



Environment and Natural Resources Trust Fund

M.L. 2024 Approved Work Plan

General Information

ID Number: 2024-058

Staff Lead: Lisa Bigaouette

Date this document submitted to LCCMR: June 10, 2024

Project Title: Water Science and Policy Fellowships for Minnesota

Project Budget: \$407,000

Project Manager Information

Name: Alexander Frie

Organization: U of MN - Duluth - Sea Grant

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Project Reporting

Date Work Plan Approved by LCCMR: June 20, 2024

Reporting Schedule: June 1 / December 1 of each year.

Project Completion: June 30, 2027

Final Report Due Date: August 14, 2027

Legal Information

Legal Citation: M.L. 2024, Chp. 83, Sec. 2, Subd. 05f

Appropriation Language: \$407,000 the second year is from the trust fund to the Board of Regents of the University of Minnesota for the Minnesota Sea Grant College Program in Duluth to create a fellowship program to train Minnesota's workforce in water resource science and policy.

Appropriation End Date: June 30, 2027

Narrative

Project Summary: Minnesota Sea Grant seeks to create a science-policy fellowship program to train Minnesota's science-policy workforce and advance Minnesota's water resource policy, emulating Sea Grant's successful federal-level fellowship program.

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

Minnesota needs scientists skilled in navigating the interface of science and policy to address modern water resource challenges, including mitigating severe weather impacts, improving water quality, and managing invasive species. To address this need at the state level, we propose a fellowship program that places recent graduate students in host placements.

The fellowships would provide one-year training opportunities. Fellows will work with and receive mentorship from hosts (state agencies, legislative committees, tribal agencies, and nonprofit organizations). Fellows will receive training from the host, and the fellows will help support the host's work on a project related to water resource science and policy. This program will provide technical expertise to hosts and pathways to careers in science policy for Minnesotans.

Fellowship programs are a proven tool for policy and workforce development. For example, the Sea Grant John A. Knauss Marine and Great Lakes Policy Fellowship (Knauss model) has placed 1,557 fellows in federal agencies and legislative offices since 1979. Multiple state-level (WI, AK, WA) programs have recently followed the Knauss model with wide success. These other programs have demonstrated that, after startup, fellowship hosts are willing to fund a significant portion of the program costs (50 - 100%).

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 train the next generation of Minnesota natural resource policy leaders, we propose a "Minnesota Sea Grant/LCCMR Science & Policy Fellowship Program" and request financial support from LCCMR for the first two fellowship classes of the program. This support will be leveraged by Minnesota Sea Grant to initiate the program, which we expect to continue beyond the requested grant period.

Hosts and fellows will be selected through a competitive process administered by Minnesota Sea Grant (MNSG). MNSG brings over 40 years of experience running fellowship competitions, recruiting fellows, and developing partnerships. MNSG will recruit prospective fellows from Minnesota-based graduate programs, identify prospective hosts, handle fellowship administration, and organize professional development opportunities.

In the program, partners will host fellows for one year and benefit from fellows' scientific expertise. During that year, fellows will support the host's efforts related to water resources policy. Hosts will benefit from the skills and insights of the fellows, and fellows will receive hands-on, real-life policy experiences that support their professional development. Letters of support from potential hosts suggest fellows could work on topics including co-management of aquatic-related resources (i.e., wild rice, lake sturgeon, or waterfowl) with tribes, agricultural water quality management, and environmental restoration policy.

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?

1: Expansion of the water resource science-policy workforce in Minnesota. To measure this, we will track the number of fellows who advance to careers involving the protection, conservation, preservation, and enhancement of Minnesota's natural resources.

2: Improved water resource science-policy implementation in Minnesota. To measure this, fellows and hosts will report

how each fellowship contributes to the protection, conservation, preservation, and enhancement of Minnesota's Natural resources.

3: Establishment of a new Minnesota Sea Grant Science & Policy Fellowship Program. We anticipate the program continuing beyond the LCCMR funding period based on the success of similar fellowship programs in other states.

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: Fellowship Host Identification and Support

Activity Budget: \$9,000

Activity Description:

For each fellowship class, we will identify and support four fellowship hosts. We will develop a competitive process for selecting hosts. We will recruit hosts by releasing a “Call for Hosts” and will actively recruit hosts from across Minnesota through webinars, informational meetings, and social media promotion. Selected hosts will be invited to a workshop used to match fellows and hosts.

Hosts will receive access to the technical skills and effort of the fellow, who will help support a host project or projects related to water resource science policy. Hosts will co-develop a mentorship and work plan with their fellow. The hosts will provide supervision and experiential training for fellows and collaborate with Minnesota Sea Grant to coordinate fellow professional development opportunities. Fellows will lend their expertise to support host efforts in water resource science and policy.

Hosting will expand a host’s water resource science policy capacity, and by the conclusion of a fellowship, hosts will have made significant progress on a project or projects related to water resource science policy. Hosts will collaborate with fellows to draft a final report, which will detail the impact of each fellowship on Minnesota’s natural resources.

Activity Milestones:

Description	Approximate Completion Date
Development of the host selection competitive process	July 31, 2024
Four class 1 hosts selected	November 30, 2024
Year 1 mid-program review of and report on the host and fellowship selection and matching	September 30, 2025
Four class 2 hosts selected	November 30, 2025
Class 1 final report from hosts	June 30, 2026
Class 1 final reports due from hosts	June 30, 2026
Year 2 mid-program review of and report on the host and fellowship selection and matching	September 30, 2026
Mid-program review of and report on the host and fellowship selection and matching processes	September 30, 2026
Class 2 final report from hosts	June 30, 2027
Class 2 final reports due from hosts	June 30, 2027

Activity 2: Fellow Recruitment, Matching, and Support

Activity Budget: \$398,000

Activity Description:

We will recruit recent graduate students who will bring technical skills, innovative ideas, and a passion for using science to inform and shape policy. We will recruit prospective fellows through webinars, informational meetings, and through media and social media promotion. We will coordinate an application review and match fellows with hosts. Placements will be made to maximize the fit between the host and fellows and professional opportunities for fellows.

After placement, fellows will start their 1-year fellowship. During this fellowship, the fellows will receive a competitive stipend (\$55,000). Fellows will be co-located with and receive direct supervision and training from their host. Fellows will work on a water resource science-policy project or projects under the advisement of their host. During the fellowship, fellows will have funding to support their professional development related to natural resources science and policy.

Participating in the fellowship will expand the fellows’ experience in water resource science and policy. At the conclusion of the fellowship, fellows will submit reports, under the advisement of their hosts, that describe the impact of their fellowships on Minnesota’s Natural Resources, skills developed by the fellow, and professional development experiences participated in by the fellow.

Activity Milestones:

Description	Approximate Completion Date
Development of the fellowship selection competitive process	November 30, 2024
Fellowship class 1 begins (4 fellows)	June 30, 2025
Fellow class 1 midyear report due	December 31, 2025
Fellowship class 1 ends and fellow final reports are submitted	June 30, 2026
Fellowship class 2 begins (4 fellows)	June 30, 2026
Fellow class 2 midyear report due	December 31, 2026
Fellowship class 2 ends and fellow final reports are submitted	June 30, 2027

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.

Results from the fellowship program will be disseminated through multiple mechanisms, including reports by the fellows, public webinars, and fellow-specific dissemination plans. This combination of approaches will ensure the results of the program are communicated to appropriate audiences.

Planning for dissemination will begin at the host selection stage of the program. In the application to serve as a host, hosts will be asked to lay out a preliminary dissemination plan. This plan will ensure that each fellow has a framework to disseminate results independently of those directly organized by Minnesota Sea Grant. Once fellows are selected, fellows will work with their hosts to finalize dissemination plans to match the needs of the fellow, their host, and target audiences.

At the end of their fellowship, fellows, in collaboration with their host office, will prepare a report summarizing the major outputs of the fellow's experience. This report will detail the fellow's support of Minnesota's Natural Resources, skills developed by the fellow, and professional development experiences participated in by the fellow. The report will be used to demonstrate impacts not only on fellows' career trajectories but also on Minnesota's natural resources. Reports will be shared with relevant parties, including hosts, relevant natural resource agencies, and the LCCMR. Additionally, reports may be made publicly available online on the Minnesota Sea Grant website or the University of Minnesota Digital Conservancy, if consented to by the host office, to ensure continued access after each fellowship year. In addition to the final report, we will host a public webinar after each fellowship year. During this webinar, all fellows will summarize their experience and their impact on Minnesota's natural resources. Target audiences for the webinar will include the general public, natural resource managers, and members of the LCCMR. Through reports, public webinars, and fellow-specific dissemination efforts, we will ensure that the impact of this fellowship program is communicated broadly.

In all materials and presentations supported by this project, the Environment and Natural Resources Trust Fund will be acknowledged through the use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the ENTRF Acknowledgment 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?

This project will demonstrate a water science policy fellowship program in Minnesota. After the conclusion of LCCMR funding, we anticipate that funds from hosts will allow for the continuation of the program. The self-sustaining nature of these fellowship programs has been demonstrated in other states. We also anticipate continued administrative support from the Minnesota Sea Grant.

We anticipate the results of this project, the trained fellows and the work they complete, will continue to positively impact Minnesota's natural resources far beyond the end date of the budget.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Fellowship Coordinator: Alexander Frie		Coordinate fellowship recruitment and selection, coordinate host recruitment and selection, arrange fellowship placements, coordinate fellowship placement workshop, support fellows during the fellowship, plan fellowship professional development. Lead reporting of project and fellowship activities.			27%	0.36		\$41,003
Communication Manager: Marie Thoms		Manage fellowship promotion. Including creating and maintaining a fellowship program webpage, creating and distributing a social media promotion campaign for recruitment of fellows and host sites, and email promotion for recruitment of fellows and host sites.			24%	0.06		\$6,597
Extension Program Associate: To be named		Coordinate matching workshop logistics including lodging and travel for attendees, workshop program, and catering.			24%	0.08		\$5,279
							Sub Total	\$52,879
Contracts and Services								
							Sub Total	-
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								

							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Estimated as \$125 a night x 8 finalists x 1 night x 2 workshops	Finalist lodging during matching workshops					\$2,000
	Miles/ Meals/ Lodging	Mileage or other Minnesota travel for finalists to travel to attend matching workshops. Estimated as \$62.50 a finalist x 8 finalists x 2 workshops.	Finalist travel to and from workshops					\$1,000
							Sub Total	\$3,000
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Printing	Flyers for distribution to graduate programs throughout Minnesota. Estimated at a cost of \$0.50 a flyer for 500 flyers. Shipping costs for print media distribution. Estimated at \$4.95 per package for 75 packages	Print Media for Fellowship Promotion					\$621
							Sub Total	\$621
Other Expenses								
		Space rental for fellowship matching workshops. Estimated as \$47.90 per hour for x for 8 hours x for 2 days and 2 workshops.	Space rental for fellowship matching workshops.					\$1,500
		Estimated as \$20 a meal x (4 hosts x 2 representatives per host + 8 fellows+ 4 staff) x 5 meals for 2 workshops.	Catering/Meals for matching workshop attendees	X				\$4,000
		Fellow financial support for 4 fellows to work with hosts to gain skills and advance projects in water resources policy. Class one estimated as \$55,000 per fellow for 4 fellows with 100% LCCMR support. Class 2 estimated as \$55,000 per fellow for 4 fellows with 50% LCCMR Support. Stipends of \$4,583 will be paid monthly to each fellow in good standing.	Fellowship Stipends					\$330,000
		Fellow professional development funds for 4 fellows to support professional development and	Fellowship Professional Development Funds	X				\$15,000

		presenting of results related to water resources policy within Minnesota. These funds may be used to pay for activities including in state conference fees, online trainings, and workshops at the discretion of the fellow with approval of the program manager. These funds would be dispersed to fellows after they complete the activity to ensure funds are dispersed following University of Minnesota's and LCCMR's guidelines and the activities are within the project scope. Year 1 estimated as \$2,500 per fellow for 4 fellows 100% LCCMR support. Year 2 estimated as \$2,500 per fellow for 4 fellows at 50% LCCMR support						
							Sub Total	\$350,500
							Grand Total	\$407,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Other Expenses		Estimated as \$20 a meal x (4 hosts x 2 representatives per host + 8 fellows+ 4 staff) x 5 meals for 2 workshops.	Meal support for the matching workshop is critical to supporting the attendance of potential hosts and potential fellows. Since the workshop will take place over two days, providing support for both prospective fellows and host representatives will ensure engagement and the success of the matching process.
Other Expenses		Fellow professional development funds for 4 fellows to support professional development and presenting of results related to water resources policy within Minnesota. These funds may be used to pay for activities including in state conference fees, online trainings, and workshops at the discretion of the fellow with approval of the program manager. These funds would be dispersed to fellows after they complete the activity to ensure funds are dispersed following University of Minnesota's and LCCMR's guidelines and the activities are within the project scope. Year 1 estimated as \$2,500 per fellow for 4 fellows 100% LCCMR support. Year 2 estimated as \$2,500 per fellow for 4 fellows at 50% LCCMR support	We request approval to spend some portion of the professional development funds on conferences if a conference is in Minnesota and presents a clear professional development opportunity for a fellow that is aligned with the program's goals.

Non ENRTF Funds

Category	Specific Source	Use	Status	\$ Amount
State				
In-Kind	University of Minnesota	Facilities and Administrative Costs	Secured	\$21,175
Cash	Fellowship Host Organizations	50% host support of fellowship stipends during fellowship year 2 (year 3 of grant)	Potential	\$120,000
Cash	Fellowship Host Organizations	50% host support of fellow professional development funds during fellowship year 2 (year 3 of the grant)	Potential	\$7,000
			State Sub Total	\$148,175
Non-State				
			Non State Sub Total	-
			Funds Total	\$148,175

Attachments

Required Attachments

Visual Component

File: [5bac4f2c-d9b.pdf](#)

Alternate Text for Visual Component

Top: Scientists in lab and field situations followed by the text "Water Science." Center: The state of Minnesota with a cartoon microscope and a path to a cartoon government building. Bottom: the text "Water Policy" and images of Sea Grant Knauss fellows (federal science-policy fellows)....

Supplemental Attachments

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

Title	File
Fond du Lac Band of Lake Superior Chippewa Resource Management Division: Letter of Support	f6360718-6f1.pdf
Minnesota Agricultural Water Quality Certification Program hosted at the Minnesota Department of Agriculture: Letter of Support	134224a0-cec.pdf
UMN Authorization Letter	046c2869-fb4.pdf

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

5/16/2024

1. Removed duplicative Milestone.
2. Requested approval for potential conference spending in professional development funds.

2/26/2024

1. Milestones updated to address the reviewer's comments.
2. Budget items were updated to address the reviewer's comments.
3. The dissemination plan was updated to address the reviewer's comments.

1/17/2024

Additional changes were made to respond to the reviewer's comments.

1. The activities and milestones were significantly revised.
2. The outcomes were significantly revised.
3. The narrative was minorly revised to make it clear that this is a new fellowship program and to clarify the description of the program.
4. Multiple budget items were combined between fellowship class 1 and class 2. (No change to the amount requested)
5. Multiple budget item descriptions were edited for clarity.

The following changes were made to account for the lower amount of recommended funding.

1. Lowered funds budgeted for fellows' professional development activities. Reduced from \$21,000 to \$15,000 over the course of the grant.
2. Reduced the estimated per meal cost from \$25 to \$20 for workshop expenses. Reducing the request from \$5,000 to \$4,000 over the course of the grant.
3. Reduced fellow stipends from \$60,000 to \$55,000. Reducing the request from \$360,000 to \$330,000
4. Reduced PI (Alexander Frie's) salary request from \$42,003 to \$41,003.
5. Reduced in-kind non-ENTF unrecovered facilities and administrative costs from \$21,875 to \$21,175 to reflect the lower overall budget.

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 agree travel expenses must 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 agree to the UMN Policy.

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?

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