



***Protecting, enhancing, and promoting  
northwest Michigan's natural communities  
through terrestrial invasive plant  
management and outreach.***

[HabitatMatters.org](https://HabitatMatters.org)





## ISN's History

- Founded 2005
  - NW MI CWMA
- GT Regional ISN: 2010
- Merged 2012!





# NORTHWEST MICHIGAN INVASIVE SPECIES NETWORK

## Major Partners:



Grand Traverse  
Conservation District



Funding provided by:

Michigan Invasive Species  
Grant Program  
Gr Lks Restoration Initiative

- Garfield Township
- City of Frankfort
- Benzie Long Lake Assoc.
- Portage Lake Watershed Forever
- Friends of Betsie Bay
- The Nature Conservancy

- Sleeping Bear Dunes NL
- Grand Traverse Band of Ottawa and Chippewa Indians
- Grand Traverse Audubon Club
- Little Traverse Bay Band of Odawa Indians



# Mission

*Protecting, enhancing, and promoting northwest Michigan's natural communities through terrestrial invasive plant management and outreach.*

Serving Benzie, Grand Traverse, Leelanau, and Manistee counties



# Habitat Matters



**For People**



**For Wildlife**



**For Northwest Michigan**





Mike Davis

# Nature's Vast, Unseen World



Double-toothed prominent (*Nerice bidentata*) on an elm leaf.



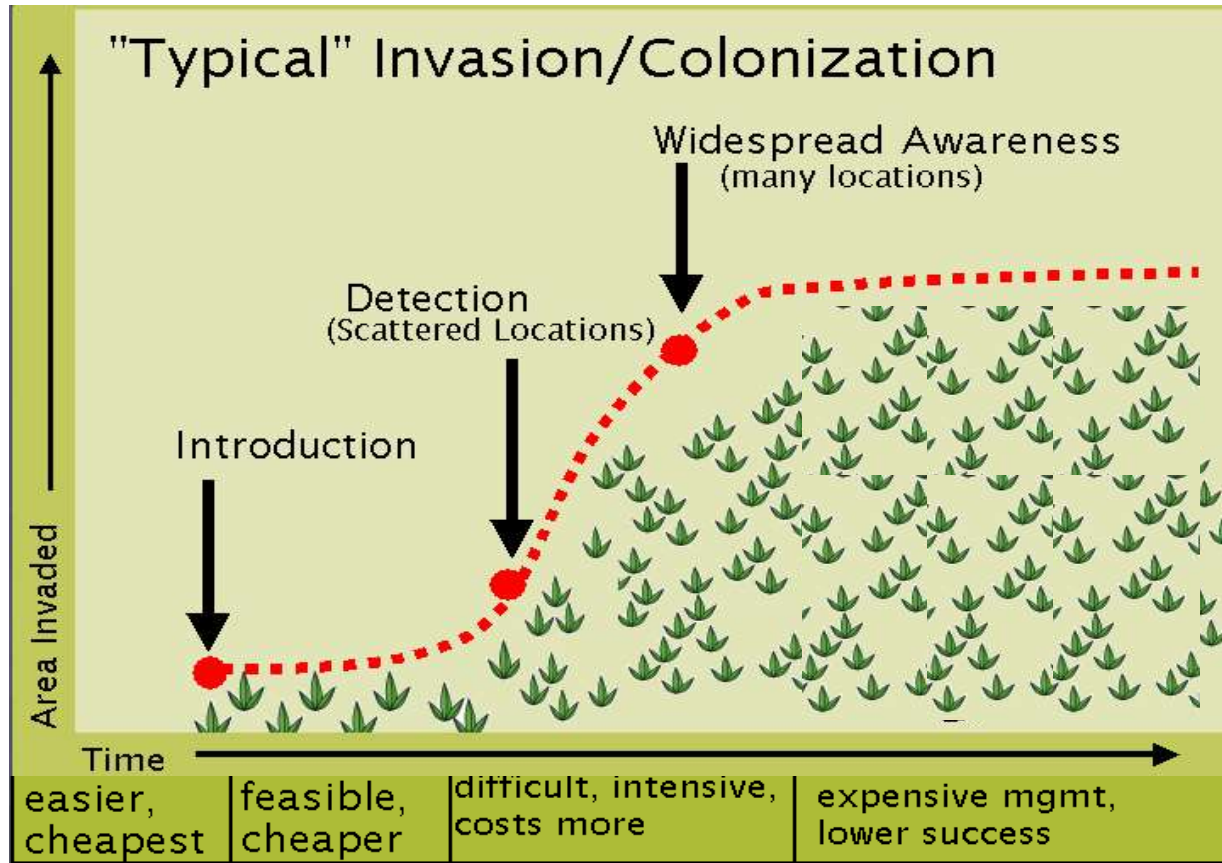
Pandorus sphinx moth (*Eumorpha pandorus*) on a Virginia creeper at Kids Creek Park.





# What's Invasive?

**Formal definition – a non-native species that harms people, the environment, or the economy.**



Source: Michigan Natural Features Inventory



Saffron Blaze

**Environmental harm** – a natural area consisting mostly of one or a combination of introduced plants that provide minimal habitat value.



# Top 20 Least Wanted Species

- Developed by ISN Partners in October 2010
- Lists plants causing the most problems
- Half of the plants on the Top 20 still sold for landscape use



**NORTHWEST MICHIGAN  
INVASIVE SPECIES NETWORK**

## TOP 20 LEAST WANTED

SHRUBS:

1. common buckthorn (*Rhamnus cathartica*)  
glossy buckthorn (*Frangula alnus*)
2. honeysuckle(s)  
(*Lonicera* spp.) \*can also be a vine
3. Japanese barberry  
(*Berberis thunbergii*)
4. multiflora rose  
(*Rosa multiflora*)
5. Russian olive (*Elaeagnus angustifolia*)  
autumn olive (*Elaeagnus umbellata*)

HERBACEOUS PLANTS:

7. baby's breath (*Gypsophila paniculata*)
8. bull thistle (*Cirsium vulgare*)
9. Canada thistle (*Cirsium arvense*)
10. dame's rocket  
(*Hesperis matronalis*)
11. European swamp thistle  
(*Cirsium palustre*)
12. garlic mustard  
(*Alliaria petiolata*)
13. Japanese knotweed (*Polygonum cuspidatum*)  
giant knotweed (*P. sachalinense*)
14. leafy spurge (*Euphorbia esula*)

WOODY VINE:

6. oriental bittersweet  
(*Celastrus orbiculatus*)

15. lyme grass (*Leymus arenarius*)
16. narrow-leaved cattail (*Typha angustifolia*)
17. phragmites (*Phragmites australis*)
18. purple loosestrife (*Lythrum salicaria*)
19. reed canary grass (*Phalaris arundinacea*)
20. wild parsnip (*Pastinaca sativa*)



oriental bittersweet



lyme grass



narrow-leaved cattail



phragmites



p. loosestrife



reed canary grass



wild parsnip

# Japanese knotweed

*Polygonum cuspidatum* (*Fallopia japonica*)



## Goals:

- Survey
- Develop effective regional treatment strategy
- Treat outlier populations

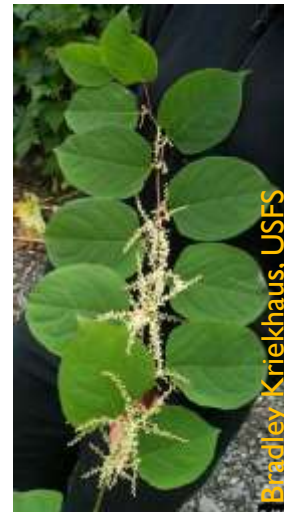
**Traditional uses:** food, medicine.

## Notes:

- Native to Asia
  - Colonizes areas after lava flow
- Introduced as ornamental
- **Illegal in Michigan**

## Problems:

- Displaces natives
- Difficult to control
  - Disposal problems
- Property damage





# Garlic Mustard

*Alliaria petiolata*



Chris Evans

## Goals for ISN:

- Control in natural areas
- Educate public & encourage private land removal

## Notes:

- Native to Eurasia

## Problems:

- Displaces natives
- Competes with tree seedlings
- Unpalatable to most native herbivores

## Disposal Options:

- Find a use
- Trash
- Tarping

**Traditional uses:** food, papermaking, animal feed



Katie Grzesiak



Grand Traverse Regional Land Conservancy

# Invasive *Phragmites*

*Phragmites australis*

## Goals:

- Surveying
- Control populations
- Engage landowner groups

## Notes:

- Native to Europe

## Problems:

- Displaces native plants
- Decreased property values
- Increased fire risk

## Traditional uses:

natural building,  
bioremediation





# Oriental bittersweet

*Celastrus orbiculatus*



## Goals:

- Survey
- Treat in natural areas

## Notes:

- Native to Asia
- Brought as ornamental

## Problems:

- Out-competes native American bittersweet
- Shades out trees it climbs on

**Traditional uses:** native and introduced versions both used in fall crafts

# Steering Committee Updates







## Mobile Data Collection

**MISIN**

[www.misin.msu.edu](http://www.misin.msu.edu)

- Data Submission
  - Web
  - App (Apple & Android)
- Identification resources
  - I pg (Species Information)
  - Training modules (Tools>>Training Modules)
- Treatment Tracking

# Boothbrush Stations

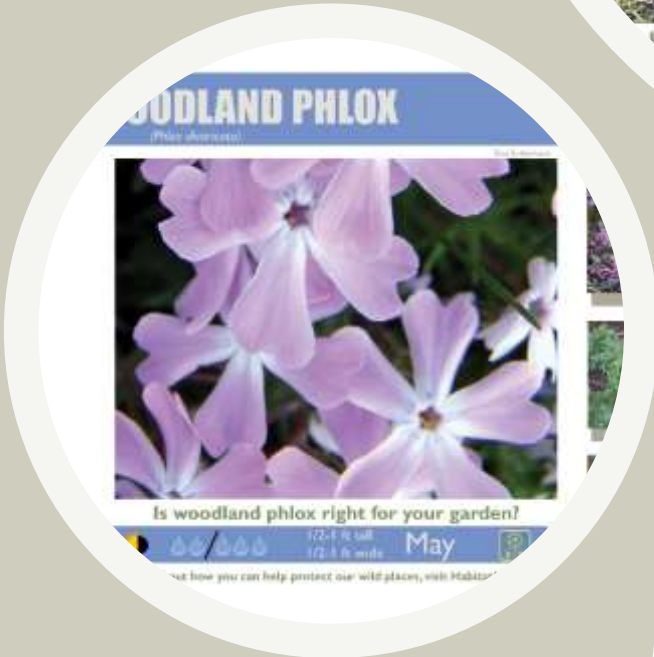
- Sign, station, brush, lumber, \$150 cost-share (\$300 value)
  - Space on sign for logo sticker
  - Need landscape fabric, gravel, concrete, installation
- Upgrade or mini-station: scrub brush, cable, & keeper (\$20)
  - Play Clean Go has smaller signs





# Native Plant Signs

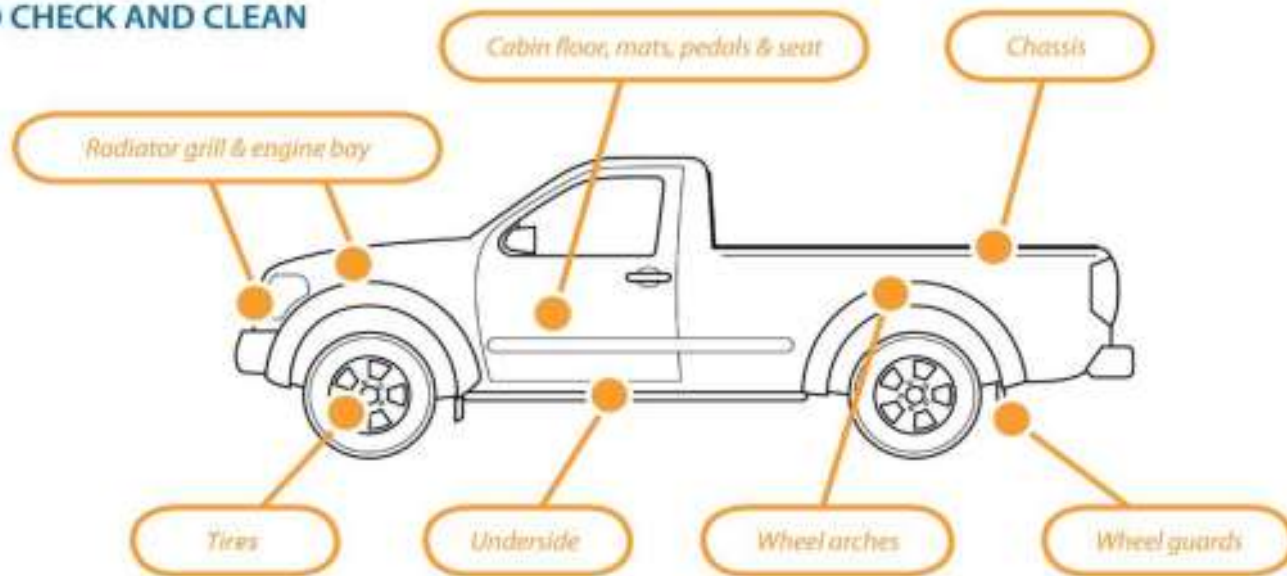
- [HabitatMatters.org/native-plant-species](https://HabitatMatters.org/native-plant-species)
- Over 200 species available
- ~\$10 each (with sign holder)
- Next order in spring!



# Decontamination Protocols

- [HabitatMatters.org/other-information](https://HabitatMatters.org/other-information)
- Aquatic and Terrestrial
- Use in RFPs, contracts, and daily work!

4WD VEHICLE WITH KEY SPOTS TO CHECK AND CLEAN



## Personal Decontamination

Remove seeds, debris, mud from boots & clothing  
Launder clothing and footwear

## Vehicle

Inspect vehicle and remove mud & debris  
Sweep/vacuum interior of vehicle  
Pressure wash exterior (incl. undercarriage)

## Tractors & Heavy Equipment

Inspect and remove mud and debris  
Use leaf blower/air compressor to remove debris  
Pressure wash equipment  
Run fans in reverse to clean air intakes

## Research/Sampling Equipment

Inspect and remove debris from , etc.  
Pressure wash equipment  
Use dedicated equipment where possible

## Hand tools and light equipment

Inspect and remove mud and debris  
Use leaf blower/air compressor to remove debris



# ISN Treatment, Monitoring, and Restoration Updates 2018



Phragmites on Manistee Lake: September 1st, 2016



Phragmites on Manistee Lake: October 9th, 2018



# Treatments & Monitoring Updates

- Treated over 700 acres of high-priority invasive species at nearly 400 sites.



Contractor working at Orchard Beach State Park.

- Surveyed nearly 1,000 acres of high-quality habitats for Top 20 invasive species at over 400 sites.



Site visit and survey at Frenchies in Traverse City.



# ISN Seasonal Crew

➤ Provided services to a variety of organizations, municipalities, and private landowners:

- Benzie County Parks & Recreation
- Benzie County Road Commission
- Camp Arcadia
- Congregational Summer Assembly
- Consumers Energy
- City of Frankfort
- City of Manistee
- City of Traverse City
- Department of Natural Resources
- Eastbay Township
- Elmers
- Filer Township
- Garfield Township
- Grand Traverse Regional Land Conservancy
- Grand Traverse Road Commission
- GTCD Parklands
- Michigan Department of Transportation
- Munson Medical Center
- National Park Service
- Periwinkle Garden Club
- Private Property Owners
- The Nature Conservancy
- Traverse City Light & Power
- Village of East Lake
- Village of Kingsley
- Village of Thompsonville



**Cutting down woody invasives for TCLP.**



**Using an herbicide foamer for cut stump.**



**Baby's breath work out on the dunes.**



**Treating swallow-wort in Kingsley.**





## Early Detection: Swallow-wort Survey & Treatment

- Treated 26 sites (4 acres) of Swallow-wort in Kingsley.
- Worked with the Village and private property owners.
- Surveyed areas in and around Kingsley to find outliers.
- Media attention from Nature Change, NPR, and the Associated Press.





# Restoration

- Planted over 5,000 native trees, shrubs, forbs, and grasses to restore 30+ acres.
- Provided funding & resources to multiple partner projects:
  - Congregational Summer Assembly
  - Grand Traverse Regional Land Conservancy
  - Grand Traverse Band of Ottawa & Chippewa Indians
  - GTC D Parklands
  - Leo Creek Preserve
  - Leelanau Conservancy
  - Leelanau Conservation District
  - Traverse City Light & Power



Maple Bay Natural Area Wetland Restoration



Getting seedlings ready at Chippewa Run Natural Area



Protected oaks on Traverse City Light & Power Property



# Invasive Species Outreach Efforts

Emily Cook – ISN Outreach Specialist







# *Go Beyond Beauty*

- Participation
- Japanese Barberry Focus
  - Trade-up Program (“Dumpster Day”)
    - 2 events/225+ plants
    - (2017) 3 events/125+ plants
- GBB Achievement Program
  - Providing participants with more opportunities while helping ISN become more self-sufficient



# *Go Beyond Beauty* Achievement Program

[www.habitatmatters.org/go-beyond-beauty.html](http://www.habitatmatters.org/go-beyond-beauty.html)

- Introduction of fee-based survey work, planting recommendations, and in-depth educational trainings.
- Business options:
  - Silver Achievement - \$150.00-\$300.00 annually, half-day training for employees, additional recognition on outreach material and signs
  - Gold Achievement - \$200.00-\$400.00 annually, full-day training for employees, additional recognition on outreach material and signs
  - Sustaining *Go Beyond Beauty* Achievement - \$200.00 annually, ISN assures no high-priority species are being sold or used via site visit or audit.
    - » All other business are on the honor system!



# *Go Beyond Beauty* Achievement Program

- Other participant options:
  - Silver Achievement - \$50.00 one time fee, site visit to determine invasive species on site, receive explanation of identified species and management suggestions, additional recognition
  - Gold Achievement - \$100.00 one time fee, site visit to determine invasive species on site, receive explanation of identified species and management suggestions AND native planting recommendations based on site conditions, additional recognition



- Become a **CHAMPION** of *Go Beyond Beauty*...  
...by removing 2<sup>nd</sup> tier invasive species from sale and use.

# Workbees and Other Events

- Garlic Mustard – 4 events/29 volunteers
- Baby's Breath – 5 events/32 volunteers plus assistance from TNC, GTRLC, BCD AIS
- Other events:
  - Camp Arcadia tree planting – 141 trees planted (MCD tree sale)
  - GM papermaking with Jane Kramer + Art Show at BRNC
  - Knotweed Community Training
  - Crystal Lake Landing Blitz with BCD and CLWA
  - “Ecology Fun” – Congregational Summer Assembly
  - BCD Nuts 4 Nature Day Camp
  - Evening of Conservation – 108 attendees!
  - Kingsley monarch butterfly release/swallow-wort promotion
  - Crystal Lake Walk-a-bout – 150 students



**Booths and Presentations – 3,600 people reached in person + 488,000 via social media and other methods**



## Connecting with Municipalities

### Target Area:

- All municipalities in Benzie, Grand Traverse, Leelanau, and Manistee Counties

### Priority:

- Municipalities with large populations of Focus Four species
- Municipalities that ISN has not made first contact with
- Municipalities that have not been contacted in 2+ years

### Goals:

- Present to townships with large populations of priority species
- Contact each township in the region at least every two years
- Suggest townships implement IS ordinances and/or planting guide ordinances
- Suggest townships host GM dumpsters
  - Goal: One township per county to host GM dumpster

# ISN Communications



# Connecting with Municipalities

Township Presentations as of date, 2018

- Leelanau
- Leland
- Bingham
- Elmwood
- Lake
- Inland
- Homestead
- Crystal Lake
- Weldon
- Colfax
- Filer
- Suttons Bay
- Cleveland
- Benzonia
- Arcadia
- Pleasanton
- Cleon
- Bear Lake
- Dickson
- Village of Kingsley
- Whitewater



# ISN Communications

## Dumpster Hosts in 2018

- City of Frankfort
- Leelanau Conservancy (Clay Cliffs)
- Lake Township
- Manistee Conservation District (GTCD)





# UMISC Conference Updates

- Winter grazing for IS control
- Writing RFB for grazing
- Grass ID workshop
- Play Clean Go Summit
- Restoration Efficacy
  - Google: BWSR Restoration What's Working
  - Shading out buckthorns
  - Post-Phragmites recovery
  - Preventing re-establishment
- Knotweed genetics
- Knotweed death-by-water!



# State-wide Updates

- **Michigan Invasive Species Coalition**
  - Core Team participation
  - Annual Meeting Dec 12/13
    - Sustainable funding, State updates, improving work with MDOT & Road Commissions, Legislative Tours, HWA update, knotweed forum
- **Play, Clean, Go**
  - Steering Committee participation
  - Officially adopted by State of MI
- **RIPPLE**
  - Reduce Invasive Pet & PLant Escapes
- **WIGL Collaborative (MIPN)**



**MInvasives**  
Michigan Invasive Species Coalition





# Giant Hogweed







**Oregon Grape**

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# Japanese Chaff Flower

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# Black Jethead

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# Asian Longhorn Beetle

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European frogbit  
*Hydrocharis morsus-ranae*  
Photo by M. Malchoff  
LC Sea Grant/VTDEC



# European Frogbit

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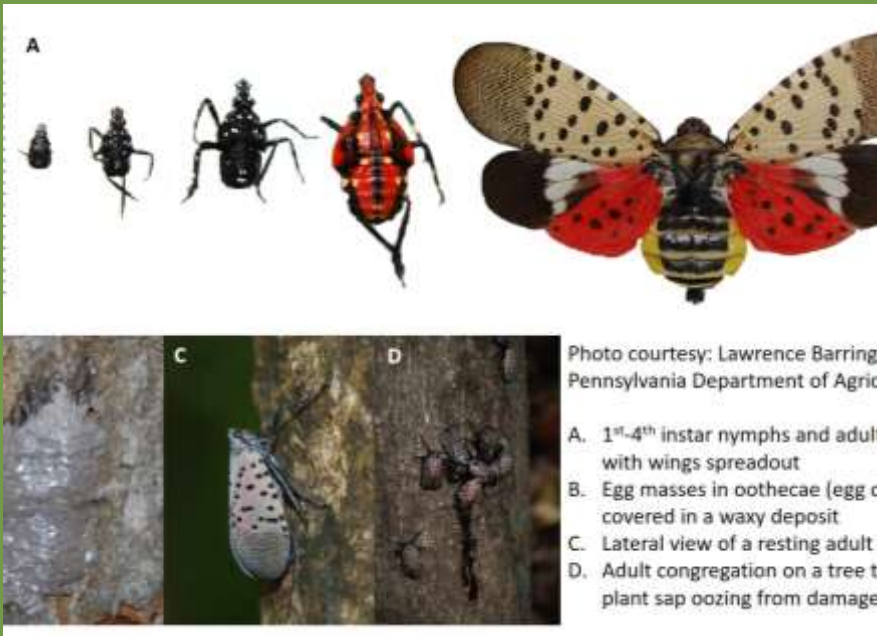




# Japanese Stiltgrass

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# Spotted Lanternfly





# Himalayan Balsam

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Chinese Yam

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**Break!**

15 minutes

# Strategic Plan

- Approved 2018!
  - On website
- Living document
  - Steering Committee will revisit & fine-tune one section per meeting
- Full update in 5 years





# Funding Plan

- Draft complete!
- Finalize by March 2019
- Overview:
  - Pushing toward diverse funding
  - Identifies strategies
    - Grants
    - Cost-share
    - Fee-for-service
    - Active fundraising?



# Grants Update

## Current Grants

- MISGP 1103 (2017)
  - Closes in March 2019
  - Some remaining purchasing
- EPA GLRI 2016
  - Extension to September 2019!
  - Subgrants in progress
  - Next summer's crew
  - Restoration, treatments ongoing
- USFS 2018
  - Year I complete
  - Funded GM dumpsters
- GTBOI Subgrant
  - Funded crew member, treatments
- USFS Outreach 2017
  - Complete!
  - Manistee-centered outreach
    - Evening of Conservation
    - Knotweed Training
    - Barberry Trade-Up
  - Working on final report





# Grants Update

## Future Grants/Applied for

- TNC HWA Subgrant (MISGP)
  - About to kick off!
- Systems Change Accelerator (Rotary)
  - Not awarded
- Williams Endowment (GT Community Foundation)
  - Boot brushes, cost-share “scholarships”
  - Expect to hear in December?
- MISGP 2018
  - Full applications (2) submitted
    - Core funding
    - Project funding (IS Leadership)
  - Expect to hear in January
- USFS Restoration
  - IS treatment (& restoration) in Boardman River bottomlands
  - Expect to hear in January?
- Gerstacker Foundation
  - IS education integration
- USFS CWMA GLRI 2019
  - RFP due out soon!



# Brainstorming

Questions?

Priorities for ISN? Partners?

Top 20 Update in 2019 (preliminary thoughts?)





# Partner Updates!

2 minutes each, please