



To: House Committee on Natural Resources Republican Members
From: Subcommittee on Energy and Minerals Staff; Ashley Nichols (Ashley.Nichols@mail.house.gov), Rebecca Konolige (Rebecca.Konolige@mail.house.gov), Rob MacGregor (Robert.MacGregor@mail.house.gov)
Date: January 10, 2022
Subject: Republican Oversight Forum on “Minnesota Mining and American Potential: An Opportunity for a Brighter and More Secure Future”

The Committee on Natural Resources Republicans and the Western Caucus will hold a forum to examine the importance of mineral development in the Duluth Complex in Minnesota. The forum will be held on **Thursday, January 13, 2022, at 10:00 a.m. (EST)** in Room 217 of the Capitol Visitors Center. **Event participation will be in-person only and no virtual participation option will be provided. The public may watch the forum via the Committee’s YouTube page.**

Member offices are requested to notify Baylee Seeman (Baylee.Seeman@mail.house.gov) and Ashley Higgins (Ashley.Higgins@mail.house.gov) **no later than Tuesday, January 11, 2022, at 4:30 p.m. (EST)** if their Member intends to participate in-person at the forum.

Please contact Bailey Mailloux (Bailey.Mailloux@mail.house.gov) should any technical difficulties arise.

I. KEY MESSAGES

- Global demand for non-fuel mineral resources, often termed “critical minerals,” is projected to increase rapidly in the coming years.¹ This is largely driven by plans to increase electrification and higher demand for renewable energy technologies.
- The Duluth Complex in Northern Minnesota is a world-class mineral deposit, containing nearly 8 billion tons of copper, nickel, cobalt, and platinum group metals.² These minerals are among the commodities that will see huge upswings in demand due to their use in batteries, electric vehicles (EVs), and other rapidly expanding sectors.

¹ International Energy Agency. “The Role of Critical Minerals in the Clean Energy Transition.” Executive Summary. <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary>

² Mining Minnesota. “Minnesota’s Vast Mineral Resources.” <http://www.miningminnesota.com/duluth-complex/>

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- If developed, the Duluth Complex could constitute 95 percent of U.S. nickel reserves, 88 percent of U.S. cobalt reserves and 75 percent of U.S. platinum-group reserves.³
- Developing this region is in the national interest due to the many important uses of the resources, however it would also provide immense economic benefits to the surrounding area. Twin Metals Minnesota is one company proposing to develop part of the Duluth Complex. Twin Metals alone is projected to provide about 750 direct full-time jobs and 1,500 indirect jobs.⁴
- Despite the economic good to the region and growing demand for hardrock minerals, the Biden administration has taken steps to prevent the Twin Metals mine from going forward.⁵
- To have secure domestic supply chains of critical minerals, Twin Metals and projects like it must be allowed to progress through the ordinary regulatory process without interference from the federal government.

II. WITNESSES

- Jason George, Business Manager and Financial Secretary, International Union of Operating Engineers Local 49
- Brian Hanson, Chair, Jobs for Minnesotans
- The Honorable Mike Jugovich, 7th District Commissioner and Chair, St. Louis County Board
- Julie Padilla, Chief Regulatory Officer, Twin Metals Minnesota
- Ryan Jackson, Senior Vice President, Government and Political Affairs, National Mining Association
- Mark Compton, Executive Director, American Exploration and Mining Association
- Heather Reams, President, Citizens for Responsible Energy Solutions (CRES)

III. BACKGROUND

History of Mining in Northern Minnesota and the Boundary Waters Canoe Area:

Northern Minnesota is home to the historic Iron Range, which has been safely mining taconite, a critical component in making steel, for more than 130 years. The taconite mined in northern Minnesota accounts for around 80 percent of America’s steel supply.⁶

The Superior National Forest in northeastern Minnesota contains 3.7 million acres of National Forest System land, including the Boundary Waters Canoe Area Wilderness (BWCAW). The BWCAW encompasses over a million acres, with an additional “buffer zone” of 227,000 acres in the Mining Protection Area, a unique designation created by the Boundary Waters Canoe Area Wilderness Act of 1978.⁷ This region is a part of the Rainy River Watershed.

³ Twin Metals Minnesota. “Local Minerals. Global Needs.” <https://www.twin-metals.com/modern-mining/>

⁴ Twin Metals Minnesota. “Minnesota, State of Opportunity.” <https://www.twin-metals.com/why-minnesota/>

⁵ Department of the Interior. “Share Biden Administration Takes Action to Complete Study of Boundary Waters Area Watershed.” October 20, 2021. <https://www.doi.gov/pressreleases/biden-administration-takes-action-complete-study-boundary-waters-area-watershed>

⁶ Bloomquist, Lee. “Domestic Steel Production Reaches New Highs.” June 10, 2021. http://www.businessnorth.com/around_the_region/domestic-steel-production-reaches-new-highs/article_af096364-ca04-11eb-a7af-9ffd24acb7eb.html

⁷ U.S. Department of Agriculture. U.S. Forest Service. “BWCAW Overview and History.” <https://www.fs.usda.gov/detail/superior/specialplaces/?cid=stelprdb5203434>

Underneath the Superior National Forest and throughout the Iron Range lies the Duluth Complex, one of the largest undeveloped mineral reserves in the world.⁸ Vast amounts of copper and nickel, as well as cobalt and platinum metal groups, began to attract interest from prospective developers decades ago. Two mining leases were granted to project proponents in 1966 for an initial term of 20 years, with rights to renew for 10 years.⁹ These leases have been renewed multiple times in the intervening years.¹⁰ The project has had different operators since its inception but has yet to begin production due to very high capital and exploration costs.

In the last few days of the Obama administration, the Department of the Interior (DOI) initiated a mineral withdrawal of 234,328 acres in the Superior National Forest, immediately halting all mining related activities pending the results of an environmental review.¹¹ In addition, the Obama administration declined to renew the two mineral leases held by Twin Metals Minnesota, despite their long tenure and hundreds of millions of dollars spent exploring the prospective mine site.¹² Members of both political parties decried this decision. This notably included Senator Amy Klobuchar, who expressed her displeasure via email to then-Agriculture Secretary Vilsack: “It should have been handled through the normal process. It wasn’t...I truly believe a thorough [Environmental Protection Agency] EPA review would have told us if it is safe or not, but other considerations ruled. I just wanted a fair process based on science that told us the truth. That is not how this feels.”¹³

After 15 months of environmental review, the Trump administration cancelled the application for the mineral withdrawal on September 6, 2018,¹⁴ and reinstated the mineral leases on May 2, 2018.¹⁵ In December 2019, Twin Metals Minnesota formally submitted a Mine Plan of Operation to begin the federal permitting process to develop the Duluth Complex, with the Minnesota Department of Natural Resources conducting its own environmental impact study as well.¹⁶ Unfortunately, on October 20, 2021, the Biden administration restarted the process for a mineral withdrawal in the area.¹⁷ The mineral leases held by Twin Metals Minnesota remain in place for the time being, but project proponents are concerned about the potential for future action. A permanent mineral withdrawal in the region would severely endanger the Twin Metals project and forbid any future hardrock mining in the area.

Currently pending before Congress are several bills to legislatively ban mining in northern Minnesota:

⁸ Mining Minnesota. “Minnesota’s Vast Mineral Resources.” <http://www.miningminnesota.com/duluth-complex/>

⁹ Twin Metals Minnesota. “Fact: Twin Metals Minnesota’s Federal Mineral Preference Right Leases Mines 1352 & 1353.” December 15, 2016. <https://www.twin-metals.com/wp-content/uploads/2016/12/TMM-Lease-Renewal-Facts-12-15-16.pdf>

¹⁰ *Id.*

¹¹ U.S. Department of Agriculture. “USDA Removes Roadblock to Mineral Exploration in Rainy River Watershed.” Press Release. September 6, 2018. <https://www.usda.gov/media/press-releases/2018/09/06/usda-removes-roadblock-mineral-exploration-rainy-river-watershed>

¹² “The Latest: Twin Metals: Reinstating leases ‘important step’.” May 2, 2018. Associated Press. <https://apnews.com/7c030dc4e85e4926a2028cb96e32b817>

¹³ Strassel, Kimberley. “A Democrat Deflates a Trump ‘Scandal’.” Wall Street Journal. June 6, 2019. <https://www.wsj.com/articles/a-democrat-deflates-a-trump-scandal-11559862259>

¹⁴ U.S. Department of Agriculture. “USDA Removes Roadblock to Mineral Exploration in Rainy River Watershed.” September 6, 2018. <https://www.usda.gov/media/press-releases/2018/09/06/usda-removes-roadblock-mineral-exploration-rainy-river-watershed>

¹⁵ U.S. Department of the Interior. “Rescission of December 15, 2016, Lease Renewal Application Rejection. Reinstatement of Mineral Leases MNES 01352 & MNES 01353 as Issued in 2004. Reinstatement of Twin Metal’s 2012 Lease Renewal Application.” May 2, 2018. <https://www.twin-metals.com/wp-content/uploads/2018/05/2018.05.02-Twin-Metals-Lease-Reinstatement-Decision-002.pdf>

¹⁶ Karnowski, Steve. “Twin Metals Minnesota files formal mine plan with regulators.” Associated Press. December 18, 2019. <https://apnews.com/3cb7d821267e8ada06e1817b5c380eef>

¹⁷ Department of the Interior. “Share Biden Administration Takes Action to Complete Study of Boundary Waters Area Watershed.” October 20, 2021. <https://www.doi.gov/pressreleases/biden-administration-takes-action-complete-study-boundary-waters-area-watershed>

- H.R. 2794, the Boundary Waters Wilderness Protection and Pollution Prevention Act, would direct the Biden administration to withdraw 234,238 acres of the Superior National Forest from mineral development, directly targeting the Twin Metals project.
- Section 435 of Division E of H.R. 4502, the FY 2022 minibus spending bill, would disallow any funds to review or approve a mine plan within the Rainy River Watershed of the Superior National Forest.

Global Demand and the Role of the Duluth Complex:

Hardrock minerals have become necessary to modern life, forming essential components of high-tech equipment including smartphones, EVs, wind and solar energy technologies, defense systems, and medical devices.¹⁸ Despite substantial reserves in the United States, the vast majority of hardrock resources comes from abroad, particularly from China. Not only does China's domination of the global minerals' market present major national security concerns, but overreliance on any single nation for important resources risks future shortages.

In the coming decades, the world will experience surges in demand for minerals due to growth in EVs and other renewable energy technologies, and policies that incentivize carbon-free energy sources. Meeting this demand will be no small feat. For instance, achieving a global net-zero emissions economy by 2050 would require six times more mining by 2040 than what occurs today.¹⁹ Attempting to meet the goals of the Paris Agreement would increase demand for copper and rare earth elements by more than 40 percent, demand for nickel and cobalt by 60 to 70 percent, and demand for lithium by nearly 90 percent.²⁰

This makes reliable domestic sources of these hardrock minerals more important than ever. The Duluth Complex in Northern Minnesota, for instance, could become a crucial supplier of copper, nickel, and cobalt – all of which are vital for EVs and other renewable technologies.²¹ It is one of the richest deposits in the world, estimated to contain 7.7 billion short tons of ore in total.²² Twin Metals Minnesota is planning to mine 180 million short tons over 25 years.²³

The need for these resources has been made especially strong by recent administrative actions. President Biden has issued several Executive Orders to rapidly increase renewable energy deployment, thus increasing the United States' demand for critical minerals. For instance, by 2030, the President aims to have 50 percent of new cars and light trucks be zero-emission vehicles²⁴ and double the nation's offshore wind production over the same period.²⁵ In comparison to a conventional vehicle, an EV

¹⁸ David Iaconangelo. "Rare Earth 'Critical' for U.S. Offshore Projects — Study." E&E News. April 5, 2019.

<https://www.eenews.net/energywire/2019/04/05/stories/1060143799>

¹⁹ International Energy Agency. "The Role of Critical Minerals in the Clean Energy Transition." Executive Summary. <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary>

²⁰ *Id.*

²¹ Thompson, Anne and Douglas, David. "Mining the Gap: Companies Push to Find Raw Materials for Electric Vehicle Boom." NBC News. November 12, 2021. <https://www.nbcnews.com/science/environment/mining-gap-companies-push-find-raw-materials-electric-vehicle-boom-rcna5077>. Scheyder, Ernest.

¹⁹ Exclusive: Tesla expects global shortage of electric vehicle battery minerals -sources." Reuters. May 2, 2019. <https://www.reuters.com/article/usa-lithium-exclusive-tesla-exclusive-int/exclusive-tesla-expects-global-shortage-of-electric-vehicle-battery-minerals-sources-idUSKCN1S81QI>

²² Twin Metals Minnesota. Staff briefing. February 3, 2020.

²³ Twin Metals Minnesota. Staff briefing. February 3, 2020.

²⁴ Exec. Order 14037, 86 Fed. Reg. 43583. Aug. 10, 2021.

²⁵ Exec. Order 14008, 86 Fed. Reg. 7619. Feb. 1, 2021.

requires six times the mineral input²⁶ and a single 3-megawatt wind turbine requires 4.7 tons of copper.²⁷ Access to mineral resources is crucial for meeting these targets, and the Biden administration has acknowledged this reality.²⁸ However, at the same time, the Biden administration has taken steps to prevent production on federal lands in the Duluth Complex, restarting the Obama-era mineral withdrawal process this October.²⁹ These two goals – the rapid expansion of renewable energy along with EVs and the handicapping of hardrock mining – are mutually exclusive. Without a huge expansion of mineral development and processing capacity, President Biden’s aggressive renewable agenda will remain simply a thought experiment.

Economic Impact:

The national importance of the Duluth Complex is matched by its significance to the local community. Twin Metals has signed a project-labor agreement with the local Iron Range Building Trades Association, guaranteeing local jobs during the mine’s construction.³⁰ Construction alone will create about 700 direct and 1,400 indirect jobs.³¹ Additionally, mining employment opportunities provide comparatively high wages, with an average mine worker in Minnesota earning close to \$90,000 compared to approximately \$21,000 in the tourism industry.³² The economic benefits will in fact be felt throughout the entire state, as mineral development provides funding to every school district in Minnesota through the Permanent School Fund.³³ This Fund has contributed around \$260 million to 337 public school districts over the past 10 years.³⁴ Given the myriad positive local impacts, numerous Minnesota stakeholders including labor unions, builders, miners, schools, local officials, and others have stated their strong support for the project.

Supporting Responsible Mining:

Environmentalists often cite historic mine contamination as supposed evidence that mining is too dangerous to allow in many areas of the country. This is highly misleading, as incidents cited are largely old mines with outdated, sometimes broken-down technology. Today’s mining industry is highly regulated and required to be compliant with extensive environmental laws at the state and federal levels.³⁵ Furthermore, many projects choose to go above and beyond what is required by law. For example, Twin Metals Minnesota has decided to use “dry stack” tailings at its project, a method that compacts filtered tailings into a non-acid generating pile to be topped with vegetation.³⁶ Dry stack

²⁶ International Energy Agency. “The Role of Critical Minerals in Clean Energy Transitions.” At 30 May 2021.

<https://iea.blob.core.windows.net/assets/278ae0c8-28b8-402b-b9ab-6e45463c273f/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf>

²⁷ The World Bank. “Climate-Smart Mining: Minerals for Climate Action.” <https://www.worldbank.org/en/news/infographic/2019/02/26/climate-smart-mining>

²⁸ The White House. “BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH.” June 2021. <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>

²⁹ Department of the Interior. Press release. “Share Biden Administration Takes Action to Complete Study of Boundary Waters Area Watershed.” October 20, 2021. <https://www.doi.gov/pressreleases/biden-administration-takes-action-complete-study-boundary-waters-area-watershed>

³⁰ Vandervort, Keith. “Twin Metals Inks Project Labor Agreement with Trades.” The Timberjay. August 21, 2019. <http://timberjay.com/stories/twin-metals-inks-project-labor-agreement-with-trades.15357>”

³¹ Twin Metals Minnesota. Staff briefing presentation. September 2019.

³² Twin Metals Minnesota. Staff briefing presentation. September 2019.

³³ Bloomquist, Lee. “Mining Funds All Minnesota Schools.” Mesabi Daily News. June 27, 2018. https://www.virginiamn.com/mine/mining-funds-all-minnesota-schools/article_e0220246-7979-11e8-b515-635cdec50b2c.html

³⁴ Bloomquist, Lee. “Mining Funds All Minnesota Schools.” Mesabi Daily News. June 27, 2018. https://www.virginiamn.com/mine/mining-funds-all-minnesota-schools/article_e0220246-7979-11e8-b515-635cdec50b2c.html

³⁵ American Geosciences Institute. “What Are Environmental Regulations on Mining Activities?” <https://www.americangeosciences.org/critical-issues/faq/what-are-regulations-mining-activities>

³⁶ Twin Metals Minnesota. Fact sheet. “Environmental Protection Measures.” <https://www.twin-metals.com/wp-content/uploads/2016/12/TMM-Lease-Renewal-Facts-12-15-16.pdf>

tailings require no dam, and therefore have no possibility of a dam failure.³⁷ Any residual water generated during production of ore concentrate is captured and reused in the processing plant in a closed loop.³⁸

Just as environmental considerations are given great weight in the United States, so too are labor standards for workers. Unfortunately, the same cannot be said for many other source countries of critical minerals. Perhaps the most notorious example is the Democratic Republic of the Congo, which produces the majority of the world's cobalt.³⁹ The Congo has well-documented cases of child mining and other human rights abuses during mineral production, presenting a major ethical dilemma for EVs and battery manufacturers who depend on cobalt for their products.⁴⁰ Efforts are underway to redesign EV engines to use less cobalt and more nickel, but as stated previously, nickel is projected to have major demand increases as well, and will no longer be a reliable alternative. Moreover, the world's largest supplier of nickel, Indonesia,⁴¹ has a very checkered history of poor environmental standards in its mining practices,⁴² making any purported environmental benefits from nickel-dominant EVs seem dubious at best. Unfortunately, unless a new mining project develops, the U.S. will have no domestic production of nickel after 2025.⁴³

The global marketplace for critical minerals is too vast and too complicated for the United States to solve on its own. However, in the face of rising demand and supply chain risks – not to mention complex environmental and human rights concerns – maximizing domestic production in the Duluth Complex and elsewhere across the nation will support safe, sustainable, and reliable production of critical minerals for many years to come.

³⁷ *Id.*

³⁸ *Id.*

³⁹ Niarchos, Nicolas. "The Dark Side of Congo's Cobalt Rush." *The New Yorker*. May 31, 2021. <https://www.newyorker.com/magazine/2021/05/31/the-dark-side-of-congos-cobalt-rush>

⁴⁰ *Id.*

⁴¹ Huber, Isabelle. "Indonesia's Nickel Industrial Strategy." December 8, 2021. Center for Strategic and International Studies. <https://www.csis.org/analysis/indonesias-nickel-industrial-strategy>

⁴² Pearce, Fred. "Why a Big Mining Project Could Wipe Out Rural Villages in Indonesia." *Yale Environment 360*. March 25, 2021. <https://e360.yale.edu/features/mining-project-could-wipe-out-rural-villages-indonesia>

⁴³ Hughlett, Mike. "Planned Minnesota high-grade nickel mine would be U.S. rarity." *Star Tribune*. November 27, 2021. <https://www.startribune.com/planned-minnesota-high-grade-nickel-mine-would-be-u-s-rarity/600121263/?refresh=true>