

# ENVIRONMENTAL REGULATION OF NEVADA'S MINING INDUSTRY

BY JIM BUTLER, ESQ.

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The numbers that describe the importance and prominence of Nevada's mining industry are familiar: If Nevada were a country, it would be the sixth-largest gold producer in the world. Two-thirds of American-produced gold comes from Nevada. Nevada is also a significant producer of silver, copper, lithium and a long list of nonfuel minerals. The total value of Nevada's mineral production in 2011, was almost \$10 billion. According to the most recent figures, the industry directly employs more than 10,000 people at an average wage of nearly \$90,000 and, in 2011, paid more than \$417 million in state and local taxes.

Mines are major industrial facilities, with the potential to impact the environment through disturbance of land or discharges to air and water, and Nevada's regulatory program reflects the size of the industry. Mines are subject to a long list of federal and state environmental laws and regulations. The Nevada Bureau of Mines and Geology has compiled a 10-page list titled State and Federal Permits Required in Nevada Before Mining or Milling Can Begin.<sup>1</sup> This article will focus on the major laws and permit requirements designed to protect water and air resources and require reclamation of land disturbed by mining, and the federal laws that regulate impacts to land, wildlife and cultural resources.<sup>2</sup>

## Nevada Bureau of Mining Regulation and Reclamation

The primary environmental regulator of Nevada's mining industry is the Bureau of Mining Regulation and Reclamation (BMRR) within the Nevada Division of Environmental Protection (NDEP). BMRR is responsible for administering Nevada's mining laws and regulations, designed primarily to protect the state's water resources, and to require and ensure reclamation of disturbed lands to a productive post-mining land use.

In keeping with the scale of Nevada's mining industry, BMRR administers one of the most sophisticated mining regulatory programs in the nation; it includes administrators, permit writers and enforcement specialists with substantial experience in Nevada mining. BMRR operates through three branches: regulation, closure and reclamation.

BMRR's Regulation Branch has the responsibility of administering water pollution control regulations specific to the mining industry. Every mine must obtain a water pollution control permit, issued by BMRR, prior to the construction of any mining, milling or beneficiation facility. Facilities are not permitted to degrade waters of the state, and mines using chemicals for processing ores are generally required to meet a zero discharge standard. Water pollution control permits are subject to public review and notice requirements, and must be renewed every five years. Permits include ground and surface water monitoring and quarterly reporting requirements. The Regulation Branch conducts regular inspections of mining facilities to confirm that operations are in compliance with permit requirements. Noncompliance can lead to enforcement actions that could include notices of violation, corrective action orders and monetary penalties.

Obtaining a water pollution control permit does not excuse an operator from

obtaining and complying with permits that may be required under federal and state clean water laws. For example, any mining operation that may discharge pollutants to surface water must obtain a National Pollutant Discharge Elimination System (NPDES) permit from the Nevada Bureau of Water Pollution Control and meet applicable water quality standards. Operations that may discharge dredged or fill material into waters of the United States must obtain a permit from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

BMRR does not issue air quality permits. Mines must obtain construction and operating permits from the Nevada Bureau of Air Pollution Control. That bureau also administers the Nevada Mercury Control Program, which imposes technology and permitting requirements on mine process facilities with the potential to emit mercury.

BMRR's Closure Branch has the responsibility of managing the final closure of mine properties, confirming that sites are properly stabilized and will not present a future threat to the environment. Every operator is required to submit a tentative permanent closure plan as part of the application for a water pollution control permit. Operators are encouraged to consider closure options and strategies in the design and construction of mine facilities in order to ensure proper permanent closure. A final permanent closure plan must be submitted to the Closure Branch two years prior to anticipated mine closure. The final closure plan must describe the steps necessary to achieving permanent stabilization of potential environmental contaminants and provide for monitoring that will demonstrate that closure standards and goals are met.

After completion of the activities described in the final closure plan, an operator must submit a final closure report sufficient to demonstrate that all activities have been successfully completed and that mine components have been reclaimed, closed and stabilized to protect the state's waters from potential environmental impact. Only after post-closure monitoring is completed and the operator demonstrates successful closure, will BMRR approve final closure and release the operator from enforcement and

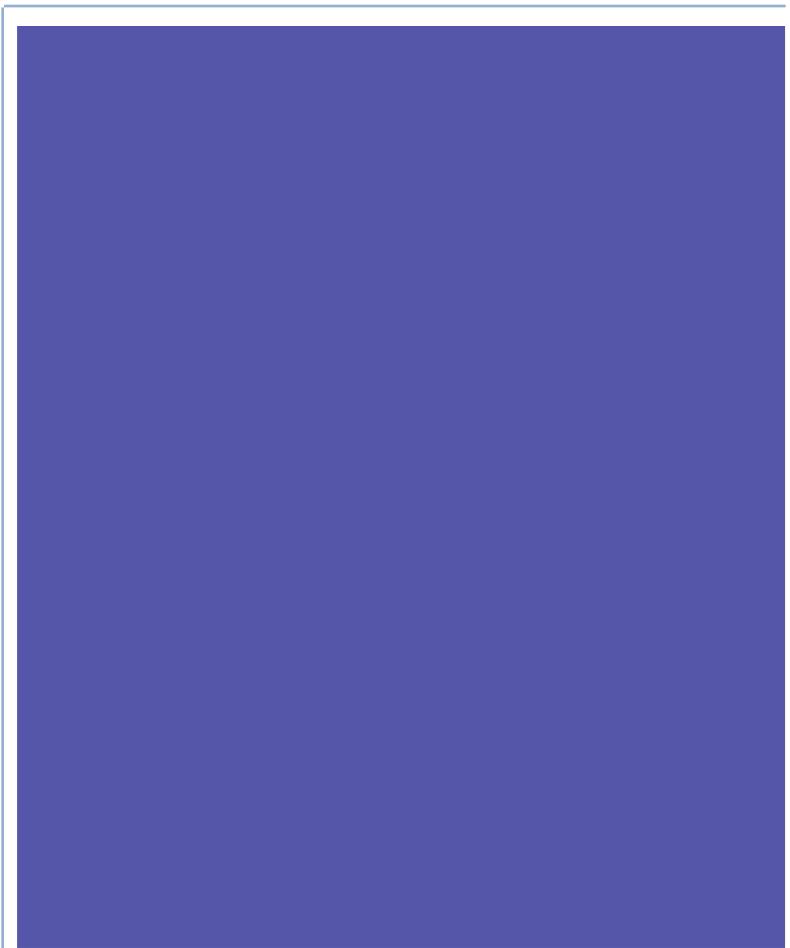
liability under the site's water pollution control permit.

BMRR's Reclamation Branch regulates mining and mineral exploration through the reclamation permit program. At a Nevada mine, reclamation means those measures taken to reshape, re-contour and re-vegetate facilities after mining, and to isolate or prevent potential environmental threats, such as acid rock drainage. Reclamation plans typically require that topsoil or other material capable of supporting vegetation is removed and stockpiled before mining begins, so that it is available to cover mine facilities when mining is completed. A reclamation permit is required for any operation that proposes to create a surface disturbance of more than five acres, or to mine in excess of 36,500 tons of material. The application for a reclamation permit must include a detailed description (including maps and supporting technical data) of the measures that will be employed to reclaim each and every facility to be constructed and operated

during the mine's life. The reclamation plan must demonstrate that land disturbed by mining will be returned to a stable and productive post-mining land use; for most operations in Nevada, that means that lands must be suitable for livestock grazing or for use as a wildlife habitat.

Nevada law requires that an operator must provide a financial guarantee or bond providing enough money for NDEP (or another federal agency for mines on federal lands) to hire a contractor to complete all components of the approved reclamation plan if the operator is unable to complete reclamation due to bankruptcy or other unforeseen circumstances. In addition to reclamation, financial assurance is required, providing the money necessary to manage and stabilize active mine sites if an operator fails. This financial assurance includes money for interim, fluid management and the stabilization of mine process fluids until such time as the reclamation can be completed.

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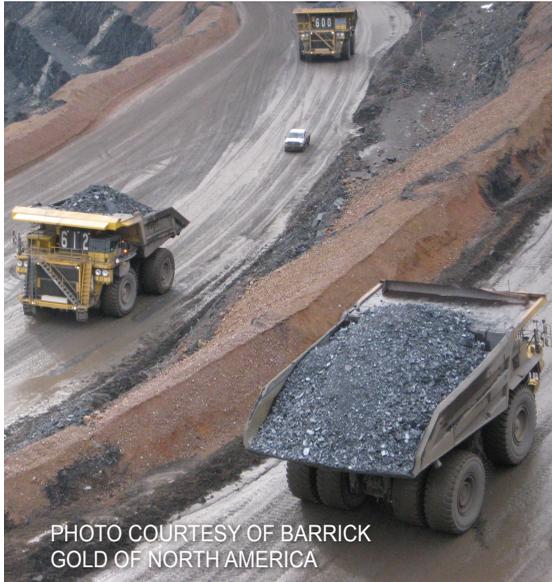


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Financial assurance must be submitted and approved before any mining begins. Review and approval of financial guarantee is probably the most important component of the regulatory program. Historically, some mines in Nevada and other states have been abandoned by operators who were not financially capable of completing reclamation. The financial assurance requirement is designed to protect the environment, and Nevada taxpayers, from the consequences of an operator's financial failure. Financial assurance may be released only after the operator demonstrates that the reclamation activities have been successfully completed.

Nevada has frequently revised its methodology and procedures for reclamation bonding, so that adequate funds will be available for the reclamation of mining sites. Nevada is the only state that has developed and implemented an online worksheet tool that standardizes financial assurance calculation. The Standardized Reclamation Cost Estimator (SRCE) can be downloaded from BMRR's website and includes standardized (and frequently updated) costs for all components of reclamation, including labor, fuel, equipment leasing, seed mixtures, etc. BMRR can accept reclamation cost estimates prepared with SRCE, without further review of those particular cost components. SRCE also facilitates regular

review and updating of financial assurance. In 2012, the total financial assurance held and payable to NDEP, or federal land managers, was almost \$1.9 billion.

### Federal Bureau of Land Management

The federal government owns and manages almost 85 percent of Nevada's land. Almost all mining operations must obtain state permits and approval from the Bureau of Land Management (BLM) which manages most federal land in Nevada. For mining or exploration that disturbs more than five acres of land, BLM requires that an operator submit a plan of operations for review and approval by the agency. BLM's review of the plan of operations requires compliance with the National Environmental Policy Act; this usually means the preparation of an Environmental Assessment or Environmental Impact Statement to be circulated for public comment. The plan of operations also becomes the means for demonstrating compliance with other federal laws, such as the Endangered Species Act and the National Historic Preservation Act. The plan of operations is typically a large compilation of site-specific plans for mining; management of waste rock and tailings; control of storm water and erosion; monitoring of air and water; and reclamation. BLM and NDEP coordinate their review of mine and reclamation plans, along with reviewing and accepting financial assurances, also required by the BLM. Mining on BLM land cannot begin until the operator has obtained BLM approval along with the necessary permits from the state of Nevada or other agencies. ■

1 Available on the bureau's website at [www.nbmjg.unr.edu/](http://www.nbmjg.unr.edu/).

2 This article discusses the regulatory program for metalliferous, nonfuel minerals and does not discuss requirements that govern mining of sand and gravel, gypsum, clay, building stone, crushed stone or other similar minerals.



**JIM BUTLER** is a shareholder in Parsons Behle & Latimer's Environmental, Energy and Natural Resources practice group. Butler has assisted clients with mine permitting and environmental compliance in Nevada since 1987, and has done similar work in more than 10 other states. He is an active member of the State Bar of Nevada and the Utah State Bar Association, and serves as a trustee of the Rocky Mountain Mineral Law Foundation. Butler has also served as chair of the American Bar Association's Mining Committee.

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