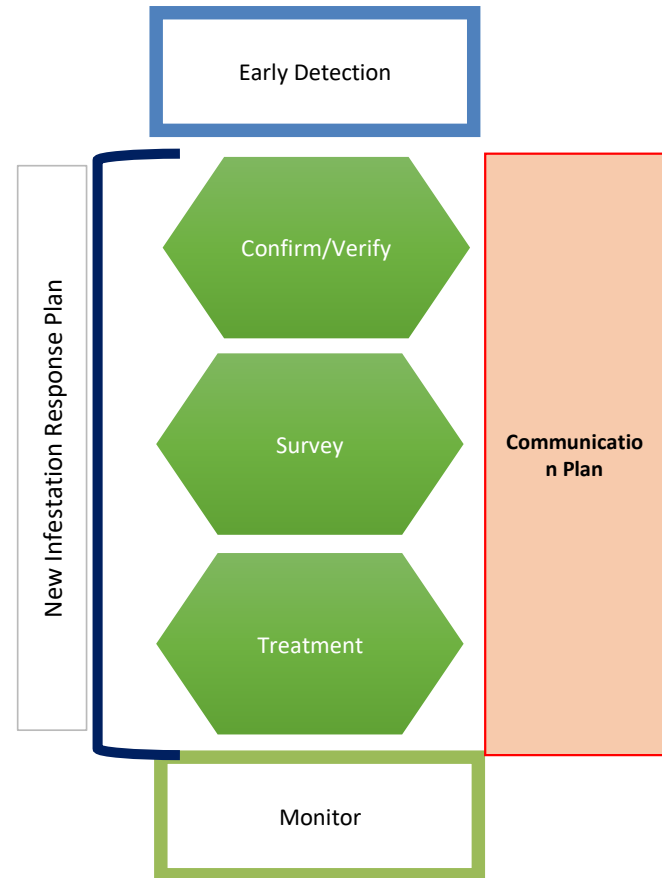


# Purpose Statement

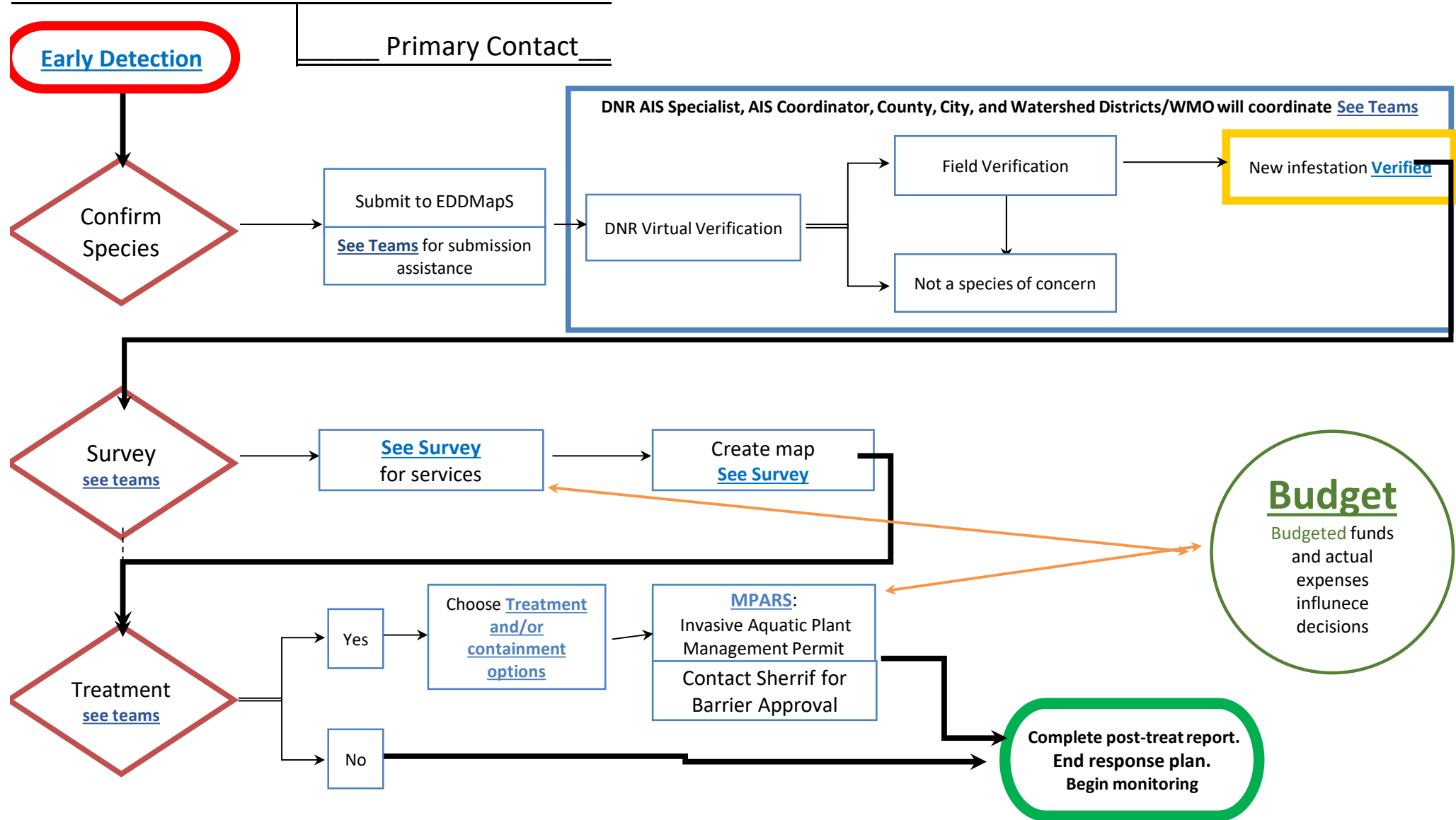
Aquatic invasive species are harmful to the biological, economic, and social functions of a lake. To limit the impacts of these species a robust response plan is necessary. This document is a guidebook for local leaders to coalesce around if a new species is found. This is a living, adaptable, and adoptable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



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

# Communications


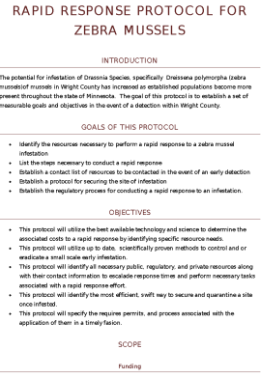
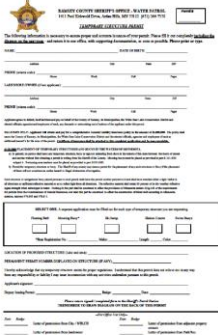
## Communication Plan

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>	

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**Survey/Treatment options:** this is not meant to be exhaustive only a starting resource.

<u>Contractors</u>		<u>Treatment Options</u>		<u>Containment Options</u>
<u>Organization</u>	<u>services</u>	<u>Species</u>	<u>Treatment</u>	<u>options</u>
<p><b>Survey</b></p> <p>Dive Guys Removal and survey</p> <p>BlueWater Science Survey</p> <p>Matt Berg Survey</p> <p>MNDNR Survey</p> <p>MNDNR list of surveyers <a href="#">Click here</a></p> <p><b>Treatment</b></p> <p>Lake management Monitoring (3rd party): Point intercept assessments</p> <p>Lake Restoration</p> <p>Jacobson Environmental</p> <p>Lake Improvement consulting</p> <p>PLM Lake and Land Mngt Prevention: Access Site inspections -usually done tw</p> <p><a href="#">MNDNR List of Applicators</a></p> <p><b>2018 Estimated prices from two companies below. Click images to open.</b></p> <div style="display: flex; justify-content: space-around;"> <div style="width: 45%;">  </div> <div style="width: 45%;">  </div> </div>		<p>Zebra mussel EarthTec (copper sulfate compound)</p> <p>Zebra mussel Potash (potassium chloride, a molluscicide)</p> <p>Zebra mussel Zequanox (biopesticide)</p> <p>Zebra mussel Tarp or Pond Liners</p> <p>Zebra mussel Sand Blanket (3 to 6 inches of sand added to area)</p> <p>Zebra mussel Drawdown (dewater the infested area)</p>	<p>Control launch access</p> <p>Restrict access to the Launch</p> <p>Increase watercraft inspections</p> <p>Restrict boating in area around new infestation</p> <p>Isolate the infestation (e.g partial launch closure)</p> <p>Enclose area with silt barrier- <i>fill in permit below</i></p> <div style="text-align: center;">  </div>	
<p><b>Verification</b></p> <p>See DNR Rapid Response Plan <a href="#">Appendix A for several species</a></p> <p><a href="#">Macalester</a> DNA verification of ZM</p> <p><a href="#">New York Botanical Gardens</a> Starry Stonewort ID</p> <p><a href="#">Michael D. Netherland, Ph.D; US Ar</a> Hydrilla verification</p> <p><b>Survey Protocols: Links below are for reference only. See teams for final survey protocol</b></p> <p><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></p> <p><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></p>		<p>Starry Stonewort Hand Pulling</p> <p>Starry Stonewort Suction Dredge</p> <p>Starry Stonewort Diver Assisted Suction Harvest</p> <p>Starry Stonewort Endothall</p> <p>Starry Stonewort Chelated Copper</p> <p>Starry Stonewort Diquat</p> <p>Starry Stonewort Algacide plus harvesting</p> <p>Hydrilla Diquat</p> <p>Hydrilla Copper plus Diquat</p> <p>Hydrilla Endothall</p> <p>Hydrilla Fluridone</p> <p>Hydrilla Imazamox</p> <p>Hydrilla Penoxsulam</p> <p>Hydrilla Bispyribac</p> <p>Hydrilla Flumioxazin</p> <p>Herbicide list <a href="#">MNDNR Approved Herbicide</a></p>	<p><b>Organization</b></p> <p>Ramsey County Environmental Water Barriers, Boat</p> <p>Rice Creek Watershed District Boat</p> <p>MNDNR Water Barriers</p> <p>Ramsey County Parks and Rec Traffic control barriers</p>	
		<p><b>Links to most up to date information below</b></p> <p><a href="https://www.umes.usgs.gov/aquatic_invasives_team.html">https://www.umes.usgs.gov/aquatic_invasives_team.html</a></p> <p><a href="https://www.invasivespeciesinfo.gov/aquatics/controlplans.shtml#ap">https://www.invasivespeciesinfo.gov/aquatics/controlplans.shtml#ap</a></p> <p><a href="https://www.maisrc.umn.edu/starry-stonewort">https://www.maisrc.umn.edu/starry-stonewort</a></p> <p><a href="https://www.maisrc.umn.edu/ais-mn">https://www.maisrc.umn.edu/ais-mn</a></p> <p><a href="https://www.maisrc.umn.edu/ewm-control">https://www.maisrc.umn.edu/ewm-control</a></p>		<p><b>quipment</b></p>

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**Teams and Contacts**

[View/Get Use this](#)  
[Team/Division/Team](#)

Teams: Responsible for decision making and operating				
Team/Division/Team	Name	Phone	Email	Cell
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Ramsey County AS Coordinator	Justin Townsend	651-266-7277	<a href="mailto:justin_townsend@co.ramsey.mn.us">justin_townsend@co.ramsey.mn.us</a>	715-781-6833
<b>Field Operations</b>				
Ramsey County AS Coordinator				
MNDNR Area AS Specialist				
Insert Appropriate WQ/WMO				
<b>Contaminant Decision</b>				
Ramsey County AS Coordinator				
MNDNR Area AS Specialist				
Insert Appropriate Lake Association				
Insert Appropriate City				
Insert Appropriate WQ/WMO				
Ramsey County Parks and Rec				
<b>Survey Team</b>				
Ramsey County AS Coordinator				
MNDNR Area AS Specialist				
Insert Appropriate Lake Association				
Insert Appropriate City				
Insert Appropriate WQ/WMO				
<b>Budget</b>				
Lead Finance Coordinator				
Ramsey County AS Coordinator				
MNDNR Area AS Specialist				
Insert Appropriate Lake Association				
Insert Appropriate City				
Insert Appropriate WQ/WMO				
<b>Treatment</b>				
Ramsey County AS Coordinator				
MNDNR Area AS Specialist				
Insert Appropriate Lake Association				
Insert Appropriate City				
Insert Appropriate WQ/WMO				
<b>Last Modified</b>	5/17/2018			

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Bald Eagle Lake	Bart Crockett	651-334-5110	<a href="mailto:crockettbar@ramsey.mn.us">crockettbar@ramsey.mn.us</a>
	Boch	651-428-1334	<a href="mailto:boch@ramsey.mn.us">boch@ramsey.mn.us</a>
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	Pam Newcome		<a href="mailto:pnewcome@ramsey.mn.us">pnewcome@ramsey.mn.us</a>
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	Jennifer Marone & David Short		<a href="mailto:jmarone@ramsey.mn.us">jmarone@ramsey.mn.us</a>
	Amanda Phillips		<a href="mailto:amandap@ramsey.mn.us">amandap@ramsey.mn.us</a>
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	Gal & Gary Babbage	651-633-5883	<a href="mailto:babbage@ramsey.mn.us">babbage@ramsey.mn.us</a>
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	SPARC		<a href="mailto:sparc@ramsey.mn.us">sparc@ramsey.mn.us</a>
	Spart Lake		<a href="mailto:spartlake@ramsey.mn.us">spartlake@ramsey.mn.us</a>
	Tom Woodrucks		<a href="mailto:tomwoodrucks@ramsey.mn.us">tomwoodrucks@ramsey.mn.us</a>
	Turtle Lake		
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	Jeff Schuster		<a href="mailto:jschuster@ramsey.mn.us">jschuster@ramsey.mn.us</a>
	Turtle Lake		<a href="mailto:jeffschuster@ramsey.mn.us">jeffschuster@ramsey.mn.us</a>
	Kevin Ouellet/Bernard		<a href="mailto:kouellet@ramsey.mn.us">kouellet@ramsey.mn.us</a>
	Turtle Lake		<a href="mailto:johnkromstedt@ramsey.mn.us">johnkromstedt@ramsey.mn.us</a>
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	Webbsio	612-919-7152	<a href="mailto:webbsio@ramsey.mn.us">webbsio@ramsey.mn.us</a>
	Bryan Millbert	651-415-1276	<a href="mailto:bmillbert@ramsey.mn.us">bmillbert@ramsey.mn.us</a>
	White Bear Lake		<a href="mailto:webbsio@ramsey.mn.us">webbsio@ramsey.mn.us</a>
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	Owasso Lake Association		<a href="mailto:owassolake@ramsey.mn.us">owassolake@ramsey.mn.us</a>
	SLID		<a href="mailto:slid@ramsey.mn.us">slid@ramsey.mn.us</a>
	Owasso Lake Association		<a href="mailto:owassolake@ramsey.mn.us">owassolake@ramsey.mn.us</a>
	Long Lake Homeowners Association		<a href="mailto:longlakehoa@ramsey.mn.us">longlakehoa@ramsey.mn.us</a>
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	Merrill Morse		<a href="mailto:merrillmorse@ramsey.mn.us">merrillmorse@ramsey.mn.us</a>
	Friends of Island Lake		<a href="mailto:friends@ramsey.mn.us">friends@ramsey.mn.us</a>

WMO/WO Contacts	Name	Phone	Email
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RWOW	Marti Kocian	763-388-3075	<a href="mailto:mocian@rwow.org">mocian@rwow.org</a>
VLAWMO	Brian Corcoran	651-204-6075	<a href="mailto:brian.corcoran@vlawmo.org">brian.corcoran@vlawmo.org</a>

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White Bear Lakes	Comie Tallon	651-429-8564	<a href="mailto:comie@whitebearlakes.org">comie@whitebearlakes.org</a>
St. Paul Lakes	Adam Robbins	651-652-2457	<a href="mailto:adam.robbs@st.paul.mn.us">adam.robbs@st.paul.mn.us</a>
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North St. Paul			
Little Canada			
Vadnais Heights			
Maplewood	Virginia Gaynor	651-249-2416	<a href="mailto:Virginia.Gaynor@maplewood.mn.gov">Virginia.Gaynor@maplewood.mn.gov</a>
New Brighton			
Roseville	Ryan Johnson	651-792-7040	<a href="mailto:ryan.johnson@roseville.mn.us">ryan.johnson@roseville.mn.us</a>



### Case Studies

Case Studies to Support Decision Making

Title	Author	Species	Link	Notes
Response of the invasive alga starry stonewort ( <i>Nitellopsis obtusa</i> ) 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">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</a>	
Zebra mussel ( <i>Dreissena polymorpha</i> ) 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>	

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