

OUR AWESOME FUTURE



**OPEN
HERE**

YOU'LL BE GLAD
YOU DID!

It is coming!
Let's lead the way!



Our Awesome Future.



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We've got 12 years.
And we can do it.



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Remember swimming at the local
lake? Oh yeah. That's coming back.



Sometimes it is your moment.

This is where we are with climate.

It is not just about energy. It is about everything.

This past September in a St. Paul library, youth were leading the community in visioning what our world will look like when we tackle the energy transition together.

They shared a meaningful question: **In every problem and project, is there a link to a climate change solution?**

At a similar meeting in another state, the community's biggest concern was abandoned properties that were bringing down the neighborhood and contributing to safety concerns.

Making the abandoned properties into solar gardens brought the neighbors cleaner energy and reduced their bills, while driving their property values back up and strengthening their community.

Possibilities for solving the problems of today with the solutions that help our tomorrows — they are everywhere:

- Solar panels on schools cut energy costs, leaving more money for classrooms.
- Electric buses charged with renewable energy leave nothing behind but cleaner air and healthier people.
- Fields of perennials can allow farmers to work their land profitably while water becomes cleaner, pollinators flourish, and carbon is sequestered.

Here is the evidence showing that climate change is upon us and is going to get worse.



But you already know that. You can feel it.
And you can see it.

What we often don't see is the way that once we embrace the problem of climate change and work full throttle to address it, how beautiful and rich our lives and communities will be.

And when we do what we need to do for climate, all of the other issues we identify in this book will get better, too — our water will be cleaner, our air more breathable, our pollinators healthier, our people thriving.

Admiral William Halsey said, *"Touch a thistle timidly, and it pricks you; grasp it boldly and its spines crumble."*

We've got 12 years.

Our future is coming.

And it is going to be awesome!

**All problems
become smaller
when you
confront them.**

International Panel on Climate Change report (September 2018): the world must decrease greenhouse gas (GHG) emissions by 45% from 2010 levels by 2030, and then proceed to eliminate GHG emissions entirely by 2050 — in order to have a reasonable chance to keep warming to 1.5 degrees Celsius and avoid the catastrophic consequences associated with another .5 degree temperature rise.

Fourth National Climate Assessment report (November 2018) compiled by 13 federal agencies finds that climate change is affecting the natural environment, land and water resources, and human health and welfare across the U.S. and its territories.¹

¹ National Oceanic and Atmospheric Administration; noaa.gov/news/new-federal-climate-assessment-for-us-released



Young people from Minnesota Can't Wait gathered at the Minnesota Capitol on January 10, 2019 to meet with Governor Walz, Lt. Governor Flanagan, and MPCA Commissioner Laura Bishop. Photo: MCEA

Climate

We've got 12 years. And we can do it.

The world's scientists tell us that in order to avoid catastrophic consequences, we need to eliminate world greenhouse gas (GHG) emissions by 2050.

That goal assumes we are on a trajectory that reaches a 50% reduction by 2030.

A big challenge? Absolutely. But we aren't about to give up on our future.

The progress Minnesota has made under the Next Generation Energy Act of 2007 has proven that the transition we must undertake now is possible: renewable energy is cheaper, it is reliable, and it is local. This is the foundation for all that is ahead.

We've got to reduce, then eliminate GHG pollution. We've got to do it meaningfully. And we've got to start now.

We need a GHG Emissions Reduction Plan. And we have one.



Use existing authority to put Minnesota on a path to eliminating GHG emissions. Start now.

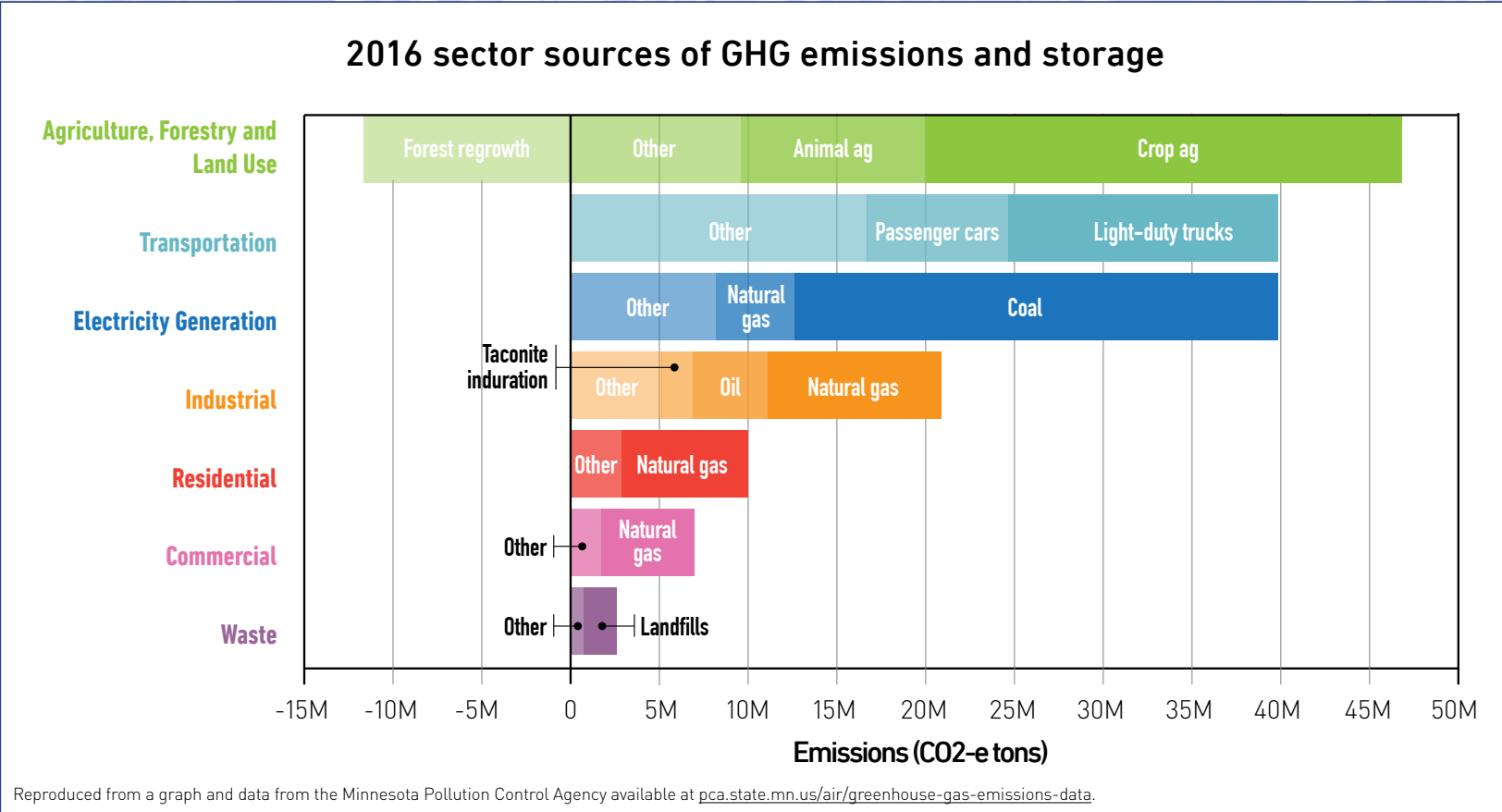
Under current law, the Minnesota Pollution Control Agency (PCA), either on its own or directed by Governor Walz, can create rules to reduce GHG pollution. A firm and decreasing cap essentially places a market price on carbon. This price creates an incentive to reduce GHG emissions, and shifts investments away from fossil fuels and toward clean technologies.

This transition must be done equitably, taking care of workers whose jobs may be impacted by the change in technology. It must ensure that Minnesota families gain economically and enjoy the benefits of efficiency and cleaner air without having to bear excessive costs during the transition. It must provide a safe and healthy future for Minnesotans of every race, gender, income, and age in every part of the state.

Renewable electricity generation is at the center of transitioning our economy to become GHG emission free. But it is only the beginning.

As we look for solutions, it is important to make sure investments serve the end we need to achieve. What about our approach changes if we are trying to eliminate GHG emissions rather than just reduce them?

This picture of our state’s GHG emissions and storage helps us see where to put our efforts.





Energy

Transforming the foundation.

In 2007, no one knew if it was possible. But they knew they had to try.

Legislators — on both sides of the aisle — passed, and Republican Governor Tim Pawlenty signed, the Next Generation Energy Act. It set benchmarks for growing the amount of renewable energy in Minnesota: 25% by 2025.

Today, Minnesota has already met and now begun to exceed those benchmarks — seven years early.

That bill laid the foundation that we need to build on.

We now need to do two things at once:

- Continue to clean our electricity production, and
- Electrify everything.

RENEWABLE
ENERGY WAS LESS
CONTROVERSIAL THAN
THE HONEYCRISP
APPLE.



Increase the Renewable Energy Standard to 100% clean energy.

A revised Renewable Energy Standard needs to include benchmark requirements for achieving

- At least 80% renewable energy by 2035 and
- 100% carbon free energy by 2050 or sooner.

Is it possible?

Xcel Energy, one of the biggest utilities in the U.S., committed to going 80% carbon free by 2030, and 100% carbon-free by 2050 (announced December 2018).

Do we know what 100% clean energy will look like?

Not exactly. But we know that with our current foundation and Minnesotan innovation, we can meet and surpass this challenge — and be leaders in the world's transition to a renewable energy future. We know it will be better for our health. And we know it is foundational to achieving what science has told us we must: zero GHG emissions by 2050.



Facilitate the transition of transportation to clean energy by both:

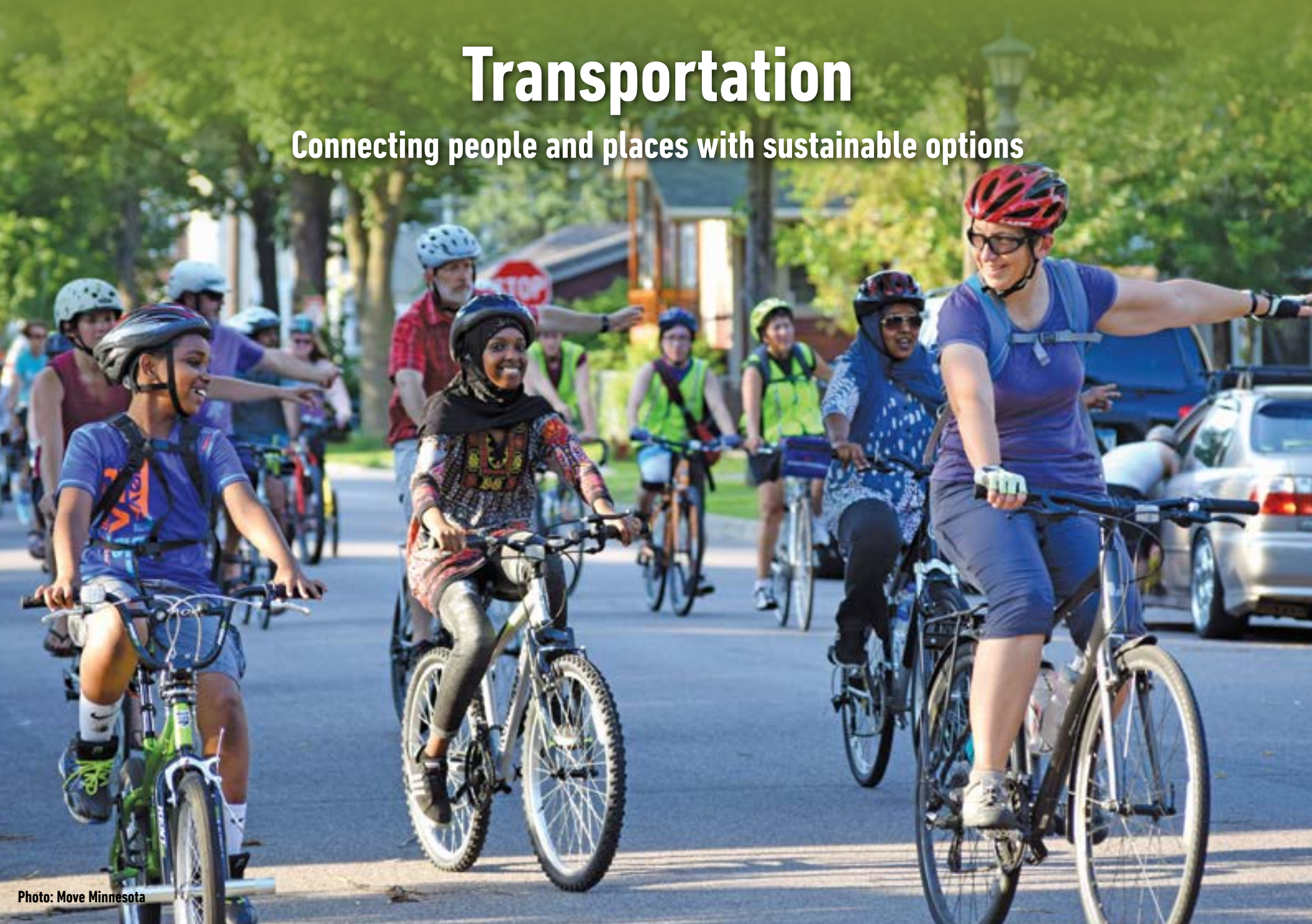
Adopting the Advanced Clean Cars Standards in full. Adopting these standards, including implementing a Zero Emission Vehicle Standard, will require manufacturers selling vehicles within the state to produce and sell a certain number of electric vehicles, as determined by their market share. This would put Minnesota on a path to having 10% of new car sales be electric vehicles by 2025 and could be adopted through executive rulemaking.

Making an electric vehicle infrastructure investment of \$40 million over the next 4-8 years to construct nearly 3,000 chargers across the state, particularly in Greater Minnesota. This level of investment will facilitate an electric vehicle uptake of 8-10% by 2025.

These measures alone are not enough to combat climate change. But they are critical pieces. Paired with a carbon emission reduction strategy and other policies, Minnesota will be heading in the right direction.

Transportation

Connecting people and places with sustainable options



In communities across Minnesota, transportation has a major impact on our everyday lives and on our environment. It is at the heart of our ability to access jobs and education, to get our families to the doctor's office and the grocery store, to build prosperity in our small towns and communities of color, and to protect our land, water, and climate for future generations.

We know transportation needs may look different in every community but we all share an interest in creating a Minnesota where the air is clean, our families are healthy, and our neighborhoods are thriving. A Minnesota that feels connected, because it is.

Unfortunately, the system we have today isn't keeping up. Getting around is a struggle for many residents. Years of inaction at the State Capitol have left essential options like transit, bicycling, and walking chronically under-resourced in both the metro region and in Greater Minnesota.

Transportation is now the top contributor of greenhouse gas emissions in Minnesota. Carbon pollution is bad for our climate, and it's bad for our health. With traffic and congestion comes poor air quality, an increase in asthma attacks, and a variety of other health problems. Communities of color often bear the greatest burden.

In 2019, lawmakers have the power to turn this around. To connect Minnesota, stabilize our climate, and create a better future, a long-term, dedicated funding solution for transit, bicycling, and walking is critical.

Minnesota voters already know it is time for lawmakers to prioritize statewide investments in sustainable transportation options:

- Three in four Minnesotans support the State of Minnesota making additional investments to expand and improve public transit, including buses, trains, and light rail.¹
- 68% of Minnesotans want a transportation package that includes funding for safe bicycling and pedestrian routes.²

¹ Per a statewide poll of 500 registered Minnesota voters, conducted August 22-26, 2018, for the Minneapolis Regional Chamber by Public Opinion Strategies.

² Per a statewide poll of 502 registered Minnesota voters, conducted February 1-5, 2017, for the Minnesota Environmental Partnership by Fairbank, Mastin, Maulin, Metz & Associates and Public Opinion Strategies.

In Minnesota, everyone should be able to get where they need to go in affordable, healthy, and sustainable ways. Legislative action is needed in 2019 to:

Prevent future cuts to transit service.

Fix the projected Metro Transit funding gap and create a long-term solution that fully funds transit in the metro area to meet the needs of our growing and changing population and serve Minnesotans of all abilities.

Fund overdue improvements.

Invest in bus rapid transit to expand fast, frequent, all-day service that will benefit residents and businesses across the metro and build out the major links between urban-urban and urban-suburban communities. Invest in Metro Transit's high and medium service improvement priorities to create a faster and more reliable bus network. Provide resources needed to grow the region's electric bus fleet.

Meet growing needs in Greater Minnesota. Invest in the build-out of Greater Minnesota public transit operations, technology, facilities, and buses.

Support active transportation options. Dedicate resources to grow safe and connected bicycling and walking infrastructure and programs statewide.

To learn more, contact Move Minnesota:

651-789-1406 | theresatn@movemn.org





Water

Remember swimming at the local lake?
Oh yeah. That's coming back.

**WE'RE
THE HOME OF
CLEAN WATER.
IT'S TIME TO
PROTECT IT.**

Minnesota's waters used to be clean: safe to drink, healthy for fish, wonderful to swim in. Today, 4 out of 10 of our water bodies don't meet water quality standards. If we don't change our trajectory, tomorrow won't be any better. But, we have a vision, we know what we need to do, and we have a plan for getting there.

1 ➡ **Set a goal. Announce that clean water is our goal and we are committed to working toward it.**

100% of Minnesota's lakes, rivers, and streams will meet basic health standards by 2050.

It is a bold goal, but Minnesotans know how to do hard things — and we aren't about to give up on our waters.

2 ➡ **We need some simple policy changes for clean water. Like these.**

Adjust the Safe Drinking Water Fee

It is a small annual fee with a big reward, allowing the Minnesota Department of Health (MDH) to:

- Test water
- Review water treatment plants
- Train and certify water system operators
- Inspect water systems
- Solve critical drinking water problems across the state

These folks are our invisible heroes. (See this cool set of two-minute videos for more — you'll be grateful! bit.ly/InvisibleWaterHeroes)

But the current fee was set in 2005 and MDH can't reliably continue this work without an increase (inflation has gone up 28% since it was set). Increasing the annual safe drinking water fee from just \$6.36 to \$9.72 per household connection to a public water supply will help MDH keep our water safe.

Prevent salt pollution

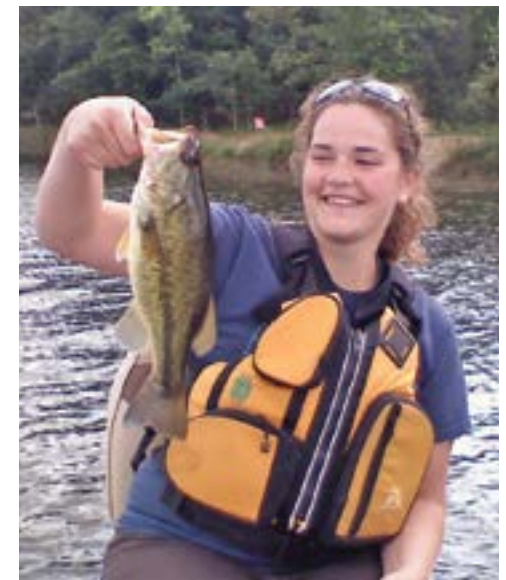
Salt runoff from our roads and walkways is polluting our waters — 39 metro area waters have chloride levels too high for fish and healthy plant life. But new methods and better products can minimize this salt pollution.

A simple "Smart Salt" training and certification program would offer liability protection for private salt applicators who become certified — helping them feel confident that the right amount of salt is all they need to keep travelers, and our waters, safe.

Renew the Legislative Water Commission

The bipartisan Legislative Water Commission has been an important means for legislators to learn about and knowledgeably engage with the short- and long-term water needs for our state. But it is set to sunset soon. This bill extends the commission, allowing legislators time to work collaboratively to solve difficult water challenges that continue to face our state.

**IT TAKES JUST
ONE TEASPOON OF
SALT TO PERMANENTLY
POLLUTE FIVE GALLONS
OF WATER.**





Invest in clean water like it is life-changing. (It is!)

The importance of keeping the land covered

When rain falls on healthy soil, it is absorbed. Plants that cover the ground take up the water they need, and then release most of it back into the air (evapotranspiration).

But when the ground isn't covered by plants, the water that falls either moves through the soil, or runs off, carrying soil and nutrients from fertilizers away with it.

Perennial plants used to cover the land year round. Prairie grasses, shrubs, and trees gave us loads of ecological benefits. Like habitat and shade, carbon sequestration, resiliency to drought and storms — and clean water.

What the prairie wasn't so good at was generating a product.

Today's cropland is highly productive but this comes at a cost. Row crops that dominate our Minnesota landscape (corn and soybeans) are only alive on the land for a few months of the year — leaving unprotected ground from September through June. Their roots are shallow. And the nutrients we've gotten so good at applying stray from the plant and enter our streams and groundwater.

Over 30 communities in Minnesota have elevated levels of nitrate due to excess fertilizers, and thousands of private wells have water that is unsafe to drink.

**We can have clean water and prosperous farms.
Here's how.**

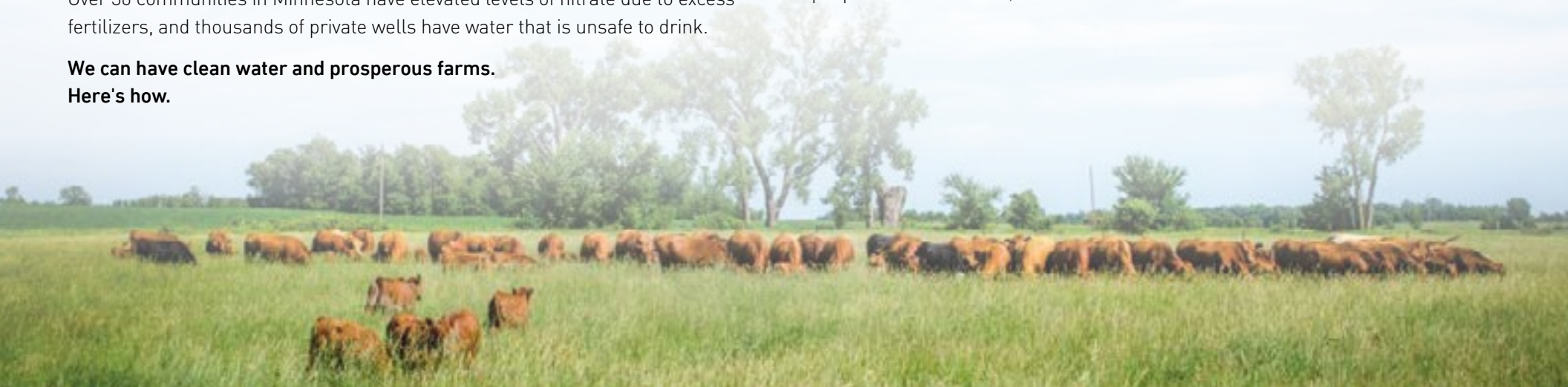


Forever Green at the University of Minnesota is developing the next generation of crops — grains, oil seeds and perennials that live on the ground all year while still being profitably harvested by farmers for our table and transportation.

Here's a sampling:

- **Kernza** — a new kind of wheatgrass that grows back each year, is delicious, and you won't believe the root system.
- **Field pennycress** — a winter oilseed that promises to be a cost-effective biofuel (hello jet planes).
- **Winter camelina** — an edible oilseed with Omega-3 fatty acids.
- **Hazelnuts** — world demand exceeds supply or you would be cooking and moisturizing with these oils already!

Forever Green is a new program (only seven years old) and it is ripe for take-off, with over three dozen products in the works. They've done great things with a sparse budget, but an investment of \$5 million a year will allow this program to fund the researchers it needs to reach its potential — for Minnesota farmers, people who drink water, and the rest of the world.





Working Lands for Drinking Water Protection Program will connect products to markets

We know that having the crops alone is not enough to create a system. You also need markets. And processors. And distribution systems. If any link in the chain fails, the future of the crop hangs in the balance.

The Working Lands for Watershed Restoration Program through the Board of Water and Soil Resources has been convening experts and planning for the last three years to ensure that these pieces will be ready. Like Forever Green, this program is primed for take-off, too.

Now it is called the Working Lands Drinking Water Protection Program. “Working Lands” because it isn’t asking farmers to take their land out of production in order to achieve cleaner water. The land is working, producing, turning a profit while also giving us the ecological benefits of prairie. And “Drinking Water Protection Program” because it is targeting 118,000 acres across Minnesota that are in wellhead protection areas and also currently planted in row crops. These are our drinking water sources most vulnerable to nutrient pollution. They need to be protected, but they don’t have to be taken out of production.

An \$8.5 million investment this biennium for the next phase of this program will help farmers plant and market new and existing conservation crops.

These state general fund investments in Forever Green and the Drinking Water Protection Program are just a drop in the bucket compared to the financial challenges facing towns across Minnesota that have unsafe drinking water. With these programs, we make a true investment in our state’s economic future and the health of our people..

Fund water infrastructure

\$102.65 million in state General Obligation bonds for much-needed wastewater and drinking water treatment systems statewide.

Fully fund land conservation

\$44 million in state General Obligation bonds for the Conservation Reserve Enhancement Program (CREP), an important program, that moves vulnerable lands from production to conservation.

Protect the Clean Water Fund

Allocate the Clean Water Fund (Legacy Amendment money for water) as recommended by the state’s nonpartisan Clean Water Council.



Restore our trust: repeal the Trust Fund raid.

Minnesota’s voter-approved Environment & Natural Resources Trust Fund (ENRTF) uses lottery money to fund special environmental projects. However, in the last hour of the 2018 session \$98 million was taken from the Trust Fund for projects ordinarily paid for by state bonds.

Repealing the raid will allow legislators to respect the will of voters and protect the Trust Fund, while getting these projects underway through traditional means.

Note: The 2018 Trust Fund raid is now the subject of an ongoing lawsuit.

Pollinators

They've got our backs. We can have theirs.

**LET'S MAKE
MINNESOTA AN
OASIS FOR
POLLINATORS.**



Pollinator declines continue at alarming rates.

In the 2017-2018 season, Minnesota beekeepers reported losing more than 50 percent of their bees.¹

These dramatic losses coincide with a major shortage among Minnesota's 400+ species of native bees.

- The rusty patched bumble bee, one of our most common bees as recently as the mid-1990s, was placed on the federal Endangered Species List last year.
- Four more wild bees have been petitioned for this list in 2018.

**MINNESOTA
USED TO BE AMONG
NORTH AMERICA'S TOP
HONEY PRODUCING
STATES, BUT PRODUCTION
HAS BEEN FALLING.**

With many Minnesota counties already lacking sufficient native pollinators to support the crops in those areas,² we can't afford for this problem to get worse.

Pollinator declines are influenced by multiple, interacting factors: increased pesticide use, habitat loss, disease and parasite pressure – and climate change.

In particular, a 2016 Minnesota Department of Agriculture review identified the strong body of **research linking neonicotinoid pesticides (“neonics”) and other systemic pesticides with pollinator declines**. The scientific evidence has only grown stronger since.

The Governor's Committee on Pollinator Protection—a diverse group of stakeholders convened by Governor Dayton in 2016—recently finalized recommendations for reversing pollinator declines. This report offers a broad menu of options for addressing habitat, pesticides, and educational needs for pollinators. Access the report at bit.ly/beereport2018.

**We know what is killing bees.
And we have win-win solutions.**

¹Preliminary results: 2017-2018 Total and Average Honey Bee Colony Losses by State and the District of Columbia (2018), available at beeinformed.org/2018/06/21/preliminary-results-2017-2018-total-and-average-honey-bee-colony-losses-by-state-and-the-district-of-columbia.
²“Modeling the status, trends, and impacts of wild bee abundance in the United States.” Proceedings of the National Academy of Sciences of the United States of America. January 5, 2016.



Photo: Laurie Schneider, Pollinator Friendly Alliance



Photo: Laurie Schneider, Pollinator Friendly Alliance

Farmers want to help!

1 ➡ Offer farmers an incentive to switch from planting neonic-treated corn and soy seed to non-treated seeds.

Many farmers are interested in transitioning away from seeds coated with neonics (they can be more expensive, and research shows that they aren't really helping farmers anyway), but there are logistical barriers to moving away from what has become standard practice for so many.

This program would be modeled after a new federal USDA Conservation Stewardship Program Enhancement that provides corn and soybean farmers with financial assistance to plant seed without neonic treatments. In Minnesota, the enhancement currently provides \$4.95 for each acre of corn or soybean seed planted without neonic treatments if the land was formerly planted with neonic-treated seed. However, this assistance is only available to farmers enrolled in CSP — roughly 5% of Minnesota farms. A new state program would be available far more broadly.

Neonic seed coatings don't measure up

Neonics are the most widely used insecticide in the country — often used as coatings on seeds — and they pose a clear threat to pollinator health.

- **Nearly all of the corn seeds, and at least a third of soybeans** planted nationwide, have been pre-coated with these bee-harming pesticides.
- In 2014, the U.S. Environmental Protection Agency (EPA) found that for soybeans, “**neonicotinoid seed treatments likely provide \$0 in benefits to growers.**”¹
- Farmers report that while neonic-free seeds are available, they can be very hard to find.

Bees — our unpaid farm helpers

- Bees' pollination services and honey production contribute over **\$30 million to the state economy every year.**²
- Pollination is essential for Minnesota's top fruit crop — apples — which was valued at **\$17.7 million in 2015.**³
- According to USDA, pollination from honeybees and native bees **significantly improves the yield, diversity, and quality** of many crops that are critical to the Minnesota economy, including sunflowers (valued at \$33 million/year) and canola (\$17 million/year).⁴
- **Minnesota honey production is falling.** In the 1990s, beekeepers produced 12.2 million pounds of honey per year. Since 2000, that average has dropped to 7.8 million pounds.⁵

From Protecting Pollinators in MN Fact Sheet, February 2017, Natural Resources Defense Council and Pesticide Action Network (PAN).

Homeowners and retailers want to help (are responsible), too!



Help them pick the right product by making neonicotinoid insecticides available only to licensed applicators (like farmers).

Currently, many pesticide products containing neonics are available to the general public — homeowners, nursery growers, and retailers are able to use them without becoming a licensed applicator. **While these kinds of consumer uses do not make up a large percentage of overall neonic use, when the average individual in these groups uses neonics, they tend to greatly over apply the chemical — up to 120 times the amount approved for agriculture.⁶**

Restricting use and sale of neonics to only certified applicators would significantly limit this unnecessary exposure for pollinators — while also:

- protecting urban waterways from neonic contamination
- protecting the habitat of the rusty patched bumble bee, which largely covers the Metro area of Minneapolis-St. Paul.

**WATER
CONTAMINATION FROM
NEONICS IS BEING FOUND IN
RURAL, URBAN, AND SUBURBAN
AREAS AND IS HARMFUL TO
FISH, BIRDS, AND
INVERTEBRATES.**

Maryland and Connecticut have both passed this type of legislation. This is a great opportunity for Minnesota to lead in the Midwest.

¹ U.S. EPA, "Benefits of Neonicotinoid Seed Treatments to Soybean Production." 2014

² Insu Koh, Eric V. Lonsdorf, Neal M. Williams, Claire Brittain, Rufus Isaacs, Jason Gibbs, and Taylor H. Ricketts. "Modeling the status, trends, and impacts of wild bee abundance in the United States." PNAS 2016 113: 140-145.

³ USDA Minnesota agricultural data: Value of crops (2015) & value of honey production (2014)

⁴ Ibid.

⁵ USDA Economics, Statistics and Market Information System

⁶ See, e.g., Lennard Pisa et al., An Update of the Worldwide Integrated Assessment (WIA) on Systemic Insecticides. Part 2: Impacts on Organisms and Ecosystems, *Envtl. Sci. Pollution Research Int'l* (Nov. 9, 2017), bit.ly/2HqgHwB.



Assist homeowners who want to make their lawns into pollinator-friendly habitat.

Increased pollinator habitat helps everyone across the state. Investing state resources to launch a cost-share program would help give homeowners an incentive to move from the resource-intensive grassy turfs to plants that help our pollinators, clean our water, and sequester carbon.



Minnesota native bumble bee *Bombus impatiens* on goldenrod. Photo: Margot Monson



Photo: Margie O'Loughlin

Let's get smart about supporting pollinators long-term.

4 ➡ Create a Pollinator Protection Account.

We know enough about what pollinators need to thrive to know that it will take work, resources, and resolve. Nothing will be a one-time fix. Minnesota needs a way to ameliorate the harm done by pesticides to the pollinators themselves and their habitats. We can fund this work through fees on pesticide-treated seeds and the pesticides classified by the US EPA as moderately or highly toxic to pollinators on acute exposure basis. **In Minnesota, we act responsibly. When we impair something, we work to make it better.**

5 ➡ Authorize a Pesticide-Treated Seed Program.

Give the state clear authority to:

- Regulate treated seeds (like they have for all other pesticides)
- Track the use of pesticide treated seeds
- Fund research on the efficacy of seed treatments

Without this authority clearly stated, we risk state agencies not gathering the information we need to protect public health and help farmers make the best decision about what is cost-effective for their operations.

"2019 is an all-hands-on-deck-moment for pollinators. And there is an opportunity for every sector of Minnesota to step-up."

— Willa Childress, Pesticide Action Network, MEP Pollinator Cluster

To learn more, contact Willa@panna.org or 612-254-9222



Photo: Margie O'Loughlin

Great Lakes

Lake Superior is receiving millions of taxpayer dollars for important clean-up, while at the same time facing unprecedented risks.



Minnesota is the headwaters state for the Great Lakes, counting 190 miles of rugged Lake Superior coastline among its natural assets. The North Shore contains countless trout streams and eight state parks. While Minnesota's Great Lake is widely viewed as the cleanest of the five Great Lakes, it can also be considered the most threatened.

The Great Lakes Restoration Initiative is cleaning up Lake Superior.

The Great Lakes region's business leaders, mayors, governors, tribes, and conservation and environmental communities have worked together since 2005 to implement a science-based plan of action known as the **Great Lakes Restoration Initiative (GLRI)**. The GLRI is a long-term regional plan to protect and restore the Great Lakes while stimulating the region's economy. The first seven years of funding provided Great Lakes projects in Minnesota with an estimated \$70 million in federal grants, with an emphasis on the St. Louis River estuary — an area polluted by industry decades ago.

The GLRI has also funded North Shore trout stream restoration, research on ballast water treatment, and support for tribal engagement. The North Shore's famed Poplar River is now celebrating successful clean-up of their long-term water turbidity problems.

Support state matching funds for Lake Superior.

The GLRI has been a powerful tool to address our state's restoration needs. Minnesotans help lead the way by supporting full Congressional funding of the GLRI. An unprecedented action plan maps out nearly 60 steps to restore the St. Louis River by 2025. Bonding funds of \$25.5 million secured by the MPCA in 2016 were matched by \$47.2 million in federal funds and work is underway to remove polluted riverbed sediment from the St. Louis River estuary. *We see a future where people and wildlife can safely enjoy this beautiful area.*

Here at home, we must take advantage of federal funding by leveraging state dollars, including funds from the Clean Water Land and Legacy Amendment and capital bonding. In western Duluth's riverfront neighborhoods, the complex Grassy Point-Kingsbury Bay project will recreate habitat and reopen shoreline sites to the public, supported by Legacy dollars, GLRI funds, and even local and private funding.

Other priority actions to improve the health of Lake Superior.

Maintain strong standards to protect the St. Louis River from new water quality threats. Proposed sulfide mines in northeast Minnesota, including the PolyMet NorthMet project and the Twin Metals Minnesota project, threaten our lakes and rivers with significant ongoing water pollution. Sulfide mines, which are different from traditional iron ore mines, have never been operated safely.

Maintain protection of Minnesota's waters from ballast water contaminated with invasive species. Recent federal legislation regarding shipping vessels gives Minnesota the opportunity to participate in critical research and technological development to treat ballast water and protect our waters from new invasions.

Finish the long-delayed St. Louis River mercury clean-up plan. The Total Maximum Daily Load study is critical to protecting our communities from health-related impacts. The study has been delayed for too long.



Photo: Margie O'Loughlin

An aerial photograph showing a body of water with a large area of green algae or aquatic plants on the left side, and a large area of yellowish-brown sediment or debris on the right side. The water is dark blue-green, and the algae is a vibrant green. The sediment is a mix of yellow and brown, with some green patches. The overall scene is a natural, somewhat chaotic, and possibly polluted, aquatic environment.

Issue Briefs

from our members

Find out more:

Aquifer recharge as a tool to replenish groundwater reserves

by Freshwater

Are we using too much groundwater too fast?

Minnesotans want and need assurances that they will have dependable groundwater supplies. Replenishment of groundwater should keep up with withdrawals. Where groundwater is overdrafted, we may need recharge as a tool to augment groundwater supply.

Groundwater at risk

Some groundwater reserves are shrinking: groundwater is being used faster than it is being replenished by rainfall.

Minnesota needs to fund an aquifer recharge study to understand the range of options and costs involved to enhance and replenish our groundwater resources.

Building groundwater resilience

Three sequential steps build groundwater resilience:

- 1) Reduce groundwater use
- 2) Reuse groundwater before discarding it
- 3) Recharge groundwater

We are already working on the first two but some parts of the state may need to have the third tool — recharging groundwater — in place in order to avert an economic crisis.

Given the uneven distribution of groundwater across the state, each region requires its own solutions. Freshwater is asking the Legislature to direct the Water Resources Center to conduct a two-year, interdisciplinary study including a stakeholder process to identify areas where groundwater recharge makes both economic and geologic sense and report back to the Legislature during the 2020-21 session.



Find out more:

Protecting Minnesota's Scientific and Natural Areas

by Friends of the Minnesota Scientific and Natural Areas

Minnesota's Scientific and Natural Areas include:

- world-class peatlands in northern Minnesota;
- native prairie remnants in western and southern Minnesota;
- remnants of old growth forests;
- shorelines along Lake Superior; and
- the blufflands of southeastern Minnesota.

What would our state be without our lands?

Protecting our Scientific and Natural Areas requires a steady commitment

Minnesota's 160 Scientific and Natural Areas (SNAs) — special places that contain the rarest and most significant plant and animal communities and geological sites in our state — have the highest legal protection of any state land classification. Without protections for these remaining natural places, the state risks loss of genetic diversity, important species, and unique geological features.

Funding for the SNA program has suffered for the last 10 years.

Maintenance and restoration of these lands have fallen behind, a supervisor position has been left unfilled, and land acquisition is a fraction of what it needs to be to protect Minnesota's unique plant and animal communities.

Appropriately funding SNA programs is a small, but important piece, of Minnesota's state budget.

General Fund: \$6.5 million for the SNA supervisor position and the staff required to maintain, restore, and protect these lands.

General Obligation Bonds: \$7.5 million would allow the acquisition of approximately 2,500 acres.

It is critically important that supplemental funds from the ENRTF and the Outdoor Heritage Fund are not restricted in a "no-net gain" policy that would prevent the acquisition of new lands without selling existing lands.

The following funding requests from the DNR to the 2019 Minnesota Legislature are critical to our success protecting land and combating climate change:

Legislative-Citizen Commission on Minnesota Resources (LCCMR) recommendations from the ENRTF:

» Minnesota Scientific and Natural Areas — \$3.5 million

Outdoor Heritage Fund recommendations:

» SNA acquisition — \$492,000 million

» Restoration for SNAs and Native Prairie Banks — \$1.13 million

» Minnesota Point Pine Forest SNA Acquisition — \$500,000

These investments will honor the intent of Minnesota voters and advance our conservation goals, ensuring that Minnesota's rare flora, fauna, and geological features are protected — for the services and beauty they provide Minnesotans today and tomorrow.

Find out more:

“Prove-it-First” Laws Needed in Minnesota to Prevent Harm from Copper- Nickel Metallic Sulfide Mining

by Sierra Club North Star Chapter

The issue goes beyond PolyMet’s proposal. A massive sulfide mining district could extend from PolyMet, to Teck Resources’ deposits, to Twin Metals’ proposed mining project under and adjacent to Birch Lake, near Ely. Exploration for copper, nickel, and other metals is advancing across the Arrowhead, from Duluth, along the North Shore, to the Boundary Waters Canoe Area Wilderness, and also in Itasca, Carlton, and Aitkin counties and along the Mississippi River.

A new kind of mining — metallic sulfide mining — poses an unprecedented risk to Minnesota’s quality of life

Sulfide mining leaches toxic metals into water and the food chain

Unlike the traditional iron-ore mining of Minnesota’s history, never-done-before in Minnesota **metallic sulfide mining generates sulfuric acid and leaches toxic heavy metals into ground and surface waters.** At even a few parts per billion, this discharge adversely impacts the aquatic food chain, eventually affecting fish, wildlife, and people.

The first sulfide mining proposal for Minnesota is going through the final approval process. The proposed PolyMet mine near Hoyt Lakes would destroy nearly 1,000 acres of wetlands, adversely impact at least 5,000 additional acres, and create a persistent toxic legacy cost for future generations.

Sulfide-mining companies should have to prove that they can be safe

Minnesota should enact a “prove-it-first” sulfide mining moratorium law to prohibit metallic sulfide mines until they have been proven safe through long-term operation and closure of similar mines elsewhere. This policy would make sure Minnesotans are not the recipients of untested or faulty mining practices, insurmountable clean-up costs, and human health issues, including the loss of clean drinking water.

Additionally, Minnesota should prohibit mines that would require long-term treatment of surface runoff or groundwater after the mine’s closure. There is no way to predict closure and clean-up costs for mines requiring ‘perpetual treatment.’ PolyMet has never operated a mine and has no financial reserves. The burden of centuries of clean-up falls to the taxpayer.

Threats from the mining of sulfide ores in the Triple Watershed region of Minnesota are of great significance: waters drain into Lake Superior, the Rainy River, and the Mississippi River. The issue of pollution becomes one of international importance.

Northeast Minnesota is known for its forests, wetlands, and wildlife, for its fish and wild rice, and for the valuable clean waters of its lakes and rivers. We must not sacrifice these resources to centuries of poisonous pollution.

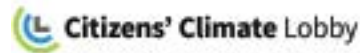
PARTNER MEMBERS



Alliance for Sustainability
Sean Gosiewski
sean@afors.org
612-250-0389
allianceforsustainability.com



Austin Coalition for Environmental Sustainability
Mark Owens
markowensrd@msn.com
507-433-2735



Citizens' Climate Lobby
Kelli Lewis
kelliump@yahoo.com
citizensclimatelobby.org



Clean Water Action
Deanna White
dwhite@cleanwater.org
612-623-3666
cleanwateraction.org/mn



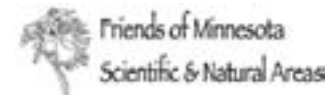
Environmental Initiative
Mike Harley
mharley@environmental-initiative.org
612-334-3388
environmental-initiative.org



Environmental Working Group
Craig Cox
craig@ewg.org
ewg.org



Fresh Energy
Michael Noble
noble@fresh-energy.org
651-225-0878
fresh-energy.org



Friends of Minnesota Scientific and Natural Areas
Tom Casey
chair@snafriends.org
snafriends.org



Friends of the Boundary Waters Wilderness
Chris Knopf
chris@friends-bwca.org
612-332-9630
friends-bwca.org



Friends of the Cloquet Valley State Forest
Kristin Larsen
kristinl55803@gmail.com
218-724-8423
friendscvsf.org



Friends of The Mississippi River
Whitney Clark
wclark@fmr.org
612-812-7499
fmr.org



Izaak Walton League - Minnesota Division
Noreen Tyler
ikes@minnesotaiakes.org
651-221-0215
minnesotaiakes.org



Land Stewardship Project
Mark Schultz
marks@landstewardshipproject.org
612-722-6377
landstewardshipproject.org



Lutheran Advocacy - Minnesota

Lutheran Advocacy Minnesota
Tammy Walhof
tammy@lutheranadvocacymn.org
651-224-5499
lutheranadvocacymn.org



Minnesota Center for Environmental Advocacy
Kathryn Hoffman
khoffman@mncenter.org
651-223-5969
mncenter.org



Minnesota Ground Water Association
Kate Pound
president@mgwa.org
mgwa.org



Minnesota Native Plant Society
Scott Milburn
scott.milburn@mnnps.org
mnnps.org



Minnesota Trout Unlimited
John Lenczewski
jlenczewski@comcast.net
612-670-1629
mntu.org



MN350
Kevin Welan
kevin@mn350.org
651-414-1731
mn350.org



Move Minnesota
Jessica Treat
jessicat@movemn.org
651-767-0298
movemn.org



National Parks Conservation Association
Christine Goepfert
cgoepfert@npca.org
612-270-8564
npca.org



The Nature Conservancy - Minnesota Office
Peggy Ladner
pladner@tnc.org
612-331-0750
nature.org



Northeastern Minnesotans for Wilderness
Alex Falconer

alex@savetheboundarywaters.org
218-365-7808; nmworg.org



Pollinator Friendly Alliance
Marcie Forsberg
marcie@pollinatorfriendly.org
pollinatorfriendly.org



Save Lake Superior Association
LeRoger Lind
llind@yahoo.com
218-834-6137
savelakesuperior.org



Save Our Sky Blue Waters
Lori Andresen
info@sosbluewater.org
218-340-2451
sosbluewater.org



WaterLegacy
Paula Maccabee
pmaccabee@justchangelaw.com
651 329-1880
waterlegacy.org



Wilderness in the City
Holly Jenkins
hollyc.jenkins@gmail.com
651 271-1257
wildernessinthecity.org



Womens Congress for Future Generations
Ann Manning
ann@wcffg.org
wcffg.org

ASSOCIATE MEMBERS

Audubon Minnesota
mn.audubon.org

Bicycle Alliance of Minnesota
bikemn.org

Center for Biological Diversity
biologicaldiversity.org

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Humane Society of the United States - Minnesota
humanesociety.org/about/state/minnesota

Institute for Local Self Reliance
ilsr.org

Kids For Saving Earth
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sustainablenorthland.org

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parksandtrails.org

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Sierra Club - North Star Chapter
sierraclub.org/minnesota

St. Croix River Association
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St. Paul Audubon Society
saintpaulaudubon.org

Sustainable Farming Association
sfa-mn.org

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Women's Environmental Network
wenmn.org



Photo: CURE

**Minnesota
Environmental
Partnership**



St. Paul Office
546 Rice Street, Suite 100
Saint Paul, MN 55103
651-290-0154
info@mepartnership.org

Duluth Office
394 Lake Avenue South
Suite 223
Duluth, MN 55802
218-727-0800

MEPartnership.org



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