

Revising Hardrock Mining Regulations

TO PROTECT COMMUNITIES, WATER, AND NATURAL AND CULTURAL RESOURCES

March 2021



GRAND CANYON TRUST



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THIS REPORT IS ENDORSED BY THE FOLLOWING ORGANIZATIONS:

Center for Biological Diversity
Earthjustice
Earthworks
Grand Canyon Trust
League of Conservation Voters
Natural Resources Defense Council
Sierra Club
The Wilderness Society

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Mining claim staked inside what used to be Grand Staircase-Escalante National Monument in Utah. This national monument was reduced to nearly half of its original size by President Trump and was opened to copper, silver, and uranium mining. Previously-established boundaries are likely to be reinstated by President Biden. Photo: Julie Dermansky/jsdart.com for Earthworks



Overview

The federal Mining Act of 1872, signed into law by President Ulysses S. Grant, is a glaring example of explicitly settler-colonial public land policy. Its basic terms have not changed since it was enacted, although Congress has narrowed its reach over the years. Today it governs development of metals like gold, silver, copper, and uranium, as well as “uncommon varieties” of common substances like building stone, on well over 200 million acres of Forest Service and Bureau of Land Management (BLM) land throughout the western United States. It allows companies to extract these publicly-owned minerals entirely for free, perhaps the last place on the planet where that is possible.

The Trump administration initiated, but did not complete, rulemakings to overhaul both the Interior Department’s BLM and the Agriculture Department’s U.S. Forest Service.¹ Its goal had been to weaken already weak regulations even further, but these rulemakings provide a pathway for a Biden-Harris administration to put in place badly needed improvements in the regulatory framework.

Doing so will require coordination between the Interior and Agriculture Departments. Congress has given both Departments authority to regulate hardrock mining on the lands they manage through the Federal Land Policy and Management Act (FLPMA) of 1976 and the Forest Service Organic Act of 1897. This makes crafting a single, common regulatory framework somewhat challenging but worth the effort, especially because a number of major hardrock mines, existing and proposed, involve lands managed by both agencies. The new Administration should, therefore, promptly charge its agencies with developing new final regulations for publication as soon as practicable.

The previous Administration’s rulemakings provide a pathway for the Biden-Harris administration to make badly needed improvements.

Meanwhile, legislative reform of the Mining Law of 1872 has attracted considerable interest on Capitol Hill. House Natural Resources Committee Chair Raúl Grijalva has championed reform, and his committee approved a substitute leasing system for the current law. In the Senate, Energy and Natural Resources Committee Chairman Joe Manchin III has also expressed interest in reform, as have some western Democrats on that Committee. Because the 117th Congress will have much else to do, legislative reform in the near term will not be easy. But the new Administration should closely coordinate its regulatory reform with allies on the Hill.



The Need for Reforming Existing Agency Regulations

BLM's hardrock mining regulations have not been significantly revised for decades, the U.S. Forest Service's regulations not for nearly a half-century. Meanwhile, hardrock mining occurs on an ever-more massive scale: today, such operations literally reduce mountains to massive open pits, waste rock dumps, and tailings piles that extend over thousands of acres of land. Most of these open pits, some over a mile wide and deep, must be constantly dewatered by pumping, a process that severely disrupts hydrology over a wide area.

Millions of tons of rock and earth must be blasted, excavated, and crushed, with ore treated with large quantities of toxic chemicals such as cyanide and sulfuric acid. Slurried mine tailings are deposited in giant piles that can pose safety threats to downstream areas and communities. Operators mine ever-lower grades of ore, sometimes producing waste rock and tailings measured in tons, in order to obtain quantities of metal measured in ounces.² The metals mining industry is the nation's single largest source of toxic waste.³

Many mines generate water pollution that persists for hundreds if not thousands of years, requiring costly water treatment and financial and environmental liability for many future generations.⁴ The Environmental Protection Agency (EPA) estimates 40 percent of the watersheds in the western United States are contaminated from hardrock mines.⁵ Most modern mines have degraded water quality resulting from various spills, tailings failures, and water collection and treatment failures.⁶ According to one study, more than three-quarters of mines fail to meet water quality standards, despite predicting otherwise when proposed.⁷



Person holding up glass of contaminated mine water (acid mine drainage).



Tribal members from Fort Belknap monitoring impacts of mine pollution from the Zortman Landusky gold mine in Montana.

Photo: Courtesy Fort Belknap Indian Community



Disastrous waste containment failures are a tragic and continuous problem around the world, as shown at Brazil's Brumadinho⁸ and British Columbia's Mount Polley⁹ within the past decade. Climate change adds to the risks and potential impacts by increasing the frequency of extreme weather events. Changing temperatures and precipitation patterns also affect the safety, stability, and viability of mining operations and infrastructure.

The hardrock industry has and will continue to resist upgrading existing regulations. The Trump administration joined the industry to promote domestic mining in order to meet mineral supply needs for national security or clean energy objectives. They promoted uranium mining that would threaten Indigenous sacred sites near the Grand Canyon in Arizona and the Bears Ears National Monument in Utah, even though uranium is not scarce, and friendly nations like Canada supply preferable product, quality, and quantity.

While the just and equitable renewable energy transition will require more of certain types of metals, the current mining regulations are no means to facilitate it, and would be counterproductive. Recovery facilities must account for environmental justice and be properly designed and well-regulated by the federal government to protect public health and water quality. Where public lands source our minerals needs, the Biden-Harris administration should enact a more responsible 21st century mining law and matching rules to meet current mining challenges.

Both the north and south rims of the Grand Canyon have been threatened by uranium mining in the past and many abandoned mining claims dot the landscape. Uranium poisoning is a massive public health crisis in nearby Indigenous communities.

Photo: Gary M. Smillie/Adobe.stock



ABOVE: The collapse of a tailings dam in Brumadinho, Brazil killed 272 people and polluted hundreds of miles of watersheds downstream. Photo: IBAMA, Brazil

LOWER: The Mt. Polley tailings dam spilled 24.4 million cubic meters of mine waste into a salmon stream, turning it into a broad corridor of mine waste.

Photo: Chris Blake, Quesnel River Watershed Alliance



Elements of New Public Lands Mining Rules

1

Establish meaningful Tribal consultation and Indigenous resource protections. On January 26, 2021, the Biden-Harris administration issued an Executive Order (EO) on Tribal Consultation and Strengthening Nation-to-Nation Relationships.¹⁰ The EO directs the Interior and Agriculture Departments to plan and engage in regular, meaningful, and robust consultation in the development of policies, like hardrock mining regulation, that have Tribal implications. Consultations and regulations on mining should seek to achieve the Free, Prior, and Informed Consent (FPIC) of Indigenous communities.¹¹

2

Discretion for land managers to balance mining proposals with other potential land uses and the protection of treasured places, sacred sites and watersheds. This requires a meaningful definition of the “unnecessary or undue degradation” standard in FLPMA to include perpetual water treatment and grants discretion to deny mines with other serious impacts to environmental or cultural resources.

3

Exercise agency authority under governing Organic Act and other statutory and regulatory provisions to minimize or prohibit harm to natural and/or cultural resources from tailings and waste piles proposed or located on lands that do not contain a valuable mineral deposit. Placement of such material may only occur pursuant to Section 42 of the General Mining Law, which allows miners to claim and patent up to 5 acres per mining claim. The Clinton administration included such a provision in its overhaul of BLM hardrock mining regulations in 2000, but the Bush administration deleted it upon taking office. Though the litigation challenging that deletion did not overturn it, the Court did provide partial success by paving the way for the BLM to revive or improve the Clinton approach.¹²

4

Assert more control over the use of large amounts of public lands for waste dumps and tailings piles. Key provisions of the 1872 Mining Act do not readily accommodate the massive scale of 21st century mining. The Clinton administration addressed some of these in Solicitor’s Opinions outlining agency authority to use other tools like Special Use Permits (SUP), Rights-of-Way (ROW), or land exchanges which provide ample discretion to say “no” to new mining. The G.W. Bush and Trump administrations have rejected this view. In 2019, in litigation brought by Indigenous tribes and environmentalists to stop a massive proposed copper mine in southern Arizona, a federal district court in essence ruled that the Clinton position is the correct view of the law.¹³ The case is now pending in the Ninth Circuit.

President Trump removed protections for 83% of Bears Ears National Monument’s area in December 2017 and mining interests immediately began reviving uranium mining claims under the 1872 Mining Law. The area is sacred to numerous Indigenous communities.

Photo: Rixie/Adobe.stock



- 5 Specify detailed performance standards for hardrock mining operations. New rules should require mining operators to use the best available technology from exploration through post-closure and meet strict operating standards.** The goal should be to prevent, where possible, surface and groundwater contamination by acid mine drainage and toxic mine waste, and minimize disturbance to fish, wildlife, flora, vegetation, and cultural resources.
- 6 Require best practices for managing mine waste tailings.** Safety for mine workers and nearby communities should be a primary consideration, from design through construction, operation, closure, and post-closure.¹⁴ Tailings facilities should be designed to withstand the most extreme credible meteorological and seismic events, like drying tailings and reducing above ground storage. Impacts of aquifer dewatering for mine operations should also be considered, particularly in arid regions where worsened drought is an expected consequence of climate change.
- 7 Require planning for climate impacts.** Operations, infrastructure, reclamation, and closure must be designed and managed to account for the increased risks associated with climate change, such as increasing the capacity of wastewater containment ponds to prevent toxic spills during extreme storms.¹⁵
- 8 Require adequate financial assurances to cover all reclamation costs, including those for long-term water treatment.** Thousands of polluting abandoned hardrock mines, including some prominent recent examples, will require billions of dollars of public money to clean up. The goal is to avoid the public (local, state, and federal governments) bearing the financial burden of cleanup should a mining company go bankrupt. This includes prohibitions on using risky financial instruments—such as corporate guarantees.
- 9 Put in place an enforcement system with legitimate accountability. Bad environmental actors should be prohibited from eligibility for new permits.** Mining operations should be regularly inspected, and sufficient penalties imposed for regulatory violations to deter bad behavior.¹⁶ Significant operations should undergo comprehensive environmental and compliance audits periodically by an independent third party.¹⁷ Transparency and opportunities for public involvement in decisions on permitting, bonding, inspections, and enforcement are vital to ensuring accountability. All financial assurance agreements, mine operation and reclamation plans, monitoring results, and compliance records should be posted online to make them readily accessible by the public.¹⁸
- 10 Put in place a system of fees to require mine operators to defray the necessary costs of inspections, environmental reviews, and other administrative functions, so government regulators have sufficient resources to carry out their responsibilities.**¹⁹

Conclusion

While congressional action is needed if hardrock miners are to provide a fair return to the taxpayer and a stable funding source for cleaning up the thousands of polluting abandoned mines on public lands, reforming existing regulations along the lines outlined can provide much-needed protections for communities, scarce water resources, and other natural and cultural resources.

Endnotes

- 1 The Final Environmental Impact Statement (FEIS) for the Forest Service locatable minerals Proposed Rule (36 C.F.R. 228) is expected in November 2021 with a Final Rule and Record of Decision (ROD) in December 2021. We expected the previous Administration's proposed rule would codify the right to use mine claims for land uses "reasonably incident" or "ancillary" to mining, including tailings disposal, and to defer substantial authorities to the corresponding BLM regulations (43 CFR 3809). Neither the BLM nor the Forest Service proposed rules were printed in the Federal Register.
- 2 https://earthworks.org/cms/assets/uploads/archive/files/publications/20TonsMemo_FINAL.pdf
- 3 See Toxics Release Inventory (TRI) National Analysis, 2019 at <https://www.epa.gov/trinationalanalysis>
- 4 <https://earthworks.org/cms/assets/uploads/archive/files/publications/PollutingTheFuture-FINAL.pdf>
- 5 EPA Liquid Assets 2000: Americans Pay for Dirty Water at <http://water.epa.gov/lawsregs/lawsguidance/cwa/economics/liquidassets/dirtywater.cfm>
- 6 <https://earthworks.org/publications/u-s-operating-copper-mines-failure-to-capture-treat-wastewater/>, https://earthworks.org/publications/us_gold_mines_spills_failures/
- 7 https://www.ceaa-acee.gc.ca/050/documents_staticpost/cearref_3394/hearings/SM09.pdf
- 8 New York Times, "A Tidal Wave of Mud" by Shasta Darlington, et al. Feb 9, 2019.
- 9 Independent Expert Engineering and Review Panel, Report on Mount Polley Tailings Storage Facility Breach, January 30, 2015. <https://www.mountpolleyreviewpanel.ca/sites/default/files/report/ReportonMountPolleyTailingsStorageFacilityBreach.pdf>
- 10 <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/>
- 11 For more information on Free, Prior, and Informed Consent international law, please see <https://www.earthworks.org/issues/fpic/>
- 12 See Earthworks et al. vs. Dep't of Interior DC District Ct Case 1:09-cv-01972-RC (10/26/20). See also Mineral Policy Center v. Norton, <https://www.casemine.com/judgement/us/5914b79badd7b049347800d7>. The Forest Service was not a party to this case.
- 13 Save the Scenic Santa Ritas et al. vs. U.S. Forest Service Docket number 4:17-cv-00576; (D. Ariz., 2019).
- 14 Earthworks & MiningWatch Canada, Jamie Kneen, Ugo LaPointe, Jan Morrill, Payal Sampat, Safety First: Guidelines for Responsible Mine Tailings Management, June 2020.
- 15 U.S. Bureau of Land Management, David Williams, "Climate Change: Extreme Conditions: Do Plans of Operations Need to Include an Ark?" presented at Montana Tech, Mine Design Operations and Closure Conference 2012: https://www.mtech.edu/mwtp/2012_presentations/Dave%20Williams.pdf
- 16 Montana's Metal Mine Reclamation Act contains a "bad actor" statute for mining operations that preclude mining companies from receiving a new permit if they've defaulted on past financial assurance obligations, unless they reimburse the state (MCA, Section 82-4-331(3), 82-4-335(9), and 82-4-360.
- 17 Alaska Department of Natural Resource and Alaska Department of Environmental require an operator to complete an independent, third-party environmental audit during the approved permit cycle (typically 5 years) as a condition of their reclamation and waste management permits.
- 18 The Alaska Department of Natural Resources large mine permitting team posts the requisite information on the state's website for public review at: <http://dnr.alaska.gov/mlw/mining/largemine/>
- 19 See 43 U.S.C. §1734(a)

