THE AIR WE BREATHE THE FORESTS WE NEED Fall Review 2023

Green Space Promotes Physical & Mental Health

Putting Down Roots in Cass County

Can Forest Restoration Help Mitigate Wildfires?



Written by: Sarah Sullivan Design by: Barbara Pederson

The Minnesota Land Trust — What We Do

We permanently protect Minnesota's most vital natural lands, including forests.

Forests clean air, sequester carbon, cool rivers and lakes, regulate the water cycle, control erosion, and provide habitat for hundreds of animal and insect species. Forests also support human health.

But Minnesota's forests are in danger. The primary threats include warming temperatures, land use change, invasive species, and long periods of fire suppression. Climate change amplifies the impact of all of these. Wildfires, floods, and pest outbreaks become more frequent and severe as the Earth warms.

Our vision for the future includes fishing in cold trout streams, hiking in the shady respite of a cool forest and enjoying the visual feast of fall colors every September. With your help today, we can secure that future!

OUR IMPACT:

130,700+

tons carbon stored in Land Trust protected forest & woodland in 2022

480

acres of northern forest under restoration

50%

of annual Land Trust protected lands are forest & woodland

Protecting, managing, and restoring forests offers roughly two-thirds of the total climate change mitigation potential of all nature-based solutions.

- THE UNITED NATIONS

Every \$1 donated to the Minnesota Land Trust generates \$9 of habitat conservation and restoration in Minnesota!

To donate, call 651-647-9590, visit our website at <u>mnland.org/donate</u>, scan the QR code at right with your mobile device, or mail your gift with the enclosed envelope.



Green Space Promotes Physical & Mental Health How to Get Started with Forest Bathing

BY REV. JERAD MOREY, WILD PATH FOREST THERAPY GUIDE

We are in the midst of a stress epidemic. Lives shaped by built environments and backlit screens can leave us anxious and worn out. Yet help is as close as the nearest park or even your own yard. It's called "forest bathing."

Through guided nature connection during forest bathing walks, people relax, breathe in awe, experience peace, and even get a good night's sleep! "I feel better than I have in *years*," is a typical response after a walk.

While group experiences have unique outcomes, you can forest bathe on your own too. Find a place with natural elements. It doesn't have to be a remote location—consider visiting church grounds or an urban college campus. Just put yourself where you can see some green, trees, shoreline, flowers, or clouds.

Nature's Prescription

Health benefits associated with spending time in nature include:

- lower blood pressure & stress hormone levels,
- reduced nervous system arousal,
- enhanced immune system function,
- increased self-esteem,
- reduced anxiety and feelings of isolation,
- increased calm & generally improved mood.

Now set your intention. This isn't about distance hiking, birdwatching, or foraging. It's about giving your body whatever feels good. Look around at your fellow beings-plant and animal. You might close your eyes and tune in your other senses—inhale the scent of the place, feel sunlight on your skin, try to detect the furthest away sound and then the closest. Take it all in sense by sense for several minutes.

When you open your eyes, notice what moves around you. Maybe it's a dancing leaf or a foraging insect. If you can, you might draw nearer to it for a closer look, engaging your senses and your curiosity. Perhaps you follow the movement with eyes, ears, or touch. When your curiosity is satisfied, look for other movement around you to explore.

After about 20 minutes, consider what your body is ready to do next. Let your body lead and perhaps you, too, will feel renewed in mind, body, spirit, and in commitment to preserving our natural land. Today only about 32% of people living in cities have access to meaningful nature experiences.

With 68% of the

world's population projected to live in urban areas by 2050, it's critical to improve access to nature.

Spending time in and engaging with nature cultivates connection, leading to a better appreciation for the environment and encouraging a conservation ethos.

Putting Down Roots in Cass County

David Massey thinks about the future a lot. "People's concept of reality is skewed," he says. "They tend to be in denial and think what happened yesterday will happen tomorrow." But David knows that's not the case.

Pam Tasker and David Massey, Minnesota Land Trust landowne

avid Massey spent over 35 years as a chemical engineer, rising in the ranks at prominent Minnesota companies, overseeing laboratories, and managing major projects including environmental health and safety inspections at manufacturing plants.

He knows that things change. He's observed how human interaction with land can harm ecological systems and even contribute to worsening health for people. He's actually seen it on a molecular level. So, when you ask David why he chose to permanently protect almost 300 acres of forest, wetland, and grassland in Cass County and nearly three miles of natural shoreline on Stoney Brook (a state-designated trout stream) the answer is, "it's complicated."

David, now retired, spent much of his childhood shuffling from place to place. He initially acquired

the Cass County property in 1970 to "put down roots," figuratively and quite literally, by building nutrient-rich organic soil under his feet. He has spent the last 50 years in a symbiotic relationship with this land, utilizing approximately 7 acres of it to grow organic produce for both his family and the benefit of communities near Brainerd and the Twin Cities.

Forty acres of organic hayfields have been cut and baled for the last time. David and his wife, Pam, are going to let nature take its course and expect the area will be a thriving woodland in the coming decades—new trees should have

no trouble putting down roots in the carefully tended organic soil. According to Minnesota Land Trust Conservation Program Manager Pat Collins, it's likely that the fields will convert to hardwood forest beginning with aspen and later shifting to maple, basswood, and oak as the forest matures.

> Eventually, the naturally restored forest, which abuts Stoney Brook on the south shore, will help protect the water from direct

solar radiation as well as cool the surface water running into the stream. The forest floor will also slow the flow of water, helping regulate water levels. "Many northern trout streams depend on surface water runoff, making them highly sensitive to land use changes. Elsewhere, trout streams are kept cool and clean by more groundwater sources, making them more resilient," says Pat. "That's why protecting a larger portion of these watersheds is such a priority for us in the northern part of the state. We must protect forests to protect trout and all the other critters that rely on cold water."

Change is inevitable, even for a space that is protected forever. But gradual change is always easier to manage. By



protecting this land and water, David and his family have ensured that change will advance more slowly and naturally here, allowing the plants and animals to better adapt. David's insistence on thinking about the future has helped ensure that some changes will never come, including subdivision development and mineral mining. These activities would force irrevocable change on the landscape, fragment habitat and imperil the health of Stoney Brook and subsequently Gull Lake, a designated Lake of Outstanding Biological Significance, as well as the greater Crow Wing River watershed.

The land has nourished and sustained David and his family. And they in turn have sustained and nourished the land—a mutually beneficial, mutually loving relationship. Through their permanent conservation easement, they've sealed the legacy of this place—a place of living soil and strong roots—for generations to come.



Funding for the acquisition of this easement was provided by Minnesota's Outdoor Heritage Fund as recommended by the Lessard-Sams Outdoor Heritage Council (LSOHC).



Our Changing Biomes

Over 70% of Minnesota's northern forest tree species are receding north into Canada due to climate change. The loss of these tree species will have a significant impact on Minnesota's wildlife, recreation, the health of lakes and rivers, and a way of life. It's critical we protect and restore more of our forests today so they might persist into the future.



Early European Settlement map based on Marschner's original analysis, Minnecologies, CC BY 3.0 https://creativecommons.org/licenses/by/3.0, via Wikimedia Commons. Biomes today and 2070 projections reprinted with permission from the Star Tribune. Copyright 2021.

Restoration Improves Forest Health, Mitigates Wildfires

The buzz of chainsaws is punctuated by a crack of wood. Though it may seem counterintuitive, even jarring, this is the sound of forest restoration—specifically, restoration of 115 acres in Lake County.

he owners of the property, situated directly between Split Rock Lighthouse and Gooseberry Falls State Parks, acquired a conservation easement in 2019, permanently protecting 950 acres dominated by forest and wetlands. Prior to the Land Trust's involvement, they had been actively restoring the landscape, adding 2,000 new trees over the course of several years.

According to Haley Golz, Minnesota Land Trust Restoration Program Manager, "The increasing prevalence and scale of climate change-related wildfires puts forest restoration front and center, especially in the Arrowhead region where there are large sections of previously harvested forest that are often at a higher risk for fueling fires."

Haley has been working with the landowners to address their concerns about low species diversity and a large number of dead and dying balsams due to a budworm infestation on their property. "After a disturbance, like clearcutting, infestation, or fire, aspens are one of the first trees to establish, followed closely by balsams. Without effective management, dense, low-diversity forests comprised entirely of these early establishing trees can become an incredible fuel source for fire."

This forest restoration project cycles through three phases: cutting forest gaps to allow enough sunlight to support new trees; removing brush around recently planted trees to support them as they try to establish; and planting longlived trees like white pine, white cedar, and red pine. These trees' lifespans are 200 to According to the US Forest Service, 15 – 40% of Minnesota's forested acres contained old growth trees prior to European settlement. Today, it's only about 2%.

800 years, and the pines' thick, protective bark makes them naturally resistant to moderately intense fires.

Helping establish old-growth forests is part of the Minnesota Land Trust's climate-forward restoration agenda. "Forests have the potential to offset around one-third of global emissions—as a natural climate solution they're pretty unrivaled," said Haley. "This permanently protected forest will benefit generations to come by helping reduce the spread of fire, preserve air quality, and sequester more carbon over the lifetime of the trees."

Funding for the acquisition of this easement was provided by Minnesota's Outdoor Heritage Fund as recommended by the Lessard-Sams Outdoor Heritage Council (LSOHC).





A Planned Gift, a Conservation Easement, and a Loving Legacy

MARY KEHRER-SCHWEIDE

MARY AND BRUCE LEO KEHRER-SCHNEIDER

ary and Bruce Leo Kehrer-Schneider have the distinct honor of holding the Minnesota Land Trust's 100th conservation easement and the first in Kandiyohi County. They acquired the easement in 1998 when they permanently protected over 120 acres of fields and woodland on the shores of Mud Lake.

Both Mary and Bruce Leo were concerned about the environment well before air quality alerts and climate change headlines became a part of daily life. Bruce Leo enjoyed organic gardening and Mary has a background in environmental education.

In 1998, their primary motivation for protecting their land was widespread development in a region that had already lost much of its natural landscape to agriculture, stressing the waterways and remaining natural habitat. In the Minnesota Land Trust, they found a group of like"Protection forever is profound, but it requires financial support. That's why I believe strongly that the Minnesota Land Trust deserves a prominent place in my will."

future of their property.

Bruce Leo passed away unexpectedly eight years ago, making the land that the couple lovingly stewarded and on which they made memories together for 30 years that much more precious. "This land is a living memorial to my

> husband. The land is what he believed in and how I feel the most connected to him and can honor him," said Mary.

> Mary has further secured her family's legacy by leaving a gift to the Minnesota Land Trust in her estate plans. Her gift helps to ensure that the Land Trust can continue to steward and support their protected property, and others like it, forever. Mary said, "Protection forever is profound, but it requires financial support. That's why I believe strongly that the Minnesota Land Trust deserves a prominent place in my will."

minded people who shared their values and vision for the

"Wild spaces need a voice, and the Land Trust is one."

To learn more about building your legacy through a planned gift, contact Jennifer Scholl, Director of Development & Communications, at 651-917-6289 or jscholl@mnland.org.





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Treasured Places

October 7, 2023 from 1:00–3:30 pm Sherburne History Center Becker, Minnesota

Free Event | Limited Space Register at mnland.org/treasured-places

The Land Trust's annual celebration of Minnesota's places & faces of conservation.

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