



Environment and Natural Resources Trust Fund

2026 Request for Proposal

General Information

Proposal ID: 2026-544

Proposal Title: Sustainable Food Security, Ecosystem Restoration, and Indigenous Empowerment

Project Manager Information

Name: Wenqing Zhang

Organization: U of MN - Duluth

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Project Basic Information

Project Summary: SFSEIIC combats Indigenous food insecurity through community-driven agriculture, ecosystem restoration, and improved local supply chains, empowering communities with culturally-tailored foods, capacity building, and a comprehensive directory of traditional food resources.

ENRTF Funds Requested: \$620,000

Proposed Project Completion: June 30, 2028

LCCMR Funding Category: Resiliency (A)

Project Location

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

Region(s): NE

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.

Indigenous communities in Minnesota face persistent and disproportionately high levels of food insecurity due to multifaceted, systemic challenges. Nearly 25% of Native American households struggle to access reliable, nutritious, and culturally appropriate food. This crisis is fueled by geographic isolation, entrenched economic barriers, infrastructure gaps that hinder local food production, and inefficient long-distance industrial supply chains. Moreover, the historical loss of Indigenous agricultural knowledge and food sovereignty has weakened these communities' ability to sustain traditional food systems and secure culturally relevant resources. Consequently, food insecurity results in poor health outcomes—such as elevated rates of diabetes and obesity—and undermines cultural identity and community resilience. Additionally, chronic underinvestment in local food infrastructure and limited market opportunities have further compounded these issues, leaving communities with few tools or resources to effectively address these challenges. The convergence of economic, environmental, and social factors calls for a comprehensive, culturally informed intervention that integrates community-driven agricultural solutions, ecosystem restoration, and local capacity building. By merging traditional practices with realigned supply chains, the proposed initiative aims to build on existing food sovereignty efforts and improve health outcomes.

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.

SFSEIIC proposes a comprehensive, community-driven solution to address food insecurity and ecosystem degradation affecting Minnesota's Indigenous communities. Our approach leverages three interrelated strategies designed to restore food sovereignty, improve health outcomes, and strengthen intergenerational knowledge sharing.

First, we will develop an integrated digital platform that enables Indigenous households to report food insecurity while also hosting a directory of Indigenous foods, local producers, and seed libraries—exclusively available to community members—to facilitate efficient food distribution and enhance community engagement.

Second, we will expand existing community gardens—such as those managed by AICHO and the Fond du Lac Band—to increase the capacity for sustainable, centralized food supply hubs. These gardens will incorporate traditional ecological practices, permaculture techniques, and green infrastructure (e.g., rain gardens, bioswales) to boost local food production and restore natural ecosystems.

Third, through established programming, we will deliver culturally tailored educational programs and training in sustainable agriculture, seed saving, and ecosystem restoration. Our intergenerational knowledge model will empower community members to lead these initiatives, ensuring long-term sustainability.

This integrated solution not only addresses immediate food insecurity but also contributes to building a resilient, community-led food system grounded in Indigenous traditions and environmental stewardship. By merging supply chain

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?

SFSEIIC's outcomes directly support the state's natural resource protection mission by integrating robust ecosystem restoration with sustainable agriculture. Employing sustainable practices, this project highlights the value of farmland, improves water quality, and enhances biodiversity. These measures help conserve and strengthen local ecosystems while reducing reliance on distant food supply chains. Furthermore, community-driven capacity building fosters long-term stewardship through training in sustainable practices and traditional agricultural methods. By documenting replicable models and best practices, SFSEIIC ensures the enduring protection, conservation, preservation, and enhancement of Minnesota's natural resources for future generations.

Activities and Milestones

Activity 1: Establish Community-Based Food Security Coordination System and Comprehensive Food Sovereignty Training Programs

Activity Budget: \$165,000

Activity Description:

The SFSEIIC project team will partner closely with AICHO, the Fond du Lac Band, local community leaders, and volunteers to develop and implement an integrated, community-driven digital platform. This platform will enable Indigenous households to report food insecurity needs, coordinate local food distribution, and connect with community gardens and other food sources. Additionally, it will feature a dedicated section with a comprehensive directory of Indigenous foods, food producers, and seed storage/access points—exclusively available to Indigenous community members.

The project team will collaborate with Indigenous partners to develop culturally informed educational programs, including practical workshops, online webinars, and training sessions that emphasize traditional Indigenous agricultural practices, sustainable food production techniques, nutrition education, and food sovereignty principles. Comprehensive training materials—such as educational videos, written manuals, digital toolkits, and culturally relevant instructional resources—will be created. Regular community engagement meetings will be held to recruit participants, distribute educational materials, gather feedback, and maintain active community involvement throughout the training and platform development process.

Activity Milestones:

Description	Approximate Completion Date
Develop and launch a community-based digital food security reporting and coordination platform.	October 31, 2026
Develop and launch the Indigenous Foods and Seed Directory Module within the digital platform.	November 30, 2026
Develop culturally relevant educational curricula, training manuals, webinars, and instructional materials focused on sustainable practices	December 31, 2026
Conduct community workshops, training sessions, and educational webinars engaging at least 50 initial participants.	March 31, 2027

Activity 2: Expand Indigenous Community Gardens as Local Food Supply Chain Hubs and Implement Ecosystem Restoration Initiatives

Activity Budget: \$195,000

Activity Description:

In partnership with AICHO and Fond du Lac's Gitigaan program, the project team will expand and enhance community garden sites by incorporating traditional ecological knowledge, permaculture methods, and innovative sustainable agriculture practices. Infrastructure improvements—including irrigation upgrades, soil enrichment, native pollinator habitat restoration, and the installation of culturally relevant crop systems—will be implemented concurrently. Additionally, the team will undertake targeted ecological restoration initiatives, such as creating rain gardens, bioswales, and wetland restoration areas, to effectively manage stormwater runoff, enhance local water quality, and restore native biodiversity. Native garden committee members and community volunteers will engage in hands-on training and implementation activities, ensuring long-term community stewardship and ecosystem sustainability.

Activity Milestones:

Description	Approximate Completion Date
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Complete expansion and enhancement of AICHO and Fond du Lac gardens with infrastructure improvements.	June 30, 2027
Implement stormwater management and ecological restoration measures (rain gardens, wetland restoration) integrated with garden expansion.	October 31, 2027
Host hands-on field workshops and garden training sessions engaging at least 100 community participants.	June 30, 2028

Activity 3: Conduct Comprehensive Analysis and Implementation of Strategic Food Distribution and Supply Chain Models

Activity Budget: \$95,000

Activity Description:

The project team, in collaboration with AICHO, Fond du Lac, and local stakeholders—including Indigenous households, farmers, and community gardens—will conduct a detailed analysis of existing food distribution and supply chain models affecting Indigenous communities. This analysis will identify inefficiencies, economic barriers, transportation challenges, and opportunities for improvement. Based on these insights, the team will design and implement short-chain distribution networks that link local Indigenous producers and community garden resources directly with Indigenous households, dramatically enhancing efficiency, reducing costs, and increasing the availability of culturally relevant foods. Regular stakeholder meetings and ongoing participant feedback will ensure that the strategies remain community-driven, continuously refining the models based on real-time input and evaluation.

Activity Milestones:

Description	Approximate Completion Date
Complete comprehensive analysis of current Indigenous food distribution and supply chain systems, identifying barriers and	December 31, 2027
Establish and implement localized short-chain food distribution networks linking community gardens directly to Indigenous households.	March 31, 2028
Conduct community feedback sessions, refine distribution models, and document lessons learned for broader replication.	June 30, 2028

Activity 4: Implement Community-Based Monitoring, Evaluation, and Documentation of Project Impacts

Activity Budget: \$70,000

Activity Description:

The SFSEIIC project will implement a comprehensive monitoring and evaluation framework in close collaboration with community volunteers, AICHO, the Fond du Lac Band, and researchers from the University of Minnesota Duluth and the Minneapolis College of Art and Design. Data will be systematically collected on food security metrics, garden productivity, the effectiveness of ecological restoration (e.g., improved water quality and increased biodiversity), economic impacts, and self-reported community health outcomes. Regular community evaluation meetings, surveys, and interviews will provide qualitative insights, community perspectives, and assessments of cultural relevance. Findings will be synthesized into detailed reports, and successful practices will be documented and communicated through community outreach, digital storytelling, infographics, social media, community forums, and a final comprehensive project report to support statewide replication efforts.

Activity Milestones:

Description	Approximate Completion Date
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Develop and implement monitoring and evaluation frameworks to track food security metrics and ecological health.	December 31, 2027
Complete data collection and analysis of garden productivity, ecosystem restoration success, and food security improvements.	March 31, 2028
Publish final project evaluation report, conduct public outreach through community forums and media.	June 30, 2028

Activity 5: Community Engagement, Outreach, and Capacity Building for Long-Term Sustainability

Activity Budget: \$95,000

Activity Description:

SFSEIIC will ensure sustained project impact through intensive community engagement and outreach. Activities will include ongoing volunteer opportunities, youth-focused programming, and intergenerational knowledge-sharing events. Educational and cultural events—including harvest festivals, youth mentorship programs, elders' teachings, and school-based engagement—will foster deeper community ties, build capacity for ongoing project stewardship, and promote cultural resilience. Additionally, strong partnerships with academic institutions, local governments, nonprofits, and Indigenous-led organizations will be maintained to support long-term funding and project sustainability.

Activity Milestones:

Description	Approximate Completion Date
Implement future leadership programs and intergenerational mentorship activities engaging at least 30 community leaders and	December 31, 2027
Conduct ongoing community engagement activities, including harvest festivals, cultural events, school outreach, and elder-youth knowledge-sharing.	March 31, 2028
Establish long-term sustainability plans through strengthened institutional partnerships and documented best practices for future replication.	June 30, 2028

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
LeAnn Littlewolf	American Indian Community Housing Organization (AICHO)	Provide expertise in community housing, Indigenous garden management, and local outreach. Lead implementation of sustainable agricultural initiatives; manage and expand established community gardens; coordinate local outreach and community engagement; facilitate formation and ongoing support of community garden committees.	Yes
William Thompson	Interim Agricultural Division of Fond du Lac Band of Lake Superior Chippewa	Facilitate the expansion of Fond du Lac growing spaces and seed-keeping efforts. Facilitate Community outreach through the Gitigaan Program. Provide specialized knowledge in ecosystem restoration and traditional Indigenous agricultural practices.	Yes
Pamela Standing	Independent Consultant	Facilitate community-led sustainable development planning and implementation. Provide technical assistance, training resources, and workshops focused on sustainability, food sovereignty, and environmental stewardship. Support integration and implementation of sustainable practices within community-driven initiatives.	Yes
Olaf Kuhlke	Minneapolis College of Art and Design	Offer technical guidance, research expertise, and strategic support in developing climate resilience and sustainability strategies. Collaborate on monitoring and evaluation of project impacts, contribute research capacity, and assist in synthesizing data and findings for reporting and dissemination.	Yes

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?

SFSEIIC embeds its outcomes within community-led structures. Local garden committees and community experts will ensure the ongoing management and ecological restoration of project sites. Findings and best practices will be disseminated through an accessible digital portal and community forums, fostering lasting impact. Ongoing funding will be secured through leveraged grants, state programs, philanthropic partnerships, and local economic initiatives, building on collaborations with AICHO, the Fond du Lac Band, and academic institutions. Additional work will be supported by further grant applications and public-private partnerships, ensuring statewide replication and the long-term sustainability of project successes.

Project Manager and Organization Qualifications

Project Manager Name: Wenqing Zhang

Job Title: Associate Professor of Operations and Supply Chain Management, University of Minnesota Duluth

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

Dr. Wenqing Zhang is uniquely qualified to manage the proposed project through his extensive expertise in Operations and Supply Chain Management, coupled with a deep commitment to social responsibility and sustainable development. His specialized focus on equitable development for Indigenous and rural communities highlights his ability to lead initiatives that enhance operational efficiencies while also promoting social good.

Dr. Zhang's innovative approach to supply chain initiatives consistently bridges the gap between technical excellence and community development. His research has significantly advanced the understanding of how ethical considerations and sustainability can be integrated into operational decision-making, ensuring that business practices support

environmental stewardship and social equity. This perspective is particularly valuable for projects that aim to address disparities in underrepresented communities while driving organizational growth and innovation. Throughout his career, Dr. Zhang has successfully managed complex projects by balancing rigorous analytical frameworks with the practical needs of diverse stakeholders. His robust academic background, supported by hands-on experience in designing and implementing supply chain solutions, has endowed him with a comprehensive understanding of project management principles, strategic planning, and risk mitigation. These skills ensure that projects under his leadership are delivered efficiently, within budget, and in alignment with strategic goals. In addition to his technical and analytical expertise, Dr. Zhang excels in stakeholder engagement, clear communication, and effective team leadership. His proven track record of collaborating with cross-functional teams enables him to meet project objectives in a timely and cost-effective manner while fostering a culture of inclusivity and continuous improvement. Given his unique blend of advanced technical knowledge, innovative mindset, and unwavering commitment to sustainable development, Dr. Wenqing Zhang is exceptionally positioned to lead the proposed project and deliver both operational excellence and meaningful social impact. For more information on his work and achievements, please visit his professional website at wenqingzhang.com.

Organization: U of MN - Duluth

Organization Description:

Labovitz School of Business and Economics (LSBE) at the University of Minnesota Duluth is a dynamic institution dedicated to fostering academic excellence, innovative research, and transformative community engagement in business education. LSBE is committed to preparing future business leaders and entrepreneurs through a comprehensive curriculum that emphasizes ethical decision-making, strategic management, and sustainable economic practices. The school offers a diverse range of undergraduate and graduate programs designed to equip students with practical skills, critical thinking abilities, and a global perspective, ensuring they are well-prepared to navigate complex business environments.

LSBE's faculty comprises accomplished scholars and industry experts whose research and teaching integrate real-world applications with theoretical foundations. The school's strong emphasis on experiential learning, internships, and collaborative projects creates a vibrant learning environment that bridges classroom theory with practical business challenges. Through strategic partnerships with local businesses, non-profit organizations, and governmental agencies, LSBE contributes significantly to regional economic development and innovation. The Labovitz School of Business and Economics remains a catalyst for positive change, empowering its students and community partners to drive sustainable growth and economic resilience in an ever-evolving global marketplace. LSBE's forward-looking approach and deep industry ties ensure graduates are well-equipped to lead in an ever-changing global economy.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Wenqing Zhang		Serve as the overall project manager, coordinate development and implementation of food insecurity coordination system, oversee community garden expansion, ecosystem restoration activities, educational and outreach programs, stakeholder engagement, project evaluation, and reporting.			27%	0.32		\$85,704
Undergraduate Research Assistant		Support fieldwork, community garden setup, data collection on food security, ecological monitoring, and assist with community workshops and outreach activities			0%	0.1		\$3,172
Undergraduate Research Assistant		Support fieldwork, community garden setup, data collection on food security, ecological monitoring, and assist with community workshops and outreach activities			0%	0.1		\$3,172
							Sub Total	\$92,048
Contracts and Services								
American Indian Community Housing Organization	Subaward	Lead community garden operations, local outreach coordination, volunteer recruitment, community engagement activities, and formation and training of garden committees.				2		\$144,400
Fond du Lac Band of Lake Superior Chippewa	Subaward	Lead implementation of sustainable agriculture practices (Gitigaan program), oversee ecosystem restoration initiatives (bioswales, rain gardens), provide training workshops on permaculture, traditional ecological knowledge, and water conservation methods.				2		\$224,000
Pamela Standing	Service Contract	Facilitate sustainable development planning and integration; conduct training workshops on sustainable practices, food sovereignty, and environmental stewardship; provide technical assistance to community-led sustainability initiatives.				0		\$27,900

TBD	Service Contract	Web portal development and management for community coordination and data sharing; Development and maintenance of community-based food security reporting and coordination platform				0		\$15,000
Minneapolis College of Art and Design	Subaward	Provide technical guidance and research support, manage development and operation of web-based data and project results portal, coordinate monitoring and evaluation, assist in data analysis and dissemination of project outcomes.				0.6		\$74,856
							Sub Total	\$486,156
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Mileage (~2,500 miles at \$0.70/mile \$1,750), lodging for 3 staff (\$150/night, 8 nights), per diem (\$69/day, 12 days)	Project team travel to conduct community outreach, training sessions, stakeholder meetings, and field visits across Northeastern Minnesota					\$15,905
							Sub Total	\$15,905
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								

	Printing	Outreach and educational materials (fact sheets, flyers, posters, manuals, infographics, final project reports)	Disseminate information, support community education, promote project outcomes, and ensure broad community engagement					\$5,810
							Sub Total	\$5,810
Other Expenses								
		Web hosting	Web hosting services for the digital platform, community coordination portal, data management, and dissemination					\$7,006
		Shipping and delivery costs	Shipping garden and restoration supplies, educational resources, printed materials, and project reports; Delivery expenses associated with distributing fresh produce from community gardens to Indigenous households					\$13,075
							Sub Total	\$20,081
							Grand Total	\$620,000

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
State				
			State Sub Total	-
Non-State				
In-Kind	UMN unrecovered indirect costs are calculated at the UMN negotiated rate for research of 37% modified total direct costs.	Indirect costs are those costs incurred for common or joint objectives that cannot be readily identified with a specific sponsored program or institutional activity. Examples include utilities, building maintenance, clerical salaries, and general supplies. (https://research.umn.edu/units/oca/fa-costs/direct-indirect-costs)	Secured	\$93,145
			Non State Sub Total	\$93,145
			Funds Total	\$93,145

Total Project Cost: \$713,145

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [a802090f-a35.pdf](#)

Alternate Text for Visual Component

This document contains the Conceptual Overview Diagram and the Project Timeline....

Supplemental Attachments

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

Title	File
Native Agriculture Financial Services	56e9e57b-c86.pdf
Support Letter from Dream of Wild Health	fba337e-bec.pdf
UMD Authorization Letter	114a7be8-835.pdf
Support Letter from True North Goodwill	c17167a4-519.pdf
Support Letter from MNIBA	8fcd2fa5-fcb.pdf
Support Letter from Fond du Lac Band	b5241d9f-130.pdf
Support Letter from Cooperative Development Foundation	f493acd2-5c0.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?

Yes

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")?

No

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

N/A

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