Minnesota Backcountry Hunters & Anglers (BHA) Report

100-Plus Reasons To Protect Northern Minnesota’s Waterways, Watersheds and Wildlife From Proposed Sulfide-Ore Mining
Executive Summary
Backcountry Hunters & Anglers is the sportsmen’s voice for our wild public lands, waters and wildlife. And the Minnesota chapter of Backcountry Hunters & Anglers (BHA) has been fighting to protect northern Minnesota’s waterways, watersheds and wildlife from proposed sulfide-ore copper mines for going on a decade now. Two such mines are currently being proposed by foreign-owned mining conglomerates on public lands in northern Minnesota’s Superior National Forest.

PolyMet Mining Corp. is a Canadian company one-third owned by Glencore, a Swiss-based global commodities company. PolyMet officials are proposing an open-pit sulfide mine near Hoyt Lakes and Babbitt, with runoff primarily draining into the St. Louis River watershed and Lake Superior, although studies indicate that the Boundary Waters watershed will also be impacted. Twin Metals is a subsidiary of Antofagasta PLC, a Chilean minerals conglomerate. Twin Metals plans a large mining operation southeast of Ely along the Kawishiwi River, which flows into the Boundary Waters Canoe Area Wilderness (BWCAW).

As explained by Minnesota Backcountry Hunters & Anglers board member, Will Jenkins: “While iron ore mines have a long history in Minnesota, sulfide-ore copper mines are very different … Every mine in the world has caused … contamination of its surrounding area. Sulfuric acid and heavy metals leech into the soil and contaminate waterways.”¹ Such mines have been detrimental, if not disastrous, to waterways, watersheds and wildlife essentially everywhere they’ve been allowed.

In fact, a study of 14 modern copper mines in the U.S. found that all of them contaminated nearby waters.² And the EPA calls the mining of sulfide ore America’s most toxic industry.³ As explained by Star Tribune reporter Josephine Marcotty (in “Iron Range mine could pollute water for up to 500 years,” 10/7/13): “Hard-rock mines have a long history of environmental damage … sulfide rock mining of various kinds have polluted 10,000 miles of rivers and streams … Between 1998 and 2007, the federal government spent at least $2.6 billion to clean up polluted hard-rock mines, some of which are now Superfund sites.”⁴

Although mining proponents claim modern technology and environmental regulations will cure all such sulfide mining ills, mining companies have been saying “we have the best, newest technology” for generations, but something always happens.⁵ In the words of hunting-angling writer Hal Herring: “What we have is a multinational mining company with a board of directors

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¹ Will Jenkins. “Help protect one of the most pristine freshwater fisheries in the country.” The Will To Hunt: 2/26/16.
² Becky Rom. “No way: Boundary Waters too precious for this risk.” Duluth News Tribune: 7/9/16.
³ Conor Mihell. “Protecting The Boundary Waters Canoe Area: America’s most popular federal wilderness is menaced by a giant copper-and-nickel mine.” Sierra: 10/19/16.
that is thousands of miles away … doing almost exactly what every mining company in … history has done, and saying the whole time that they are not like any other mining company.”

“It’s tempting to buy into the false optimism, the smoke and mirrors rhetoric, claiming that these sulfide mines can be operated without any risk to northern Minnesota’s sky-blue waterways and watersheds,” says David Lien, Minnesota Backcountry Hunters & Angles co-chair, “but when you turn over even a few rocks, the promised prospects enter the realm of fantasy.”

During August 2014, at the Mount Polley mine in Central British Columbia, 6.6 billion gallons of toxic mine tailings sluiced down into the headwaters of one of the Fraser River’s richest sockeye salmon migratory routes. In 2015, the 3-million-gallon Gold King Mine blowout in Colorado turned the Animas River orange with heavy metals-laced muck. During 2016, near Butte, Montana, throngs of geese landed in an abandoned sulfide mine, Berkeley Pit—a 50 billion-gallon toxic stew that is part of the nation’s largest Superfund site. At least 3,000 died.

Now history looks to repeat itself here in Minnesota with sulfide mines in the Superior National Forest adjacent to the Boundary Waters, one of the most popular wildernesses in North America. The Minnesota chapter of Backcountry Hunters & Anglers does not intend to let that happen. In this report, “100-Plus Reasons To Protect Northern Minnesota’s Waterways, Watersheds and Wildlife From Proposed Sulfide-Ore Mining,” we detail the inevitable impacts of sulfide mining on northern Minnesota’s clean waterways and watersheds, its rapidly growing outdoors recreation economy, and our unmatched public lands hunting and angling heritage.


Minnesota’s great public lands estate was handed down to us by the likes of the world’s greatest hunter-conservationist, Theodore Roosevelt. One of Roosevelt’s gifts to our nation was a greatly expanded National Forest System, which grew by some 150 million acres during his administration. Northern Minnesota’s 3.2-million-acre Superior National Forest was established by Roosevelt in 1909 and today encompasses the 1.1-million-acre Boundary Waters Canoe Area Wilderness.

We take the advice of Theodore Roosevelt, as stated in BHA’s Mission Statement: “Preserve large tracts of wilderness … for the exercise of the skill of the hunter, whether or not he is a man

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9 Bruce Finley. “230 Colorado mines are leaking heavy metals into state rivers.” The Denver Post: 8/16/15.
of means.”11 As explained by David Lien (a U.S. Air Force veteran): “We believe, as Medal of Honor recipient Theodore Roosevelt said: ‘Of all the questions which can come before this nation, short of the actual preservation of its existence in a great war, there is none which compares in importance with the great central task of leaving this land even a better land for our descendants than it is for us.”12

Formed around an Oregon campfire in 2004, BHA is the sportsmen’s voice for our nation’s wild public lands, waters and wildlife. With 15,000 members spread out across all 50 states and Canada, including 26 state-based chapters and two international chapters, in Alberta and British Columbia, BHA brings an authentic, informed, boots-on-the-ground voice to the conservation of public lands.13

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12 https://www.nps.gov/thro/learn/historyculture/theodore-roosevelt-quotes.htm
13 The mission of the Backcountry Hunters & Anglers (BHA), a national 501(c)3 organization with members in all 50 states and active chapters in twenty-six states and two Canadian Provinces (British Columbia and Alberta), is to ensure America’s outdoor heritage of hunting and fishing in a natural setting, through education and work on behalf of wild public lands and waters. Since its inception in 2004, BHA has worked on numerous projects throughout the country to conserve key backcountry habitat and waters through advocacy, education and boots-on-the-ground action.
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“Beyond was the wilderness, the unknown, where deer and moose, otter and beaver, wolf and lynx, as well as many smaller furbearers, battled for their right to existence … We must push on, farther from the scars of civilization, closer to the apex of this raw, timbered kingdom.” –Charles Ira Cook Jr., Trapping The Boundary Waters\textsuperscript{14}

“Why do I love being out here? Sometimes, I’m not even sure … I love watching wildlife and seeing stunning scenery. But ultimately, like catching fish and bagging game … Why do I come out here? Because I need to be out here. I search. I wonder. I feel immense gratitude. I am home.” –Bear Paulsen, The Boundary Waters Journal\textsuperscript{15}

“When I’m in the wilderness fishing or hunting, my mind is at peace. When out in canoe country, living the simple outdoor life, I am removed from the day-to-day global madness. Except for my wife and kids, nothing in my life—not education, sports, career, recognition, money, or religion—has come close to enriching my life like chasing after the wild. Nothing.” –Stuart Osthoff, The Boundary Waters Journal\textsuperscript{16}

“To me, deer hunting is about hunting camps, tracking snows, woodcraft, rifles and ravens. I am a still-hunter, a roamer, and a kindred spirit to the gray wolf that stalks the same woods. I like big, public spaces where you can breathe deep, stretch your legs and let the wild into your soul.” –Shawn Perich, Northern Wilds publisher/editor, Grand Marais

“Fish and game have sustained mankind since the beginning of time—not just in a physical sense, but also in a spiritual sense. Many look for spiritual fulfillment in a church. I need look no further than my next cast into the sacred waters of canoe country.” –Stuart Osthoff, The Boundary Waters Journal\textsuperscript{17}

“Final warning. Quit worrying so much. Sure enough, you might get killed out there. Being too careful is also dangerous. You only get one life. Your hand is designed to hold a paddle, not a TV remote. Your shoulders are a perfect fit for a Duluth Pack, not a sofa. Your eyeballs are yearning for pine studded horizons, not the Wall Street Journal … don’t wait too long, or fret too much, or postpone. Just drive to the end of the road, pull the canoe off the rack, and get lost in the Boundary Waters. That’s living.” –Rob Kesselring, The Boundary Waters Journal\textsuperscript{18}

Minnesota Backcountry Hunters & Anglers Report:
100-Plus Reasons To Protect Northern Minnesota’s Waterways, Watersheds and Wildlife From Proposed Sulfide-Ore Mining

Sulfide Mining Puts Jobs At Risk
-“Eveleth is the size of Ely, and has Thunderbird mine within the boundaries of the city. The last year the state of Minnesota reported gross sales revenues, Eveleth was $41 million a year. Ely is $106 million a year. Eveleth relies on mining. Ely hasn’t had a mine since 1967. Ely’s economy, which is based fundamentally on the wilderness and a healthy national forest, would be displaced and replaced with what Eveleth has. Yes, it would be bad for our economy.” –Ron Meador
-“The truth is that a copper-nickel mining project that is currently uneconomical and highly speculative is now even less likely to happen … This isn’t an attack on mining, nor on northern Minnesota jobs. Instead, it is a recognition that there are different means of building a healthy economy, and that, in this instance, the potential for harm to an incalculably valuable resource was too significant to overlook.” –Editorial Board, The (Ely) Timberjay
-“The potential damage is environmental and economic,” says Steve Piragis, owner of Piragis Northwoods Company, an outfitter in Ely. “It’s a huge threat to us. The process of sulfide-ore mining almost universally pollutes water and that kind of pollution just can’t happen in a place like the Boundary Waters. It’s equal in stature to the Grand Canyon, Yosemite, or any of the great parks.”
-“The natural landscape is what drives our economy. It’s what makes us different,” said Dave Seaton, owner of Hungry Jack Outfitters on the Gunflint Trail. “Clean water is more valuable than copper.”
-“Minnesotans have a strong and passionate commitment to the outdoors … Tourism is a $14.4 billion industry in Minnesota, generating over 17 percent of our sales tax … People travel to our state for a variety of reasons, but the number one area of interest is our great outdoors. Minnesota is known for its lakes, rivers, forest, and prairies and the outdoor recreation that it attracts.” –Governor Mark Dayton
-“Tourism is Minnesota’s fifth-largest industry … providing nearly 11 percent of total private-sector employment.” –Editorial Board, Duluth News Tribune
-“Independent estimates show that the outdoor recreation industry contributes approximately $646 billion to U.S. gross domestic product and supports 6.1 million jobs. In Minnesota, those estimates show the economic value of outdoor recreation generating $11.6 billion in consumer spending, $3.4 billion in wages and salaries, $815 million in state and local tax revenue, and

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20 Editorial Board. “Twin Metals decision: We’ve had enough hyperbole; let’s get to work building a diverse and stable economy.” The (Ely) Timberjay: 12/22/16.
24 Editorial Board. “Let’s better tap into global travel industry.” Duluth News Tribune: 10/6/11.
supporting 118,000 jobs.” –Mark Norquist, Minnesota Backcountry Hunters & Anglers board member

-A powerful tourism and recreation economy is created and sustained by the Boundary Waters. It supports 18,000 jobs and drives $850 million in sales in Northeastern Minnesota alone, providing a big boost to rural communities. Zooming out a bit, the BWCAW is a major driver of a statewide outdoor economy that generates $11.6 billion in consumer spending and 118,000 jobs, according to the Outdoor Industry Association.

-“The Boundary Waters is an integral part of an $850 million-dollar outdoor recreation economy in Northeastern Minnesota.” –Scott Hed, Sportsmen for the Boundary Waters

-“States that fund their natural resources are gaining a competitive advantage.” –Luther Propst, International Mountain Bicycling Association board member

-According to the U.S. Fish and Wildlife Service, Minnesota’s pristine lakes, rivers, and public lands support 48,000 private sector hunting-and fishing-related jobs.

-“We have 800,000 registered boats in the state. Hunting and fishing is a $2.4 billion dollar industry here. Visitors to our parks spend about $280 million in this state. And visitors to our trails add $2.6 billion dollars to our local economies.” –Tom Landwehr, DNR Commissioner

-“America’s public lands perform best when protected for recreation. In fact, the business of outdoor recreation, which relies heavily on public lands, supports more jobs (6.1 million) than oil, natural gas and mining combined. Americans spend more on outdoor recreation annually ($646 billion) than on electronics, pharmaceuticals or automobiles … From 2008 to 2011, during the height of the recession, the outdoor industry grew 5% every year.” –Yvon Chouinard, Patagonia founder

-“According to this year’s Outdoor Industry Association report on the outdoor-recreation economy, the outdoor-recreation industry generated a staggering $887 billion in consumer spending last year, up from $646 billion the year prior. Public lands, the report notes, are the backbone of the outdoor economy, which accounts not only for hunters and fishermen, but also bikers, boaters, hikers, kayakers, off-roaders, skiers, and other outdoor hobbyists.” –JR Sullivan, Field & Stream

-“Sustaining 7.6 million in just one industry—more than all the energy and coal mining jobs in the country. What is the outdoor industry? It’s all the businesses that enable Americans to go hunting, fishing, backpacking, camping, rafting, paddling, boating, birdwatching, and hiking … The latest report from the Outdoor Industry Association lays out the economic facts about the industry, which generates: 7.6 million jobs, $887 million in consumer spending, $65.3 billion in federal tax revenue, $59.2 billion in state and local taxes.” –Bob Marshall, Field & Stream

-“Jobs supported by the Boundary Waters are resilient and sustainable. Nationally, the outdoor economy actually grew during the Great Recession [and before], expanding by 5 percent

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25 Mark Norquist, Minnesota Chapter of Backcountry Hunters & Anglers board member and member of Sportsmen for the Boundary Waters. “Finally, we’ll know the true economic benefits of outdoor recreation.” Minneapolis-St. Paul (Minn.) Star Tribune: 12/12/16.
31 Yvon Chouinard, Patagonia founder. “If America’s public lands were a business, the GOP would be bungling the balance sheet.” Los Angeles Times: 3/9/17.
annually from 2005 through 2011. These jobs are safe from boom-and-bust volatility and the whims of multinational mining conglomerates (Chilean, in the case of Twin Metals) that have no ties to the community. Safe, that is, unless we plant an industrial sulfide mine right next door.” – Adam Fletcher, *Duluth News Tribune*.

-“The Boundary Waters is America’s most popular wilderness area, attracting, with Voyageurs National Park, more than 500,000 visitors from all over the world to our state every year who spend money at all kinds of local businesses employing hardworking Minnesotans.” – Adam Fletcher.

-“Does it make sense to risk the 18,000 tourism jobs in Northeastern Minnesota that rely on our forests and fisheries—in exchange for a few hundred, short-term, non-sustainable [sulfide] mining jobs that will leave us with a degraded landscape and the tatters of a ‘boom & bust’ economy?” – Paul Schurke.

-“Sulfide mining in that watershed will wreck thousands of outdoor sustainable jobs for short-term benefit.” – Erik Jensen, Minnesota Backcountry Hunters & Anglers co-chair.

-“Precious metals mining has a less-than-exemplary record. And the Boundary Waters are a cherished resource and the basis of a thriving tourism industry. If mining can’t be done in a way that doesn’t pollute, it shouldn’t be allowed.” – Editorial Board, *Duluth News Tribune*.

-“Hunting, fishing, guiding and outfitting are not boom-bust industries like mining, but perpetually sustainable activities and traditional economic strengths of our state.” – David A. Lien, Minnesota Backcountry Hunters & Anglers co-chair.

-“The construction jobs at the front end of this project will be temporary, and then we have been told that there will be a more set amount of steady jobs. Well what of the now steady jobs that will be lost in the area when the pollution takes over?” – Marlys Wisch, Lake County DFL Chair.

-Ely outfitter Jason Zabokrtsky said he had clients come from 44 states and nine countries in 2016 because they can catch big fish, drink water out of the lakes, watch stars at night and hear loons call. Those guests “don’t travel those distances to paddle in polluted waters or listen to mining activity,” he said.

-“In February … the results of a study … equated the Boundary Waters to an export for Northeastern Minnesota, because so much money comes in from outside the immediate region. And of those outside visitors—mostly from the Twin Cities, Wisconsin, Illinois and Michigan—more than half reported household incomes of $100,000 or more.” – John Myers, *Duluth News Tribune*.

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42 John Myers. “Study says Northland mining industry jobs are worth more than tourism.” *Duluth News Tribune*: 4/18/17.
“In Ely the wide-ranging benefits of the Boundary Waters are apparent. This place is built on the Boundary Waters and over the past 30 years has changed itself from a busted mining town to a bustling, sustainable economy based on this pristine place. The proposed mining aims to shatter all that has been built and will destroy the Wilderness we have all grown to love and cherish.” – Lukas Leaf, Sportsmen for the Boundary Waters

“Many retirees will move away and fewer tourists will come to Ely if a large chunk of the Superior National Forest is turned into a heavy-industry sulfide-rock mining zone. Ely-area real estate experts already are seeing property values decreasing in the White Iron, Farm, Garden, and Fall Lakes chain areas, even though the first proposed copper-nickel mining project in the BWCAW watershed (if permitted) is at least 10 years away.” – Elton Brown, Duluth News Tribune

Approximately 254,200 anglers in the Minnesota District 8 (i.e., U.S. Rep. Richard M. Nolan’s district) spent $308.7 million on fishing-related purchases.

The nearly 240,000 people who visit Voyageurs National Park each year enjoy kayaking, swimming, boating, and world-class fishing. These visitors contribute more than $19 million to the local economy.

Even small amounts of acid mine contamination leaking into the Rainy River Drainage Basin would impact Voyageurs’ ecosystem for decades and threaten its pristine waters and wildlife, world-class fishing, and the family-owned small businesses that serve park visitors. To date, not a single sulfide mining project has operated and closed without producing polluted drainage.

“Many threats have plagued the area over the years, road programs, power dams, airplane and fly-in resort developments, the acquisition of private land, logging and mining, and I realize now that had any of these issues been lost there would be no wilderness in the BWCA today.” – Sigurd F. Olson

As physicist Amory Lovins has written: “Economies are supposed to serve human ends, not the other way around. We forget at our peril that markets are a good servant, a bad master, and a worse religion.”

Jobs Tradeoff (A Bad Deal)

-In the words of Minnesota Backcountry Hunters & Anglers board member, Lukas Leaf: “Any pollution from the proposed copper mines would flow directly into the heart of the Boundary Waters in the form of sulfuric acid and ferric hydroxide … for more than 500 years. The small upside of a few temporary jobs is far outweighed by the potential damage that could occur. To date, we have more than 74,000 signatures on our petition to stop the mines.”

-“To me the biggest thing is this whole question about 500 years of pollution for 20 years of jobs.” – Paul Austin

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43 Lukas Leaf. “Driven to Protect the BWCA.” Sportsmen for the Boundary Waters: 12/29/16.
44 Elton Brown. “Mining study stacked against tourism.” Duluth News Tribune: 5/2/17.
"Imagine if a Walmart came in and said, ‘We’ll give you 350 jobs for a few years but then you’ll have to keep treating runoff from the store for 500 years.’ Would anyone agree to that?” –Betsy Daub

"PolyMet … is promising only 360 jobs … It would be cheaper for Minnesota taxpayers, better for our water quality and fairer to future generations if we the taxpayers simply paid 360 people on the Iron Range $80,000 each for 20 years.” –Don Arnosti, Minnesota Izaak Walton League conservation director

"Promises of good times and plentiful jobs need to be treated with circumspection. PolyMet has repeatedly scaled back its job predictions for its huge, open-pit sulfide mining project near Hoyt Lakes, Minn., and the company’s own figures suggest that only 90 of the promised 360 jobs, just 25 percent, will go to local communities.” –Louis V. Galdieri

"We would be trading a lot of jobs for a small number of [sulfide mining] jobs. This would be permanent damage for a very short-term gain … The nation is judicious and preserves its natural beauty for future generations. Americans don’t want to see an industrial wasteland … We want clean air and clean water. It should be something we bequeath.” –Theodore Roosevelt IV

“This document is complex but the choices that Minnesotans have are simple. Are we going to take on 500 years of water treatment and the cost that goes along with that … in exchange for just 20 years of [sulfide] mining?” –Aaron Klemz

"Proponents of the Twin Metals Mine acknowledge that it would be the first sulfide mine to operate within the watershed of a protected wilderness area. Does it make sense for the nation’s most polluting industry to operate up against the nation’s most heavily-visited and popular wilderness, the Boundary Waters?” –Paul Schurke

“Tourism has its own problems, to be sure. It’s no get rich quick scheme, but it’s dependable, unlike the boom and bust of mining, which guarantees an economy that lurches from crisis to crisis. Tourism is also sustainable for the long term, but only if we protect the assets that bring visitors here.” –Marshall Helmberger, *The (Ely) Timberjay*

"National Geographic says Ely ‘has all the classic hallmarks of a quaint outdoor town: log cabins, small-town diners, and ample wildlife trophies. Tucked on the edge of a lesser known but spectacular natural marvel in the U.S., Ely is within shouting distance of the Boundary Waters Canoe Area Wilderness, more than a million acres of wild terrain in Minnesota’s Superior National Forest. … Silence is one of the most profound parts of traveling through the Boundary Waters, where on most mornings the stillness is interrupted only by the echoes of loon calls rippling across the lakes.’” –Sam Cook, *Duluth News Tribune* hunting/outdoors columnist

-No analysis has been conducted to assess what impacts sulfide mining could have on our state budget. Just such an assessment was performed on the impact of coal mining on the West Virginia state budget. West Virginia analyzed both the tax revenues and the expenditures associated with this industry for fiscal year 2009. They discovered that the total impact to the West Virginia state budget was a net cost of $97.5 million.

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52 Don Arnosti, conservation director Minn. Izaak Walton League chapter. “Minnesota officials bowing to demands of mining companies.” *Duluth News Tribune:* 6/18/15.
53 Louis V. Galdieri. “Will big mining do better this time around?” *MinnPost.com:* 8/30/13.
“The coal mining industry is destroying West Virginia from the top down as it goes after dirty coal by mountain topping. The copper mining industry will destroy Minnesota from the bottom up as it degrades our ground water and surface water by mining in our lakes, rivers, and wetlands.” –Bob Tammen, retired Iron Range miner and Vietnam War veteran

“The natural resources of this state belong to all citizens. It is wrong that they are being given away at low cost to foreign corporations for the specious promise of jobs and short-term economic growth.” –William K. Dustin, Star Tribune

“We were also told that a large part of the Twin Metals operation will be owned by a corporation from Chile. We were all thrilled when the miners in Chile were rescued but what was not widely publicized was that many of those miners went home to communities without sewers or running water. Copper mining proponents should explain why a corporation from Chile is going to have any more respect for our communities than they have for their own.” –Bob Tammen, retired Iron Range miner and Vietnam War veteran

“Sulfide mining has a rap sheet of really bad violations, and we have to ensure our water resources aren’t harmed. I’ve personally been to the proposed mining site, and it’s rich in wetlands and has a lot of ground water moving through the area. That’s a big concern for us’ … ‘It’s being pitted as jobs versus the environment, but it’s jobs versus jobs,’ Morse said [i.e., Steve Morse, executive director of the Minnesota Environmental Partnership].” –Tori J. McCormick, Outdoor News

Regional (Mining) Economics

“The reason northern Minnesota’s unemployment is higher than that of Duluth or the Twin Cities is because our economy is less diverse, less responsive to the economic activity that fuels the larger recovery. Thus, doubling down on the single natural resource based industry isn’t a long term solution to that problem … Only diversification will bring the Iron Range’s economy in line with the state’s unemployment averages, which—it bears mentioning—are well below the national average. Minneapolis has the lowest unemployment rate among all metro areas in the United States.” –Aaron Brown Star Tribune

“In communities like Ely and Tower, there’s an effort to transition to a different economic model, based on the creation of high quality-of-life communities, with outstanding recreational resources, where people will want to visit, to live, and to create new and sustainable economic opportunities. At a minimum, it makes sense to give those efforts the chance to succeed.” –Editorial Board, The (Ely) Timberjay

“Communities that have depended for generations on the boom-and-bust cycle of mining will only grow sustainably when they diversify their economies. Those of us on the North Shore, who are mostly dependent upon tourism and recreation for our economies, only stand to lose if sulfide mining becomes a reality in Minnesota.” –Frank Moe, former Cook County Commissioner

“The real obstacle to progress for the region is the failure to imagine any future other than boom-and-bust mining.” –Becky Rom, Duluth News Tribune

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60 Bob Tammen. “Mining arguments fall flat one by one.” Timberjay: 11/5/10.
65 Editorial Board. “Twin Metals decision: We’ve had enough hyperbole; let’s get to work building a diverse and stable economy.” The (Ely) Timberjay: 12/22/16.
67 Becky Rom, national chairwoman of the Campaign to Save the Boundary Waters, lives in Ely. “No way: Boundary Waters too precious for this risk.” Duluth News Tribune: 7/9/16.
“In 1974 it took 35 workers to produce 1,000 tons of copper ore in a year. In 2003 seven workers could accomplish the same output. The result of modern equipment was fewer workers, higher unemployment in mining communities and few signs of prosperity.” – Editorial Board, *Duluth News Tribune*

“The jobs that [sulfide] mining companies offer will not bring prosperity to us. If mining companies’ promises were true, this would be the wealthiest part of the country.” – Jennifer Cummings

“We have hundreds of years of history with mining. It’s staring us in the face on the Iron Range or the Upper Peninsula or Butte, Montana. How is it that despite the high wages, and despite the incredible wealth pulled out of the ground, these areas are not prosperous?” – Thomas Power, Ph.D., Chairman Univ. of Montana Economics Dept.

“If someone said ‘name me a prosperous mining town,’ you’d be hard-pressed to come up with a name.” – Thomas Power, Ph.D., Chairman Univ. of Montana Economics Dept.

-Counties classified as dominated by mining by the U.S. Census Bureau show the highest rates of poverty of any industrial group. These poverty rates increased between 1989 and 1996.

-“Economic development is important, but sustainability is everything.” – Rob Pennicott

-“Check out some of the Wikipedia pages on copper mining. The page ‘Copper mining in the United States’ lists Arizona, Utah, New Mexico, Nevada, and Montana as the top copper producing states. A little research reveals that each one of those states has a lower per capita personal income than Minnesota. We can debate the reasons for the failure of copper mining to produce prosperity, but the numbers are what they are.” – Bob Tammen, retired Iron Range miner and Vietnam War veteran

-“I was just thinking that as I drive across the range in the summer I don’t see any signs of a booming economy … until I get to Ely. In Ely in the summer you would think that you’re at the Mall of America there are so many people. I visit Mountain Iron on a fairly regular basis—right on the edge of a major mine. All you see is a crumbling community.” – Judy Lundquist, Iron Range resident

-“If you want to use experience as your guide, google the Resource Curse. That’s the economic theory that a community that tries to build up its economy by selling off nonrenewable resources usually ends up with a lousy economy. The Mesabi Iron Range could be a poster child for the Resource Curse. The hundred mile long Range has at least 24 communities and six operating taconite plants. If mining created healthy communities, we should have one by now.” – Bob Tammen, retired Iron Range miner and Vietnam War veteran

-“The mining companies say we need these metals to maintain our lifestyles. The truth is that the low-grade, semi-processed metals of the Arrowhead region would be sent to Ontario for final smelting. Through PolyMet’s agreement with Glencore, these metals would then be sold on the world market. The United States would be competing with China to buy our own precious metals back.” – Elaine Palcich

-“Ely and other towns near the Boundary Waters, including Duluth, are thriving because

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69 John Myers. “St. Louis County Board votes (4-3) to support copper mining.” *Duluth News Tribune*: 12/21/11.
residents have embraced the economic potential of the outdoors.” –Adam Fletcher, *Duluth News Tribune*78

-“The Forest Service estimates the annual economic impact of the BWCA on the region at $100 million, and the annual economic impact of the Superior National Forest as a whole at $500 million. Ely benefits from our share of this spending, these jobs and the taxes paid.” –Bill Forsberg, past president Ely Chamber of Commerce79

-“This resurgence has made Ely the envy of communities throughout the North Country. And if the business upsurge doesn’t sufficiently underscore Ely’s vitality, a recent Ely *Timberjay* headline certainly does. On September 17, its front page trumpeted: ‘Ely School Enrollment Jumps Sharply.’ What community wouldn’t be immensely proud to share that kind of news!” –Paul Schurke, *The (Ely) Timberjay*80

-“Cook County is remote. Duluth, the nearest urban center, is two hours away via two-lane highway 61. Despite its remoteness, Cook County has some impressive statistics. Our county has one of the highest levels of education per capita in the state and an interesting cross-section of residents. Even after the bursting of the real estate bubble, our real estate prices are the highest in northern Minnesota. This isn’t due to a limited private land base, but because of the desirability of an area with an abundance of public land and waters. Those same natural resources are the backbone of our tourism- and timber-based economy.” –Shawn Perich, *Northern Wilds* publisher/editor, Grand Marais81

-“Economics—There is no doubt that opening new mines in our region will create direct jobs … But when you scratch below the surface, you quickly realize that the economic renaissance touted by many mining boosters is likely little more than wishful thinking. Just consider the numbers. Add up all the proposed copper mines together and they don’t add up to the 1,200 jobs that were lost on the East Range with the closure of LTV Mining back in 2001.” –Marshall Helmerberger, *The (Ely) Timberjay*82

-“As of 2015 … the taconite mining industry directly employs 3,363 workers, or barely a quarter of the 12,000 miners who worked in the region’s taconite industry in the late 1970s—and the region continues to produce about exactly the same amount of taconite as 40 years ago. That’s called hand-writing on the wall, and those who envision a resurgence of mining jobs in the region would do well to consider the history of automation and its impact on the region’s employment.” –Marshall Helmerberger, *The (Ely) Timberjay*83

-Between 1980 and 2000, aggregate earnings in mining-dependent counties grew at only half the rate of other American counties and per capita income grew about 25 percent slower.84

-“In Cook County, our public land holdings include part of the BWCAW, several state parks, a national monument, and timber-producing forests. They are crisscrossed with hiking, ski and snowmobile trails, not to mention the public access to dozens of fishing lakes. These lands and their many uses are directly linked to the tourism and timbering sectors of our county workforce. Public sector employment is bolstered by state and park jobs that pay good wages with benefits. While we live in a remote corner of the state … playing to the strength of our public lands base

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80 Paul Schurke. “Ely dying? The numbers tell a far different story (While sulfide mining proponents find it strategic to contend that Ely is dying, the numbers tell a different story. Small business is alive and growing in Ely).” *The (Ely) Timberjay*: 10/21/15.


has allowed us to build a … healthy economy.” –Shawn Perich, *Northern Wilds* publisher/editor, Grand Marais

-“We recognize and share the frustration that many feel about the seemingly endless struggles of the region’s economy. But we need to recognize that mining is, in part, responsible for those struggles. The boom and bust cycles inherent in mining make mining economies particularly unstable and lacking in diversity.” –Editorial Board, *The (Ely) Timberjay*

-“It’s disappointing to hear fellow steelworkers talk about doing it clean here so it’s not done dirty someplace else. They ignore the leaking tailings ponds, blighted waste piles, regional haze, and mesothelioma deaths of their fellow miners. They also seem to forget our fellow miners who lost half of their pensions and all of their health care because bankruptcy courts care more about creditors than employees.” –Bob Tammen, retired Iron Range miner and Vietnam War veteran

-“Mines bear no second crop.” –Michael Frome, *Battle for the Wilderness*

**Business Coalitions/Voices**

-“More than 200 private businesses, including nearly 60 from northern Minnesota, have joined forces to back permanent protection of the Boundary Waters Canoe Area Wilderness from sulfide-based mining of copper and nickel. The new group, known as the Boundary Waters Business Coalition, includes dozens of small rural businesses, like wilderness outfitters, recreational product manufacturers, outdoor gear retailers, and resorts.” –Marshall Helmberger, *The (Ely) Timberjay*

-“The Downstream Business Coalition, a group of business leaders who employ more than 1,000 people in the Duluth area, say (in an open letter to Minnesota Gov. Mark Dayton): ‘We believe the risk to the environment poses a long-term threat to the regional economy that far outweighs the short-term benefits.’ Gregg Benson, CEO of Loll Designs, adds: ‘There is no more downstream for waste. We are downstream. The days of simply throwing our waste into the river and saying it’s gone away should be over.’” –John Myers, *Duluth News Tribune*

-“Bent Paddle Brewing Co. … [is] in the Downstream Business Coalition. The coalition is a group of 89 businesses who oppose proposed copper mining projects in Northeastern Minnesota — such as the PolyMet project near Hoyt Lakes. They say the potential environmental damage from mine waste could do greater harm to the region’s economy than added mining jobs will help.” –Jamey Malcomb, *Duluth News Tribune*

-“A thriving Boundary Waters means a thriving bottom line,” said company [i.e., Ely Outfitting Company and Boundary Waters Guide Service] owner and operator Jason Zabokrtsky. “Putting America’s most toxic industry right next to America’s most visited wilderness would put shops like ours out of business.”


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86 Editorial Board. “Twin Metals decision: We’ve had enough hyperbole; let’s get to work building a diverse and stable economy.” *The (Ely) Timberjay*: 12/22/16.


91 Jamey Malcomb. “Six months after controversial Bent Paddle beer vote, little change in Silver Bay.” *Duluth News Tribune*: 9/24/16.

Service, French River Muzzleloaders, Full Curl Brand, GreenHead Productions, Hungry Jack Outfitters, Modern Carnivore, Northstar Canoes, Piragis Northwoods Company, Rapala, Sawbill Canoe Outfitters, the Upper Midwest Council of the International Federation of Fly Fishers, and many more, have expressed opposition to sulfide mines near the BWCAW.  

“This is Rapala’s 80th year in business. We have 100 employees in Minnesota and close to 3,000 worldwide. We support many local companies in televisions shows, advertising, packaging, tournaments, and pro-staff. We distribute 13 brands to virtually everywhere in the world. We’re able to showcase northern Minnesota to people all over the country and the world. These massive lakes and rivers, as well as Voyageurs National Park and Rainy River Drainage Basin, are all a crucial part of our business, and currently directly in the path of pollution from proposed sulfide-ore copper mining.” –Greg Wollner, Executive Vice President, Rapala, in Minnetonka


-Jason Zabokrtsky, Founder and Head Guide, Ely Outfitting Company & Boundary Waters Guide Service, says: “Copper mining will kill my job … And I represent thousands more people across the state whose jobs are dependent on clean water, including dozens of people who work for me guiding trips and staffing our outfitting business in Ely.”

-“Ely has not been a mining town since 1967. By any measure, Ely is one of the most prosperous communities in northeastern Minnesota … I would like to see a resolution … in support of the BWCAW and the federal government which is protecting this area and is the reason why Ely is so prosperous. If we allow sulfide-ore mining … it will kill the goose that has laid this golden egg. People will not come here. People won’t retire here. And the hundreds of thousands of tourists that come here, won’t return.” –Reid Carron, The (Ely) Timberjay

-“The company’s mining waste would be treated and discharged into a tributary of the St. Louis River, which flows south to the Twin Ports where it enters Lake Superior … Benson [Gregg Benson, CEO of Loll Designs] said the region needs to move away from dependence on mining and that new mines will ‘only stop the momentum our economy already has. People are moving here because of the water and the woods, not because of mining.’” –John Myers, Duluth News Tribune

-“The BWCAW’s massive expanse of pristine lakes and streams is an angler’s paradise, which is why I am so concerned about sulfide-ore mining within that watershed. These mines have a terrible track record for leaching heavy metals and acid mine drainage into waters, harming fisheries. In fact, the company behind the expired leases is even now facing environmental

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94 Gregg Wollner, Executive Vice President, Rapala, in Minnetonka and former American Sportfishing Association board chairman. “Boundary Waters demand protection, now and in future.” St. Cloud Times: 1/7/17.
95 Marshall Helmberger. “Businesses join forces to protect the wilderness: Coalition supports ban on sulfide mining near the Boundary Waters.” The (Ely) Timberjay: 3/6/17.
charges in its home country of Chile over a copper mine it owns there.” –Greg Wollner, Executive Vice President, Rapala, in Minnetonka

-“Laura Mullen, a Bent Paddle co-founder and the brewery’s vice president of community and outreach, said Bent Paddle’s No. 1 concern about copper mining is the purity of water downstream from any potential project, including PolyMet. She said the company chose Duluth as the location of its brewery because of the ‘clean, amazing water of Lake Superior.’ ‘This is … a clean water issue for us … we depend on it for our product and our brand.’” –Jamey Malcomb, Duluth News Tribune

Recent Sulfide Mine Disasters & Deception
-“The impacts of acid mine drainage (AMD) on watersheds was clearly demonstrated during Aug. 2015, when the Animas River in Colorado turned orange from the Gold King Mine spill.” –Matthew Brown, et al., Associated Press

-“The 3-million-gallon Gold King Mine blowout in Colorado turned the Animas River orange with heavy metals-laced muck,” explains Denver Post reporter Bruce Finley.

-“You’re never going to walk away from these things,” said Bruce Stover, director of Colorado’s inactive mine reclamation program. ‘Things happen inside mines that are unpredictable … You cannot just cork these up so it all goes away. That’s not going to happen.’” –Bruce Finley, The Denver Post

-“Past mining operations left Colorado with 7,300 abandoned projects that still leak toxic waste into soil and water … ‘There’s no such thing as no-impact mining. You can’t promise that,’ said Jim Burnell, senior geologist in Colorado’s Department of Natural Resources.” –Bruce Finley, The Denver Post

-“The definition of a mine, said Mark Twain, is a hole in the ground owned by liars. And this month the industry’s biggest lie—that it can be trusted with our water—is once again on display as another mining disaster has spilled millions of gallons of toxic mining waste and chemicals into our streams, rivers and lakes.” –Joel Reynolds, Duluth News Tribune

-Near Butte, Montana, throngs of geese landed in an abandoned sulfide mine, Berkeley Pit—a 50 billion-gallon toxic stew that is part of the nation’s largest Superfund site. At least 3,000 died. And now, poisonous water from the pit is putting Butte’s groundwater at risk. Former Montana state lawmaker Fritz Daily said (in the Jan. 23 Great Falls Tribune): “I’m talking about the environmental future of this town, I’m talking about the economic future of this town, and I’m talking about the social future of this town.”

-In the 1990s, the Summitville mine in Colorado released a toxic brew including cyanide and acid mine drainage, killing all fish and wildlife in a 17 mile stretch of the Alamosa River. Cleanup costs at the now-Superfund site exceed $150 million.

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99 Gregg Wollner, Executive Vice President, Rapala, in Minnetonka and former American Sportfishing Association board chairman. “Boundary Waters demand protection, now and in future.” St. Cloud Times: 1/7/17.

100 Jamey Malcomb. “Silver Bay City Council votes to remove Bent Paddle beer from municipal liquor store.” Duluth News Tribune: 3/11/16.


102 Bruce Finley. “230 Colorado mines are leaking heavy metals into state rivers.” The Denver Post: 8/16/15.

103 Bruce Finley. “Draining old mines foul Denver’s watershed every day with contaminants.” The Denver Post: 9/16/15.

104 Bruce Finley. “Colorado part of ‘new gold rush’ for rare-earth metals.” The Denver Post: 1/16/11.


107 Dr. Mike Dombeck, UW System Fellow & Professor of Global Conservation, College of Natural Resources, University of Wisconsin-Stevens Point. “Testimony Submitted To The Senate Committee On Energy and Natural Resources On Reform of the Mining Law of 1872,” 1/24/08.
“At the Mount Polley copper and gold mine in central British Columbia, a major breach in an earthen dam unleashed a torrent of contaminated mine tailings … which swept into nearby salmon streams and lakes. The dam was designed by Knight Piesold … Just last year, the company stated in a memo to the EPA: ‘Modern dam design technologies are based on proven scientific/engineering principles, and there is no basis for asserting that they will not stand the test of time.’”

“On August 5, 2014, 6.6 billion gallons of toxic mine tailings sluiced down into the headwaters of one of the Fraser River’s richest sockeye salmon migratory routes. Mt. Polley Mine, until that point, was held up as the industry standard—a shining example of how large-scale mining can coexist with the environment. Instead it proved the opposing standard, that no large-scale mine in history has operated without tremendous impact on sustainable natural resources and the world around it. Now history looks to repeat itself with a suite of mines in one of the last untouched wildernesses in North America.” –Morgan Sparks, Backcountry Journal

“The Mount Polley mine at one time was hailed as the ‘gold standard’ of sulfide mines, where sulfide mining was done right without impacts to the environment. They were wrong.”

“The regulatory process doesn’t grasp that they’re essentially putting large, toxic … time bombs up in the headwaters of some of the most productive salmon rivers on earth,’ said Chris Zimmer, Alaska campaign director for Rivers Without Borders. ‘For this to actually work, everything has to go right at these mines forever.’

“Failure of the Mount Polley tailings pond dam in British Columbia validates fears Alaska fishermen have regarding Canada’s proposed development of large-scale hardrock mineral mines near transboundary rivers with Alaska.” –Alaska U.S. Sen. Mark Begich, in a letter to Secretary of State John Kerry, asking that the 1909 Boundary Waters Treaty be invoked to prevent future downstream effects from accidents such as the one at the Mount Polley mine in British Columbia.

“The Gilt Edge Mine near Lead in the Black Hills … is a federal Superfund cleanup site that has so far cost taxpayers more than $100 million. The former gold and silver mine in South Dakota was abandoned in 1999. According to the U.S. Environmental Protection Agency, the most recent mine operator, Brohm Mining Co., left behind about 150 million gallons of acidic, heavy-metal-laden water in three open pits and millions of cubic yards of acid-generating, sulfide-bearing waste rock.” –Bill Hanna, Herald-Review

-Bruce Johnson, a former Minnesota Pollution Control Agency (MPCA) worker and Department of Natural Resource (DNR) field chemist who worked on mining issues, said: “These guys are going to make multi-millions of dollars. We don’t want to be left with a bunch of mining pits full of polluted water that even ducks won’t land on.”

“As Outdoor News columnist Steve Carney observed, some of our surface water is already so polluted it will kill a dog that takes a drink. You would think the lawmakers in this Land of 10,000 Lakes would be so alarmed by such an observation that they would pull out all the stops to make clean water a priority. Surely, that’s what they would do if they truly served the public.

110 Friends of the Boundary Waters Wilderness (FBWW). “We cannot afford this scene in Minnesota.” FBWW: 2/9/15.
Instead, the Legislature intends to double down on water pollution.” –Shawn Perich, *Outdoor News*

-Geophysicist Dave Chambers works with the Center for Science in Public Participation in Bozeman, Mont., a nonprofit organization that gives technical advice about mining to regulatory agencies, businesses and environmental groups. “In virtually every type of mine, over 99 percent of everything you mine becomes waste and is left right on the site as a waste pile of some sort,” Chambers said. “When metals from the piles get into the water, they can be toxic to aquatic organisms at very low concentrations.” Acid mine drainage has not been a problem for taconite, which usually is contained in different ore that contains little or no sulfides.

-“An exception in Minnesota is the Dunka mine, a taconite mine near Babbitt that was covered with sulfide rock. LTV Steel Mining Co. operated the Dunka mine from 1964 to 1994 and stockpiled more than 20 million tons of waste rock. For decades the piles—80 to 100 feet high and extending for almost a mile—have been leaching copper, nickel and other metals into wetlands and streams that flow into Birch Lake not far from the Boundary Waters. An average of 300,000 to 500,000 gallons runs off them each month, according to MPCA documents … the runoff had violated state water standards nearly 300 times since 2005. The MPCA … negotiated a $58,000 fine and cleanup agreement … with Cliffs Erie, which now owns the site.” –Tom Meersman, *Star Tribune*

“The Flambeau Mine, located on the Flambeau River near Ladysmith, Wisconsin. This mine produced copper, gold, and silver for four years in the 1990s … The mine’s parent company, London-based Rio Tinto, wrote in a news release in 2013, ‘Testing shows conclusively that ground water quality surrounding the site is as good as it was before mining.’ But the Flambeau Mine’s own data shows otherwise, according to Dr. Robert Moran, a hydrologist and geologist whose resume includes consulting work for nonprofits, mining companies, and government agencies worldwide … He saw that far from being pollution-free, concentrations of toxic elements such as zinc, arsenic, and sulfate in the surrounding groundwater greatly exceed pre-mining levels, as well as standards of survival for many aquatic lifeforms …”

“Part of the problem is a lot of this data just isn’t there,” he says … ‘As far as we can tell, these are filtered samples. But the fish and other organisms, they don’t drink filtered water.’ Flambeau would also pick and choose which tests to include in their routine reports, Moran says. Arsenic, uranium, and other ‘controversial’ metals are largely left out of water quality updates. The methodology of Flambeau’s reports to the public were flawed to begin with, so it’s nearly impossible to tell through a historical review just how bad the situation really is, Moran says. ‘In short, the Flambeau Mine is the poster child for a severely flawed permitting and oversight process.’”

-“The closed [Flambeau] mine is polluting surface water and ground water with copper, zinc, and manganese in amounts well in excess of legal limits. The mining company’s own reports to the Wisconsin DNR show that water in a monitoring well only 125 feet from the Flambeau River has

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118 Susan Du. “Flambeau Mine, heralded as a model, is looking more like a toxic playground.” *CityPages*: 4/18/17.
119 Susan Du. “Flambeau Mine, heralded as a model, is looking more like a toxic playground.” *CityPages*: 4/18/17.
average manganese levels that are 14 times greater than the permit standard.” –Reid Carron, The Ely Echo

-“At the request of the Wisconsin DNR in 2011, the U.S. Environmental Protection Agency issued an ‘impaired-water’ designation for a tributary of the Flambeau River that flows across the mine site. The mine site has polluted the stream with copper and zinc at levels that harm aquatic life. Finally, the Flambeau Mine, besides operating for only four years, was a tiny open pit that covered only 38 acres. Antofagasta controls tens of thousands of acres.” –Reid Carron, The Ely Echo

Poisoned Waterways & Watersheds
-As explained by Minnesota Backcountry Hunters & Anglers (BHA) board member, Will Jenkins: “While iron ore mines have a long history in Minnesota, sulfide-ore copper mines are very different … Every mine in the world has caused … contamination of its surrounding area. Sulfuric acid and heavy metals leech into the soil and contaminate waterways.”
-“Never—not once, not anywhere in the world—has sulfide mining been done without damaging lakes and streams. The sulfide mines proposed for Minnesota are at the head of our continent’s 3 key watersheds: Great Lakes, Mississippi and Hudson Bay. Does it make sense for industry with a 100% water-pollution track record to operate in North America’s most water-intensive environment?” –Paul Schurke

-“Copper-nickel mining, always risky for humans and their environment, is least dangerous in arid settings. But northern Minnesota, the site of three major watersheds, is one of the richest sources of freshwater in the world.” –Barton Sutter, Star Tribune

-Twin Metals, owned by Antofagasta of Chile, and other mining companies are pressuring state and federal officials to allow sulfide mining in northern Minnesota’s Superior National Forest region. This type of mining pollutes land and waters with sulfuric acid, heavy metals and other chemicals (known collectively as “acid mine drainage,” or AMD) and is often called the most toxic industry in America.

-This type of mining is the most toxic industry in America, as explained by National Wildlife Federation president, Collin O’Mara, and Ted Roosevelt IV, great-grandson of President Theodore Roosevelt (in the Rochester Post-Bulletin). In fact, they say, every single sulfide-ore mining operation in the nation has, at some point, discharged acid mine drainage (AMD) pollution into adjacent waters or lands, damaging wildlife, waterways, wetlands, forests and local communities.

-In 1998, the state of Wisconsin enacted a “mining moratorium” law. The law requires a company applying for a mining permit to prove that a similar mine has operated for 10 years and been closed for 10 years without the pollution of groundwater or surface water—the mine could be located anywhere in the U.S. or Canada. Since that time, no new sulfide mines have been proposed in Wisconsin.

122 Will Jenkins. “Help protect one of the most pristine freshwater fisheries in the country.” The Will To Hunt: 2/26/16.
125 Collin O’Mara, president and CEO of National Wildlife Federation, and Ted Roosevelt IV, the great-great grandson of President Theodore Roosevelt, is a conservationist and sportsman. “Call of the wilderness seeks to save the Boundary Waters.” Rochester (Minn.) Post-Bulletin: 4/6/16.
126 Collin O’Mara, president and CEO of National Wildlife Federation, and Ted Roosevelt IV, the great-great grandson of President Theodore Roosevelt, a conservationist and sportsman. “Call of the wilderness seeks to save the Boundary Waters.” Rochester (Minn.) Post-Bulletin: 4/6/16.
To date, mining companies are unable to point to a sulfide mine that has ever been developed, operated and closed without producing polluted acid mine drainage (AMD) from its operations. Yet studies show that the companies and state agencies reviewing mine plans consistently predict no pollution will occur during the planning and permitting process.\(^{129}\)

A study of 14 modern copper mines in the U.S., representing 89 percent of U.S. copper production, found that all of them contaminated nearby waters.\(^{130}\)

Hard-rock mines have a long history of environmental damage … sulfide rock mining of various kinds have polluted 10,000 miles of rivers and streams … Between 1998 and 2007, the federal government spent at least $2.6 billion to clean up polluted hard-rock mines, some of which are now Superfund sites.” –Josephine Marcotty, *Star Tribune*\(^{131}\)

The EPA calls the mining of sulfide ore America’s most toxic industry.” –Conor Mihell, *Sierra*\(^{132}\)

“A place that’s half land and half water is the absolute worst location for a sulfide mine, because such mines are essentially waste-management industries. The Twin Metals deposit, for example, contains barely 0.5 percent copper. The rest, sulfide ore waste, would be stored in piles mounding across an area the size of 100 football fields.” –Conor Mihell, *Sierra*\(^{133}\)

“Considering copper mines close to Ely, the Twin Metals presentation didn’t include information from their preliminary documents that predicts they’ll need more than three square miles of tailings ponds less than fifteen miles from Ely. Being there are several companies exploring in the area, officials should give us an estimate of how many square miles of tailings ponds will be constructed in wetlands of the Superior National Forest.” –Bob Tammen, retired Iron Range miner and Vietnam War veteran\(^{134}\)

“The parent company of Twin Metals, Antofagasta, was recently fined $23 million for environmental issues in their own country of Chile.” –Will Jenkins, Minnesota Backcountry Hunters & Anglers board member\(^{135}\)

A study of 25 sulfide mines by consulting groups Kuipers & Associates and Buka Environmental found that in only 4 percent of project plans was water quality impact correctly predicted.\(^{136}\) And an analysis of environmental impact statements for hardrock mines showed that 100 percent predicted compliance with water quality standards before operations began.\(^{137}\) Yet the EPA estimated in 2004 that there are 156 hard rock mining Superfund sites with potential cleanup costs ranging up to $54 billion.\(^{138}\)

“Open-pit metals mining, it turns out, is the most energy-intensive and wasteful mining in the world. For instance, PolyMet estimates the ore reserve at its proposed NorthMet mine in Northeastern Minnesota … [is] .074 copper equivalent. Copper mining is the most inefficient big dig. It takes 1 billion tons of material to recover 1.6 tons of copper. That means an immense amount of waste and water threats. Considering that the General Accounting Office reports the federal government spent at least $2.6 billion to remediate hard rock mine sites from 1998 to

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\(^{130}\) Becky Rom, national chairwoman of the Campaign to Save the Boundary Waters, lives in Ely. “No way: Boundary Waters too precious for this risk.” *Duluth News Tribune:* 7/9/16.


\(^{132}\) Conor Mihell. “Protecting The Boundary Waters Canoe Area: America’s most popular federal wilderness is menaced by a giant copper-and-nickel mine.” *Sierra:* 10/19/16.

\(^{133}\) Conor Mihell. “Protecting The Boundary Waters Canoe Area: America’s most popular federal wilderness is menaced by a giant copper-and-nickel mine.” *Sierra:* 10/19/16.

\(^{134}\) Bob Tammen. “Mining arguments fall flat one by one.” *Timberjay:* 11/2/10.


2007 … metal mining poses interesting liability questions for Minnesota.” –Winona LaDuke, *Duluth News Tribune*  
-“This ore deposit sits only three miles away from the wilderness area, upstream in the watershed. Mining representatives claim that they have a 5-billion-ton ore body. Being that it’s less than 1 percent copper, I think we’re reasonable in requesting to know where the 99 percent waste is going to go.” –Bob Tammen, retired Iron Range miner and Vietnam War veteran  
-“When it comes to dealing with a half-millennia of water pollution in a part of the state that includes the Boundary Waters Canoe Area in the Superior National Forest, wild-rice waters (actively used by the state’s Chippewa tribes) and rivers that drain into Lake Superior, Minnesotans are being asked to take a leap of faith.” –Jeff Guntzel  
-“Much of the environmental debate surrounding the proposed PolyMet sulfide mining project revolves around whether PolyMet’s plans will contain the waste and whether the company has adequate bankruptcy-proof financial assurance to cover the cleanup cost if acid mine drainage occurs. This is not a small issue, because PolyMet is located within the Partridge River watershed, a headwater tributary of the St. Louis River, which enters Lake Superior at Duluth.” –Shawn Perich, *Northern Wilds* publisher/editor, Grand Marais  
-“PolyMet Mining Corp., which is one-third owned by the international conglomerate Glencore, is applying for permits to build an open-pit mine near Hoyt Lakes that would drain into the St. Louis River and Lake Superior. Kennecott mining continues to increase its exploration footprint around a copper deposit near Tamarack that would drain into the Mississippi and St. Croix rivers.” –Josephine Marcotty, *Star Tribune*  
-Although PolyMet has said the toxic runoff from its proposed mining operation near Babbitt won’t impact the BWCAW, the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) ran their water model and determined that PolyMet’s pollution will indeed flow into the BWCAW watershed; the DNR still has not run the model, relying solely on PolyMet’s paid consultant.  
-“The EPA said: ‘All waste rock at the [PolyMet] site is acid generating, and acidic water … will mobilize metals and sulfates, leaching them into groundwater and surface water … The project will result in unacceptable long-term water quality impacts … increasing mercury loadings into the Lake Superior watershed.’” –Erik Jensen, Minnesota Backcountry Hunters & Anglers co-chair  
-“The Supplemental Draft Environmental Impact Statement shows PolyMet plans to use an antiquated 1950s LTV pit for copper mine waste rock. The pit originally was built on top of three streams to promote drainage of iron tailings.” –Liz Siverston, *Duluth News Tribune*  
-According to the EPA: “The proposed [PolyMet] approaches to manage acid generation are untested or unproven at the proposed scale,” and, “This project may have substantial and unacceptable adverse impacts on aquatic resources of national importance … specifically, to the

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139 Winona LaDuke, White Earth Reservation (she has written six books on environmental and Native American issues). “Native view: On metal mining, Minnesota can learn from ... El Salvador?” *Duluth News Tribune*: 4/28/17.  
Lake Superior Watershed and the Great Lakes Basin.” – Erik Jensen, Minnesota Backcountry Hunters & Anglers co-chair

- “By far, however, the greatest concerns … relate to acid mine drainage. What if … acid-laden waters … escapes by leakage or breakage? The cost to the overall natural system … would be potentially devastating … any reasonable person must ask what happens as the mine expands and eventually closes … Barring major spills, even small leakages of toxic material could have serious effects … Who can guarantee that man-made infrastructure is unbreakable, unbreachable, or unsinkable?” – Shane Mahoney, *Sports Afield*

- “The St. Louis River flows 179 miles through a 3,634 square mile watershed into Duluth Harbor. It forms one of the largest freshwater estuaries in the world, and is important habitat for fish, wildlife and waterfowl. Over 230 species of birds depend on the estuary for a stopover place during migration.”

- “The lower St. Louis River … Expensive efforts are underway to … restore habitat and rehabilitate the river estuary. Progress has already been made. Giant, prehistoric sturgeon have returned to spawn for the first time in decades. Walleye, musky, pike, smallmouth bass and crappie continue to thrive in the river estuary. Wild rice restoration … are among the 60 specific projects either completed, underway or planned for the St. Louis River estuary-Duluth harbor area.” – Outdoor Writers Association of America

- “Our world is tending ever more away from the responsible stewardship we have known for more than two generations … Any promises Twin Metals might make in pursuit of the permission to mine will have to be enforced in a world increasingly unlikely to demand that businesses keep their promises. It is naïve to think otherwise.” – David Zentner, past national president of the Izaak Walton League of America

- “One company, Twin Metals Minnesota, a subsidiary of Chilean conglomerate Antofagasta, has invested more than $250 million to develop the largest underground mine in Minnesota’s history … independent hydrological studies show that acid mine drainage from the proposed mining site could seep into the nearby Kawishiwi River, flow past 30 resorts, lodges, and camps on the Birch and White Iron lakes, 1,200 miles through the western Boundary Waters, Voyageurs National Park, and into Canada.” – Stephanie Pearson, *Outside*

- “In 2010, such mines accounted for 41 percent of all toxins released into the environment. ‘It is not a question of whether, but when, a leak will occur that will have major impacts on the water quality of the Boundary Waters Canoe Area,’ says Tom Myers, a hydrogeologist and water resources consultant.” – Conor Mihell, *Sierra*

- The lakes and rivers of Voyageurs National Park are now at risk from proposed sulfide mining projects in its watershed. Independent scientific studies show that sulfide-ore copper mining on lands adjacent to rivers and lakes that flow into the Boundary Waters and into Voyageurs

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151 David Zentner, of Duluth (Minn.), is past national president of the Izaak Walton League of America and was co-chairman of the Clean Water, Land and Legacy Amendment campaign. He’s also a supporter of the Campaign to Save the Boundary Waters (savetheboundarywaters.org). “Boundary Waters’ legacy cannot be put at risk.” *Duluth News Tribune*: 3/22/16.

152 Stephanie Pearson. “How to Live in the Wilderness for a Whole Year.” *Outside*: 9/21/16.

153 Conor Mihell. “Protecting The Boundary Waters Canoe Area: America’s most popular federal wilderness is menaced by a giant copper-and-nickel mine.” *Sierra*: 10/19/16.
National Park and Ontario’s Quetico Provincial Park would seriously harm the Wilderness and the Parks as well as the lands and waters on which mining activity occurs.154

-Voyageurs National Park encompasses more than 84,000 acres of water. These waters are home to loons, snapping turtles and wood frogs, and 53 species of fish, including lake sturgeon, walleye, and smallmouth bass. These native species rely on clean water to thrive.155

-“On March 29, the El Salvadoran legislature voted to prohibit all mining for gold and other metals, making El Salvador the first country in the world to impose a nationwide ban on metal mining. Declaring that El Salvador’s fragile environment could not sustain metal mining, legislators across the political spectrum approved the ban. It even had broad support across society, particularly from the influential Roman Catholic Church, as the New York Times reported. ‘Today in El Salvador, water won …,’ Johnny Wright Sol, an El Salvadoran legislator from the center-right Arena party, wrote, according to the Times. ‘Mining is an industry whose primary and first victim is water,’ Andres McKinley, a hydrologist and mining specialist for Central American University in El Salvador, said.” –Winona LaDuke, Duluth News Tribune156

**Sportsmen’s Voices/Wildlife At Risk**

-Land Tawney, president/CEO of Backcountry Hunters & Anglers, said: “The Boundary Waters Canoe Area Wilderness is one of the most iconic fishing and hunting destinations in America. The recent decision by the Forest Service—to block mining leases that would endanger the Boundary Waters watershed–deserves praise not only from Backcountry Hunters & Anglers and BHA’s Minnesota chapter in particular, but from sportsmen and women from all across the country.”157

-Darrell Spencer, a sportsman and Duluth resident, said: “If allowed, sulfide-ore copper mining development in the watershed of the BWCAW would inevitably pollute surrounding lakes’ groundwater and downstream waters in the BWCAW. The development of a mine would taint the quality and reputation of the BWCAW as a hunting and fishing paradise.”158

-“The Boundary Waters Wilderness is a world-class fishing, hunting and all-around outdoors destination,” said Scott Hed, outreach director for Sportsmen for the Boundary Waters. “Its water is some of the cleanest on this earth and the Wilderness is a major driver in the economy of Northern Minnesota. The Forest Service’s announcement [i.e., not renewing Twin Metals mining leases] recognizes the significance of the Boundary Waters … and acknowledges the serious dangers posed by sulfide-ore copper mining.”159

-During 2016, more than 74,000 people and 200 sportsmen’s organizations, businesses, and conservation groups sent letters expressing opposition to renewing the expired Twin Metals leases.160

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- The Minnesota Department of Natural Resources Division of Fish and Wildlife said that the project (PolyMet’s propose sulfide mine) will definitely affect fish and wildlife, noting that “this increase in risk to water quality and fish habitat is a significant impact of the project.”

- “There is a difference between copper and iron mining. When iron mines close and fill with water, rainbow trout can be planted to feed on aquatic invertebrates and be caught by anglers, giving Minnesota another nice, deep, clearwater lake. With copper mining, the poisonous brew … prohibits the presence of fish, bugs and plants. Birds landing on the water can be referred to as ‘dead ducks.’ I mean, no life.” –Charles Bruns, Duluth News Tribune.

- “I’m an outdoorsman, and I’m concerned about water quality,” said Jim Juntti of Barnum, at a PolyMet public hearing in Duluth. “I asked them what the plan is if something happens and that (tailings basin) opens up and things go bad … They didn’t really have an answer for me.”

- “I’ve found some awesome sheds and buck sign on many canoe trips. I know where I could hunt big bucks out there who live and die without ever seeing a human being … There are areas with more deer and areas with more top-end deer, but I contend the BWCAW is the highest-quality public land wilderness whitetail hunting in America.” –Stu Osthoff, Boundary Waters Journal publisher.

- In the Winter 2015 Boundary Waters Journal, Stu Osthoff said: “Nothing created by man has come close to captivating me like a big whitetail buck. Such is the power of these deer … hunting in the BWCAW and surrounding Superior National Forest simply embraces the wilderness experience at the very highest level.”

- Sportsmen’s groups nationwide have been closely involved in the opposition to the Twin Metals leases. Land Tawney, president and CEO of Backcountry Hunters & Anglers, said that the protection of the Boundary Waters “has turned into a national priority, not just for Backcountry Hunters & Anglers, but for all sportsmen across the country.”

- “Boundary Waters is a national treasure for sportsmen and outdoor enthusiasts—and serves as an economic engine for the communities in northeastern Minnesota,” said John Tomke, chair of the Wildlife and Hunting Heritage Conservation Council. “It is America’s most visited Wilderness Area, primarily because of the pristine habitat that supports a wide diversity of wildlife … and outdoor experiences from hunting and fishing to canoeing and camping. Tourism in this region supports thousands of jobs and hundreds of millions of dollars of economic activity annually.”

- In the words of Minnesota Backcountry Hunters & Angler’s co-chair, Erik Jensen: “From the wetlands of the prairie pothole region to the Boundary Waters, Minnesota is known for its great aquatic resources, which provide bountiful hunting and fishing opportunities, from waterfowl to abundant walleye, northern pike, bass, trout, salmon and panfish. The Minnesota chapter of BHA thanks Gov. Dayton for protecting these sporting opportunities in the Boundary Waters.”

- Sportsmen for the Boundary Waters outreach director, Scott Hed, says: “The BWCA is the most-visited Wilderness in the country, with over 250,000 people enjoying its clean waters and healthy forests annually. If you’ve been there, you know how special it is. If you’ve not been
there, what are you waiting for? In the meantime, help protect the BWCA. There are some places that are simply too valuable to risk."168

-In his day, Theodore Roosevelt spoke out vigorously against industries that, in his words, were out to “skin” the American landscape. Such is the case with foreign-owned sulfide mining conglomerates here in Minnesota. As Minnesota BHA co-chair, Erik Jensen, said: ‘It would be foolish to put the Boundary Waters’ future in the hands of a foreign company using hard-rock mining methods that have left irreparable harm wherever they have been tried.’169

-During November 2016, at the Berkeley Pit in Montana—a former sulfide mine filled with acidic, metal-laden water, now federally managed as a Superfund site—some 10,000 geese set down in the pit, resulting in thousands of dead birds. Butte residents found carcasses in a Walmart parking lot, on roadsides and outside the city, The Washington Post reported.170

-“The estimated 3,000 to 4,000 snow geese that perished in December 2016 in the Berkeley Pit’s toxic water died of both heavy metals and sulfuric acid, according to U.S. Fish and Wildlife Service spokesperson Ryan Moehring. The necropsy report [said] … lesions in the stomach, intestines, and throats were severe and ’suggestive of chemical tissue damage induced by a corrosive substance.’ Copper and zinc, both of which were found inside the birds’ stomachs, could have been the cause or a contributing factor in the lesions, according to the report. Other metals, including manganese, were found in the organs of the geese.” —Susan Dunlap, Montana Standard171

-“Montana Resources manager of environmental affairs Mark Thompson said the report’s findings that the metals and acid in the pit caused the bird mortalities came as no surprise. ‘There was never any suspicion the birds died from some other cause besides pit water,’ Thompson said. The companies responsible for the pit, Montana Resources and Atlantic Richfield Co., could be fined as much as $5,000 per bird … One bird the lab tested was shot in Dillon … died of the gunshot wound … That bird showed inflammation and bacteria internally in addition to internal damage caused by metals and sulfuric acid.” —Susan Dunlap, Montana Standard172

-Duluth sportsman Darrell Spencer says: “Deer hunting in the BWCAW is difficult, but the challenge of chasing big bucks in the wilderness is worth the effort. We need to protect the lakes and rivers that make up the Boundary Waters. I am glad Gov. Mark Dayton agrees that the Boundary Waters is too precious to risk.”173

-“Much of the canoe country’s waters are still being discovered for fly fishing … From my experience in my favorite and not to be named Boundary Waters lake, there are smallmouth and northern pike and even walleye on tight lines right through the summer and into fall … The best smallmouth bass fishing is in June but it remains way above average all summer long. Northern pike are ubiquitous, far ranging and voracious in every month of the summer. Walleyes are a bit easier to catch earlier in the summer but we have also found them in 3 feet of water in August.” —Steve Piragis, owner of Piragis Northwoods Company in Ely174

-The Minnesota BHA chapter has been engaged in this battle to protect the Boundary Waters watershed from proposed sulfide mines for going on a decade now, and chapter co-chair, David Lien (a U.S. Air Force veteran), says: “A storm is brewing. Get ready. Become a BHA member! We may not have billions, but we have something better … boots-on-the-ground. If foreign-

168 http://www.sportsmenfortheboundarywaters.org/updates
owned sulfide mining conglomerates want a war, Minnesota’s sportsmen and women will bring it!!"175

-“Making sure the Boundary Waters remains intact for future generations is why I founded Veterans for the Boundary Waters. We are made up of veterans who have found a way to heal, connect and live again with the help of the Boundary Waters. We are committed to making sure that it remains intact as place of healing and peace for all us. Join me in protecting this national treasure.” –Erik Packard, veteran of two tours in Iraq and Minnesota BHA board member176

-“The lease [withdrawal] decision drew praise from hunting-angling groups, including the Backcountry Hunters & Anglers. ‘The Boundary Waters are one of the nation’s most iconic landscapes,’ said BHA President and CEO Land Tawney. ‘To even consider defiling this pristine watershed is ludicrous. We thank the Obama administration for taking bold action in support of the Boundary Waters, and we look forward to working with the Trump administration to conserve this irreplaceable region in perpetuity.’” –Editor(s), Outdoor News177

-In the rocky swamps and timber of the Arrowhead region of Minnesota, deer hunting is a passion of many, like Duluth hunter Darrell Spencer, who says (about hunting the Boundary Waters): “The general consensus is, it might be the last place you can hunt white-tailed deer on their own terms.”178

-“[The] … decision [to withdraw mining leases] drew praise from groups such as Backcountry Hunters & Anglers, whose members have consistently advocated for the region’s conservation. ‘The Boundary Waters in northern Minnesota are a special place for people who love to hunt and fish,’ said Mark Norquist, a … board member of BHA’s Minnesota chapter. ‘Science has shown the copper mining in the watershed would inflict devastating harm on this priceless wilderness. Minnesotans and sportsmen welcome the federal government’s decision to deny the request for renewal of expired leases by Twin Metals.’” –Editor(s), Outdoor News179

-Boundary Waters Journal publisher Stu Osthoff adds: “A 150 class BWCAW buck that survives five tough winters and timber wolves on his trail nearly 24/7, is as tough and savvy as any big game animal on earth.”180 “I call this real hunting,” Stu said.181 And Stu got it right when he wrote: “Deer hunting is not really about venison in the freezer or antlers on the wall. It is about a timeless and priceless love of the wild.”182

-“Nonferrous mining … is new to Minnesota. It brings with it unfamiliar risks. Nonferrous minerals are found in sulfur-bearing rocks. When sulfide waste rock is exposed to water and air, sulfuric acid is produced … When sulfuric acid and heavy metals get into our surface waters, fish and plant life die. Waterfowl and other wildlife populations follow.” –Rebecca Otto, Minn. State Auditor183

-“The Boundary Waters, along with the Superior National Forest, contains 20 percent of all fresh water in the entire national forest system. Sulfide-ore copper mining is completely new to water-rich northern Minnesota. The millions of tons of waste rock that would be left behind near the mine site would be a toxic ticking time bomb. This is the perennial problem of copper mines

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176 Erik Packard, a veteran of two tours in Iraq and founder of Veterans for the Boundary Waters. “BWCA saved; now let’s save it.” St. Cloud (Minn.) Times: 5/14/16.
177 Editor(s). “Sportsmen celebrate as Feds deny mineral lease renewals for mine near Boundary Waters.” Outdoor News: 12/16/16.
179 Editor(s). “Sportsmen celebrate as Feds deny mineral lease renewals for mine near Boundary Waters.” Outdoor News: 12/16/16.
around the world, even in places like Arizona—and Ely gets 10 times as much precipitation.” – Steve Piragis, owner of Piragis Northwoods Company in Ely

“At the heart of the Upper Midwest’s unique cultural heritage is a love of freshwater fish and wild game. The threat posed by sulfide-ore coppers mines to clean, protected wilderness areas like the Boundary Waters Canoe Area is real, and it puts that heritage at risk … The Boundary Waters is a vast wilderness of lakes, streams, and forests where anglers and hunters can test their skills. This wild landscape is home to moose, deer, bear, grouse, walleye, bass, lake trout and pike. Even conservative models of pollution show that waterways would carry contaminants from these mines into the Wilderness. A single mine in this watershed could pollute the areas where you fish or hunt for at least 500 years.” – Sportsmen for the Boundary Waters

“With access to more than 5,000 lakes, streams and rivers, Ely is pretty much ground-zero for fishing … Fish for walleye, northern pike, smallmouth bass, lake trout, rainbow trout and pan fish.” – Outdoor Writers Association of America

“Only three states had higher angling expenditures in 2011: Florida, New York, and Michigan. The 2011 survey ranks Minnesota second in the U.S. for angling participation. Thirty-two percent of residents age 16 or older have a fishing license. Only Alaska, at 40 percent, has a higher participation rate.” – Rob Drieslein, Outdoor News

“We have more than 1.5 million licensed anglers in a state where it’s fair to call fishing the Great Minnesota Pastime. Only in Minnesota can you put in a canoe and continue that trip from Ely, paddling the Voyageurs’ canoe route through the border waters wilderness, and land at Grand Portage looking out to the largest freshwater lake in the world. Fantastic fishing for walleyes and smallmouth will keep you busy on the inland waters, and the lake trout is king on Superior. Fishing for brook trout and steelhead along the North Shore will also bring you through beautiful towns with shopping opportunities like Grand Marais, Two Harbors and Duluth.” – Tom Landwehr, DNR Commissioner

“The iconic Gunflint Trail to the beautiful Boundary Waters Canoe Area begins in Grand Marais, Minnesota. The city of Grand Marais … has been named the ‘coolest town in America’ by Budget Travel and ‘Best weekend destination’ by Lake Superior Magazine.” – Outdoor Writers Association of America

“The theologian, Martin Luther, was alleged to have said, ‘Human reason is like a drunken man on horseback. Prop him up on one side, and he falls off the other.’ Luther’s words ring true when it comes to the people who want to build massive sulfide mines in northern Minnesota’s Superior National Forest, in the Boundary Waters and St. Louis River/Lake Superior watersheds.” – David A. Lien, Minnesota Backcountry Hunters & Anglers co-chair

“During last fall’s election, we saw gains for the Republican Party in Minnesota and throughout the country. Now you see Republicans taking dead aim at conservation nationwide … Conservation is in the crosshairs of the political right … Hunters can let politicians destroy the things that keeps us going from season to season or we can let them know that our … natural

184 Steve Piragis, Piragis Northwoods Co., in Ely, Minnesota. “Falling in love with the Boundary Waters.” Save the Boundary Waters: 12/14/16.
185 Sportsmen for the Boundary Waters. “Take Action Now: Comment to Protect the BWCA from Copper Mining.” Heavy Table: 2/28/17.
189 Tom Landwehr, Minn. DNR Commissioner. “Get outdoors and experience what only Minnesota offers.” Grand Rapids (Minn.) Herald- Review: 5/6/14.
resources are important to us for our quality of life and we want them protected. Hunting seasons close. Conservation season is open 365 days a year.” –Dean Flicker, *Outdoor News*191

“`One does not have to be an extreme environmentalist to wonder about the wisdom of building this mine in this particular place … if we do not draw the line here, then when and where? What place will be deemed more sensitive, more critical to wildlife, to fish and to people, and this state and nation?’” –Shane Mahoney, *Sports Afield*192

“It would have been a good-sized congregation on a Sunday morning, but the 250 who gathered at Concordia Lutheran Church … came … about the proposed PolyMet copper mine north of Hoyt Lakes. I sat there thinking about my future grandchildren and their children, wondering what kind of world we will leave for them. It is impossible not to play out, in one’s mind, a worst-case scenario: streams devoid of fish, rivers and lakes devoid of wild rice, wells full of undrinkable water … What this decision comes down to, of course, is trust. Do we trust companies like PolyMet to do the right thing? … If things go badly years down the road, what are the chances that a mining company can be held financially responsible? Someday, our grandchildren may learn the answers to those questions.” –Sam Cook, *Duluth News Tribune*

“The Boundary Waters changed my life. After I returned from combat in Iraq, my father, who introduced me to the Boundary Waters, was losing his battle with cancer. I could not find my place ‘back in the world.’ I began to struggle with PTSD, alcohol, depression and suicide. On the insistence of my wife and friends, I went back to Boundary Waters for the first time in several years. That trip started a healing process … I [also] learned about the dangers facing the Boundary Waters from sulfide-ore copper mines proposed in the watershed …”194

“To share my story and connect with other veterans … I founded Veterans for the Boundary Waters … The Boundary Waters and places like it are one of the reasons I pledged my life to this country. The Boundary Waters is a rare commodity in this world, and without a doubt it is a place that is worth protecting.” –Erik Packard, Minnesota Backcountry Hunters & Anglers board member195

“Minnesotans clearly value the outdoors. In 2008, when times were tough across the country, the state’s residents overwhelmingly passed the Clean Water, Land and Legacy constitutional amendment. That’s right. Minnesotans voted to increase the state sales tax on themselves to raise nearly $300 million a year for fish and wildlife habitat, parks, trails and the arts. This is who we are. We love the outdoors. We bust our behinds all week, and then we get outside. We hunt deer and birds and turkeys. We catch walleyes and sunfish and trout. We snowmobile and ride four-wheelers and pedal mountain bikes. We camp and hike and look at the stars … Minnesota’s outdoor experience defines our way of life. It is our passion, our renewal, our inspiration. From frogs to forests, from grouse to geese, from crappies to campgrounds, the outdoor life runs through us like a river.” –Sam Cook, *Duluth News Tribune*


196 Sam Cook. “Legislature showing little inclination to increase outdoors funding.” *Duluth News Tribune*: 4/30/17.
Financial Assurance Fallacies

-“Minnesota has existed for 155 years. The U.S. for 237 years. The notion that [cleanup] instruments will be available 500 years from now is not believable.” –Northern Minnesota tribal cooperating agencies

-“Taxpayers across the country are already on the hook for $50 billion of cleanup costs from closed, polluting sulfide mining operations. In most cases, companies declared bankruptcy or simply walked away from mines after closure, leaving taxpayers on the hook. In Colorado, the company that operated the Summitville mine declared bankruptcy, leaving taxpayers with a $230 million cleanup bill. That’s nearly three years of funding for the Duluth public schools.” –Ian Kimmer, Duluth News Tribune

-“Financial assurance is about making sure the company doesn’t privatize the profits for investors and then socialize the costs to taxpayers. We have to make sure that doesn’t happen to Minnesota as it has in so many other copper mines around the world.” –Paula Maccabee, Duluth News Tribune

-“It’s pretty obvious that modern mining corporations are scavenger industries who have perfected their techniques of stripping assets and leaving behind cleanup liabilities and unfunded pensions. Until our legislators are willing to pass adequate financial assurance and ‘prove it first’ legislation, we are left with the option of vigorously opposing the permitting of any new mining operations.” –Bob Tammen, retired Iron Range miner and Vietnam War veteran

-PolyMet still has a long way to go … It still has to go through an environmental review and get 20 state and federal permits. So far, the company doesn’t even have cash flow projections, which would reveal how much money it has to build with, and what kind of damage deposit it could cover. Spokesman Bruce Richardson recently told The Timberjay, an Ely newspaper, that PolyMet won’t provide that information until after it gets permits.

-“The first copper-nickel mine proposed for Minnesota hasn’t yet adequately addressed concerns about taxpayer liability. Despite calls by the U.S. Environmental Protection Agency to include details of financial assurance in the … PolyMet Environmental Impact Statement, the company and its contractor haven’t done so. Failure to consider the costs of cleanup at the beginning of the environmental review process risks putting Minnesota in the same position as other states stuck with long-term cleanup costs. Since PolyMet is proposing a mine that would require 500 years of treatment of polluted water after closure, at a cost of billions of dollars, this is a real concern.” –Ian Kimmer, Duluth News Tribune

-“What would we think of a renter who refused to pay a damage deposit? Rather gives away their bad intentions. It would make me think the mining companies have a business model that depends on externalizing the costs … it would show the companies think that in order to make money, they need to make someone else pay for the pollution.” –Eric Ferguson

-“You don’t need to look very hard to find similar sulfide mining operations nationwide that have failed to meet ‘no pollution’ promises, resulting in horrific environmental damage and costing millions of taxpayer dollars … The signs are obvious—and growing: Permanently

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201 Susan Du. “Environmentalists are getting suspicious of Klobuchar, Franken on protecting Boundary Waters.” CityPages: 1/26/17.
protect the Boundary Waters from the dangers of heavy-metal mining.” –Editorial Board, St. Cloud Times.

-“This kind of mining has not gone well anywhere it’s been done. For me, as a statewide elected official and as a state auditor, I want to make sure that we’re thinking about the financial burden it could place on the next generations. We have to have that in mind.” –State Auditor Rebecca Otto

-“A Mesabi East graduate … said he had been a [PolyMet] supporter, but changed his mind. He said he had lived near the Embarrass River and fears future pollution because of the sulfide content in the rock to be mined … ‘It’s going to fall on taxpayers. We need to stop this in its tracks’ … Another opponent said, ‘the stupidity of it all is breathtaking.’” –Bill Hanna, Herald-Review

-“In PolyMet’s case, given that it was formed by several companies just for one project, I can’t help thinking that the company will dissolve when the mining is done and oops, none of the former owners can be held liable as the successor company.” –Eric Ferguson

-“Computer projections in the environmental impact statement say that either active or passive water treatment will be needed for … up to 500 years … a Minnesota law … prohibits mines requiring perpetual treatment after closing. The statute, passed in the 1990s, requires mines to be reclaimed and maintenance-free … ‘That law was written to prevent exactly what they are intending to do,’ said Betsy Daub, policy director for Friends of the Boundary Waters Canoe Area Wilderness.” –Josephine Marcotty, Star Tribune

-“A proposed copper-nickel mine in northeast Minnesota would generate water pollution for up to 500 years and require billions of dollars in long-term cleanup costs, state regulators have concluded … How taxpayers would be protected from any long-term cleanup costs remains an open question.” –Josephine Marcotty, Star Tribune

-“No corporation is likely to exist for hundreds of years … and accurately predicting the costs of water treatment for centuries is difficult if not impossible … The Zortman-Landusky gold mine in Montana … is an example. When it went bankrupt in 1999, the operator turned off its water treatment plant and left.” –Josephine Marcotty, Star Tribune

-“Proponents of the PolyMet Mine concede that it will generate pollution for at least 500 years and will require perpetual treatment. Does it make sense for Minnesota to permit a 20-year mine that will threaten our … lakes and streams for 500 years?” –Paul Schurke

-“Financial risk. According to the Environmental Impact Statement document, it will take an estimated $200 million to ‘reclaim’ the mine after it is played out. That doesn’t include another $3.5 million to $6 million annually, in 2013 dollars, to operate the treatment plant. Critics of the project say that will leave someone—the mining company, the federal government’s Superfund program, or Minnesota taxpayers—holding a bill running, potentially, into the billions of dollars over hundreds of years.” –John Myers, Duluth News Tribune

-“The threat of acidic mine runoff, along with sulfate and heavy metal water pollution, is too great … the project could require water treatment for centuries after the mine is played out.

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204 Editorial Board. “Signs point to no mining near BWCAW.” St. Cloud Times (Minn.): 5/2/16.
spoiling local waters and leaving taxpayers to pay for the cleanup. ‘The lack of common sense and the stupidity of it all is breathtaking … that we could even think of fouling our water forever for 20 years’ of mining jobs,’ said Jane Whitledge of Duluth.”213

-Larry Ronning of Two Harbors said he’s concerned that there won’t be enough money available to handle any major breakdown in the man-made systems designed to keep polluted water from running off the site. “Mining is a part of this area. But not this kind of mining,” he said. “We’re talking forever here. How can they calculate how much that’s going to cost? Who’s going to be around to pay?”214

-“It appears water treatment and monitoring are going to be necessary for at least 200 years at the mine site and 500 years at the plant site after the projected 20 years of mining are completed … That creates a potential cleanup liability [of] … more than $3 billion.” –Paul Austin, et al.215

-“The bottom line is there is no amount or type of financial assurance to match the financial risk and uncertainty of sulfide mining. And even with the best possible financial assurance measures in place, the PolyMet project still poses a significant long-term risk to some of Minnesota’s most precious waters: the St. Louis River watershed and Lake Superior.” –Carin Skoog, Duluth News Tribune216

-“We do have a fiduciary responsibility to future generations.” -Rep. John Benson (DFL), Minnetonka217

-“British Columbian taxpayers will be on the hook for $40 million to clean up the worst mining spill in Canadian history and the company responsible has once again escaped criminal charges after a private prosecution was dismissed this week. In August 2014 the 40-metre-high tailings dam at the Mount Polley mine near Williams Lake collapsed, sending 25-million cubic metres of contaminated sludge and mine waste sweeping into lakes and rivers—but no charges have been laid and no fines have been levied against Imperial Metals, the parent company of Mount Polley Mining Corp.” –Judith Lavoie218

-“The only thing corporations care about, the only thing they have the legal duty to promote, is their bottom line.” –U.S. Senator Al Franken219

“Minnesota state Rep. Andrew Falk went on the attack when a PolyMet Mining Corp. official appeared in a House committee … he was upset that PolyMet Vice President Brad Moore would not answer questions about the topic of the meeting: whether the company is providing enough financial assurance that any environmental problems would be fixed once the proposed Northeastern Minnesota copper-nickel mine closes …”220

“Falk said he is inclined to agree with people who say PolyMet is only a shell company that does not have enough assets to cover remedial environmental costs. Holding a well-bookmarked PolyMet annual report, Falk asked: ‘What is the true value of assets?’ Moore responded: ‘The details of the finances, I do not know.’ … that did not sit well with Falk: ‘I was hoping that an executive vice president would know something about the financials.’”221

215 Paul Austin, Paul Danicic and Scott Strand. “Company can’t even answer basis questions about environmental impacts.” Duluth News Tribune: 2/24/14.
“Falk said that he looked through the annual report for cash PolyMet has available to put up as assurance there would be enough money for environment work when the mine closes. All he found was less than $10 million, a fraction of what even the company says needs to be available … Moore refused to give … documents supporting PolyMet’s initial estimate of how much money may be needed.”

–Don Davis, Duluth News Tribune

Technological Solution Fantasies

-“Mining companies have been saying, ‘We have the best, newest technology’ for generations. But something always happens.” –Willie Rahr, The New York Times

-“It’s tempting to buy into the false optimism, the smoke and mirrors rhetoric, claiming that these sulfide mines can be operated without any risk to northern Minnesota’s sky-blue waterways and watersheds, but when you turn over even a few rocks, the promised prospects enter the realm of fantasy.” –David A. Lien, Minnesota Backcountry Hunters & Angles co-chair

-“The problem is that the [sulfide] mining industry has such a terrible track record—especially the big foreign conglomerates. What are the odds that after 150 years of failures, this time they are finally going to get it right? That’s just not realistic. And especially in places like … the Boundary Waters.” –Scott Hed, Sportsmen for the Boundary Waters

-“We need to be clear about the mining proponents’ facile assurances. They argue they can mine safely and we should trust them. That simply does not wash. Sulfide-ore mining has never been conducted anywhere safely and without environmental damage—usually severe and usually long-term, as in forever.” –David Zentner, past national president of the Izaak Walton League of America

-“Sulfide mining in water-intensive areas has never been done without contaminating surrounding waters. Reverse osmosis is not ‘new’ technology. It has been around for decades. If it could solve water contamination caused by metal mining it would have done so by now. Reverse osmosis cannot even solve water pollution at Minnesota’s taconite mines.” –C.A. Arneson

-“Sulfide-ore mining has never been done safely in North America. Northeastern Minnesota is a water-rich environment that would increase substantially the environmental damage found in every other sulfide-ore mine project.” –Brad Sagen, Fall Lake resident

-“All mining companies say they will have no discharge and will keep recycling. However, it does not work that way. Minntac is a closed system. The only solution to its contaminated wastewater is to contaminate surrounding waters. Reverse osmosis was tested for Mesabi Nugget and it was found to be too costly or it did not work. The company could not meet standards and obtained a variance to violate Minnesota’s water-quality standards.” –C.A. Arneson

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226 David Zentner, of Duluth (Minn.), is past national president of the Izaak Walton League of America and was co-chairman of the Clean Water, Land and Legacy Amendment campaign. He’s also a supporter of the Campaign to Save the Boundary Waters (savetheboundarywaters.org). “Boundary Waters’ legacy cannot be put at risk.” Duluth News Tribune: 3/22/16.


Rob Davis, of the Twin Cities, is a businessman and Eagle Scout. “I appreciate jobs. I appreciate the value of wilderness. There is a near certainty of millions of dollars of cleanup. This is not a good deal for Minnesota,” he said.\(^{230}\)

“The process to treat the water is complex, requiring multiple systems to work successfully, and a mine in Michigan using a state-of-the-art reverse osmosis plant … has already had more than 40 permit violations for not meeting water quality standards.” – Renee Richardson, *Brainerd Daily Dispatch*\(^{231}\)

“What happens when safeguards fail, as they always have, when a sulfide-ore mine sends toxic water pouring into the wilderness and the entire watershed, as it is sure to do? We are left to rely on the mining company’s promises. Treatment of toxic mine waste is perpetual; human guarantors of responsibility are not.” – David Zentner, past national president of the Izaak Walton League of America\(^{232}\)

“We all use water. Water is more valuable than metals—without water all the metals in our spacecraft could not save us. Yet water is what the SDEIS [Supplemental Draft EIS] fails to adequately address. It is proposing to use our waters as a sulfide-mining sewer, instead of unequivocally protecting Minnesota’s most valuable asset.” – C.A. Arneson\(^{233}\)

“Acid mine drainage is what results from bringing sulfur-bearing minerals into contact with the atmosphere. Sulfuric acid is created … There are 1,500-year-old Roman-era hard rock mines in Europe that are still producing acid mine drainage pollution today.” – William E. Smith, *Bemidji Pioneer*\(^{234}\)

“There will be un-captured seepage” from the PolyMet site, said Paula Maccabee. “Our only question is, how much? How polluted? And how soon?”\(^{235}\)

“PolyMet’s own projections acknowledge that 16 million gallons of water will leave the site untreated every year.” – Javier Serna, *Outdoor News*\(^{236}\)

The possibility that PolyMet’s polluted water would flow northward into the Boundary Waters watershed has not been sufficiently addressed by the DNR. The Great Lakes Indian Fish and Wildlife Commission [GLIFWC] ran the complicated water model and determined that PolyMet’s pollution will indeed flow into the BWCAW watershed; the DNR still has not run the model, relying solely on PolyMet’s consultant.\(^{237}\)

“Federal and state regulators have conceded that potentially polluted water from the proposed PolyMet copper-nickel mine could flow toward the Boundary Waters Canoe Area Wilderness instead of away from it … It was long assumed that water from PolyMet’s planned mine would flow south toward the St. Louis River and Lake Superior, and away from the BWCAW.” – Editor(s), *Outdoor News*\(^{238}\)

“The mining industry’s Flambeau Mine myth … in Wisconsin … operated from 1993 to 1997 … The closed mine is polluting surface water and ground water with copper, zinc, and manganese in amounts well in excess of legal limits. The mining company’s own reports to the Wisconsin DNR show that water in a monitoring well only 125 feet from the Flambeau River has


\(^{231}\) Renee Richardson. “Getting the details behind copper-nickel mining in Minnesota.” *Brainerd Daily Dispatch*: 1/30/14.

\(^{232}\) David Zentner, of Duluth (Minn.), is past national president of the Izaak Walton League of America and was co-chairman of the Clean Water, Land and Legacy Amendment campaign. He’s also a supporter of the Campaign to Save the Boundary Waters (savetheboundarywaters.org). “Boundary Waters’ legacy cannot be put at risk.” *Duluth News Tribune*: 3/22/16.

\(^{233}\) C.A. Arneson. “How are we going to treat our Minnesota waters?” *MinnPost.com*: 1/29/14.


average manganese levels that are 14 times greater than the permit standard … At the request of the Wisconsin DNR in 2011, the U.S. Environmental Protection Agency issued an “impaired-water” designation for a tributary of the Flambeau River that flows across the mine site. The mine site has polluted the stream with copper and zinc at levels that harm aquatic life. Finally, the Flambeau Mine, besides operating for only four years, was a tiny open pit that covered only 38 acres. Antofagasta controls tens of thousands of acres.” –Reid Caron, *The Ely Echo*

“…At the request of the Wisconsin DNR in 2011, the U.S. Environmental Protection Agency issued an “impaired-water” designation for a tributary of the Flambeau River that flows across the mine site. The mine site has polluted the stream with copper and zinc at levels that harm aquatic life. Finally, the Flambeau Mine, besides operating for only four years, was a tiny open pit that covered only 38 acres. Antofagasta controls tens of thousands of acres.” –Reid Caron, *The Ely Echo*

“A new study shows that the Flambeau sulfide-ore copper mine located on the Flambeau River near Ladysmith, Wisconsin, has left major pollution in the waters surrounding the mine. The Flambeau Mine has been heralded by the mining industry as a model for environmentally safe copper mining practices. However, recent independent analysis determined the mine actually left high concentrations of toxic elements such as zinc, arsenic and sulfate in the surrounding groundwater. This report is further reason for the need to permanently protect the Boundary Waters from sulfide-ore copper mining.” –Samantha Chadwick

“What we have is a multinational mining company with a board of directors that is thousands of miles away … doing almost exactly what every mining company in … history has done, and saying the whole time that they are not like any other mining company.” –Hal Herring, *Trout*

“The fiduciary responsibility of corporations is to maximize profit for the investor at any expense—including the long-term degradation of natural systems upon which we all depend.” –George Wuerthner

“A mining company lies to people about the impact of mining? I have never heard of that before. I’m shocked.” –Jeff Maffatt, *Trout*  

**Governmental (Local/State/National) Voices**

“The … Stony River Township board of supervisors voted unanimously for the resolution, which calls for the state of Minnesota to enact a metallic sulfide mining moratorium law, and, until such a moratorium is enacted, to deny all requests for permits to prospect or develop metallic sulfide mines. … the resolution ‘recognized the community’s character as a rural lake district, not a mining district, and acknowledged the extreme negative impacts … sulfide ore mines could bring to the township.’ ‘We’ve got clean water and a healthy forest, and we went to keep it that way,’ Art Ernest, Stony River Township supervisor, said.”

“The Stony River Township Board, which governs over 500 sparsely populated square miles of forest southeast of Ely, voted … to ask the state and federal governments for a moratorium on copper-nickel mining and prospecting in their area … the Eagles Nest Township Board, which represents an area west of Ely … issued its own call for a moratorium on mining and prospecting.” –Steve Karnowski, *Crookston Daily Times*

“Pequaywan Township north of Duluth has become the third township in the region to pass a resolution asking for a go-slow-or-don’t-go approach to copper mining … The resolution asks for a state ‘prove it first’ law that shows copper mines can be operated and closed without environmental degradation somewhere else before they are allowed to operate here … The

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244 Forum Newspapers. “Stony River puts hold on mining.” *Lake County News Chronicle*: 9/22/11.
resolution also calls for stronger requirements for upfront money to cover costs of environmental cleanup should any mine close.” –John Myers, *Duluth News Tribune* 246

-“At the DFL caucuses … resolutions banning sulfide mining near the BWCA were passed overwhelmingly in Ely, Morse township, Fall Lake township, Stony River township, as well as Gunflint and Tofte areas near Grand Marais.” –Keith Vandervort, *The (Ely) Timberjay* 247

-The St. Louis County DFL unit in Duluth passed a resolution raising concerns over proposed copper mining in Northeastern Minnesota. The St. Louis County Organizing Unit 3 executive committee passed a resolution “addressing the substantial risks posed by sulfide mine proposals,” saying the state’s first copper mine “would leave long-term water pollution behind that could stick Minnesota taxpayers with the costs for cleanup and monitoring.” The committee “finds that sulfide-ore mining … has unacceptable environmental impacts and should not be allowed in the sulfur-bearing Duluth Complex from the Boundary Waters to Lake Superior.” 248

-“Three Duluth city councilors have thrown their names behind an effort calling for administrative law judge hearings on state permits for the proposed PolyMet copper mine project. Councilors Gary Anderson, Joel Sipress and Em Westerlund held a media event Tuesday to announce their support for … evidentiary hearings … ‘The citizens of Duluth I’ve talked to want to make sure that this is a very public and transparent process, and this is a good step to do that,’ Anderson said. ‘It’s a good step for the city of Duluth because we are downstream of this project and because we rely on natural resources for so much of our economy.’” –John Myers, *Duluth News Tribune* 249

-“Copper-nickel mining … Truth is, such mining has proved environmentally harmful, even disastrous, wherever in the world it’s been done.” –Ron Way, former assistant Minnesota Pollution Control Agency (MPCA) commissioner 250

-“Jess Richards works for the Division of Land and Minerals for the Minnesota DNR, the agency responsible for oversight of mining in the state … even after a mine has been reclaimed (following completion of a mining operation), what’s done cannot be redone. ‘It’s like a bandage on an ugly wound,’ he says.” –Tim Spielman, *Outdoor News* 251

-John Linc Stine, Minnesota Pollution Control Agency commissioner (quoted in the *Duluth News Tribune*), adds: “What we do on the land is reflected in the water.” 252

-In the words of Dave Frederickson, Minnesota Department of Agricultural Commissioner (in the *Outdoor News*): “In Minnesota, water is our currency, and we can’t walk away from that. We are a headwaters state and we have an ethical and moral obligation to care for that water.” 253

-“We got great legislators who are here who have gotten the message already. There’s too many who have not, so talk to them, get your friends and neighbors to talk to them and tell them, we want clean water, we want action, and we want it now.” –Gov. Mark Dayton, State Capitol-April 2017 254

-“Cleanup related to nonferrous mines is costly and difficult to predict. State regulators estimate that the PolyMet Mining site in northern Minnesota, for example, will require water treatment for up to 500 years. How do we calculate such financial risk 500 years into the future? How do we


252 John Myers. “DFL unit’s resolution opposes copper mining.” *Duluth News Tribune*: 1/14/14.


account for changes brought on by technology, the environment or the economy over such a long
time period?‖  –Rebecca Otto, Minn. State Auditor

-“State Rep. Alice Hausman introduced a bill that would have tightened regulations on all those
mining companies that are lining up to extract copper, nickel and other metals from untapped
reserves in northeastern Minnesota. As the St. Paul DFLer tells it, the goal was simple: Protect
Minnesotans from the sort of disastrous economic and environmental outcomes associated with
nonferrous metal mining operations in other states and parts of the globe.”  –Mike Mosedale,
Politics in Minnesota

-“The U.S. Government Accountability Office, an independent nonpartisan agency that reports to
Congress, says that financial assurances for nonferrous mining have been inadequate to cover
cleanup costs. According to one GAO report, ‘after cleanup became mandatory, many parties
responsible for hard rock mining sites have been liquidated through bankruptcy or otherwise
dissolved, [leaving the cost of cleanup] to the taxpayer.’”  –Rebecca Otto, Minn. State Auditor

-“Gov. Mark Dayton said he has ‘grave concerns’ about the proposed Twin Metals underground
mine near Ely. Dayton directed Department of Natural Resources (DNR) Commissioner Tom
Landwehr ‘not to authorize or enter into any new state access agreements or lease agreements for
mining operations’ on state lands that would be part of the proposed mine.”  –Dave Orrick,
Pioneer Press

-“Today’s announcement is tremendous news for the protection of the Boundary Waters Canoe
Area Wilderness, a crown jewel in Minnesota, and a national treasure. It is important to note that
this decision is not in opposition to mining, but in defense of a pristine and priceless
environmental wonder. We must continue doing all we can to support good jobs and a strong
economy in Northeastern Minnesota, while ensuring the protection of our greatest natural
resources. I thank Secretary Vilsack and Secretary Jewell for their exceptional leadership, to
protect the BWCAW for all Minnesotans and for our country.”  –Minnesota Gov. Mark Dayton

-“Former Minnesota Gov. Al Quie, who in 1964 was a congressman representing southeastern
Minnesota … a Republican … recalled that wilderness was not a partisan issue. A longtime
outdoorsman, farmer and horseman, Quie said the idea of protecting the last remaining wild
places in the U.S. ‘just made good sense.’ ‘I had been personally interested in wilderness and
preserving wild places since I was 10,’ said Quie, who was born in Dennison in southeastern
Minnesota … ‘I had done a lot of canoeing up in that country [i.e., the Boundary Waters] when I
was younger, and I don’t see how you could argue it isn’t a place that needed to be preserved.’”
   –John Myers, Duluth News Tribune

-“Twin Metals is building one wing of the Mall of America underground. It’s a huge, huge
project,” said the Governor Mark Dayton. “To think you can excavate all of that, and pull those
minerals out, and process them, and just take them by train somewhere else, and bring the waste
back and deposit it without consequences, to me is just totally unrealistic.”

-“The Boundary Waters Canoe Area Wilderness and Voyageurs National Park are federal lands
that must be protected. There is no evidence that sulfide-ore copper mining can be conducted in

256 Mike Mosedale. “Copper mining showdown looms.” Politics in Minnesota: 12/1/09.
this area without permanently damaging these national treasures.” –U.S. Rep. Betty McCollum262

-“You’ve got to remember that most of these conglomerates that are doing mining on public land are not mom-and-pop mining operations. These are international mining corporations based all around the world … You’re talking about multinational corporations that extract assets. And there’s not one penny paid in royalties. Gas and oil royalties go into a fund for restoration and remediation once the work is done. Mining pays none.” –Arizona U.S. Congressman Raúl Grijalva263

-“If the land is mined, the miner pays only $100 a year to the federal government. This arrangement stands in sharp contrast with the 12.5 percent royalty that oil companies pay for drilling on public land. If hardrock miners paid the same royalty, they would have shelled out more than $40 billion dollars to the U.S. Treasury by now just for silver, gold and copper, to say nothing of royalties on other minerals, such as molybdenum and uranium. Lack of a royalty on public land minerals means that tax dollars will have to be used to fund cleanup.” –Roger Di Silvestro, National Wildlife264

-“Today’s decision to halt the current threat of dangerous, environmentally risky sulfide-ore copper mining is a major victory for our state and our environment. Working with Governor Dayton and a grassroots coalition of Minnesotans and Americans, we have fought to conserve the million acres and thousand lakes that form these national treasures. I am delighted that Secretaries Tom Vilsack and Sally Jewell have acted to save our Boundary Waters. While all Minnesotans should celebrate today’s victory, we have more work to do. I will keep advocating for the full withdrawal of these federal lands from mining, including fighting for legislation in Congress that will protect our Boundary Waters forever.” –U.S. Rep. Betty McCollum265

-Gladly, federal agencies recently said ‘no’ to Twin Metals’ proposed sulfide mine by not renewing expired mineral leases on the edge of the Wilderness. Department of the Interior Secretary Sally Jewell said in a statement: “This is the right action to take to avoid irrevocably damaging this watershed and its recreation-based economy.”266

-“Not this mine, not in this place, not next to this wilderness,” Leslie Jones, deputy undersecretary of the U.S. Department of Agriculture, told the Duluth News Tribune.267

-Agriculture Secretary Tom Vilsack said keeping BWCAW water pristine is important not just for the 250,000 people who fish and canoe in the wilderness each year but for the tourism industry surrounding the area that pumps some $45 million into the local economy annually. “The Boundary Waters is a national treasure,” Vilsack said in a statement announcing the mining permit decision.268

-“There’s a reason that the Boundary Waters is one of the most visited wilderness area in America: it’s an incredible place. Today’s best available science is helping us understand the value of the land and water and potential impacts of development in places like the Boundary Waters. This is the right action to take to avoid irrevocably damaging this watershed and its recreation-based economy, while also taking the time and space to review whether to further protect the area from all new mining.” –U.S. Interior Sec. Sally Jewell269

“Sulfide-ore mining has never—never—been undertaken without serious environmental consequences. Sulfide-ore mining is dangerous everywhere and most dangerous in wet environments. And the Boundary Waters is nothing if not wet. The consequences of such mining are perpetual. They will surely outlive all of us and will just as surely outlive the mining company’s pledges, promises and sureties.” –Walter Mondale, former U.S. Vice President

**Minnesota Pollution Control Agency/Wild Rice/Mercury**

“Supporters of the Twin Metals project have argued that Minnesota is the best place to mine because the state has tough environmental standards. But as we’ve learned in recent years, those standards are routinely ignored when it comes to the mining industry. Sorry, but that’s a very real fact. No one can legitimately claim that Twin Metals, or any mine, in Minnesota is going to meet the highest standards when neither state regulators, nor state legislators, require it.” –Editorial Board, *The (Ely) Timberjay*

“It seems a myth to me that Minnesota has robust environmental enforcement and that we ‘do it right.’ The truth is that the Minnesota Pollution Control Agency has neglected to enforce the Clean Water Act as it regards mining, as a St. Paul-based environmental group charged this summer. Due to pressure from Iron Range legislators and rule-breaking corporations, federal law has been flouted, responsible stewardship scorned and the MPCA neutered. Northeastern Minnesota is a sacrifice zone—for water quality and the rule of law.” –Peter M. Leschak, *Duluth News Tribune*

“If Minnesota cannot effectively regulate the taconite industry, what possible hope is there that copper-nickel sulfide mining will be anything but an environmental and human-health disaster? Until we have a mature relationship with iron, we shouldn’t go near copper.” –Peter M. Leschak, *Duluth News Tribune*

“Until recently, Minnesota Rules covered nondegradation of surface water and groundwater quality as part of the permit process. Then the MPCA removed protection of groundwater, so that permits for mining pollution would not have to consider whether … groundwater is being degraded … First, Minnesota’s sulfate standard was gutted by the Legislature and the MPCA; then the MPCA weakened Minnesota Rules. It was exactly what the sulfide mining industry wanted and needed. Pollution impunity.” –C.A. Arneson, *MinnPost.com*

“Wild rice harvest dates back to the Late Archaic and Early Woodland periods, more than 2,000 years ago. Deeply steeped in the cultural and spiritual traditions of Minnesota’s Ojibwe people, wild rice was harvested in the lower St. Louis River for generations. Sadly, during the last century, unregulated chemical dumping, untreated sewage releases and other physical disturbances finally overwhelmed the natural ecosystem and the environmentally sensitive wild rice beds all but disappeared.” –Minnesota Land Trust Annual Report (2013)

“The St. Louis watershed is a prolific source of wild rice, the ‘food that grows on water,’ which led the Ojibwe people to settle in the region. The river remains the primary reservation fishery for the Fond du Lac Band of Lake Superior Chippewa. The mainstem of the St. Louis River and several of its larger tributaries have been dammed for hydropower generation, disrupting

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271 Editorial Board. “Twin Metals decision: We’ve had enough hyperbole; let’s get to work building a diverse and stable economy.” *The (Ely) Timberjay*: 12/22/16.
274 C.A. Arneson. “When it comes to sulfide mining, let’s use ‘pro-water’ and ‘anti-water’ to describe stances.” *MinnPost.com*: 2/17/17.
connectivity and increasing mercury bioaccumulation in fish.” –American Rivers, “America’s Most Endangered Rivers of 2015”

-“The sulfate standard has been on the books since the 1973, and is based on research from the 1940s by a Minnesota Department of Natural Resources scientist who found that wild rice did not thrive in waters that had sulfate levels above 10 parts per million. The standard was rarely mentioned until, in recent years, tribal officials and environmental groups began asking state officials why the standard was not being enforced for taconite plants which routinely release tailings basin water with much higher sulfate limits.” –John Myers, Duluth News Tribune

-“Minnesota lawmakers tried, on their own, to relax the state sulfate rule in 2011 in an effort to help industry. But the EPA said the state could not change a law tied to the Clean Water Act without scientific backing … The current standard of 10 parts per million was upheld in December 2012 by a state court of appeals ruling.” –John Myers, Duluth News Tribune

-“One year ago the PCA released its preliminary findings on how much sulfate pollution is too much for wild rice, saying a two-year, $1.5 million field and laboratory study showed sulfate above 4-16 parts per million can produce a chain reaction in the ecosystem that harms the plant. The scientific work, while limited in time and scope, showed that sulfate at certain levels does indeed affect wild rice, as suspected.” –John Myers, Duluth News Tribune

-“A flexible standard could create openings for political pressure. John Pastor, who’s a biologist at University of Minnesota Duluth … did much of the research for the MPCA’s recent study that analyzed the old 10 parts per million standard … He says his research showed that the old, 10 parts per million standard will protect wild rice 80 percent of the time. He thinks it should remain in place.” –Dan Kraker, Duluth News Tribune

-“A 2013 study by the Minnesota Department of Health found that 1 in 10 infants on the North Shore of Lake Superior are born with unsafe levels of mercury in their blood, potentially impairing normal development. A mining proponent called PolyMet ‘the snowplow’ for the industry, clearing the way for many sulfide mines to follow.” –American Rivers, “America’s Most Endangered Rivers of 2015”

-“In addition to acid drainage and metal contamination, chemical compounds called ‘sulfates’ are often discharged from sulfide mining operations when sulfides are oxidized. Sulfates have been shown to facilitate turning nontoxic forms of mercury into toxic forms—a process called ‘mercury methylation.’ This toxic form of mercury bioaccumulates in fish and results in fish consumption advisories. Mercury contamination causes brain and kidney damage and behavioral disorders in humans.” –Conservation Minnesota

-“In a health study of newborn babies in the Lake Superior Basin conducted from 2007 to 2011, the Minnesota Department of Health found eight percent of tested newborns had mercury levels above the safe dose limit for methylmercury as set by the U.S. Environmental Protection Agency (EPA). After years of seeing declines in mercury levels in fish, the EPA is once again finding mercury increases in fish tissues. And, according to the EPA, mining is the largest source of mercury contamination to the Lake Superior Basin.” –Conservation Minnesota

The proposed PolyMet copper-nickel project would be located in the Superior National Forest, upstream of residential drinking water wells, a city drinking water source, and important fisheries reaching as far downstream as Lake Superior. A leading international expert on wetlands and mercury, Dr. Brian Branfireun, has concluded that increased mercury methylation from sulfate and mercury pollution and from hydrological changes in the highly methylating wetlands at the PolyMet site would increase the mercury contamination of fish—not only near the PolyMet site but downstream in the St. Louis River, the largest U.S. tributary to Lake Superior.” –Aggie Cook, Minnesota Dept. of Health registered nurse (retired)284

“First impacts of water contaminated with heavy metals generally show up as dead fish or aquatic life, with drinking water supplies threatened. Later damage, depending on exposure, include human health harm and higher costs of cleaning up water at municipal treatment plants. Fully restoring poisoned fisheries after past disasters in Colorado has taken decades. State mining regulators often don’t discover the old mine discharges until state health responders are called to test water after residents report bright colors or dead fish.” –Bruce Finley, The Denver Post285

“An April 9 letter in the News Tribune, ‘Mayor absent with copper-mining support,’ seemed intended to bully Duluth Mayor Emily Larson to support copper-nickel mining within earshot of the Boundary Waters. Let’s be honest, while it may be economically profitable for a loud minority, the silent majority of us Northlanders will be stuck dealing with the aftermath and cleanup once the mining companies pull up stakes to go plunder someone else’s backyard. Our waters have made great improvements since clean-water legislation in the 1970s, but I still can’t eat more than a few walleyes a month due to the fear of mercury poisoning. Thank the burning of coal for electricity for that. Let’s not make our problems worse by adding more water pollution to the mix. It’s our drinking water, after all.” –Matt Hansen, Duluth News Tribune286

“A group of Duluth-area physicians, nurses and medical school faculty says the effects of copper mining on human health haven’t been adequately addressed in the PolyMet environmental review … The 19 health care professionals say … ‘The World Health Organization lists 10 chemicals of major public health concern. Sulfide (copper) mining involves five of them, including mercury, arsenic, lead, asbestos and air pollution,’ the group wrote …”287

“The [group’s] letter notes that mercury contamination of fish, and the people who eat fish, already is an issue in the region and that the PolyMet project could contribute to the level of toxic mercury in the local waterways. The environment review ‘fails to clearly state the expected amounts of mercury that will be released into surrounding watersheds over time, and does not give estimations of how much mercury is likely to affect significant water bodies downstream from the project, particularly the St. Louis River and Lake Superior Basin.” –John Myers, Duluth News Tribune288

Polls/Public Opinion
-Fabrizio Ward LLC, a polling firm run by Tony Fabrizio, is former advisor to the Republican National Committee. Donald Trump used him as his chief pollster for the 2016 election. The

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284 Aggie Cook of Sartell, Minn., is a retired registered nurse for the Minnesota Department of Health and currently is the volunteer president of the Minnesota Public Health Association, which represents 400 public health professionals from across the state. “Nurse’s View: PolyMet sulfide mine threatens downstream health.” Duluth News Tribune: 5/5/16.
285 Bruce Finley. “230 Colorado mines are leaking heavy metals into state rivers.” The Denver Post: 8/16/15.
firm found that 60 percent of Minnesotans do not want sulfide-ore mining anywhere near the Boundary Waters. Even in the 8th District, which comprises the Iron Range, opposition triumphed by double-digit margins. Fabrizio Ward wrote: "Minnesotans are passionate about the Boundary Waters. Their love for the area is both broad and deep. Overall, 78 percent have a favorable opinion of the area, with an eye-popping 58 percent viewing it very favorably." The firm added that protection of the Boundary Waters is an important electoral issue for Minnesotans. "Even in CD-8, where the mines would be located … the advantage is to the candidate who fights for the Boundary Waters Wilderness."289

-"The overwhelming majority of Americans who participated in the review process urged denial of federal mining leases and withdrawal of sensitive lands near the Boundary Waters from the federal mining program. This also reflects the desires of Minnesotans—78 percent of whom support the two-year pause-and-study proposal, including a majority of Republicans, Democrats and independents. Minnesotans do not view the Boundary Waters as a partisan or a political issue." –Steve Piragis, et al., Star Tribune290

-"Statewide polling shows an overwhelming 85 percent of Minnesotans favor requiring mining companies to prove they have the financial means to clean up pollution from their mines before beginning operations. There’s only one question I’d ask mining proponents: Is 20 years of sulfide mining jobs worth 2,000 years of poisoned waterways and watersheds that will cost the rest of us millions, and possibly billions, to clean up?" –Erik Jensen, Minnesota Backcountry Hunters & Anglers co-chair291

-"A public-opinion poll … found that 70 percent of Duluth residents agree ‘the Minnesota Department of Natural Resources should hold a hearing run by an impartial judge where all sides can present evidence before making a decision on permits for PolyMet.’ Only 22 percent of those surveyed disagreed with this statement.” –John Myers, Duluth News Tribune292

-"It’s disappointing that PolyMet, one of the corporations proposing copper-nickel mines on a sulfide ore body in the region, wants to dump its copper mining waste on top of iron mining waste in a leaking tailings pond left over from a bankrupt iron mining operation. The company’s proposal has been rejected twice, being called ‘inadequate and unacceptable.’ More than 52,000 public comments were submitted on the second draft of the environmental review. A miningtruth.org analysis of the comments found that 98 percent of them were opposed to the mine proposal.” –Bob Tammen, retired Iron Range miner and Vietnam War veteran293

-In a public comment period for the PolyMet Mining Project and Land Exchange Supplemental Draft Environmental Impact Statement (SDEIS) last year, permitting agencies received 58,000 comments—almost all of them opposing the mine.294

-In 2014, over 58,000 comments were submitted on PolyMet’s Supplemental Draft Environmental Impact Statement (SDEIS), with over 98% opposed to the proposal.295

-"A March 2016 poll found that 67 percent of Minnesotans oppose sulfide mining in areas near the Boundary Waters and only 16 percent support the proposals. This majority opposition spans

the range of political leanings, as well those in the eighth Congressional District, which contains the proposed mining areas.” – Jenny Rowland

Steve Morse, executive director of the Minnesota Environmental Partnership, said the poll confirms that, “The majority of Minnesota voters believe that sulfide mining poses a real threat to Minnesota’s water and they don’t trust mining companies to prevent accidents and manage the cleanup process.”

“A poll, conducted by Fabrizio Ward LLC—a Republican leaning polling company used recently by Donald Trump’s campaign—found 72 percent of Minnesotans who responded were either very or somewhat concerned about runoff from copper mines ‘threatening the Boundary Waters and Lake Superior.’” – John Myers, Duluth News Tribune

More than 74,000 people and 200 sportsmen’s organizations, businesses, and conservation groups sent letters expressing opposition to renewing the expired Twin Metals leases.

Take Action
-On January 13, 2017, federal agencies initiated an environmental review of the watershed surrounding the Boundary Waters Wilderness and Voyageurs National Park to determine whether this watershed is the wrong place for sulfide-ore copper mining. Public comments will be collected until August 17, 2017: https://www.federalregister.gov/documents/2017/01/13/2017-00506/superior-national-forest-minnesota-application-for-waiting

-To see the federal mining moratorium proposal go to fs.usda.gov/superior and click on the “Withdrawal of Federal Minerals in Rainy River Watershed from Exploration and Development” project page. Comments may be submitted via email to: comments-eastern-superior@fs.fed.us.

-Help Backcountry Hunters & Anglers (BHA) Protect the Boundary Waters from Sulfide Mining: http://www.backcountryhunters.org/take_action#

Sulfide Mining Information/Resources
-Boundary Waters Business Coalition: https://www.bwcbusiness.org/
-Sulfide-Ore Copper Mining Creates Unacceptable Risks to the Boundary Waters: https://www.saveourboundarywaters.org/sites/default/files/attachments/owb_science_fact_sheet.pdf
-Sulfide Mining and Voyageurs National Park: http://voyageurs.org/advocacy/sulfide-mining/
-Sulfide Mining: http://www.friends-bwca.org/issues/sulfide-mining/
-Information about the proposed PolyMet Mine: http://www.nwf.org/Wildlife/Policy/Mining-Loopholes/PolyMet-Mine-MN.aspx
-Toxics Release Inventory (TRI) Program National Analysis: https://www.epa.gov/trinationalanalysis
-News and Information on the Mount Polley Mine Disaster: https://www.desmog.ca/mount-polley-mine-disaster

-4,500-Year-Old Mining Pollution in Southwestern Spain: Long-Term Implications For Modern Mining Pollution. [Economic Geology](http://www.geological.org/content/95/3/655.short)

-Minnesota DNR: Boundary Waters Canoe Area: [Boundary Waters Canoe Area](http://dnrstate.mn.us/watertrails/bwca/index.html)

**Boundary Waters Videos/Films**

-Minnesota BHA board member, Mark Norquist, is owner of Green Head Productions and executive producer of “Flush in the Wild,” a short film/video featuring Erik Packard, founder of Veterans for the Boundary Waters, in his first Boundary Waters Wilderness grouse hunt: [Save the Boundary Waters](https://gearjunkie.com/worth-fighting-for-bwca-wilderness-area)

-Mark Norquist is also executive producer of the acclaimed film/video series “Fish Out of Water, which won the Spirit of Film award at the Frozen Film Festival in St. Paul: [Sportsmen for the Boundary Waters](https://www.sportsmenfortheboundarywaters.org/fish-out-of-water)

**Sportsmen for the Boundary Waters**

-Sportsmen for the Boundary Waters: [Sportsmen for the Boundary Waters](https://www.sportsmenfortheboundarywaters.org)


-Veterans Help Save the Boundary Waters After it Saved Them.” [Veterans Help Save the Boundary Waters After it Saved Them.](https://www.sportsmenfortheboundarywaters.org/veterans)

-Norquist is also involved in a short film/video series: “Flush in the Wild,” which won the Spirit of Film award at the Frozen Film Festival in St. Paul: [Sportsmen for the Boundary Waters](https://www.sportsmenfortheboundarywaters.org/fish-out-of-water)

-Will Jenkins. “Executive chefs take to Minnesota area like, well, fish to water.” [Executive chefs take to Minnesota area like, well, fish to water.](https://www.flyrodreel.com/scott-hed-s-new-fight-for-mn)

-John Weiss. “Winona family is guided by Aldo Leopold’s passion.” [Winona family is guided by Aldo Leopold’s passion.](https://wtip.org/veteran-finds-healing-power-of-wilderness)


-Sportsmen for the Boundary Waters. “Take Action Now: Comment to Protect the BWCA from Copper Mining.” [Heavy Table](http://heavytable.com/take-action-now-comment-protect-bwca-copper-mining)


-Veterans for the Boundary Waters. “Executive chefs take to Minnesota area like, well, fish to water.” [Sportsmen for the Boundary Waters](https://www.sportsmenfortheboundarywaters.org/executive chefs take to Minnesota area like, well, fish to water.)

-Editors: [Editors](https://savetheboundarywaters.org/)
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THREAT TO FISH AND GAME
HABITAT NEEDS PROTECTION

The Boundary Waters is threatened by proposals for sulfide-ore copper mining, a risky mining practice never done before in Minnesota.

State and federal environmental studies confirm that sulfide-ore copper mining causes water pollution. The U.S. EPA has recognized sulfide-ore mining as America’s most toxic industry.