



## Environment and Natural Resources Trust Fund

M.L. 2025 Approved Work Plan

### General Information

**ID Number:** 2025-250

**Staff Lead:** Noah Fribley

**Date this document submitted to LCCMR:** June 5, 2025

**Project Title:** Conserving Natural Resources by Advancing Forever Green Agriculture

**Project Budget:** \$2,146,000

### Project Manager Information

**Name:** Mitchell Hunter

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

**Office Telephone:** (651) 675-7380

**Email:** mhunter@umn.edu

**Web Address:** <https://cfans.umn.edu/>

### Project Reporting

**Date Work Plan Approved by LCCMR:** June 24, 2025

**Reporting Schedule:** March 1 / September 1 of each year.

**Project Completion:** June 30, 2030

**Final Report Due Date:** August 14, 2030

### Legal Information

**Legal Citation:** M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 03aa

**Appropriation Language:** \$2,146,000 the first year is from the trust fund to the Board of Regents of the University of Minnesota for the Forever Green Initiative to fund research projects to develop new perennial and winter-annual crops to protect water, wildlife, soil, other natural resources, and the climate. This appropriation is available until June 30, 2030, by which time the project must be completed and final products delivered.

**Appropriation End Date:** June 30, 2030

## Narrative

**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.

**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.

## 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

## Activities and Milestones

### Activity 1: Selecting sub-projects

**Activity Budget:** \$23,538

**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. Proposals will be reviewed by a panel of external experts to ensure that all sub-projects meet high scientific standards. The process will be overseen by the Associate Dean for Research and Graduate Programs in the College of Food, Agricultural, and Natural Resources Sciences. 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 provide at least one round of feedback and may be asked to evaluate proposals that have been modified based on that feedback. The Associate Dean will make final allocations based on the review panel's recommendations.

**Activity Milestones:**

Description	Approximate Completion Date
Develop and release RFP	July 31, 2025
Proposals Due	September 30, 2025
Run peer review process	October 31, 2025
Select projects	November 30, 2025
Deploy funds	January 31, 2026

### Activity 2: Awarding and administering sub-projects

**Activity Budget:** \$2,122,462

**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 for this activity 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 work plan revision with new subprojects	January 31, 2026
Provide ongoing grant support and ensure timely submission of project updates	June 30, 2030
Submit final report and findings	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

## 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.**

Findings, data, and other research products will be disseminated through multiple channels. Updates on progress and research results will be disseminated by CFANS via websites, social media, publications, and media releases. Findings will be presented at local and national conferences and via peer-reviewed publications and student theses. Findings will also be shared with growers and industry partners at field days and meetings. The Forever Green Partnership, which unites members from private, public, and advocacy sectors around a common interest in increasing Continuous Living Cover in agriculture, provides another avenue to share outcomes with NGOs and companies, as does the MBOLD coalition, which includes many of the leading food and agriculture companies based in Minnesota. Crop varieties developed as a result of this research will be released to farmers in partnership with private seed companies. Funding from the Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project and sub-project print and electronic media, publications, signage, and other communications and outreach.

## 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

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Grant Program Coordinator		Support grant program operations including RFP development, submission process, securing reviewers, scheduling review panels, award letters, post-award administration, and reporting			24.4%	1		\$80,703
							<b>Sub Total</b>	<b>\$80,703</b>
<b>Contracts and Services</b>								
To be awarded to sub-projects	Subaward	Budget reserve for awarding to subprojects upon approval by LCCMR				25		\$2,065,297
This is the cumulative budget, spent, and balance for all sub-projects combined. Detailed budgets for subprojects will be managed and submitted in an Excel workbook via the attachments page under "Optional Attachments/ Support Letter or Other" with the file name	Subaward	Total amount awarded to subprojects				0.01		-

as the date of submission (for example, YYYY-MM-DD Budget Update).								
							Sub Total	\$2,065,297
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	\$2,146,000



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
<b>State</b>				
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
Cash	Waived University of Minnesota Overhead	Funds that would be collected if the 0.55% UMN indirect cost rate were applied	Secured	\$1,180,300
			<b>State Sub Total</b>	<b>\$1,187,800</b>
<b>Non-State</b>				
			<b>Non State Sub Total</b>	-
			<b>Funds Total</b>	<b>\$1,187,800</b>

**Total Project Cost: \$3,333,800**

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

### Difference between Proposal and Work Plan

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

This is a summary of the changes I have made in response to the recent comments:

- Removed the budget for the peer reviewers. \$165 is not enough money to secure high-quality peer reviewers. We will use other funds to pay for this. Reallocated these funds to the budget for subprojects.
- Added more detail about the peer review process to the activities/milestones.
- Removed the milestone of hiring the Grant Program Coordinator since we believe that this person will be in place when funds are available (hired using other funds to expedite on-boarding).
- Shifted from two RFPs and peer review processes to one, and accelerated the grantmaking timeline, based on current plans for the FGI Grant Program.
- Clarified Activity 2 as requested re: detailed updates.
- Adjusted milestones in Activity 2 to align with updated schedule for Activity 1.
- Adjusted budgets for both activities to reflect the accelerated timeline for grantmaking.
- Added the requested language to the budget item titled, "Awarded to sub-projects." When saving this language, the system would not accept a zero for FTE or years. So I added 0.1 for both.
- Clarified the dissemination section as requested.
- Removed Don Wyse's name as a collaborator since he has passed away. Added Nick Jordan instead.

## 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?**

N/A

**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 project:**

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