



# Environment and Natural Resources Trust Fund

M.L. 2021 Approved Work Plan

## General Information

**ID Number:** 2021-323

**Staff Lead:** Michael Varien

**Date this document submitted to LCCMR:** July 21, 2021

**Project Title:** Expanding Access To Environmental Education For Underserved Communities

**Project Budget:** \$178,000

## Project Manager Information

**Name:** Julia Ponder

**Organization:** U of MN - Raptor Center

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## Project Reporting

**Date Work Plan Approved by LCCMR:** July 20, 2021

**Reporting Schedule:** December 1 / June 1 of each year.

**Project Completion:** July 31, 2023

**Final Report Due Date:** September 14, 2023

## Legal Information

**Legal Citation:** M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 05g

**Appropriation Language:** \$178,000 the first year is from the trust fund to the Board of Regents of the University of Minnesota for the Raptor Center to build environmental literacy and engagement by delivering an environmental education program featuring live raptors and standards-based curriculum to approximately 300 classrooms in underserved communities throughout Minnesota.

**Appropriation End Date:** June 30, 2024



## Narrative

**Project Summary:** The Raptor Center is proposing to build environmental literacy and engagement by bringing an integrated environmental education program featuring live raptors and standards-based curriculum to underserved communities throughout Minnesota.

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

With environmental issues being among the most pressing challenges that society will face in the coming decades, there is a critical need to expand environmental and scientific literacy in the next generation. The fates of our wildlife and the natural world around us lay in the hands of an informed public. While Minnesota has state standards for environmental education, not all students and teachers have equal access to effective tools for meeting these standards.

For forty-five years, The Raptor Center (TRC) has worked to build essential connections between people and wildlife by providing high quality environmental education programs. With support from Minnesota's ENRTF fund, TRC developed Raptor Lab to engage, inspire and captivate students' awareness, concern and action toward protecting our natural environment while teaching critical STEM concepts. The Raptor Lab curriculum is a coherent sequence of lessons that teachers can integrate into their classroom over time. Student engagement with Raptor Lab and other raptor-based curriculum is enhanced when they have the opportunity to experience the magnificence of a live raptor visit to their classroom. Many communities, however, are unable to access these passion-sparking experiences due to limitations of resources and geography.

**What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.**

The Raptor Center is proposing to build environmental literacy and engagement by bringing an integrated environmental education program to underserved communities throughout Minnesota. This program will combine a standards-based curriculum using live raptors in the classroom with raptor-based coursework such as Raptor Lab to create an engaging and impactful learning experience. The live bird programs will be taught by highly skilled environmental educators and engage students (primarily focused on grades 6 through 8) in learning about environmental issues and solutions. Aligning with the live raptor programming, teachers will be provided an appropriate age-based curriculum, including lesson plans, curriculum guides, and activities, along with supplementary materials and resources to reinforce learning. They will also receive support in integrating the coursework into their classroom. The foundation for classwork will be Raptor Lab, an interactive online curriculum aimed at having students investigate an important environmental issue impacting bald eagles in Minnesota. Raptor Lab's final module, Outdoor Investigator, guides students in conducting their own outdoor investigation. A comprehensive evaluation tool will be developed and implemented to measure impact.

**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?**

The Raptor Center will provide re-usable environmental education curriculum supplemented by an experiential learning experience with a live raptor program to 300 classrooms in underserved communities through Minnesota; around 200 programs will be presented in urban areas of the metro and at least 100 programs in greater Minnesota with expected reach of 20,000-30,000 students over two years. Students that take part in Raptor Lab's Outdoor Investigator curriculum will have the opportunity to present their projects at the University of Minnesota Science Ecology Fair.

## 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

## Activities and Milestones

**Activity 1: Deliver environmental education curriculum supplemented by live bird programming to classrooms throughout Minnesota.**

**Activity Budget:** \$178,000

**Activity Description:**

The Raptor Center will deliver 300 environmental education programs using live raptors in the classrooms as part of a raptor-based classroom curriculum. Staff will identify, contact, and schedule programs in schools with a student population 50% or greater receiving free and reduced lunch. Teachers will be assisted in choosing an appropriate science standards-based curricula for their class from a selection of Raptor Lab, Outdoor Investigator, Raptors of Minnesota, Endangered Species, Animal Adaptations or other raptor-based topics. They will be provided with lesson plans, teacher guides, activities, and resources. A web site will be developed to provide quick access to classroom tools (guides, activities) for course-delivery, supplemental materials for course enhancement and staff contact information for support in curriculum delivery. For classes using Raptor Lab’s Outdoor Investigator, supporting materials will be provided to assist teachers in encouraging their students to present their outdoor investigations at the University of Minnesota’s (UMN) Science Ecology Fair. To measure impact, a comprehensive evaluation program will be designed, developed, and implemented in partnership with the University of Minnesota’s Office of Measurement Services.

**Activity Milestones:**

Description	Completion Date
Develop website to include lesson plans, curriculum guides, activities, and resources for quick access	October 31, 2021
2021-2022 School Year: Present 100 programs to urban schools, 50 to rural schools	June 30, 2022
Develop and implement comprehensive evaluation program	June 30, 2023
2022-2023 School Year: Present 100 programs to urban schools, 50 to rural schools	June 30, 2023

## 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 Raptor Center will utilize its database of school listings to contact schools and identify those interested in participating. Email advertisements, direct calling to school districts and science educators, and in-person meetings will also be used to identify school connections. TRC will present at teacher conferences, administrator/principal conferences, Minnesota Educators Association conference and Minnesota Science Teachers Association conference to reach new audiences. This project will be shared with the general public through social media and print publications, as well as in media stories where possible. Finally, efforts and learnings from the project will be shared at professional conferences. The Environment and Natural Resources Trust Fund will be acknowledged through use of the trust fund logo or attribution language on all project print and electronic media, publications, signage, and other communications per the ENRTF Acknowledgment 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 be funded?**

During this grant period we will establish new relationships with schools we have not been able to serve in the past due to funding issues. We will share the results of our evaluation program with teachers and administrators so they can see a measured impact from our program. Results will also be shared at teacher conferences. This direct experience of our program, in combination with our evaluation results, can be shared with local organizations and foundations to garner community support to continue funding this program into the future.

## Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Raptor Lab Integrating Online and Outdoor Learning Environments	M.L. 2014, Chp. 226, Sec. 2, Subd. 09h	\$186,000
Game and Nongame Bird Pesticide Exposure	M.L. 2016, Chp. 186, Sec. 2, Subd. 03m	\$349,000
Expanding Raptor Center Online Education	M.L. 2017, Chp. 96, Sec. 2, Subd. 05d	\$270,000
Spruce Grouse as Indicators for Boreal Forest Connectivity	M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 03e	\$350,000

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Interpretive naturalist/educator		Classroom programs - scheduling, delivery and follow-through work with teachers and students			31.8%	2		\$100,674
Project and partner coordinator		Educational program content and adaptation for classes; program evaluation; teacher/school communications			36.5%	0.2		\$14,157
Project manager		Project oversight, coordination, reporting			36.5%	0.1		\$21,210
							<b>Sub Total</b>	<b>\$136,041</b>
<b>Contracts and Services</b>								
UMN Office of Measurement Services	Professional or Technical Service Contract	Development and implementation of program evaluation				0.05		\$5,000
Copy editor and designer	Professional or Technical Service Contract	Copy editor/designer for printed materials (Pre/post activities, teacher's guide, and TRC program lesson plan with objectives, outcomes, content)				0.05		\$5,000
							<b>Sub Total</b>	<b>\$10,000</b>
<b>Equipment, Tools, and Supplies</b>								
	Tools and Supplies	Animal food	Raptor food for live bird programming for out-state visits to schools					\$1,800
							<b>Sub Total</b>	<b>\$1,800</b>
<b>Capital Expenditures</b>								
							<b>Sub Total</b>	-
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	-

<b>Travel In Minnesota</b>								
	Miles/ Meals/ Lodging	Mileage	Getting to schools (metro and out-state) for program delivery. 36000 miles at 0.\$58/mile					\$20,880
	Miles/ Meals/ Lodging	Per diem and hotels	Hotels and meals for overnight trips to out-state areas (approximately 50 overnight trips will be needed)					\$9,279
							<b>Sub Total</b>	<b>\$30,159</b>
<b>Travel Outside Minnesota</b>								
							<b>Sub Total</b>	-
<b>Printing and Publication</b>								
							<b>Sub Total</b>	-
<b>Other Expenses</b>								
							<b>Sub Total</b>	-
							<b>Grand Total</b>	<b>\$178,000</b>



Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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## Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
<b>State</b>				
			<b>State Sub Total</b>	-
<b>Non-State</b>				
In-Kind	Waived facilities and administrative costs	The University of Minnesota is waiving the income normally generated from extramural research grants that contribute Facilities and Administrative (F&A). The current full rate is 55% of direct costs.	Pending	\$92,158
			<b>Non State Sub Total</b>	<b>\$92,158</b>
			<b>Funds Total</b>	<b>\$92,158</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [a27bff46-b66.pdf](#)

#### *Alternate Text for Visual Component*

Image shows a live bird program being presented in a classroom situation along with screen shots of two on-line curriculum options that teachers and students will have access to....

### Optional Attachments

#### *Support Letter or Other*

Title	File
University of Minnesota cover letter	<a href="#">7dbd9b31-88e.pdf</a>
Background check certification	<a href="#">e864d5b3-23e.pdf</a>

## Difference between Proposal and Work Plan

### *Describe changes from Proposal to Work Plan Stage*

Added dissemination information and reviewed all other information. Corrected mailing address in section 2.

Added background check certification

7/13/2021 - Completion date changed in narrative as requested

## 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 agree travel expenses must 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 agree to the UMN Policy.

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

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?**

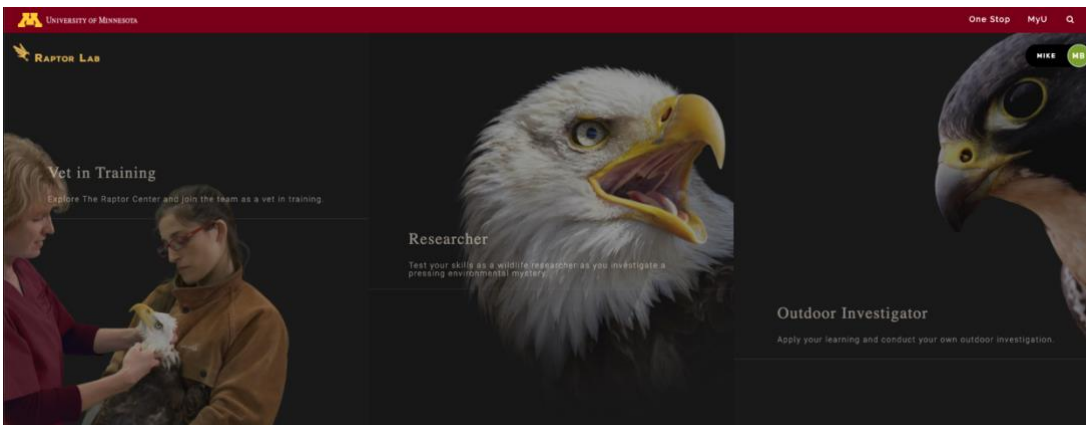
No

**Does the organization have a fiscal agent for this project?**

Yes, Sponsored Projects Administration

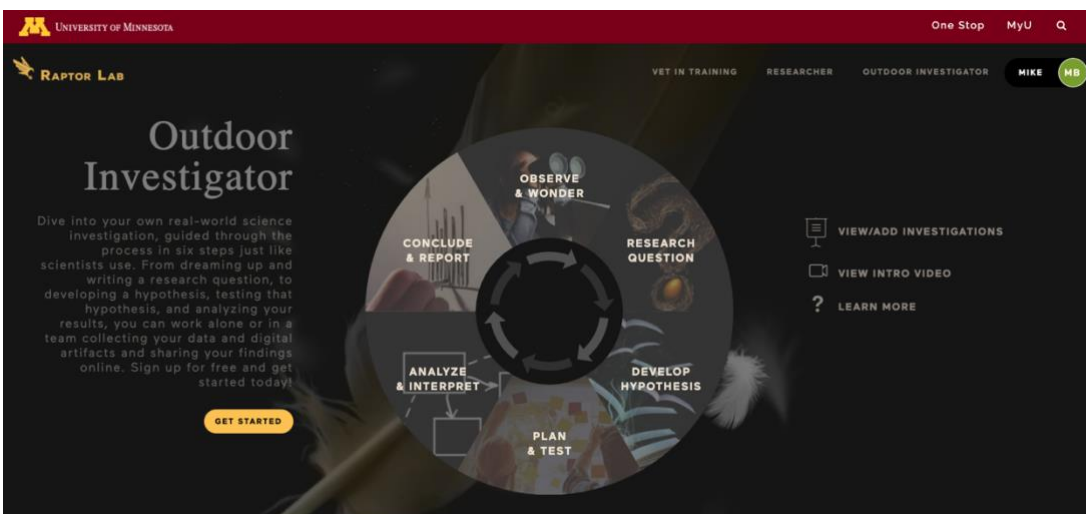
# Expanding Access to Environmental Education for Underserved Communities

*Connecting students with wildlife to inspire our next generation of environmental stewards.*



## Raptor Lab

*Role play a scientist helping solve an environmental issue impacting bald eagles.*



## Outdoor Investigator

*Investigate your own question about the natural world and present your findings to the world.*

