



# AQUATIC INVASIVE SPECIES RAPID RESPONSE PLAN

*Updated in 2024*

## QUICK REFERENCE GUIDE

Action	Description	Lead
<b>Detection</b> ↓	New suspicions of AIS should be reported to the DNR	DNR: Mark Ranweiler, 218-739-7576
<b>Confirmation</b> ↓	Species identity is confirmed by experts	DNR: Mark Ranweiler, MAISRC
<b>Communication</b> ↓	Inform the public through a press release and outreach	PGOLID Lake Coordinator and Board
<b>Evaluation</b> ↓	Evaluate whether containment, treatment, or removal can occur, obtain any necessary permits	DNR
<b>Respond</b>	Implement treatment/containment plan	DNR and PGOLID

## INTRODUCTION

This plan is being developed, maintained, and implemented by the Pelican Group of Lakes Improvement District (PGOLID) as part of the planning for the containment and/or eradication of new aquatic invasive species (AIS). This plan is intended to outline a process Managers can follow to expedite the response timeline and increase the likelihood of success. PGOLID has a history of implementing long term sustained aquatic invasive species detection and containment programs targeting small populations, reducing large populations, and successfully containing species that would otherwise cause regional harm. This plan will be implemented in a partnership between the PGOLID Board, PGOLID Lake Coordinator, MN DNR, and other stakeholders. Regularly reviewing and updating this plan with those partner groups will help maintain the working relationships necessary for a successful eradication response. For success to be possible we must be “prepared and committed to take rapid and effective action” (Smits and Moser 2009)

## PURPOSE OF A RAPID RESPONSE

*From: Minnesota’s Rapid Response Plan for AIS 7-31-13*

Preventing introductions of new species and new infestations is the foremost strategy in AIS management and is crucial to avoiding their establishment, spread, and irreversible consequences. Unfortunately, prevention measures are imperfect, and even the best efforts will not stop all introductions. Experience has shown that once an AIS has become established and widespread, eradication is costly and unlikely (Lodge et. al 2006). If not eradicated, control efforts to limit their distribution and abundance can become perpetual and costly programs (e.g., sea lamprey control in the Great Lakes and Eurasian water milfoil in Minnesota lakes).

Early detection and effective rapid response are a crucial second line of defense to prevent establishment (NISC 2008) and minimize the ecological and economic impacts of an AIS introduction (CDFG 2008). The sooner a new introduction is detected, the greater probability there is that a systematic response effort can be implemented while the population is still localized and not beyond that which can be contained and eradicated (NISC 2003). In many cases, actions must be taken quickly to be effective, possibly within only a few days of the introduction (USEPA 2005). Successful rapid response is therefore dependent upon effective early detection monitoring and AIS reporting programs for alerting managers to new introductions. Government officials and natural resource managers must be prepared and committed to take rapid and effective action following the report of an AIS introduction (Smits and Moser 2009).



Zebra mussels, Starry stonewort, Spiny waterflea, credit: MAISRC

## CONNECTION WITH STATE INVASIVE SPECIES MANAGEMENT PLAN

The Minnesota state management plan for invasive species (MISAC 2009) includes Element II that addresses Early Detection, Rapid Response and Containment. It also has a specific strategy and actions that call for a general rapid response plan and when needed species-specific rapid response. The PGOLID plan does not address the issue of prevention. This plan describes early detection monitoring and reporting systems, but its primary focus is on the actions that occur once a potential new AIS introduction or infestation has been reported.

## STRATEGIES TO DETECT, CONTAIN, AND ERADICATE AQUATIC INVASIVE SPECIES

### 1. **Detection** - *Develop a system for detecting new aquatic invasive species as soon as possible.*

- a) Raise awareness of priority species of concern as well as 'watch' species by developing and distributing information about how to recognize and report aquatic invasive species
- b) Identify high-risk areas for invasive species introductions, establishment and spread and focus detection efforts in these areas.
- c) Establish processes for reporting sightings/presence of infestations/populations and agency verification of these reports.
- d) Investigate reports of new nonnative species as soon as possible.
- e) Conduct field surveys for priority invasive species and monitor invasive species populations.
- f) Establish and maintain databases of known locations of invasive and "watch" species.

### 2. **Develop Rapid Response Plan** - *Develop a general rapid response plan outlining the actions required for the first detection, containment, and eradication of invasive species.*

- a) Develop a response plan that incorporates assessment, response, communication and education, monitoring, research/adaptive management and funding.
- b) Ensure that responsible parties are aware of the duties outlined in the response plan.
- c) Identify species for rapid response efforts and prioritize high priority species for individual response outlines.
- d) Inform the public about the need to have a rapid response plan(s) that might employ pesticides.
- e) Review and revise response plans on a periodic basis.



**3. Implement Containment and Eradication Efforts - *Prevent the establishment or spread of a reproducing population through targeted eradication efforts including innovative and emerging technologies.***

- a) Implement quarantines allowed by law and/or other containment measures to prevent the movement of invasive species.
- b) Evaluate and implement chemical, biological, and/or mechanical methods to eradicate recently detected or isolated invasive species populations.
- c) Adaptively manage infestations with continued treatments and research projects to achieve the desired level of suppression/eradication.
- d) Monitor eradication efforts through field survey or other means to evaluate eradication success.
- e) Continue to contain and minimize infestations where eradication is not possible.



Curly-leaf pondweed mats in the channel between Big and Little Pelican Lakes, 2015

## RAPID RESPONSE TEMPLATE OF ACTIONS

Ongoing activities related to AIS necessary to respond rapidly.	
Action	Lead Individual(s)
Inform Residents and Visitors of their role in AIS prevention and control	PGOLID Communications Committee, Lake Coordinator, PLPOA
News Release - Rapid Response Plan	Lake Coordinator, PGOLID Communications Committee <i>Draft news release for review annually</i>
Provide information for individuals to report suspected AIS	Lake Coordinator, PGOLID Communications Committee, PLPOA
Actions triggered by the report of potential AIS within the Pelican Group of Lakes	
Action	Lead Individual(s)
Investigate reports of suspected AIS; Write a brief report on the results of visit to the lake and post it on a shared drive	Lake Coordinator, DNR Regional – Mark Ranweiler – (218)-739-7576
Confirm species identity	DNR Regional – Mark Ranweiler (218)-739-7576, other experts, MAISRC Species Specific Specialists <a href="https://www.maisrc.umn.edu/">https://www.maisrc.umn.edu/</a>
Information about confirmed occurrences should be sent to the PGOLID President, Rapid Response Committee, Otter Tail County AIS, MN DNR	Lake Coordinator
Designate spokesperson as primary communications contact.	Rapid Response Committee

## Actions triggered by the report of potential AIS within the Pelican Group of Lakes, continued...

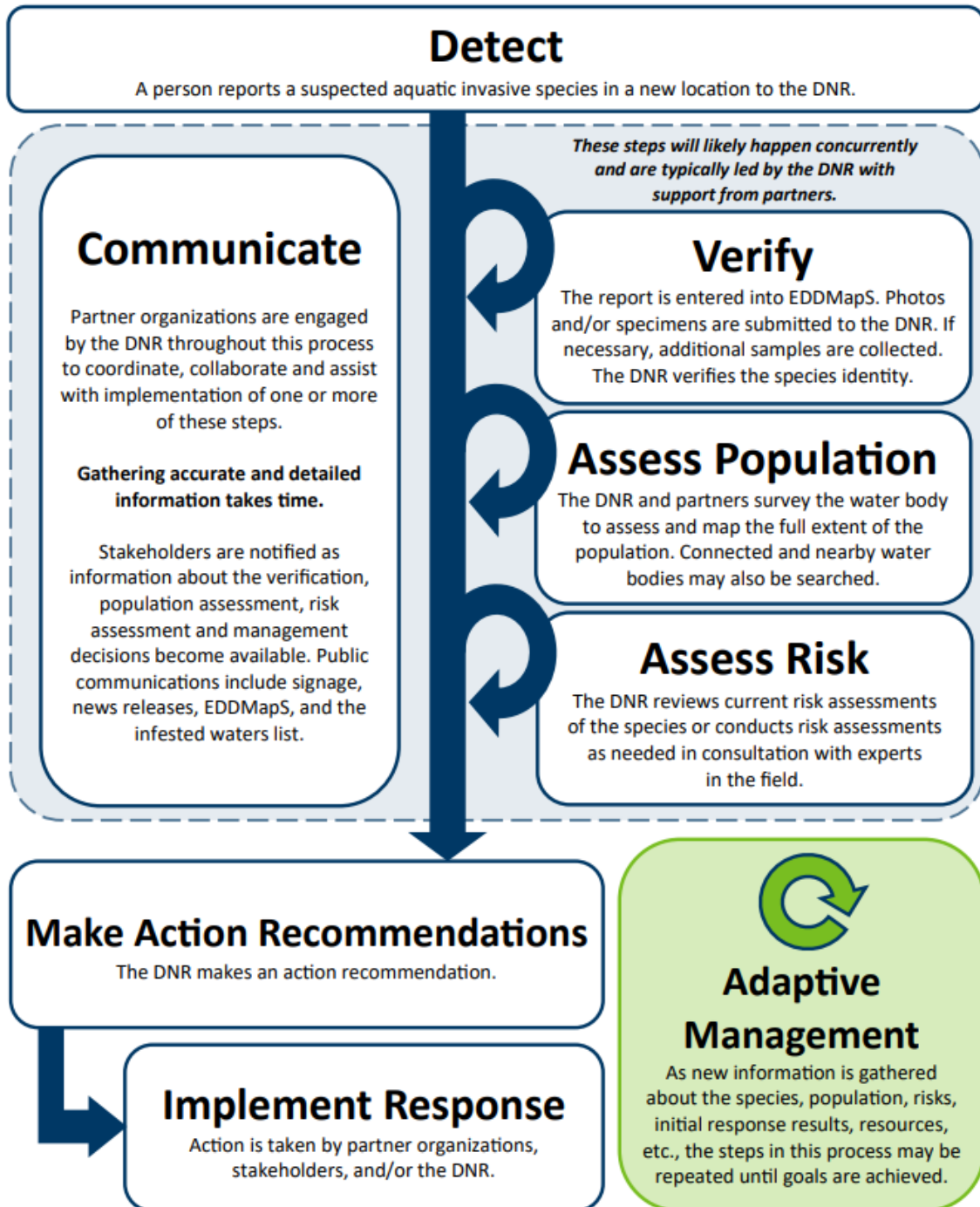
Action	Lead Individual(s)
<p>Inform others of new infestation prior to news releases (e.g., Commissioner's Office, MN DNR area and regional staff, MN Sea Grant, USFWS, NPS, Tribes, area and regional staff)</p> <p>PLPOA, PRWD, Lake Lizzie Assn., Prairie Lake Assn., Otter Tail COLA, Becker and Otter Tail SWCDs, County Commissioners, Legislative Representatives</p>	<p>Communications/Rapid Response Committee</p> <p>Committee, Spokesperson, Lake Coordinator</p>
<p>Draft and issue news release about new introduction or infestation</p>	<p>Communications Committee, Spokesperson, Lake Coordinator, MN DNR-Mark Ranweiler (218)-739-7576</p>
<p>Possible containment action, quarantine area of infestation by PGOLID Rule, mark with perimeter buoys</p>	<p>PGOLID Board</p> <p>PGOLID Buoy Committee</p> <p>Otter Tail County Sheriff (218)-998-8555</p> <p>Superior Lakeside (218)-532-2500</p>
<p>Post signage of quarantine area at access and communicate with Lake Residents</p>	<p>Lake Coordinator, MN DNR, PLPOA</p>
<p>Containment Action News Release</p>	<p>PGOLID Communications Committee, Spokesperson, Lake Coordinator, PLPOA</p>
<p>Enforce AIS containment laws at new infested water.</p>	<p>DNR Conservation Officers William Landmark (651)-296-6157 or Jake Swedberg, Otter Tail County AIS Program Spencer McGrew – (218)-998-8113</p>
<p>Conduct watercraft inspections at public water accesses on waters with newly discovered infestations.</p>	<p>Otter Tail County AIS Program – Spencer McGrew (218)-998-8113</p> <p>MN DNR Inspection Program</p> <p>Regional – Michael Bolinski (218)-739-7576</p> <p>State Coordinator – Adam Doll (651)-259-5056</p>

## Actions triggered by the report of potential AIS within the Pelican Group of Lakes, continued...

Action	Lead Individual(s)
<p>Conduct field survey to determine distribution of species in the waterbody</p> <p>Write a brief report on the results of the survey and post it on the website</p>	Lake Coordinator
<p>Consider survey of aquatic community for future assessment</p> <p>Determine if endangered species present</p>	MN DNR Ecological Review Specialist Jamie Thibodeaux (218)-308-2672
Determine treatment method	PGOLID Board, Lake Coordinator, DNR Regional Specialist Mark Ranweiler (218)-739-7576, DNR Aquatic Invasive Species Program Supervisor Heidi Wolf (651)-259-5152, DNR Commissioner Sarah Strommen <a href="mailto:commissioner.dnr@state.mn.us">commissioner.dnr@state.mn.us</a> , Senator Bill Ingebrigtsen (651)-297-8063
Obtain treatment permits	Lake Coordinator, DNR Regional Specialist Mark Ranweiler (218)-739-7576
Arrange funding for treatment	PGOLID Board, Spokesperson, Lake Coordinator, PLPOA, MN DNR, Pelican River WD <a href="http://www.prwd.org">www.prwd.org</a> , MAISRC <a href="https://www.maisrc.umn.edu/">https://www.maisrc.umn.edu/</a>
Obtain Treatment Proposals	PGOLID Board, Lake Coordinator, MN DNR, MAISRC
Contract for treatment	PGOLID Board
Treatment Decision News release	Communication Committee, Spokesperson, Lake Coordinator
Implement Treatment	Contractor, MN DNR, Lake Coordinator
Monitor Results with short and long-term aquatic surveys.	MN DNR, MAISRC, PGOLID Board, Lake Coordinator
Repeat Containment and Treatment steps as necessary	All Responsible Parties

# AIS Early Detection and Response Process Flowchart

This is a basic visual representation of the process. Real-life scenarios are complex and each will require a unique response.



Source: [https://files.dnr.state.mn.us/natural\\_resources/invasives/rapid-response-ais.pdf](https://files.dnr.state.mn.us/natural_resources/invasives/rapid-response-ais.pdf)



# CONTROL OPTIONS FOR HIGH PRIORITY SPECIES

## Starry Stonewort

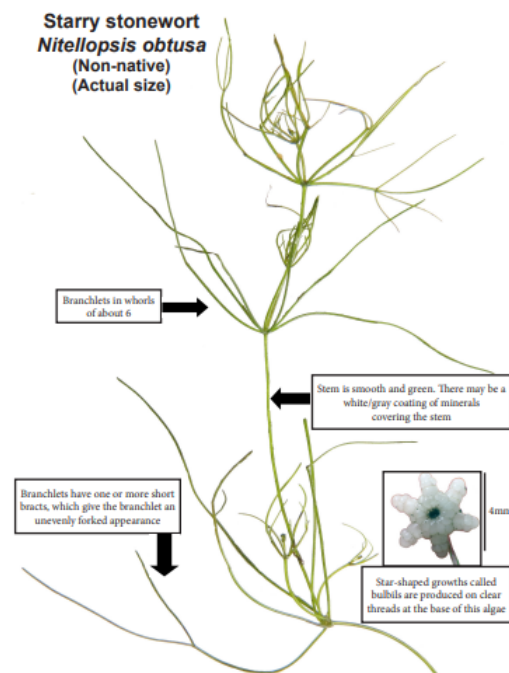
Starry Stonewort (*Nitellopsis obtusa*) is a green branched macro-algae that is rooted to the lake bottom by rhizomes. The branches number four to eight and form whorls around the main stem. The rhizomes form small star shaped bulblets less than a ¼ inch across that are the main reproductive structures. Unchecked starry stonewort grows up to an inch a day and can occupy the entire littoral zone interfering with recreational uses and eliminating native species. Mats of starry stonewort act as a benthic barrier limiting nutrient and oxygen transport to the lake bottom causing a ‘pickling’ of the lake sediments which kills macroinvertebrates and other native fauna. After sediment ‘pickling’ only starry stonewort and/or chara can survive in those sediments for several years.



Starry stonewort Photo by Paul Skawinski

Starry Stonewort is susceptible to several management strategies:

- **Mechanical:** Hand pulling, diver assisted harvesting, benthic barriers, dredging, shading, and/or whole lake drawdowns are effective mechanical control techniques for Starry Stonewort. In Michigan and other eastern states benthic barriers have been more effective at a lower cost when compared to hand pulling and diver assisted harvesting. Benthic barriers are prohibited without special variance permits from the MN DNR. The PGOLID Board feels the use of benthic barriers to control high priority aquatic invasive species meets the MN DNR’s requirements for a variance permit.
- **Chemical:** Copper based algaecides are effective at reducing the density and vitality of starry stonewort. Applying an algaecide as soon as possible after the confirmation/extent survey can reduce the development of reproductive structures and provide more time to determine a suitable eradication response. It may be possible to integrate a copper component into a benthic barrier.

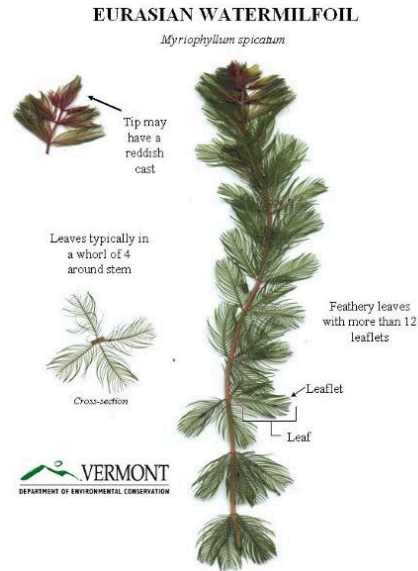


### Status as of July 2024

- 21 infestations in Minnesota
- Closest to Pelican Lake are in the Bemidji area, Walker area, and Brainerd area

## Eurasian Milfoil

Eurasian Milfoil (*Myriophyllum spicatum* spp.) grows from a root crown on the lake bottom forming a tall multi-branched plant. Leaves form whorls of four around the stem with many leaflets, usually 12 to 24 pairs. The root crown is the major overwintering component while plant fragments and stolons are the primary means of reproduction. Left



uncontrolled Eurasian milfoil can choke the littoral areas limiting recreation, interfering with fish spawning, and eliminating native species.

- **Mechanical:** Hand pulling, diver assisted harvesting, benthic barriers, shading, dredging, and/or whole lake drawdowns are effective management techniques for controlling Eurasian Milfoil.
- **Chemical:** Eurasian Milfoil is susceptible to several commonly used aquatic herbicides and applications have been shown to greatly reduce the density and coverage of milfoil. Applying a contact herbicide soon after the initial extent survey will provide additional response time to develop a control and/or eradication strategy.

### Status as of July 2024

- 100s of infestations in Minnesota
- Closest to Pelican Lake are in the Park Rapids area, Walker area, Alexandria area, and Brainerd area

## APPENDICES

### Resources and Authorities Available – From MN AIS Plan

*These factors will be reviewed and answered to the extent possible on an annual basis by the PGOLID Board.*

The following factors should be considered prior to treatment: PGOLID's answers in **Bold**

1. Is there knowledge of the risk of reintroduction, and is the risk low enough to justify eradication?
2. Taken overall, can controls be initiated rapidly? **Yes**
3. Taken overall, is there a will to act? **Yes**
4. Are there decision-making procedures and structures with the power to determine whether attempts at eradication should proceed, how, and who should fund it? **Yes**
5. Has there been a clear assessment of technical, field, administrative, funding, and legal resources available for an eradication attempt? **Yes**
6. Is there acceptance of the need to proceed on the best information available? **Yes**
7. Is there acceptance of short-term, local impacts in return for long-term, widespread benefits? **Yes**
8. Is there acceptance that the “no action” response has serious impacts? **Yes**
9. Do a preponderance of the agencies (and their staff) feel they have a clear responsibility to act, or does one agency have a clear mandate and authority to act? **One agency has a clear mandate and authority (DNR).**
10. Is there recognition and acceptance that a potential eradication effort can be a long-term effort, almost always taking years in the case of plants or other organisms with resistant resting stages? **Yes**
11. Taken overall, is organization adequate? **Yes**
  - a) Is there an ability to quarantine the infested area? **Yes**
  - b) Was there a capacity to survey, to determine whether the species is restricted to the quarantine area? **Yes**
  - c) Will program staff with experience in AIS management and eradication be assigned to direct the control efforts and monitor results? **Yes**
  - d) Are funding sources adequate and of sufficient duration? **Yes**
  - e) Is there effective collaboration among the parties carrying out the effort? **Yes**
  - f) Is there regional collaboration where infestations cross jurisdictions? **Yes**
  - g) Are there provisions for monitoring in order to modify, expand, or end an eradication campaign? **Yes**

## Minnesota Administrative Rules

### 6280.1000 VARIANCE AND LAKE VEGETATION MANAGEMENT PLAN.

#### *Subpart 1. Variance.*

A. The commissioner may issue APM permits with a variance from one or more of the provisions of parts 6280.0250, subpart 4, and 6280.0350, except that no variance may be issued for part 6280.0250, subpart 4, items B and C. Variances may be issued to control invasive aquatic plants, protect or improve aquatic resources, provide riparian access, or enhance recreational use on public waters. The commissioner shall make a determination that there are exceptional circumstances or special or unique conditions based on the criteria in items B and C before granting a variance to control native aquatic plants to provide riparian access or enhance recreational use.

B. The following criteria shall be considered to determine if a variance is justified to control invasive aquatic plants or protect or improve aquatic resources in public waters:

- (1) whether the variance has the potential to increase or protect native aquatic plants, improve water quality, or provide other ecological benefits;
- (2) whether the variance has the potential to prevent the spread of invasive aquatic plants;
- (3) whether the variance would further research or evaluation of invasive aquatic plant control; and
- (4) whether there is a feasible alternative to control invasive aquatic plants or improve aquatic resources.

If these questions can be answered positively than a variance permit for benthic barriers can be justified.s