



Environment and Natural Resources Trust Fund

2027 Request for Proposal

General Information

Proposal ID: 2027-345

Proposal Title: Status of Mollusks in the Minnesota River Watershed

Project Manager Information

Name: Kathryn Holcomb

Organization: MN DNR - Ecological and Water Resources Division

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Project Basic Information

Project Summary: We will conduct mussel surveys to assess the status and potential recovery of mollusks (mussels, snails, pea clams) in the Minnesota River Watershed and to inform ongoing DNR conservation planning.

ENRTF Funds Requested: \$740,000

Proposed Project Completion: June 30, 2029

LCCMR Funding Category: Fish and Wildlife (D)

Project Location

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

Region(s): SW

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

Narrative

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

Minnesota has more than 100 species of native mollusks (mussels, snails, pea clams) and many are imperiled or lack enough information to determine their conservation status. These species provide important ecological services that help maintain healthy watersheds for Minnesotans. Much of Minnesota's mollusk survey data is 20+ years old or incomplete (especially for snails and pea clams), so the DNR's Center for Aquatic Mollusk Program's (CAMP) is working to resurvey mollusks statewide to update their status, distribution, and conservation needs. The Minnesota River Watershed is a priority for this effort because it historically had among the greatest mussel populations in Minnesota, but experienced major loss in diversity and density due to anthropogenic activities. More recently, conservation and restoration actions have been implemented throughout the watershed to restore stream connectivity and habitat and are expected to benefit mollusk populations. This project will evaluate whether mollusks are recovering in this watershed, what actions may be benefiting them, and what conservation actions are still needed. Additionally, project results will support ongoing DNR conservation planning tools including the Watershed Health Assessment Framework, Rare Species Guide, Natural Heritage Information System, Natural Heritage Review, Minnesota Conservation Explorer, and the Minnesota Wildlife Action Plan.

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.

To understand the current status of mollusks in the Minnesota River watershed, we will conduct timed mollusk surveys using standardized techniques (e.g., snorkeling, SCUBA) and will also collect environmental DNA samples to increase detection of rare species. Several local partners within the watershed will contribute to our survey effort. The University of Minnesota at Mankato will assist with surveys and will provide eDNA gear; the University of Minnesota Extension, CURE MN, and the Ney Nature Center will facilitate a mollusk bioblitz where volunteers will contribute to our survey efforts. We will compile existing environmental data (e.g., water quality) from MPCA, fisheries data from DNR Fisheries and MPCA, and information on stream restoration actions from the DNR, Soil and Water Conservation Districts, and other watershed groups. Analyzing mollusk data with environmental and restoration data will help us understand why and how mollusk status has changed and what conservation actions are still needed for mollusks.

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 produce a mollusk status report as well as a mussel propagation and reintroduction plan for the Minnesota River watershed and will contribute data to six ongoing DNR conservation planning tools. These outcomes will inform status and conservation needs of mollusks in the Minnesota River watershed and also statewide when data are incorporated into CAMP's statewide mollusk survey initiative and other DNR conservation planning tools. Finally, we seek to foster a conservation ethos in members of the public participating in our bioblitz and other outreach efforts by facilitating direct interactions with mollusks and water resources.

Activities and Milestones

Activity 1: Mollusk surveys and analysis

Activity Budget: \$295,600

Activity Description:

We will collect approximately 100 environmental DNA (eDNA) samples and conduct approximately 100 timed mollusk surveys across the Minnesota River watershed following standardized methods. Snails and pea clams will be preserved and identified in the laboratory. Data will be recorded in the field, entered into CAMP's database, and analyzed along with historical survey data and existing online biological (e.g., fish) and environmental (e.g., water quality) data to examine trends in mollusk species richness, abundance, distribution and conservation status in relation to environmental parameters. Threats and conservation needs for mollusks will also be identified. Collaboration with partners within the watershed will expand our mussel and snail survey effort. Susan Colvin and her students at the University of Minnesota in Mankato will conduct surveys for mussels and provide additional eDNA sampling gear. Amy Rager (University of Minnesota Extension), Peg Furshong (CURE MN), and Liz Sheppard (Ney Nature Center) will facilitate a 2–3-day mollusk bioblitz (Activity 3) to contribute to our survey and outreach efforts. In both cases, the DNR will coordinate with partners to select survey sites and provide training on survey protocols.

Activity Milestones:

Description	Approximate Completion Date
Complete mollusk bioblitz	October 31, 2028
Complete 100 eDNA surveys	June 30, 2029
Complete 100 mollusk surveys	June 30, 2029
Data analysis	June 30, 2029

Activity 2: Products and support for conservation planning

Activity Budget: \$295,400

Activity Description:

Survey data collected from Activity 1 will contribute to several ongoing DNR conservation planning efforts, which will allow CAMP, the DNR, and other stakeholders make up-to-date, informed conservation decisions. With survey data collected from Activity 1 and existing environmental and restoration information, we will: 1) produce a project report on the status, distribution, threats, and conservation needs of mollusks in the Minnesota Watershed for use by the DNR and stakeholders, 2) produce a mussel propagation and reintroduction plan for the Minnesota River watershed; 3) update the DNR's Rare Species Guide mussel accounts; and 4) share data with the DNR's Watershed Health Assessment Framework, Natural Heritage Information System, Natural Heritage Review, Minnesota Conservation Explorer, and the Minnesota Wildlife Action Plan. Survey data will also contribute to CAMP's ongoing statewide mollusk survey initiative.

Activity Milestones:

Description	Approximate Completion Date
Report on the status, distribution, threats, and conservation needs of mollusks in the Minnesota Watershed	June 30, 2029
Complete a mussel propagation and reintroduction plan for the Minnesota River watershed	June 30, 2029
Update DNR Rare Species Guide accounts for mussels	June 30, 2029
Provide mollusk survey data to six of DNR's ongoing conservation planning efforts	June 30, 2029

Activity 3: Mollusk bioblitz and outreach

Activity Budget: \$149,000

Activity Description:

A 2-3 day mollusk bioblitz will contribute to survey efforts and provide Master Naturalists and the public with an opportunity to search for mollusks and learn about their ecology and conservation needs. Partners at the University of Minnesota Extension, CURE MN, and Ney Nature Center will coordinate volunteer recruitment and engagement for the bioblitz, and the DNR will provide training and educational content including posters and field guides. The DNR will also design artwork for a lapel pin, which will celebrate the volunteers' participation. We will participate in several outreach activities to share project findings and educate residents within the Minnesota River watershed on the benefits that mollusks provide to their communities. Outreach activities include two events at the Ney Nature Center, two continuing education trainings for Master Naturalists, and at least two other outreach opportunities with other stakeholders within the study area. Additionally, we will deploy an underwater camera to capture video footage of mussels in their natural environment to help people understand how mussels live in our rivers and lakes. If video footage is successful over long periods of time, we may trial a live-feed Mussel Cam, similar to the DNR's Eagle Cam.

Activity Milestones:

Description	Approximate Completion Date
Complete mollusk bioblitz with volunteers	October 31, 2028
Outreach with stakeholders in the Minnesota River watershed (at least six events)	June 30, 2029
Print mussel posters and mussel identification field guides	June 30, 2029
Collect underwater mussel footage and test deployment of a live-feed Mussel Cam	June 30, 2029

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Liz Sheppard	Ney Nature Center	Activity 1, 3 - Mollusk bioblitz, organize and engage volunteers	No
Peg Furshong	CURE MN	Activity 1, 3 - Mollusk bioblitz, organize and engage volunteers	No
Amy Rager	University of Minnesota Extension	Activity 1,3 - Mollusk bioblitz, organize and engage volunteers	No
Susan Colvin	University of Minnesota, Mankato	Activity 1 - Susan and students will assist with mussel surveys and provide eDNA sampling gear	No
Dan O'shea	Mn DNR	Activity 1 - DNR stream restoration information contact	No
Alison Cariveau	Mn DNR	Activity 2 - Minnesota Wildlife Action Plan contact	No
Kevin Krause	Mn DNR	Activity 2 - Watershed Health Assessment Framework contact	No
Lisa Joyal	Mn DNR	Activity 2 - Natural Heritage Information System contact	No
Molly Barrett	Mn DNR	Activity 2 - Natural Heritage Review, Minnesota Conservation Explorer contact	No
Barbara Carre	Mn DNR	Activity 2 - Rare Species Guide contact	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.

The DNR will expand public awareness and engagement of native mollusks and Minnesota's water resources through the mollusk bioblitz, participation at established outreach events within the Minnesota River watershed, our program newsletter, and a variety of social media platforms.

Project results will be communicated in two reports: 1) a mussel propagation and reintroduction plan for the Minnesota River watershed and 2) a project report assessing whether mollusks are recovering in the Minnesota River watershed. The project report will be posted to our DNR mussel program website and will be advertised via social media, the CAMP newsletter, and direct dissemination to natural resource partners. Additionally, we will share project survey data with six ongoing DNR conservation planning tools.

ENRTF will be acknowledged on all outreach and communications materials mentioned above using the ENRTF logo and appropriate citation language.

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?

This project advances the DNR's Conservation of Aquatic Mollusks Program (CAMP) and its holistic approach to mollusk recovery in Minnesota. Survey data will facilitate a statewide status reassessment and directly inform propagation and reintroduction priorities within the Minnesota River watershed. By strategically leveraging federal State Wildlife Grants for surveys alongside LCCMR and Clean Water Legacy support for propagation, CAMP maximizes conservation impact. Consequently, no additional LCCMR funding is requested to fulfill the specific objectives of this project.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Restoring Mussels in Streams and Lakes - Continuation	M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 08b	\$619,000
Restoring Mussels in Streams and Lakes - Continuation	M.L. 2023, , Chp. 60, Art. 2, Sec. 2, Subd. 08d	\$825,000
Restoration and Outreach for Minnesota's Native Mussels	M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 04b	\$1,258,000

Project Manager and Organization Qualifications

Project Manager Name: Kathryn Holcomb

Job Title: Mussel Program Supervisor

Provide description of the project manager's qualifications to manage the proposed project.

Kathryn Holcomb has supervised the Mn DNR's freshwater mussel program since 2022. She manages a mix of about 7 state and federal funding sources annually. Kate has worked for State DNR agencies in Florida, Utah, and Minnesota since 2010, and is experienced with conservation of freshwater mussels, snails, and nongame freshwater fishes.

Organization: MN DNR - Ecological and Water Resources Division

Organization Description:

The Mn DNR's Center for Aquatic Mollusk Programs (CAMP) is dedicated to conservation of freshwater mollusks in Minnesota, with the ultimate goal of preserving self-sustaining mollusk populations across the state. Given mollusks' important role in healthy, functional aquatic ecosystems, this contributes to the DNR's Ecological and Water Resources Division's vision of "healthy lands and waters throughout Minnesota".

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Supervisor		Grant administration, assistance with Activities 1-3			25%	0.2	X	\$29,000
Research Scientist II		Lead biologist for Activities 1-3			25%	1	X	\$133,500
Specialist Intermediate		Assist with Activities 1-3			25%	2	X	\$279,500
Specialist		Assist with Activities 1-3			25%	0.8	X	\$97,000
Intern		Assist with Activities 1 and 3			10%	0.6		\$32,000
							Sub Total	\$571,000
Contracts and Services								
TBD	Service Contract	Process eDNA samples and analysis				-		\$30,000
TBD	Service Contract	Create wearable mollusk pins for mollusk blitz participation and outreach events				-		\$250
							Sub Total	\$30,250
Equipment, Tools, and Supplies								
	Tools and Supplies	Ethanol, sample containers, label paper, indelible ink pens	Equipment for preserving mollusk voucher specimens					\$3,000
	Tools and Supplies	SCUBA air tank refills, annual SCUBA gear safety inspections and maintenance, new dive gear (wetsuits, boots, weights, snorkel, mask). No item will cost over \$5,000.	Gear needed for conducting mollusk surveys. Maintenance and inspections needed to maintain safe diving.					\$10,000
	Tools and Supplies	Gloves, kitchen sieves, sorting trays, paper data sheets, pencils, paper maps	Equipment for volunteers assisting with mollusk bioblitz					\$250
							Sub Total	\$13,250
Capital Equipment								
							Sub Total	-

Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Fleet costs, meal and mileage reimbursement, hotel costs.	Travel to conduct mollusk surveys in the Minnesota River watershed					\$59,415
	Miles/ Meals/ Lodging	Hotel costs, meal and miles reimbursement	Travel for mollusk bioblitz and outreach events					\$3,504
							Sub Total	\$62,919
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Printing	DNR mussel posters	Posters for outreach events and mollusk bioblitz. Print CAMP's two popular posters: "Mussels of Minnesota" and "Life cycle of the Freshwater Mussel".					\$1,000
	Printing	Mn DNR's new freshwater mussel identification guide (2026 edition)	Provide new, printed mussel identification guides for mollusk bioblitz volunteers and provide guides at outreach events					\$5,000
							Sub Total	\$6,000
Other Expenses								
		DNR's direct and necessary costs pay for activities that are directly related to and necessary for accomplishing appropriated projects. HR Support (\$11,643), Safety Support (\$1,527), Financial Support (\$8,217), Communication Support (\$2,086), IT Support (\$31,565), and Planning Support(\$1,543).	Direct and necessary (overhead costs)					\$56,581
							Sub Total	\$56,581

							Grand Total	\$740,000
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Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Personnel - Supervisor		Grant administration, assistance with Activities 1-3	Classified : This position does not have a permanent dedicated funding base and so the MN DNR cannot backfill the ENRTF portion of their salaries. Classified staff manage this program but they may not be retained to work on mussels without the support of this ENTRF grant. Retaining these positions is essential for implementing this project.
Personnel - Research Scientist II		Lead biologist for Activities 1-3	Classified : This position does not have a permanent dedicated funding base and so the MN DNR cannot backfill the ENRTF portion of their salaries. Classified staff manage this program but they may not be retained to work on mussels without the support of this ENTRF grant. Retaining these positions is essential for implementing this project.
Personnel - Specialist Intermediate		Assist with Activities 1-3	Classified : This position does not have a permanent dedicated funding base and so the MN DNR cannot backfill the ENRTF portion of their salaries. Classified staff manage this program but they may not be retained to work on mussels without the support of this ENTRF grant. Retaining these positions is essential for implementing this project.
Personnel - Specialist		Assist with Activities 1-3	Classified : This position does not have a permanent dedicated funding base and so the MN DNR cannot backfill the ENRTF portion of their salaries. Classified staff manage this program but they may not be retained to work on mussels without the support of this ENTRF grant. Retaining these positions is essential for implementing this project.

Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
			Non State Sub Total	-
			Funds Total	-

Total Project Cost: \$740,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [b20e8535-f66.pdf](#)

Alternate Text for Visual Component

Visualization of the DNR's Center for Aquatic Mollusk Program's (CAMP) proposed project objectives and expected outcomes....

Supplemental Attachments

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

Title	File
Letter of Support, Ney Nature Center	c3c8debc-87c.pdf
Letter of Support, University of Minnesota Extension	f4cf0b54-cba.pdf
Letter of Support, University of Minnesota, Mankato	a77234c6-217.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

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 Commissioner's Plan applies.

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

Yes

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

Yes

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

No

Does your project include original, hypothesis-driven research?

No

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")?

Yes

Do you certify that background checks are performed for background check crimes, as defined in Minnesota Statutes, section 299C.61, Subd. 2, on all employees, contractors, and volunteers who have or may have access to a child to whom children's services are provided by your organization?

Yes

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

Minnesota DNR, Ecological and Water Resources: Kathryn Holcomb, Lindsay Ohlman, Jordan Holcomb, Bernard Sietman, Zoe Schroeder, Dan O'Shea

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