



Environment and Natural Resources Trust Fund

2025 Request for Proposal

General Information

Proposal ID: 2025-250

Proposal Title: Conserving Natural Resources by Advancing Forever Green Agriculture

Project Manager Information

Name: Mitchell Hunter

Organization: U of MN - College of Food, Agricultural and Natural Resource Sciences

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Project Basic Information

Project Summary: The Forever Green Initiative will fund research projects focused on protecting water, wildlife, soil, the climate, and other natural resources by developing new perennial and winter-annual crops.

ENRTF Funds Requested: \$5,000,000

Proposed Project Completion: June 30, 2030

LCCMR Funding Category: Foundational Natural Resource Data and Information (A)

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?

In the Future

Narrative

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

Conventional agricultural systems contribute to degradation of water quality and wildlife habitat and are a source of greenhouse gas emissions. This is exacerbated by the current systems' reliance on summer-annual crops. These crops only cover the soil during the warm season; at other times, soil is vulnerable to erosion and the loss of nutrients to surface water or groundwater, which impairs fish habitat and public health. This lack of living plant cover also limits habitat and forage resources for wildlife, including pollinators, and contributes to the loss of soil carbon to the atmosphere.

To protect and enhance Minnesota's natural resources, we must move toward year-round vegetative cover on cropland (also known as "continuous living cover"). Incorporating winter-annual and perennial crops that cover the soil over the winter can reduce losses of nitrate, phosphorus, and sediment while improving wildlife habitat, pollinator resources, and carbon sequestration potential.

A strategic and sustained research effort is needed to develop and deploy these systems. First, this research must breed new perennial and winter-annual crops, determine how to manage them, and identify end uses. Second, it must develop robust markets and supply chains to enable widespread adoption and maximize the benefits for Minnesota's natural resources.

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.

The University of Minnesota's Forever Green Initiative (FGI) is the national leader in this new approach to protecting and enhancing natural resources. Forever Green focuses on developing new perennial and winter-annual crops; integrating them into cropping systems; and building supply chains and markets for these crops. Examples include winter-hardy "cash cover crops" such as camelina, pennycress, and winter barley, and perennial crops such as intermediate wheatgrass (Kernza®) and hybrid hazelnuts.

There are over 15 FGI crop teams spanning disciplines including genomics, breeding, agronomy, natural resource sciences, food science, and economics. This interdisciplinary approach allows for rapid scientific advancement with real-world impact, leading to high-performing crop varieties, best management practices that maximize ecological benefits, and novel end-uses. The FGI commercialization team then works to develop supply chain and markets.

The requested funding will advance this research by supporting the FGI Grant Program, which provides multi-year research grants. This well-established program has operated since 2016 and has been supported by a variety of state funding sources, including LCCMR. However, additional resources are needed due to the scope of FGI's efforts and the urgency of advancing continuous living cover agriculture. LCCMR funding will greatly accelerate progress, with widespread benefits for Minnesota's natural resources.

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?

Research sub-projects supported by this project will help protect water, wildlife, soil, the climate, and other natural resources by advancing development of perennial and winter-annual crops and cropping systems. Specific outcomes could include: enhanced understanding of natural resource outcomes from FGI cropping systems; improved management recommendations that maximize environmental benefits; new crop varieties that are more economically viable and therefore can be adopted on more acres; advances in food science that create new markets and therefore expand deployment; and development of supply chains that advance commercialization and therefore increase acreage of these crops.

Activities and Milestones

Activity 1: Selecting sub-projects

Activity Budget: \$71,250

Activity Description:

Sub-projects will be selected through two rounds of the FGI Grant Program. A half-time Grant Program Coordinator will be hired to administer the process. For each round, a request for proposals (RFP) will be developed in collaboration with the Project Manager (Dr. Hunter) and the FGI Executive Committee. A peer review process will select the most impactful sub-projects. Proposals will be reviewed by a panel including external experts, UMN faculty without direct ties to FGI, and department heads from across the College of Food, Agricultural, and Natural Resources Sciences (CFANS). The process will be overseen by the CFANS Associate Dean for Research and Graduate Programs. The RFP and evaluation criteria will be based on academic best practices, experience with past FGI RFPs, and the FGI strategy and mission. Evaluation criteria will include: 1) alignment with the FGI strategy for protecting natural resources, 2) technical and scientific merit, 3) qualifications of the research team, and 4) timeliness and necessity of the project. Reviewers will score proposals then meet to discuss, select proposals, and recommend funding amounts. The Associate Dean will make final allocations based on the review panel's recommendations.

Activity Milestones:

Description	Approximate Completion Date
Hire half-time Grant Program Coordinator	August 31, 2025
Develop and release 1st RFP	November 30, 2025
Run 1st review process, select projects, deploy funds	May 31, 2026
Develop and release 2nd RFP	November 30, 2026
Run 2st review process, select projects, deploy funds	May 31, 2027

Activity 2: Awarding and administering sub-projects

Activity Budget: \$4,928,750

Activity Description:

Each sub-project recommended for funding will be added as an activity in an amended work plan for LCCMR review and approval. Proposals will be developed using the LCCMR work plan and budget structures during the RFP process, so that the materials can be readily uploaded into the LCCMR dashboard. Leaders of each sub-project will be given access to the dashboard to upload their information. The Project Manager (Dr. Hunter) and Grant Program Coordinator will assist as needed and ensure that all materials are complete for all new sub-projects before submitting the work plan amendment request. When the work plan is amended, funds will be shifted from the budget line "to be awarded to sub-projects" to the budget line "awarded to sub-projects" in Professional and Technical Contracts. Detailed updates will be limited to when sub-projects are added or funds are returned for redistribution. The Project Manager will ensure timely project updates; submission of the final report and findings; proper acknowledgment of LCCMR funding in all publications; and return of an appropriate share of royalties from any LCCMR-funded research to the ENRTF (e.g., royalties from the sales of seed of crop varieties developed with LCCMR support).

Activity Milestones:

Description	Approximate Completion Date
Submit 1st work plan revision with new subprojects	June 30, 2026
Submit 2nd work plan revision with new subprojects	June 30, 2027
Provide ongoing grant support and ensure timely submission of project updates	June 30, 2030

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
TBD	TBD	The Forever Green Initiative collaborates with many partners to conduct research and develop new cropping systems. We anticipate that numerous partners will be included on sub-projects funded through this grant. Likely partners include state and federal agencies, research institutes, and Minnesota-based farmers and food and agricultural businesses.	No

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?

This project will enable FGI crop teams to continue the process of developing crops and moving them toward commercialization. Implementation is built into the FGI model and will proceed through partnerships with conservation organizations, farmers, supply chain businesses, end-users, and local and state government entities. Forever Green has been supported by a wide range of funding sources over many years, including large federal grants, private companies, philanthropies, and various state programs. Forever Green will continue to pursue funding from this diverse mix of sources to advance our research and lead to on-the-ground implementation.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Forever Green Agriculture Initiative	M.L. 2022, , Chp. 94, Art. , Sec. 2, Subd. 10i	\$763,000

Project Manager and Organization Qualifications

Project Manager Name: Mitchell Hunter

Job Title: Associate Director, Forever Green Initiative; Adjunct Assistant Professor, Department of Agronomy and Plant Genetics

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

Dr. Mitch Hunter is an agronomist and agroecologist by training whose research focuses on developing novel cropping systems that result in enhanced water quality, climate resilience, and soil health. He manages the research and development (R&D) efforts of the Forever Green Initiative (FGI) at the University of Minnesota. This includes managing the FGI Grant Program, which has provided over 30 grants to FGI researchers in the last two years. Dr. Hunter develops the request for proposals (RFP) in coordination with the FGI Executive Committee; recruits reviewers and assigns them to proposals; organizes review panel meetings; presents on FGI priorities; and does post-award administration, including financial administration and reporting. Dr. Hunter also oversees and supports the ~15 FGI crop development teams.

Organization: U of MN - College of Food, Agricultural and Natural Resource Sciences

Organization Description:

The University of Minnesota College of Food, Agricultural and Natural Resource Sciences (CFANS) is one of seventeen colleges and professional schools at the University of Minnesota. The college houses the departments of Agronomy and Plant Genetics; Soil, Water and Climate; Food Science and Nutrition; and others whose research capabilities are central to the Forever Green Initiative.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Grant Program Coordinator		Support grant program operations including RFP development, submission process, securing reviewers, scheduling review panels, award letters, post-award administration, and reporting			33.5%	1		\$80,100
							Sub Total	\$80,100
Contracts and Services								
To be awarded to sub-projects	Sub award	Budget reserve for awarding to subprojects upon approval by LCCMR				60		\$4,908,650
Awarded to sub-projects	Sub award	Total amount awarded to subprojects				0		-
TBD	Professional or Technical Service Contract	Peer review of grant applications (15 reviewers per year at 10 hours each, \$375 stipend per reviewer)				0.16		\$11,250
							Sub Total	\$4,919,900
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								

							Sub Total	-
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
							Sub Total	-
							Grand Total	\$5,000,000

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				
In-Kind	AGREETT Funding for Project Manager (Dr. Hunter); SF 1955 Conference Committee Report - 93rd Legislature (2023 - 2024)	Leadership and oversight of the grant program. These funds are not considered cost-share/matching commitment.	Secured	\$7,500
			State Sub Total	\$7,500
Non-State				
			Non State Sub Total	-
			Funds Total	\$7,500

Total Project Cost: \$5,007,500

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [e6455fc4-0e4.pdf](#)

Alternate Text for Visual Component

A 42-page document providing an overview of the Forever Green Initiative, including the challenge we are addressing, our logic model, an overview of our proposed solution, and detailed information on 17 of our crops and crop groups....

Supplemental Attachments

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

Title	File
Friends of the Mississippi River Letter of Support	441f6100-cb2.pdf
SPA Approval Letter	6ca03e2d-6fd.pdf
Environmental Initiative Letter of Support	1ca5f145-378.pdf
Clean River Partners Letter of Support	7d56da37-e31.pdf
Great River Greening Letter of Support	61ff1608-56a.pdf
Green Lands Blue Waters Letter of Support	e72b3a16-ff6.pdf
Minnesota Farmers Union Letter of Support	a79059e1-455.pdf
Lake Pepin Legacy Alliance Letter of Support	361efe1e-0b1.pdf
Land Stewardship Project Letter of Support	6c63efd7-633.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

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

Yes

Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?

Yes

Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?

No

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:

Don Wyse, Department of Agronomy and Plant Genetics, UMN; Sue Kalenze, Department of Agronomy and Plant Genetics, UMN; Kelsey Grachek, Sponsored Projects Administration, UMN

