

RIDGELINE

A PUBLICATION OF THE SUPERIOR HIKING TRAIL ASSOCIATION

SPRING 2022



STUDYING THE NORTH SHORE TODAY TO PROTECT IT FOR TOMORROW

The Superior Hiking Trail is a portal to the natural world for hikers and backpackers. Traversing a rich variety of terrain and habitat types, users are immersed in the diverse landscape of the boreal forest. Enchanted by the natural wonders, sometimes we don't stop to think about how area managers are caring for the land and water around us. In this issue, we delve deep into landslide research, a new fen, creating bird habitat, and the SHTA's 2022 Trail Renewal Projects.

(Continued on page 2)

GEOLOGISTS' STUDY INCLUDES LANDSLIDES ALONG THE SHT

— By KAREN GRAN, ANDY WICKERT AND CARRIE JENNINGS

The 2012 flood that destroyed the swinging bridge at Jay Cooke State Park, and caused major damage to the Superior Hiking Trail, may still be causing landslide issues.

Research geologists have found the SHT crosses active landslides in the Mission Creek watershed in Fond du Lac that may be related to the flood. Although the slide is active, the trail is stable and safe to hike in this area.


During times of intense precipitation, sediments become saturated and the number of landslides increases. During the June 2012 storm, thousands of landslides occurred with the highest density happening on the western end of the Lake Superior basin in Minnesota and Wisconsin. Landslides can damage infrastructure and add excess sediment to rivers and waterways.

Landslide inventory mapping conducted by the U.S. Geological Survey, University of Minnesota Duluth, and University of Wisconsin-Superior has recently been released and offers a view into the areas most impacted by landslides.

Many of the streams in northeastern Minnesota are incising, or cutting, through glacial sediments and underlying bedrock, creating steep-sided valleys where landslides and rockfalls occur. Where the Superior Hiking Trail crosses these features, it offers hikers the chance to see how landslides impact the landscape around them.

Thick red clays along the western end of Lake Superior were deposited on the bed of what geologists call Lake Duluth. This precursor to Lake Superior formed as ice retreated at the end of the last glaciation. Because ice to the east dammed Lake Duluth, its waters rose far above what is today's shoreline and deposited clays that are susceptible to landsliding, especially where rivers have cut deep valleys over time.


When Mission Creek migrated across its floodplain during the flood, it caused erosion that is still working its way upstream in its tributary valleys. Many of the landslides on those tributaries are active now because of the incision that continues a decade later. Landslides are one way the landscape around you is changing. They also present a challenge for trail maintenance.

You can find out more about landslides in Minnesota online in the U.S. Geological Survey's Publications Warehouse (Fact Sheet 2022-3007) and at the USGS's Landslide Inventory for Minnesota. 

Karen Gran is a Fluvial Geomorphologist and professor at the University of Minnesota Duluth, Andy Wickert is a Geomorphologist and associate professor at the University of Minnesota, and Carrie Jennings is a Glacial Geologist working as the Research and Policy Director at Freshwater Society. Funding for this project was provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR).

(FROM COVER) **Studying the North Shore today to protect it for tomorrow** CONTINUED

As use of the Trail has increased, so have the Association's efforts to protect the natural landscapes along the Trail. We do our part to minimize visitor use impacts by designing and building the Trail to minimize impacts to adjacent land and water. While our work is important, there are so many land stewards working on other parts of the puzzle.

In this edition of the Ridge-line, the Association gives you a glimpse into the work of land managers who are partnering with researchers and scientists to help understand, maintain and protect the land and its diverse uses along the Trail. These folks are studying the patterns in the natural world to inform better outcomes for the ecosystem. They ask the tough questions around climate change and human impacts on the landscape. They challenge us to think differently about the public lands we love so dearly, and provide tangible actions to assure the SHT can be preserved for future generations. 

— By LISA LUOKKALA



▲ **Geomorphologist Karen Gran examines a landslide in the Mission Creek area that features multiple head scarps and slump blocks.** Photo by Emilie Richard.



SUPERIOR NATIONAL FOREST IS A GLOBALLY IMPORTANT BIRD AREA

A golden-winged warbler perches among budding foliage.

Photo by Ryan Pennesi


The Superior National Forest is recognized as a Globally Important Bird Area by the American Bird Conservancy, and projects to improve bird habitat near the Superior Hiking Trail started in 2021 and will continue in 2022.

The existing mix of spruce, fir, poplars, lowland brushy areas as well as northern hardwood stands are just a few of the habitats making the Superior National Forest an attractive home for up to 155 nesting bird species

Starting in 2021, the USDA Forest Service, Tofte Ranger District began improving forest conditions for birds thanks to a partnership between the American Bird Conservancy and the Superior National Forest with a grant from the Minnesota Outdoor Heritage Fund. A third partner, The Nature Conservancy of Minnesota, has been assisting with tree planting and bud-capping of new trees, which protects young trees from grazing deer.

Two forest bird habitat projects are located close to the Superior Hiking Trail between Carlton Peak and Britton Peak Trailhead. In 2021, land managers removed decadent brush in forest gaps to create suitable nesting habitat on 161 acres for two young forest species: the American woodcock and the golden-winged warbler.

Cleared forest gaps promote new growth of shrub species, as well as providing planting sites for white pine, white spruce, northern white cedar, tamarack and yellow birch, which adds structure and species diversity and benefits multiple bird species. The addition of conifer trees benefits boreal forest songbirds of conservation concern like the magnolia warbler, Swainson's thrush and Canada warbler. A similar project will begin in March of 2022 with treatments planned on approximately 114 acres.

Remember to pack your binoculars on your next hiking trip. Now more than ever, the Superior Hiking Trail is truly a superior place for bird watching! 

— By **PEG ROBERTSEN**

Peg Robertsen is a Wildlife Biologist with the Superior National Forest

The Superior Hiking Trail Association is dedicated to building, managing, renewing and promoting the Superior Hiking Trail.



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VOLUME 37, ISSUE 1

PEOPLE.
NATURE.
FOOTPATH.

NORTHERN LAKE WALK FEATURES NEW ICELANDITE COASTAL FEN SNA

The northern Lake Walk now runs alongside a new Scientific and Natural Area—the Icelandite Coastal Fen SNA, established in 2021.

The 25-acre site near Colvill, Minn. is one of only two existing coastal wetlands on Lake Superior's north shore known as a fen. A fen is a grassy or shrubby wetland fed by slow moving groundwater with a buildup of peat. Because of the extreme rarity of this wetland type along Lake Superior and its outstanding quality, this site was deemed a high priority for protection.

The first part of the fen's name is related to the geology of the beach here, a pebble beach formed by Lake Superior storm waves starting thousands of years ago. Professor Emeritus in Geology at University of Minnesota Duluth Dr. John Green said the bedrock at this site is a volcanic rock (lava flow) called icelandite. This rock is a lighter gray than the more abundant dark basalt of the north shore. Icelandite is rela-



▲ **The Icelandite Coastal Fen Scientific and Natural Area was established in 2021, and is located directly alongside the Trail's northern Lake Walk.** Photo courtesy of the Minnesota Department of Natural Resources.

tively rare, especially in the Midwest and formed about 1.1 billion years ago.

The acquisition of Icelandite Coastal Fen has been long in the making. Beginning with a 1998 Minnesota Biological Survey ecological evaluation, the site was recommended for protection as an SNA. Issues such as boundaries, management responsibility, recreation opportunities, and

acquisition from the Minnesota Department of Transportation (MnDOT) all contributed to decades of discussion, fact-finding, legal research, and complex negotiations. In the end the 25-acres from MnDOT were sold to DNR in 2021 to become a Scientific and Natural Area. ▲▲

— **By KELLY RANDALL**

Kelly Randall is the Statewide Outreach Coordinator for the MN DNR's Scientific and Natural Areas Program

Give Back to the Trail You Love



BECOME A VOLUNTEER! A trail cleared of fallen trees and brush. Crossing a high-flowing creek on a solid bridge. These are all moments during hikes that make us happy. Volunteers make moments like these happen. The trail needs constant care. You can volunteer to help in many ways.

Adopt a campsite or section of trail: Hike out a couple times a year to check your section of trail or campsite and perform basic maintenance. Participate in a group project: Spend a day or two working on a project like the Bean and Bear reroute or the Spruce Creek bridge build.

Do you want to volunteer, but your talents are digital skills or office work? We are looking for volunteers to help in our Two Harbors office, outreach events, photography and videography, data collection, and more. Learn more at superiorhiking.org/volunteer. ▲▲

Volunteers contributed 790 work hours to complete the installation of a new bridge over Kimball Creek in August 2021.

TRAIL SUPPORTERS STEP UP: AN OVERVIEW OF THE SHTA'S FINANCES


After another year of much uncertainty through the ongoing pandemic, the Superior Hiking Trail Association emerged with a strong financial outlook. Recognizing the value of the Trail, thousands of individuals, business supporters, agency partners, and other funders stepped up to show their dedication when it was needed most. We're grateful for it; your generous support means a stronger, more resilient and sustainable future for the Superior Hiking Trail and the Association.

HIGHLIGHTS:

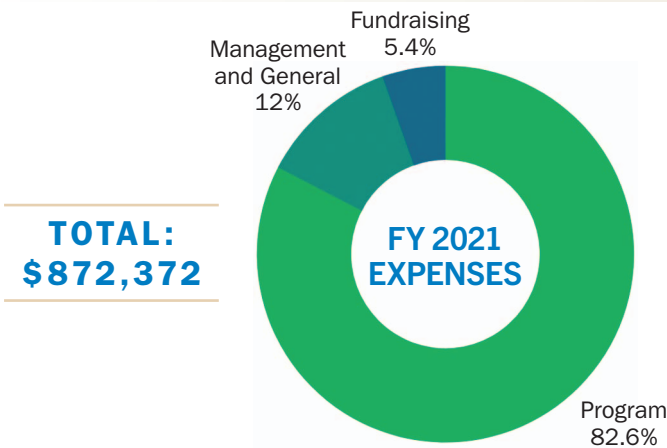
Grants: Grant funding was provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative Citizen Commission on Minnesota Resources, Minnesota Power, the Federal Recreational Trail Program, the Lake Superior Coastal Program, and Lloyd K. Johnson Foundation.

New members: 425 SHT enthusiasts joined the SHTA as new members, contributing nearly \$35,000.

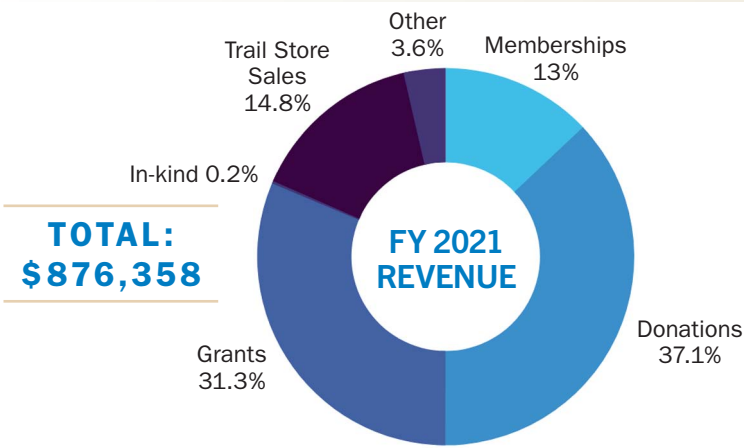
Sales of guidebooks, maps, and other items through our Trail Store grew by more than 20 percent.

Business partners, like REI, Castle Danger Brewery, Rockstead Running LLC, Adventure Running Co, Sawtooth Outfitters, Great Lakes Gear Exchange, Cook County Whole Foods Co-op, and Bluefin Bay Family of Resorts provided major investments in our efforts on the Trail. 

FISCAL YEAR 2021 EXPENSES



FISCAL YEAR 2021 REVENUE



Become a Member!

Do you love the Superior Hiking Trail as much as we do? Show your dedication and support by becoming a member today. We rely upon the support of members to ensure we can protect, renew, and enhance the SHT for generations to come. To learn more, visit superiorhiking.org

LANDMARK YEAR AHEAD: 2022 TRAIL PROJECTS

We have several major projects planned for this season from closing the Gooseberry Gap to continuing our efforts to improve water drainage to create a drier, more resilient trail. Here is a round-up of what we will be working on this year:

► **DULUTH.** The SHTA will complete six water management projects that include small re-routes and close to 1,000 feet of boardwalk replacement within the City of Duluth. This work will be a mix of contractor time and volunteers.

► **UMD BAGLEY REROUTE.** Short but critical, this reroute eliminates the roadwalk on Arrowhead Road, providing a safer road crossing and will allow us to access a shared multi-use bridge so we do not have redundant infrastructure in close proximity to one another.

► **LISMORE ROAD PARKING LOT.** A project continuing from 2021, we anticipate the parking lot to be complete in 2022. The project is a partnership with the City of Rice Lake and the SHTA, and will provide parking for about half a dozen vehicles. This is a replacement parking lot after we lost access to our previous lot.



New trail built to close the Gooseberry Gap in 2021. The work this year will complete this long-awaited reroute and move the trail off of a short detour onto the paved Gitchi Gami Trail.



► **GOOSEBERRY GAP PHASE II.** The final 2.7 miles of new trail will be constructed this spring. This project will officially complete the gap which has persisted since 2015 between Gooseberry Falls State Park and Blueberry Hill Road. This is the largest reroute ever undertaken by the SHTA. Expect to see more up-

dates on this project and opportunities to celebrate this landmark project!

► **CARIBOU-LAKE AGNES STRUCTURE RENEWAL.** This project will renew approximately 1 mile of trail and includes 700 feet of improvements with approximately 9 structures.

► **POPLAR RIVER REROUTE.** A 1-mile reroute near the Poplar River will relocate the trail from an unsustainable area with poor drainage to a better location where sustainable tread can be constructed. This project, combined with the puncheon work completed here in 2021 and other projects planned for 2022, will make the Lutsen Ski Hill Road to Caribou Trail section one of our premier, most-renewed areas!



Woods Creek continues to erode land, moving toward the trail. If the trail is not moved, it will soon be swallowed up by this creek's migration.

► **WOODS CREEK REROUTE.** SHTA staff and volunteers will

construct a 325 foot reroute moving the trail away from a severely and dangerously eroding stream bank.

► **NATURE BOY BRIDGE.** Removal of this failed bridge, currently slumped to an unusable degree, is the first priority, followed by bank stabilization. This bridge is located between Pincushion Mountain Trailhead and the Gunflint Trail crossing.

► **SPRUCE CREEK BRIDGE.** Located midway between Caribou Trail and Cascade River State Park, the bridge pieces have already been snowmobiled-in this winter due to its challenging location. The 34' bridge replacement is a partnership project with the U.S. Forest Service and will be a near-replica of the new Kimball Creek bridge completed in 2021.

► **SUNDLING BOARDWALK.** 200 feet of aged boardwalk will be replaced with Wickcraft boardwalk, which is the same material used on the 2020 Sawmill boardwalk replacement. The project will include step replacement on the north side as well.




The new Sundling Boardwalk will resemble 2021's Sawmill Boardwalk replacement, picture above.

► **JONVICK BOARDWALK.** This project will include a 232 foot boardwalk with 70 feet of puncheon on one side and a short reroute of 110 feet. Both these



boardwalk projects were made possible by funding provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources.

► **MYSTERY MOUNTAIN REHABILITATION.** This project will rehabilitate approximately a half-mile section of trail from the Poplar River Bridge at Lutsen Mountains up to the SHT Mystery Mountain campsite. It will feature a mix of tread rehabilitation and structure installation and repair.

► **BEAN & BEAR REROUTE CONTINUED.** Our goal is to complete the remaining 1,600 feet of reroute with oversight by Trail Eyes, LLC and supported by SHTA volunteers. One of our volunteer opportunities for 2022, this project will take place in June. For more information on how to participate, watch our Volunteers web page for updates at superiorhiking.org 



A wet stretch of trail near Mystery Mountain will be renewed and rehabilitated this year.



VISIT THE TRAIL STORE

We are excited to welcome you all back for the second season at our new Trail Store in downtown Two Harbors.

2022 SEASON HOURS

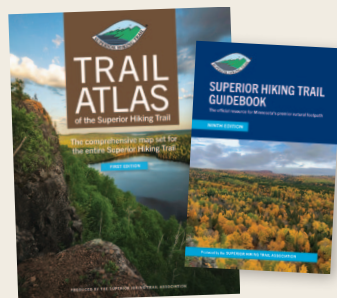
10 am–4:30 pm

May 19–October 28

- Open Thursdays and Fridays
- Open first Saturday of June, July, August, and September

PLAN YOUR ADVENTURE WITH OUR NEWEST GUIDE AND TRAIL ATLAS

The 9th edition *Superior Hiking Trail Guidebook* and the fully updated map collection, the *Trail Atlas*, were released last summer season. Purchase yours today at our online trail store to plan your upcoming SHT adventures!





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SHTA Volunteer of the Year



Steph Hoff is a Rock Star volunteer who has been a Volunteer Crew Leader since 2018. “She gets an enormous amount of work done; (she is) an excellent trainer and leader. She engages everyone and makes even the most arduous work fun. The perfect crew leader!” said Michael Loscheider, a fellow VCL. Steph has led many projects, including a 3-day slope and bridge repair on Crow Creek (north) in 2019, is bringing our new natural stone building practices out onto the field, and much more. If you’d like to meet Steph, she’ll be out putting her vast skills to work on the Spruce Creek Bridge replacement this year. Thank you, Steph, for all of your hard work and dedication! 

Steph (right) with fellow Volunteer Crew Leader Michael Loscheider.



EXPLORE NEW DESTINATIONS THROUGH THE 2022 Superior Hiking Challenge

The Trail turns 36 years old this year. Celebrate this milestone by hiking 36 miles anywhere along the SHT this season! To give focus to your hiking, Birchy the Beaver is hoping you’ll visit the many beaver ponds along the trail where there are all sorts of interesting things to see: dams, ponds, beaver-downed trees, and beavers swimming or slapping their tails. Visit our website to learn more and register. Runs June 4–October 31, 2022.