

July 6, 2015

Finding of No Significant Impact (FONSI)
for
Michigan Department of Natural Resources (DNR)
Early Detection and Response Program:
Treatment Methods for
Controlling Aquatic Invasive Species

Part of GLRI Grant F13AP00855

Context:

The Michigan Department of Natural Resources (DNR) has developed an early detection¹ and response² program (EDR) for controlling³ aquatic invasive plant species. Within the context of their ongoing Great Lakes Restoration Initiative (GLRI) grant, F13APOO855, the DNR is proposing to implement the EDR using a combination of mechanical and chemical (i.e., herbicide) tools. The accompanying DNR-prepared environmental assessment (EA) evaluates potential environmental impacts of the proposed management activities for the EDR.

In 2010, the DNR and Michigan Natural Features Inventory (MNFI) were granted \$1,028,548.00 from the Environmental Protection Agency (EPA) to develop and implement an EDR, with the goal of detecting and eradicating high-threat aquatic invasive species in the state of Michigan. In 2013, additional funding was awarded through this GRLI grant to implement the EDR. Overall, the project aims to use the best known methods to detect, eradicate and control several high-priority aquatic invasive plant species that adversely impact the health of the Great Lakes.

Summary of proposed action:

A. Target Aquatic Invasive Species

1. **European frog-bit** (*Hydrocharis morsus-ranae*) *Description:* European frog-bit (EFB) is a free-floating, semi-emergent aquatic plant native to Europe, Asia and parts of Africa.
2. **European water-clover** (*Marsilea quadrifolia L.*) *Description:* European water-clover (EWC) is a rooted, aquatic fern native to Europe.
3. **Flowering rush** (*Butomus umbellatus*) *Description:* Flowering rush (FR) is an emergent aquatic species native to Europe and Asia.
4. **Parrot feather** (*Myriophyllum aquaticum*) *Description:* Parrot feather (PF) is an emergent aquatic plant that invades lakes, ponds and streams, tolerant of fluctuations in water levels and sites with high levels of nutrients.

¹ Early detection is defined as verifying the presence of a species before it spreads so widely and becomes so abundant that response actions cannot be implemented practically, effectively, and efficiently.

² The goal of response is to eradicate target species in the State of Michigan.

³ Control is defined as reduction, to a target level, in the abundance and/or density of the target species.

5. **Water hyacinth** (*Eichhornia crassipes*) *Description:* Water hyacinth (WH) is a free-floating aquatic plant which produces attractive purple flowers, which have promoted its distribution as a water garden plant.

6. **Water Lettuce** (*Pistia stratiotes*) *Description:* Water lettuce (WL) is a free-floating aquatic plant that forms dense populations of rosettes that resemble small heads of lettuce.

7. **Additional Plants of Concern:** The DNR recognizes four additional aquatic invasive species of concern that pose threat to the integrity of Michigan's natural resources. **Water chestnut** (*Trapa natans* L.), **water soldier** (*Stratiotes aloides*), **Brazilian water-weed** (*Egeria densa*) and **hydrilla** (*Hydrilla verticillata*) have not yet been detected in Michigan, however due to the potential impacts each of these species could have on aquatic ecosystems, any reported occurrences will be responded to.

B. Treatment Area

The DNR has implemented an EDR to survey and treat infestations of the species listed above on a statewide level in coordination with federal (U.S. Fish and Wildlife Service) and local (Cooperative Invasive Species Management Areas (CISMA)) partners. Given the potential impact of these species to Michigan's natural resources, the DNR proposes expansion, under the actions described in this EA, of current efforts to improve efficiency and efficacy in control of these species. Response efforts have been implemented in four main areas of the state based on reported occurrences: Southeast Michigan, Saginaw Bay, the Thunder Bay watershed in Alpena County, and Munuscong Bay in Chippewa County. Through cooperative efforts, the ERR has verified 128 reports and responded to 63 infestations of 6 priority species across the state.

Efforts to respond, under actions described in this EA, to priority species will be primarily directed by the DNR, in coordination with local CISMAs.

C. Treatment Methods

For many of the species targeted through the EDR, herbicide is the most successful method of control. While for some infestations and some species, mechanical treatments may be an effective means of control, many situations will require the use of herbicides. Mechanical treatments can be successful in certain situations, however, they are rarely an effective stand-alone method. Treatment options will be assessed on a site-by-site basis, accounting for size of infestation, potential non-target impacts and likelihood for success. Our preferred method will involve a combination of herbicide and mechanical treatments to achieve greatest efficacy and minimize impact to non-target species.

The scope and scale of work associated with this project presents challenges when considering impacts to threatened and endangered species. In light of these challenges, all necessary and available precautions to protect listed species and limit disturbances will be undertaken during the planning and implementation of control methods.

Using available resources provided through the Michigan Natural Features Inventory, including a database of known occurrences of federally- and state-listed species, and a habitat rarity index, staff conduct a site-based review for presence/absence of listed species, and assess treatment options to ensure minimal impact. These resources are compiled through long-term monitoring data, verification of rare species reports and routine data collection. Additionally, during site

assessment, field staff will note the presence of federally listed species and evaluate impacts of potential management before initiating control actions. A Section 7 consultation, which is required under the Endangered Species Act, was completed by DNR on April 17, 2015.

Primary herbicide application methods utilized on this project are targeted and designed to be selective. Applications are conducted through the use of hand-held sprayers, as opposed to larger boom sprayers or aerial spraying, to allow operators greater control of herbicide release, and to treat only targeted species. In this way, we minimize the impacts to non-target species and reduce likelihood of disturbing federally listed species.

Over the course of this project, a number of herbicides will be used in the treatment of aquatic invasive species. Each of these herbicides has been registered by the U.S. Environmental Protection Agency following a review of toxicity, risk and effects. Additionally, the herbicides we intend to use on this project have been selected from a list of those approved by the DNR for safe use in aquatic environments. Each of these herbicides has undergone additional review which examines the toxicity of the base chemical, any adjuvants and post-degradation products.

D. Assessment of Potential Affects on Monarch Butterfly Habitat

The majority of treatment sites will not harbor any milkweed, as the treatment sites are too wet for all types of "Asclepias", the milkweed genus. A small amount of treatments for the emergent form of the invasive flowering rush may be in wetlands where the common *Asclepias incarnata* (swamp milkweed) may be present. In these areas, where mixed vegetation may be present including swamp milkweed, selective hand application will be applied carefully to avoid non-target damage. Flowering rush is overtaking many Michigan southeastern coastal wetlands that are critical for monarch migration. A reduction in invasive plants in these areas, especially the emergent flowering rush, will limit competition with *Asclepias incarnata* and will produce an overall benefit to monarchs. The more common *Asclepias syriaca* and *Asclepias tuberosa* are limited to upland areas and are not impacted by this work. No state listed milkweeds are currently found in or near the treatment areas.

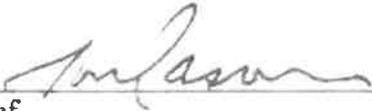
E. Public Comment on the Project Environmental Assessment

On June 22, 2015, the DNR issued a public notification of their environmental assessment for their early-detection-and-response-program, requesting comments from the public. The notice was made through news releases to daily newspapers in Michigan, and state environmental group news contacts. Public comments received were reviewed by MI DNR staff and FWS Fisheries Program staff. None of the comments raised significant issues, in the judgment of the DNR and FWS staff, and both recommend a finding of no significant impact for the herbicide treatment using the methods planned.

Finding of No Significant Impact (FONSI)

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, and based on the analysis in the Environmental Assessment (EA) by the Michigan Department of Natural Resources February 3, 2015;

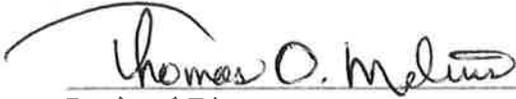
the DNR and the Service have determined that implementing the proposed action, described in the attached EA, would not result in significant impact on the human environment, and does not require preparation of environmental impact statement (EIS).



Chief
Wildlife Division
Michigan Dept. of Natural Resources

7-6-2015

Date



Regional Director
Midwest Region
U.S. Fish and Wildlife Service

7-8-2015

Date