SPRING 2018 Newsletter

SLELO PRISM

St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management

Teaming Up to Stop the Spread of Invasive Species

36%

Of SLELO *Special Projects* are related to ecological restoration.

In This Issue:

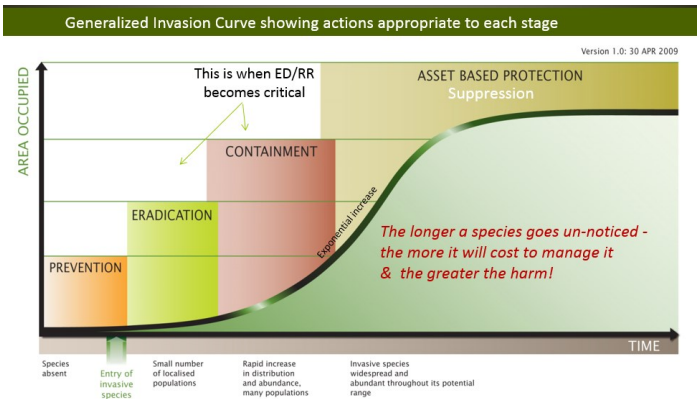
SLELO PRISM Approaches & Strategies-*A Refresher*

By: Rob Williams, SLELO PRISM Coordinator

In early 2012, SLELO partners completed an intensive strategic planning process that included many approaches and strategies designed to effectively prevent and manage invasive species in our region. In recent years, our partners have developed additional protocols that help guide our successes to achieve the greatest conservation value to our lands and waters. Lest we forget that our work is guided by collaborative decisions worthy of an occasional refresher. Following are some brief descriptions of our PRISM's approaches and strategies.

All taxa with two species lists:
With over 103 invasive plants and 77 invasive animals found across New York State, it is important to focus on all taxa that pose a threat to high value land and water resources. To be focused and effective, our partners have developed two species lists. The first is our Prevention List (a.k.a. Watch List) which is a list of species not currently found in the SLELO region but pose a clear and present danger to the region. If found early when in low abundance, these species can likely be eradicated or contained. The second is our Target Management List, those species currently found in the region for which we target management efforts as resources allow.

Invasive Curve as a guide:
Once a species becomes widespread, management is nearly impossible, requiring significant monetary and technical resources which in the end may not achieve measurable results. It therefore makes more sense to focus on Prevention List species and their early detection. The Invasive Curve (shown below) provides insight as to how we approach prevention, early detection and response efforts



PCAs and HPAs:
Attempting to conduct early detection work on all 7,387 square miles of the SLELO Region is virtually impossible. To achieve the greatest level of efficiency, SLELO partners focus on Priority Conservation Areas or PCAs. These are areas that have some ecological or cultural uniqueness such as unique habitat, grassland, alvar, wetland, dune, freshwater spawning area, fen, bog, etc., or that are important economically. Even some of our PCAs pose a significant challenge for early detection work due to their size or landscape characteristics. To further increase effectiveness in our early detection work we focus our searches on Highly Probable Areas or HPAs. These are areas, within PCAs, where invasive species are most likely to arrive and/or establish themselves. Combining the use of both PCAs and HPAs makes our work effective with tangible results.

Protocols for nominating species and PCAs:
Two structured protocols have been developed by our partners to add either a new PCA or a new species to our lists. These protocols provide purpose, importance and a way of sharing information among our partners. Available upon request.

Work on private property:
We typically do not have the resources to conduct work on private property unless it is part of a larger conservation project or effort. Examples being our participation with NYSDEC Giant Hogweed Program or our Salmon River Restoration Initiative. We do, however, provide landowners with information that can help them prevent or manage invasives on their land.

Our Meetings:
The partners of the SLELO PRISM meet during the third week of every other month beginning in January and alternate between Wednesdays and Thursdays. Our Education and Outreach Committee meets on the in-between months.

Partnership structure:
We have three levels of participation to include: *Principle Partners* - representing organizations that demonstrate the greatest financial investment in the SLELO PRISM, those who have signed a Memorandum of Understanding as well as representatives from public agencies that have a vested interest in invasive species within the SLELO region. *At-Large Partners* - made up of one at-large representative from each of the (5) counties represented in the SLELO region. *Cooperating Affiliates* - Anyone who demonstrates an active interest and who support our mission.

Decision by consensus:
It has always been the desire of our partners to reach consensus on our approaches, strategies and work plans in the spirit of cooperation.

Effectiveness:
Since our PRISM was formalized, our partnership has grown to seventeen formal partners. We have implemented ecological restoration projects on the Salmon River and on Tug Hill. We have conducted early detection searches on all 25 PCA's on a two-year rotation. We have had early detections of prevention list species: rusty crayfish and northern snakehead (the latter pending confirmation). Our partners have implemented numerous spread prevention initiatives. We have eradicated 19 giant hogweed sites and we have implemented innovative technologies in our mission to protect ecologically important waterways and landscapes from the threat of invasive species.

Trap Trees

By: Paul Hetzler, CCE St. Lawrence County

When I hear "trap tree," an image of Charlie Brown's kite-eating tree in the *Peanuts* comic strip comes immediately to mind. But trap trees, or sentinel trees, are intended to nab a much smaller flying object, the emerald ash borer (EAB).

The idea is to make certain ash trees more attractive to EAB, to serve both as a monitoring tool and as a means of slowing the rate of ash death. Early in the growing season, a chosen ash tree is girdled, which stresses it and induces it to create certain phenols and alcohols not present in healthy trees. It is on this chemical signature that the adult emerald ash borers home in. In the words of Aaron Barrigar, a Forest Conservation Technician with the Saint Regis Mohawk Tribe's Environment Division, "Girdling ash by removing the bark and phloem around the entire circumference of the trunk creates an effective attractant for emerald ash borer. EAB adults lay more eggs on stressed ash trees than on healthy trees, which is why girdled ash are effective detection tools for the insect."

Paul Hetzler felling a trap tree. Photo Credit, Wayne Samphier, & Aaron Barrigar, St. Regis Mohawk Tribe Environmental Division.

An ideal trap tree can be any black, green or white ash between four and ten inches in diameter (as measured 4.5' off the ground), but must be healthy and have full sun on at least one side. It should have easy access, and not be within striking distance of any utilities, roads or buildings. The tree is girdled in late May, shortly after leaf-out. Barrigar cautions that while the bark must be cut through, the sapwood has to remain intact. "If you cut into the sapwood, it disrupts xylem cells that transport water. This can cause the trap tree to die and be ineffective as a trap. You want the tree to stay alive during the summer." After EAB emergence is over, usually in November or December, the trap tree is felled, limbed, and placed up on sawhorses. Using a sharp draw-knife, the bark of the entire trunk is carefully peeled to look for emerald ash borer galleries and larvae.

The Saint Regis Mohawk Tribe's Environment Division initiated a sentinel tree program in 2013, far ahead of any surrounding communities. Trap trees are monitored in and around Mohawk territory at Akwesasne. Along with Barrigar, Wayne Samphier, also with the Saint Regis Mohawk Tribe's Environment Division, heads up the program. Both are active members of the St. Lawrence County EAB Task Force, a volunteer group formed at the behest of Paul Hetzler, Natural Resources Educator with Cornell Cooperative Extension.

With a focus on community education and outreach, the EAB Task Force comprises foresters, arborists, utility managers, teachers, Village, Town and County officials, as well as concerned citizens. Given that EAB has been found in two locations in St. Lawrence County, one in Franklin County, and one in northern Oswego County very near the Jefferson County border, the EAB task force feels a particular urgency in getting the word out. The group is planning to create as many as twenty sentinel trees around St. Lawrence County this spring. The Mohawk Tribe's Environment Division is even more ambitious, with plans for more than a hundred. In December 2017, one of Barrigar and Samphier's trap trees in St. Lawrence County yielded several dozen live EAB larvae in addition to a maze of galleries. There was evidence that the tree, a green ash on the edge of a wetland in Robert Moses State Park, may have been infested for more than one year.

St. Lawrence CCE is hosting a class on managing EAB and another forest pest, view the Upcoming Events on page 5 for details.

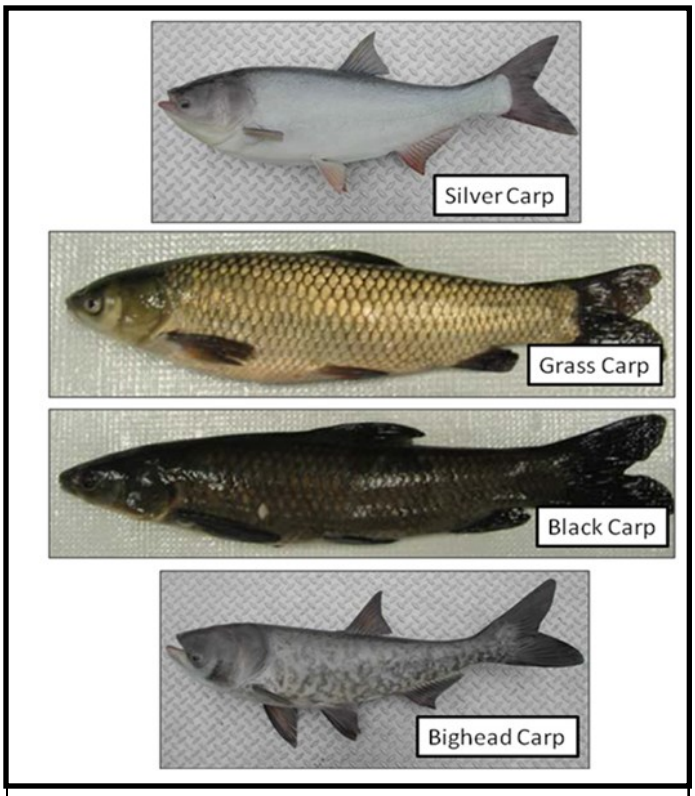
For more information on the class, sentinel trees, or the EAB Task Force, email Paul Hetzler at ph59@cornell.edu

Carping about Invasive Species

By: Paul Hetzler, CCE St. Lawrence County

Asian carp are more popular on social media than most humans. These rather large members of the minnow or Cyprinidae family have taken to leaping from the water to slap anglers upside the head, maybe as payback for using their smaller kin as bait. I'm told YouTube videos of this abound. But it's tough to capture in a video clip the damage these invasive fish could do to Great Lakes ecosystems.

Though our common carp is native to Asia, it seems to have made peace with our waterways in the 150-some years since it arrived, and these days is behaving. Asian carp is a term applied to a group of four invasive carp species: bighead, silver, black, and grass. These guys are experts in two domains: eating and creating offspring. These carp all eat ravenously, grow fast, and lay from 250,000 to 3 million eggs per year. Depending on the species, they may consume between 20% and 100% of their body weight each day, stripping their environment of plankton, aquatic plants, and invertebrates. Young Asian carp are capable of doubling in size in one year, quickly placing them out of range of most predators. And while they might improve water quality in sewage lagoons, they make clear water turbid and less suitable for native fish.



Silver, Grass, Black and Bighead Asian carp, photo credit: *https://www.watershedcouncil.org/how-to-identify-asian-carp.html*

Unlike in their native range, Asian carp in North America have no natural controls, and overwhelm aquatic systems. To quote Dan Stephenson, chief of fisheries for the Illinois Department of Natural Resources: "There are more Asian carp in Illinois than in China." Like the old lady who swallowed a fly, we created today's big problems by importing Asian carp decades ago to solve various small ones.

Aside from the fact silver carp enjoy rocketing up to thrash boaters, they can in some cases increase the severity of toxic algae blooms. This is ironic, given they were imported to remove excess plankton from water. Silver and, the closely related but larger, bighead carp are filter feeders, with specialized gills that constantly direct plankton to the mouth. Because they lack true stomachs, nearly half the nutrients they take in are excreted. Certain toxic blue-green algae not only pass through intact, they exit with more food than they came in with. Carp also release nutrients when they feed on bottom sediments. The silver lining would be if silver and bighead carp were awesome game fish, but unless you can get plankton on your hook, you probably won't catch them. Black and grass carp, close cousins, both eat proper food. Brought to the southern US in 1963 as a farmed fish, grass carp may eat their body weight each day, devouring native aquatic plants, and increasing the water's nutrient load in the process. In addition to eating food that native fish need, grass carp pose a threat to wetlands. Black carp, which can attain a length of nearly 6 feet, are the largest of the four, and for the moment, the least numerous. They feed primarily on snails and mussels, but also aquatic insects and worms.

To be fair to carp, it's not their fault they're here. Silver carp are a threatened species in their eastern Siberian homeland. And worldwide, Asian carp are an important food source. According to the United Nations Farm and Agriculture Organization, aquaculture produces more grass carp—5 million tons annually—than any other fish species in the world.

Of the group of 4, only the grass carp is confirmed in the Great Lakes (Erie, Ontario & Michigan), with a known breeding population on the rise in Lake Erie. The other three have made their way up from the Mississippi River to the doorstep of Lake Michigan, thanks to the Chicago Sanitary and Ship Canal, built in the 1800s to send Chicago's poo down South rather than into Lake Michigan. This canal is the only connection between the Mississippi and the Great Lakes, and has been dubbed a superhighway for invasive species.

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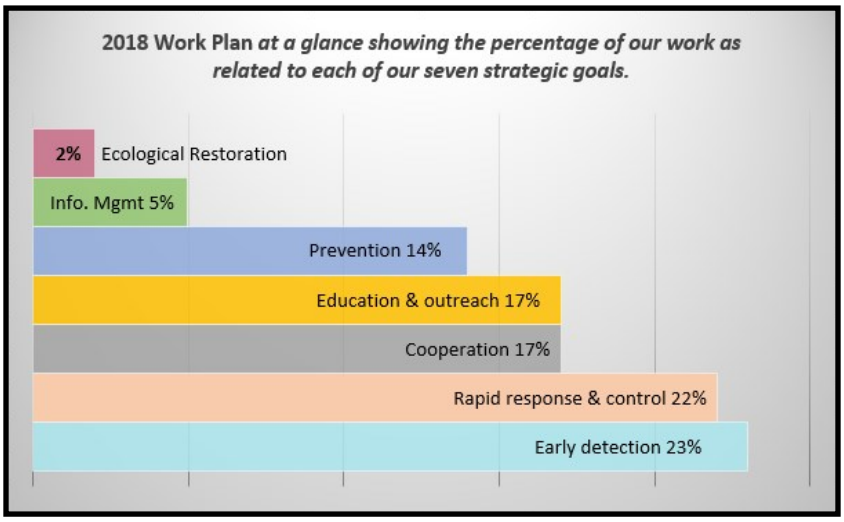
Our 2018 Work Plan and What It Means

By: Rob Williams, SLELO PRISM Coordinator

Each year, partners of the SLELO PRISM develop work plans that allow us to stay focused on our mission. Each work plan task is directly linked to one or more of the seven goals outlined within our Strategic Plan. This linkage is what keeps us focused and what brings the greatest value and impact to our work and mission.

This year our partnership will implement 66 activities throughout a five-county region that focus on each of our seven goals *(showcased in the bar graph)*. This work will be achieved with support from the SLELO PRISM staff, our host organization (The Nature Conservancy, CWNY), local partners and volunteers and our state agency partners.

Translated, this means that we are committed to creating healthy, sustainable and resilient ecosystems to maintain ecological integrity and to protect native habitats, biodiversity and natural areas by using a collaborative and integrated approach to invasive species management. **Kudos SLELO Partners!**



The percentages of our 2018 efforts based on SLELO's 7 strategic goals include:

Ecological Restoration = 2%
Information Management = 5%
Prevention = 14%
Education/Outreach = 17%
Cooperation = 17%
Rapid Response/Control = 22%
Early detection = 23%

Carping about Invasive Species, *continued*

By: Paul Hetzler, CCE St. Lawrence County

Due to opposition from a few business interests to closing the canal, an "electric fence" barrier was set up to deter invasive species from migrating into the Great Lakes. Clearly it was not enough, because in June 2017 an adult silver carp was caught beyond the barrier, just 9 miles from Lake Michigan. Henry Henderson of the Natural Resources Defense Council has compared Asian carp to cockroaches, because if you see one, it means there are a lot more nearby. Currently, other options are being considered.

There is an argument that the Great Lakes themselves are enough to keep out invasive carp. Because the lakes have been so thoroughly filtered by invasive zebra and quagga mussels, the logic goes, filter-feeders such as grass and bighead carp will stay in the more fecund waters of the canal. Therefore, don't worry—be happy. Well, that's an interesting thought, but it leaves out black and grass carp, which eat solid food. We have no idea whether the black carp population would explode when presented with endless fields of mussels on which to graze. Should that happen, the lakes would slowly revert to their pre-1980s murkiness, and the laissez-faire policy on invasive filter-feeders would get blown out of the water.

Time will tell whether the Great Lakes will collect the whole set of Asian carp, or if common sense will prevail.

If you catch an Asian carp,
Do NOT release the suspected fish back into the water, note your location and put the fish on ice and immediately contact the,
Region 7 NYS DEC Fisheries Unit
607-753-3095 ext. 213

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Upcoming Invasive Species Events

We encourage our partners to highlight their upcoming invasive species related events in each newsletter. Please contact Megan Pistolese to submit an event at 315-387-3600 ex.7724; megan.pistolese@tnc.org.

Wetlands Forum 2018 Annual Conference: April 10th and 11th. To submit a presentation abstract for approval contact Chris Einstein, ceinstein@chacompanies.com, 518-453-4522. Abstract submission deadline is January, 12th, 2018. Registration info will be posted HERE in the near future. For more details view: NYS Wetlands Forum

Management Options for Emerald Ash Borer and Hemlock Woolly Adelgid: April 12th 8:30am-3pm at the Best Western University Inn, 90 East Main Street, Canton, NY 13617. $15 fee, includes lunch. To register call 135-3799-9192 or email Paul Hetzler, ph59@cornell.edu Event Flyer & Agenda

iMapInvasives Train the Trainer Webinar Schedule: More information can be found at the Certified Trainers Network. View the program announcement here: Call for Certified Trainers Network**.** *Upcoming training dates below:*

- **Thursday, Apr 19, 2018 12:30**PM **-2:30**PM Register here: https://goo.gl/qibd7H
- **Monday, May 7, 2018; 9:30** AM**-11:30**AM Register here: https://goo.gl/Tk5iba

Emerald Ashe Borer Adopt a Trap Training: April 25th 1pm-4pm (*rain date April, 27th*) at the DEC Salmon River Fish Hatchery 2133 County Rt. 22, Altmar, NY 13302. *This Training* ***is not open to the Public*** *& is Intended for SLELO partners & volunteers who have pledged to monitor traps.* To register contact, Megan Pistolese,315-387-3600 x7724, megan.pistolese@tnc.org . Flyer/Agenda

Oneida County Cornell Cooperative Extension 4-H Science Days-Oriskany CCE: April 24th 9am-3pm Event Flyer.

NYSG Watercraft Inspection Steward Program Trainings (*registration closes May 1st)* Training Announcement

- May 21-23rd, Western NY Regional Training, De Veaux Woods/Fort Niagara State Parks
- May 23-25, Lower Hudson Regional Training, Norrie Point Environmental Center

THTLT Garlic Mustard Pull & Pesto Workshop: June 1st 3pm-5pm @ Thompson Park Zoo. For details, contact Lianna Lee with the Tug Hill Tomorrow Land Trust at tughilloutreach@nnymail.com, (315) 779-2239.

Pollinator Pathway Workshops (Events are Free), **Pre-Registration Required** *(*yardmap.org *accounts will be created for you prior to the workshops).* Workshop dates below:

- **May 31**st **6pm-9pm** at the Indian River Lakes Conservancy Educational Building located at 43982 Stine Rd, Redwood, NY 13679. Please preregister with Megan Pistolese, megan.pistolese@tnc.org, 315 387-3600 x7724. Event Flyer
- **June 20th** (rain date June 22nd) **from 10am-2:30pm** at the TILT's Zenda Farms Preserve, 38973 Zenda Road, Clayton, NY 13624. *Help plant native species in the Zenda Farms garden, please notify Megan if you're interested in helping.* To register contact Megan Pistolese, megan.pistolese@tnc.org, 315 387-3600 x7724.Event Flyer

iMapinvasives.org Trainings: Registration required (*imapinvasive.org accounts will be created for you prior to the workshop).* Workshop dates below:

- **June 13th** *(***north Session)** *rain date 7/14)*, 11am-3:30 pm, Wachtmeister Field Station, Co. Rd. 27, Canton, NY 13617.
- **June 18th (south session)** *(rain date 7/19)*, 11am-3:30 pm, SUNY Oswego Rice Creek Field Station, Brownell Rd. Oswego, NY 13126.

EAB Awareness Week is May 20th-26th for 2018.

(note: some agencies will define it as beginning May 19th or ending May 27th to include more weekend days)

About the cover:

Preethi Moorthy, shown planting an Eastern White Pine seedling along the Salmon River as part of the SLELO PRISM's Salmon River Restoration Initiative (post knotweed control). Other ecological restoration projects include: Tug Hill Forest Resiliency Project (post woody invasives removal) and Zenda Farms Restoration Project (post swallowwort removal).
Photo Credit: Megan Pistolese.

The Community Ash Tree Survey: Slowing the Spread of EAB

Emlyn Crocker, Nature Up North

You look out your window on a mid-summer day: the sun filters through the full, bright green leaflets on the big ash tree in your yard, making patterns that dance across your floor. You hear birds sing too; a pair of robins has nested again in one of the upper branches. It's a pretty picture, until you learn that emerald ash borer (*Agrilus planipennis*) larvae are slowly destroying this tree, eating away the layer just under the bark. Fast-forward a few years, and the tree will be at risk of falling on your home or electric wires, and no birds will be nesting in its branches.

When it comes to emerald ash borer (EAB), it's never too soon to raise the alarm. The invasive wood-boring beetle, originally from Asia and confirmed in St. Lawrence, Franklin and Oswego counties in August 2017, is poised to wipe out local ash populations. Nature Up North, an environmental outreach program at St. Lawrence University, hopes to slow the spread of EAB by creating a digital map of ash trees in the region. On average, ash make up from 7% to 10% of Northern New York State's forests and are one of the most common species in urban areas, so finding ash to survey won't be a problem. The challenge? Finding enough people to do the surveying. Nature Up North and the St. Lawrence County Emerald Ash Borer Task Force are depending on community members—students, homeowners, and recreationalists alike—to complete the task.

The Community Ash Tree Survey uses an open-source Esri tool called Survey 1-2-3, which is free for download on smartphones and tablets. Once the app is downloaded, the survey uses your device to tag the location of an ash, and it asks contributors to record notes on its health, size, and condition. Surveyors are asked to look for overt signs of EAB infestation, and each tree is tagged for a follow-up visit later on. Throughout spring and early summer, Nature Up North and the EAB Task Force will bring the survey, and information about EAB, to local communities at events across the North Country. There will be opportunities to learn about Nature up North's survey at SLELO PRISMs iMapinvasives.org trainings to be held at the St. Lawrence University's Wachtmeister Field Station on June 13th and at the SUNY Oswego Rice Creek Field Station on June 18th *(details on the events page on page 6)*.

The Ogdensburg Boys and Girls Club helped Nature Up North kick off the survey in August 2017.
Photo credit: Maya Williams

Other local efforts to fight EAB are underway, such as establishing trap trees across the region to draw EAB to those trees for removal. Insecticides can protect individual trees, but aren't feasible on a larger scale. In addition, SLELO partners will deploy 60 EAB tree traps throughout the region in attempt to strengthen early detection efforts for this forest pest. While there is no one solution, local experts hope this multifaceted approach will slow the EAB takeover. We can't save all the estimated 900 million ash trees in NYS, but there might still be time to protect some of the ash here in the North Country. Learn more about how you can help at www.natureupnorth.org/surveyashtrees.

Emlyn Crocker is Project Manager at Nature Up North (www.natureupnorth.org). Contact info@natureupnorth.org with questions or comments.

SLELO Partners
helping to promote
Community Preparedness

COORDINATOR'S COLUMN

"Planting a seed for healthier, more resilient lands and waters"

I would like to take this opportunity to plant a seed *(native of course)* and see how it grows. In other words, articulate a new concept to our partners and followers and see if it resonates.

For many years now, we have been tackling invasive species from a *straight-forward - find em' and stop em' approach.* Although this methodology is important from an early detection/rapid response perspective and should continue, it does have limitations. As soon as we suppress one population, another is observed elsewhere. As soon as we get a leg up on one species, another one *comes-a-knockin*'.

Our mission includes the words "*protect native habitats, biodiversity and natural areas*". It's the protection of natural systems that we really want to accomplish, isn't it? As an example of my concept let me say this, if we protect our forests from invasive pests, this translates into healthy, resilient forests which further serves to protect healthy waters. Therefore, if we protect the Tug Hill forests, we also protect the Tug Hill aquifer and hydraulically connected waterways which makes the entire system more resilient and healthier. If we reduce the impact that aquatic invasive species have on Lake Ontario embayment's, then we are protecting, fisheries, recreation, and the general ecological balance of our waterways— making the entire system more resilient and healthier. If we prevent invasive species from establishing themselves on our globally rare alvar systems and encourage the growth of diverse native plants, we then make these systems healthier and more resilient to climate change, don't we?

Now that I have worked the soil, let me introduce the seed. If we were to think about our approaches more in terms of, what system is this species affecting and what can we do as a partnership to lessen the impact, create resiliency and restore/protect the ecological health of that system, and if we strive for this, shouldn't our work become more impactful? Rather than an approach like (*there's some swallow-wort here and some over there – we had better get it*), let's think more about the system that the swallowwort is affecting *(forests and forest regeneration or perhaps grasslands that support song birds with specialized feeding habits)* and then lets consider what we can do as a partnership, on a larger scale, that will serve to protect that system as a whole and make it more resilient and healthier in the process.

Hmmm, I thank you for your contemplation!

~ Rob Williams

SLELO PRISM Partners

- NYS Department of Environmental Conservation
- The Nature Conservancy
- Cornell Cooperative Extension Offices
- NYS Office of Parks, Recreation & Historic Preservation
- NYS Department of Transportation
- NY Sea Grant
- Ducks Unlimited
- Soil & Water Conservation Districts
- Fort Drum Military Installation
- Tug Hill Tomorrow Land Trust
- Tug Hill Commission
- Save The River
- Onondaga Audubon
- Thousand Islands Land Trust
- NY Power Authority
- CNY Regional Planning & Development Board
- US Coast Guard Auxiliary

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NYS Dept. Environmental Conservation
The NYS Environmental Protection Fund

Edits completed by: Paul Hetzler, St. Lawrence CCE; Rob Williams SLELO PRISM Coordinator Megan Pistolese SLELO PRISM E/O Coordinator

The Nature Conservancy
Protecting nature. Preserving life.

Our host organization