



Northwoods Cooperative Weed Management Area

*Working Together to Protect Northern Wisconsin
from Invasive Species*

2022 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 combat invasive species in northern Wisconsin (Douglas, Bayfield, Ashland, and Iron Counties). This report summarizes the accomplishments of the NCWMA in 2022.

Education and Prevention

Ramona Shackelford, the NCWMA Coordinator, gave six presentations at events and conferences. She organized a two-hour workshop on invasive shrub identification and a demonstration of how to treat buckthorn at the Northern Great Lakes Visitor Center (NGLVC) on June 17th (Figure 1). Ramona assisted Lauren Larsen of the Wisconsin Extension along with others in organizing three Wisconsin Women Woodland Landowner programs on September 17th, 24th and October 15th (Figure 2). Ramona attended all three events and demonstrated how to treat buckthorn at one event and did a PowerPoint presentation at the final event. Ramona attended the Lake Superior Collaborative Conference and presented a five minute presentation on the NCWMA's knotweed control project. She did a presentation (along with others) on identifying and treating butterfly dock (*Petasites hybridus*) at the Statewide Aquatic Invasive Species (AIS) meeting, the Lakes and Rivers Conference, and at the Upper Midwest Invasive Species Conference (UMISC). NCWMA staff took the NCWMA booth to two Invasive Species Identification Days at the NGLVC where they shared information and brochures. Ramona created a flyer for the City of Superior identifying six invasive shrubs.

Ramona facilitated four quarterly NCWMA partner meetings and two steering committee meetings in 2022. She also attended two Bayfield County Land and Water Conservation Department (LWCD) meetings and four Bayfield County AIS Committee 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 13,486 visits in 2022. Ramona sent eleven e-mail updates through MailChimp to the NCWMA e-mail list that includes 256 subscribers. The NCWMA Facebook page had an increase of 111 new followers ("Likes"), and ended the year with a total of 561 followers. Ramona and NCWMA staff posted on Facebook 51 times in 2022. Thirty-three posts had a "reach" greater than 70. There were 237 reactions 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 water bodies. The NCWMA hired two Clean Boats, Clean Waters (CBCW) Interns, Carolyn Gurske and Xavier Clark, who took the boat wash to landings from June through August. In addition to washing boats, the CBCW interns completed CBCW surveys at boat landings. They took the boat wash to boat landings forty-five days from June through August. During these days, they contacted 632 boaters and washed 166 boats.



Figure 1: A Weed Wrench was used to pull out glossy buckthorn during the Invasive Shrub Workshop at the Northern Great Lakes Visitor Center on June 17th.



Figure 2: Joan Elias (left) discusses the work she has done on her property at the Women Woodland Owners Field Day on September 17, 2022.

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 two 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.

Invasive species treatments were completed by Ramona Shackleford and the seasonal “weed crew” including Savannah Yunkers as the Invasive Species Crew Leader along with Luke Slekar and Logan Servinsky, the Invasive Species Technicians. The NCWMA weed crew became certified to use herbicide in Wisconsin soon after being hired. Their primary focus was treating **garlic mustard** (p.3) and **knotweed** species (p.4). They also treated 21 acres of **wild parsnip** (manually and chemically) over eleven days of field work in Ashland and Iron Counties. They assisted the Douglas County LWCD in treating **hybrid cattail** and **yellow flag iris** along the Brule River for two days (Figure 3). They dug up 1.7 acres (three sites) of **cut-leaf teasel** over three field days (Figure 4). The NCWMA weed crew dug up **Dalmatian toadflax** along 2 acres of roadway, and treated one site of **butterfly dock** (*Petasites hybridus*). The NCWMA weed crew 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.

A new site of **Phragmites** which covers about 1.5 acres was reported on Madeline Island in September. Ramona Shackleford, Alex Selle of the DNR, and staff of the Town of La Pointe treated the site with herbicide on October 7 (Figure 5). Staff from GLIFWC assisted in surveying roads for any additional Phragmites on the island.

Buckthorn and Exotic Honeysuckle

The NCWMA weed crew treated about eleven acres of **common buckthorn** along Ashland’s Waterfront Trail, Washburn’s Lakefront Trail, and on three private properties. **Exotic honeysuckle** bushes and **glossy buckthorn** were also treated as they were encountered. They treated these bushes with cut-stump herbicide treatments.

The NCWMA received a grant through the Wisconsin DNR’s Weed Management Area-Private Forest Grant to assist a private landowner to have nine acres of common buckthorn treated using goats. The NCWMA contracted this work out to Regenerative Ruminants, which brought in their goat herd to eat the buckthorn. The goats browsed through the nine-acre property by being enclosed within half-acre areas of temporary fencing that were cycled through the property.



Figure 3 (top): Savannah Yunkers and Luke Slekar dig out cattails along the Brule River. Figure 4 (bottom): Logan Servinski cuts teasel plants.

Figure 5 (right): Ben Schram or the Town of La Pointe sprays Phragmites on Madeline Island.

Figure 6 (far right): The DNR’s Weed Management Area – Private Forest Grant funded a project to treat buckthorn on private property using goats.



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. The largest sites of garlic mustard within forests are along the floodplains of the Montreal River in Hurley and the Bad River near Mellen. Ramona took data on plots at both of these sites in May to monitor changes in garlic mustard density from year to year. Ramona and/or the NCWMA weed crew attended events to hand-pull garlic mustard during 24 field days in May through mid-June. They worked to hand-pull at thirty-four different sites that cover over 100 acres. Ramona helped organize group events to hand-pull garlic mustard in Superior on May 20th and June 6th (Figure 7), Bay City Creek in Ashland on May 12th, Cable on June 2nd, and the Washburn Wastewater Treatment Plant on May 11.

Ramona organized a series of events to hand-pull garlic mustard across 70 acres along the Bad River's floodplain from May 16 to May 20. Staff from GLIFWC, the NCWMA, the Bad River Band's Mashkiziibii Natural Resources Department, Ashland and Iron Counties LWCDs, volunteers, and two classes from Northland College assisted at least one day. The NCWMA hosted a picnic lunch with funding from the DNR on May 16th for all who helped hand-pull. Ramona organized an event on May 13th with a group of Enbridge workers to hand-pull garlic mustard primarily on Enbridge's property along the Bad River.

Ramona helped organize a hand-pulling event along the Montreal River on May 25th with the Iron County LWCD, GLIFWC, the Ottawa National Forest, and the entire sixth grade from the Hurley School (Figure 8 & 9). The NCWMA weed crew hand-pulled garlic mustard three additional days along the Montreal River across seven acres of private property downstream from Hurley.



Figure 7: The group who attended the garlic mustard hand-pulling event along the Faxon Creek in Superior on May 20th, including staff from the City of Superior and the NCWMA.



Figure 8: Zach Wilson of the Iron County LWCD shows his staff how to use the Kobo app to report invasive plants during the garlic mustard hand-pull event along the Montreal River.



Figure 9: 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 25, 2022.

Knotweed

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 315 documented knotweed sites. This includes twenty-six new sites that were documented in 2022. It also includes eight sites that have not been seen in five years and may have been eradicated. Ramona and Savannah obtained the permission to treat knotweed sites and notified landowners of the treatment schedule. Given that knotweed plants grow extremely fast and can reach over ten feet tall, the NCWMA weed crew surveyed sites and cut plants for 14 field days in June and July. The weed crew then returned around four weeks later and treated the regrowth (which may be two to four feet tall) with herbicide (Figure 10 a & b). The crew spent 13 field days treating knotweed with herbicide in August and September.

Overall, 114 sites of knotweed were treated by the NCWMA in 2022. The NCWMA staff treated 80 sites, while Bay Area Environmental Consulting (BAEC) was contracted by the NCWMA to treat 34 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.

Table 1 below shows the breakdown of treatments among the four counties of the NCWMA. Two-thirds of treated sites were in Bayfield County. Two-thirds of Bayfield County’s sites were giant knotweed. Each of the other three counties had between 12 and 14 sites treated that were predominantly Japanese knotweed.

Treatments often kill a large portion of an infestation, but leave a large vegetative dead zone from the herbicide the following year (Figure 11 a & b). The NCWMA did restoration work on 12 knotweed sites in the fall of 2022. The sites chosen for restoration had no or little vegetation growing where dense knotweed previously grew. For restoration, the dead material was raked off to reveal bare soil, and then a native seed mix was spread over the area.

Table 1: Knotweed Species Treated with Herbicide by County in 2022

County	Bohemian	Giant	Japanese	Total
Ashland	1	2	11	14
Bayfield	9	50	16	75
Douglas	2		10	12
Iron	2	3	8	13
Total	14	55	45	114



Figure 10 a (top): The NCWMA weed crew cut giant knotweed in July. Figure 10 b (bottom): Luke Slekar treats knotweed with herbicide in August 2022.



Figure 11 a (left): A Japanese knotweed site in Hurley in 2021. Figure 11b (right): The same site in June of 2022. This shows that the treatment worked well, but left a substantially large area with little vegetation. Restoration efforts are important to prevent other invasive species from overtaking the area.

The NCWMA 2022 Budget Summary

The NCWMA's funding balance was \$110,662 starting in 2022. Over the course of the year, \$87,600 was added (Table 2). Expenses for the year totaled \$126,913 which included nearly \$90,000 for staff salaries (five seasonal workers and the NCWMA coordinator), \$23,000 for treatments completed by contracting out work, \$4,200 for office rent, \$3,700 for supplies and operating costs, and \$6,200 for travel expenses. The fund balance at the end of 2022 was \$72,000. Funding is at a good level going into 2023 as \$36,158 more in funding will be added to the NCWMA's budget in early 2022.

The U.S. Forest Service's Great Lakes Restoration Initiative-Cooperative Weed Management Area's grant (USFS-GLRI-CWMA) is the largest funding source for the NCWMA. A grant award of \$45,000 through this grant program was added to the NCWMA's agreement with the U.S. Forest Service in 2022. The NCWMA applied for \$50,000 additional funding through the USFS-GLRI-CWMA program in November. Grant awards for this application will be announced in February 2023. The U.S. Forest Service created a new agreement with the NCWMA in 2022 that included new funding of \$30,000 to hire staff to run the portable high-pressure boat wash.

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 2022, 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 2023.

The NCWMA started 2022 with two Weed Management Area-Private Forest Grants (WMA-PFGs) through the Wisconsin DNR totaling over \$21,000. These grants fund work treating buckthorn, garlic mustard, and knotweed on private forested properties. One of these grants was completed in June 2022. A new WMA-PFG through the Wisconsin DNR was awarded in July for \$12,592 to help treat buckthorn on a private property using goats.

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 completed by Zach Stewart of the Douglas County Land and Water Conservation Department. The Douglas County LWCD will use this funding again to organize similar volunteer trips to the island in 2023.

Table 2: NCWMA Expenses for Each Grant and Fund Balance

Grant	Start Balance 1/1/2022	Added Fund- ing in 2022	Expenses 2022	End Bal- ance 12/31/2022	Added Funding 2023	Balance 1/1/23
USFS GLRI CWMA	53,386.41	45,000.00	58,404.95	39,981.46		39,981.46
USFS GLRI Boat Wash		30,000.00	14,149.10	15,850.90		15,850.90
DNR-EPA-GLRI- Knotweed Control	31,163.00		31,163.00	0.00	31,163.00	31,163.00
DNR NCWMA WMA23-0003		12,592.00	7,292.08	5,299.92		5,299.92
DNR WMA21-0006 Buckthorn	6,217.91		6,217.91	0.00		0.00
DNR-WMA 22-0002 GM	14,900.00		5,243.61	9,656.39		9,656.39
Clough Island Control	4,995.00		4,995.00	0.00	4,995.00	4,995.00
	110,662.32	87,592.00	127,465.65	70,788.67	36,158.00	106,946.67



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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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