

**Environment and Natural Resources Trust Fund
2019 Request for Proposals (RFP)**

Project Title:

The Natural Resources Literacy Initiative

ENRTF ID: 138-CH

Category: H. Proposals seeking \$200,000 or less in funding

Sub-Category: C. Environmental Education

Total Project Budget: \$ 194,485

Proposed Project Time Period for the Funding Requested: June 30, 2021 (2 yrs)

Summary:

A cross-disciplinary team of scientists will reach out and engage with the public throughout Minnesota in a series of interactive, give-and-take, outreach forums called the "The Natural Resources Literacy Initiative."

Name: Lawrence Zanko

Sponsoring Organization: U of MN - Duluth

Title: Senior Research Program Manager

Department: Natural Resources Research Institute

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Duluth MN 55811-1442

Telephone Number: (218) 788-2674

Email lzanko@d.umn.edu

Web Address

Location

Region: Statewide

County Name: Statewide

City / Township:

Alternate Text for Visual:

The visual shows the projects title; a map of Minnesota; the logos of initiative collaborators (Minnesota Sea Grant, NRRI, and UM Extension); text describing the initiative; and a topics list.

<input type="checkbox"/>	Funding Priorities	<input type="checkbox"/>	Multiple Benefits	<input type="checkbox"/>	Outcomes	<input type="checkbox"/>	Knowledge Base	
<input type="checkbox"/>	Extent of Impact	<input type="checkbox"/>	Innovation	<input type="checkbox"/>	Scientific/Tech Basis	<input type="checkbox"/>	Urgency	
<input type="checkbox"/>	Capacity Readiness	<input type="checkbox"/>	Leverage	<input type="checkbox"/>		TOTAL	<input type="checkbox"/>	%
<input type="checkbox"/> If under \$200,000, waive presentation?								



PROJECT TITLE: The Natural Resources Literacy Initiative

I. PROJECT STATEMENT

Minnesotans are hungry for objective, straightforward, and scientifically-based information and guidance to help learn about and solve important (and often complex) natural resource topics and issues facing their communities and the state. To help fill this need and increase the public’s natural resources literacy quotient (NRLQ), the NRRI, Minnesota Sea Grant, and University of Minnesota Extension will collaborate and assemble a cross-disciplinary team of scientists and outreach specialists that reaches out and engages with the public throughout Minnesota in a series of interactive, give-and-take, outreach forums we call “The Natural Resources Literacy Initiative.” The initiative’s forums will take place in all six LCCMR state regions and eight congressional districts, and will be designed to be two-way, and focusing on problem-solving, informing, and providing objective science-driven context to topical natural resource-based issues and how they intersect with the environment. Mining, energy, water, forestry, invasive species, and agriculture are examples of this natural resource/environment nexus. The proposed initiative will stress self-empowerment, exchange of ideas (not one-way information dumping), valuing non-scientist opinions, interactivity, personal contact, and providing ways for participants to get involved somehow themselves (service opportunities, citizen science, etc.).

The proposed initiative would be an important complement to Minnesota Sea Grant’s outreach efforts for increasing environmental literacy statewide, and would be accomplished through NRRI, Minnesota Sea Grant, and UM Extension collaboration. A two-part scientist tour is envisioned: 1) an engagement session in communities; and 2) a follow-up tour that promises to come back with ideas, solutions, fact-based and innovative information – making it clear that it is impartial university research being brought “to your doorstep in response to your community’s needs.” Sea Grant and Extension outreach specialists would run the engagement sessions, accompanied by key NRRI scientists. NRRI scientists would lead the follow-up re-engagement tour. The initiative’s planning, communications, and mechanism for implementation will be led by Sea Grant and UM Extension.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Year 1: Initial Engagement Tour of Minnesota – Idea and Priority Exchange

Minnesota Sea Grant and UM Extension coordinate with the NRRI to organize, facilitate, and hold engagement and community outreach engagement sessions throughout Minnesota in each LCCMR region and congressional district. Record sessions and assemble findings for follow-up engagement tour (Activity 2).

ENRTF BUDGET: \$75,000

Outcome	Start Date	End Date
1. Project team assembled and engagement sessions scheduled, by topic	Jul 1, 2019	Sep 30, 2019
2. Outreach sessions conducted in all six LCCMR regions, and findings assembled to guide Activity 2	Oct 1, 2019	Mar 31, 2020



Activity 2: Year 1-2: Re-Engagement Tour of Minnesota – Delivering on what have we learned

The project team re-engages with Minnesotans in each LCCMR region and congressional district. Re-engagement forums can take place in town halls, community centers, and school and university auditoriums; by webinar; and by media (print, social, radio and/or television). Project outcomes summarized in a final report, and in a project review workshop.

ENRTF BUDGET: \$119,485

Outcome	Start Date	End Date
1. Re-engagement forums scheduled and teams assembled by topic	Apr 1, 2020	Sep 30, 2020
2. Re-engagement forums held, and forum findings assembled	Apr 1, 2020	Mar 31, 2021
3. Final report to LCCMR completed, and project review workshop held in Duluth that is open to all.	Apr 1, 2021	Jun 30, 2021

III. PROJECT PARTNERS:

A. Partners receiving ENRTF funding N/A

B. Partners NOT receiving ENRTF funding N/A

IV. LONG-TERM- IMPLEMENTATION AND FUNDING:

The project will be a model for continuing and implementing this outreach program, again involving all three project collaborators (NRRI, Minnesota Sea Grant, and UM Extension). There will be an emphasis not only on improving citizen understanding of the science of natural resources, but also on problems communities find important, such as stormwater management, dealing with invasive species such as Emerald Ash Borer, ways to use waste or by-product materials generated locally, novel products suited to a particular community’s resources, harmful algal blooms, and ways to use mine waste.

Long-term funding for this program is envisioned to be a blend of matching and in-kind support from several sources (the project collaborators, agencies, foundations, and the private and public sectors) who value improving everyone’s understanding of natural resources and the environment.

V. TIME LINE REQUIREMENTS:

The project will require two years of ENRTF funding, from 7/1/2019 to 6/30/2021.

IX. SEE ADDITIONAL PROPOSAL COMPONENTS:

- A. Proposal Budget Spreadsheet (attached)**
- B. Visual Component or Map (attached)**
- C. Parcel List Spreadsheet (n/a)**
- D. Acquisition, Easements, and Restoration Requirements (n/a)**
- E. Research Addendum (not required at proposal stage)**
- F. Project Manager Qualifications and Organization Description (attached)**
- G. Letter or Resolution**
- H. Certified Audit or 990 Tax Information**

2019 Proposal Budget Spreadsheet

Project Title: The Natural Resources Literacy Initiative

IV. TOTAL ENRTF REQUEST BUDGET 2 years

BUDGET ITEM	AMOUNT
Personnel: <i>Personnel are non-faculty, 12-month appointments except where indicated</i>	\$ 171,192
Larry Zanko, Principal Investigator: \$25,423 (fringe rate 33.5%); 10% FTE each year	
Cindy Hagley, Co-Investigator: \$35,203 (fringe rate 33.5%); 15% FTE each year	
John Bilotta, Co-Investigator: \$33,308 (fringe rate 33.5%); 15% FTE each year	
NRRI Outreach Team: \$77,258 (fringe rate 33.5%); cumulative 25% FTE each year In addition to the PI and co-PIs, the NRRI outreach team consists of 16 individuals listed below - 15 researchers covering the breadth of NRRI's research areas, and NRRI's communications specialist. <i>NOTE: 3 to 5 team members will participate in most aspects of the outreach, while others will be available to serve when the needs match their expertise.</i> <u>George Hudak</u> (Mining, Minerals, and Metallurgy Initiative Director) <u>Dean Peterson</u> (Geology), <u>Pat Schoff</u> (Sustainable Development) <u>Lucinda Johnson</u> (Water Initiative Director) <u>Eric Singsaas</u> (Wood Products and Bioeconomy Initiative Director) <u>Val Brady</u> (Aquatic Invertebrate Ecology) <u>George Host</u> (Forest and Land Initiative Director) <u>Rich Axler</u> (Limnology and Aquatic Ecology) <u>Ron Moen</u> (Senior Research Associate and Associate Professor) <u>Don Fosnacht</u> (Renewable Energy Initiative Director) <u>Annie Bracey</u> (Avian Ecology) <u>Chanlan Chun</u> (<i>summer only, 9-month appointment</i>) (Environmental Science and Engineering) <u>Euan Reavie</u> (Assistant Water Initiative Director) <u>Matt Aro</u> (Wood Utilization) <u>Pat Donahue</u> (Wood Products) <u>June Breneman</u> (Communications Specialist/External Affairs)	
Professional/Technical/Service Contracts:	\$ -
Equipment/Tools/Supplies:	\$ -
Acquisition (Fee Title or Permanent Easements):	\$ -
Travel:	\$ 20,757
Statewide Travel (\$20,757): mileage at 10,150 miles x \$0.545 per mile (\$5,532) and lodging and meals estimated at \$145 per night x 105 person-nights (\$15,225). Travel will be reimbursed per University policy.	
Additional Budget Items:	\$ 2,536
Outreach Materials (\$506): Printing/photocopying for outreach mailings and handouts.	
Webinars and Video Conferencing (\$2,030): Costs for hosting webinars or video conferencing	
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 194,485

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ To Be Applied To Project During Project Period:	\$ -	N/A
Other State \$ To Be Applied To Project During Project Period:	\$ -	N/A
In-kind Services To Be Applied To Project During Project Period:		
Unrecovered indirect: 54% on modified total direct cost (\$194,485 base)	\$ 105,022	Secured
Past and Current ENRTF Appropriation:	\$ -	N/A
Other Funding History:	\$ -	N/A

The Natural Resources Literacy Initiative



The Problem:

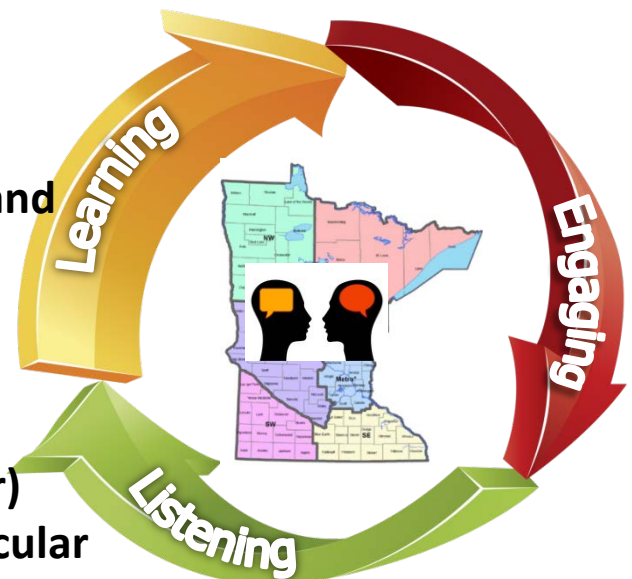
Public discourse about the intersection of natural resource use and the environment is frequently presented as one side versus another. We seek to elevate that dialogue to focus on cooperative decision-making and problem-solving based on sound science. In other words, we seek to enhance the public's *natural resources literacy* quotient.

The Solution:

A cross-disciplinary team of scientists and outreach experts will reach out and engage with Minnesota communities in all six LCCMR regions via a series of interactive, give-and-take, outreach forums called the "The Natural Resources Literacy Initiative."

Initiative Topic Examples:

- Non-ferrous ("sulfide") mining
- Water quality
- Renewable energy, fossil fuels, and their delivery systems
- Forestry/bioeconomy
- Byproduct/waste utilization
- Stormwater management
- Invasives (ex. Emerald Ash Borer)
- Novel products suited to a particular community's resources





**Environment and Natural Resources Trust Fund (ENRTF)
2019 Project Manager Qualifications and Organization Description**

PROJECT TITLE: The Natural Resources Literacy Initiative

LAWRENCE ZANKO: Natural Resources Research Institute, University of Minnesota Duluth

Key Qualifications: Mr. Zanko is a Senior Research Program Manager (Researcher 7) for By-Product Reuse and Remediation within the Minerals, Metallurgy and Mining (M3) Program at NRRI-UMD. Since his start with NRRI in 1988, he has participated in or led a broad spectrum of research projects dealing with non-ferrous minerals, ferrous minerals, industrial minerals (most recently focusing on construction aggregates), contaminated sediment remediation and reuse, resource modeling and estimation, and related policy issues. He regularly interacts and collaborates with community and public and private sector professionals and academicians in the geological, minerals, transportation, and environmental fields, inside and outside Minnesota. He is a member of two committees of the Transportation Research Board (TRB) of the National Academies: Aggregates (AFP70) and Resource Conservation and Recovery (ADC60).

Education: Master of Geological Engineering, University of Minnesota, Twin Cities (UMTC); Bachelor of Geological Engineering; and B.S. Microbiology (UMTC).

NRRI Research: Includes 1 patent (co-inventor), 4 peer-reviewed professional publications, and over 40 publicly available technical reports.

CYNTHIA HAGLEY: Minnesota Sea Grant

Key Qualifications: Ms. Hagley is Environmental Quality Extension Educator for Minnesota Sea Grant. Her areas of focus include: Great Lakes coastal environments; Water & environmental quality; Shoreland management; Coastal resource use; Discussion facilitator; Administrative and programmatic coordination.

Education: M.S. - Aquatic Ecology/Limnology, University of California Davis; B.S. - Biology, University of Minnesota.

JOHN BILOTTA: Minnesota Sea Grant and UM Extension

Key Qualifications: Mr. Bilotta is Water Resource Management and Policy Extension Educator for Minnesota Sea Grant; and is Extension Educator, Water Resource Management and Policy, for UM Extension. Joint appointment with Minnesota Sea Grant and Minnesota Land Grant Programs

He is located at the University Water Resources Center on the University of Minnesota St. Paul Campus.

Areas of focus include: NEMO - Nonpoint Education for Municipal Officials; Stormwater and green infrastructure policy and planning for municipal and local governmental units; Stormwater best management practice (BMP) education and training for professionals; Natural resource education program development and delivery. He is co-lead and/or coordinator for water resource education programs including the Minnesota Stormwater Research Council, the Minnesota Water Resources Conference, and the Green Infrastructure for Clean Water Conference.

Education: M.S. - Soil Science - Soil Fertility; B.S. - Natural Resources & Environmental Studies - Soil Resources; Current Ph.D. student Humphrey School of Public Affairs - Public Water Policy.

ORGANIZATION DESCRIPTION

The Natural Resources Research Institute is a University of Minnesota Duluth applied research organization. NRRI's mission is to deliver research solutions to balance Minnesota's economy, resources and environment for resilient communities.