



2025 WORK PLAN

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2025 Annual Operating Plan
Lake to Lake Cooperative Invasive Species Management Area

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Introduction

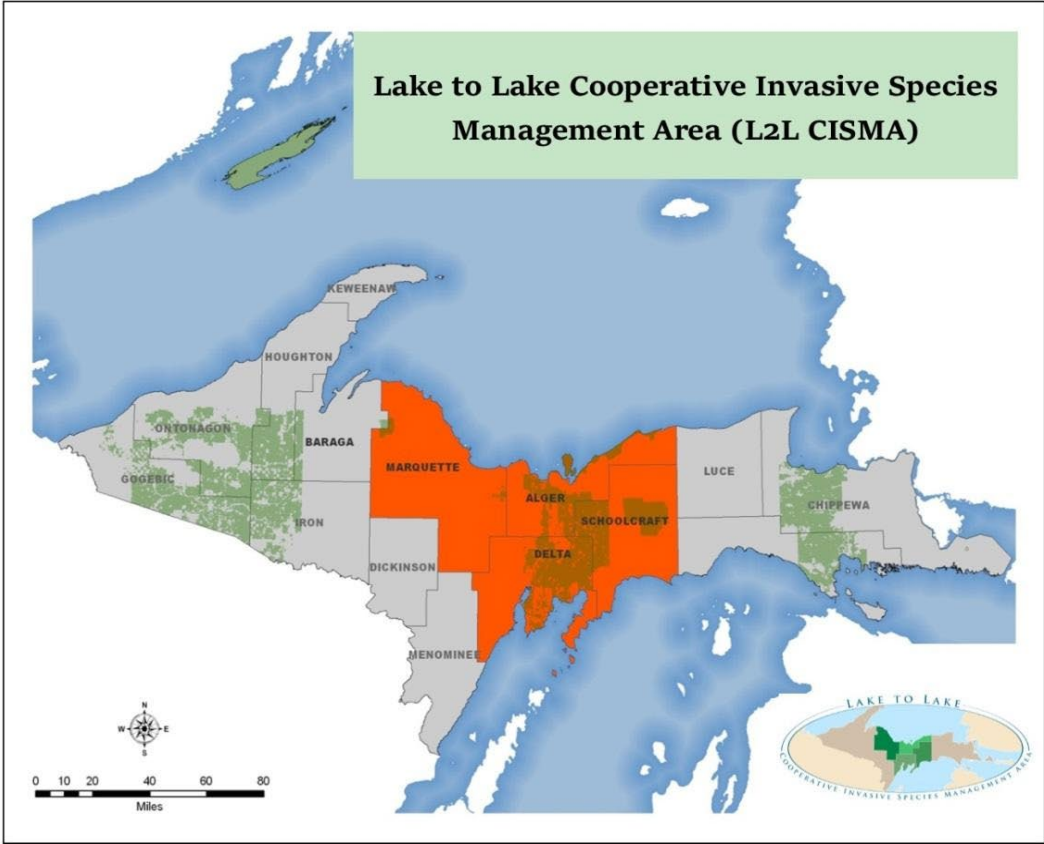
The Lake to Lake Cooperative Invasive Species Management Area (L2L CISMA) is a partnership of local, state and federal agencies, tribes, non-profit associations, private companies, landowners and interested citizens who are all working together to provide long-term protection for native ecosystem communities by reducing the threat of non-native invasive species. The L2L CISMA service area includes Alger, Delta, Marquette and Schoolcraft Counties. L2L CISMA utilizes the resources and expertise of various partner organizations to develop cooperative strategies to prevent the spread of invasive species across jurisdictional boundaries, and to work together to implement control measures on established invasive populations. We are coordinating efforts among partners to educate the public about these non-native invasive species, survey and map the invasions, promote best management practices for controlling these invaders, and provide opportunities for on-the-ground invasive removal and treatment.

Membership in L2L CISMA is free and open to groups, organizations, or businesses committed to managing and preventing non-native invasive species in the central Upper Peninsula. Each year we develop an Annual Operating Plan to guide our collective efforts within the outline of our Five-Year Strategic Plan. Current partners of L2L CISMA include:

1. Alger Conservation District
2. Common Coast Research & Conservation
3. Delta Conservation District
4. Delta County Non-Motorized Trails
5. Forest Service - Hiawatha National Forest
6. GEI Consultants Inc.
7. Lyme Great Lakes Timberlands
8. Marquette Board of Light & Power

9. Marquette County Conservation District
10. MDNR Gwinn Forest Management Unit
11. MDNR - Van Riper/Craig Lake/Laughing Whitefish Falls State Park/Blueberry Ridge/Little Presque Isle Recreation Area
12. Michigan Nature Association
13. MSU Extension
14. National Park Service - Pictured Rocks National Lakeshore
15. Noquemanon Trail Network
16. Rock River Township
17. Schoolcraft Conservation District
18. Seney National Wildlife Refuge - U.S. Fish and Wildlife Service
19. Superior Watershed Partnership
20. The Forestland Group
21. The Nature Conservancy - Michigan Chapter
22. Upper Peninsula Land Conservancy
23. Upper Peninsula Resource Conservation and Development Council
24. Yellow Dog Watershed Preserve

Map of the Lake to Lake CISMA service area



Funding for 2025 for Lake to Lake CISMA

| Grant Title | Funding Source | Grant Duration | Purpose | Awarded | Costs to Date | Remaining |
|---|--|----------------------------|---|---|---------------|--------------|
| WE Energies Purple Loosestrife | WE-Energies, with WRISC and WePIC | March 2019 – Dec. 2025 | Survey and mgmt. of purple loosestrife on the Michigamme River | \$ 84,355.00 | \$ 50,863.84 | \$ 33,491.16 |
| 2022 GLRI Phragmites | USFS GLRI CWMA, contract from UPRCD | March – Oct. 2027 | Phragmites management within Hiawatha National Forest | \$ 32,127.25 | \$12,000 | \$ 20,127.25 |
| FY2024-25 MISg Core Functions | MI DNR – MISg Program | May 2024 – May 2025 | Support L2L CISMA Core Functions, Alger CD subaward | \$ 104,495.10 | \$ 73,146.90 | \$ 31,348.20 |
| FY2024-25 MISg HWA | MI DNR – MISg Program | May 2024 – May 2025 | Support for survey efforts for HWA – subaward from UPRCD | \$ 28,047.64 | \$ 8,047.00 | \$ 20,000.64 |
| 2023 MISg Himalayan Balsam | MI DNR MISg Program, with UPRCD and Three Shores CISMA | May 2023 – May 2025 | EDRR for Himalayan Balsam in L2L CISMA | \$ 78,918.27 | \$ 19,643.60 | \$ 59,274.67 |
| 2023 GLRI CWMA | USFS GLRI CWMA | September 2023 - Sept 2025 | NNIS Survey, detection, and mgmt. in L2LCISMA | \$ 49,981.20 | \$ 25,253.32 | \$ 24,727.88 |
| USFS GLRI | Hiawatha National Forest | May 2024- Dec. 2025 | AIS Outreach | \$ 60,000.00 | \$ 25,494.39 | \$ 34,505.61 |
| Riparian restoration of invasive Butterbur | Sustain Our Great Lakes | Sept 2023 – Dec. 2025 | Manage and restore riparian habitats from invasive Petasites hybridus (butterbur) | \$ 148,873.93 | \$ 84,870.75 | \$ 64,003.18 |
| USFS GLRI | Hiawatha National Forest | Sept 2023 – Sept 2025 | EDRR efforts for priority NNIS on HNF | \$ 98,200.00 | \$ 58,200.00 | \$ 40,000.00 |
| Pictured Rocks Veg Intern | Pictured Rocks National Lakeshore | 2024-2025 | Host 2 interns for PIRO veg crew efforts | \$ 60,714.69 | \$ - | \$ 60,714.69 |
| Hiawatha Botany Intern | Hiawatha National Forest | 2024-2025 | Host an intern for Hiawatha NF Botany program | \$ 29,115.08 | \$ - | \$ 29,115.08 |
| FY24 GLRI CWMA | USFS GLRI CWMA | Pending | Survey and treatment efforts for NNIS on ATV trails | \$ 100,000 | \$ - | \$ - |
| FY2025 MISg Core Functions | MI DNR – MISg Program | Pending | Support L2L CISMA Functions, Survey and Treatment | \$ 109,998.78 | \$ - | \$ - |
| FY2025 MISg HWA | MI DNR – MISg Program | Pending | Support for survey efforts for HWA – subaward from UPRCD | \$ 56,096.13 | \$ - | \$ - |
| 2024 UPPCO AIS | Upper Peninsula Power Company | Pending | AIS Detections at UPPCO hydroelectric locations | \$ 12,000.00 | \$ - | \$ - |
| Total Pending: \$ 278,094.91 | Total 2025 Grant Funds Amount: \$ 774,834.16 | | Total Costs Incurred to Date: \$357,489.80 | Total Remaining Funding for 2025 and on: \$417,344.36 | | |

2025 Work Plan by Grant Program

WE Energies Purple Loosestrife Mitigation on the Michigamme River

- Survey and treat the Michigamme River for purple loosestrife in partnership with WRISC and WePIC

2022 GLRI Phragmites Contract

- Conduct management of non-native phragmites within the Hiawatha National Forest in L2L CISMA service area, through partners at UPRC&D Council

FY2024-25 MISg Core Functions

- Support essential functions for Lake to Lake CISMA including support for the CISMA coordinator, and essential field survey and treatment efforts

FY2024-25 MISg HWA

- Conduct survey efforts for EDRR of HWA during the winter months of 2024-2025

FY23-25 MISg Himalayan Balsam

- Finalize outreach efforts after two years of EDRR survey and treatment management efforts for Purple Jewelweed in L2L CISMA service area

2023 GLRI CWMA

- Continue year 2 of support for field technicians to survey, map and manage NNIS at boat launches, campgrounds and trailheads in addition to field support for NNIS workdays with partners at Hiawatha National Forest

USFS GLRI – AIS

- Continue year 2 of support for field technicians to target AIS outreach, survey and prevention efforts, including continued boat wash events at boat launches, and AIS survey and management efforts

Riparian restoration of invasive Butterbur

- Continue year 3 of support for CISMA staff and field technicians to continue to address and manage invasive butterbur in the L2L CISMA service area

USFS GLRI – EDRR

- Continue efforts to support L2L CISMA staff in maintaining capacity to respond to EDRR efforts on Hiawatha National Forest

L2L CISMA Field Safety Policy

CISMA Coordinator: Being director of rural and/or remote field activities, the coordinator must ensure that the risks associated with the work are managed effectively. The coordinator will:

- Determine the possible hazards that may be encountered during the activity, such as: hazardous plants, rough terrain, inclement weather, chemicals, etc., and ensure any risk is communicated with the field team.
- Assess the risks associated with the possible hazards and determine if the activity is safe, and ensure any risk is communicated with the field team.
- Incorporate strategies to minimize the risks to safety and health, such as: training, requiring appropriate clothing, footwear, communication devices, etc.
- Ensure that the responsibilities for safety and health are communicated to all participants, such as: holding a meeting to explain safety protocol and equipment and ensuring that all participants sign the appropriate waiver form.
- Provide appropriate information, instruction and training to all participants, such as: train field staff to handle hazards appropriately and notify them of first aid certification classes.
- Ensure the field crew is properly equipped with complete set of safety gear, such as: clothing, special hazard clothing, communication device, first aid kit and water filter.
- Communicate with field crew before and after they travel to a work site.

Crew Leader: The fieldwork leader on site must:

- Ensure that safe working practices are developed and maintained at all times.
- Ensure that participants are warned about hazards as well as how to avoid, eliminate or minimize them, either from the Coordinator or from a partner organization lead.
- Ensure that participants under their supervision use safety equipment provided in the correct manner.

Suggestions for safety equipment:

- **Communication:** A communication system should be in place. Cell phones will generally work in most cases, but not always. Always follow the scheduled plan for the day so an approximate location and detail of the daily activities can be relayed if necessary to safety personnel.
- **Clothing and Footwear:** Field crews should be prepared for a variety of weather conditions and wear pants, long sleeve shirts, and boots. If a crew is spending the night in the field they should come prepared and know in advance what they will need to bring.
- **Special Clothing for Hazardous Conditions:** If the crew will be working with or near hazardous plants they should be equipped with hazmat suits, long pants and long sleeves and gloves. If they are working in buggy conditions they should have head nets and/or bug shirts.
- **Sun:** Field crews should be prepared to work in the sun for long hours and bring appropriate clothing and sunscreen.
- **Water:** Field crews should arrive at the site with full water bottles. If the crew will be working in a remote area they should also have an extra water supply, or have a water filtration system available.
- **First Aid:** Field crews should arrive on site with one complete first aid kit to be checked by the L2L CISMA coordinator.

Reporting – Field Data Forms

Invasive Species Treatment Report



| | | | |
|--|-------------------|--|----------|
| Project/Site Name: | | Waypoint Code/Site ID #: | |
| Species: | | | |
| Observer/Crew Leader: | | Date: | |
| Personnel Involved (see attached sign-in sheet): | | | |
| GPS Coordinates (decimal deg.) Latitude: | | GPS Coordinates (decimal deg.) Longitude: | |
| Land Ownership: <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Other: _____ | | | |
| Contractor Name (if applicable): | | Has permission been secured? | |
| County Name: | | Section | Township |
| Phenology at time of treatment: | | Range | |
| Density (see back for codes): | | | |
| Estimated Area (see back for codes): | | Actual Area: | |
| Control Method(s): manual (M), mechanical (MM), biocontrol (BA), herbicide (H), fire (F), or other (o) please describe: | | | |
| Comments: | | | |
| Map of treatment area (include landmarks, roads, structures, property lines, etc.) | | | |
| Total number of 30 gallon garbage bags filled: | | Note: If different size bags were used please specify. | |
| Total "person-hours" devoted to management at this site: | | | |
| Count as grant match? Yes/No | Applicable Grant: | Time spent incl. travel: | Mileage: |

L2L Detailed Herbicide Application



Detailed Herbicide Treatment Information

| | | |
|--|---------------------------------|------|
| Applicator Name (s): | | |
| Applicator Certification Number(s): | | |
| GPS Coordinates: | | |
| Licensed Business Name: | | |
| Date pesticide was applied: (mm/dd/yyyy) | Target plant (common name): | |
| | Target plant (scientific name): | |
| Location of pesticide application (address): | | |
| City: | State: Michigan | Zip: |
| Chemical Product Name: | Chemical Quantity: | |
| <input type="checkbox"/> General-use chemical <input type="checkbox"/> Restricted-use chemical | | |
| EPA Product Registration Number: | | |
| Dilutant used (circle) WATER OTHER | Quantity: | |
| Active Ingredient (AI) name: | Percent AI on product label: | % |
| Adjuvant/Surfactant (eg Silco): | Adjuvant Quantity: | |

| Product Rate | (oz/acre) |
|--|-----------|
| Volume of mix in sprayer at start: | oz |
| Volume of mix in sprayer at end: | oz |
| Subtract to get volume of mix applied: | oz |
| Total area treated with herbicide: | acres |

| | | | | |
|--|-----------------|----------------------------|------|---------------------------|
| Types of equipment used on the project (ATV's, herbicide applicators, backpack sprayers, PPE, etc.): | | | | |
| | | | | |
| | | | | |
| Wind Speed (mph): | Wind direction: | Air temp during treatment: | Dew: | Other weather conditions: |
| | | | | |
| Description of problems/issues that were encountered during the project: | | | | |
| | | | | |
| Notes: | | | | |
| | | | | |

**Restricted-use pesticide records must be kept for 3 years following application. General-use pesticide records must be kept for 1 year following application.*

L2L CISMA Invasive Plant Monitoring Form

Observer Name: _

Location-Center of Monitoring Plot (decimal degrees):

Latitude:

Longitude: _

| |
|--|
| Pre-Treatment Monitoring Year ____ Date: _ Control Code: * Initials: |
| Percent Cover of Target Plant: _____ Comments: _____ |
| Post-Treatment Monitoring Year ____ Date: _ Control Code: _____ Initials: _____ |
| Percent Cover of Target Plant: _____ Comments: _____ |
| Pre-Treatment Monitoring Year ____ Date: _ Control Code: _____ Initials: _____ |
| Percent Cover of Target Plant: _____ Comments: _____ |
| Post-Treatment Monitoring Year ____ Date: _ Control Code: _____ Initials: _____ |
| Percent Cover of Target Plant: _____ Comments: _____ |

| CODE | PERCENT EFFICACY | RATING | DESCRIPTION |
|------|------------------|-----------|--|
| 0 | 0 | No Effect | No effect can be detected on the target species population |
| 3 | 1-5 | Failure | Little to no effect can be detected on the target species population |
| 15 | 6-25 | Poor | Treatment killed less than a quarter of the target species population |
| 35 | 26-50 | Marginal | Less than half of the target species population was controlled |
| 65 | 51-75 | Fair | Over half of the target species population was controlled |
| 85 | 76-90 | Good | Treatment was successful in killing most of the target species population |
| 95 | 91-99 | Excellent | Over 95% of the target species population has been killed with the treatment |
| 100 | 100 | Complete | Not a single individual of the target species population was found after a complete survey of the site. Infestation was eradicated on the site |
| UN | UNK | Unknown | Treatment efficacy/success can not be determined |

* Not applicable unless you have conducted & recorded treatment at this location prior to 2012

Invasive Species Pre-and Post-Treatment Monitoring Protocols

Before treatment is conducted at a site:

1. Establish a monitoring plot for every 5-10 acres of infestation. If infestations are extensive and fairly homogeneous, then one every one 10 acres would be sufficient.
2. Establish the center point of each plot and mark it with a small wooden stake or lath
3. Mark stake with an orange flag or similar marker.
4. Record the lat/long of the centerpoint on the data sheet. The sample plot will be circular with a 6 foot radius (12 foot diameter). Use a 6' tape or other device to measure radius.
5. Estimate the % stem density of target plant in the plot each time that plot is visited. Use the control codes to characterize control efficacy. (The first time a plot is visited, there would not be a treatment control code because no treatment will have been conducted.) There is room for any pertinent comments regarding the infestation, native regrowth, or other observations.
6. Revisit plot at end of season to determine effectiveness of current year's treatment, and again before the next year's treatment
7. Make a copy of the form at the end of the season and then take that form back out into the field the next time, keeping a copy safe in the office. Each plot should be visited a minimum of 4 times. Extended retreatment (more than two seasons) will necessitate additional forms to monitor progress.

HNF Invasive Plant Treatment Form

| Treatment - General Information |
|--|
| <i>Attach Invasive Plants survey form and map of treatment area if applicable</i> |
| Project / Site Name _____ (e.g. East Gravel Pit) Land Ownership: _____ District: _____ County name: _____ Species Code: _____ Species Common Name: _____ _____ (multiple target species can be recorded) Density of infestation at time of treatment (optional): _____ % cover: _____ Treatment type code: _____ Manual (M), Mechanical (MM), Biocontrol (BA), Fire (F), Pesticide (P) Treatment Start Date: _____ Stop Date if different from Start Date: _____ Acres Treated: _____ (if linear = miles of 2-sided road x 3.63) Infested Area (if different from above): _____ (acres) Crew Leader's name: _____ Cooperating agencies (volunteer groups): _____ _____ Narrative of treatment (equipment used if applicable; describe location; type of site: pit, roadside, riparian, etc.) _____ _____ _____ List TES plants if present _____ |
| Database Information (contractors leave blank) |
| NRIS Site ID (or use "non-Terra inventory" if not mapped) _____ FACTS Activity Unit ID _____ (e.g NNIS200703) Use NNIS, year, district code FACTS Treatment Subunit ID _____ (3 digits, starting at 001 for the year) FACTS Subunit Name _____ (may be same as Project Name) Fund code _____ Cost/Unit of measure _____ |
| Chemical Treatment Information |
| Certified Pesticide Applicator's name: _____ Applicator name (if different than above): _____ Contractor company name: _____ Temperature _____ Wind speed _____ (mph) Wind direction _____ Cloud Cover _____ Distance to water (if applicable) _____ Start time _____ Stop time _____ Chemical Product name _____ Dilutant used (circle): WATER OIL OTHER Active Ingredient name _____ Colorant? YES NO Application Rate: <i>Percent solution is recommended from the label and is usually figured by ounce per gallon</i> Percent % solution _____ OR Product Rate (oz/acre; lbs/acre; or pt/acre): _____ Adjuvant / Surfactant used _____ % solution Total Volume of mix applied _____ (gallons, liters, or pounds) |
| Biological Treatment |
| <i>Need to fill out separate Biocontrol release form with specifics on agents released and location.</i> |

HNF Invasive Plant Treatment Monitoring

Note: 50% of all treatments must be monitored in the current year

Use this form for entering treatment effectiveness monitoring in FACTS database

Date of monitoring: _____

Project / Site Name: _____

Inspector Name: _____

Species Monitored: _____

Effectiveness of treatment on target population (see codes below): _____

Comments: _____

% Cover of remaining target species (*optional*) _____ Count of individuals (*optional*) _____

Density-how big is the population now? (*optional*) _____ (sq.ft / sq.meter / acre)

Distribution (*optional*) ___ Continuous / Isolated / Linear / None / Patchy / Scattered / Scattered-Patchy

Other Notes:

Effectiveness Codes

| | | |
|-------|-----------|---|
| 0 | No Effect | No effect can be detected |
| 1-5 | Failure | Little or no effect can be detected on target species population |
| 6-25 | Poor | Treatment killed less than a quarter of the target species population |
| 26-50 | Marginal | Less than one half of the population was controlled |
| 51-75 | Fair | Over one half of the population was controlled |
| 76-90 | Good | Treatment was successful in killing most of the target species population |
| 91-99 | Excellent | Over 95% of the population has been killed |
| 100 | Complete | Not a single individual of the target species population was found |
| UNK | Unknown | Success cannot be determined |

Lake to Lake CISMA Partner List

| L2L CISMA Partner Contact | | | |
|--|-------------------------------|--------------------------|--|
| Group/Organization | Contact Person | Phone | Email |
| Alger Conservation District | Alex Kolton | (906) 387-2222 | alex.kolton@macd.org |
| Delta Conservation District | Heather LeDuc | 906-553-7700 | heather.leduc@macd.org |
| Delta County Non-Motorized Trails | Glen VandeWater | N/A | gwnrs@sbcglobal.net |
| Forest Service – Hiawatha National Forest - USDA | Justin Bournoville, Ted Roper | (906) 387-2512 x 1015 | Justin.bourovill@usda.gov , theodore.roper@usda.gov |
| GEI Consultants, Inc | Sam Prentice | (906) 629-6069 | sprentice@geiconsultants.com |
| Marquette Board of Light and Power | Tom Skewis | (906) 225-8670 | tskewis@mblp.org |
| Marquette County Conservation District | Maddie O'Donnell | (906) 226-8871 ext. 3064 | madeline.odonnell@macd.org |
| MDNR Gwinn Forest Management Unit | | | |
| MI DNR – Van Riper/Craig Lake State Parks | Deb Gill | (906) 339-4461 | DGill2@michigan.gov |
| Michigan Nature Association | Andrew Bacon | (517) 483-2953 | abacon@michigannature.org |
| MSU Extension | <i>Position In transition</i> | | |
| National Park Service – Pictured Rocks National Lakeshore - USDI | Andrew Bishop | 906-202-0100 | andrew_bishop@nps.gov |
| Noquemanon Trail Network | Lori Hauswirth | (906) 235-6861 | lori@noquetrails.org |
| Rock River Township | Teri Grout | | rockrivertwpsupervisor@outlook.com |
| Schoolcraft Conservation District | Ashley Reitter | (906) 341-8215 | schoolcraftcd@macd.org |
| Seney National Wildlife Refuge - U.S. Fish and Wildlife Service | Sara Siekierski | (906) 586-9851 x11 | sara_siekierski@fws.gov |
| Superior Watershed Partnership | Geri Grant | (906) 228-6095 | geri@superiorwatersheds.org |
| The Forestland Group | <i>Position In transition</i> | | |
| The Nature Conservancy, Michigan Chapter | Chris Cantway | (906) 225-0399 ext. 4015 | ccantway@tnc.org |

| | | | |
|---|-------------------------------|--------------------------|---------------------------------|
| Upper Peninsula Land Conservancy | <i>Position In transition</i> | (906) 225-8067 | |
| Upper Peninsula Resource Conservation and Development Council | Nick Cassel | (906) 225-0215 | nick.cassel@uprcd.org |
| USDA - Natural Resources Conservation Service | Misa Cady | (906) 226-8871 ext. 3070 | misa.cady@mi.usda.gov |
| Yellow Dog Watershed Preserve | Rochelle Dale | (906) 345-9223 | rochelle@yellowdogwatershed.org |

U.P. CISMA Contact Information

| CISMA | Service Area | Coordinator | Phone | Email |
|--------------------|--|--------------------------------|--------------------------|----------------------------|
| Lake to Lake CISMA | Alger, Delta, Marquette, and Schoolcraft Counties | Elise Desjarlais | (906) 226-8871 ext. 3068 | l2lcisma@gmail.com |
| Three Shores CISMA | Chippewa, Luce Mackinac Counties | | (906) 635-1278 | threeshorescisma@gmail.com |
| KISMA | Houghton, Keweenaw, Baraga Counties | Sigrid Resh | (906) 482-0214 | Kisma.up@gmail.com |
| WePIC | Gogebic, Ontonagon, and Iron Counties | Jen Ricker-Feak, Mike Zukowksi | (906) 875-3765 | ironbaragacd@gmail.com |
| WRISC | Dickinson, Menominee, Florence, Marinette, and Forest Counties | Lindsay Peterson | (906) 774-1550 ext. 104 | wildriverscwma@gmail.com |

L2L CISMA Species of Concern

| Common Name | Latin Name | Priority Status |
|-------------------------|---------------------------------|-----------------|
| Autumn olive | <i>Elaeagnus umbellata</i> | Low* |
| Bull thistle | <i>Cirsium vulgare</i> | Low* |
| Butterbur | <i>Petasites hybridus</i> | High |
| Canada thistle | <i>Cirsium arvense</i> | Low* |
| Common St. Johnswort | <i>Hypericum perforatum</i> | Low* |
| Eurasian water milfoil | <i>Myriophyllum spicatum</i> | High |
| European frogbit | <i>Hydrocharis morsus-ranae</i> | High |
| Flowering rush | <i>Butomus umbellatus</i> | High |
| Garden valerian | <i>Valeriana officinalis</i> | High |
| Garlic mustard | <i>Alliaria petiolata</i> | High |
| Purple jewelweed | <i>Impatiens glandulifera</i> | High |
| Japanese barberry | <i>Berberis thunbergii</i> | Medium |
| Leafy spurge | <i>Euphorbia esula</i> | Medium |
| Marsh thistle | <i>Cirsium palustre</i> | Low* |
| Non-native buckthorns | <i>Rhamnus spp.</i> | Medium |
| Non-native common reed | <i>Phragmites australis</i> | High |
| Non-native honeysuckles | <i>Lonicera ssp.</i> | Medium |
| Non-native knapweeds | <i>Centaurea spp.</i> | Low* |
| Non-native knotweeds | <i>Polygonum spp.</i> | Medium |
| Purple loosestrife | <i>Lythrum salicaria</i> | Medium |
| Reed canary grass | <i>Phalaris arundinacea</i> | Low* |
| Sweet clover | <i>Melilotus spp.</i> | Low* |
| Wild parsnip | <i>Pastinaca sativa</i> | High |
| Hemlock woolly adelgid | <i>Adelges tsugae</i> | High |
| Black swallowwort | <i>Vincetoxicum nigrum</i> | High |
| Lesser celandine | <i>Ficaria verna</i> | High |

Priority Species for Hiawatha National Forest

Non-Native Invasive Plant (NNIP) List and Forest Watch List species (labeled – ECC)

| Common Name | Latin Name | Code | Legal status in Michigan |
|-----------------------------------|---|-----------|---|
| garlic mustard | <i>Alliaria petiolata</i> | ALPE4 ECC | |
| Japanese barberry | <i>Berberis thunbergii</i> | BETH ECC | |
| non-native knapweeds | <i>Centaurea spp.</i> | ECC†a | Spotted knapweed is a prohibited noxious weed. |
| Canada thistle | <i>Cirsium arvense</i> | CIAR4 ECC | Prohibited noxious weed. |
| marsh thistle | <i>Cirsium palustre</i> | CIPA6 ECC | |
| bull thistle | <i>Cirsium vulgare</i> | CIVU ECC | Prohibited noxious weed. |
| hound's tongue | <i>Cynoglossum officinale</i> | CYOF ECC | |
| leafy spurge | <i>Euphorbia esula</i> | EUES ECC | |
| common St. Johnswort | <i>Hypericum perforatum</i> | HYPE ECC | |
| non-native bush honeysuckles | <i>Lonicera spp.</i> | ECC†b | |
| purple loosestrife | <i>Lythrum salicaria</i> (and cultivars) | LYSA2 ECC | Restricted Plant Species. |
| sweet clover | <i>Melilotus spp.</i> | ECC†c | |
| Eurasian water milfoil | <i>Myriophyllum spicatum</i> | MYSP2 | Restricted Plant Species. |
| wild parsnip | <i>Pastinaca sativa</i> | PASA2 ECC | |
| reed canary grass | <i>Phalaris arundinacea</i> | PHAR3 ECC | |
| common reed (non-native genotype) | <i>Phragmites australis</i> | PHAU7 | Restricted Plant Species. |
| non-native knotweeds | <i>Polygonum spp.</i> | POCU6 ECC | Japanese knotweed is a Prohibited Plant Species |
| non-native buckthorns | <i>Rhamnus spp.</i> | ECC†d | |
| butterbur | <i>Petasites hybridus</i> | PEHY | |
| European frogbit | <i>Hydrocharis morsus-ranae</i> | HYMO6 | Prohibited Plant Species |

†Species that are grouped are closely similar in appearance, ecological effects, and treatment methods. They also may hybridize. Generally only one species in the group is commonly encountered and the others are occasional or new invaders.

- a) May include *Centaurea biebersteinii*; spotted knapweed, *C. diffusa*; diffuse knapweed, *C. jacea*; brown knapweed, *C. ×pratensis*; hybrid knapweed, *C. nigra*; black knapweed, and possibly other new invader species.
- b) May include *Lonicera tatarica*; Tartarian honey suckle, *L. morrowii*; Morrow honeysuckle, and *L. ×bella*; hybrid honeysuckle.
- c) Includes *Melilotus alba*, white sweet clover, and *M. officinalis*, yellow sweet clover.
- d) Includes *Rhamnus cathartica*; common buckthorn, and *R. frangula* (synonym *Frangula alnus*); glossy buckthorn.

Priority Species for Seney National Wildlife Refuge

List of Exotic Species

Table 1: Known non-native plant and animal species of concern, management priority, and current status at Seney National Wildlife Refuge. For a list of other species found in the eastern Upper Peninsula, the user should contact colleagues in the Central and Eastern Upper Peninsula Cooperative Weed Management Areas.

| Taxon/Species | Priority | Status |
|-----------------------|----------|---|
| PLANTS | | |
| Glossy buckthorn | High | Widespread in Unit 1; scattered in Unit 2-3; management priority since 2003 with numerous successes/lessons learned; research has shown efficacy of treatments using 2.5% a.i. <i>Rodeo</i> |
| Reed canary grass | High | One main patch in Unit 1; no past management activities known |
| Purple loosestrife | High | Absent?; has shown up periodically in Unit 1 and has been extirpated using 2.5% a.i. <i>Rodeo</i> , status elsewhere not known, but populations are found off Manistique River Rd. to the south and on South Manistique Lake. Also a Kirtland's Warbler Wildlife Management Area parcel in Clare Co. has been managed for this species: T20N-R5W S. 5 SE1/4 |
| Leafy spurge | High | Sporadic populations in Units 1 and 2; sporadic management in the past using 2.5% a.i. <i>Rodeo</i> |
| Garlic mustard | High | Absent? |
| Non-native phragmites | High | Samples taken from Units 1-3 only show some small non-native patches in Unit 1; sporadic management in the past using 2.5% a.i. <i>Rodeo</i> has extirpated this phenotype? |
| Multiflora rose | Medium | Sporadic populations in Units 1-3; sporadic management using 2.5% a.i. <i>Rodeo</i> in the past with some success; plants do not seem to be thriving |
| Spotted knapweed | Medium | Widespread throughout Unit 1-3 wherever roads exists and at Diversion Farm; does not thrive anywhere where it needs to compete for sunlight (e.g., in dense vegetation, in forests); primary management is to allow surrounding vegetation to grow and mowing (2.5% a.i. <i>Rodeo</i> used in dunes at Whitefish Point Unit where this species is a priority) |
| Tartarian honeysuckle | Medium | Sporadic populations in Units 1-3; at the Headquarters, Visitor Center, and along some edges of farm fields; sporadic management in the past with some success using 2.5% a.i. <i>Rodeo</i> ; plants do not seem to be thriving |
| Forget-me-not | Medium | Chicago Farm field and Conlon Field roads only?; treatments using 2.5% a.i. <i>Rodeo</i> started in 2011 |
| Silvery cinquefoil | Low | Present, unknown distribution and abundance |

| | | |
|---------------------|-----|---|
| Timothy | Low | Present, unknown distribution and abundance |
| Live-forever | Low | Present, unknown distribution and abundance |
| Japanese barberry | Low | Present, unknown distribution and abundance |
| St. John's wort | Low | Present, unknown distribution and abundance |
| Canada thistle | Low | Present, unknown distribution and abundance |
| Musk mallow | Low | Present, unknown distribution and abundance |
| Yellow sweet clover | Low | Present, unknown distribution and abundance |
| Smooth brome | Low | Present, unknown distribution and abundance |
| Butter-and-eggs | Low | Present, unknown distribution and abundance |
| Orchard grass | Low | Present, unknown distribution and abundance |
| Kentucky blue-grass | Low | Present, unknown distribution and abundance |
| Catnip | Low | Present, unknown distribution and abundance |
| Shepherd's purse | Low | Present, unknown distribution and abundance |
| Ryegrass | Low | Present, unknown distribution and abundance |
| Queen Anne's lace | Low | Present, unknown distribution and abundance |
| Ox-eye daisy | Low | Present, unknown distribution and abundance |
| Tall buttercup | Low | Present, unknown distribution and abundance |
| Bladder campion | Low | Present, unknown distribution and abundance |
| Bird's foot trefoil | Low | Present, unknown distribution and abundance |
| Orange hawkweed | Low | Present, unknown distribution and abundance |
| Heal-all | Low | Present, unknown distribution and abundance |
| Yellow goat's-beard | Low | Present, unknown distribution and abundance |
| Field Sow-thistle | Low | Present, unknown distribution and abundance |
| Plantain | Low | Present, unknown distribution and abundance |

ANIMALS

| | | |
|---------------------|----------|---|
| Beech scale | High | Beech scale (a non-native insect) is part of the Beech Bark Disease Complex, with fungi causing mortality; scale and the complex is found in all northern hardwood stands in Units 1-4; no management known to reduce extent of the scale; forest enhancement efforts used to mitigate the effect |
| European earthworms | Medium | No management actions, but reducing acreage in farm fields may help suppress populations and reducing the movement of soils may slow further spread |
| Rusty crayfish | Low | Found in the Driggs River and seems well established in Pine Creek; no known effective management strategies exist |
| Sea lamprey | Priority | Found in most streams, managed by Marquette Office |
| Emerald ash borer | Low | Unknown, minimal ash found within the Refuge with some found at Chicago Farm area. |