

KISMA
Keweenaw Invasive Species Management Area

**Participating Agreement between Michigan Technological University
and the US Forest Service, Ottawa National Forest**

9 March 2018

| | |
|-------------------------|-----------------------------------|
| Agreement Number: | 17-PA-11090700-026 |
| Cooperator Name: | Michigan Technological University |
| Performance Start Date: | 05/03/2017 |
| Performance End Date: | 12/31/2017 |
| Report Source: | Cooperator |
| Report Due Date: | 03/31/2018 |
| Agreement Start Date: | 05/03/2017 |
| Expiration Date: | 03/31/2019 |

This report includes summary information pertaining to two KISMA projects awarded by the U.S. Forest Service:

- A. the GLRI project "Targeted Control of Invasive Plants on Recreational Trail System: Demonstration, Education, and Implementation Project," and**
- B. the Joint Chiefs' project "Partnering for Watershed Restoration of Lake Superior."**

Commitments from Michigan Tech are listed on pages 2-3 of the Agreement. Michigan Tech served as fiscal manager for KISMA and agrees to provide the institutional, managerial, and financial capability to ensure proper planning, management, and completion of the GLRI and Joint Chiefs' projects, which includes funds sufficient to pay the non-Federal share of project costs, when applicable.

A. Deliver the work proposed under the "Targeted Control of Invasive Plants on Recreational Trail System Demonstration, Education, and Implementation Project", submitted by Michigan Tech to the U.S. Forest Service (State and Private Forestry) in January 2017. This project includes:

- 1. Map all invasive plant species on ~700 acres of trail system in Houghton, MI;*

During the 2017 growing season, KISMA mapped approximately 294 acres of invasive plant species on the recreational trail system, using both funds from the Michigan Invasive Species Grant Program (MISGP) and GLRI (Tables 1 and 2; Figure 1). Individual point locations contained in two Excel Workbooks were shared with Ian Shackelford on

3/7/2018 and were uploaded to MISIN. For the GLRI project, four spreadsheets were pertinent and contained the following:

- 9.10.17 only Tech Trails. 1,213 records. See Table 2 for species but mostly common buckthorn, glossy buckthorn, and Japanese barberry
- 11.14.17_KISMA Tech Trails. 373 records. See Table 2 for species but mostly common buckthorn, glossy buckthorn, and Japanese barberry
- 11.17.17_Capstone Tech Trails. 109 records. Primarily buckthorns, barberry, honeysuckle, and reed canary grass
- 12.23.17_Tech Trails Minimized. 181 records. Primarily buckthorns and barberry

The ~1900 records help delineate the areas of higher versus low density of infestations and will be used to prioritize management on the Tech Trails. The individual GPS locations also provide specific locations to return to for subsequent removal.

Table 1. Invasive plant species mapping activities for KISMA using GLRI or MISGP funding for KISMA.

| Date | Activity | Funding used | Area (acres) |
|---------------------|--|--------------|--------------|
| 6/01-9/10/17 | mapped invasive plant species on Michigan Tech Trail System (23 days total spent on Trails with an average of 10.9 ac mapped per day) see Figure 1 | MISGP | 251.4 |
| 9/11-12/2/17 | mapped invasive plant species on Michigan Tech Trail System (11 days total spent on Trails with an average of 3.8 ac mapped per day) see Figure 1 | GLRI | 42.3 |
| Total | | | 293.7 |

Areas of Tech Trails Mapped for Invasives

Prepared: December 5, 2017
 Prepared by: Ashley Truitt for KISMA
 Projection: NAD 1983

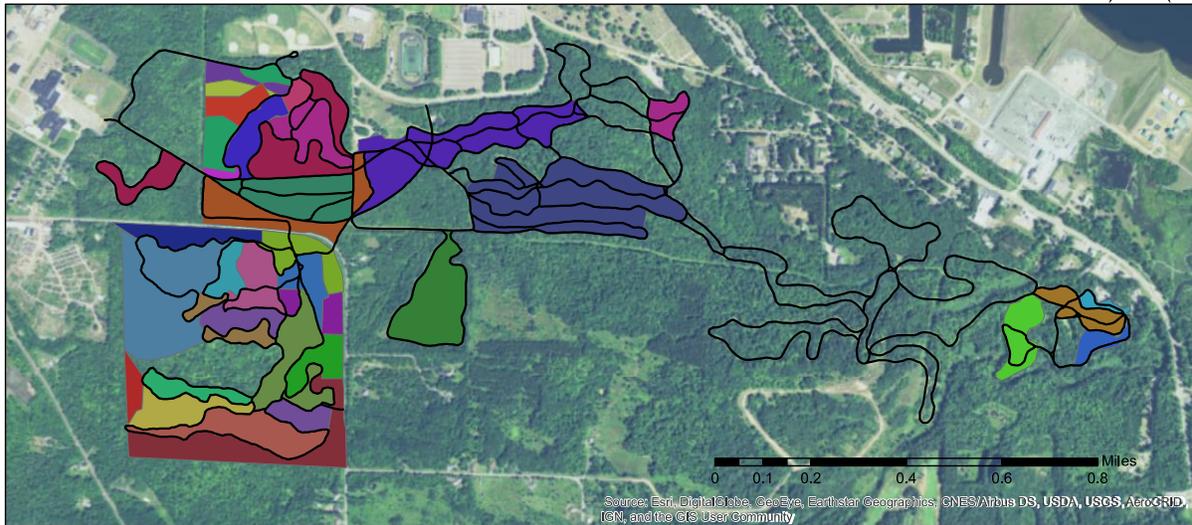


Figure 1. Areas of Invasive plant species mapped on the Michigan Tech Recreational Trail and Nara Trail systems during summer and fall of 2017. The most common invasive plant species were: Japanese barberry, common and glossy buckthorn, invasive honeysuckles, and invasive thistles with less common plant species being reed canary grass, black locust, spotted knapweed, tansy, and Scotch pine.

Table 2. Summary of the number of points recorded of each invasive species present at the trails and the total for the entire sample area (Figure 1).

| Species | Number of Individuals |
|--------------------|-----------------------|
| Autumn olive | 7 |
| Barberry sp | 397 |
| Black Locust | 8 |
| Common buckthorn | 716 |
| Glossy buckthorn | 511 |
| Goutweed | 1 |
| Honeysuckle sp | 63 |
| Japanese knotweed | 2 |
| Oregon Grape | 1 |
| Purple loosestrife | 1 |
| Reed canarygrass | 13 |
| Thistle sp. | 53 |
| Total | 1779 |

2. Educate 400+ students (local school and Michigan Tech) and general public on invasive species ID, mapping, and control techniques of invasive plant species on trails (i.e., buckthorns, barberry, knotweed) during 2017 and 2018;

Educational Activities in 2017:

Ten educational events took place, connecting with 275 people in the KISMA area ranging from middle school students to Tech students to broader citizen groups of KISMA. The events used all or part of GLRI or Joint Chiefs' funds or served as match for Joint Chiefs' funds (Table 3).

Table 3. Educational activities for GLRI and Joint Chiefs' projects (in bold text) as well as MISGP projects.

| Date | Activity | Number of participants (project funds) | Area (acres) |
|---------------------|---|---|--------------|
| 5/22/17 and 9/15/17 | Invasive plant species identification and mapping training for weed crew | 4 weed crew (MISGP) and 6 weed crew (GLRI) | 0 |
| 5/30/17 | TIS education and weeding of spotted knapweed with Houghton Middle School 7th grade class near Huron Creek behind Walmart in Houghton (Huron Creek Wetland Mitigation site). | 100 students (MISGP) | 0.1 |
| 6/12/17 | Educational outing for purple loosestrife biocontrol beetle collection, raising, and release: KISMA, the Wetland's Club at Michigan Tech, Alger County Conservation District, Keweenaw Bay Indian Community (KBIC), and the US-Forest Service led by Ian Shackleford met up to collect <i>Galerucella</i> beetles to raise and release in our respective management areas. For KISMA, the beetles were released in the Nara Nature Preserve wetlands, where purple loosestrife has recently expanded infestation area | 8 KISMA attendees (MISGP and Joint Chiefs') | 0.2 |
| 6/16/17 | Keweenaw County Historical Society presentation focusing on spotted knapweed, knotweeds, and wild parsnip to the Eagle Harbor Lighthouse park staff and the public on knapweed, knotweeds, and wild parsnip | 14 attendees (MISGP) | 0 |
| 8/9/17 | KISMA provided an invited general invasive plant species and 'why-should-you-care' educational talk to the Kiwanis club of Houghton | 11 attendees (MISGP) | 0 |
| 9/1/17-12/21/17 | KISMA Coordinator, Sigrid Resh, worked closely with 5 Michigan Technological University students on their senior capstone project involving the MTU trails and invasives. These students learned invasive plant species ID and management options and priorities, the scope of problem on a site with which they were familiar. These students also conducted a survey of trail users on their invasive species knowledge and concern. The students then had to create a management plan and presentation for the Tech Trail managers, incorporating what they found and proposing methods of dealing with these issues. | 5 Tech students | |
| 9/20/17 | Houghton 7th graders on campus for hands-on science--pollinator garden project at Husky Bay. Worked with students to remove knapweed, tansy, and white sweet clover, and planted native shrubs and transplanted lance-leaved coreopsis. 9/20/16 | 100 MS students (MISGP and Joint Chiefs') | 0.5 |

| | | | |
|---------|--|--|---|
| 11/3/17 | Tech trails Buckthorn education and management work day with 4 MTU student volunteers, 4 KBIC partners, Ottawa NF's Ian Shackleford, 3 KISMA Weed Crew and KISMA Coordinator and Botanist (also outreach with 3 trail users passing by)—used weed wrench, buckthorn baggies, hand-pulling, seed tree cutting, and cut stump chemical applications on common and glossy buckthorn | 14 (counting educated passers-by) (GLRI) | 3 |
| 11/7/17 | Public talk at Portage Lake District Public Library on fall management of Buckthorn, Barberry and Knotweeds | 13 attendees (Joint Chiefs') | 0 |
| Total | | 275 people | 3.8 (3.7 of which was GLRI and Joint Chiefs') |

3. *Prioritize and treat invasive plant species for 300 acres on the Tech Trail System;*

Treatment Activities in 2017:

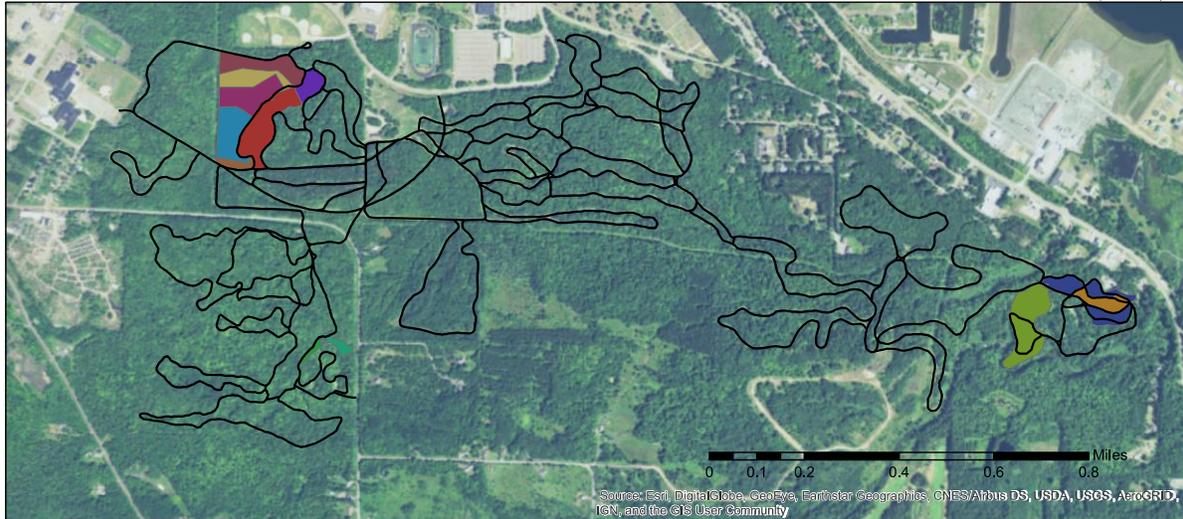
KISMA treated 59.7 acres of invasive species with 38 of those acres on the Tech Trail System (Table 4)

Table 4. Invasive plant species treatment activities for GLRI or Joint Chiefs' projects (in bold text) and also some MISGP projects.

| Date | Activity | Funding used | Area (acres) |
|--|--|----------------------------|--------------|
| 5/30-9/15/17 | Appendix A—areas treated excluding Tech Trails (match support for Joint Chiefs') | MISGP/Joint Chiefs' | 18 |
| 9/11-12/2/17 | Treated invasive plant species on Michigan Tech Trail System and City of Houghton Nara Trails (Figure 2 | GLRI | 38 |
| Details of additional treated acreage are in Table 2, as those were also educational outreach projects. | | | 3.7 |
| Total | | | 59.7 |

Areas of Tech Trails Controlled Fall 2017

Prepared: December 11, 2017
 Prepared by: Ashley Truitt for KISMA
 Projection: NAD 1983



| Controlled Area Fall Semester 2017 | | |
|--|---|--|
| Date | | |
| <ul style="list-style-type: none"> 9/19/2017 9/29/2017 10/6/2017 | <ul style="list-style-type: none"> 10/13/2017 10/17/2017 10/20/2017 10/31/2017 11/1/2017 | <ul style="list-style-type: none"> 11/3/2017 11/9/2017 11/10/2017 12/2/2017 |

Figure 2. Area of Invasive plant species treated on the Michigan Tech Recreational Trail and Nara Trail systems during fall of 2017 (38 acres total). Treated species included: Japanese barberry, common and glossy buckthorn, honeysuckle, autumn olive, and invasive thistles.

4. *Establish invasive and native species monitoring protocol to determine treatment and restoration efficacy in subsequent years; and*

None completed yet.

5. *Restore native shrubs and herbs with planting to bare areas caused by barberry removal.*

None planted yet.

- B. Deliver the work proposed under the Joint Chiefs' project "Partnering for Watershed Restoration of Lake Superior." This project includes:**

1. *Arrange for a KISMA strike team to work on invasive plants in the Houghton and Michigan Tech Trail System;*

KISMA hired two weed crews for the 2017 growing season. The summer weed crew worked on both the Tech Trails and the broader KISMA area and was supported with

MISGP funds due to the delay in funding availability for this agreement. We will use GLRI and Joint Chiefs' funds for the Summer 2018 weed crews for the Tech Trail and greater KISMA area.

The fall weed crew worked mostly on the Tech Trails system and was supported with GLRI/Joint Chiefs' funds.

2. *Fund a local crew to treat invasive plant infestations within the KISMA area. Treat at least 13.2 acres. Do not count the GLRI-funded invasive work on the Michigan Tech trails;*

Because the funding came in late. I used MISGP funds for the summer weed crew work in the greater KISMA area and the summer Tech Trails work. Though that technically means that GLRI and Joint Chiefs' money was not used for much of the summer work. KISMA did accomplish many activities, and more of those activities will be covered by GLRI and Joint Chiefs' funding during the 2018 growing season.

3. *Provide an administrator for KISMA. Duties will include communicating with KISMA members, planning KISMA meetings, conducting public education on invasive species in Houghton, Keweenaw, and Baraga counties, writing news releases about KISMA and invasive species, recruiting and supervising KISMA volunteers, and providing expertise on the management of invasive plants;*

Done. Jill Fisher and Sigrid Resh perform these duties.

4. *Record invasive plant control work. At a minimum, all treatments will be recorded by species, location, date, personnel, method, and volume of herbicide used (if any). Enter treatments in an Excel spreadsheet and provide to the U.S. Forest Service by October 10 of each year;*

Done. Spreadsheet provided to Ian Shackleford on 9/10/17, which has been updated with more recent Excel worksheets provided on 3/7/18. Treated acreage for 2017 includes: treated areas done during education/outreach (3.7 acres), treated areas of the greater KISMA area (18 acres), and treated areas on the Tech Trails (38 acres) (Tables 3 and 4). Appendix A contains the invasive plant infestations found in the KISMA area (excluding the Tech Trails points) with treated infestations in bold text, which were reported to MISIN and USFS in 2017.

5. *Map invasive plant infestations. Report locations to both MISIN and the Ottawa National Forest;*

Done. KISMA shared two Excel Workbooks with Ian Shackleford on 3/7/2018. They included seven spreadsheets:

- 9.10.17 only Tech Trails. 1,213 records. Mostly common buckthorn, glossy buckthorn, and Japanese barberry

- 9.10.17 all other sites. 89 records. Garlic mustard, goutweed, Japanese knotweed, giant knotweed, wild parsnip, spotted knapweed, European swamp thistle, bull thistle, Canada thistle, common buckthorn, nipplewort, Morrow's honeysuckle, purple loosestrife
- 11.14.17_KISMA Tech Trails. 373 records. See Table 2 for species.
- 11.17.17_Capstone Tech Trails. 109 records. Primarily buckthorns, barberry, honeysuckle, and reed canary grass
- 11.17.17_Capstone Monastery (site located between Eagle Harbor and Eagle River that was surveyed by Senior Capstone students from Michigan Tech in the School of Forest Resources and Environmental Science. 31 records. Mostly thistle, St. John's wort, and spotted knapweed
- 12.5.17_Capstone Pt Abbaye (site located on peninsula in Baraga now owned by Keweenaw Land Trust that was partially surveyed by Jim Bess and a Capstone student from Tech). 132 records. Primary reed canary grass, thistles, and timothy grass
- 12.23.17_Tech Trails Minimized. 181 records. Primarily buckthorns and barberry

Appendix A contains the new invasive plant infestations found in the KISMA area (excluding the Tech Trails points) with treated infestations in bold text for 2017, which were reported to MISIN and USFS and uploaded to MISIN in early 2018.

6. *Provide one education session per year (2017 and 2018) to the public at Tech Trails, on identification, mapping, and control options of the invasive species on the trails; and*

See Table 3 entries for 11/3/17 and 11/7/17 and Figure 5. We did two, because there were so few members of the public who showed up to the Tech Trail venue, so we also provided information about the Tech Trail invasive plant species at the public library venue.

7. *Submit an annual performance report of work accomplished through the end of each calendar year. See Section V Item 0.*

This is that report.

Michigan Tech has submitted two invoices for work in 2017 (\$1,389.46 and \$1,542.71), totaling \$2,932.17, and covering work through 11/30/2017. \$45,024.83 remains undelivered (\$37,067.83 GLRI and \$6,958.00 Joint Chiefs). The Forest Service and Michigan Tech are currently preparing Modification #1 to this agreement, which will provide an additional \$7,690 of Joint chiefs funding.



Figure 3. Purple loosestrife biocontrol project. Top Left Photo: *Galerucella* beetle collection from Bergland, MI with USDA Forest Service, Keweenaw Bay Indian Community (KBIC), Alger Co. Conservation District, Michigan Tech Wetland Club, and KISMA personnel. Top Right Photo: KISMA personnel transferring beetles to rearing pots. Bottom Left and Right Photos: Nara Nature Preserve loosestrife infestation where beetles were released.



Figure 4. Husky Bay invasive species pull and native planting with 100 Houghton middle school students. Upper Left Photo: Invasive species piling and preparation for native shrub planting with one of the student groups. Upper Right Photo: Bagging of weeds by another of the student groups. Bottom Photo: Jill Fisher instructing students on shrub planting.



Figure 5. Tech trails Buckthorn education and management work day with 4 MTU student volunteers, 4 KBIC partners, Ottawa NF's Ian Shackleford, 3 KISMA Weed Crew and KISMA Coordinator and Botanist (also outreach with 3 trail users passing by)—used weed wrench, buckthorn baggies, hand-pulling, seed tree cutting, and cut stump chemical applications on common and glossy buckthorn.

Appendix A. Invasive plants sites reported to MISIN (other than Michigan Tech). Sites in bold were treated with manual removal.

| Site Name | Date | Observer | Latitude | Longitude | Ownership | County | Species | Area Code |
|---|-------------------|-------------------------|------------------|-------------------|----------------|-----------------|---|-----------|
| 1020 9th Ave Houghton | 15/06/2017 | Lindsey Dolinski | 47.116753 | -88.559498 | Private | Houghton | Alliaria petiolata | 2 |
| 1315 Roberts St Hancock | 15/06/2017 | Lindsey Dolinski | 47.132175 | -88.605163 | Private | Houghton | Alliaria petiolata | 2 |
| 306 Franklin St Houghton | 15/06/2017 | Lindsey Dolinski | 47.119741 | -88.563317 | Private | Houghton | Alliaria petiolata | 1 |
| 320 Iroquois St | 3/7/2017 | Sam Stokes | 47.234713 | -88.438653 | Private | Houghton | Polygonum cuspidatum | 3 |
| 320 Iroquois St | 3/7/2017 | Sam Stokes | 47.234713 | -88.438653 | Private | Houghton | Polygonum cuspidatum | 3 |
| 44803 Paradise Rd | 10/7/2017 | Sam Stokes | 47.066036 | -88.552607 | Private | Houghton | Polygonum sachalinense | 2 |
| 46189 US Hwy 41 | 10/7/2017 | Sam Stokes | 47.085858 | -88.516282 | State | Houghton | Polygonum sachalinense | 1 |
| 506 Edward/301 Douglas St. Houghton | 14/06/2017 | Sam Stokes | 47.118532 | -88.576132 | Private | Houghton | Alliaria petiolata | 2 |
| 51594 Boston Rd | 13/07/2017 | Nick Lowing | 47.161612 | -88.549389 | Private | Houghton | Pastinaca sativa | 2 |
| Redwynn Dunes | 12/8/2017 | Lindsey Dolinski | 47.437408 | -88.222856 | Private | Keweenaw | Centaurea stoebe | 5 |
| Beverly Claremont | 14/06/2017 | Sam Stokes | 47.233533 | -88.441024 | Private | Houghton | Alliaria petiolata | 2 |
| Black Creek Trail | 24/07/2017 | Lauryn Watkoske | 47.326806 | -88.434224 | State | Keweenaw | Cirsium arvense | 1 |
| Central Mine | 7/7/2017 | Sam Stokes | 47.405859 | -88.200471 | Private | Houghton | Several species | 5 |
| Central Mine | 7/7/2017 | Sam Stokes | 47.405859 | -88.200471 | Private | Houghton | Pastinaca sativa and Cirsium arvense | 5 |
| Charlie Harju | 14/06/2017 | Sam Stokes | 47.227340 | -88.445504 | Private | Houghton | Alliaria petiolata | 1 |
| Chassell Dump | 13/06/2017 | Sam Stokes | 47.023092 | -88.536863 | City | Houghton | Alliaria petiolata | 3 |
| Cliff Dr | 13/07/2017 | Sam Stokes | 47.306780 | -88.384445 | State | Keweenaw | Pastinaca sativa | 1 |
| Cliff Dr | 13/07/2017 | Sam Stokes | 47.306780 | -88.384445 | State | Keweenaw | Pastinaca sativa | 1 |
| Donald Britz rental properties 22695 Pinewood Rd | 22/08/2017 | Sigrid Resh | 47.087534 | -88.516141 | Private | Houghton | Polygonum sachalinense | 2 |
| Eagle Harbor Lighthouse | 5/6/2017 | Sam Stokes | 47.459555 | -88.160016 | Other | Keweenaw | Centaurea stoebe | 2 |
| Eagle Harbor Lighthouse | 5/6/2017 | Sam Stokes | 47.459555 | -88.160016 | Other | Keweenaw | Centaurea stoebe | 2 |
| Eagle Harbor Lighthouse | 5/6/2017 | Sam Stokes | 47.459555 | -88.160016 | Other | Keweenaw | Centaurea stoebe | 1 |
| Eagle Harbor Lighthouse | 5/6/2017 | Sam Stokes | 47.459555 | -88.160016 | Other | Keweenaw | Centaurea stoebe | |
| Edith Isaacson Garlic Mustard | 14/06/2017 | Sam Stokes | 47.233344 | -88.443849 | Private | Houghton | Alliaria petiolata | 1 |
| Ericson's Feed Empty Lot | 13/06/2017 | Sam Stokes | 47.111825 | -88.572692 | Private | Houghton | Several species | 3 |
| Fixer upper house on corner or Ahmeek and 1st | 14/06/2017 | Sam Stokes | 47.239764 | -88.437918 | Private | Houghton | Alliaria petiolata | 1 |
| GLC--bear loop entrance to beaver ponds | 17/07/2017 | Sigrid Resh | 47.358884 | -88.108736 | Private | Keweenaw | Cirsium palustre | |
| Gundersen House | 23/06/2017 | Sam Stokes | 47.270165 | -88.415867 | Private | Houghton | Polygonum cuspidatum | 3 |
| Gundersen House | 23/06/2017 | Sam Stokes | 47.270165 | -88.415867 | Private | Houghton | Polygonum cuspidatum | 1 |
| Gundersen House | 23/06/2017 | Sigrid Resh | 47.270165 | -88.415867 | Private | Houghton | Polygonum cuspidatum | 2 |
| Gundersen House | 23/06/2017 | Sam Stokes | 47.270165 | -88.415867 | Private | Houghton | Polygonum cuspidatum | 4 |
| Gundersen House | 23/06/2017 | Sam Stokes | 47.270165 | -88.415867 | Private | Houghton | Polygonum cuspidatum | 1 |
| Gundersen House | 23/06/2017 | Sam Stokes | 47.270165 | -88.415867 | Private | Houghton | Polygonum cuspidatum | 5 |
| Gundersen House | 23/06/2017 | Sam Stokes | 47.270165 | -88.415867 | Private | Houghton | Polygonum cuspidatum | |
| Huron Creek - Walmart | 30/05/2017 | Sam Stokes | 47.106022 | -88.586477 | City | Houghton | Centaurea stoebe | 3 |
| Huron Creek by Walmart | 24/09/2017 | Sigrid Resh | 47.108561 | -88.587068 | City | Houghton | Lythrum salicaria | 2 |
| KBIC Sand Point Restoration Site | 11/7/2017 | Sam Stokes | 46.792693 | -88.464878 | Tribal | Baraga | Centaurea stoebe | 5 |
| KLT Tarped Hovel Knotweed | 10/7/2017 | Sam Stokes | 47.057630 | -88.574740 | Private | Houghton | Polygonum sachalinense | 1 |
| KLT Tarped Hovel Knotweed | 10/7/2017 | Sam Stokes | 47.057630 | -88.574740 | Private | Houghton | Cirsium vulgare | 1 |

| Site Name | Date | Observer | Latitude | Longitude | Ownership | County | Species | Area Code |
|---|------------|------------------|-----------|------------|-----------|----------|------------------------|-----------|
| Mary Luczak Garlic Mustard | 14/06/2017 | Sam Stokes | 47.233389 | -88.443818 | Private | Houghton | Alliaria petiolata | 1 |
| MTU Parking Lot 21 | 7/6/2017 | Sam Stokes | 47.115804 | -88.551891 | Private | Houghton | Polygonum cuspidatum | 4 |
| MTU Parking Lot 21 | 7/6/2017 | Sam Stokes | 47.115804 | -88.551891 | Private | Houghton | Polygonum cuspidatum | |
| MTU Parking Lot 21 | 7/6/2017 | Sam Stokes | 47.115804 | -88.551891 | Private | Houghton | Polygonum cuspidatum | |
| Paradise cottage | 6/8/2017 | Sigrid Resh | 46.597870 | -85.037123 | Private | Other | Phalaris arundinacea | |
| Pennala Wild Parsnip | 28/06/2017 | Sam Stokes | 46.558867 | -88.758567 | Private | Houghton | Pastinaca sativa | 5 |
| Portage Trail | 10/7/2017 | Sam Stokes | 47.092122 | -88.514883 | State | Houghton | Polygonum sachalinense | 4 |
| Portage Trail | 5/7/2017 | Sam Stokes | 47.092122 | -88.514883 | State | Houghton | Polygonum sachalinense | 4 |
| Quilt Shop | 2/6/2017 | Sam Stokes | 47.090660 | -88.516399 | Private | Houghton | Polygonum sachalinense | 5 |
| Quilt Shop | 16/6/2017 | Sam Stokes | 47.090660 | -88.516399 | Private | Houghton | Polygonum sachalinense | 5 |
| Quilt Shop | 30/6/17 | Sigrid Resh | 47.090660 | -88.516399 | Private | Houghton | Polygonum sachalinense | 5 |
| Quilt Shop | 3/7/2017 | Sam Stokes | 47.090660 | -88.516399 | Private | Houghton | Polygonum sachalinense | 5 |
| Quilt Shop | 5/7/2017 | Sam Stokes | 47.090660 | -88.516399 | Private | Houghton | Polygonum sachalinense | 5 |
| Quilt Shop | 26/7/2017 | Sam Stokes | 47.090660 | -88.516399 | Private | Houghton | Polygonum sachalinense | 4 |
| Quilt Shop | 20/8/2017 | Sam Stokes | 47.090660 | -88.516399 | Private | Houghton | Polygonum sachalinense | 4 |
| Quilt shop | 24/09/2017 | Sigrid Resh | 47.090781 | -88.515954 | Private | Houghton | Polygonum sachalinense | 3 |
| Quincy DryHouse Ruins | 21/06/2017 | Lindsey Dolinski | 47.135888 | -88.578116 | Federal | Houghton | Rhamnus cathartica | 1 |
| Quincy DryHouse Ruins | 21/06/2017 | Sam Stokes | 47.135888 | -88.578116 | Federal | Houghton | Conium maculatum | 3 |
| Quincy DryHouse Ruins | 21/06/2017 | Sam Stokes | 47.135888 | -88.578116 | Federal | Houghton | Conium maculatum | 5 |
| Quincy DryHouse Ruins | 21/06/2017 | Sam Stokes | 47.135888 | -88.578116 | Federal | Houghton | Conium maculatum | 1 |
| Theta Tau | 23/06/2017 | Sam Stokes | 47.092534 | -88.515357 | Private | Houghton | Polygonum sachalinense | 5 |
| Theta Tau | 23/06/2017 | Sam Stokes | 47.092534 | -88.515357 | Private | Houghton | Polygonum sachalinense | 5 |
| Theta Tau | 23/06/2017 | Sam Stokes | 47.092534 | -88.515357 | Private | Houghton | Polygonum sachalinense | 2 |
| Grinnell Memorial NS | 29/7/17 | | | | Private | Keweenaw | Lapsana communis | 3 |
| 320 Iroquois St | 3/7/2017 | Sam Stokes | 47.234713 | -88.438653 | Private | Houghton | Berberis thunbergii | 1 |
| 1315 Roberts St Hancock | 15/06/2017 | Nick Lowing | 47.132175 | -88.605163 | Private | Houghton | Polygonum cuspidatum | 1 |
| 418 Pewabic St., Laurium | 14/06/2017 | Sigrid Resh | 47.233605 | -88.440903 | Private | Houghton | Alliaria petiolata | 1 |
| 45844N Hwy US 41 | 10/7/2017 | Sam Stokes | 47.080537 | -88.516879 | Private | Houghton | Polygonum sachalinense | |
| 506 Edward/301 Douglas St. Houghton | 14/06/2017 | Sam Stokes | 47.118532 | -88.576132 | Private | Houghton | Alliaria petiolata | 1 |
| Alley btwn 2nd and 3rd off US41 in Chassell | 10/7/2017 | Sam Stokes | 47.030727 | -88.525185 | Private | Houghton | Polygonum sachalinense | 3 |
| Beverly Claremont | 14/06/2017 | Sam Stokes | 47.233533 | -88.441024 | Private | Houghton | Aegopodium podagraria | 1 |
| Chassell Dump | 13/06/2017 | Sam Stokes | 47.023092 | -88.536863 | City | Houghton | Polygonum cuspidatum | 2 |
| Denton Rd off US 41 | 10/7/2017 | Sam Stokes | 47.083132 | -88.524101 | Private | Houghton | Polygonum sachalinense | 3 |
| Franklin St | 15/06/2017 | Lindsey Dolinski | 47.118010 | -88.562650 | City | Houghton | Polygonum cuspidatum | 3 |
| House Build Site (Across from Quilt Shop) | 2/6/2017 | Sam Stokes | 47.092276 | -88.514397 | Private | Houghton | Polygonum sachalinense | 3 |
| Laurium Yard Waste Dump | 14/06/2017 | Sam Stokes | 47.231564 | -88.430519 | City | Houghton | Alliaria petiolata | 1 |
| MTU Parking Lot 21 | 7/6/2017 | Sam Stokes | 47.115804 | -88.551891 | Private | Houghton | Lonicera morrowii | 1 |
| MTU Parking Lot 21 | 7/6/2017 | Sam Stokes | 47.115804 | -88.551891 | Private | Houghton | Rhamnus cathartica | |
| MTU Parking Lot 21 | 7/6/2017 | Sam Stokes | 47.115804 | -88.551891 | Private | Houghton | Elaeagnus umbellata | 1 |

| Site Name | Date | Observer | Latitude | Longitude | Ownership | County | Species | Area Code |
|---|-------------------|------------------------|------------------|-------------------|----------------|-----------------|---|--|
| Northey/Goltz past 12930 Little America Road | 9/10/17 | Sigrid Resh | 47.18284 | -88.727299 | Private | Houghton | Giant knotweed GK Polygonum sachalinense | 3 = 1000 ft^2 to 0.5 acre |
| Point Abbaye | 20/06/2017 | Sam Stokes | 46.908909 | -88.232491 | Other | Baraga | Cirsium palustre | 5 |
| Portage Trail | 3/8/2017 | Sam Stokes | 47.092122 | -88.514883 | State | Houghton | Cirsium arvense | 1 |
| Portage Trail | 3/8/2017 | | 47.092122 | -88.514883 | State | Houghton | Cirsium arvense | 1 |
| Portage Trail | 3/8/2017 | Sam Stokes | 47.092122 | -88.514883 | State | Houghton | Lythrum salicaria | 1 |
| Portage Trail | 3/8/2017 | | 47.092122 | -88.514883 | State | Houghton | Lythrum salicaria | 1 |
| Portage Trail | 3/8/2017 | | 47.092122 | -88.514883 | State | Houghton | Lythrum salicaria | 1 |
| Portage Trail | 3/8/2017 | Sam Stokes | 47.092122 | -88.514883 | State | Houghton | Phragmites australis | 2 |
| Portage Trail | 3/8/2017 | | 47.092122 | -88.514883 | State | Houghton | Phragmites australis | 2 |
| Portage Trail | 3/8/2017 | | 47.092122 | -88.514883 | State | Houghton | Phragmites australis | 2 |
| Sam & Opie's Walks around Calumet/Laurium | 17/06/2017 | Sam Stokes | 47.245770 | -88.444681 | Other | Houghton | Polygonum cuspidatum | 1 |
| Sam & Opie's Walks around Calumet/Laurium | 17/06/2017 | Sam Stokes | 47.245770 | -88.444681 | Other | Houghton | Polygonum sachalinense | 1 |
| Sam & Opie's Walks around Calumet/Laurium | 17/06/2017 | Sam Stokes | 47.245770 | -88.444681 | Other | Houghton | Pastinaca sativa | 1 |
| Sproule residence 1001 Birch St., Houghton | 17/10/2017 | Sigrid Resh | 47.115271 | -88.555859 | Private | Houghton | Common buckthorn CB Rhamnus cathartica | 5 |
| Sproule residence 1001 Birch St., Houghton | 17/10/2017 | Sigrid Resh | 47.115275 | -88.556105 | Private | Houghton | Norway maple | 2 |
| Swedetown | 5/10/17 | Sigrid Resh | 47.24188 | -88.480828 | Private | Houghton | Glossy buckthorn GB Rhamnus frangula | 5 |
| Tech property behind Cynthia Drake house | 30/09/2017 | Sigrid Resh | 47.12829 | -88.555628 | Private | Houghton | Japanese knotweed JK Polygonum cuspidatum | 5 |
| Tech property behind Cynthia Drake house | 30/09/2018 | Sigrid Resh | 47.12897 | -88.55573 | Private | Houghton | Japanese knotweed JK Polygonum cuspidatum | 5 |
| Twin Elm Farm on Paradise Rd | 10/7/2017 | Sam Stokes | 47.033301 | -88.552538 | Private | Houghton | Polygonum sachalinense | 3 |
| Jeremy Worm 82 School Street, Ahmeek | 15/09/2017 | Laurin Watkoske | 47.295992 | -88.387901 | Private | Houghton | Polygonum cuspidatum | 2 |