

**Environment and Natural Resources Trust Fund  
2020 Request for Proposals (RFP)**

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**Project Title:**

**ENRTF ID: 164-D**

Stop Starry Invasion - Community Invasive Species Containment

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**Category:** D. Aquatic and Terrestrial Invasive Species

**Sub-Category:**

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**Total Project Budget: \$** 1,264,955

**Proposed Project Time Period for the Funding Requested:** June 30, 2023 (3 yrs)

**Summary:**

The destructive invasive algae starry stonewort, discovered in 2015, has now spread to 14 lakes. We hope to contain it in those lakes with boat cleaning stations at all accesses.

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**Name:** Jeff Forester

**Sponsoring Organization:** Minnesota Lakes and Rivers Advocates

**Job Title:** \_\_\_\_\_

**Department:** \_\_\_\_\_

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**Web Address:** http://www.mnlakesandrivers.org/

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**Location:**

**Region:** Statewide

**County Name:** Statewide

**City / Township:**

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**Alternate Text for Visual:**

This graph of predicted starry stonewort shows a 50:1 ROI for mitigation today versus a 1:1 ROI for 2030 mitigation. Action now saves money later.

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ TOTAL	_____ %



PROJECT TITLE: Stop Starry Invasion - Community Invasive Species Containment

I. PROJECT STATEMENT

Michigan first discovered starry stonewort in 2005 and took no direct action to contain it. Today over 1,000 Michigan lakes are infested. Minnesota first discovered starry stonewort in 2015 and today fourteen lakes are infested. These lakes have twenty eight vectors of spread - twenty eight boat launch access sites. Starry stonewort spreads prodigiously, is difficult and expensive to manage, prefers the highest quality waters, and significantly impacts fishing, boating and swimming. Resource managers concur that the Aquatic Invasive Species Best Management Practice, BMP is for boaters to completely clean, drain and dry all watercraft and water related equipment before moving it between water bodies.

This project seeks to contain starry stonewort in the fourteen infested lakes by turbocharging clean, drain, dry, best management practices (BMPs) by installing waterless boat cleaning stations at all twenty eight accesses on the fourteen starry stonewort infested lakes. A three year pilot in Hennepin County found that when a waterless boat cleaning station is combined with community engagement, signage, careful location, and pavement markings, AIS violation rates can be reduced by 70+%.

Self cleaning stations have never been deployed in an organized fashion to contain a specific, emerging aquatic invasive species like starry stonewort. By doing so we will preserve access to our lakes and shield other lakes in Minnesota from this new-to-Minnesota invasive algae. We hope to provide a protocol for containing all future invasions by a species new to Minnesota. While this project is focused on starry stonewort, the clean, drain and dry BMPs help prevent both the spread and introduction of all other aquatic invasive species in Minnesota.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Identifying Partners, Selecting Sites, and Enhancing Boat Launches with Outreach and Behavioral Cues Minnesota Lakes and Rivers Advocates will identify key local partners and work with them to choose the best sites to instal waterless cleaning stations, plan access upgrades, and design strategic local AIS education efforts.

These partners will design and implement education ranging from pavement striping, signage, video content, and stop bars. These water access site upgrades will guide traffic flow and educate users. Supporting education and boat ramp upgrades will catalyze the use of waterless cleaning stations.

We will evaluate the success of the program by collecting and correlating two key variables: education impressions and behavior. Thereby, we can evaluate the impacts of our educational efforts by correlating the adoption of BMPs to education/outreach over the lifecycle of the campaign. These efforts will result in long-term educational infrastructure that reduces risk of not only starry stonewort spread, but all other AIS, after the life of the project is finished.

ENRTF BUDGET: \$ 278,330

Table with 2 columns: Outcome, Completion Date. Rows include: 1. Identified local partners (June '20 - May '21), 2. Installation of cleaning stations (June 21' - Aug. '22), 3. Collecting use data via IoT platform (June '22 - Dec. 24')

Activity 2: Install, Service and Maintain Waterless Cleaning Stations at 28 Boat Ramps for 3 Years. The supplier of the waterless cleaning stations will be chosen through an RFP process, but so far only one, the CD3, has been identified. CD3s are built in Minnesota, in use across the United States, are internet connected to



**Environment and Natural Resources Trust Fund (ENRTF)  
2020 Main Proposal Template**

transmit information on use and maintenance needs to the managers of the equipment, and have all the tools required to meet current BMPs. CD3s have low maintenance costs and are designed to last at least ten years. Additionally CD3s are an example of a success story of catalyzing innovation in invasive species management via the Lessard Outdoor Heritage Fund dollars via the Initiative Foundation grants. CD3s provide lights, wet/dry vacuum, air blower, hand tools for physical AIS removal, and a drain plug wrench so boaters can effectively Clean, Drain and Dry their water related equipment. Because the selected boat cleaning station manufacturer has the knowledge and experience we will rely on their technicians to install the equipment. These systems will be free to boaters.

The project will cover the cost of the equipment, installation, software, and annual costs including maintenance, insurance, replacement of tools, and the software interface platform for three years. After three years the stations will be given to the supporting partner and they will assume annual costs. The success of the activity will be evaluated by the use data collected by the software interface platform.

**ENRTF BUDGET: \$986,625**

<b>Outcome</b>	<b>Completion Date</b>
1. Comprehensive educational/outreach plan	<i>July 2020</i>
2. Execution of plan	<i>July '21'- Oct. '23</i>
3. IoT data use data collected	<i>Aug '21- Oct. '23</i>
4. Final Report	<i>Jan. 2024</i>

**III. PROJECT PARTNERS AND COLLABORATORS:**

**A. Partners receiving ENRTF funding**

<b>Name</b>	<b>Title</b>	<b>Affiliation</b>	<b>Role</b>
Jeff Forester	Executive Director	Minnesota Lakes and Rivers Advocates	Stakeholder engagement and project management

**B. Partners NOT receiving ENRTF funding**

<b>Name</b>	<b>Affiliation</b>	<b>Role</b>
County partners	Cleaning Station Site Partners	Manager of cleaning stations
Lake Associations	Cleaning Station Site Partners	Volunteer managers of cleaning stations

**IV. LONG-TERM IMPLEMENTATION AND FUNDING:**

Local partners will be prioritized to receive a cleaning station which agree to take upon the low annual operational costs after the completion of the 3-year project.

**Attachment A: Project Budget Spreadsheet**  
**Environment and Natural Resources Trust Fund**  
**M.L. 2020 Budget Spreadsheet**

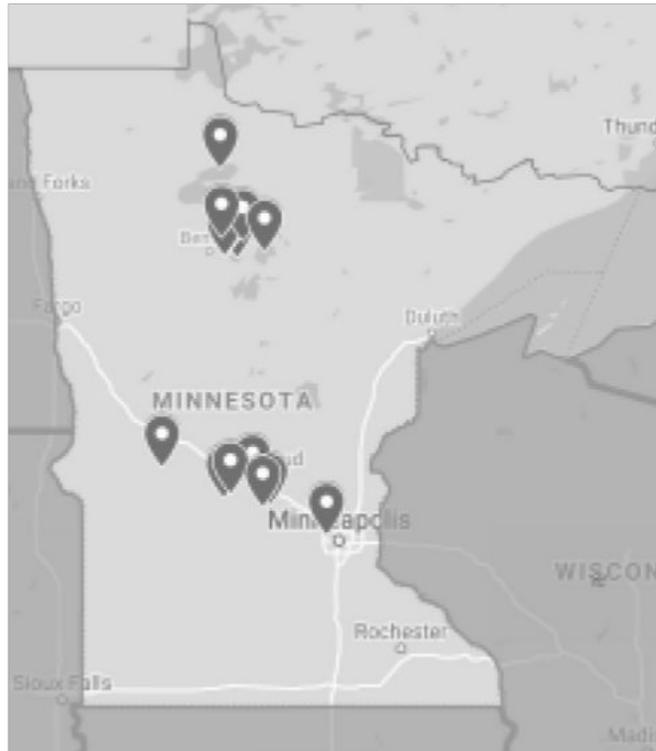


**Legal Citation:**  
**Project Manager: Jeff Forester**  
**Project Title: Stop Starry Invasion - Community Invasive Species Containment**

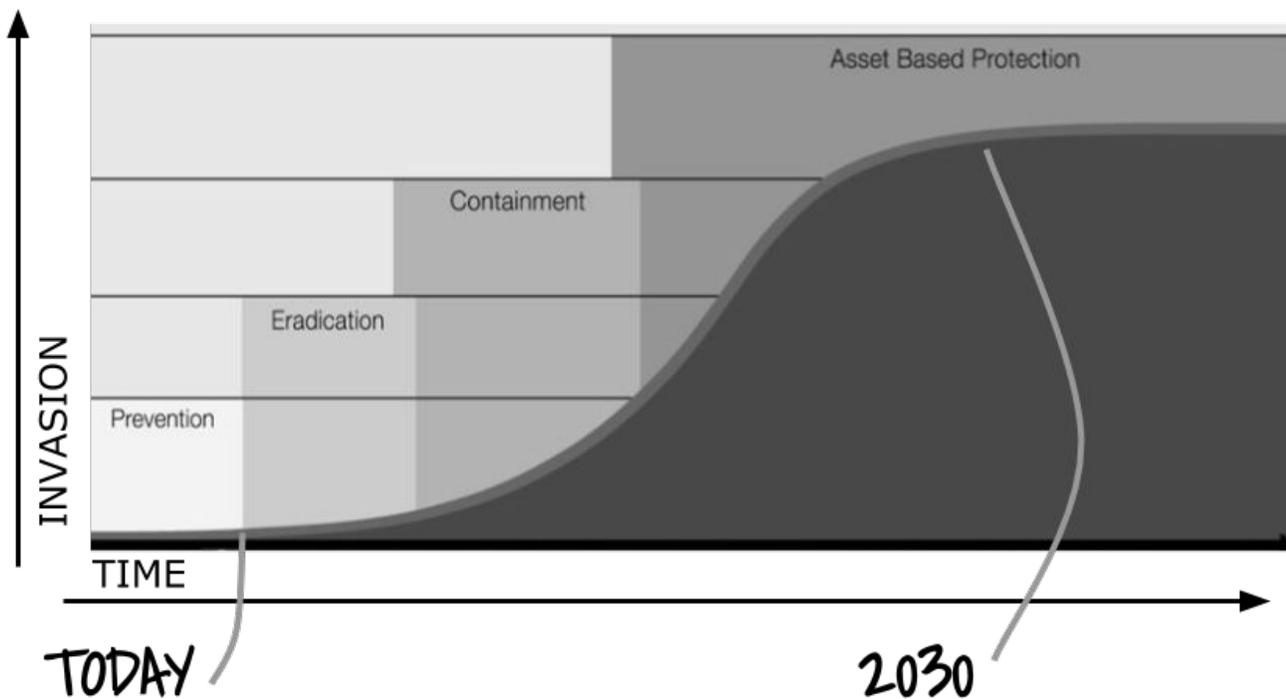
**Organization: Minnesota Lakes and Rivers Advocates**  
**Project Budget: \$1,264,955**  
**Project Length and Completion Date: 3 years (Dec. 2024)**  
**Today's Date: 4/14/2019**

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
<b>BUDGET ITEM</b>				
<b>Personnel (Wages and Benefits)</b>		\$ -	\$ -	\$ -
Project Manager/Admin - 360 hours over 3 years @\$120 per hour (Activities 1&2)		\$ 43,200		
Community Outreach/Contact @ \$70 per hour, estimated 634.5 hours over 3 years (Activity 1)		\$ 44,415		
Site Project manager - Admin @ \$70 per hour, estimated 557 hours over 3 years (Activity 2)		\$ 39,000		
Mileage (Per "Commissioner's Plan" @ \$0.545, 11,448 miles total) (Activity 1)		\$ 6,239		
Mileage (Per "Commissioner's Plan" @ \$0.545, 3,816 miles total) (Activity 2)		\$ 2,080		
Lodging, Per Diem and Incidentals (Per "Commissioner's Plan" (\$71 M&IE +\$124 Lodging) (Activity 1)		\$ 976		
Lodging, Per Diem and Incidentals (Per "Commissioner's Plan" (\$71 M&IE +\$124 Lodging) (Activity 2)		\$ 195		
<b>Professional/Technical/Service Contracts</b>				
Delivery and installation of waterless cleaning systems & concrete pads (28 units @ \$1500 each)		\$ 42,000	\$ -	
<b>Equipment/Tools/Supplies</b>				
Vinyl covers (28 @ \$975 each) Activity 2		\$ 27,300	\$ -	
Concrete bases (28 @ \$850) Activity 2		\$ 23,800		
Signage and pavement marking (28 sites x \$4750/site) Activity 1		\$ 133,000		
Custom educational wraps (28) Activity 1		\$ 28,000		
Septic pump out (\$75/pump out x 4 pump outs/year x 28 stations x 3 years) Activity 2		\$ 25,200		
Tool replacement (\$200/year/station x 28 stations x 3 years) Activity 2		\$ 16,800		
<b>Capital Expenditures Over \$5,000</b>				
Cleaning Stations (Solar Wayside Units @ \$26,000) Activity 2		\$ 728,000		
<b>Fee Title Acquisition</b>				
<b>Easement Acquisition</b>				
<b>Professional Services for Acquisition</b>				
<b>Printing</b>				
<b>Travel expenses in Minnesota</b>				
<b>Other</b>				
Creating starry stonewort specific video and content: Activity 1		\$ 22,500		
3 years of IoT software (28 units x3 years x \$875/unit/year) Activity 2		\$ 73,500		
Software set up fee (7 counties) Activity 2		\$ 8,750		
<b>COLUMN TOTAL</b>		\$ 1,264,955	\$ -	\$ -
<b>SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT</b>				
<b>Non-State:</b>		\$ -	\$ -	\$ -
<b>State:</b>		\$ -	\$ -	\$ -
<b>In kind:</b>		\$ -	\$ -	\$ -
Vendor Site Analysis (20 hrs/site x \$150/hr)	Secured	\$84,000		
Liability and Property Insurance: lifetime of infrastructure (10 years x 28 stations x \$1000)	Pending	\$ 280,000	\$ -	
Post project support for lifetime of units (7 years) x (software)	Pending	\$166,600		
Post project support for lifetime of units (7 years) x (pump out)	Pending	\$ 58,800		
Post project support for lifetime of units (7 years x \$200/year/station x 28 stations)	Pending	\$ 39,200		
Local Governmental Unit: Maintenance (\$25/hr x 1hr/week/unit x 28 units x 10 years x 24 weeks/season)	Pending	\$168,000		
Local Governmental Unit: participation in project (20 hrs/site)	Pending	\$47,600		
<b>Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS</b>		<b>Amount legally obligated but</b>	<b>Budget</b>	<b>Spent</b>
		\$ -	\$ -	\$ -

### Starry Stonewort Infested Lakes in MN 2018



### Starry Stonewort Invasion Curve & Economic Return



Economic Return from AIS Action

F) Project Manager Description and Organization Description:

Minnesota Lakes and Rivers Advocates was formed in 1993 to “Protect Minnesota’s Lake and River Heritage for current and future generations by forging powerful links among lakes, lake advocates and policy makers.” MLR has over 250 lake association members and over 6000 individual members. Over the last 25 years MLR has built a reputation and relationship with key stakeholders and partners across Minnesota.

MLR has organized three Aquatic Invaders Summits, each of which drew over 400 people from across Minnesota and neighboring states. The Summits featured local, national and international experts on Aquatic Invasive Species, AIS issues and programs. The Summits’ goal has been to increase communication, collaboration and cooperation among the many groups working to prevent the spread and manage the current infestations of AIS in Minnesota.

MLR works in the nexus of local government units, academia, state agencies like MN DNR, and local civic groups to address AIS issues. At the 2015 Aquatic Invaders Summit, MLR convened a host of partners to develop the first Local AIS Action Framework, LAAF which was adjusted and approved by attendees at the 2015 Aquatic Invaders Summit including many local units of government staff, DNR staff, academics, marina and resort owners and citizens. This LAAF served as a working template for Counties as they established their AIS programs following passage of the County AIS Prevention Aid.

In 2016 MLR worked with AIS Planners at the DNR and County AIS Specialists to design a standardized template for Counties to use when reporting on the AIS programs established after the County AIS Prevention Aid came online. Last year about half of the counties voluntarily used this framework to report on their AIS efforts, providing better data in a format that is more comparable and trackable.

MLR is a stable and efficient organization with a long track record.

Project Manager: Jeff Forester, Executive Director of Minnesota Lakes and Rivers Advocates

MLR has two staff, and is served by a volunteer board. Jeff Forester, E.D. of Minnesota Lakes and Rivers Advocates has been involved in AIS issues for over a decade. He served on the DNR Commissioner’s Statewide AIS Advisory Committee for four years and on the Initiative Foundation’s grant review committee for their AIS Innovations Grants funded by the Lessard Sams Outdoor Heritage Council. In addition, Jeff meets regularly with many local County AIS Committees, County Board members, Watershed District and Soil and Water Conservation District Managers. He has strong working relationships at both the state and local levels of government.

Because of his unique knowledge of AIS issues, and his deep and diverse relationships with both citizen organizations and professional resource managers at all levels of government, Jeff is best positioned to be the project manager for this effort.