Northeast Michigan
Cooperative Weed Management Plan

Introduction

For years the threat of invasive species has been prevalent in the state of Michigan. Under constant attack, our precious natural resources have often fallen victim to unrelenting and advantageous invasive species. An effective solution to this resource threatening issue is to develop a cooperative weed management area. The cooperative weed management concept allows public and private entities to share resources toward controlling noxious weeds.

Control and prevention of invasive species has been called for throughout the conservation community in Northeast Michigan for many years. The first meeting of the group involved in this agreement took place in December 2008, organized by Huron Pines. The intention of this meeting was to gain partners and support for creating an invasive species program that would help in the protection of the vital coastal resources in Northeast Michigan. The support and interest from that meeting resulted in a resolution to create a cooperative weed management agreement.

Background Information- Reasoning for a Coordinated Effort

What are invasive weeds and why manage them?

The federal government defines an invasive weed as any plant or plant product that can injure or damage crops, livestock, public health, natural resources, or the environment. There are several weeds listed on the state's prohibited or restricted lists, including the three species that will be the focus for this weed management plan.

The three target species will be: purple loosestrife, buckthorn and phragamites. These three species, which were chosen by the Huron Pines Resource Advisory Group, have significant short and long term effects upon the environment, natural resources and the citizens of Northeast Michigan. In order to protect our quality of life and abundant natural resources from irreparable damage, these invasive plants need to be controlled and monitored. Not doing so would jeopardize Northeast Michigan's economy, tourism industry, distinctive natural heritage, diverse recreational opportunities, public health and scenic beauty.

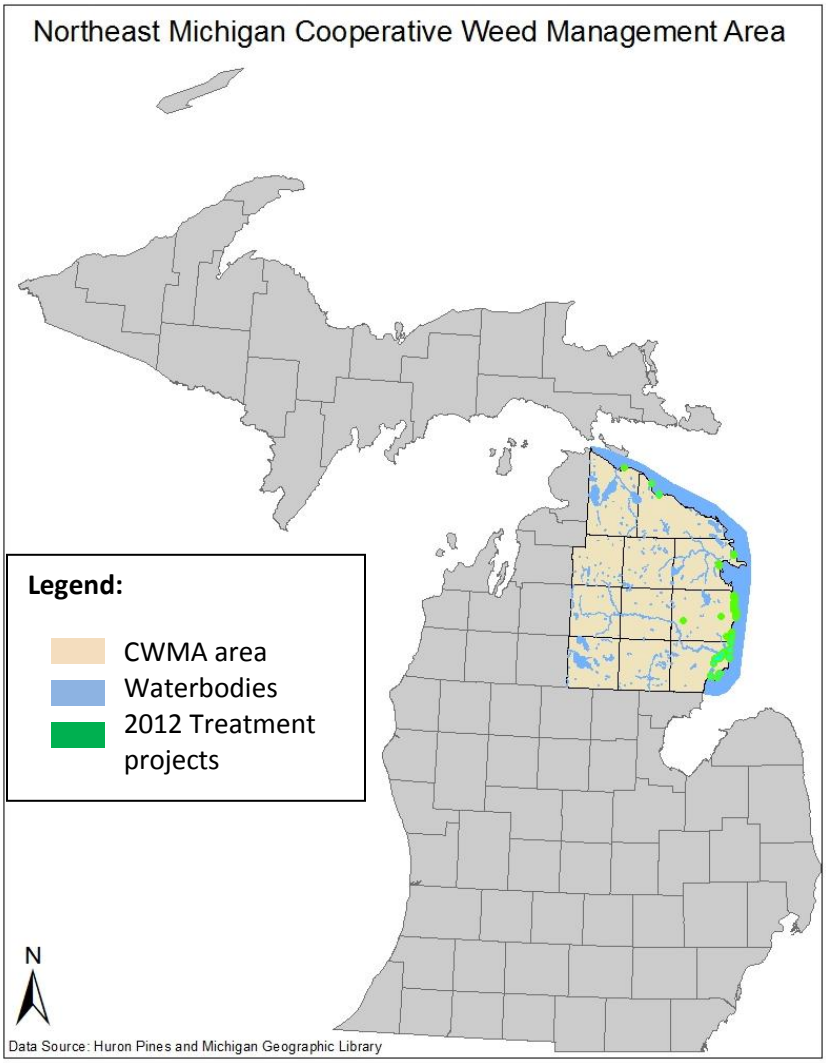
Why invest in a Cooperative Weed Management Area?

So often when an invasive weed species is first noticed in an area, the initial reaction is one of neglect or uncertainty. Neglect because small patches of weeds are generally not seen as a pressing issue, and uncertainty showing up as a result of not knowing how to handle such a problem. Thus, a once small, manageable and inexpensive problem becomes large, unmanageable and expensive. To invest now in a region-wide weed management effort is an investment in the future of Northeast Michigan.

Cooperative weed management is much more cost effective, especially when dealing with small infestations. Less time, effort and money is required to perform the needed tasks. The coordination of partners also allows for the sharing of resources and information across jurisdictional boundaries so that weed management can be carried out along ecological rather than political boundaries. Also the united front is much more visible, helping to generate public awareness. Finally, cooperative weed management can make securing funding easier and more productive.

Geographic Scope and Species Priorities

As of 2012, the Northeast Michigan Cooperative Weed Management Area covers all 11 counties of the northeastern Lower Peninsula of Michigan, including Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, and Roscommon counties.



Because this is such a large geographic area, fighting invasive species needs to be prioritized according to habitat need and available resources. Geographically, invasive species early detection and rapid response will be prioritized in the following order:

1. Highest priority: **Keep phragmites out of high value sites and treat outlier infestations whenever possible but especially near high value sites**
    - **a.** Lands with endangered, threatened and special concern species or species of greatest conservation need and/or high quality natural communities (See MNFI website <http://mnfi.anr.msu.edu/>).
    - **b.** Lands that are currently managed as State parks, nature preserves, or in conservation ownership.
    - **c.** Private lands bordering state parks, nature preserves or lands in conservation ownership

2. Medium Priority: **Contain or eradicate large source populations**
    a. Lands which include large blocks of landowners or single landowner with large coastal properties.

3. Lowest Priority: **Capitalize on treatment of any site where resources are immediately available and success is likely**
    a. Individual privately owned properties without rare species, natural communities and that do not border state parks, preserves or conservation lands will be given the lowest priority.

Early detection and rapid response to individual species will be prioritized in the following manner:

1. Highest priority: **True Early Detection and Rapid Response**
   Garlic mustard, Japanese knotweed, phragmites, European frogbit, black swallowwort, etc.

   These species are not widespread in our service area and still have a reasonable probability of being prevented from taking over region-wide.

2. Medium Priority: **Watershed-Wide Control**
   Purple loosestrife, buckthorn, wild parsnip

   These species are widespread but can be controlled in a larger area or prevented from spreading to important habitats.

3. Lowest Priority: **Site-by-site Removal**
   Autumn olive, spotted knapweed, mullein, burdock, thistles, queen anne's lace, ox-eye daisy, St. John's wort

   These species are considered noxious weeds and are heavily distributed throughout Northeast Michigan, but they can be removed at important sites where complete habitat restoration is taking place, or where rare species are threatened.

Mission and Goals for Northeast Michigan's Weed Management Efforts

The Northeast Michigan Cooperative Weed Management Area provides a framework that will guide our efforts to control invasive weeds in Northeast Michigan, acquire and allocate resources and set goals/objectives to work toward and achieve. The purpose of this cooperative weed management area is

To stop the introduction, spread, and distribution of invasive weed species in the ecosystems along the Lake Huron shoreline and adjacent ecosystems to which it connects.

To successfully carry out this mission, there are a number of goals that need to be achieved:

1. Identify specific invasive plants to target efforts and resources toward.

    - The tiered approach to targeting species will be the initial focus for the efforts of this weed management agreement. Other species will be added or considered for targeting on a case-by-case basis as deemed necessary by the Huron Pines Resource Advisory Group.

    - The site prioritization process was developed in conjunction with MNFI and Michigan DNR staff. The species priorities were approved by the Huron Pines Resource Advisory Group, which is made up of resource professionals in the Northeast region of Michigan.

2. Develop cooperative weed management partnerships with public and private partners to attack shared weed problems.

    - Partnerships should involve individuals, agencies,nonprofit organizations and local units of government to prioritize and pool their limited resources in efforts to control invasive weeds.

    - Partnerships need to allow management across ownership and jurisdictional boundaries and allow for joint application for local, regional and national grant funding sources.

    - Partners currently included in this weed management area are: U.S. Fish and Wildlife Service, The Nature Conservancy, Thunder Bay National Marine Sanctuary, Huron Pines, Michigan Department of Natural Resources, U.S. Forest Service and Michigan Department of Environmental Quality, Natural Resources Conservation Service and the Michigan Sea Grant.

3. Implement the most efficient, economical and environmentally friendly control methods for targeted weeds.

    - Continuing research of new/different methods of control is crucial to ensure that the most cost-effective and environmentally friendly methods are being employed for removal projects.

    - Good herbicide practices ensure that safe and appropriate herbicides are used, with an accurate mixture of herbicides, as well as proper use and rate of application.

    - Accurate maps of targeted weed locations make budgeting easier and more accurate.

4. Implement an early detection and rapid response system.

    - The early detection and rapid response system will be volunteer based. This will require proper training for volunteers in plant identification and documentation when an infestation is discovered.

- Mapping of weeds is an important measure of control success or failure, rate of establishment and movement of weeds.

5. Reduce the extent and density of established weed infestations to lower or eliminate economic and environmental impacts.

    - Total eradication of a large established weed infestation is highly unlikely. The goal for such areas should be to reduce the stands density and prevent it from spreading.

    - For these types of areas a long-term plan must be designed and followed that uses cost-effective measures over a long period of time. A single treatment will not be effective in this situation.

6. Engage volunteers to assist in early detection, rapid response and removal projects.

    - Train volunteers to properly identify and document the three target species.

    - Develop and distribute quality brochures and fact sheets on identification, impacts and control methods for the three target species.

    - Speak to local citizen groups about the impacts of invasive weeds and their control methods.

7. Develop and maintain a database of noxious and invasive weed infestations that is made accessible to the public.

    - A centralized database of mapped information of the three targeted weeds will make for more accurate tracking of changes in weed infestations area and density.

    - Accumulated data will be easily accessible to any interested party via the Huron Pines website.

8. Comply with all State of Michigan weed laws and permitting requirements when necessary.

    - All State of Michigan Noxious Weed laws will be followed at all times to ensure that our efforts are not damaged by negligence.

    - Rules and regulations regarding the movement, mixture and application of herbicides will be followed for protection of the environment as well as public health.

    - Any requirements of permits for herbicide application, prescribed burns, etc., will be applied for and received prior to any action taken.

9. Reestablish native plant communities where appropriate.

    - Any restoration of native plant communities would be on a site by site basis.

    - Areas dominated by a monoculture of invasive species would likely require some restoration to ensure that the natural integrity of the site is maintained.

    - Reestablishing native plant communities fills the gaps created by the removal of invasive species and reduces the probability of them returning.

Conclusion

This cooperative weed management plan provides a framework for the implementation of successful and cost-effective weed management through the Northeast region of Michigan. These efforts will help protect the natural resources and environment that some many people depend on for their livelihoods, culture and recreation. A strong and well coordinated effort will ensure the ecological and economical impacts felt in western states by exotic weeds do not materialize here in Northeast Michigan.

All organizations and partners signed onto this agreement have a mutual accord to the protection of Northeast Michigan from invasive species and restoration of native plants and ecosystems. The purpose of this Cooperative Weed Management Area is to provide protection to the sensitive natural ecosystems of the Great Lakes Basin by reducing the spread and distribution of invasive plant species and restoring areas already impacted. It will also aid in the application for various types of funding to assist in the continuing effort to restore and protect essential habitat for wildlife and recreationalists alike.

Partner Roles

Huron Pines agrees to coordinate and develop the program and resulting projects, conduct communications with all partners, organize outreach efforts, train volunteers, seek funding and report and post results of efforts to partners as well as the public.

Michigan Department of Natural Resources agrees to assist in acquisition of required permitting for projects, provide technical assistance and seek funding when opportunities arise.

Michigan Department Environmental Quality agrees to assist in acquisition of required permitting for projects, provide technical assistance and seek funding when opportunities arise.

U.S. Fish and Wildlife Service agrees to provide technical assistance as well as seek funding when opportunities arise.

U.S. Forest Service agrees to provide technical assistance as well as seek funding when opportunities arise.

Natural Resources Conservation Service agrees to assist in acquisition of required permitting for projects, provide technical assistance and seek funding when opportunities arise.

Michigan Sea Grant agrees to provide technical assistance as well as seek funding when opportunities arise.

Michigan Natural Features Inventory agrees to provide technical assistance as well as seek funding when opportunities arise.

The Nature Conservancy agrees to provide technical assistance, seek funding when opportunities arise and coordinate projects on TNC managed lands and adjacent lands.

Thunder Bay National Marine Sanctuary agrees to provide their services as a location to hold meetings, volunteer training sessions, and for housing when necessary.

Local Units of Government agree to promote invasive species monitoring and removal projects and volunteer efforts and support control efforts with funding, resolutions of support or ordinances where applicable.

By signing this agreement partners are affirming their support and role as a member of this cooperative agreement to assist in the restoration, protection, and maintenance through control and prevention of invasive species in Northeast Michigan.

_____ _____

Date

_____ _____

Date