

N O R T H S T A R JOURNAL

NEWS ON OUR EFFORTS TO KEEP THE ENVIRONMENT HEALTHY FOR MINNESOTA COMMUNITIES

SPRING/SUMMER 2022
Volume 42, Issue 1

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SIERRA CLUB
NORTH STAR CHAPTER

CO-CHAIRS' & DIRECTOR'S COLUMN

Greetings from your leadership. This spring, I (Tom) was honored to be elected Co-Chair of the North Star Chapter Executive Committee along with Kamau Wilkins, who has served as Chapter Chair for the past two years. I look forward to applying my longtime experience with Sierra Club in this new role.

It has been a long cold winter, as COVID continued to keep many of us inside and away from others. But now the Sierra Club has been working to cautiously open offices, have face-to-face meetings, and bring people together.

We have re-launched our local outings program and, thanks to our volunteer leaders, are happy to be meeting folks in nearby nature across the state. I was lucky to join a snowshoe hike at Jay Cooke State Park on a warm sunny day that reenergized spirits. Check the calendar, sc.org/mn, for a hike near you.

This summer we are looking ahead to the expansion of two programs: Inspiring Connections Outdoors (ICO), which creates connections between young people and between different communities; and our new Military Outdoors program, which improves the lives of veterans and their families.

Beyond this good news, I am also thinking about challenges and opportunities.

Proposed sulfide ore mines in the Lake Superior and Boundary Waters watersheds have been a focus of Sierra Club and its partners over the past few years. Now a new sulfide mining proposal is getting our attention: the Talon Mine near Tamarack. Pollution could threaten the Mississippi River and surrounding wetlands, and Indigenous treaty rights will be an issue.

Another challenge and opportunity is the upcoming midterm elections. Because of redistricting, the Minnesota House, Senate, and Governor's seats are all up for grabs. The North Star Political Team has been busy interviewing candidates to determine which are worthy of our support. We will need many volunteers to help our endorsed candidates get elected. Read more about the many challenges we are taking on from clean energy to transit to zero waste in this issue.

This work depends on local gifts to the Chapter, 100% of which stay in Minnesota. Right now donations will be matched up to \$20,000, thanks to our generous donors!

So inform yourself about the issues, get ready for elections, donate and get outdoors.



Tom Thompson, Co-Chair

Kamau Wilkins, Co-Chair

Margaret Levin, State Director



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Find a list of chapter staff and volunteer leaders at sierraclub.org/minnesota/staff and sierraclub.org/minnesota/chapter-leadership. With any questions contact us at 612-659-9124, north.star.chapter@sierraclub.org.

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NORTH STAR
JOURNAL

Great Lakes Solidarity: Water & Oil Still Don't Mix

Devon Young Cupery & Scott Russell

Our Wisconsin and Michigan neighbors are working to protect the Great Lakes from Enbridge's aged Line 5 crude oil pipeline, and from the corporation's plan to build an even larger pipeline in its place. Line 5 is part of Enbridge's U.S. network, which also includes Line 3.

From what we experienced in Minnesota, our neighbors should worry. For instance, Line 3 construction resulted in multiple aquifer breaches, illegally releasing more than 255 million gallons of groundwater.

A DEFUNCT AND DANGEROUS PIPELINE

Line 5 transports 22 million gallons of crude oil and natural gas liquids every single day. The pipeline is well past its 50-year useful life expectancy; and its continued operation risks catastrophic spills into the Straits, threatening Lake Michigan, Lake Huron, and millions of people's drinking water.

The state of Michigan has revoked Line 5's easement to operate in the Straits of Mackinac, and easements to cross the Bad River Band of Lake Superior Chippewa's lands expired in 2013. But the line is still operating because Enbridge has tied up both challenges in court.

LINE 5 EXPANSIONS: EVEN WORSE

Enbridge is now proposing to bore a tunnel under the Straits for a new segment of pipeline. At a March 17 public hearing, everyone who testified opposed the tunnel.

"Enbridge wants to discharge five million gallons of wastewater into Lake Michigan every day that the tunnel is being constructed," said Mike Wilczynski, who worked 12 years as a geologist for the Michigan Department of Environmental Quality. "Enbridge hasn't said how it will remove bentonite clay from the slurry prior to discharge. When mixed with water, bentonite will stick to everything it touches, killing fisheries and destroying our drinking water, not to mention forming an impermeable barrier suspended on top of Lake Michigan for years to come."

Enbridge also proposes to reroute a 40-mile segment around the Bad River reservation, but the new route cuts through the band's watershed, crossing hundreds of waterways that flow into the reservation and the Kakagon and Bad River Sloughs.

The Band is calling for public support to protect its drinking water, wild rice, fisheries, and cultural survival.

NORTH STAR ROLE

The North Star Chapter's Stop Line 3 Team has rebranded itself as the "Beyond Oil" Team. Our work will include supporting Line 5 opponents in Wisconsin and Michigan.

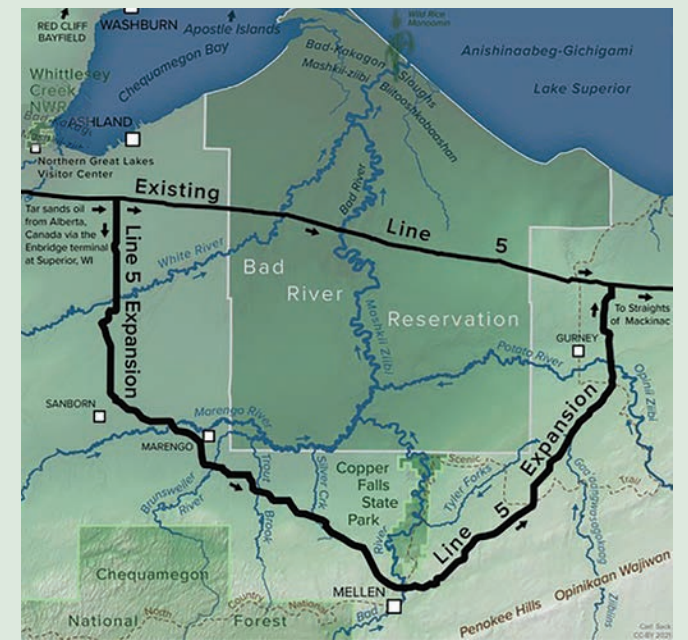
We have a lot to bring to the table. We and our partners have documented the harm done by Line 3 construction. We can raise awareness about Enbridge's permit violations, including its multiple aquifer breaches in Minnesota that illegally released more than 255 million gallons of groundwater and extensive drilling fluid pollution at river crossings.

We are also part of a larger partnership working to continue documenting Line 3 environmental damage, and pressuring our regulatory agencies to do better and act on behalf of the people of this state.

This is an ongoing story. Watch for action alerts.

Scott Russell is a former co-chair of the chapter's Stop Line 3 Team and is still trying to figure out how state regulators failed us so badly.

Devon Young Cupery is a communications specialist with the chapter who believes in the power of people.



Graphic Credit: Carl Sack

MINNESOTA LEGISLATURE BIENNIUM REVIEW

Peter Wagenius

In Minnesota, each-two year term of the state legislature is considered one biennium. The North Star Chapter began the 2021-2022 State Legislative Biennium with ambitious priorities set by our volunteer leadership and aligned with our broader goals. If passed, these bills would help all Minnesotans by ensuring clean air and water, protected lands, greater environmental justice, and a stable climate for future generations.

With a divided legislature and an anti-environment majority in the Senate, we approached the biennium with tempered short-term expectations and a long-term plan. Together our volunteer leaders, supporters and staff worked with partners to pressure legislators through lobbying and action alerts, as well as by hosting meetings, rallies, and events.

STEPS FORWARD IN 2021

In that context, we achieved some significant steps forward in 2021:

- Solar energy investments, including solar on schools, solar on higher education institutions, and solar on landfills
- Funding for the Metro E and F Bus Rapid Transit (BRT) lines, a second daily train to Chicago, the transition toward zero-emission buses, and new options for walking and biking
- Investments in clean-energy jobs and equitable workforce development
- A “Buy Clean” pilot to reduce emissions in building materials
- The ECO act, a common sense update to Minnesota’s energy efficiency policy
- PFAS ban on food packaging
- Increasing forests’ ability to sequester carbon

All of this was possible because 2021 was a budget year, which meant that our legislative champions had the leverage of “must-pass bills,” bills needed to prevent a government shutdown.

STALLED IN THE SENATE

We did important work to pass historic policies through the House, but the Republican-controlled Senate blocked them:

- An Omnibus Energy Bill including 100% clean electricity by 2040
- An Omnibus Transportation Bill with ongoing funding to build a complete transit network, statewide electric vehicle infrastructure, and more

These bills demonstrate what will be possible in 2023 if we have a more pro-environment legislature.



DEFENSE

On the defensive side, we:

- Led a coalition of organizations to successfully block a proposal to mandate the sale of E15, a blend of 15% ethanol and 85% gasoline. More ethanol delays real clean transportation solutions and pollutes our water and climate
- Blocked attempts to repeal the Clean Cars Standards
- Stopped Republican hand-outs to corporations



2022: HISTORIC SURPLUS, BUT NO “MUST PASS” BILLS

In 2022, there were no “must pass” bills, and as we anticipated, that made it really challenging to force a compromise that would include the investments we wanted.

Sierra Club knew that the greatest opportunities would be related to the billions of state surplus and federal infrastructure dollars. In 2022, lawmakers have a chance to enact historic investments put forward by the House Climate Caucus in its \$1 billion Build MN Climate Budget – directing resources from the state surplus to proven climate solutions that also create jobs, lower energy bills, and increase equity. In our #RealSolutionsRealChampions series of social media posts, we’ve been highlighting individual bills from this package and the legislators who proposed them. We are continuing to build the narrative that proven solutions exist and are possible right now.

Additionally, we continued working for policies like a Prove it First sulfide mining moratorium, advancing environmental justice through the Frontline Communities Protection Act, reducing road salt pollution, and keeping toxic PFAS “forever chemicals” out of our homes, soil, air, and water. And, we fought back against a proposal by anti-environment legislators to take 100% of the sales tax on auto parts out of the state General Fund and direct it to highways and roads – with none for transit.

At press time, the 2022 regular session deadline had ended with few bills passed, and the Senate not supporting a Special Session to finish their work. Watch our blog and website for further updates.

SERIOUS CLIMATE ACTION BLOCKED BY FOSSIL FUEL INTERESTS, ALLIED POLITICIANS

Looking back on the biennium as a whole, we can trace the obstruction of serious climate action to fossil fuel interests like Flint Hills Refinery and the Minnesota Chamber of Commerce. In the Democratic-controlled House, the two critical omnibus bills passed with every Democrat voting in favor. This shows that Democrats are more united than ever to take real action for our climate.

Meanwhile over in the Senate, all Republicans voted that climate change is not caused by human activity. That’s right – while House Democrats are working on solutions, Senate Republicans are still denying that the climate crisis is even real.

While it is disappointing to see climate denial and false solutions being put forward, there are many reasons to stay engaged and hopeful. Together with allies we are building awareness, energy, and momentum for real climate solutions.

CLIMATE ELECTIONS COMING IN FALL 2022

The fight ahead is one we can win. Polling shows voters are very concerned about right wing extremism...and climate denial is extreme. Several Senate seats have gotten bluer through redistricting. When we win a few more Senate seats, we can pass big climate bills that are already written and vetted. Join us on the trail to make it happen.

Peter Wagenius is the Political and Legislative Director at the North Star Chapter, a proud parent of two young girls, and baker of great millet bread.



Graphics from our #RealSolutionsRealChampions campaign. Graphic Credit: Devon Cupery

WORKING FOR CLIMATE JUSTICE IN SAINT PAUL



Original art by Moira Villiard

Dominique Diaddigo-Cash

Saint Paul Mayor Melvin Carter III introduced a measure to establish a Climate Justice Advisory Board in 2020 to work toward carbon neutrality for the city and its residents.

This board was created to advise in the design of policies that intersect with the Saint Paul Climate Action and Resilience Plan (CARP). The goal of CARP is to achieve carbon neutrality for city operations by 2030 and citywide by 2050.

The inaugural members of the board include representatives from environmental organizations, private corporations, and community organizers chosen to represent a broad spectrum of perspectives. I was selected to join the board for a three year term, joining 16 others from across the east metro.

We spent much of our first year becoming grounded in the content of CARP. CARP talks about the vulnerabilities of Saint Paul to the impacts of ongoing climate change and takes initial steps to identify any disparities in vulnerability. For instance, those under the age of five or over the age of 65 face increased vulnerability to incidents such as extreme weather, illness, or air pollution. Similarly, in households where the dominant language is not English, there is additional care needed to ensure outreach, education, and safety materials are accessible to all residents.

During this time, two opportunities to engage in dialogue with the City Council around broader justice issues emerged.

- The first was following the Minneapolis police murder of Daunte Wright, after which Minneapolis and Saint Paul issued respected curfews. Those curfews, intended to discourage protest, had a negative impact on frontline workers and people who relied on transit. The Saint Paul Criminal Justice Advisory Board (CJAB) joined in with other organizations such as the NAACP, Black Lives Matter, and the Saint Paul Federation of Educators in calling on Mayor Carter to lift the curfew to provide relief.
- The second opportunity was a statement about Enbridge Line 3 and the water crossing permits that were issued in 2020. The CJAB acknowledged that our work needs to transcend geographical boundaries to fully understand climatic impacts. Following the lead of Saint Paul 350, the CJAB submitted a memo of support for calls to revoke the permits. This resulted in a meeting between the board and the Ramsey County attorney who expressed sympathy with our activism and reaffirmed our important role as it relates to policies within CARP.

Each of these activities were beyond the traditional scope of our responsibilities as an advisory board, but nonetheless they have created meaningful opportunities to build relationships and grow into our purpose. This helps to expand the overall mission of climate justice and to understand the ways that we are all linked together.

The board meetings have also been a place to learn about community initiatives that we could help shape and participate in. These have included Xcel energy discussing their 15-year Integrated Resource Plan, the Electric Vehicle Spot Network, and the Saint Paul Youth Commission. Every

opportunity has been generative, whether in the form of providing direct feedback for the implementation of an initiative or through the simple act of building community across sectors and between neighborhoods.

For Saint Paul and Ramsey County to achieve their climate goals, changes in our infrastructure will need to be developed with an imperative for resilience, and agencies will need to ensure that this takes priority over profitable development agreements. It's the role of public advisory groups to ensure that this planning doesn't happen at the expense of working class communities or communities of color. The CJAB's focus on climate justice as opposed to simply climate change adaptation is a step toward ensuring that happens.

Going beyond CARP, the board will need to engage directly with residents of Saint Paul to deepen our understanding of their experiences and to learn about new and emergent issues. The board reports directly to the city council and mayor's office.

Moving forward, the board has identified a list of priorities where our advisory is most urgent. These priorities are:

1. Transportation
2. Energy burden
3. Green workforce development and inclusion
4. Emergency preparedness
5. Communication/education within the community.

In April 2022, members of the board presented a summary of our first year to the Saint Paul City Council — the first face to face meeting for many of us.

Building resilience to climate change and working to hold back the tide of environmental ruin and corporate greed will happen through the implementation of sensible policies and lasting regulations.

This means understanding that the impacts of climate change more severely impact communities of color, people living in poverty, developing nations, and people living in poverty.

Through building relationships with those who are most impacted, institutions and agencies can help to amplify the voices of those whose lived experiences convey the urgency of the work.

The story of the Climate Justice Advisory Board highlights much of what it means to be a community organizer focused on climate justice. You can follow this work by visiting the City Of Saint Paul website and looking under "Boards and Commissions".

Dominique Diaddigo-Cash is an Organizing Representative with the Sierra Club, a lifelong community organizer and restorative practices circle-keeper — welcoming marginalized identities and experiences into various movements for social change.



PAUL BUNYAN GOES WAKESURFING

Original artwork by Emma Laskowski

Lindsay Starck

Imagine our delight when the two of them showed up—Babe as blue as the flat July sky and Paul sweating like a cold glass on a hot day. We waved them over to the picnic tables, told Paul to take off that flannel, set down that axe, and stay a while. Hadn't he been locked up in his cabin for two years like the rest of us?

We figured he could benefit from a bit of socializing. A maple-flavored old fashioned mixed up in a rain barrel. A heap of beer-battered walleye served in a kiddie pool.

"How'd you even find a mask big enough for your face?" we asked him.

He shrugged, sipped his drink. The bourbon sloshed against the sides of the barrel and the air grew sweet with the memory of those maples. "I used hammocks," he replied.

Babe, flattening half a football field of tall grass where he lay beside the lake, heaved a heavy bovine sigh and dropped his giant head to his hooves.

Paul had been a talker once, before the months of isolation. Now the conversation sputtered on in fits and starts. We tried to get him to reminisce about the old days—the popcorn blizzard, the flapjack contests. But he was moodier than we remembered. Quieter, darker. Who could blame

him? All of us were different than we'd been before.

It was a relief when the new boat roared by. We were glad to see Paul perk up, show some interest. He'd never seen a wake like that, he said. The size of it! Incredible!

"It's those massive tanks on the back," we told him, eager to rekindle his old spark. "Keeps them bow-up, stern-down. You've really never seen one? Seems like they were made for a guy like you!"

The water from the wake was sloshing in great tides over the shoreline and spraying Babe's ears. He turned his huge blue head toward us, but we were all trying to flag down the boat. By the time Paul had stripped down to his swim trunks and waded out into the lake, Babe was on his feet and backing up the hill with a strange look in his eye.

If you could have seen Paul out there! If you could have witnessed his joy! He rode that wakesurf board as naturally as if it was one of his own logs bobbing gently down the Mississippi. The engine growled and the white spray burst with rainbows and wasn't it something beautiful, that feat of human engineering? Wasn't it something to behold?

We knew that Babe, from up the hill, could see the banks eroding. We knew that those were native plants uprooted. Those were loon nesting sites that Paul's massive wake had

just washed away. We'd read about the damaged docks, the zebra mussels, the algae blooms.

We're not fools. Of course a wake that size was bound to churn, contaminate, destroy. We didn't need an ox to tell us that.

But isn't it natural to want things bigger than what they are? Lumberjacks and legends, pancakes and pine trees? After the couple years we've had—didn't Babe believe that we, too, deserved some fun?

We never got to ask him. When Paul rounded the bend again, Babe was waiting. That blue ox went tearing down the hill, trampling the pier like a pile of toothpicks, and bellowed his way through the ripped-up sludge until he reached the boat itself. Then he hauled it out of the water on his horns and sent

it careening across the sky. We heard the crunch of its landing on the far shore.

At the time, we weren't too happy. But when the water grew clearer and the loons returned, we found we didn't mind the loss so much.

As for Paul? We can't say. Haven't seen him since. Although we hope that he's forgiven Babe, we all agree that if we were him, we might still be mad.

With a wake that big, he must have finally been able to feel small.

Lindsay Starck is a writer, editor, and English professor at Augsburg University in Minneapolis. In the summer months, she likes to kayak on Lake Nokomis with her red heeler, Cedar.

To learn more about wake boats and our position please visit the water and wetlands stewards webpage, sierraclub.org/minnesota/waters-wetlands.

FIGHTING FOSSIL FUELS ACROSS MINNESOTA

Sierra Club is strengthening our work in Greater Minnesota to move beyond fossil fuels.

Here's some of what we've been up to.

IN ROCHESTER

Public Utility to Study Fossil-Free Scenario. To advance our goal of 100% clean energy without new gas, we secured a commitment from the municipal utility, Rochester Public Utilities (RPU), to allocate funds that will include a fossil-free scenario for all new energy-generating infrastructure in their future planning process.

Neighbors Chipping In. We also saw the roll out of a long awaited program for RPU customers to round up their bills to assist low-income households. We fought for this program alongside the Society of St. Vincent de Paul and the Three Rivers Community Action Program.

Mayor's Sustainability and Resiliency Taskforce. With our base of members and partners, we participated in a yearlong process that resulted in strong greenhouse gas emissions reduction targets for buildings and transportation.

Grassroots Air Quality Monitoring. We led an Air Quality Steering Committee—including local governments, the Mayo Clinic, and the U of M Rochester—to administratively secure public funding and installation of air quality monitors.

IN DULUTH

Minnesota Power Advocacy. Another major advocacy campaign for 100% Clean Energy is in the heart of the Northland. This campaign has focused on the proposed Nemaadji Trail Energy Center (NTEC) fossil gas plant which would be located just across the border from Duluth in Superior, Wisconsin. Through researching the gas plant proposal and developing our own preferred energy resource plan with partners, we found that NTEC is both unnecessary and harmful to efforts to curb the climate crisis.

Rather than wasting ratepayer dollars to build new fossil fuel infrastructure, our team proved that Minnesota Power could actually spend less money and still reliably meet future energy needs by increasing its investment in wind, solar and battery storage.

In addition to submitting an energy plan with more renewables, we also filed a report showing the public health and equity impacts of Minnesota Power's proposed plans. This report is the first of its kind. It found that Minnesota Power's coal/biomass plants cause disproportionately costly health impacts from the harmful array of pollution emitted near low-income communities, native communities and communities of color.

Get involved! Our Rochester and Duluth teams meet monthly – see back cover for details.

ANOTHER END OF THE WORLD IS POSSIBLE.



Melbourne climate strike. Photo Credit: John Englart

Marya Hart

THE EARTH IS AT A TIPPING POINT

We humans now extract and consume resources at an unsustainable rate. If we continue on this course, we will render the earth uninhabitable.

“We are on a fast track to climate disaster,” said UN Secretary General Antonio Guterres in a speech introducing the International Panel on Climate Change’s (IPCC) latest report in April 2022.

On one side of our planet’s tipping point is life as we know it. On the other, as Guterres puts it, are “major cities under water; unprecedented heatwaves; terrifying storms; widespread water shortages; the extinction of a million species of plants and animals.”

Both Guterres and the environmental movement advocate a rapid shift to renewable energy if we want to tip the scales back in favor of sustainability.

But green energy alone will not get us there. We must address not only the sources of our energy, but also how we use it.

The good news is that it is possible for us to live in abundance while forgoing pollution, habitat destruction and the downstream impacts, but only if we face our present predicament, understand how our addiction to economic growth has gotten us here, and commit ourselves to changing the way we use energy.

LESS IS MORE, MORE IS LESS

To understand why a shift to renewables is insufficient for the challenge we face, it’s important to understand “the rebound effect”: a well-documented paradox of human behavior. In a nutshell, as energy generation and use become more efficient, humans erase that efficiency with increased consumption.

When it comes to green energy, you can see the rebound effect all around you. Super-efficient light bulbs? Great, we don’t have to turn them off. Electric car? I’m doing my part by driving it. Saved money through efficiency? I’ll use that money to fly to a far-off vacation spot.

GREEN TECHNOLOGY ALONE WILL NOT SAVE US

But perhaps scaling up renewables and recycling can meet our energy needs?

Well, not exactly. First, remember the rebound effect. Under our current economic system, as GDP grows, energy use rises in tandem. Green growth “absolutely decoupled” from energy and resource use has never been proven possible.

Then, recall that even solar and wind energy are not free. Converting the sun and wind to useful purposes requires resources and energy-intensive processes. For example, photovoltaic panels use arsenic, cadmium, tellurium; wind turbines require concrete, steel, iron, fiberglass, polymers,

aluminum, copper, zinc and rare earth elements. Battery storage and transmission use lithium, copper, and nickel.

Even with aggressive recycling and landfill recovery, those critical minerals cannot be mined or recycled at a scale to meet currently-anticipated demand. Plus, building a new green infrastructure at a rapid-enough pace will use fossil fuels, intensifying the energy and climate problems it is meant to solve.

Worse, in the race to obtain critical minerals and other resources for the green economy, poor nations and people are most imperiled. Green energy resources are concentrated in the global South, often on Indigenous lands, where energy companies have consistently harmed air, water, wildlife, and people in search of profits.

Even green energy has limits and costs: it requires mining ever-dwindling stocks of ores, along with manufacturing and transmission, all entailing energy use, waste, transport costs, greenhouse gas emissions, economic exploitation, and environmental destruction.

The brutal reality: Human civilization is based on an economic and energy system of endless growth, which will collapse once the limits of extraction, and its concomitant environmental effects, have been reached.

This systematic collapse-in-progress is driven by inequality. Rich nations and people consume more than they need, contributing disproportionately to pollution and climate change. Meanwhile, poor nations and people have not reached basic sufficiency.

Fortunately, there is a solution.

DEGROWTH: A NEW WAY

Degrowth is defined by the economic anthropologist and author Jason Hickel as “a planned reduction of energy and resource use designed to bring the economy back into balance with the living world in a way that reduces inequality and improves human well-being.”

Degrowth does not refer to population control nor to closing our national borders against immigrants. Rather, this movement exposes the connection between ceaseless growth and environmental degradation and proposes we find new ways to live within the earth’s material limits by abandoning our policy of growth at any cost.

We can’t get there only by recycling or driving EVs. We need bold political and social action to create a fundamental systems shift.

DEGROWTH REQUIRES BIG CHANGES

We must push our national leaders to live up to their climate promises, and we in the global North must act in solidarity with the global South. Degrowth absolutely depends on

restructuring human and economic relationships and changing the way we interact with the earth.

It can be dispiriting to think only of huge, global forces that are seemingly beyond our control. But rather than lapsing into pessimism and despair, we can find hope and lead the way to big solutions by taking local action.

Locally, we must concentrate on solutions that promote sustainability and degrowth. Many of the North Star Chapter’s advocacy focuses on achieving these principles. Active campaigns that reflect aspects of the degrowth principles include:

- Opposing highway expansions in favor of investments in efficient, equitable public transit. The proposal to replace the section of I-94 through the cities with the Twin Cities Boulevard is a current example. Expanding affordable housing near transit is also a part of creating truly sustainable systems. (Read more on page 19.)
- Supporting energy alternatives and energy efficiency while battling new oil and fossil gas infrastructure. This is why we have been working to stop Enbridge’s Line 3 and Line 5, as well as opposing new fossil gas plants from Xcel Energy and Minnesota Power. We successfully stopped Xcel’s proposed new gas plant and are currently fighting the proposed Nemadji Trail Energy Center.
- Rejecting the greenwashed promotion of false solutions; for example, proposed sulfide ore mines such as Polymet, Twin Metals and Tamarack which promise jobs and critical minerals at the risk of toxic, perpetual water pollution.
- Moving to zero waste. Supporting extended producer responsibility bills, which require the manufacturer of a product to be responsible for its ultimate recycling, reuse or disposal. (Read more on page 14.)
- Supporting allies in advocating for tax, wage, and labor laws that reduce inequality, protect workers and prevent the top one percent from unduly influencing our economic and environmental policies.
- Advancing policies that foster local self-reliance, including distributed energy, local food production and industry.

We are facing an existential threat, but we will prevail if we face the facts, mourn our losses, and accept that there will be material changes to our lifestyle. Our lives can and will still be joyful and complete, if we speak out and keep hope alive.

Look for a version of this article in the chapter’s blog with links to notes and bibliography.

Marya Hart is an active volunteer with the North Star Chapter, and enjoys working on member communications and data entry.

LEARNING WITH THE CLEAN ENERGY TEAM

BUILDING POSITIVE PARTNERSHIPS

Delaney Russell

When a majority white-led organization such as the Sierra Club approaches a BIPOC-led environmental justice organization with an offer “to partner,” it can land with a great deal of ambivalence and skepticism.

Case in point: recently, our Clean Energy Team (CET) decided we could help reduce fossil fuel use by advertising the financial benefits of home energy audits to low-income residents of North Minneapolis.

Thinking residents would be more open to outreach from members of their own community, we reached out to Youth N’ Power (YNP), a partnership between Minnesota Interfaith Power and Light (MNIPL) and Redeemer Center for Life. YNP mentors young people (“apprentices”) from Minneapolis to organize for environmental justice.

We were delighted to learn that the apprentices already were doing extensive outreach on home energy audits and were interested in partnering with us, and that residents were excited about conserving energy.

However, a problem emerged. It turned out that residents weren’t signing up for the audits.

Rather than continuing with our assumption about what folks need, we turned to the apprentices. If outreach wasn’t increasing energy audits, what did they think could?

The apprentices identified three barriers:

1. Audits are scheduled months in advance
2. Someone needs to be present during the audit but many

audits are during traditional working hours and residents can’t take time off

3. Residents are wary of the potential for microaggressions from energy auditors outside their community.

We are now working together on how to accomplish our mutual goal (increase energy audits), which involves strategies to address the barriers identified by apprentices who possess the experience and knowledge to benefit their community. By deferring to their knowledge, we build our collective power and strengthen our partnership.

One option now in the works is to collaborate with Minneapolis home energy auditors to:

1. Schedule “Home Energy Squad in Your Neighborhood” days, where auditors could drop in that day with tips and supplies for homeowners and renters in dwellings up to four units.
2. Schedule these events on evenings and weekends.
3. Include trained auditors who are from North Minneapolis.
4. Consider partnering with Xcel’s Multifamily Building Efficiency program for 5+unit dwellings.

We would not have arrived at these solutions without closely collaborating with the apprentices. Through their on-the-ground work and ongoing research, our joint efforts resulted in outcomes that ultimately benefit the community.

Delaney Russell is the Environmental Justice Lead on the Clean Energy Team. When she’s not fighting for justice, you can find her on the pickleball court.

YOUTH N’ POWER PERSPECTIVES ON PARTNERING WITH WHITE-LED ORGANIZATIONS

During the Clean Energy Team’s partnership with Youth N’ Power (YNP), our team learned (again) about our tendency to think we know what’s best for others. Luckily, the YNP apprentices were courageous enough to give us feedback and we knew enough to listen to it.

Below are some reflections and quotes directly from the apprentices. We share them in the hope that readers can also keep learning about how to be a good partner.

At the request of the apprentices, quotes are anonymous. We honored their time and insights with small honoraria.

“It’s hard to walk into a room where everyone else is white. I can’t necessarily relate to what people are saying, or what they’re talking about has nothing to do with what I’ve experienced or gone through. And it’s hard to hear something that might be aggressive.”

“My people haven’t always had good experiences with white people so being in a white space makes me want to be quiet or not talk. And then, sometimes, when they ask me for my thoughts, they cut me off or go on to another question or look like they aren’t really listening. They don’t seem like they really want to hear my opinion, so I stop talking.”

“If they ask my opinion and I tell them what’s important to me, they often say, Oh that’s not what we’re here to talk about; we’ll have another meeting on that later.

Or sometimes they ask me a question about what my community wants. I’d like to say,

If you want to hear what they want, go there and ask a variety of people!”

“How are you supposed to trust someone when you don’t even see them twice? When an idea comes from people who aren’t from the community or who I haven’t seen before, I just don’t trust it. What do they really know about what we actually need?”

“Even after we come to their meetings, it’s hard to feel a ‘partnership’ with people if they don’t come to events or meetings we invite them to. Recently, for example, we had an event and invited everyone that says they’re our partner. And only one person came. That really hurt, when they say we’re important to them and we’ve made the effort to show up in their spaces. It makes it feel one-sided.”

SELFIES FROM CLEAN ENERGY TEAM MEMBERS



TEAM HIGHLIGHTS

- Successfully pressured the Minnesota Public Utilities Commission and Xcel to enact a long-term plan that includes coal plant retirements, more renewables, and no new fossil gas plants
- Supported a Minneapolis environmental justice community in advocating for the East Phillips Urban Farm instead of a proposed City of Minneapolis Water Yard Facility that would add vehicle pollution to an already overburdened community.
- Partnered with Youth N’ Power, a local youth organization empowering a new generation of environmental justice organizers in North Minneapolis

- Connected with thousands of Sierra Club members and supporters about signing up for community solar
- Created a digital map of areas of Minneapolis experiencing high energy burden to demonstrate the disparities in affordability based on race, income, and zip code
- Formed a team that will attend over a dozen community events this summer educating and activating Minnesotans on climate change
- Organized meetings with state legislators to lobby for \$1 billion for climate solutions in Minnesota

TRUE CORPORATE RESPONSIBILITY, AN ANSWER TO THE PLASTICS CRISIS.



Some of the too many plastic containers found by the author.

Zero Waste Team member, Josie Winship, wearing plastic litter she found in her neighborhood and some of her own plastic that she finds hard to avoid.

Lori Olinger

When I joined the Zero Waste Task Force, I was interested in creating less trash and wanted to get better at recycling and composting. I'm still a big fan of recycling and composting but when it comes to plastic, the more I learn, the more I try to phase it out of my life.

There is a staggering amount of plastic waste in the world: we produce about 300 million metric tons per year. And the U.S. comes in with the highest per capita rate: 287 pounds.

Plastic is made with toxic chemicals which get into our bodies through food and packaging. Recent studies have found associations between chemicals in plastic and serious health problems including infertility, obesity, and language delay in children. The risk is highest for infants and children.

Petrochemical plants that produce plastic cause health problems for people who live near them. St. James Parish in Louisiana, also known as "Cancer Alley," is one example. The parish contains over 150 chemical plants and refineries, almost 50% of the population are people of color, and cancer rates are far above national averages.

At the other end of the plastic life cycle, people who live near landfills and incinerators like the Hennepin County garbage burner (HERC) are also affected by pollution from plastic that contaminates soil, air, and water.

The U.S. also exports plastic waste to less-developed countries. Even if plastic does get recycled into something new like clothing or carpet, it still releases microplastic

particles. That's another area of concern since recent studies have found microplastics in blood and lung tissue.

It is possible to cut back on plastic by buying in bulk, using reusable containers, and buying less stuff. But it's nearly impossible to avoid plastic because 40% of it is used for packaging. Since plastic is so cheap, companies use excessive amounts. A toaster I recently purchased came with three cardboard boxes, a polystyrene block and multiple plastic bags! We are forced to accept plastic and pay for handling the waste through our taxes.

SYSTEMS CHANGE NEEDED

When the responsibility for what to do with packaging is on the consumer, it's hard to enact meaningful change, but if we can put that responsibility back with the producers, real change is possible.

"Extended Producer Responsibility for Packaging" laws (aka EPR for Packaging) have been enacted in Maine and Oregon, and have been introduced in several other states, including Minnesota, where Rep. Sydney Jordan and Sen. Kari Dziedzic authored HF4132/SF4518. The Zero Waste Task Force is supporting their bill because it will help reduce waste and make the products we use safer.

This legislation would put the cost of managing packaging back on businesses so that they make different choices. The bill would:

- Charge a fee for packaging equal to the cost of managing the packaging waste.

- Incentivize businesses to use less packaging.
- Ban toxic chemicals from packaging.
- Require businesses to make packaging more recyclable.
- Require clear recycling labeling.
- Permit recycling labels for packaging only where there is a market.
- Improve and expand recycling infrastructure.
- Fund pilot reuse/refill systems.
- Provide recycling and composting education.
- Administer the program through an independent organization.

Earth Overshoot Day, the day we start using more resources than Earth regenerates in a year, is July 17th; for the U.S., it's March 13th. We need to use our resources more wisely, and one way is to cut back on excessive packaging. Join us if you're interested in working to support this bill and have an impact on the plastic crisis.

At the Zero Waste Team we educate and advocate for systems change. We are engaged at the state legislature; partner with the National Sierra Club; and engage locally, like with the Hennepin County Zero Waste planning and efforts to shut down the HERC. If you want to get involved, contact lori.oling@northstar.sierraclub.org.

Lori Olinger is the chair of the chapter's Zero Waste Task Force and a retired engineer. She is excited to be sharing zero waste practices at many events this summer.

THE CONNECTION BETWEEN ZERO WASTE & THE HENNEPIN ENERGY RECOVERY CENTER (HERC)

All community members, especially children and the elderly, suffer when they breathe dirty air. For example, the link between air pollution and asthma is well documented.

But the health impacts of pollution are magnified among lower-income people and in communities of color across the state, including North Minneapolis, whose residents have the highest rate of asthma-related hospitalizations in Minnesota.

North Minneapolis residents have been calling for the closure of the Hennepin Energy Recovery Center (HERC) trash incinerator for years. It is past its lifespan and should have been closed several years ago. Trash incineration is detrimental to our health and climate, producing 2.5% more fossil pollution than coal plants.

In the next two years we have a unique opportunity to shut down the HERC.

This year, the Hennepin County Environment and Energy Department is creating a Zero Waste Plan, which will feed into its updated Solid Waste Management Plan in 2024.

County staff and commissioners are increasingly focused on racial and environmental justice. And community capacity has expanded with the launching of the Anti-Incinerator Working Group, a coalition of primarily BIPOC organizations and organizers. (Sierra Club is a member.)

Now is the time to make the transition to a state-leading zero waste model.

KEEP OUT: SULFIDE MINING BRINGS TOO MUCH RISK, TOO LITTLE GAIN

Alec Olson

America's most toxic industry, sulfide mining, wants in on Minnesota's minerals, but its facade of economy-boosting, job-creating projects doesn't hold up. And most Minnesotans see through it too.

Nearly two-thirds of Minnesotans (60%) are against the two sulfide mines proposed near the Boundary Waters, according to reporting by the Star Tribune.

Some 4,500 jobs rely on

the 1,100 pristine lakes in northern Minnesota, and wilderness areas support a billion dollar industry.

Yet a persistent challenge remains. International corporations continue funneling money into campaigns that would hide the toxicity of sulfide under the guise of short-lived economic stimulus and scrupulous mining practices.

We don't buy it — not when 100% of copper mines can't manage to prevent leaking pollutants. The Sierra Club stands against sulfide mining in all Minnesota watersheds, given the intense risk it poses to our land and water and the industry's poor track record of stewardship.

WHY SULFIDE MINING WOULD BE DISASTROUS FOR MINNESOTA

Mining copper or nickel sulfide ores is toxic and comes with great risk.

Mining sulfide rock releases acid and toxic metals and contaminants that pollute rivers and groundwater for hundreds of years, long after the profits are spent and the products are buried in landfills.

When it comes to the land and water, the fallout can devastate entire ecosystems.

Sulfuric acid forms when the ores react with the oxygen in the air. If this makes its way into the water, it's not just aquatic life that pays the price. Our communities, our economy, and our way of life become threatened.

Never before has sulfide mining been allowed in Minnesota — and we shouldn't start now.

ACTION TO PREVENT SULFIDE ORE MINING

Across Minnesota, environmental leaders, our partners, organizers and volunteers are working to rule out sulfide mining in the Land of 10,000 Lakes. Some recent activity includes:

- The EPA's recommendation in support of the Fond du Lac Band of Lake Superior Chippewa's tribal rights and tribal water quality standards. The band objected to a federal water permit for the proposed PolyMet sulfide mining project on the grounds that the proposed mine would violate their clean water rights under federal law. On May 3, the EPA agreed with them, stating that the "Section 404" wetlands permit previously issued to PolyMet would not protect the band's water, nor the fish and wild rice that depend on it.
- The delivery of over 6,000 petitions from Minnesotans across the state to Governor Walz calling on him to "Move On From PolyMet." This campaign was conducted with lead partners Minnesota Center for Environmental Advocacy, Duluth for Clean Water, and Friends of the Boundary Waters Wilderness.
- At the Minnesota State Capitol, we continue to work with partners to advance a "Prove It First" bill. Every sulfide mine located in a water-rich environment has resulted in pollution of surface or groundwater. Prove it First would prohibit sulfide ore mines until they have been proven safe through long-term operation and closure of similar mines elsewhere. A similar law was in place for two decades in Wisconsin.

Efforts and victories like these are the culmination of many working in support of a common goal.



Activists gather outside the Capitol to deliver thousands of petitions to Governor Walz calling him to move on from PolyMet. Photo Credit: Tom Thompson

WE CAN'T DO IT ALONE, WE NEED YOUR SUPPORT

Sulfide mining would take a considerable toll on Minnesota's economy, especially in the Northland, and squander the state's crown jewel: a vast wilderness many feel deeply connected to.

To protect places like

the Boundary Waters and Lake Superior, we need support. Will you lend a hand?

Wherever you reside in Minnesota, we could use your help to spread the word, contribute to our advocacy, and raise the importance of this topic. Here are three ways you can help today:

1. Learn about the issue. Sulfide mining has a poor track record when it comes to polluting. Learn about the impacts on our website: sierraclub.org/minnesota/mining
2. Share this with a friend. Spreading the word helps tremendously. When people know the facts, they can see the heavy cost of sulfide mining.
3. Consider getting involved. If you're passionate about protecting the environment any level of contribution — time, money, or attention — will help.

GET INVOLVED

Find meeting details on the back page & online. Get in touch with our Duluth team. They meet monthly to develop advocacy efforts focused on clean energy, environmental stewardship and more.

Alec Olson is a volunteer writer and editor with the North Star Chapter.

ELECTRIC TRUCKS & BUSES COULD CLEAN UP 30% OF MN GREENHOUSE GAS POLLUTION.



The author takes a ride on a clean, zero emission electric Metro Transit Bus with MK Anderson and Anjali Bains, Coalition for Clean Transportation allies from Fresh Energy. Selfie by Joshua Houdek

Joshua Houdek

You likely know that transportation is the number one contributor to climate change pollution in Minnesota, as well as nationwide. Our Land Use and Transportation Team is working hard to tackle this problem and provide equitable solutions by reducing Vehicle Miles Traveled (VMT) and increasing electrification.

We can reduce VMT by making it easier, safer, more convenient and more fun to walk, bike, and take public transit. Zero emission electric buses, like the one pictured above, do both. Transit reduces the need to drive, especially in urban areas of our state, and when we replace dirty diesel with clean electric, buses are a win-win.

We need more (many more) electric vehicles to make a difference. In 2021, Minnesota became the first Clean Car State in the midwest. It was a huge victory for the Sierra Club, our allies, and the nation, and it sent a strong signal to automakers worldwide. Passing Clean Cars creates stricter standards that will require new cars and light trucks (pickups & SUVs) sold in Minnesota to emit less climate-disrupting pollution. It will also increase the availability and sales of zero emission (i.e. electric) vehicles.

But the new standards don't address electrifying medium and heavy-duty (MHD) vehicles like delivery vans, larger trucks, and buses, the biggest source of health-harming diesel emissions in Minnesota.

We collaborated with the Coalition for Clean Transportation on a new report from Fresh Energy that forecasts the benefits

of adopting policies that support the rapid electrification of MHD vehicles. By advancing policies like Clean Cars for trucks and buses, Minnesota could reap cumulative societal benefits of up to \$18.5 billion.

Taking these steps will also help us get back on track to meet our state climate goals while boosting community health, particularly for communities living near high-traffic roadways, a large portion of whom are Black, Indigenous, people of color, and/or under-resourced.

While MHD vehicles only make up 9% of on-road vehicles in Minnesota, they account for 31% of greenhouse gas (GHG) emissions, 62% of nitrogen oxide (NOx) emissions, and 55% of fine particulate matter. We have so much to gain by tackling toxic trucks and buses, including:

- Reducing CO2 pollution by 35 to 88 million metric tons. That's equivalent to removing more than seven million passenger vehicles from the road for one year.
- Avoiding more than 100 premature deaths and nearly 100 hospital visits annually.
- Saving more than \$1.3 million in health-related costs annually.
- Saving more than \$16,000 over the life of each vehicle by 2030 in fuel and maintenance.

Madi Johnson, a clean transportation organizer with MN350 explains: "Right now, cities and schools are leading on large vehicle electrification. We need to see statewide goals and policies in place."



WIN FOR EQUITABLE CLEAN TRANSPORTATION!

In May, the MnDOT Interim Commissioner announced a commitment to include a highway-to-boulevard option in the Rethinking I-94 project planning process. This option represents a vision to replace I-94 between downtown Minneapolis and Saint Paul and reclaim freeway land for surrounding communities.

This is a very important step forward, and a result of hundreds of community members expressing their support for a future without a highway that harms health, climate, and our environment.

Built in the 1960s, I-94 destroyed homes and businesses, schools, and connections to the things people valued, all to save commuters driving time.

By far the most severe and intentional consequences of the freeway fell upon the communities of color who lived in or near the highway corridor.

Moving forward, we will fight for the Twin Cities Boulevard option not just to be evaluated, but also to be given full and fair consideration in MnDOT's environmental review process.

Congrats and thank you to our partners, especially our friends at Our Streets Minneapolis.

Support Your Passion for a Just and Sustainable World

Create a legacy that protects and restores the natural world for future generations by naming Sierra Club's North Star Chapter in your will or trust. Or, name Sierra Club Foundation as the beneficiary of your retirement plan for the benefit of your local chapter and leave less highly taxed assets to your loved ones.



To learn more about the advantages of making a planned gift and to become a member of the Rachel Carson Society, please contact us.



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FIGHTING PIPELINES WITH BOOTS ON THE GROUND



Pipeline Tour participants. Photo Credit: Dawn Loeffler

Marty Cobenais

I began to detest pipelines on August 22, 1979, when one burst a few miles from my home, spilling 440,000 gallons of crude oil. About 25% of the oil from that Pinewood Spill is still in the ground, and the site has become a major research project, where scientists study the long-term effects of oil spills on the surrounding environment.

Many years later, I became the first organizer in the U.S. to fight pipelines, while working for the Indigenous

Environmental Network. I was based in Bemidji with a small group of tribal members from the Leech Lake Band of Ojibwe. We were fighting Line 67 (Alberta Clipper) and Line 13 (Southern Lights Diluent), which Enbridge was trying to add to its network of four pipelines known as the U.S. Mainline. Because there was little public support and knowledge, I thought it was important to educate people about the dangers of pipelines. So I introduced the idea of pipeline tours.

Our first tour was on a chartered bus from the Twin Cities that arrived at the Paul and Babe statues on the shores of Lake Bemidji. The people on the tour had no idea of what to expect that day, nor how it would change their lives.

We began our adventure by taking the bus down an abandoned railroad. It was quite the experience for all – including the driver, who loved it!

Our first stop was at a wetland full of cattails and weeds along the railroad bed. I explained to the group that in the early days of pipeline building, two of the pipelines were placed on wetlands in the winter months and covered with dirt to protect the pipelines from getting hit and damaged. The group saw the mounds of dirt that covered the pipelines, which were wrapped with an asphalt-type wrap. The other two pipelines were wrapped in rubber and weighted down to keep them under water.

Then the tour group was led out into the wetland, where they were able to walk on an exposed pipeline. This was a very powerful thing to experience. No one had ever done such a thing; their idea of a pipeline was something buried underground. They took many photos of their feet on the

pipeline with water on both sides of the pipe.

The tour then continued to an overlook where the four pipelines cross the Clearwater River, just west of Pinewood. The landscape of this area is stunning, but a 50-yard-wide open field is cut into the middle of the pine forest. This is the path of the pipeline clearcut. It is a steep 75-foot drop from this vista to the swampy river bottom. Enbridge was proposing to widen it further for the two new pipelines.

This was the first of more than twenty tours. Over time we included different sites depending on which pipeline we were fighting.

We went to view Lines 1 and 2, which lay at the bottom of Cass Lake; to a pumping station spill which was never cleaned up and is still being monitored; and to the site where Lines 67 and 13 are placed. We also went to view more exposed pipelines in a swamp in the Chippewa National Forest, near Norway Beach.

We visited the Clearbrook tank farm, which moves millions of barrels of oil every day. On several occasions the Sheriff's Department was called to disperse us, but we were always law-abiding, and no arrests or tickets were ever issued.

We also started visiting the Red Lake Encampment near Leonard, Minnesota, where tribal members protested Enbridge's pipelines which operated with no easement on Red Lake-ceded lands. Beginning February 28, 2012, tribal members and supporters held the camp for seven months, enduring several minus 50 degree nights. Eventually, Enbridge and the tribe negotiated an \$18.5 million payment and land swap agreement. However, because the Bureau of

Indian Affairs has not signed off on the deal, Red Lake still owns this parcel, and Enbridge still has no easement.

Several years later we added tours near Itasca State Park, where (then proposed, now built) Line 3 would first cross the Mississippi River, and in Bagley, where the Minnesota Pipelines (Koch Pipelines) cross the Clearwater River and U.S. Highway 2.

These tours were important. They helped to educate the public and gain support to fight future pipelines. Throughout the more than ten years of pipeline tours, about 200 people have stood on exposed pipelines, and those people got their friends and families involved in the fight. Politicians, writers, students, actors, and singers have joined us.

Many of the people on these tours were vital to the fight as they were executive directors and lead organizers of some of the biggest environmental groups in Minnesota, including Sierra Club, MN350, Honor the Earth, Friends of the Headwaters and Minnesota Interfaith Power and Light. They have gone on to help lead the Line 3 fight, and defeated the Sandpiper Pipeline.

I'm proud to have started these tours so many years ago. I'm still in the fight. And there's plenty more to do.

Marty Cobenais, Zimobwaywin (Speaks to Others), is a member of the Red Lake Chippewa Tribe, Hereditary Chief of the Pembina Treaty Council, North Star Sierra Club Chapter Executive Committee member, and a board member of the Minnesota Environmental Partnership.



The author Marty Cobenais standing by an exposed pipeline. Photo Credit: Dawn Loeffler

A GEOLOGY TOUR OF MINNEAPOLIS PARKS

Don Luce

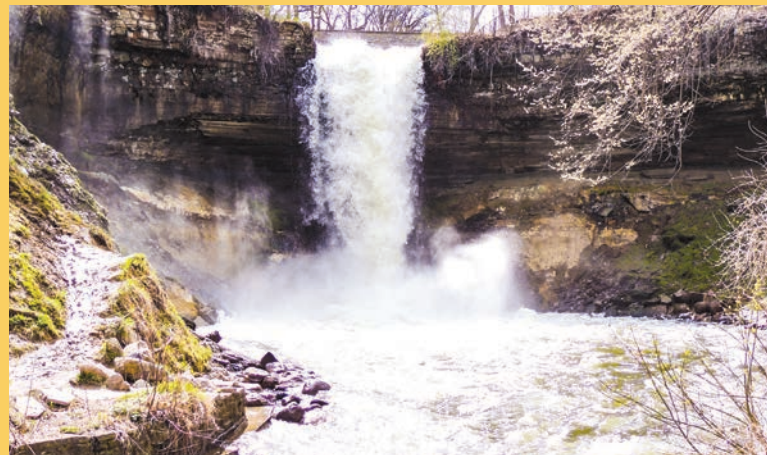
When the North Star Chapter decided to restart their local outings program last November, I was eager to share some of my favorite outdoor places with other members. I wanted to lead a short hike and provide some interesting interpretation. Because most plants and animals are dormant during the winter, I decided to focus on geology. Landforms, rock layers, and soil types are more visible without the vegetation leafed out.

I started with a December hike at Theodore Wirth Park. We hiked through the hilly south section of the park. I posed a basic question – why are these hills here? For a clue, we looked at the sub-soil exposed along an eroded trail. It consisted of an unsorted mixture of clay, sand, gravel, and rocks: the classic composition of glacial till. Till forms as a glacier melts and drops the random assortment of materials that had been picked up in the ice. When a melting glacier edge remains in the same area for a long time, deposits of till build up to form irregular mounds called moraines. Chunks of glacial ice are often left behind by a retreating glacier, and till builds up around them. When the ice chunks melt, they leave depressions that fill with water, forming lakes. This is how the park's hills and lakes formed.

Another interesting feature of the park is the quaking bog, which we entered on a floating walkway. Smaller,

creating anaerobic conditions that inhibit decomposition. The build-up of partly decomposed plant remains form peat. Only a limited number of plants can tolerate the waterlogged, nutrient-poor conditions of a bog. We observed some classic bog plants – tamarack, leather leaf, Labrador tea.

I also led two hikes along the Mississippi River gorge. There we observed some of the major bedrock layers underlying the Twin Cities and much of southeastern Minnesota. Gray, blocky Platteville limestone was deposited some 450 million years ago when Minnesota was covered by a shallow, tropical sea. Many invertebrate fossils can be found in this deposit. Under the limestone is a thin layer of greenish Glenwood shale formed from deposits in mud flats near the shore. As we moved down the trail, deeper into the gorge, we came to St. Peter sandstone. White to yellow in color, this deposit is formed from beach sand washed by waves and blown by winds. It is poorly consolidated and easily eroded. The rock layers record a time when Minnesota was covered by a sea in which marine life was thriving and diversifying.



Minnehaha Falls. Photo credit: Rubin Latz

These rock layers explain one of the most significant landform features in Twin Cities: the only natural waterfall on the Mississippi River. Limestone is resistant to erosion, while the underlying sandstone is easily eroded. As water flows over the edge of the limestone, it erodes the sandstone, resulting in a sharp drop-off into a gorge. This can best be seen at Minnehaha Falls.

At the end of the last Ice Age, there was a massive waterfall near St Paul, which has been eroding upstream since. Not far upstream from the current location of St Anthony Falls, the Platteville limestone peters out. The falls are now stabilized by a concrete apron built in the 1950s. If the falls were to continue to erode upstream, they would be reduced to a series of rapids.

Don Luce recently retired from the Bell Museum of Natural History where he was curator of exhibits. He's enjoyed getting to stay engaged in natural history education through the outings program.



The author Don Luce giving a talk at the Theodore Wirth Bog on a winter outing. To find an upcoming outing, go to sc.org/mn-outings. Photo credit: Jean Hopfensperger

isolated depressions filled with stagnant water create the perfect conditions for bog formation. The growth of sphagnum moss in particular aids in bog formation and the moss holds water, making the bog 'quake'. Sphagnum moss releases acids into the water and blocks water flow,

HOW TO GET GREAT LOCAL EMAILS

Do you wish you knew more about Sierra Club advocacy actions, events, and outings happening across Minnesota? We'd love to tell you about them!

But if you haven't been seeing our local action alerts and invitations, you might not be getting our emails. Here is how to ensure you do.

First things first:

Go into your email platform and search for emails from Mary Blitzer, open one, reply to it with just the word "yes" and click on a link within the email— this will help your email provider recognize us, keeping our emails out of your spam folder.

Then:

Search for an email from Mary Blitzer. If you are in Duluth try searching for Jenna Yeakle.

If you're a Gmail user:

- On your desktop, drag the email into your Primary tab. (You may need to search in your Promotions tab.)
- On your mobile device, click the three dots in the top right of the email, then tap Move To, then Primary

If you're an Apple user:

- Click the email address at the top of the email (next to the From field) and choose Add to Contacts

If you're a Yahoo, Outlook, or Hotmail user:

- Find the email (make sure to check in your junk or spam folders), click the box on the left of the email to add a checkmark and then click the Not Junk button or select Not Spam.

Finally, read our emails and enjoy more local events and actions!

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We are Minnesotans working for our communities' well-being through environmental protection.

TOGETHER WE:

- Work in partnership for environmental and racial justice
- Create change through grassroots political advocacy
- Pair volunteer leadership with professional expertise

OUR PRIORITIES:

- Move Minnesota to Clean Energy
- Protect Lands and Waters
- Promote Sustainable Communities and Transportation
- Connect Minnesotans to Nature

Thank you for being a part of the North Star Team!



The Minnesota Sierra Club staff team 2020



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Your donations make our work possible. Right now donations will be matched up to \$20,000, thanks to our generous donors. sc.org/mn-donate

Volunteers Wanted!

Contribute your time to protect the air, water, lands and climate we all depend on.

CAMPAIGN TEAMS: Lead grassroots advocacy campaigns on our most pressing issues.

Beyond Oil, 2nd Wednesday at 6:30 PM
marcy.leussler@northstar.sierraclub.org

Land Use & Transportation, 1st Monday at 6:00 PM
risa.hustad@northstar.sierraclub.org

Zero Waste, 3rd Tuesday at 7:00 PM
lori.olinger@northstar.sierraclub.org

100% Clean Energy, 4th Tuesday at 6:30 PM
john.krenn@northstar.sierraclub.org

GEOGRAPHIC TEAMS: Organize in your city for 100% Clean Energy, the environment and your community.

Rochester, 2nd Monday at 6:30 PM
rick.morris@sierraclub.org

Duluth, 1st Tuesday at 5:30 PM
jenna.yeakle@sierraclub.org

STEWARDS TEAMS: Research, monitor and advocate for environmental issues.

Forests and Wildlife Stewards, 2nd Monday at 7:00 PM
bob.graves@northstar.sierraclub.org

Waters and Wetlands Stewards, 2nd Monday at 7:00 PM
steve.ring@northstar.sierraclub.org

CAPACITY TEAMS: Share your talents and skills with us.

SierraAction: Use our grassroots power to impact legislation.
3rd Wednesday, sam.rosemark@northstar.sierraclub.org
ben.kuhnke@northstar.sierraclub.org

Communications: Hone your photography, design, and writing skills. Quarterly meetings, mary.blitzer@sierraclub.org

Community Outreach: Spread the word about protecting our planet. Ongoing events, patty.okeefe@sierraclub.org

Outings: Find new friends and explore Minnesota parks. Events ongoing, sc.org/mn-outings

Inspiring Connections Outdoors: 2nd Sunday at 4:00 PM
Help plan outings with communities that have less outdoor access.
mnico@northstar.sierraclub.org

For the most up-to-date information and many more events visit sc.org/mn.
Email north.star.chapter@sierraclub.org or call 612-659-9124 with any volunteer questions.