



# Environment and Natural Resources Trust Fund

## 2021 Request for Proposal

### General Information

**Proposal ID:** 2021-137

**Proposal Title:** Plumbing The Muddy Depths Of Superior Hiking Trail

### Project Manager Information

**Name:** Denny Caneff

**Organization:** Superior Hiking Trail Association

**Office Telephone:** (218) 834-2700

**Email:** dcaneff@superiorhiking.org

### Project Basic Information

**Project Summary:** Bring "plumbing," or serious and effective water management devices and techniques, to the Superior Hiking Trail. This includes building structures and sculpting and managing soil and rock.

**Funds Requested:** \$187,000

**Proposed Project Completion:** 2023-11-30

**LCCMR Funding Category:** Small Projects (H)

**Secondary Category:** Methods to Protect, Restore, and Enhance Land, Water, and Habitat (F)

### 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?**

Region(s): NE

**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.**

Much of the Superior Hiking Trail was not built to modern, national trail building standards. That fact, plus extremely heavy usage of the Trail due to its popularity, coupled with the ravages of climate change, means that water is damaging the Trail by either flowing onto or along it, and not moving off the Trail at all. The result is serious erosion and the proliferation of mud holes. Hikers tend to avoid muddy and wet spots on the Trail; by doing so, they exacerbate the problem by widening the Trail and causing more erosion and creating even more mud.

A lack of "plumbing" on the Trail creates three distinct problems: (1) Increased erosion of the tread into nearby bodies of water, (The SHT follows and crosses nearly 100 named rivers and streams, as well as many lakes and ponds.) (2) A need for expensive fixes, such as boardwalks and reroutes, when erosion and mud holes are left unplumbed for too long, (3) An unsatisfying experience for the tens thousands of annual visitors to the SHT.

### **What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.**

The solution to this problem is not technically complicated but it is logistically complex. There's hardly a mile of the SHT that doesn't require what we call "plumbing," or reworking the tread of the Trail. The goal of this plumbing is to make the SHT shed water quickly -- allowing it to move across, not along, the tread -- and to make certain that the SHT, and use of it, is no longer a cause of erosion. Plumbing can be as simple as re-contouring the tread, by cutting back berms that form on the edges of the path or installing dips and drains, to allow water to flow off the Trail. It can mean building simple rock or wooden walkways in perennially wet areas. The solution for each section of the Trail will be determined by the surrounding landscape and how water flows through the area.

Due to the nature of construction projects in the outdoors and the variability of weather in northern Minnesota, we anticipate needing two full trail seasons -- typically June to November -- to complete this project.

### **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?**

As a part of our broader Trail Renewal Program initiative, efforts to plumb the SHT will ensure that every mile of this natural footpath along the North Shore is sustainably built and will be enjoyed by tens of thousands of annual visitors for decades to come -- all without causing unnecessary harm to surrounding lands and waters. With more precipitation expected in the coming years due to climate change, our efforts to make the SHT resilient and well-drained now will pay dividends later to protect and preserve the sensitive habitats and ecosystems through which the Trail passes.

## Activities and Milestones

### Activity 1: A Resilient Trail By Way of Rebuilt, Reinforced, and Re-plumbed Tread

**Activity Budget:** \$187,000

**Activity Description:**

There is no "One Size Fits All" approach to ensuring the SHT sheds water effectively; in fact there are several solutions. We'll employ the right techniques in the right places keep water off the Trail and restore, reshape and rebuild the tread to nationally established sustainable standards.

Our efforts in this activity will include excavating worn sections to establish new contours and installing water management/drainage devices (e.g. drainage dips, swales, ditches) so that water is deflected away from the tread. This will reduce or eliminate erosion and mud holes.

In sections where plumbing is not feasible, we'll make mud holes more resilient and more appealing to trail users by installing stone steps. There is no shortage of native, local stone along the Trail, and well-built stone features have a long useful life expectancy with little maintenance required. And, where needed, we'll build "puncheon" -- simple boardwalk -- to keep trail users from tearing up wet soils and causing erosion.

We will use these techniques, developed by professional trail builders across the country, to make the Trail enjoyable, sustainable, and resilient for years to come.

**Activity Milestones:**

Description	Completion Date
Up to 10 stone step crossings installed to fix perennial mud holes	2023-11-30
Up to 20 short reroutes (under 1,000 feet each) constructed	2023-11-30
Up to 100 drainage devices (i.e. dips, swales, ditches) installed	2023-11-30
Up to 50 miles of tread restored and re-contoured to shed water	2023-11-30

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Jim Shoberg	City of Duluth Parks Department	Liaison to SHTA from Duluth Parks to assist in planning and executing trail projects within the limits of the City of Duluth	No
Mike Young	Minnesota DNR Division of Forestry	Liaison to SHTA from DNR to assist in planning and executing trail projects within northeastern Minnesota forest lands	No
Christa Maxwell	Minnesota DNR Parks and Trails Division	Liaison to SHTA from DNR to assist in planning and executing trail projects within North Shore state parks	No
Derrick Passe	Lake County Soil and Water Conservation District	Advises on environmental regulatory matters in Lake County	No
Jon Benson	U.S. Forest Service	Liaison to the SHTA for any work done on the SHTA within the boundaries of Superior National Forest.	No
Cathy Quinn	U.S. Forest Service	Liaison to the SHTA for any work done on the SHTA within the boundaries of Superior National Forest.	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 be funded?**

The Trail Renewal Program has focused the Association's energy, resources, and systems so that the lofty goal of creating and supporting a hiking trail that lasts a century is achievable. The Trail Renewal Program has brought about a significant increase in private donations that support the operations of the SHTA. Continued efforts to plumb the SHT will utilize support from wherever we can get it, including public sources (local governments, IRRRB, ENRTF, Federal Recreational Trails Program) and private sources (private foundations, major donors, and investors).

## Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Restoring Five Sections of the Superior Hiking Trail	M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 09o	\$191,000
Enhancement Plan for Superior Hiking Trail	M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 09f	\$100,000

## Project Manager and Organization Qualifications

**Project Manager Name:** Denny Caneff

**Job Title:** Executive Director

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

Denny has been executive director of the Superior Hiking Trail Association (SHTA) since June of 2017. He led the creation of the Trail Renewal Program, the framework by which the SHTA has improved, rebuilt and rehabilitated the Superior Hiking Trail, and the systems and processes that support trail renewal. He has also hired new staff with passion for and expertise in trail renewal and fundraising; recruited and developed volunteers committed to trail renewal; and has committed the SHTA to honoring all land and water conservation regulations that affect the SHT. Denny is in the

process of managing two other ENRTF grants -- one to evaluate the most damaged sections of the SHT (grant expires in June 2020), and the other to rebuild and rehabilitate those sections of the SHT that are the most damaged, threaten the safety of trail users, or are called for by (private and public) landowners.

**Organization:** Superior Hiking Trail Association

**Organization Description:**

Superior Hiking Trail Association is a member-based organization, headquartered in Two Harbors, that manages, renews, promotes and supports the Superior Hiking Trail. The SHT is a 300-mile long natural footpath running from the Ontario border to the Wisconsin border, passing through Duluth. Started in 1986, The SHT features 94 backcountry campsites and several loops and spurs. A beloved and popular Minnesota recreational amenity, the Trail is enjoyed by people age 6 to 86 -- long-distance hikers and backpackers, trail runners, church youth groups, adventure travel enterprises all enjoy the stunning scenic beauty and the physical challenge that the SHT affords.

With most sections built 30 years ago and sustaining heavy use, the SHT is worn out and showing its age. Built structures are failing, environmental damage is occurring, and a few spots on the Trail are becoming hazardous to users. The Association is committed to renewing every mile of the SHT that requires it and reducing or eliminating the environmental damage caused by heavy use and poor initial construction and placement.

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Trail Operations Director		Trail operations director oversees trail construction and plumbing projects.			25%	0.48		\$32,500
							<b>Sub Total</b>	<b>\$32,500</b>
<b>Contracts and Services</b>								
TBD	Professional or Technical Service Contract	Qualified and reputable professional trail building entities paying prevailing wages will be contracted to complete trail restoration and plumbing projects. They will be sourced via competitive RFP process. Services would include tread reconstruction, puncheon/boardwalk construction, and stonework.				0.73		\$140,000
							<b>Sub Total</b>	<b>\$140,000</b>
<b>Equipment, Tools, and Supplies</b>								
	Tools and Supplies	Construction Materials, Tools, and Supplies	This includes construction materials, such as milled lumber, metal supports, and related hardware, and necessary hand tools and supplies to complete the activities of the project.					\$14,500
							<b>Sub Total</b>	<b>\$14,500</b>
<b>Capital Expenditures</b>								
							<b>Sub Total</b>	<b>-</b>
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	<b>-</b>

<b>Travel In Minnesota</b>								
							<b>Sub Total</b>	-
<b>Travel Outside Minnesota</b>								
							<b>Sub Total</b>	-
<b>Printing and Publication</b>								
							<b>Sub Total</b>	-
<b>Other Expenses</b>								
							<b>Sub Total</b>	-
							<b>Grand Total</b>	<b>\$187,000</b>

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>				
			<b>State Sub Total</b>	-
<b>Non-State</b>				
In-Kind	Volunteers	1000 hours of volunteer support for the project, valued at \$25/hr.	Secured	\$25,000
Cash	Donations and memberships	Various related expenses, including: materials, tools, volunteer support, lodging, travel, and other professional services to support this project.	Secured	\$50,000
			<b>Non State Sub Total</b>	<b>\$75,000</b>
			<b>Funds Total</b>	<b>\$75,000</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [23be29bb-741.pdf](#)

#### *Alternate Text for Visual Component*

A two-page document that includes photos and outlines the following:

Our Problem: Year-round mud holes and wet areas that cause erosion, push hikers off-trail, and damage surrounding vegetation.

Our Solution: Install devices that shed water off and/or reinforce the tread to keep users on the Trail.

#### *Financial Capacity*

File: [3ef2a330-2f4.pdf](#)

#### *Board Resolution or Letter*

Title	File
SHTA Board Resolution	<a href="#">cd71a07b-df8.pdf</a>
SHTA LCCMR 2021-2023 Graphic.pdf	<a href="#">b7d412e9-fb0.pdf</a>

### Optional Attachments

#### *Support Letter or Other*

Title	File
SHTA Audited Financial Statements FY2019	<a href="#">bf027373-31f.pdf</a>

## Administrative Use

**Does your project include restoration or acquisition of land rights?**

No

**Does your project have patent, royalties, or revenue potential?**

No

**Does your project include research?**

No

**Does the organization have a fiscal agent for this project?**

No

**Our Problem:** Year-round mud holes and wet areas that cause erosion, push hikers off-trail, and damage surrounding vegetation.



A 15-foot wide mud hole caused hikers to create their own reroutes at Bean and Bear Lakes Loop last summer.



“Cupping” of the tread has caused water to run down, not across, the Trail, resulting in erosion into the Gooseberry River.



Without proper drainage, this section near Split Rock River has caused significant erosion in recent years.





**Our Solution:** Install devices that shed water off and/or reinforce the tread to keep users on the Trail.



Example drain found on Ice Age National Scenic Trail in Wisconsin.

### **Drainage Devices**

Drains, dips, and swales will help move water off and away from the Trail quickly.



Installed near Oberg Mountain, 2019.

### **Puncheon**

Simple boardwalk will protect the Trail and surrounding vegetation from damage when wet.



Installed at Bean and Bear Lakes, 2019.

### **Stone Steps**

Local stone will be used to offer an enjoyable, sustainable path through perennially muddy areas.