



Environment and Natural Resources Trust Fund

2027 Request for Proposal

General Information

Proposal ID: 2027-211

Proposal Title: A Bird's Eye View: One Health STEM Programming

Project Manager Information

Name: Evangeline Holley

Organization: U of MN - Raptor Center

Office Telephone: (612) 888-3594

Email: holle276@umn.edu

Project Basic Information

Project Summary: Using a One Health approach, The Raptor Center proposes providing holistic environmental education focused on raptors, inspiring and activating youth in under-resourced schools and engaging their families through community events.

ENRTF Funds Requested: \$232,000

Proposed Project Completion: June 30, 2029

LCCMR Funding Category: Small Projects (G)

Secondary Category: Fish and Wildlife (D)

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

Narrative

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

Students in under-resourced schools across Minnesota continue to lack access to engaging, high-quality STEM programming that inspires participation in environmental conservation. At the same time, environmental challenges affecting Minnesota's ecosystems are increasingly complex, making it essential that youth understand the interconnectedness of these systems.

For over 50 years, The Raptor Center (TRC) has fostered environmental literacy and stewardship. Building on previous grant cycles, we will center a One Health approach that connects plants, wildlife, water, air, and human well-being as interdependent systems. Through live raptor presentations and curriculum aligned with Minnesota State Science Standards, students will explore the interconnectedness of ecosystems and their role in preserving Minnesota's natural resources. This engagement will extend beyond our classroom visits, as educators will have the ability to check out kits from the Science Museum of Minnesota's (SMM) Lending Library with curriculum and materials for their students to continue learning. All curriculum and resources will be translated into Spanish, Somali, and Hmong, to make it easily accessible.

To deepen and sustain impact, we plan to offer community engagement opportunities that adapt classroom curriculum into interactive, multigenerational experiences. Engaging students alongside their families cultivates a shared, action-oriented commitment to protecting Minnesota's environment.

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.

Building on what we learned through our previous ENRTF grant, TRC is expanding its live raptor education programming to strengthen student understanding of the One Health concept. Using live raptors as powerful indicators of environmental health, we will help students explore how these birds depend on healthy, functioning ecosystems. By connecting raptor health to environmental health, students can gain a clear, tangible understanding of how human, animal, and ecosystem well-being are interconnected.

We will deliver 125 education programs to under-resourced schools across Minnesota, intentionally designed to address ongoing ecological challenges and equip younger generations with knowledge and motivation to respond. Programming will be aligned with Minnesota State Science Standards and inspire students to care for their environment and the wildlife and natural resources within it. In addition, we will partner with the SMM Lending Library, developing kits with curriculum and materials that will allow educators the flexibility to extend student learning beyond our classroom visits. For impact outside the classroom, we will participate in 8 community events, creating opportunities for families to engage with the same One Health concept. Through multiple, reinforcing touchpoints, this work cultivates environmental stewardship and long-term conservation ethics across Minnesota communities.

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?

With newly developed, interactive, One Health-focused curriculum delivered through in-school and community programming, both students and their families will engage with environmental and STEM concepts. Program participants will leave with a better understanding of the interconnectedness of the health of Minnesota ecosystems and our own health, a greater awareness of how their actions will affect their environment and the wildlife within it, and what they can do to help protect and preserve Minnesota wildlife and ecosystems. They will be inspired to protect, conserve, preserve, and enhance our state's natural resources.

Activities and Milestones

Activity 1: In-School Environmental Programs with Live Raptors

Activity Budget: \$155,600

Activity Description:

During the previous grant cycle, TRC used live ambassador raptors and updated programming in under-resourced schools identified through indicators such as historic free and reduced lunch data, participation in federal Title programs, and limited access to nature-based education opportunities.

Building on lessons learned, this cycle centers on developing a new, interactive curriculum grounded in the One Health concept as a unifying framework. This curriculum will help students understand the interconnectedness of plants, wildlife, water, raptors, and humans - and the importance of treating each with respect in order to preserve Minnesota's natural resources. Two standards-based curricula will be created to allow schools to schedule a second in-person program if desired, and all curriculum will be translated into Spanish, Hmong, and Somali. Developed by a Raptor Center naturalist in collaboration with the TRC Education Director, the curriculum will incorporate current best practices in environmental education and include an interactive activity that deepens student engagement and strengthens content retention beyond traditional lecture-style learning. Over the course of the grant period, 125 programs will be delivered to 40 schools, 29 of which will be in the seven-county Twin Cities Metropolitan Area and 11 of which will be in Greater Minnesota.

Activity Milestones:

Description	Approximate Completion Date
Develop new One Health focused curriculum and classroom activity	December 31, 2027
Pilot in-school program at two schools and update based on teacher feedback	March 31, 2028
2027-2028 School Year: Deliver 25 programs to 5 schools	June 30, 2028
2028-2029 School Year: Deliver 100 programs to 35 schools	June 30, 2029
Complete comprehensive evaluation of school programming to assess effectiveness in achieving educational objectives/engaging students.	June 30, 2029

Activity 2: Family Community Events

Activity Budget: \$46,400

Activity Description:

The Raptor Center will host family-friendly booths and programs at community events, featuring hands-on activities and live raptor demonstrations designed to reinforce and extend the One Health concept introduced during school programming. We will participate in 8 community events, 6 within the seven-county Twin Cities Metropolitan Area and 2 in Greater Minnesota, ensuring geographic balance and expanded access.

The school curriculum will be thoughtfully adapted to fit a community setting, maintaining alignment with Minnesota State Science Standards while making content accessible and engaging for multigenerational audiences. Digital resources provided as well as a written copy of the curriculum presented will be translated into Spanish, Somali and Hmong. These events will provide families meaningful opportunities to learn together, strengthen connections between classroom learning and real-world environmental stewardship, and inspire participants to become advocates for Minnesota's natural resources. Ongoing program evaluation throughout the grant period will assess effectiveness and guide continual improvement of booth activities and community programming to maximize impact.

Activity Milestones:

Description	Approximate Completion Date
Adapt One Health school curriculum to a community setting.	June 30, 2028
Participate in 8 community events.	June 30, 2029
Complete comprehensive evaluation of family community events to evaluate and enhance effectiveness/impact.	June 30, 2029

Activity 3: Kits for educator use with extension curriculum and activities

Activity Budget: \$30,000

Activity Description:

During the last grant cycle, The Raptor Center expanded family learning resources by creating printed materials and enhancing its digital platform with STEM fact sheets, field guides, and outdoor extension activities, supporting continued engagement with environmental education beyond in-person programs.

Building on this foundation, the next phase focuses on developing comprehensive educational kits to extend classroom learning following The Raptor Center’s in-school program. Because multiple in-person visits can be difficult for schools to schedule, these kits will provide an accessible way for educators to reinforce and expand on our program concepts. Each kit will include One Health focused curriculum, detailed lesson plans, all necessary classroom supplies, and biofacts or high-quality reproductions for hands-on learning. Designed to be turnkey, the kits will enable a complete lesson that extends the program’s impact beyond a single visit. Curriculum and resources within the kits will also be translated into Spanish, Somali, and Hmong.

The kits and curriculum will be developed in partnership with the Science Museum of Minnesota Lending Library, leveraging their expertise in curriculum development and kit creation. Housed and distributed through the Lending Library, the kits will remain available permanently, ensuring long-term access for schools.

Activity Milestones:

Description	Approximate Completion Date
Develop educational kits.	February 28, 2028
Pilot kits at two schools and update kits based on teacher feedback.	March 31, 2028
2027-2028 School Year: Kits checked out to participating schools.	June 30, 2028
2028-2029 School Year: Kits checked out to participating schools.	June 30, 2029
Complete comprehensive evaluation of kits to assess effectiveness in achieving educational objectives/engaging students.	June 30, 2029

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Alyssa McDuffee	Science Museum of Minnesota	STEM Library Materials Coordinator	Yes

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 conclusion and results of this program will be shared through a combination of presentations, documentation, and public outreach to ensure broad participation, awareness, and long-term impact. Key findings from program evaluation will be presented to The Raptor Center staff and over 300 volunteers, providing insights that can be used to refine environmental education programs, strengthen community partnerships, and inform future grant proposals. Results and lessons learned will also be shared with schools, educators, and community organizations to support improved stewardship and management of Minnesota’s natural resources.

Throughout the grant period, program progress will be documented and shared with our 80,000+ social media followers, highlighting activities, outcomes, and the role of the Environmental and Natural Resources Trust Fund in supporting this work. Educational resources, curriculum, and program materials will be preserved and made accessible for ongoing use, extending the longevity of collections and products developed with this funding. Kits developed in partnership with the SMM Lending Library will continue to be available to Minnesota educators permanently as part of the Lending Library collection. All dissemination efforts will include ENRTF attribution per the Acknowledgement Guidelines, promoting public awareness and encouraging behavioral changes that protect, conserve, and enhance Minnesota’s environment.

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?

During this grant period, we will leverage existing relationships with under-resourced schools and community partners and work to establish new relationships. Comprehensive evaluation of the new curriculum and its effectiveness both in the classroom and at community events will measure impact and be used to refine our efforts. By the end of the grant, we will have a new One Health-focused curriculum and digital resources that can be used broadly to inspire Minnesota youth and their families in collective environmental stewardship. In addition, the kits developed will be available for educators at the SMM Lending Library after the grant period.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Expanding Access to Environmental Education for Underserved Communities	M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 05g	\$178,000
Reducing Biophobia & Fostering Environmental Stewardship in Underserved Schools	M.L. 2023, , Chp. 60, Art. 2, Sec. 2, Subd. 05d	\$180,000
Highly Pathogenic Avian Influenza and Minnesota Raptors	M.L. 2024, , Chp. 83, Art. , Sec. 2, Subd. 03v	\$187,000
Activating Youth and Family Environmental Stewardship through Raptors	M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 05q	\$228,000

Project Manager and Organization Qualifications

Project Manager Name: Evangeline Holley

Job Title: Education Director

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

I am an experienced environmental science educator and have written and carried out the activities of numerous education focused grants. I am currently assisting with the management of the current LCCMR ENRTF grant awarded to The Raptor Center and learning the LCCMR process.

Organization: U of MN - Raptor Center

Organization Description:

The Raptor Center (TRC) is a medical, outreach, and research Center within the College of Veterinary Medicine at the University of MN focused on health issues found at the intersection of raptors and humans. TRC provides medical care for over 11,00 injured and ill raptors each year, trains veterinarians and veterinary students from around the world in conservation medicine, and has extensive experience in outreach and environmental education, reaching more than 100,000 people annually throughout Minnesota. For over 50 years, staff at TRC has studied health issues in raptors and several staff have faculty appointments in the Department of Population Medicine.

The University of Minnesota is a highly ranked public research university with a mission that encompasses research and discovery, teaching and learning, and outreach and public service. A land-grant university, it supports research and discovery benefiting the conservation and management of Minnesota's natural resources. It has well-established systems and processes for management of research awards and financial oversight of grants.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Project Manager		Responsible for project oversight, coordination, reporting and evaluation, as well as supporting the development of educational program content and supervising staff.			36.6%	0.14		\$15,847
Animal and Resource Manager		Responsible for raptor ambassador bird care and training, supervisory oversight of staff, and travel.			32.2%	0.1		\$8,010
Program Administrator		Responsible for administrative support for booking of programs and planning communication			32.3%	0.3		\$24,136
Naturalist		Responsible for new content development and for conducting classroom programs: scheduling, delivering, and following through on work with teachers and students, as well as presenting at community events			32.2%	1.7		\$121,303
							Sub Total	\$169,296
Contracts and Services								
Science Museum of Minnesota	Service Contract	Development and creation of educator kits by the SMM Lending Library staff, housing and distribution of kits.				0.2		\$25,000
Healthy Community Initiative	Service Contract	Program evaluation services				0.2		\$15,700
Minnesota Interpreters & Translators, LLC	Service Contract	Translation of curriculum and resources into Spanish, Somali and Hmong				0.05		\$7,500
							Sub Total	\$48,200
Equipment, Tools, and Supplies								

	Tools and Supplies	Classroom supplies for activities	Educational materials for students to interact with in our in class programming					\$200
	Tools and Supplies	Food and care supplies for raptor ambassadors	Food (chicken, quail, rats, mice) and care supplies (medication, vet supplies) for our education birds going out on programs.					\$5,334
							Sub Total	\$5,534
Capital Equipment								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Mileage traveling to and from schools and community events, estimating about 8,000 miles at \$0.725 per mile	Travel to schools and community events					\$5,800
	Miles/ Meals/ Lodging	Per diem and hotels: Hotels and meals for overnight trips to areas in greater Minnesota (approximately 5 overnight trips will be required)	Per diem and hotels so we can do trips to the greater Minnesota areas that (due to distance) require an overnight stay					\$2,670
							Sub Total	\$8,470
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Printing	Printing of curriculum materials and evaluation materials	Printing of curriculum materials and evaluation materials Materials for classroom activities and evaluation of programs					\$500
							Sub Total	\$500

Other Expenses								
							Sub Total	-
							Grand Total	\$232,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
---------------	---------------------	-------------	--

Non ENRTF Funds

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

Total Project Cost: \$232,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [543e19f2-80c.pdf](#)

Alternate Text for Visual Component

Venn Diagram Graphic describing the One Health Concept, a photo of a TRC Naturalist with a bird on glove at a school, and a photo of the SMM Lending Library space with materials and kits available to educators....

Supplemental Attachments

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

Title	File
Example SMM Lending Library Curriculum	ee45539c-501.pdf
UMN Annual Audit	5eb39cb3-dab.pdf
Tax Exempt Status	c5106214-b36.pdf
UMN SPA Approval Letter	16be66f1-b7e.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 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?

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:

Lori Arent, The Raptor Center (UMN)

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