

# Final Abstract

Final Report Approved on October 9, 2025

## M.L. 2023 Project Abstract

For the Period Ending June 30, 2025

**Project Title:** Reducing Biophobia & Fostering Environmental Stewardship in Underserved Schools

**Project Manager:** Lori Arent

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

**Mailing Address:** 1920 Fitch Ave

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**E-mail:** arent@umn.edu

**Website:** <https://www.raptor.umn.edu/>

**Funding Source:**

**Fiscal Year:**

**Legal Citation:** M.L. 2023, Chp. 60, Art. 2, Sec. 2, Subd. 05d

**Appropriation Amount:** \$180,000

**Amount Spent:** \$166,533

**Amount Remaining:** \$13,467

### Sound bite of Project Outcomes and Results

Through the lens of raptors, The Raptor Center has reduced biophobia in youth by delivering engaging environmental education programs to underserved schools. Connecting students with birds of prey, our programs spark curiosity, build empathy for wildlife, and foster interest in conservation, especially in communities with limited access to such opportunities.

### Overall Project Outcome and Results

Many Minnesotan students lack access to environmental education and meaningful experiences in nature. This lack of engagement can contribute to biophobia – a fear or aversion to the natural world – that persists into adulthood. This disconnect poses a long-term challenge, especially as environmental issues grow more urgent. Developing a connection with nature at a young age plays a critical role in nurturing empathy, environmental awareness, and a lifelong commitment to conservation. Research shows that early positive experiences in nature are among the most effective strategies for overcoming biophobia.

To address this, The Raptor Center (TRC) delivered raptor-focused, environmental education programming to 294 underserved classrooms, reaching over 10,000 students. Through dynamic, live raptor encounters paired with

environmentally-themed programming, students explored connections between raptors and broader ecological systems, including air, water, land, and other wildlife. Our charismatic bird ambassadors helped ignite curiosity and foster lasting, positive attitudes toward nature, inspiring a new generation of environmental stewards.

TRC also hosted teacher open houses, introducing over 30 educators and their families to our resources and curriculum integration opportunities. This expanded our impact by supporting sustained, curriculum-aligned environmental education in schools.

Our continued efforts contribute directly to protecting and enhancing Minnesota's natural heritage by fostering a generation of informed and motivated conservation advocates. By focusing on raptors – species that are often sensitive indicators of the health of our shared ecosystems – we highlight the interconnectedness of human health, wildlife health, and habitat conservation. This has ripple effects in broader natural resource preservation, including improving water and air quality, safeguarding native species, and promoting sustainable land use.

### **Project Results Use and Dissemination**

We shared a program summary and data report from our grant programming with over 300 volunteers through a monthly newsletter, and presented the same information to 20 TRC staff at a bi-monthly meeting. An article in our semi-annual Raptor Release magazine, reaching approximately 4000 readers, further expanded the program's visibility. Throughout the grant cycle, our Communications Manager also provided regular updates on social media. These combined outreach efforts successfully raised awareness of both our program and ENRTF, as reflected in the current rising teacher interest in potential program offerings for the 2025-2026 school year.



## Environment and Natural Resources Trust Fund

M.L. 2023 Approved Final Report

### General Information

**Date:** November 12, 2025

**ID Number:** 2023-167

**Staff Lead:** Tom Dietrich

**Project Title:** Reducing Biophobia & Fostering Environmental Stewardship in Underserved Schools

**Project Budget:** \$180,000

### Project Manager Information

**Name:** Lori Arent

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

**Office Telephone:** (612) 624-0762

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### Project Reporting

**Final Report Approved:** October 9, 2025

**Reporting Status:** Project Completed

**Date of Last Action:** October 9, 2025

**Project Completion:** June 30, 2025

### Legal Information

**Legal Citation:** M.L. 2023, Chp. 60, Art. 2, Sec. 2, Subd. 05d

**Appropriation Language:** \$180,000 the first year is from the trust fund to the Board of Regents of the University of Minnesota for the Raptor Center to foster long-lasting environmental stewardship and literacy in Minnesota youth in underserved schools by providing engaging, multiunit, standards-based environmental programming featuring positive interactions with raptors and evaluating program effectiveness and areas for improvement.

**Appropriation End Date:** June 30, 2026

## Narrative

**Project Summary:** The Raptor Center proposes to foster long-lasting environmental stewardship and literacy in Minnesota youth in underserved schools through providing engaging, multi-unit, standards-based environmental curriculum programming featuring positive interactions with raptors.

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

Students across Minnesota are faced with sometimes limited access to the environmental world and impactful educational nature programming. Limited engagement with the natural world can lead to a phenomenon known as biophobia (i.e., fear or aversion to nature). With environmental issues being among the most pressing challenges that society faces today, the reduced value for the environment resulting from biophobia is critical to address. As American youth are experiencing increased biophobia, we can reduce this via exposure to diverse and direct experiences with nature.

While environmental concepts are embedded in Minnesota science standards, not all schools have equal access to effective tools for providing engaging experiences that foster student commitment to conservation. TRC educators have been filling this gap by providing high quality education programming since 1974 and with ENRTF support are currently providing in-person opportunities for underserved schools during the 2022-2023 school year. Single visits have impact on students, combating biophobia, and we also know offering a series of curriculum-based experiences for students featuring units that build upon each other over multiple visits could offer even more. The increased number of personal experiences with live raptors will combat biophobia and solidify students' positive associations with the natural 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.**

To reach a diverse range of communities, TRC proposes to offer environmentally themed multi-unit educational programming to 80 underserved classrooms (totaling 160 programs) reaching over 2,000 students. Response to a current TRC/ENRTF grant project provided incredibly encouraging feedback from teachers/schools, but we hope to have even more impact. This current proposal leverages well-established school partnerships to offer teachers repeated experiences with nature to classrooms.

To maximize impact on students' attitudes towards the natural world and actively cultivate long-lasting pro-conservation attitudes; multiple presentations will be offered to teachers that progress over the school year. Educational programming will ignite curiosity and excitement both with live animals and with outdoor experiences to increase connections to and positive experiences with nature. Content will align with state standards. Some teachers have schedules that cannot accommodate multiple visits and for these classrooms we will still inspire and impact students with single visits. TRC will provide additional resources/environmental education activities that teachers can use before or after formal programming. A comprehensive evaluation of the programming will occur to analyze impact.

Through this innovative combination of multiple experiences and outreach, we hope to effectively foster positive attitudes towards the natural world and combat biophobia.

**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?**

Programming from TRC will reach 80 qualifying underserved classrooms and over 2,000 Minnesota students over two years. Each student who goes through this programming will dive deeply into topics including ecology, ecosystems, and human environmental impacts. The progressive programming will help foster empathy and environmental stewardship in students and make positive connections with the environment. Ultimately, people protect what they understand and care about, and this programming is about fostering these values with the environment. Evaluation of learnings and

impact on students will be compiled to continually adjust our educational approach and be shared with the environmental education community.

## 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: Deliver a series of two environmental education programs involving live animals and outdoor experiences to classrooms across Minnesota.**

**Activity Budget:** \$170,000

**Activity Description:**

The Raptor Center will work with 40 classrooms/year during the 2023-24 and 2024-25 school years (total 80 classrooms). Each year, 28 of 40 will be from the seven-county Twin Cities area, while 12 of 40 classrooms will be greater Minnesota counties. TRC will utilize its database of school listings, as well as email advertisements, direct calling to educators, and in-person meetings to contact interested schools. Eligible schools will be identified as under served and eligible for programs through evaluation of factors including: historic free/reduced lunch data, participation in federal title programs, lack of access to other nature-based programming. TRC will offer a series of two programs/school year to educate students in environmental science topics including, but not limited to, ecological concepts, ecosystems, and human impacts on the environment. Lessons/topics connect in theme and convey important narratives that would be difficult to convey in one in-person visit (e.g., interconnectedness of human, animal, and environmental health; conservation; environmental pressures). Teachers only able to fit one program in schedules will be accommodated to not restrict student access to programming. Participating schools will get access to other lessons/classroom activities via a web platform that teachers can access.

**Activity Milestones:**

Description	Approximate Completion Date
Curate online educational materials into a new web-based resource of extension activities for teachers	December 31, 2023
2023-2024 School Year: deliver 80 total programs and reach 40 classrooms (both urban and rural)	June 30, 2024
Host teacher open house at The Raptor Center to augment in classroom and virtual content	December 31, 2024
2024-2025 School Year: deliver 80 total programs and reach 40 additional classrooms (urban and Rural)	June 30, 2025
Host second teacher open house at The Raptor Center	June 30, 2025
Translate curriculum and activities into Spanish, Hmong, and Somali	June 30, 2025

## Activity 2: Program Evaluation

**Activity Budget:** \$10,000

**Activity Description:**

As this is a rapidly evolving topic, best practices are still being formed. We will strongly utilize program evaluation and already established literature to guide this program delivery. First, evaluation consultants will conduct an extensive literature review on biophobia and the development of environmental empathy in students and how to measure the impact of educational programming on reducing biophobia. They will then use the results to develop instruments to measure the program’s impact on students and on TRC each year. These evaluations will collect qualitative data from student participants to determine the programs effectiveness and areas for further improvement and results will be shared in a final report.

**Activity Milestones:**

Description	Approximate Completion Date
Literature review on biophobia reducing/empathy building education techniques and develop evaluation tools for project	December 31, 2023
Complete a comprehensive evaluation of grant-based programming	April 30, 2025
Complete and share final evaluation report	June 30, 2025



## 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 the evaluation of this program will be shared in separate presentations for TRC's staff and 300+ volunteers. We will also schedule a public presentation with the University of Minnesota's community STEM program for students and their families in the Twin Cities Metro area. The results of our grant will be utilized to further innovate our environmental education efforts, provide data/citation for future educational grants, and create a platform for more sustainable local partnerships in the community.

As the program progresses through the 2023 and 2024 academic school year we will be regularly documenting our progress to our 40,000 followers across multiple social media platforms. These updates will assist with marketing this opportunity to schools that wish to partake in the program and raise community awareness of ENRTF's role in funding this program.

All of our dissemination efforts will attribute the Environmental and Natural Resources Trust Fund through language as instructed in 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?**

During this grant, we will leverage previously established relationships with schools to deliver a curiosity-igniting educational program series that we previously could not deliver due to funding issues. Throughout these programs, we will create and validate innovative evaluation tools that measure the impact of environmental education programming on reducing biophobia and connecting students to nature and curriculum topics. We will share our science-based tools with the environmental education community through professional organizational written communications and meetings/conferences. The demonstrated impact that biophobia-reducing programming has on creating the next generation of environmental stewards will allow us to approach other funding organizations.

## 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

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount	\$ Amount Spent	\$ Amount Remaining
<b>Personnel</b>										
Project manager		Project oversight, coordination, reporting			33.5%	0.1		\$19,030	-	-
Project and partner coordinator		Educational program content and adaptation for classes; program evaluation; teacher/school communications			33.5%	0.2		\$15,498	-	-
Interpretive naturalist/educator		Classroom programs - scheduling, delivery and follow-through work with teachers and students			28.7%	2		\$107,978	-	-
							<b>Sub Total</b>	<b>\$142,506</b>	<b>\$138,140</b>	<b>\$4,366</b>
<b>Contracts and Services</b>										
Evaluation Studies Program Consultant	Service Contract	Development and implementation of program evaluation				0.1		\$10,000	\$10,000	-
Minnesota Interpreters and Translators (MINT)	Service Contract	MINT will provide translations of four curriculums that outline key concepts and terminology from live raptor programs as well as supplemental activities into three languages: Spanish, Somali, and Hmong.				0.1		\$13,500	\$11,977	\$1,523
							<b>Sub Total</b>	<b>\$23,500</b>	<b>\$21,977</b>	<b>\$1,523</b>
<b>Equipment, Tools, and Supplies</b>										
	Tools and Supplies	Animal food	Raptor food for live bird programming for out-state visits to schools					\$1,440	\$1,439	\$1
							<b>Sub Total</b>	<b>\$1,440</b>	<b>\$1,439</b>	<b>\$1</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: Traveling to 80 schools, three times each (total of 240 trips), to deliver education programming. Estimated at 33,840 miles of overall travel at \$0.58/mile	Travel mileage to schools to deliver education programs					\$9,554	\$2,729	\$6,825
	Miles/ Meals/ Lodging	Per diem and hotels: Hotels and meals for overnight trips to greater Minnesota areas (approximately 36 overnight trips will be needed)	Per diem and hotels so we can do trips to the greater Minnesota areas that (due to distance) require an overnight stay					\$3,000	\$2,248	\$752
							<b>Sub Total</b>	<b>\$12,554</b>	<b>\$4,977</b>	<b>\$7,577</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>\$180,000</b>	<b>\$166,533</b>	<b>\$13,467</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	\$ Amount Spent	\$ Amount Remaining
<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 35% of direct costs.	Secured	\$62,967	\$57,382	\$5,585
			<b>Non State Sub Total</b>	<b>\$62,967</b>	<b>\$57,382</b>	<b>\$5,585</b>
			<b>Funds Total</b>	<b>\$62,967</b>	<b>\$57,382</b>	<b>\$5,585</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [724b95e1-3fd.pdf](#)

#### *Alternate Text for Visual Component*

Graphics show K-12 students learning STEM concepts in natural and classroom settings and getting excited by live ambassador birds including a bald eagle and a small eastern screech owl. It also includes an image of innovative digital content for extension lessons being gathered real time via an iPad....

### Supplemental Attachments

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

Title	File
Cover Letter from SPA	<a href="#">4df7ecd4-6ca.pdf</a>
Financial Audit	<a href="#">48a94aff-9c0.pdf</a>
Background Check Form	<a href="#">cfa29073-ef4.pdf</a>
April 2024 report attachment	<a href="#">49573cae-144.pdf</a>
Literature Review: Biophobia	<a href="#">a6ded48c-9c8.pdf</a>
LCCMR Final Evaluation Report	<a href="#">267a8f81-66b.pdf</a>
Raptor Release Magazine (LCCMR Article Pg 5)	<a href="#">2717fd36-6bf.pdf</a>

### Difference between Proposal and Work Plan

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

Made edits as requested in comments under activities, milestones, and dissemination. Added background check document to attachments.

## 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?**

No

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

Yes, Sponsored Projects Administration

**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**

Not acknowledged

## Work Plan Amendments

Amendment ID	Request Type	Changes made on the following pages	Explanation & justification for Amendment Request (word limit 75)	Date Submitted	Approved	Date of LCCMR Action
1	Amendment Request	<ul style="list-style-type: none"> <li>• Budget</li> <li>• Narrative</li> <li>• Other</li> <li>• Activities and Milestones</li> <li>• Budget - Travel and Conferences</li> <li>• Budget - Non-ENRTF Funds Contributed</li> <li>• Attachments</li> </ul>	We found teachers prefer two program series vs three and we originally wrote schools as the metric and found that classrooms is a better metric and still will reach our total goal of 2,000 students. As we are requesting to decrease total program series number (from 3 to 2), we propose to use extra staff capacity to host two open houses to MN teachers to help increase engagement/content/use of materials.	May 1, 2024	Yes	May 10, 2024
2	Amendment Request	<ul style="list-style-type: none"> <li>• Narrative</li> <li>• Other</li> <li>• Activities and Milestones</li> </ul>	Updated criteria to identify underserved schools as free lunch % is no longer applicable due to state wide free lunch in schools and adjusted activity language to allow for one program (rather than a series of two) for teachers who have schedules that cannot fit multiple visits. This is so we do not restrict programming for students whose classes cannot block multiple hours for repeat visit. Priority will still be the two program series.	June 18, 2024	Yes	July 9, 2024
3	Project Manager	<p>Previous Manager: Victoria Hall (hall2112@umn.edu)</p> <p>New Manager: Lori Arent (arent@umn.edu)</p>	Victoria Hall is leaving the UMN.	September 18, 2024	Yes	September 19, 2024
4	Amendment Request	<ul style="list-style-type: none"> <li>• Budget</li> <li>• Project Collaborators - Project Manager Info</li> <li>• Activities and Milestones</li> <li>• Budget - Professional / Technical Contracts</li> <li>• Budget - Capital, Equipment, Tools, and Supplies</li> </ul>	Feedback from under-resourced schools indicated that having curriculum and activities in other languages would increase their usefulness. We are asking to redirect unused travel funds to translate our materials into three languages: Spanish, Hmong, and Somali. Unused travel funds resulted from overestimating	March 28, 2025	Yes	April 1, 2025

		<ul style="list-style-type: none"><li>• Budget - Travel and Conferences</li></ul>	the number of rural programs requiring overnight stays, reducing the number of visits per classroom in previous amendments, and TRC covering first-year travel costs due to new staffs' unfamiliarity with the process.			
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# Status Update Reporting

## Final Status Update August 14, 2025

**Date Submitted:** August 8, 2025

**Date Approved:** August 18, 2025

### Overall Update

Since the last report, we completed our programming deliverables and had four of our curricula and two worksheets translated into Spanish, Somali, and Hmong (and uploaded them to our website) to increase accessibility for diverse learners.

From an outreach perspective, The Raptor Center (TRC) not only met but exceeded its original program goals. Over the past two years, we engaged more than 10,000 young students from underserved schools and reached 294 classrooms, surpassing our initial classroom and student estimates by more than threefold. This was achieved through dynamic standards-aligned education programming featuring live raptors, which promoted environmental stewardship and helped to reduce biophobia among students.

Due to challenges in scheduling recurring programs within busy classroom schedules, we adapted our approach to better align with teacher availability. Additionally, we refined our curriculum to deliver a high-quality environmental education experience, fostering stewardship and empathy towards nature.

To raise awareness of our offerings, we hosted two open houses at TRC for 30 teachers and their families, providing a firsthand look at our unique programming.

### Activity 1

Since the last report, we completed our program deliverables by conducting an additional 43 programs to 116 classrooms, reaching an 3,612 students. We also had 4 of our curricula and two worksheets translated into Spanish, Somali, and Hmong and put on our website to make our material accessible for teachers of diverse learners.

During this grant cycle, we discovered that scheduling recurring visits (two programs) was challenging for many teachers, who often had time for only one in the academic calendar. Consequently, we focused on offering one-time programs, which allowed us to significantly increase the number of classrooms served, from a goal of 80 to an actual outcome of 294. We exceeded both our metro and rural-area classroom counts, notably presenting to 101 rural classrooms (beyond the estimated 24). In total, we delivered 167 programs - 143 in the metro area, and 24 in rural MN - to 294 classrooms, reaching 10,167 young learners.

These programs featured live raptors and STEM education curricula tailored for grades K-8. We also hosted two open houses at TRC, attended by 30 teachers and their families, which showcased our programming and generated enthusiasm for inviting us into their classrooms.

*(This activity marked as complete as of this status update)*

### Activity 2

Our program evaluation was a great success. Our external evaluator provided a supporting literature review entitled *Biophobia: Environmental Education as a Lever to Combat Biophobia in Youth* (see attachments), which reinforced the critical need our program worked to address- engaging underserved youth with standards-based programming, fostering environmental stewardship, and replacing biophobia with curiosity and wonder about the natural world. She completed a comprehensive evaluation of our programming, incorporating qualitative data from student participants, which is also

included as an attachment. Our final evaluation report was completed last month, and the findings and overall summary of the grant program have been shared with the TRC community.

*(This activity marked as complete as of this status update)*

### **Dissemination**

Since the last update, we shared the summary and data of our grant programming to over 300 volunteers via their monthly newsletter, and presented the same information to 20 TRC staff during a bi-monthly meeting. Originally, one planned venue for dissemination was the University of Minnesota's "community STEM program for students and families." Unfortunately, this event was cancelled. In response, we shared information about this important work through an article in our semi-annual Raptor Release magazine (attached), which reaches approximately 4000 readers, effectively expanding the program's visibility to a broader audience.

Additionally, throughout the grant cycle, our Communications Manager shared updates across our social media platforms. We believe that these dissemination efforts successfully raised awareness of both our program and ENRTF overall, as evidenced by increased teacher interest in programming for the 2025-2026 school year.

# Status Update Reporting

## Status Update April 1, 2025

**Date Submitted:** March 18, 2025

**Date Approved:** April 1, 2025

### Overall Update

The Raptor Center (TRC) has served 178 classrooms and 6,555 students from Pre-K to 8th grade since starting programming in 2023 through the LCCMR grant. This program has evolved since its inception, transitioning from 2-3 TRC visits per classroom to primarily one visit in response to teacher feedback. With this change, TRC has been able to serve more than double the intended number of students and classrooms across the Twin Cities metro and anticipates meeting our intended reach in rural communities. The evaluation efforts put forth by TRC have informed small program improvements to best serve students as this program continues to evolve.

TRC is still navigating personnel changes. In the early fall of 2024, we hired a new Education Director to oversee education programs including those funded by grants. This transition has been successful, and the constant of our Education Grant Program Naturalist ensured that high-quality programming continued. TRC is still in search of a new Executive Director with hopes of making a hire later this year.

### Activity 1

TRC adapted to meet the needs of teachers and students. Teachers indicated that scheduling 2+ program sessions was not manageable for their schedules. TRC responded by condensing the program content to one visit and for some, providing a second virtual visit. This allowed our staff to engage more classrooms (178+ of 80) and students (6,555+ of 2,000).

Reaching students underserved in the STEM space directed recruitment efforts. Classrooms qualified for this program by having a student population with 40%+ students qualifying for free/reduced lunch. Using community-level data through the Minnesota Department of Education, we estimate that 75.3% of students served qualify for FRL and 84% are BIPOC. Of the 178 classes served, 8 are in rural communities. By the end of this school year, we will serve the 24 rural classrooms proposed.

TRC also hosted an open house to share resources and connect with community educators in October. Many educators indicated interest; only three teachers attended. We conducted a follow-up survey to investigate why the attendance was lower than expected and made adjustments when scheduling the second open house to be held April 1st and 2nd.

### Activity 2

Evaluation efforts continue with challenges. Engaging already overextended teachers in surveys and interviews has proven to be difficult while impromptu or in the moment feedback is provided readily to naturalists implementing the program. All input from teachers is welcomed and incorporated into program improvements.

The literature review anticipated by June 2025 is underway and on track to be completed by the end of the grant cycle.

### Dissemination

Newly developed online resources will be released this spring and distributed to teachers who have invited TRC into their classrooms. These resources will offer extensions of the program that students experienced and provide the opportunity for teachers to integrate environmental education into their existing curriculum. TRC hopes to have these evergreen resources translated so that students with diverse backgrounds can utilize them with ease.

Additionally, TRC provided an update on grant programming at our February all-staff meeting, reached out to over 300 teachers marketing our upcoming April open house, and wrote a draft of an article for our Biannual Raptor Release publication that will be mailed to over 4000 supporters in early May and shared with countless others on our website.

# Status Update Reporting

## Status Update October 1, 2024

**Date Submitted:** October 8, 2024

**Date Approved:** November 13, 2024

### **Overall Update**

This status update is waived per guidance from LCCMR staff provided on August 13, 2024

### **Activity 1**

This status update is waived per guidance from LCCMR staff provided on August 13, 2024

### **Activity 2**

This status update is waived per guidance from LCCMR staff provided on August 13, 2024

### **Dissemination**

This status update is waived per guidance from LCCMR staff provided on August 13, 2024

# Status Update Reporting

## Status Update April 1, 2024

**Date Submitted:** May 1, 2024

**Date Approved:** May 10, 2024

### Overall Update

A series of at least three programs from The Raptor Center (TRC) has so far been implemented in a total of 16 underserved schools since the start of the project period, with a total of 59 programs being delivered. Another two schools will be participating in the experience in May 2024, totaling an additional six programs. TRC has learned a lot of what is most effective for teachers, including that while teachers like the three programs, a series of two would better fit in their teaching schedule, and multiple classrooms and grades per school are interested in program content when we come to each school. We have learned that we can make even more impact by giving more time in each individual school and still be well on track to reach 2,000 students across Minnesota. Over the past nine months, students participating in the programming have engaged deeply with live raptors at their schools, exploring topics such as raptor adaptations and healthy ecosystems. To ensure programming is effective, TRC staff have been gathering existing evaluation tools to refine and create project-appropriate materials and messaging with evaluation specialists. We are in the final stages of hiring an experienced evaluator.

### Activity 1

Repurposing existing curriculum into three part series for schools occupied more time than anticipated at the start, delaying program implementation. But we are well on track now with scheduling plans to make up for total program numbers in the 2024/2025 school year. We successfully reached out to qualifying schools and have had great responses- but have received strong feedback that a two program series would on average better fit schedules than a three program. Additionally, we were targeting one classroom a school and have strong feedback that impacting multiple classrooms per school is wanted. During the current reporting period, TRC has conducted visits to 16 of the identified schools, delivering a minimum of three programs per school as outlined. A total of 59 programs have been delivered so far, demonstrating progress in achieving project objectives. Additionally, progress has been made in the development of a web platform, granting participating schools exclusive access to supplementary lessons and activities. Catering to K-12 students, this platform enriches the educational experience by offering extension material that teachers can integrate seamlessly before or after TRC visits. Included in the attachments section are screenshots showcasing the initial iteration of this platform.

### Activity 2

The Raptor Center has been actively recruiting an experienced and skilled evaluator to support the evaluation work of this project. We have conducted both internal and external searches, including holding interviews with contract professionals, and are in the middle of the University contracting process. The full literature review is still underway and anticipated to be completed soon.

### Dissemination

As the project period is still ongoing, dissemination efforts have primarily focused on sharing the project experience through social media posts. Updates and stories have been provided to TRC's 40,000+ followers across multiple platforms, showcasing the progress and impact of the environmental education program. These posts serve a dual purpose of showcasing the opportunity to schools interested in participating and raising community awareness of the Environmental and Natural Resources Trust Fund's (ENRTF) support for the initiative. Social media updates have included appropriate language attributing the Environmental and Natural Resources Trust Fund, following the ENRTF Acknowledgement Guidelines. An example is provided in the attachments.