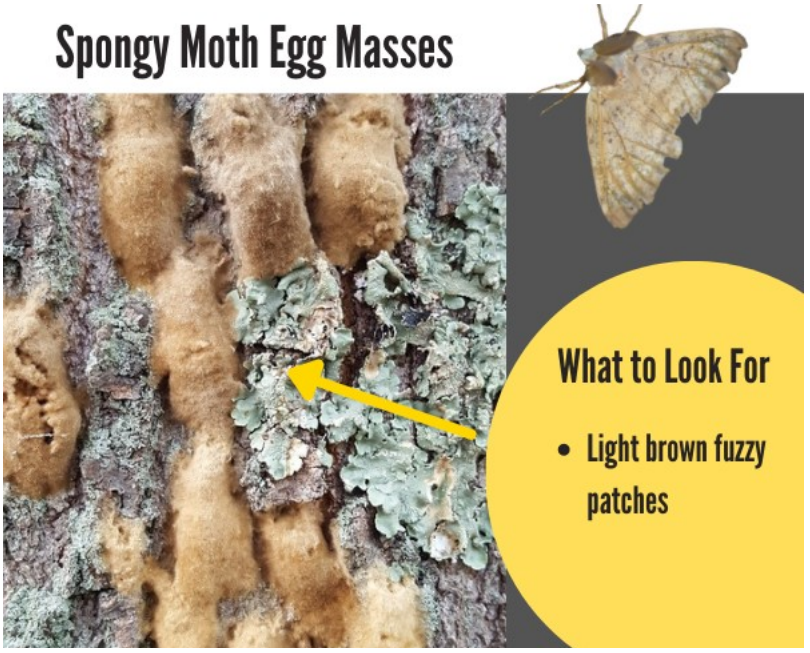
The spotted lanternfly *(Lycorma delicatula),* and spongy moth (*Lymantria dispar*) formerly known as the gypsy moth, are two invasive insects that lay eggs on trees and other flat surfaces.

Winter is an ideal season to check street trees, local parks and your own backyard for egg masses that could be from these pests and to scrape them off. Removing found egg masses helps to suppress new populations of these invasive species that would otherwise hatch in the spring.

Spotted lanternfly eggs are laid in segmented rows about an inch in length. Masses contain between 30-50 eggs and are covered in a waxy substance that turns a greyish-brown color as it dries and has a cracked mortar-like appearance that easily camouflages the eggs making them harder to spot. SLF eggs can be found on any flat surface exposed to the outdoors (view a checklist for areas to search for SLF eggs).



Spongy moth egg masses are about an inch and a half long and a quarter of an inch wide. Masses contain between 500– 1,000 eggs and are light brown color with a fuzzy appearance. Tree trunks, the underside of fences, and the tires of trailers and other equipment kept outside are often areas where you will encounter spongy moth eggs.



If you find SLF or spongy moth egg masses, follow these steps:

- Scrape egg masses off using a putty knife or thick plastic card. Extend your reach using telescoping extension poles with attached scrapers (view technique).
- Dispose of eggs in a container with some dish detergent, hand sanitizer or rubbing alcohol.
- For spongy moth, dispose of the container in the garbage.
- For **spotted lanternfly**, collect a specimen and **report** it to, NYiMapInvasives.org, NYS AGM SLF Public Reporting Form, or email spottedlanternfly@agriculture.ny.gov.

Take the Pledge to Protect to get more tips like this at, iPledgeToProtect.org

Partner Spotlight
New York Natural Heritage Program Works on Fort Drum

Greg Welter-NYNHP

Fort Drum Military Installation is a staple of the Watertown, NY area. It covers over 100,000 acres of land, most of which is undeveloped and used for Soldier training. Sadly, just like elsewhere across the region, invasive species threaten to take over if the appropriate management is not performed. To make educated management decisions, natural resource managers at Fort Drum first must know the extent and spatial distribution of the problem.

To this end, Fort Drum has teamed up with the New York Natural Heritage Program (NYNHP) to perform a survey of invasive plant species on the installation. NYNHP is a program of the State University of New York College of Environmental Science and Forestry that is funded primarily by the NYS Department of Environmental Conservation and its partners, with a mission to facilitate the conservation of New York's biodiversity by providing comprehensive information and scientific expertise on rare species and natural ecosystems to resource managers and other conservation partners.

NYNHP began this survey during the summers of 2021 and 2022. A field crew of four seasonal staff was brought on in 2021, followed by eight seasonal staff and a field coordinator in 2022. The crews hope to survey much of the installation systematically on a 15-meter grid. Terrestrial plant species are focused on, though the crew keeps their eye out for some aquatic species as well.

NYNHP Invasive Species Crew ©NYNHP.

The data collected will drive Fort Drum's invasive species management strategy moving forward. Their invasive species treatment staff often follow a week or two behind the NYNHP survey crew and manage newly discovered populations of species such as black and pale swallow-wort, which is still in low abundance on the installation, so the survey effort pays off in real-time. Additionally, the data gets uploaded to iMapInvasives, New York's invasive species database which is managed by NYNHP. Zoom on to Fort Drum on the map in iMapInvasives to see observation and treatment data!

Reach out to megan.pistolese@tnc.org to showcase your invasive species projects in our newsletter!

Terrestrial Restoration & Resiliency Initiatives

SLELO- Robert Smith

2022 Early Detection Field Surveys:

Results of last summer's field season showed the presence of nine of the 10 invasive species that we have seen during previous surveys. Giant Hogweed was the only tier invasive species not present at these six PCAs. Of the 142 HPAs that we visited, the most common species found was pale swallowwort, which was found at 89 sites. Honeysuckle and common buckthorn were the second and third most common, found at 44 and 35 HPAs respectively. The fewest number of tier invasive species occurred at Chaumont Barrens Preserve with only 3 (Pale Swallowwort, Common Buckthorn, Honeysuckle), while the largest number of tier invasive species occurred at Deer Creek WMA, Lakeview WMA, and Oneida Lake/Three Mile Bay WMA with 8 species found. The field report that includes this information will be available on our Field Reports page on our website.

Deer Creek WMA

Chaumont Barrens Preserve

2022 Hemlock Woolly Adelgid Surveys:

We are currently conducting HWA surveys. This year, we selected 14 sites to survey, and two sites, Chateaugay and Trout Brook State Forest will be surveyed if time permits. These are basically the same sites that we surveyed last year, with the exception of Winona State Forest, which replaces Noyes Bird Sanctuary, where we found HWA last year. So far, we have completed 2 sites, Rainbow Shores and Camp Zerbe, and have not detected HWA. As usual, we will alert members of the SLELO PRISM community if we find HWA at any of these sites.

Urban Forest Sustainability Initiative 2020-2022:

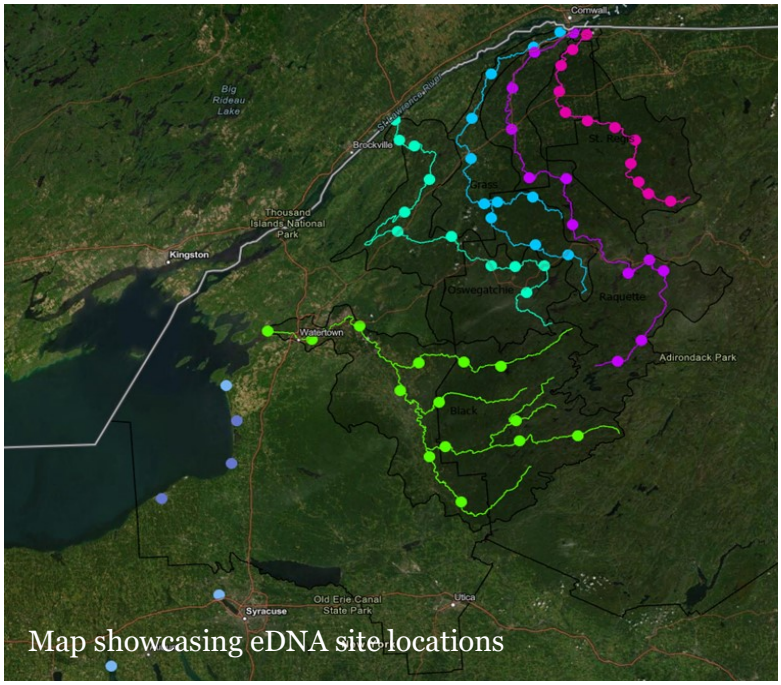
As you probably know, we have been promoting the Urban Forest Sustainability Initiative for the last three years. We have offered communities an urban forest sustainability guide, a presentation about the program, urban forest resources on the SLELO PRISM website, and up to $5,000 reimbursement for the purchase of non-invasive trees. During this 3-year period, 7 communities participated in the program, those being Watertown, Massena, Canton, Pulaski, Ogdensburg, Potsdam, and Sackets Harbor. This means we were able to reimburse up to $29,000 for the purchase of non-invasive trees. Under our current contract, we will not be able to offer any reimbursements for tree purchases in 2023, but we do plan to continue promoting the UFSI Guide to other communities.

For more information on these or other terrestrial restoration and resiliency projects please reach out to Robert Smith at robert.l.smith@tnc.org .

2022 Connected Waters eDNA Project

In 2022, SLELO PRISM and APIPP collaborated to expand environmental DNA sampling occurring in SLELO PRISM into the Adirondacks region. The results from this project have allowed us to improve our understanding of aquatic invasive species distribution and enhance our aquatic early detection work. The sampling sites were selected based on the most highly probable areas to encounter new invasive species introductions or experience the spread of invasive species that are present in other regions. Sampling protocol followed the 2021 protocol developed by SLELO PRISM and The Nature Conservancy. A total of 66 sampling sites were selected, with over 150 samples collected in total. A project report will be available on our eDNA webpage this spring.

Gabriel Yerdon and Brittney Rogers ©TNC



Map showcasing eDNA site locations

Primary Sampling Sites:

- Black River and adjacent watershed (14)
- Oswegatchie River and adjacent watershed (11)
- Grasse River and adjacent watershed (11)
- Raquette River and adjacent watershed (12)
- St. Regis River and adjacent watershed (12)
- Eastern Lake Ontario Continued Sites (3)
- Species Specific Sample Sites (3)

Primary Species:

- Silver carp (*Hypophthalmichthys molitrix*)
- Bighead carp (*Hypophthalmichthys nobilis*)
- Northern snakehead (*Channa argus*)
- Tubenose goby (*Proterorhinus semilunaris*)
- Tench (*Tinca tinca*)
- Rusty crayfish (*Orconectes rusticus*)
- Round goby (*Neogobius melanostomus*)
- Hydrilla (*Hydrilla verticillata*)
- Carolina fanwort (*Cabomba caroliniana*)
- Eurasian watermilfoil (*Myriophyllum spicatum*)

‘22 Watercraft Inspection Results, Looking ahead to ‘23

SLELO PRISM – Brittney Rogers

The 2022 steward program operated Memorial Day Weekend and continued beyond U.S. Indigenous Peoples’ Day. Our co-administrator, TILT, hired 12 stewards who staffed nearly 30 launches to engage the public, specifically boaters and anglers, on how to look for and remove aquatic invasive species from their boating and fishing equipment.

During this time, our 12 stewards conducted over 13,500 surveys with 95% compliance with an inspection. Over 28,000 people were engaged by stewards, many receiving educational materials while the stewards inspected 13,375 watercraft.

Stewards intercepted 1,110 AIS in 2022. The most common AIS included Eurasian watermilfoil (475), curly-leaf pondweed (408) and zebra mussels (120). Stewards also intercepted species including water chestnuts. round goby, European frog-bit, and Spotted Lanternfly among others. The busiest launches staffed by stewards in 2022 were Massena Dam Intake, Lake Bonaparte, Delta Lake, and Wrights Landing.

WISP launch site table ©TNC


Water chestnut nutlets ©TNC

Visit our website for more information about watercraft inspection, the 2022 annual report, and for more information on how to become a steward for the 2023 field season, **positions will be opening soon!**

We would like to acknowledge the support of the following municipalities and organizations for having stewards staffed at their launches. Your support is invaluable to the success of this program.

City of Fulton
City of Ogdensburg
City of Oswego
City of Rome
New York Power Authority
NYSDEC R6 Fisheries
NYSDEC R6 Forestry
NYSDEC R6 Wildlife
NYSDEC R7 Fisheries
NYSOPRHP
Town of Cape Vincent
Town of Henderson
Town of Massena
Village of Clayton
Village of Heuvelton
Village of Phoenix
Village of Sackets Harbor
Wrights Landing Marina

For more information on these projects or any other aquatic invasive species focused project, contact the Aquatic Restoration and Resiliency Coordinator, Brittney Rogers at **Brittney.Rogers@tnc.org**

Anglers Can Help Stop the Spread of Aquatic Invasive Species

Kiernan LaFaver-SLELO/TILT 2022 Watercraft Inspection Steward

With an estimated 187 aquatic and terrestrial invasive species identified within the Great Lakes region, it is inevitable to come upon at least one during outdoor recreation activities due to their commonality in the landscape. From the widely distributed and naturalized common buckthorn to the notorious and menacing Spotted Lanternfly invasive species are found throughout the region. Of these invasive species, a great number are rampant within our waters.

Aquatic Invasive Species (AIS) are found throughout New York State in streams, rivers, ponds, lakes, and even inland seas, such as Lake Ontario. Recreators may be more likely to encounter AIS if they regularly use New York's waterways, for boating, kayaking, and fishing. While boaters typically only have a few items that come into contact with water, such as the motor, hull and trailer, sport anglers often have many more. In addition to the common boating surfaces, anglers have trolling motors, fishing lines, and various cables for electronics. Anglers also have more accessories that come into contact with the aquatic landscape and therefore present more opportunities for aquatic hitchhikers to catch a ride to previously uncontaminated waters.

There are many ways that AIS can become attached to fishing gear. Common AIS that can directly interact or attach to hooks and fishing line include the round goby and colonial zebra mussels. In fact, zebra mussels can quickly invade motor props or boat hulls if left in water for prolonged periods of time. Other AIS such as invasive watermilfoil and Water Chestnut, may be picked up via fishing line, attach to waders, or be pulled up when running a trolling motor in shallow water.

Spiny waterflea on a line at Wrights Landing Marina. Photo by 2022 Watercraft Inspection Steward, Alisa T. © TNC.

Plants may also be picked up when launching and retrieving boats, especially in the later summer months when most aquatic plants have achieved their maximum height during the growing season.

What can you do as an angler to help prevent the spread of aquatic invasive species? The process is very simple. **Clean** off anything on your boat, trailer, or fishing equipment that does not belong, such as plants, animal matter, or mud-*which can hold microscopic invasives*. **Drain** anything that can hold water, such as your bilge, live wells, and bait buckets. **Dry** the boat and compartments that can hold water, your trailer, and dry and sanitize your fishing equipment. In addition to helping stop the spread of invasive species, this process is great for regular maintenance and improves the looks and lifespan of your boat and equipment. At the end of the day, a clean boat is a good looking boat! **If you should encounter AIS, take these steps to prevent its spread.** Dispose of found AIS in a garbage can or designated receptacle. If you catch something that you suspect to be northern snakehead or tench, do not release the fish, put it on ice and contact the NYS Department of Environmental Conservation at **isinfo@dec.ny.gov**. Report observations for all invasive species at **nyimapinvasives.org**, New York's invasive species observation database.

New Oneida Lake Management Plan Includes Invasive Species

Aaron McKeon-CNY RPDB

Oneida Lake is the largest lake entirely within New York State, with a surface area of nearly 80 square miles and a watershed larger than the state of Rhode Island. The lake has been continuously monitored by Cornell's Biological Field Station since 1956, for fish, and since 1975 for other components of the ecosystem, and a plan for the watershed was developed by a large group of stakeholders and local leaders in 2005. Since then, there have been numerous studies of the lake and its tributaries, but no formal planning has occurred at the watershed scale.

Oneida Lake, © Vadim Karatayev-

The Oneida Lake Watershed Nine Element (9E) Plan, which kicked off in summer 2022, will build on past planning, state-of-the-art digital modeling, and community input to develop a strategy to address water quality concerns including invasive species in and around Oneida Lake. Working in partnership with Madison County, the Central New York Regional Planning and Development Board, and the Cornell Biological Field Station, the 9E Watershed Advisory Committee (WAC) will identify a set of goals for the lake – particularly, a balanced approach to managing nutrient inputs from the watershed, such as from agricultural fertilizers and failing septic systems.

In addition to harmful algal blooms and climate change, Oneida Lake faces an ongoing and ever-evolving threat in the form of aquatic invasive species.

Invasive species have played and will continue to play, an influential role in the Oneida Lake ecosystem. Given its location on the New York-Erie Barge Canal, organisms can access the lake from the Great Lakes to the west and from the Hudson-Mohawk river system to the east. White perch, zebra mussels, and water chestnut - species that were documented decades ago - have affected the structure of the lake ecosystem. Newer arrivals, such as quagga mussels (in 2005), round goby (in 2014), and spiny waterfleas (in 2019), have brought new challenges and changes to the lake's water quality.

A virtual public meeting for the 9E plan was held on January 24th. You can find a recording of this meeting on the **Oneida Lake Watershed Management Plan website**. If you have comments or questions on this process email **oneida9e@cnyrpdb.org**.

Volunteer with iMapInvasives– *Mitch O'Neil-iMap*

The eastern hemlock is an iconic element of our forests – creating habitat wherever it stands tall and keeping our drinking water crisp and clear. An invasive insect called *Hemlock Woolly Adelgid (HWA)* threatens our hemlock stands in New York, but you can help by joining scientists, conservationists, and volunteers across the state in monitoring the spread of HWA.

From Feb 1st – March 15th, the **NY Natural Heritage Program** is hosting the *2nd Annual HWA Winter Mapping Challenge* in partnership with the **NYS Hemlock Initiative**. Join the challenge to help map HWA along the "leading edge" of its current range, and compete to win a prize! **To participate**, find some hemlock trees in your area, check for HWA egg masses (look for white fuzz balls on the undersides of twigs), and report your findings to NY iMapInvasives. The iMap users who survey the most sites for HWA will win the challenge!

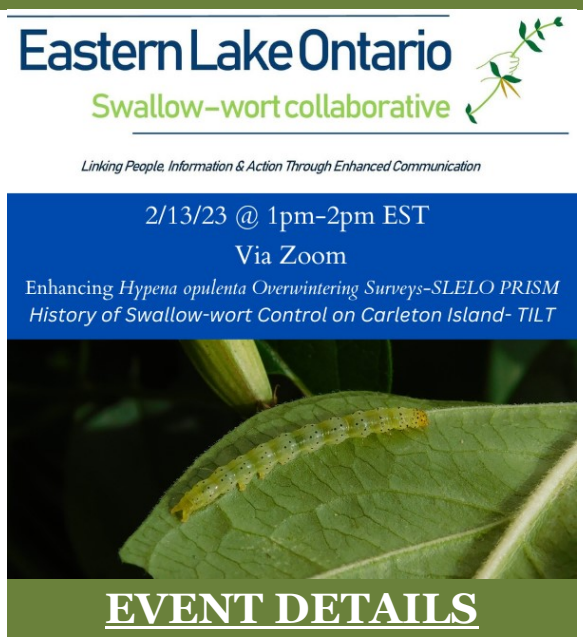
Visit the **NY iMapInvasives website** to learn more about the challenge, connect with HWA mapping efforts in your area, and sign up for the **kick-off virtual event Tuesday Feb 7th, 11am**.

Volunteer With SLELO PRISM

One of the best ways you can help to protect your favorite outdoor spaces from invasive species is to volunteer with us! Join us on guided hikes, paddles, water chestnut pulls, terrestrial removal efforts and other activities that are not only fun, but have a big impact on reducing the spread of invasive species.

To become one of our volunteers, fill out the sign-up form on our **website** and you will receive email invitations for volunteer opportunities with SLELO and our partners as they arise. Gain special volunteer status and win prizes the more you volunteer!

EVENTS & ANNOUNCEMENTS



EVENT DETAILS

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- February 1st-15th HWA Winter Mapping Challenge
- February 8th, Native Alternatives for Common Invasive Garden Plants webinar
- February 9th (*2/10 snow-date*) HWA Guided Survey Hike at Forest Park in Camden, NY.
- February 14th-15th RISCC 2023 Virtual Symposium
- February 15th Climate Change and Invasive Species
- February 23rd-24th NYFOA Forestry Seminars at the New York Farm Show
- March 1st-3rd Spotted Lanternfly Summit
- New York Invasive Species Awareness Week (NYISAW) June 5th—11th

<<Notable Announcements>>

TAKE THE PLEDGE

VIEW THE STORIES

SLELO Interview Recording

From Our Director

Just a thought….

Natural climate solutions are essential to New York's climate mitigation goals. Reducing the threat from invasive species is an important strategy for maintaining the carbon sequestration potential of New York's forests.

A recent study showed forest plots damaged by insect pests stored 69% less carbon than less disturbed plots[1]. Additionally, data used from USDA Forest Service's National Forest Inventory and Analysis Program was used in the study and indicated that the amount of reduced carbon storage in disturbed forests is equivalent to the carbon dioxide emissions from over 10 million passenger vehicles driven for a year[2].

The combined efforts of SLELO and other New York PRISMs to slow the spread of forest pests and pathogens are key to ensuring the potential for sequestering carbon in our forests. Therefore, if we think of our invasives' work in terms of supporting the ability of our forests to sequester carbon, then we can expose the value our work brings towards climate mitigation.

~Rob Williams

SLELO PRISM Partner List

- NYS Department of Environmental Conservation
- The Nature Conservancy in New York
- Cornell Cooperative Extension Offices
- NYS Office of Parks, Recreation & Historic Preservation
- NYS Department of Transportation
- NY Natural Heritage Program
- Soil & Water Conservation Districts
- Fort Drum Military Installation
- CNY Regional Planning & Development Board
- NY Power Authority
- Tug Hill Commission
- Tug Hill Tomorrow Land Trust
- Thousand Islands Land Trust
- Indian River Lakes Conservancy
- Save The River
- NY Sea Grant
- Ducks Unlimited
- Onondaga Audubon
- US Coast Guard Auxiliary
- St. Regis Mohawk Tribe-Environmental Unit
- Algonquin to Adirondack Collaborative

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SLELO PRISM

The Nature Conservancy — *SLELO PRISM Host Organization*

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Eastern Lake Ontario Swallow-wort collaborative