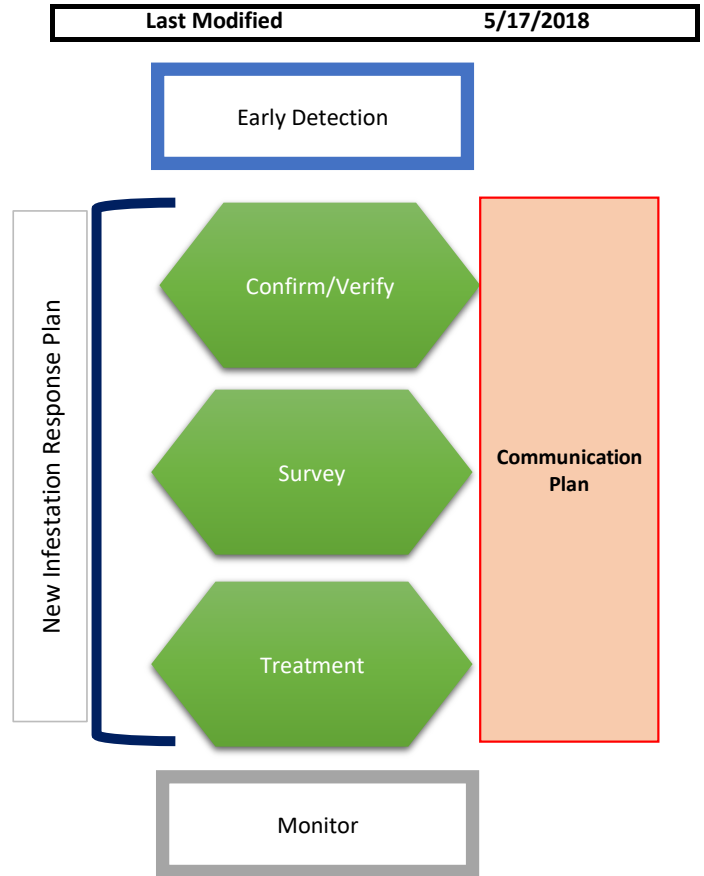


# Purpose Statement

Aquatic invasive species are harmful to the biological, economic, and social functions of a lake. To limit the impacts of these species a robust response plan is necessary. This document is a guidebook for local leaders to coalesce around if a new species is found. This is a living, adaptable, and adoptable guiding document meant to fit the needs of different invasions.

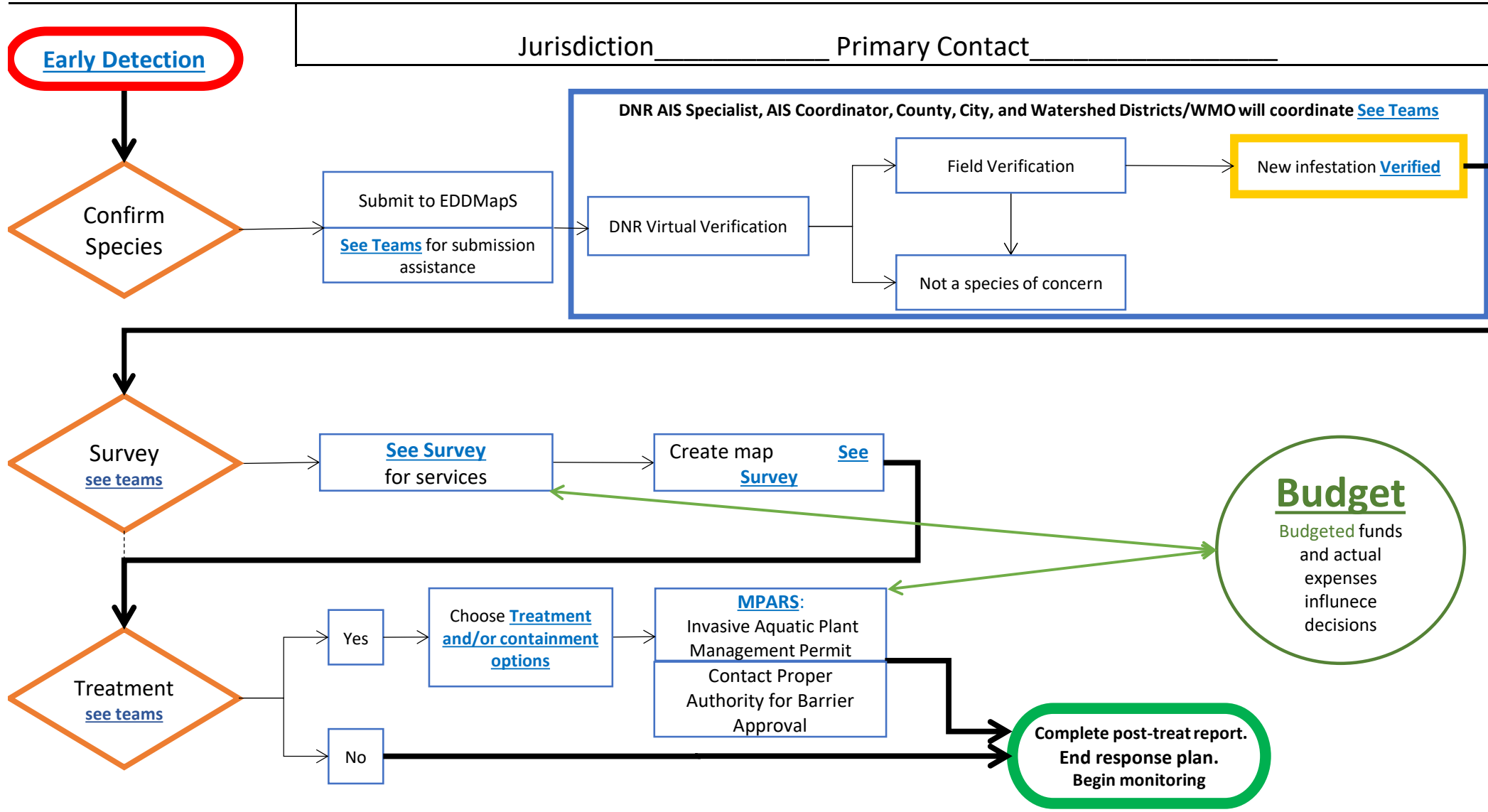
This document is best utilized by lake association members, local AIS Program Coordinators, local government unit staff, special units of government, and state agencies to manage a response. The intent is to fill the need for a framework once a species is detected in the [early detection program](#). Without a robust early detection program, the success of any response plan is doubtful. The NIRP also provides the vehicle to transition from an initial response to long term [treatment and monitoring](#) as invasive species are rarely eradicated.

The intent of this document is to prompt conversations that lead to an understanding of each person's role. To that end this plan can be adapted for individual lakes, cities, counties, or any other geographical reaches. Please utilize this document and change it as needed to best suit your needs. This document is limited by the community's ability to act. Involvement by all stakeholders does increase the probability of success. This starts by creating the necessary relationships before infestations occur.



# New Infestation Response Plan

Last Modified 5/17/2018



Please follow the [Communication Plan](#) throughout this process

Last Modified

#NAME?

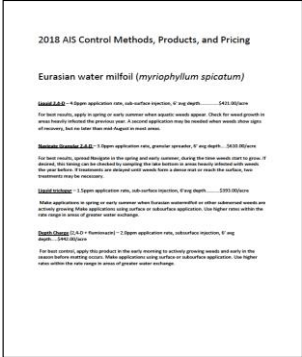
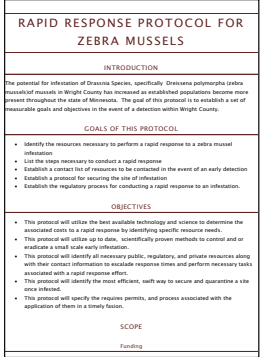
Communications	Last Modified	5/17/2018
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Communication Plan

Initial communication to the public and media will be managed by the DNR. If you are asked about the potential infestation it *before* the DNR publically confirms it, please state "The report needs further investigation. ID is pending and the DNR is handling all communications in regards to species ID."  
*After* the DNR confirms it, communication about the new infestation with your stakeholders is highly encouraged.

<u>Communications Team</u>	<u>Name</u>	<u>Office Phone</u>	<u>Cell Phone</u>	<u>Email</u>	<u>Organization</u>
<b>Primary Communications Staff</b>					
	DNR Lead Communications Staff				
	Local AIS Coordinator				
	Lake Association Representative				
<b><u>Communication Resources</u></b>					
News Release Examples	<a href="#">ZM Example</a>	<a href="#">SSW Example</a>	<a href="#">Carp Example</a>	<a href="#">Aquarium Plant Example</a>	

# Survey/Treatment options

<b>Contractors</b>	
<u>Organization</u>	<u>services</u>
<b>Survey</b>	
Dive Guys	Removal and survey
BlueWater Science	Survey
Matt Berg	Survey
MNDNR	Survey
MNDNR list of surveyers	<a href="#">Click here</a>
<b>Treatment</b>	
Lake management	Monitoring (3rd party): Point intercept assessments
Lake Restoration	
Jacobson Environmental	
Lake Improvement consulting	
PLM Lake and Land Mngt	Prevention: Access Site inspections -usually done tw
<a href="#">MNDNR List of Applicators</a>	
<b>2018 Estimated prices from two companies below. Click images to open.</b>	
	
<b>Verification</b>	
See DNR Rapid Response Plan	<a href="#">Appendix A for several species</a>
<a href="#">Macalester</a>	DNA verification of ZM
<a href="#">New York Botanical Gardens</a>	Starry Stonewort ID
<a href="#">Michael D. Netherland, Ph.D.; US Ar</a>	Hydrilla verification
<b>Survey Protocols: Links below are for reference only. See teams for final survey protocol</b>	
<a href="https://www.dnr.state.mn.us/invasives/aquaticanimals/zebramussel/pilot_project.html">https://www.dnr.state.mn.us/invasives/aquaticanimals/zebramussel/pilot_project.html</a>	
<a href="https://files.dnr.state.mn.us/eco/invasives/ais-delineation-guidance.pdf">https://files.dnr.state.mn.us/eco/invasives/ais-delineation-guidance.pdf</a>	

<b>Last Modified</b>		<b>5/17/2018</b>
<b>Treatment Options</b>		
<u>Species</u>	<u>Treatment</u>	
Zebra mussel	EarthTec (copper sulfate compound)	
Zebra mussel	Potash (potassium chloride, a molluscicide)	
Zebra mussel	Zequanox (biopesticide)	
Zebra mussel	Tarp or Pond Liners	
Zebra mussel	Sand Blanket (3 to 6 inches of sand added to area)	
Zebra mussel	Drawdown (dewater the infested area)	
Starry Stonewort	Hand Pulling	
Starry Stonewort	Suction Dredge	
Starry Stonewort	Diver Assisted Suction Harvest	
Starry Stonewort	Endothall	
Starry Stonewort	Chelated Copper	
Starry Stonewort	Diquat	
Starry Stonewort	Algacide plus harvesting	
Hydrilla	Diquat	
Hydrilla	Copper plus Diquat	
Hydrilla	Endothall	
Hydrilla	Fluridone	
Hydrilla	Imazamox	
Hydrilla	Penoxsulam	
Hydrilla	Bispyribac	
Hydrilla	Flumioxazin	
Herbicide list	<a href="#">MNDNR Approved Herbicide</a>	
<b>Links to most up to date information below</b>		
<a href="https://www.umesc.usgs.gov/aquatic_invasives_team.html">https://www.umesc.usgs.gov/aquatic_invasives_team.html</a>		
<a href="https://www.invasivespeciesinfo.gov/aquatics/controlplans.shtml#ap">https://www.invasivespeciesinfo.gov/aquatics/controlplans.shtml#ap</a>		
<a href="https://www.maisrc.umn.edu/starry-stonewort">https://www.maisrc.umn.edu/starry-stonewort</a>		
<a href="https://www.maisrc.umn.edu/ais-mn">https://www.maisrc.umn.edu/ais-mn</a>		
<a href="https://www.maisrc.umn.edu/ewm-control">https://www.maisrc.umn.edu/ewm-control</a>		

<b>Containment Options</b>	
<u>options</u>	
Control launch access	
Restrict access to the Launch	
Increase watercraft inspections	
Restrict boating in area around new infestation	
Isolate the infestation (e.g partial launch closure)	
Enclose area with silt barrier	
<b>Equipment</b>	
<b>Organization</b>	<b>Resource</b>

Teams and Contacts		Last Modified	
<a href="#">Insert appropriate link</a>			
<b>Teams:</b> Responsible for decision making and spending			
<b>Initial digital verification</b>	Name	Phone	Cell
MNDNR Area AIS Specialist			
County AIS Coordinator			
<b>Field verification</b>	Phone	Email	
County AIS Coordinator			
MNDNR Area AIS Specialist			
Insert Appropriate WDW/WMO			
<b>Containment decision</b>	Phone	Email	
County AIS Coordinator			
MAISRC			
MNDNR Area AIS Specialist			
Insert Lake Association			
Insert Appropriate City			
Insert Appropriate WDW/WMO			
<b>Survey Team</b>	Phone	Email	
County AIS Coordinator			
MNDNR Area AIS Specialist			
Insert Lake Association			
Insert Appropriate City			
Insert Appropriate WDW/WMO			
<b>Budget</b>	Phone	Email	
Lead Finance Coordinator			
County AIS Coordinator			
MNDNR Area AIS Specialist			
Insert Lake Association			
Insert Appropriate City			
Insert Appropriate WDW/WMO			
<b>Treatment</b>	Phone	Email	
County AIS Coordinator			
MNDNR Area AIS Specialist			
MAISRC			
Insert Lake Association			
Insert Appropriate City			
Insert Appropriate WDW/WMO			

Phone	email	

WMO/WD Contacts	Name	Phone	Email

City Contacts	Name	Phone	Email



Case Studies	Last Modified
Case Studies to Support Decision Making	5/17/2018

Title	Author	Species	Link	Notes
Response of the invasive alga starry stonewort (Nitellopsis obtusa) to control efforts in a Minnesota lake	MAISRC	Starry Stonewort	<a href="https://www.maisrc.umn.edu/sites/maisrc.umn.edu/files/glisson_et_al_2018_lake_and_reservoir_management_-_response_of_the_invasive_alga_starry_stonewort_nitellopsis_obtusa_to_control_efforts_in_a_minnesota_lake.pdf">https://www.maisrc.umn.edu/sites/maisrc.umn.edu/files/glisson_et_al_2018_lake_and_reservoir_management_-_response_of_the_invasive_alga_starry_stonewort_nitellopsis_obtusa_to_control_efforts_in_a_minnesota_lake.pdf</a>	
Zebra mussel (Dreissena polymorpha) eradication efforts in Christmas Lake, Minnesota	MAISRC	Zebra Mussels	<a href="https://www.maisrc.umn.edu/sites/maisrc.umn.edu/files/zebra_mussel_dreissena_polymorpha_eradication_efforts_in_christmas_lake_mn_0.pdf">https://www.maisrc.umn.edu/sites/maisrc.umn.edu/files/zebra_mussel_dreissena_polymorpha_eradication_efforts_in_christmas_lake_mn_0.pdf</a>	
Incident Command System Forms	FEMA	All	<a href="#">ICS Forms</a>	
ASTM guidelines on testing toxicity for mussels	ASTM	Zebra Mussels	<a href="https://www.astm.org/Standards/E2455.htm">https://www.astm.org/Standards/E2455.htm</a>	

