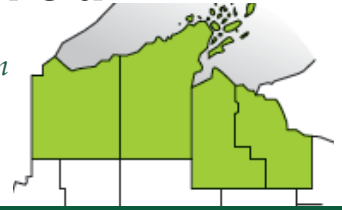




Northwoods Cooperative Weed Management Area

*Working Together to Protect Northern Wisconsin
from Invasive Species*

2023 Annual Report



The Northwoods Cooperative Weed Management Area (NCWMA) is a collaborative group of state, county, and federal agencies, tribes, municipalities, community organizations, and individuals who have come together to manage invasive species in northwestern Wisconsin (Douglas, Bayfield, Ashland, and Iron Counties). This report summarizes the accomplishments of the NCWMA in 2023.

Education and Prevention

Ramona Shackelford, the NCWMA Coordinator, worked with a committee to organize a daylong workshop entitled "Invasive Species and Alternative Control Methods." Ramona reserved the Northern Great Lakes Visitor Center (NGLVC), invited speakers, and contacted landowners for field trips. She reserved a bus and set up registration using EventBrite that included lunch options. The Whittlesey National Wildlife Refuge paid for bussing. Forty-one people attended the event on July 20th and eleven people assisted in presenting (Figure 1 and 2). NCWMA staff took the NCWMA booth to four Invasive Species Identification Days at the NGLVC during the summer and the Bad River Natural Resources Open House in March where they shared information and brochures. Ramona gave a presentation to the Bayfield County Master Gardeners in March.

Ramona facilitated four quarterly NCWMA meetings and two steering committee meetings in 2023. She also attended three Bayfield County Land and Water Conservation Department (LWCD) meetings. Ramona added updates, meeting minutes, and detailed information on invasive species to the NCWMA website. The number of visitors to the NCWMA website was 14,418 in 2023 which was an increase of seven percent.

Ramona sent nine e-mail updates through MailChimp to the NCWMA e-mail list that includes 239 subscribers. The NCWMA Facebook page had an increase of 215 new followers and ended the year with a total of 781 followers. Ramona and NCWMA staff posted on Facebook 34 times in 2023. Twenty-six posts had a "reach" greater than 70. There were 520 likes, comments, and shares to posts over the year.

Portable Boat Wash: The U.S. Forest Service provides funding to the NCWMA to maintain a portable high-pressure boat wash to decontaminate boats as they leave or enter waterbodies. The NCWMA hired two Invasive Species Technicians who took the boat wash to landings 21 times in June through August. In addition to washing boats, they completed Clean Boats, Clean Waters surveys at boat landings. They took the boat wash to five different landings on Lake Superior including Loon's Foot in Superior, Second Landing and Kreher Park in Ashland, the Washburn Marina, and Saxon Harbor in Iron County. They also took it to one inland lake, the Gile Flowage in Iron County. Overall, the Invasive Species Technicians contacted 593 boaters, inspected 287 boats, and washed 174 boats.

Photos from the 2023 NCWMA Workshop: Invasive Species and Alternative Control Methods



Figure 1: Wendy Stein (right) discusses the work she and her husband, Phil Freeman, have done to manage leafy spurge on their property.



Figure 2: Tony Janisch discusses the work the City of Washburn has done to control invasive species such as common buckthorn and honeysuckles along the Washburn Lakefront Trail.

Control and Management

The NCWMA continues to provide a toolshed for the public to check out tools for treating invasive species. The NCWMA lent weed wrenches for digging up buckthorn to five landowners. The shed also stores gloves, a weed whacker, loppers, machetes, and shovels that were used by the NCWMA weed crew for manual control efforts.

Treatments of invasive plants were completed by Ramona Shackleford and three seasonal Invasive Species Technicians including Savannah Yunkers-Marshall, Morgen Luethmers, and Matthew Dietrich (Figure 3 and 4). The NCWMA's seasonal staff were certified to use herbicide in Wisconsin soon after being hired. Their primary focus was treating **garlic mustard** (below) and **knotweed** species (p.3). They also treated **wild parsnip** over three days by digging up plants across eight acres primarily along the Waterfront Trail in Ashland. They assisted the Douglas County LWCD in treating one acre of **yellow flag iris** along the Brule River for one day. They dug up 0.85 acre (three sites) of **cut-leaf teasel** over four field days. The NCWMA crew dug up **Dalmatian toadflax** along 1.3 acres of roadway. The NCWMA teamed up with the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) and/or the Iron County LWCD during some of these invasive plant treatments.

The NCWMA received a grant through the Wisconsin DNR's Weed Management Area-Private Forest Grant (WMA-PFG) to assist a private landowner whose property borders the Whittlesey National Wildlife Refuge to have nine acres of common buckthorn treated with herbicide by contractors. The NCWMA contracted this work out to Bay Area Environmental Consulting.

Garlic Mustard

Garlic mustard is a high priority invasive species in the NCWMA. It is biennial forb that can spread rapidly and take-over the understory of forests. Hand-pulling garlic mustard is the focus of the NCWMA's work in May through mid-June. Ramona and/or the NCWMA invasive species crew hand-pulled garlic mustard for 24 field days. They worked to hand-pull at 39 different sites covering over 78 acres. In addition, the NCWMA paid contractors to treat 12.3 acres of private, forested property with herbicide using the Wisconsin DNR's WMA-PFG funding. The largest sites of garlic mustard are in the forested floodplains of the Montreal River in Hurley and the Bad River near Mellen. Ramona took data on the plant species and their cover in plots at both of these sites in May to monitor changes in garlic mustard density from year to year.

Ramona helped organize group events to hand-pull garlic mustard throughout the region. Events were at Central Park and at a private property in Superior (June 2nd and June 7th), in Ashland with the WATERS club from Ashland High School (May 25th), and at the Velo Café in Cable with volunteers and assistance from the Cable Natural History Museum (June 1st). Ramona helped organize a hand-pulling event along the Montreal River's floodplain on May 24th with the Iron County LWCD, GLIFWC, the Ottawa National Forest, and the entire sixth grade from the Hurley School (Figure 5).



Figure 3 & 4: Morgen Luethmers (top-left), Matthew Dietrich (top-right) and Savannah Yunkers-Marshall (bottom) were hired as Invasive Species Technicians in 2023.



Figure 5: Hurley School's Sixth Graders with staff from GLIFWC, Iron County LWCD, and the Ottawa National Forest after hand-pulling garlic mustard along the Montreal River on May 24, 2023.

The greatest effort to hand-pull garlic mustard was along the Bad River’s floodplain with hand-pulling events daily from May 15th to 18th. Staff from GLIFWC, the NCWMA, the Bad River Band’s Mashkiizibii Natural Resources Department, Ashland and Bayfield County LWCDs, volunteers, and students from Northland College assisted for at least one day (Figure 6). The NCWMA hosted a cook out at Copper Falls State Park with funding from the DNR’s WMA-PFG program on May 16th for all who helped hand-pull. Ramona organized an event on May 12th with a group of Enbridge workers to hand-pull garlic mustard primarily on Enbridge’s property along the Bad River.

Knotweeds

Japanese, giant and Bohemian knotweeds are invasive plants that are difficult to eradicate due to their extensive root systems (Figure 7 and 8). The Wisconsin DNR has a GLRI grant through the EPA to fund the NCWMA’s treatments of knotweed in the Lake Superior Basin. With this funding, the NCWMA crew worked on knotweed surveys and treatments throughout the summer. Currently, the NCWMA has 327 documented knotweed sites (Table 1). This includes 22 sites that were not found in 2023 (after being treated previous years) and 28 newly reported sites.

Prior to herbicide treatments, the NCWMA cuts the knotweed in June or July, and then lets it regrow for 4 to 6 weeks. Cutting it and letting it regrow, allows the NCWMA to use less herbicide, makes treatments safer for applicators, and decreases the chances of impacting non-target species. The NCWMA surveyed sites and cut plants for 12 field days in June through early August. The NCWMA crew returned and treated the regrowth with herbicide over 11 days in August and September (Figure 9).

Overall, 134 sites of knotweed were treated by the NCWMA in 2023. The NCWMA staff treated 82 sites, while Bay Area Environmental Consulting (BAEC) was contracted by the NCWMA to treat 52 sites of knotweed using the same methods as the NCWMA’s crew. BAEC treated sites that were associated with wetlands and obtained permits through the DNR to treat those sites. Over half of treated sites (73) were in Bayfield County. Each of the other three counties had between 19 to 22 sites treated. The NCWMA treated 62 sites of Japanese knotweed, 54 sites of giant knotweed, and 18 sites of Bohemian knotweed. All three species are very invasive and are treated by the same methods.



Figure 6: Northland College Students helped hand-pull garlic mustard along the Bad River north of Mellen.

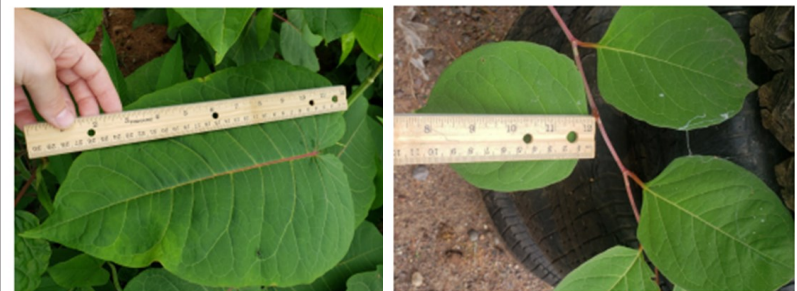


Figure 7 & 8: Giant knotweed (left) has leaves up to 1 foot long with a cordate base. Japanese knotweed (right) has leaves 6 inches or less and a straight base. Bohemian knotweed is a hybrid of the two species and each plant has a combination of leaf shapes. All three species are tall (over 6 feet) and have thick bamboo-like stems.



Figure 9: Morgen Luethmers treats knotweed with herbicide.

County	Bohemian Knotweed	Giant Knotweed	Japanese Knotweed	Knotweed Species Not Determined	Total Known Sites
Ashland	7	2	30	1	42
Bayfield	17	104	42	15	183
Douglas	16		36	12	67
Iron	5	6	22	2	35
Total	45	112	130	30	327

The NCWMA 2023 Budget Summary

The NCWMA's funding balance was \$106,900 starting in 2023. Over the course of the year, \$80,000 was added (Table 2). Expenses for the year totaled \$109,100 which included nearly \$71,700 for staff salaries (three seasonal workers and the NCWMA coordinator), \$26,400 for treatments completed by contracting out work, \$4,200 for office rent, \$3,000 for supplies and operating costs, and \$3,800 for travel expenses. The fund balance at the end of 2023 was \$77,800. Funding is at a good level going into 2023 as \$31,163 more in funding will be added to the NCWMA's budget in early 2024, so the starting balance will be \$108,900.

The U.S. Forest Service's Great Lakes Restoration Initiative-Cooperative Weed Management Area's grant (USDA-FS-GLRI-CWMA) is the largest funding source for the NCWMA. A grant award of \$50,000 through this grant program was added to a new agreement with the U.S. Forest Service in 2023. The NCWMA applied for \$99,780 in additional funding through the USDA-FS-GLRI-CWMA program in October 2023. Grant awards for this application will be announced in spring 2024.

The NCWMA was awarded a grant in 2021 through the Wisconsin DNR to treat knotweed in the Lake Superior Basin for \$124,901 over five years. This is a GLRI grant funded through the EPA. In 2023, the NCWMA spent \$31,163 of this grant for a large portion of the knotweed treatments. The NCWMA has another \$31,163 of funding available from this grant in 2024.

The NCWMA started 2023 with two Weed Management Area-Private Forest Grants (WMA-PFGs) through the Wisconsin DNR totaling nearly \$15,000. These grants fund work treating buckthorn, garlic mustard, and knotweed on private, forested properties. One of these grants was completed in June 2023. A new WMA-PFG through the Wisconsin DNR was awarded in July for \$15,000 primarily for treating garlic mustard, buckthorn, honeysuckle, and a portion will be for outreach and education.

The NCWMA has annual funding through a mini-grant with the DNR to organize trips with volunteers to Clough Island to treat buckthorn. This is part of the DNR's GLRI grant funding from the EPA. The work of this grant was contracted to Douglas County Land and Water Conservation Department. This is the final year for this grant.

Table 2: NCWMA Expenses for Each Grant and Fund Balance

Grant	Balance 1/1/23	New Funding	Expenses to 12/31/2023	End Balance 12/31/2023	Added Funding 2024	Balance 1/1/24
USFS GLRI CWMA 2019 agreement	39,981.46	15,000.00	53,296.11	1,685.35		1,685.35
USFS GLRI CWMA 2023 agreement	0.00	50,000.00	0.00	50,000.00		50,000.00
USFS GLRI Boat Wash	15,850.90		7,143.80	8,707.10		8,707.10
DNR-EPA-GLRI- Knotweed Control	31,163.00		31,163.00	0.00	31,163.00	31,163.00
DNR NCWMA WMA23-0003	5,299.92		2,950.00	2,349.92		2,349.92
DNR-WMA 22-0002 GM	9,636.39		9,636.39	0.00		0.00
DNR-WMA24-0002		15,000.00		15,000.00		15,000.00
Clough Island Control	4,995.00		4,915.95	79.05		0.00
	106,946.67	80,000.00	109,105.25	77,762.37	31,163.00	108,925.37



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PARTNERS

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**Bad River Band of Lake Superior
Chippewa**

**Bayfield County Land and Water
Conservation Dept.**

**Douglas County Land and Water
Conservation Dept.**

**Iron County Land and Water
Conservation Dept.**

**Great Lakes Indian Fish & Wildlife
Commission**

**National Park Service Apostle
Islands National Lakeshore**

**National Park Service, St. Croix
National Scenic Riverway**

**Red Cliff Band of Lake Superior
Chippewa**

**USDA Forest Service, Chequamegon-
Nicolet National Forest**

**U.S. Fish and Wildlife Service,
Whittlesey Creek National Wildlife
Refuge**

**University of Wisconsin Extension -
Douglas County**

**Wisconsin Department of Natural
Resources**

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