



Environment and Natural Resources Trust Fund

M.L. 2025 Approved Work Plan

General Information

ID Number: 2025-126

Staff Lead: Michael Varien

Date this document submitted to LCCMR: June 9, 2025

Project Title: Aquatic Invasive Species: From Problems to Real-World Solutions

Project Budget: \$5,771,000

Project Manager Information

Name: Cori Mattke

Organization: U of MN - MAISRC

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Project Reporting

Date Work Plan Approved by LCCMR: June 24, 2025

Reporting Schedule: March 1 / September 1 of each year.

Project Completion: June 30, 2029

Final Report Due Date: August 14, 2029

Legal Information

Legal Citation: M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 06a

Appropriation Language: \$5,771,000 the first year is from the trust fund to the Board of Regents of the University of Minnesota for the Minnesota Aquatic Invasive Species Research Center to conduct high-priority projects aimed at solving Minnesota's aquatic invasive species problems using rigorous science and a collaborative process. This appropriation may also be used to deliver research findings to end users through strategic communication and outreach. This appropriation is available until June 30, 2029, by which time the project must be completed and final products delivered.

Appropriation End Date: June 30, 2029

Narrative

Project Summary: MAISRC will launch 16-20 high-priority projects aimed at solving Minnesota's AIS problems using a rigorous, prioritized, and collaborative process. Results will be delivered to end-users through strategic communication and outreach.

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

Aquatic invasive species (AIS) are a real and growing threat to Minnesota's lakes, rivers, and wetlands. The impacts of AIS are being felt from the end of our docks to state budgets – degrading our ecosystems, economies, and way of life. The stakes are high, and Minnesotans are responding. We invest millions of dollars and countless hours each year to prevent and control infestations. These necessary investments have no doubt resulted in positive outcomes; however, they have yet to solve the long-term problem.

In 2012, Minnesota identified a path forward: The Minnesota Aquatic Invasive Species Research Center (MAISRC) was established with ENRTF support, becoming a national leader. A Minnesota program, committed to providing solutions for Minnesota. Through groundbreaking and solutions-oriented research, we have filled key knowledge gaps, developed new tools, informed decisions in real-time, and built capacity at all levels by translating science into action. MAISRC has put solutions to our AIS problems within reach.

It is imperative that we remain committed to a long-term vision for AIS response in Minnesota, one that is informed by actionable science and collaborative management implementation. Success stories are emerging (i.e., non-native phragmites, common carp, etc.) and more must be pursued.

What is your proposed solution to the problem or opportunity discussed above? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & Milestones.

MAISRC is driven to discover research-based solutions to Minnesota's AIS problems. We have a proven track record of addressing manager-identified problems through innovative, rigorous, and highly collaborative research. We have brought together ~37 different project managers and their experienced/diverse teams to pursue ~65 ENRTF-funded research projects (some multi-phase) on a range of high-priority species and strategies for AIS prevention, control, and management. Our accomplishments are numerous, with some highlighted in the infographic. For more, visit: www.maisrc.umn.edu.

We propose to build on past success and continue forward momentum by launching additional projects through our competitive RFP process, informed by our extensive research needs assessment and partner engagement. All research will be vetted by internal and external reviewers to ensure both scientific rigor and practical application. For all new projects and those funded with previous ENRTF appropriations, we will continue to prioritize communication and outreach to ensure results are effectively delivered to managers, practitioners, and the public to build our State's response capacity. We will continue to consult our external Advisory Board, Technical Advisory Board, and our Fellows Group to stay mission-oriented.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

We will continue to advance scientific understanding and build capacity aimed at solving Minnesota's AIS problems. Through workshops and direct communication, we will translate our science and deliver tools directly to local, state, tribal, and federal AIS managers. We will broadly share recommendations with diverse audiences, through media interviews, local presentations, webinars, published manuscripts, and more. Hands-on experiences will train students to be the next generation of AIS professionals. We expect the outcomes of this project will empower Minnesotans, from the dock to the state capital, and everywhere in between, to be an active participant in solving Minnesota's AIS problems.

Project Location

What is the best scale for describing where your work will take place?

Statewide

What is the best scale to describe the area impacted by your work?

Statewide

When will the work impact occur?

During the Project and In the Future

Activities and Milestones

Activity 1: Implementing a collaborative and interdisciplinary AIS research and outreach program

Activity Budget: \$655,371

Activity Description:

The value of a Center-based approach to AIS research is invaluable and reaches far beyond what fragmented efforts could accomplish. We will provide leadership by establishing priorities, facilitating coordination, evaluating research progress in real-time, and being a trusted go-to resource for countless individuals, agencies, and advisory committees. We will provide physical infrastructure, shared equipment, and lab support in ways that maximize resource efficiency and effectiveness across ENRTF-appropriations and individual projects. We will also continue to foster a highly collaborative research community, bringing together the best-and-brightest from across disciplines and institutions to develop creative solutions to complicated problems.

We will continue to support the advancement of our science towards management action and engage the partners at every step in the process. Since inception, MAISRC has been featured in ~600 media stories, published ~150 manuscripts and numerous factsheets, trained ~450 community science volunteers, and presented our work countless times to end-users in in-person, virtual, and written formats. MAISRC staff and researchers meet regularly with managers, practitioners, lake associations, etc. to ensure the translation of technical science into meaningful real-world action. The emphasis we place on end-user engagement and coordination is unique among academic programs and brings significant value to individual projects.

Activity Milestones:

Description	Approximate Completion Date
Prioritize 2028 research needs through research needs assessment process	December 31, 2027
Initial dissemination of results and next steps identified for projects completed December 31, 2027	June 30, 2028
Prioritize 2029 research needs through research needs assessment process	December 31, 2028
Initial dissemination of results and next steps identified for projects completed December 31, 2028	June 30, 2029
Continued dissemination of research results from past MAISRC subprojects and provide science-based recommendations	June 30, 2029

Activity 2: Advancing innovative research to develop solutions and build statewide capacity

Activity Budget: \$5,115,629

Activity Description:

We will offer a competitive RFP in years one and two of this project, launching 20-24 new and continuation subprojects (approximately \$200k-250k each, with two-year durations) addressing Minnesota's highest priority research needs on emerging and existing AIS threats. New lines of research will be focused on needs identified by our comprehensive research needs assessment. These new subprojects will provide a pipeline of innovation and collaboration. Concurrently, existing projects with high potential will be evaluated through the competitive peer-review process and continued. By providing a long-term strategy to build upon and transition promising research, MAISRC is best positioned to realize the value of previous research investments. We have demonstrated the rigor and success of this process by launching and supporting dozens of highly impactful new and continuation subprojects in previous RFP cycles.

Our RFP is open to all Minnesota-based researchers and we encourage creation and collaboration of multi-disciplinary teams. As a result, we have brought together new teams and agency partnerships from across the state and world, adding much-needed expertise and leveraging significant non-ENRTF funds. This coordinated process has also avoided

duplication of research efforts and identified gaps where we have successfully recruited new research expertise to complement our current team.

Activity Milestones:

Description	Approximate Completion Date
Internal and external review of 2025 RFP proposals	September 30, 2025
Award subproject funding to 8-10 proposals from 2025 RFP, subprojects begin on January 1, 2026	September 30, 2025
Issue 2026 RFP on high priority research needs	March 31, 2026
Internal and external review of 2026 RFP proposals	September 30, 2026
Award subproject funding to 8-10 proposals from 2026 RFP, subprojects begin on January 1, 2027	September 30, 2026
Issue 2027 RFP on high priority research needs	March 31, 2027
Subprojects awarded in 2025 RFP completed (subprojects run January 1, 2026 - December 31, 2027)	December 31, 2027
Subprojects awarded in 2026 RFP completed (subprojects run January 1, 2027 - December 31, 2028)	December 31, 2028

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Invasive Species Program Staff	MN Dept of Natural Resources	Staff from the MN DNR Invasive Species Program sit on the MAISRC Technical Committee and participate in the biennial Research Needs Assessment process to identify priority species and research needs.	No
External Researchers & Managers	State, federal, and tribal agencies, counties, watershed districts, soil and water conservation districts, etc.	As a part of the Research Needs Assessment process, MAISRC brings representatives to the table from multiple external research and management agencies to participate in the prioritization of research needs.	No
Community Partners	County AIS managers, lake associations, and non-profits	MAISRC partners with local governments and community organizations to disseminate research findings and help translate research into tools and resources that are available to both managers and the public.	No

Dissemination

Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.

Part of MAISRC's core work is translating AIS science into public and management action. MAISRC provides multiple platforms for information and new research findings about AIS to be widely disseminated including opportunities for stakeholder engagement through public events like the annual Research and Management Showcase, ongoing outreach and Extension programming for stakeholders and communities throughout the state, and making research progress and results accessible to the public and natural resource managers through reports, brochures, the MAISRC website, social media, and via peer reviewed publications and student theses. Additionally, MAISRC organizes a publicly available and indefinite data repository ("MAISRC-DRUM") in partnership with the UM Libraries for data related to ongoing and completed MAISRC projects.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the ENRTF Acknowledgement Guidelines.

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this work be funded?

MAISRC has a demonstrated track record of not only conducting high-quality research, but also providing the public and managers with research tools and science-based information in understandable formats. We are committed to research transparency and long-term public accessibility of data and related products. ENRTF funding would ensure that these activities will continue until 2029. We have, and will continue to, leverage the ENRTF investment with significant UMN support (faculty positions, foregone ICR, etc.), direct legislative funding, and external grant support from 'Partnership

Projects'. However, to ensure MAISRC remains focused on Minnesota's priorities and solutions-oriented research, additional ENRTF support remains crucial.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Building Knowledge and Capacity to Solve AIS Problems	M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 06a	\$4,000,000
Building Knowledge And Capacity For AIS Solutions	M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 06e	\$3,750,000
Developing Research-Based Solutions to Minnesota's AIS Problems	M.L. 2023, , Chp. 60, Art. 2, Sec. 2, Subd. 06b	\$4,941,000

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Project Manager		Lead MAISRC research activities and coordinate with local, state, and national agencies and AIS professionals.			37.1%	1		\$237,518
Co-Project Manager		Coordinate MAISRC research program, outreach to stakeholders, and dissemination of research findings.			37.1%	1		\$145,600
Communications Manager		Maintain MAISRC communications platforms to effectively disseminate research findings and connect MAISRC research with the public.			33.5%	1		\$104,312
Graduate Student		Perform research on the prevention, control and management on AIS in Minnesota. Fringe rate includes cost of tuition.			48%	1		\$119,941
Undergraduate Student		Support MAISRC research program, outreach to stakeholders, and dissemination of research findings.			0%	0.5		\$20,000
							Sub Total	\$627,371
Contracts and Services								
To be awarded to subprojects	Subaward	Budget reserve for awarding to subprojects, upon approval from LCCMR.				0		\$5,115,629
Awarded to subprojects	Subaward	Cumulative budget, spent, and balance for all subprojects combined. Detailed subproject budgets are submitted in an Excel workbook via the attachments page under "Optional Attachments/Support Letter or Other" with the name as the date of submission (e.g. "Budget Update YYYY.MM.DD").				0		-
Private Contractors	Service Contract	Space and facility rental for events, meetings, and workshops (e.g. annual Showcase).				0		\$10,000
							Sub Total	\$5,125,629
Equipment, Tools, and Supplies								

							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Travel for MAISRC staff.	AIS coordination meetings, support of MAISRC research, and dissemination of research results.					\$6,000
	Conference Registration Miles/ Meals/ Lodging	Project Manager registration and travel to two conferences over the course of the project (4 years).	Presentation of research findings.					\$4,000
							Sub Total	\$10,000
Travel Outside Minnesota								
	Miles/ Meals/ Lodging	Project Manager travel to four regional AIS meetings.	Coordination of AIS research with regional managers and researchers.	X				\$4,500
	Conference Registration Miles/ Meals/ Lodging	Project Manager to travel to one national conference over the course of the project (4 years).	Presentation of research findings to strategic audiences and expanding AIS research for Minnesota.	X				\$3,500
							Sub Total	\$8,000
Printing and Publication								
							Sub Total	-
Other Expenses								
							Sub Total	-
							Grand Total	\$5,771,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Travel Outside Minnesota	Miles/Meals/Lodging	Project Manager travel to four regional AIS meetings.	Working with regional AIS managers and researchers is essential to advancing AIS solutions for Minnesota by sharing knowledge and coordinating control/management efforts across state boundaries that are rooted in the latest science. Participating in regional meetings allows MAISRC to engage in AIS prevention and management efforts that will have direct impacts on Minnesota waters.
Travel Outside Minnesota	Conference Registration Miles/Meals/Lodging	Project Manager to travel to one national conference over the course of the project (4 years).	Sharing research findings at regional and national conferences allows MAISRC researchers to connect with others in the field and advance knowledge and AIS solutions. Shared research findings directly impact Minnesota by bringing new ideas and information into the state that can further AIS prevention, control, and management efforts.

Non ENRTF Funds

Category	Specific Source	Use	Status	\$ Amount
State				
In-Kind	University of Minnesota foregone indirect costs	Administrative support of MAISRC activities including payroll and human resources, finance, facilities, and IT.	Secured	\$3,156,541
Cash	Environment and Natural Resources Appropriation M.L. 2023, Ch. 60, Art. 1, Sec. 3, Subd. 3(j)	<p>\$1,820,000 for MAISRC's core work to prioritize, support, and develop research-based solutions that can reduce the effects of aquatic invasive species in Minnesota by preventing spread, controlling populations, and managing ecosystems and to advance knowledge to inspire action by others.</p> <p>\$2,000,000 for Lab to Lakes special project working with local partners to implement MAISRC research findings.</p>	Pending	\$3,820,000
Cash	Environment and Natural Resources Appropriation M.L. 2023, Ch. 60, Art. 1, Sec. 3, Subd. 6, Sec. 9(a)	Lab to Lakes special project to enhance and implement MAISRC's research-based solutions through: (1) implementation of a watershed-scale carp management plan and additional research focused on site-specific method refinement and evaluation; (2) creation of a long-term monitoring program with state and local partners that evaluates the feasibility of whole-lake zebra mussel control projects and the development of criteria for selecting and managing lakes; (3) refinement and implementation of large scale surveillance and early detection methods for high-priority aquatic invasive species; and (4) development and sharing, with relevant experts and stakeholders, contingency plans regarding the potential risks of aquatic invasive species.	Pending	\$1,000,000
			State Sub Total	\$7,976,541
Non-State				
			Non State Sub Total	-
			Funds Total	\$7,976,541

Total Project Cost: \$13,747,541

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [f7333440-8e3.pdf](#)

Alternate Text for Visual Component

The visual component includes a map of Minnesota that depicts research activities throughout the state and highlights notable accomplishments. A description of a three-step process for MAISRC research: 1. Ideas and needs, 2. Research, 3. Real-world solutions. A timeline depicts the MAISRC funding cycle, with overlapping RFPs and 2-year projects....

Supplemental Attachments

Capital Project Questionnaire, Budget Supplements, Support Letter, Photos, Media, Other

Title	File
Full description of visual component	c190e2ab-a2b.docx
UMN Sponsored Projects Office approval	8013afdf-d08.pdf
Budget Update Template	143906a4-3ea.xlsx

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

The MAISRC proposal has been adapted to a work plan by completing the following:

- Reducing the number of subprojects (Activity 2) from 20-24 to 16-20 to reflect the decrease in overall budget that was recommended (\$5,771,000) vs. what was proposed (\$6,500,000)
- Collapsing subproject budget lines into a single Sub Award line in the budget, which will be reallocated as subprojects are approved (as per LCCMR staff recommendation)
- Increasing the core MAISRC budget (Activity 1) by \$4,400 to provide for a more competitive hourly rate for undergraduate personnel
- Including an attached Budget Update template for reporting on subproject budgets
- Providing a description of planned dissemination activities

Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?

N/A

Do you understand that travel expenses are only approved if they follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?

Yes, I understand the UMN Policy on travel applies.

Does your project have potential for royalties, copyrights, patents, sale of products and assets, or revenue generation?

No

Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?

N/A

Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?

N/A

Does your project include original, hypothesis-driven research?

Yes

Does the organization have a fiscal agent for this project?

No

Does your project include the pre-design, design, construction, or renovation of a building, trail, campground, or other fixed capital asset costing \$10,000 or more or large-scale stream or wetland restoration?

No

Do you propose using an appropriation from the Environment and Natural Resources Trust Fund to conduct a project that provides children's services (as defined in Minnesota Statutes section 299C.61 Subd.7 as "the provision of care, treatment, education, training, instruction, or recreation to children")?

No

Provide the name(s) and organization(s) of additional individuals assisting in the completion of this project:

Nicholas Phelps, Director and Associate Professor, MAISRC and UMN Twin Cities

Do you understand that a named service contract does not constitute a funder-designated subrecipient or approval of a sole-source contract? In other words, a service contract entity is only approved if it has been selected according to the contracting rules identified in state law and policy for organizations that receive ENRTF funds through direct appropriations, or in the DNR's reimbursement manual for non-state organizations. These rules may include competitive bidding and prevailing wage requirements

Yes, I understand