

Center for American Progress



# Multinational Mining Corporations Are Exploiting U.S. Taxpayers

Outdated Mining Laws Allow Foreign Companies  
to Mine U.S. Public Lands for Free

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By Nicole Gentile November 2019



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# Introduction and summary

Under the Trump administration, corporate profits have taken priority over public lands time and time again. However, the biggest of all handouts to the mining industry started decades before Donald Trump was even born: the General Mining Act of 1872, a woefully outdated law that governs extraction of hardrock minerals in the United States. This law allows companies to mine for metals and other minerals on public lands for free; exposes nearby communities and rivers to perpetual toxic waste; and gives tribes and land managers no meaningful opportunity for input. The result is that corporations—including foreign firms with no stakes in maintaining the welfare of these communities—reap the profits, while local communities are left holding the bag on a legacy of pollution.

## What are hardrock minerals?

The minerals that fall under the General Mining Act are usually referred to as “locatable minerals” and include resources such as uranium, gold, silver, lead, copper, zinc, nickel, mica, and gemstones. The Bureau of Land Management (BLM), the federal agency that manages public lands, does not have a comprehensive list of minerals that fall under the General Mining Act.<sup>1</sup> According to the BLM, it is extremely difficult to create a list of what this law regulates because the definition includes economics and excludes various minerals that have been placed under different laws such as coal, oil, gas, and gravel.

To make matters worse, in 2018, the Trump administration added uranium—which is extracted through hardrock mining—to the nation’s list of “critical” minerals, meaning the commodity is considered “vital to the Nation’s security and economic prosperity.”<sup>2</sup> The addition means companies mining for uranium will benefit from the administration’s so-called “critical minerals strategy”<sup>3</sup> that aims to shortcut environmental reviews and open more public lands for mineral extraction. The administration added uranium to the list without sound science or a clear justification<sup>4</sup> and in direct contradiction to the U.S. Department of Defense’s list of strategic minerals.<sup>5</sup> Fuel minerals have not historically been considered critical minerals, and including

uranium is a major departure from past practice.<sup>6</sup> In addition, experts from both sides of the political spectrum have argued that concern over supply of these minerals is vastly overblown.<sup>7</sup> As a result, the move has prompted outrage from members of Congress,<sup>8</sup> government watchdog organizations,<sup>9</sup> and environmental groups.<sup>10</sup>

Uranium companies have benefited from other Trump administration handouts as well. Dramatic cuts to protected public lands within Bears Ears National Monument reflect lobbying efforts from a uranium company, Energy Fuels Resources, that owned mining claims within the original boundaries. Conveniently, most of these claims now fall outside the newly reduced monument's borders. After pressure from uranium companies, President Trump also created a Nuclear Fuel Working Group, where high-level administration officials are tasked with developing recommendations to ramp up uranium mining and production in the United States.

In catering to the mining industries' requests, the Trump administration is trying to solve a nonexistent problem. In reality, two-thirds of federal land<sup>11</sup> is already open to mining claims, and experts<sup>12</sup> have demonstrated that there is more than enough access to critical minerals to meet current needs. Furthermore, this CAP analysis finds that the corporations that stand to benefit most from the administration's actions are all foreign owned.

Rather than clearing the deck for more mining on U.S. public lands, the administration should overhaul the entire hardrock mining governance structure. From compensating taxpayers and protecting special places to consulting with tribes and making sure mining companies pay to clean up their own mess, there is an urgent need to update the General Mining Act.

# What is hardrock mining?

Mining for hardrock minerals today is nothing like it was when the General Mining Act was first passed in 1872. Gone are the days of settlers with a pickaxe and a mule or prospectors panning for gold. Today, the scope and scale of metals mining has made it the No. 1 toxic polluter in the United States,<sup>13</sup> and there are as many as half a million abandoned mines across the country that threaten our waterways.

While not all minerals are extracted in the same way, they are typically mined either conventionally—in open-pit or strip mines or in underground tunnels and shafts<sup>14</sup>—or via in-situ recovery.<sup>15</sup>

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## Conventional mining

Open-pit mining involves stripping the surface vegetation, soil, and overburden rocks to uncover mineral deposits. This type of mining not only creates a large surface disturbance, but it also generates an overabundance of often-radioactive waste, which must be stored and monitored in perpetuity to limit runoff and water pollution. As a result, open-pit mining is very polluting and involves a large footprint on the land.

Subsurface mines entail a series of tunnels and shafts to reach the ore underground. This type of mining involves less stripping of vegetation and less overburden rock, but the problem with permanent waste persists.

Most minerals governed by this law—such as gold, silver, copper, and uranium—are not mined in their pure forms. Instead, the ore is found in small concentrations in the Earth's crust and must be extracted from the surrounding rock through a highly toxic process. For open-pit and subsurface mining operations, this step involves crushing the rock and drenching it in a chemical bath, often a solution of cyanide,<sup>16</sup> a “rapidly acting, potentially deadly chemical.”<sup>17</sup> Heap leaching<sup>18</sup>—the most common method of extraction for uranium in the United States—is conducted on an imper-

vious holding pad (usually plastic, clay, or asphalt)<sup>19</sup> in an attempt to prevent the acid and the often-radioactive waste rock from escaping into the surrounding environment. The waste product—crushed earth that has been separated from the economically valuable ore—is stored in tailings dams forever.<sup>20</sup> It is estimated that there are 3,500 tailings dams worldwide, and about half are constructed using the waste rock itself, making these dams dangerous and vulnerable to failure.<sup>21</sup> In fact, there have been numerous major incidents and failures of these waste impoundments.<sup>22</sup>

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## In-situ recovery

Some mining, called in-situ recovery (ISR), exercises the entire ore extraction process directly in the ground by pumping a chemical solution into an aquifer and dissolving the target mineral from the surrounding rock.<sup>23</sup> That solution is then pumped back to the surface and processed. ISR operations comprise a growing share of uranium extraction facilities in the United States.<sup>24</sup> Mining companies widely tout ISR as an environmentally sound alternative to open-pit and subsurface mining. The process does not involve removing surface rock and has minimal overburden waste. However, the process is designed to intentionally contaminate an aquifer and risks polluting groundwater for nearby communities.<sup>25</sup> The risks of ISR for groundwater is understudied, but science demonstrates that long-term monitoring is necessary to address spikes in water contamination that happen after a mine is closed.<sup>26</sup> And according to the Nuclear Regulatory Commission, achieving pre-mine groundwaters conditions is impossible.<sup>27</sup>

Notably, the Trump administration has gutted requirements for monitoring water quality after ISR, reducing it from 30 years to six years.<sup>28</sup> President Trump also halted regulations to have current mine operations pay for acid mine drainage cleanup.<sup>29</sup>

Regardless of how the ore is extracted—be it conventional or in situ—the biggest health and environmental threats from mining include acid mine drainage. Rocks—often rich in sulfur—are exposed to air from mining, reacting with oxygen to form sulfuric acid. That acid can leach other pollutants from the rock, including arsenic and other heavy metals.<sup>30</sup> Water percolating through the mine, even after it is closed, will contaminate rivers and streams and carry these toxic elements downstream affecting unsuspecting communities.

# A harmfully outdated law

The General Mining Act was written before society as we know it existed—and it is no longer adequate to regulate the modern mining industry. The law is a vestige of the Wild West, and its continued enforcement results in myriad harmful side effects. The United States and mining practices have evolved, while our mining policy has not.

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## Shortchanging U.S. taxpayers

American taxpayers aren't compensated for the extraction of minerals from the public lands they own, and corporations enjoy a stunningly low cost of doing business in the United States. While they have their own gross inadequacies,<sup>31</sup> the laws and regulations for extracting oil, gas, and coal from public lands are lightyears ahead of those for hardrock mining. For example, oil and gas companies must pay a royalty of 12.5 percent on resources taken from public lands. Hardrock mining companies, by comparison, pay zero percent. Oil and gas companies must pay a rental rate of \$1.50 per acre on their leases, whereas hardrocking mining companies do not pay rent.<sup>32</sup> The U.S. Government Accountability Office (GAO) conservatively estimates that if hardrock mining companies paid a comparable royalty to oil and gas, it would generate \$800 million for the U.S. Department of the Treasury every year.<sup>33</sup>

The laws governing extraction on U.S. public lands have recently received much-needed scrutiny. A large number of the 2020 democratic presidential candidates have called for a moratorium on all new oil and gas leasing on public lands. In 2016, the Obama administration implemented a pause on all new coal leasing until the program could be evaluated and reformed. However, these calls to stop giving away public resources until the public benefit can be weighed have a huge and notable exception. Even as the Trump administration rushes to give away American taxpayer-owned resources to multinational mining conglomerates, no one has called for a cessation of new hardrock mining claims or new mining despite the fact that these laws are the most backward and harmful of all.



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## Enriching foreign corporations

The full scope of foreign companies benefiting from U.S. publicly owned resources without paying a cent in rents or royalties is not fully known. In fact, the government doesn't keep a list of companies operating on public lands,<sup>34</sup> so there is no tracking system for the value of minerals that foreign companies are extracting or the revenues they are taking overseas.<sup>35</sup> Instead, we are left with estimates.

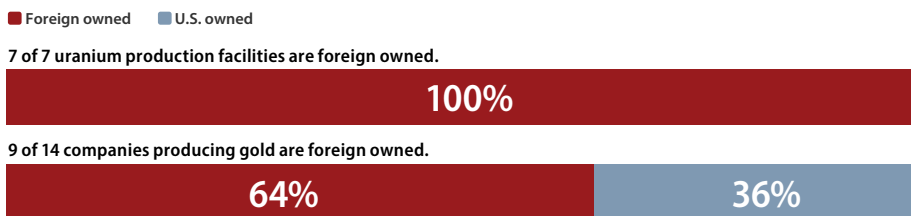
### Why foreign companies?

According to a 2013 news analysis, 75 percent of all mining companies in the world are headquartered in Canada.<sup>36</sup> Canada is a destination for extractive industry expertise but also has lax regulations that allow companies to skirt the disclosures and oversight that might be required in another country.<sup>37</sup> As a result, Canadian mining companies have a shocking track record of environmental degradation and human rights violations.

A new CAP analysis looked at companies mining for uranium in the United States.<sup>38</sup> CAP found that 83 percent of companies mining or exploring for uranium are foreign owned.<sup>39</sup> Additionally, 100 percent of companies that produced uranium from the United States in 2018 are not headquartered in the United States.<sup>40</sup>

A similar trend emerges for gold-mining operations in the United States. According to the 2016 U.S. Geological Survey (USGS) minerals yearbook—the most recent data available as of publication of this report—9 of the 14 companies producing gold in the United States are foreign owned.<sup>41</sup>

**FIGURE 1**  
**The majority of uranium and gold companies operating in the United States are foreign owned**



Sources: According to the U.S. Energy Information Administration, there are seven facilities in Nebraska, Wyoming, and Utah that produced uranium in 2018. See U.S. Energy Information Administration, "Domestic Uranium Production Report - Annual" (Washington: 2019), available at <https://www.eia.gov/uranium/production/annual/>. These facilities are owned by Energy Fuels Resources, Ur-Energy, Cameco, Uranium One, or Peninsula Energy—none of which are based in the United States. Author's calculations use data from U.S. Geological Survey, "2016 Minerals Yearbook: Gold [Advance Release]" (Washington: U.S. Department of the Interior, 2019), available at <https://prd-wret.s3-us-west-2.amazonaws.com/assets/palladium/production/atoms/files/myb1-2016-gold.pdf>.

This analysis addresses uranium and gold mining but, anecdotally, can be extrapolated to other lucrative mineral extraction such as copper and nickel. For example, the company behind the proposed Pebble Mine in Bristol Bay, Alaska—Northern Dynasty—is headquartered in Canada. If built, the copper, gold, and molybdenum mine would be the largest mine in North America.<sup>42</sup> The controversial proposed nickel and copper mine at the doorstep of the Boundary Waters Canoe Area Wilderness in Minnesota is owned by Antofagasta PLC, a Chilean mining company.<sup>43</sup> There are no data about what percentage of these resources are coming from public lands and are therefore royalty free at the expense of American taxpayers. However, it is clear that the outdated mining law continues to benefit foreign companies that take their profits overseas, undermining benefits to the U.S. economy.

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## Polluting tribal nations

Native communities are often hit hardest by pollution from hardrock mining.<sup>44</sup> In fact, a new study from the University of New Mexico found that more than one-quarter of women in the Navajo Nation were exposed to high concentrations of uranium.<sup>45</sup> Infants, who are also born with high levels of uranium exposure, continue to be subjected to this pollution over their first year of life. Recent research also demonstrates that Native Americans living near abandoned hardrock mines are susceptible to hypertension, kidney disease, and other chronic illness.<sup>46</sup> The health disparities are striking, and the threats from both abandoned and new mines disproportionately affects Native communities.

Yet until the 1970s, tribal nations had little to no say over mining operations that would affect their communities.<sup>47</sup> Even today, tribal nations are not meaningfully consulted when siting new mines. Furthermore, many of these communities lack access to the political, scientific, and legal resources needed to protect the health of their communities.<sup>48</sup> And the lack of reclamation funds for the thousands of abandoned uranium and other hardrock mines that dot the West leaves these communities with no capital to address the pollution and the inequities that a history of hardrock mining has wrought.

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## Cutting out land managers

The General Mining Act was designed to help settle the West. It has not been modernized as mining technology and societal values have evolved. For years, federal decision-makers have had little leeway to stop controversial or ill-advised

mining projects because the law puts mining above all other uses of public lands.<sup>49</sup> For example, according to the recently retired forest supervisor for the Coronado National Forest in New Mexico, he was hamstrung by this law in reviewing permits for a major proposed copper mine.<sup>50</sup> His agency spent years preparing documents for the Rosemont mine, and, despite the controversy surrounding the project and his own professional opinion that the mine should not move forward, he felt he could not say no.

A recent court ruling on Rosemont could narrow the scope of what the mining law covers to only the land directly above mineral-rich deposits.<sup>51</sup> The mine operators had applied for a permit for 2,447 acres of public land for dumping waste rock and tailings—the size of about 1,853 football fields. The implications of the ruling remain to be seen, but it could give federal decision-makers more room to veto projects in sensitive areas by limiting the size of operations that involve vast tailings dams and retention ponds. However, the company behind the mine recently filed a new “millsite” claim, which could be a loophole for companies looking to dump their toxic waste on public lands.<sup>52</sup> Regardless, this case highlights how a law that was written for mining operations from 1872 is inadequate to govern the highly mechanized and scaled-up version of mining that takes place today and is insufficient to balance our more advanced understanding of mining’s effects on local communities and the environment.

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## Privatizing public lands

The General Mining Act was written, in essence, to settle the West. As such, anyone could stake a mining claim by driving stakes into the ground or building cairns. That claim could then be patented—or turned into private land—for between \$2.50 and \$5 an acre. Those prices haven’t changed to reflect the market or even keep pace with inflation. Since 1867, taxpayers have handed over more than 3 million acres of public lands to hardrock mining companies for far below market value.<sup>53</sup> And taxpayers have even been forced to buy back land for an astronomical markup. In 1996, for example, a Canadian mining company proposed a mine at the doorstep of Yellowstone National Park. The threat of the mine caused an uproar, and taxpayers paid \$65 million to buy back land that the company had bought for \$5 an acre.<sup>54</sup>

Since 1994, the practice of patenting has been stopped through the annual appropriations process, but the law is still on the books.

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## Poisoning rivers and watersheds

What makes the lack of updated laws and regulations for governing hardrock mining even more egregious is the fact that hardrock mining is the largest toxic polluter in the country.<sup>55</sup> The BLM estimates that there are as many as half a million abandoned mines across the country,<sup>56</sup> which the U.S. Environmental Protection Agency (EPA) projects could cost as much as \$54 billion to clean up.<sup>57</sup> The effects on rivers and waterways in the West is astonishing. In fact, CAP found that by the time that the Colorado River reaches the border with Mexico, it has been exposed to potential pollution and runoff from 20,138 upstream mines—the vast majority of which are abandoned hardrock mines.<sup>58</sup>

Without a reclamation fund or any financial support from mining companies currently operating in the United States, it falls squarely on taxpayers to foot the bill for this cleanup. According to the GAO, taxpayers spent at least \$2.6 billion on reclaiming abandoned hardrock mines on public lands from 1997 to 2008.<sup>59</sup>

Until 2001, hardrock mining companies were not even required to post a bond or provide any level of financial assurance that they would clean up their highly toxic operations, nor were they required to pay into a reclamation fund to help clean up abandoned hardrock mines. This stands in sharp contrast to coal companies that have been paying into an abandoned mine land reclamation program for more than 40 years since the passage of the Surface Mining and Control and Reclamation Act.<sup>60</sup> The general public believes that the mining industry, instead of taxpayers, should pay to clean up abandoned mines. In fact, a poll from 2008 in Montana found that 95 percent of those surveyed support updating the law to require the hardrock mining industry to help foot the bill for cleaning up abandoned mines.<sup>61</sup> The industry profiting off the extraction of these resources should help clean up the legacy of waste that their industry has left behind.

## The Gold King Mine: Monitoring toxic waste in perpetuity

In 2015, the Gold King Mine made national headlines when 3 million gallons of toxic sludge—including lead, arsenic, mercury, and cadmium—poured into a tributary of the Animas River in southwestern Colorado.<sup>62</sup> The EPA had been conducting a routine mine site investigation when acid mine drainage that had been building up breached a barrier. The effects downstream were catastrophic. Six U.S. states and 12 Native American tribes and nations were all affected by the spill.

The EPA was blamed for the breach and has since updated protocols to help prevent future incidents,<sup>63</sup> yet the actual root of this problem received surprisingly little attention. With an estimated 23,000 abandoned mines in Colorado alone<sup>64</sup> and half a million abandoned mines across the United States—which the EPA is tasked with monitoring in perpetuity—it's notable that these breaches and spills don't happen more often. The Gold King disaster demonstrated how these toxic waste sites are ticking time bombs. This type of accident should provide a referendum on what type of risks are worth taking with our water supplies in the name of multinational corporations that are mining on public lands for free.

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### Lacking in transparency

According to the GAO, there is very little aggregated information about hardrock mining in the United States—and what data are available are inconsistent and poor quality.<sup>65</sup> The BLM, U.S. Forest Service, National Park Service, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, and USGS do not keep central records of which acres are available for claim-staking under the General Mining Act and which acres have been withdrawn.<sup>66</sup> There is also no record of the potential quantity of locatable minerals on public lands. Furthermore, there is no aggregated information about which companies are operating in this country and the value of minerals they are extracting from public lands. Without basic information available, the public and taxpayer watchdogs have very few resources for oversight and accountability.

# The pillars of reform

For years, members of Congress have been introducing proposals to bring the laws and regulations governing this highly polluting industry into the 21st century. Most recently, in 2019 Sen. Tom Udall (D-NM) and Rep. Raúl Grijalva (D-AZ) have introduced complementary bills in the U.S. Senate and House of Representatives to overhaul the mining governance structure. Any reform package must include the following key components.

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## Require a royalty on par with other extractive industries

To level the playing field with other extractive industries and to ensure that taxpayers are receiving a return on publicly owned resources, a royalty of at least 12.5 percent must be assessed on the value of hardrock minerals. Given that a significant percentage of hardrock mining—and the vast majority of both uranium and gold mining—is conducted by multinational corporations that are not headquartered in the United States, it's even more critical that these companies are compensating taxpayers for the resources they are mining.

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## Permanently end the practice of patenting

While the practice of patenting has been halted every year since 1994 through the appropriations process, there is a continued risk that this temporary Band-Aid could be ripped off, opening a floodgate of patenting claims. A more permanent solution is necessary, and patenting should be ended in law for good.

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## Ensure cultural, iconic, and ecologically sensitive lands are off-limits for hardrock mining

No one wins when special places are put at risk—not local communities whose health and well-being are at stake; not citizens across the country who want to see public lands protected; and not mining companies who can end up in expensive litigious battles to protect their brand and their bottom line. Land managers must be given the authority to deny permits where mining simply doesn't make sense. To complement this protection, new legislation should create a fast track for withdrawing lands that are deemed culturally and ecologically sensitive or otherwise critically important to local communities where mining would degrade the value of the land and affect human health.

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## Establish meaningful bonding requirements and set standards for reclamation

Company-posted bonds are often insufficient to cover cleanup costs, and companies that are currently mining in the United States have not been required to help pay for the legacy of waste from their industry. Companies must post bonds, backed by a third party that will cover not only the full reclamation of their current operations but also the needed eternal monitoring of these sites. Clear and bold standards for this reclamation must be set that give the industry certainty while guaranteeing that the land will be returned to its natural state and that funds will exist to address acid mine drainage and other threats to watersheds that are inextricably linked with hardrock mining.

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## Require mining companies to help pay for abandoned mine cleanup

Mining companies that are benefiting from publicly owned resources should also be contributing to the public good. To conduct business in the United States, companies should be required to pay into a reclamation fund—similar to the abandoned mine lands reclamation fund created under the Surface Mining Control and Reclamation Act—to start cleaning up the abandoned mines that dot the West without unduly burdening taxpayers.

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## Require meaningful inspection and enforcement actions

Inspections and enforcement actions on hardrock mining sites must be routine, meaningful, and strict. It only takes one accident to affect millions of people in downstream communities, so the EPA must be empowered to take meaningful actions to prevent catastrophe.

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## Require consultations with the tribes and outline clear guidelines for protest and legal recourse

Tribal nations are disproportionately affected by the toxic legacy of hardrock mining and must be given a meaningful consultation role in mine-permitting processes. Where conflicts exist, a clear path for mitigating effects or denying permits must be established by bringing in tribal consultation as early as possible in the planning process. Furthermore, legal, scientific, and political resources should be made available to tribal nations to protect their citizens and begin to remedy past damages.

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## Collect more data and make them publicly available

Without aggregate information about which acres are available for hardrock mining, the extent of mineral extraction, and which companies are operating where, it is difficult for land managers to understand the full effects of hardrock mining on public resources and to fully quantify the risks and opportunities for taxpayers. This information must be collected and made readily available for both decision-makers and the public.



# Conclusion

A prudent person wouldn't allow any company—foreign or otherwise—to come to their home, take their valuable possessions, destroy their property, and poison their drinking water, then leave without so much as a dime in compensation. Yet that is essentially what the outdated mining law allows to happen on taxpayer-owned public lands.

Without a comprehensive overhaul of the law, the Trump administration will be allowed to continue its prioritization of foreign interests unchecked. And future administrations will have no tools or authority to rein in the mining industry's abuse of public lands. At 147 years and counting, the time for reform is long overdue.

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## About the author

**Nicole Gentile** is the deputy director for Public Lands at the Center for American Progress.

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