



Environment and Natural Resources Trust Fund

2027 Request for Proposal

General Information

Proposal ID: 2027-450

Proposal Title: Cofactors: Equipping Minnesotans for CWD Threat Mitigation

Project Manager Information

Name: Marc Schwabenlander

Organization: U of MN - College of Veterinary Medicine

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Project Basic Information

Project Summary: We will leverage popular interest in a CWD video game and demonstrated stakeholder demand to create accessible, role-driven educational tools that cultivate informed, responsible citizens who actively contribute to mitigation.

ENRTF Funds Requested: \$294,000

Proposed Project Completion: June 30, 2029

LCCMR Funding Category: Small Projects (G)

Secondary Category: Education and Outdoor Recreation (C)

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.

Chronic wasting disease (CWD) is spreading and emerging in Minnesota's deer populations. Despite scientific advances in detection and mitigation, public attention wanes, responses to policy remain fragmented, and many citizens—especially new or non-hunters—lack clear understanding of their role in the response. Research indicates CWD knowledge can correlate with greater support for management actions, yet many hunters cannot accurately answer basic CWD questions. Misfolded protein disorders defy intuition: long incubation, environmental resilience, and complex transmission hinder risk perception. Combined with an incomplete understanding of science and attention fatigue, this creates opportunity for misinformation and disengagement—even as rural economies, food sovereignty, hunting traditions, and land values face real threat. A top question in our 21,300 annual engagements—“What can I do?”—underlines the need for relatable outreach, matched to how diverse audiences absorb and act on information. Early signs confirm demand: we've already recruited a multidisciplinary advisory panel and engaged over 100 beta testers for Cofactor—including educators, agency staff, and hunters—and have observed high engagement and perceived learning gains. Without acting on this momentum, we risk losing the chance to harness broad-based enthusiasm to sustain science-informed stewardship of Minnesota deer populations.

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.

Human behavior is the single most important factor in CWD mitigation. We propose to answer the public's question by adapting Cofactor, a high-engagement video game already generating strong interest, into a single-player educational tool tailored for diverse Minnesota audiences. This immersive role-driven experience lets players step into the shoes of hunters, scientists, managers, and community members—navigating real-world CWD challenges through context-sensitive decisions that shift with location, regulations, and evolving science. It is a dynamic tool that adapts to player interest and context. Working with educators, agencies, and stakeholders, we will localize content, assess learning outcomes via gameplay metrics and adult classroom feedback, and deliver a ready-to-deploy version for hunter safety courses, adult education, and conservation workshops by June 2029. Concurrently, we will overhaul the MNPRO website (mnpro.umn.edu) into a dynamic hub—hosting existing and newly-created videos, fact sheets, news, and tools with strong accessibility and social-sharing features—to ensure long-term community engagement and widespread dissemination. In year 2, we will deploy tangible educational material at events. These combined efforts represent qualitatively more dynamic, individually-assimilable education that will equip citizens not just to understand CWD—but to actively steward their role in its mitigation.

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?

This project strengthens conservation through informed public action. By transforming passive learners into engaged stakeholders—armed with practical knowledge and decision-making skills—the initiative promotes responsible hunting, ethical harvest, and reduced prion spread across Minnesotan lands. It also supports natural resource agency recruitment by featuring positive, accessible portrayals of science-based stewardship roles. Outcomes include scalable educational tools reaching 10,000 users/month, in formal and informal settings; improved citizen engagement in best practices; and sustained public trust in science-guided wildlife management. Ultimately, these contribute to healthier deer populations, protected ecosystems, preserved cultural traditions, and long-term resilience of Minnesota's natural resources.

Activities and Milestones

Activity 1: Cofactor single player development

Activity Budget: \$175,189

Activity Description:

We will adapt a single-player release of Cofactor, an immersive CWD education video game currently in beta testing. This involves incorporating genuine environmental contexts in Minnesota; actual science, hunting, and wildlife management skills; and stakeholder perspectives into attractive gameplay. Educator and player surveys will generate qualitative data on classroom and platform experience and accessibility, while gameplay metrics provide data points to measure the success of learning objectives, as well as yielding insights into stakeholder concerns and motivations. We have established and will leverage a multidisciplinary advisory panel to vet the accuracy and appropriateness of the content for an adult audience. It includes agency, educational, and NGO representation. Completing this development phase will yield a game teachers can and will deploy as a component of hunter safety and outdoor recreation classes, through adult education courses we have already identified. This results in a single-player edition release. Further, it provides a product to demonstrate to agencies, communities, educators, and others who will shape its use, and who have already indicated their eagerness for it.

Activity Milestones:

Description	Approximate Completion Date
Compile and analyze beta-tester surveys, gameplay metrics, and learning assessments to define design improvements.	December 31, 2027
Host interdisciplinary advisory panel workshop; synthesize scientific, regulatory, and stakeholder input into detailed work plan.	February 28, 2028
Re-code game engine and UI components for single player, and expand game experience.	August 31, 2028
Create regionally-accurate art, audio, environmental models, wildlife behavior scripts, and regulatory decision trees.	February 28, 2029
Execute accessibility testing and iterative bug fixes; convene final panel; launch final version statewide.	June 30, 2029

Activity 2: Advancing the availability of CWD educational materials

Activity Budget: \$118,811

Activity Description:

Our center has developed extensive outreach media vital for public understanding. However, this output has been disseminated across multiple platforms, hindering accessibility. This activity will begin with an audit of existing outreach and usage so that high-demand materials are easily discoverable. We will overhaul the MNPRO website to transition to a long-term repository of educational content including our papers, videos, and fact sheets; these will be contextualized by the addition of a news feed, blog, and special projects pages. Existing content will be augmented with newly produced videos in year 2. Finally, we will streamline the newsletter sign up process by embedding a simplified form. These changes will reduce barriers to accessing public health information.

Because we work with communities and age groups that prefer to share information verbally, we will create a hub to host, attractively serve, and facilitate the social sharing of our video content. In year 2, we will participate in outreach events as opportunities to continue serving the public with our print materials and in-person interactions.

Activity Milestones:

Description	Approximate Completion Date
Conduct audit of existing CWD outreach assets; categorize by audience, format, and usage metrics.	August 31, 2027

Implement searchable digital repository, newsletter signup, and streamline social sharing elements to broaden reach.	June 30, 2028
Develop overhauled website and updated information hierarchy; improve discoverability and accessibility.	June 30, 2029
Produce educational videos from re-mastered content and new sequences.	June 30, 2029
Deploy materials at in-person engagements at events in year two; survey participants for improvement.	June 30, 2029

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Marc Schwabenlander	University of Minnesota	Co-Primary Investigator. Schwabenlander will coordinate outreach projects and assist with the development of all educational materials	Yes
Thomas Seiler	University of Minnesota	Co-Primary Investigator. Th. Seiler will lead outreach development, digital creation and management, and stakeholder engagement.	Yes
Tonya Seiler	University of Minnesota	Co- Investigator. To. Seiler will manage and lead outreach events, assist in the development of educational materials, and coordinate stakeholder connections.	Yes
Peter Larsen	University of Minnesota	Co- Investigator. Larsen will assist with the development, oversight, and execution of all educational materials and outreach activities.	Yes
Tiffany Wolf	University of Minnesota	Co- Investigator. Larsen will assist with the development, oversight, and execution of all educational materials and outreach activities.	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.

We will use the following opportunities to share materials produced and methods of production:

1. dissemination via the MNPRO website: <https://mnpro.umn.edu/>
2. dissemination through training offered by the College of Veterinary Medicine, UMN Extension
3. presentation at local, regional, and national scientific, management, and public/stakeholder meetings and events
4. dissemination to the media via press releases and UMN Research Briefs
5. dissemination through CIDRAP outreach channels (social media, newsletters, websites)
6. testimonials to LCCMR and other policy platforms

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

Long-Term Implementation and Funding

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

Project results will be implemented in real-time throughout the project. Educational materials will be integrated into outreach activities—including in-person events, workshops, and community presentations—so stakeholders can immediately benefit from new resources. Materials will be distributed through web platforms and multimedia channels to reach diverse audiences across Minnesota. Digital productions and online platforms developed through the project will remain active after the funding period ends. Ongoing maintenance and updates will be supported through MNPRO's outreach infrastructure, staff time, and future grants, ensuring the project's tools, findings, and educational resources continue supporting outreach, training, and public education long after completion.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Establishing a Center for Prion Research and Outreach	M.L. 2022, , Chp. 94, Art. , Sec. 2, Subd. 03k	\$3,877,000

Chronic Wasting Disease Prion Soil Research	M.L. 2022, , Chp. 94, Art. , Sec. 2, Subd. 03n	\$732,000
Emerging Issue: CWD Prions in Minnesota Waters	M.L. 2022, , Chp. 64, Art. , Sec. 2, Subd. 20b-1	\$164,000
White-Tailed Deer Movement and Disease in Suburban Areas	M.L. 2024, , Chp. 83, Art. , Sec. 2, Subd. 03u	\$699,000
Chronic Wasting Disease Prions in Minnesota Waters	M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 03jj	\$322,000

Project Manager and Organization Qualifications

Project Manager Name: Marc Schwabenlander

Job Title: Executive Director

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

Mr. Schwabenlander is a research scientist and administrator specializing in wildlife disease, particularly chronic wasting disease (CWD). He serves as the Executive Director at the Minnesota Center for Prion Research and Outreach (MNPRO), where he contributes to multidisciplinary projects, grant-funded research, and efforts to translate scientific findings into practical policy and management strategies. His work spans laboratory studies, field research, science communication, and collaboration with state agencies and partners to inform and improve CWD response and public health efforts.

Organization: U of MN - College of Veterinary Medicine

Organization Description:

The University of Minnesota College of Veterinary Medicine affects the lives of animals and people every day through educational, research, service, and outreach programs. We are dedicated to the education of future and current veterinarians and biomedical scientists and the discovery of new knowledge and skills.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Principal investigator		Project manager			36.6%	0.14		\$24,483
Co-principal investigator		Project co-lead			32.3%	1.94		\$192,117
Co-investigators		Leads for specific activities			35.2%	0.34		\$60,765
Researcher		Assisting in activity management and administrative support			32.3%	0.72		\$5,867
							Sub Total	\$283,232
Contracts and Services								
							Sub Total	-
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Equipment								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Travel for MNPRO staff; ~4 trips throughout the state with 2-4 people per year	Conduct outreach events, meet with stakeholders/partners. Activities 1-2.					\$4,000
							Sub Total	\$4,000

Travel Outside Minnesota								
	Conference Registration Miles/ Meals/ Lodging	Funds for 1 MNPRO staff to present at a scientific conference	To present work to the scientific community at a professional conference. Activity 1-2.	X				\$2,500
							Sub Total	\$2,500
Printing and Publication								
	Printing	Outreach materials, surveys, reports, booklets, posters, models	Educating Minnesota's public and disseminating research results throughout the state					\$2,268
							Sub Total	\$2,268
Other Expenses								
		Outreach event fees	Costs associated with participating in outreach events (booth fees, entrance, etc.)					\$2,000
							Sub Total	\$2,000
							Grand Total	\$294,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Travel Outside Minnesota	Conference Registration Miles/Meals/Lodging	Funds for 1 MNPRO staff to present at a scientific conference	Conferences in the associated fields of research are held throughout the U.S. This will allow colleagues in these fields to learn how MNPRO is leading the way in CWD outreach, while also allowing MNPRO connection and collaboration.

Non ENRTF Funds

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

Total Project Cost: \$294,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [867507df-07c.pdf](#)

Alternate Text for Visual Component

The visual summary shows a forest scene inspired by the game Cofactor, featuring characters (scientist, hunter, natural resource manager, butcher) taking a selfie. Photos show community outreach interactions. Text highlights 2025 CWD education efforts—16,692 engagements / 24 events—and a game-based outreach strategy to engage 10,000 people monthly....

Supplemental Attachments

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

Title	File
UMN SPA approval letter	6582c664-3ec.pdf
CIDRAP LOS	4ebb55e6-ad9.docx
Cofactor explainer video link	d17ca0e3-833.docx

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?

Yes, Sponsored Projects Administration

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

No

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

No

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

Thomas Seiler, UMN and Tonya Seiler, 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

N/A