



January 2016

HARDROCK MINING

BLM and Forest Service Have Taken Some Actions to Expedite the Mine Plan Review Process but Could Do More

Accessible Version

GAO Highlights

Highlights of [GAO-16-165](#), a report to the Chairman, Committee on Natural Resources, House of Representatives

Why GAO Did This Study

The Mining Law of 1872 encouraged development of the West by opening up federal land to exploration, extraction, and development of hardrock minerals such as gold, silver, and copper. Because mining creates the potential for serious health, safety, and environmental hazards, BLM and the Forest Service have processes for reviewing mine plans submitted by operators to help prevent and mitigate these hazards. A mine plan details the proposed mine's operations, such as the methods for mining and reclaiming the site once operations have concluded.

GAO was asked to assess the mine plan review process. This report examines (1) the number of mine plans BLM and the Forest Service approved from fiscal years 2010 through 2014, among other things, and (2) challenges that have affected the length of time for BLM and the Forest Service to complete the review process, as well as actions these agencies have taken to address these challenges. GAO obtained and analyzed mine plan review data from fiscal years 2010 through 2014, and interviewed agency officials in 23 offices, representing the 12 western states where hardrock mining occurs. The results are not generalizable to all locations conducting mine plan reviews.

What GAO Recommends

GAO recommends, among other things, that the agencies take actions to improve the quality of mine plan submissions and seek additional recovery of the costs associated with conducting mine plan reviews. The agencies generally concurred with these recommendations.

View [GAO-16-165](#). For more information, contact Anne-Marie Fennell, (202) 512-3841 or fennella@gao.gov.

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BLM and Forest Service Have Taken Some Actions to Expedite the Mine Plan Review Process but Could Do More

What GAO Found

From fiscal years 2010 through 2014, the Department of the Interior's Bureau of Land Management (BLM) and the Department of Agriculture's Forest Service approved 68 mine plans of operation. The length of time it took the agencies to approve the mine plans ranged from about 1 month to over 11 years, and averaged approximately 2 years. Of the 68 approved mine plans, 13 had not begun operations as of November 2015. Agency officials attribute this to difficulties mine operators may face, such as obtaining other required federal and state permits.

A Hardrock Gold Mine on BLM-Managed Land in Nevada



Source: GAO. | GAO-16-165

BLM and Forest Service officials GAO interviewed said they experienced 13 key challenges that affected the length of time to review hardrock mine plans. The two most frequently cited were (1) the low quality of information operators provided in their mine plans and (2) the agencies' limited allocation of resources for their hardrock mining programs. To address the low quality of information in mine plans, some BLM and Forest Service officials held pre-mine plan submittal meetings with operators. However, officials do not always do so because BLM does not have specific guidance on how to implement these meetings, and Forest Service does not have any guidance instructing them to do so. Federal standards for internal control state that management should ensure there are adequate means of communicating with, and obtaining information from, external stakeholders that may have a significant impact on the agency achieving its goals. Without taking further actions to improve the quality of mine plan submissions, BLM and the Forest Service may be missing opportunities to help expedite the review process. To address the limited allocation of resources, BLM and Forest Service officials are leveraging existing resources by collaborating with other agencies, among other actions, but neither agency has fully used its authority to collect fees for conducting mine plan reviews as authorized by law. In addition, Forest Service is not authorized to retain these fees, as BLM is, but has not proposed the legislative changes that would allow it to retain fees, as is suggested by Office of Management and Budget guidance. BLM officials said the agency has not prioritized cost recovery for certain types of environmental analyses, and Forest Service officials were unaware of these authorities. By not using these authorities, BLM and Forest Service may be missing opportunities to expedite the mine plan review process.

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Abbreviations

BLM	Bureau of Land Management
EA	environmental assessment
EIS	environmental impact statement
Interior	Department of the Interior
IOAA	Independent Offices Appropriations Act
LR2000	Legacy Rehost 2000
mine plan	mine plan of operation
MLR	Management of Land and Resources

NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System

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January 21, 2016

The Honorable Rob Bishop
Chairman
Committee on Natural Resources
House of Representatives

Dear Mr. Chairman:

The Mining Law of 1872 encouraged development of the West by opening up federal land to exploration, extraction, and development of hardrock minerals such as gold, silver, and copper. Since then, thousands of operators have extracted billions of dollars worth of hardrock minerals, which play an important role in our nation's economy.¹ For example, according to the Department of the Interior (Interior), at least 2.5 million ounces of gold were extracted from federal land in 2014, with an average price of \$1,270 per ounce.² Two federal agencies oversee the extraction of hardrock minerals on federal land—the Bureau of Land Management (BLM) within Interior and the Forest Service within the Department of Agriculture.³ Together, these two agencies manage about 450 million acres of federal land, comprising about 38 percent of the combined land area of the 12 western states where these lands are located.⁴

¹An operator is the person who conducts operations in connection with exploration, mining, and processing hardrock minerals on federal land.

²Department of the Interior, *U.S. Department of the Interior Economic Report, FY 2014* (Washington, D.C.: June 23, 2015).

³The Mining and Minerals Policy Act of 1970 states that it is the policy of the federal government to foster and encourage private enterprise in the development of a stable domestic minerals industry and the orderly and economic development of mineral resources. 30 U.S.C. § 21a (2015). BLM refers to its program to facilitate the extraction of minerals under the General Mining Act as the "Mining Law Administration Program," while the Forest Service refers to its program as the "Locatable Minerals Program." For the purposes of this report, we refer to these generally as hardrock mining programs.

⁴Specifically, BLM manages more than 247 million surface acres, and the Forest Service manages 193 million surface acres. In addition, BLM manages approximately 700 million subsurface acres. The 12 western states include Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Because mining, by its very nature, disturbs the land and creates the potential for serious public health, safety, and environmental hazards, BLM and the Forest Service have processes for overseeing mining operators to help prevent, mitigate, or manage these hazards. The primary method BLM and the Forest Service use to analyze the potentially harmful effects of mining is known as the mine plan review process. Under agency regulations,⁵ a mine operator must submit a plan, known as a mine plan of operation (mine plan),⁶ that details the operational aspects of the mine, such as the mining methods and techniques that will be employed and how the site will be reclaimed once operations are concluded. BLM and the Forest Service typically then conduct an environmental review of the mine plan under the National Environmental Policy Act (NEPA). NEPA requires federal agencies to evaluate the likely environmental effects of a proposed project using an environmental assessment (EA) or, if the project is likely to significantly affect the environment, a more detailed environmental impact statement (EIS).⁷ At the conclusion of the environmental review, the agencies may then approve the mine plan or approve it subject to possible changes or conditions to prevent environmental damage. The agencies may also withhold approval of the mine based on the findings of the environmental analysis; however, BLM and Forest Service officials told us that they were not aware of any instances where this had occurred.

Because an operator cannot generate revenue until the mine plan review process has been completed, and the mine has been constructed, mine operators typically seek to expedite the time it takes to complete the mine plan review process so that they may begin to recoup their costs. These

⁵BLM's hardrock mining regulations are codified at 43 C.F.R. pt. 3800; the Forest Service's hardrock mining regulations are codified at 36 C.F.R. pt. 228.

⁶Mining activities approved under a mine plan are generally referred to as plan-level operations and are the focus of this report. In addition to plan-level operations, BLM regulations generally allow operators to conduct exploration activities on 5 acres or less by filing a description of the proposed activities with BLM, known as a notice. Notice-level operations may begin within 15 days of filing if BLM takes no action. BLM also allows individuals to conduct certain limited mining activities on federal land, such as collecting soil or rock samples with hand tools, without the need to notify BLM if the activities will only result in no or negligible disturbance to the land. BLM refers to these activities as casual use. Under Forest Service regulations, an operator may conduct mining activities that will not cause a significant disturbance of surface resources, without notifying the Forest Service or filing a mine plan.

⁷42 U.S.C. §§ 4321-4347 (2015).

costs may include expenses for exploration to locate and study the mineral deposit, environmental studies at the mine site and surrounding areas, engineering studies to develop a mine plan, and third-party contractors to provide analytical services to the federal agencies to help facilitate their review. For large and complex hardrock mines, it can be very costly to develop a mine and complete the mine plan review process. For example, according to an industry estimate, operators may spend more than \$100 million even before constructing a mine.⁸

You asked us to review the mine plan review process for hardrock mines on federal land.⁹ This report examines (1) the number of mine plans BLM and the Forest Service approved from fiscal years 2010 through 2014, the time it took these agencies to approve these mine plans, and the extent to which these agencies track this process; and (2) the challenges, if any, that have affected the length of time for BLM and the Forest Service to complete the review process, and the actions, if any, these agencies have taken to address these challenges.

To determine the number of mine plans that were approved from fiscal years 2010 through 2014,¹⁰ we examined data from BLM's Legacy Rehost 2000 (LR2000) system and the Forest Service's Locatable Minerals database—automated information systems the agencies use to track key dates and milestones in the mine plan review process. Through interviews with agency officials, our analysis of these data, and comparisons to other publicly available information from federal agencies, we determined that these data from these databases were not sufficiently reliable to measure the time it took these agencies to complete the mine plan review process, as discussed later in the report. Consequently, we

⁸Laura Skaer, Executive Director, Northwest Mining Association, *Effect of the President's FY-2012 Budget and Legislative Proposals for the Bureau of Land Management and the U.S. Forest Service's Energy and Minerals Programs on Private Sector Job creation, Domestic Energy and Minerals Production and Deficit Reduction*, testimony before the House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources, 112th Cong., 1st Sess., April 5, 2011.

⁹This request was originally made by Doc Hastings, former Chairman of the Committee on Natural Resources, House of Representatives.

¹⁰We selected the five most recent fiscal years (2010 through 2014), in consultation with agency officials, to increase the likelihood that agency staff who worked on these projects would still be employed at the agency and have access to records and documentation about these projects.

did not rely on data from LR2000 and the Locatable Minerals database, but instead worked with agency officials to collect data from paper and electronic records maintained by BLM field offices and Forest Service ranger districts to develop a list of mine plans approved from fiscal years 2010 through 2014. To ensure that we reviewed data on comparable projects, we requested data on mine plans that were 5 acres in size or larger, and were plans for new mines or mine expansions.¹¹ We obtained detailed information on dates and milestones associated with these mine plans from BLM and Forest Service field and district officials. We asked BLM and Forest Service officials from the agencies' Washington, D.C., offices to verify the accuracy and completeness of these data and then reviewed these data and compared them to other publicly available sources, such as published NEPA documents. Based on this review, we determined that these data were sufficiently reliable for our purposes of determining the time frames for completing the mine plan review process. Using these data, we calculated and summarized the elapsed days between key milestones in the mine plan review process. We also analyzed the extent to which the data systems used by BLM and the Forest Service reflected practices consistent with federal standards for internal control for tracking and recording events and transactions.¹²

To examine any challenges that have affected the length of time for BLM and the Forest Service to review the mine plans, and any actions officials have taken to address these challenges, we identified and refined a list of 13 challenges based on interviews with agency officials, industry representatives, nongovernmental organizations, academic institutions, and a review of nine studies and reports issued from 1997 through 2014 on the mine plan review process and its associated challenges. We identified these studies and reports with assistance from mining associations, industry consultants, and federal agencies. From our list of mine plans approved from fiscal years 2010 through 2014, we selected 23 BLM and Forest Service locations for additional interviews. We selected locations in each of the 12 western states where hardrock mining occurs. At least one mine plan was reviewed in each of these

¹¹We excluded mine plans for mineral exploration and modifications to previously approved mine plans at the suggestion of academic experts and agency officials, who noted that these are typically different in scope and not comparable to mine plans for new mines and mine expansions.

¹²GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: November 1999).

states in this time frame.¹³ We also selected locations to ensure that the mine plans reviewed by the agency officials varied in the length of time it took for the officials to complete their review. Further, we selected 2 additional locations where officials had conducted mine plan reviews that were particularly difficult or complex, according to agency headquarters officials. Because we selected a nonprobability sample of BLM and Forest Service locations, our findings are not generalizable to all BLM and Forest Service locations conducting reviews of mine plans. The officials we spoke with had worked on about three-fourths of the mine plans that were approved from fiscal years 2010 through 2014. In each of these interviews, we used a standard set of questions that we developed to discuss this list of challenges with officials who review mine plans. We asked these officials to indicate whether they had experienced each of the challenges and, if so, whether the challenge affected the length of time necessary to complete the mine plan review process and the approximate length of time each challenge added to the process. In addition, we asked whether they experienced other challenges not already identified and the actions they had taken to address these challenges. Other challenges mentioned by officials were all related to one of the 13 identified categories of challenges we asked them about, and these responses were included with those results. We then compiled and analyzed information from these interviews and compared this information to applicable laws and regulations, federal standards for internal control, and agency handbooks and guidance to identify ways, if any, in which these challenges could be further addressed.

We conducted this performance audit from July 2014 to January 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Appendix I provides additional information on our scope and methodology.

¹³The 12 states where BLM and Forest Service officials had reviewed a hardrock mine plan between fiscal years 2010 and 2014 were Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Background

This section provides information on the four primary stages of hardrock mining operations, the organizational structure of BLM and the Forest Service, and the agencies' five-step process for reviewing mine plans.

The Primary Stages of Hardrock Mining Operations

Hardrock mining operations consist of four primary stages—exploration, development, production, and reclamation. Some of these stages can take place simultaneously, depending on the characteristics of the operation. Exploration involves staking a mining claim,¹⁴ prospecting, and other steps, such as drilling, to locate and define the extent and value of mineral deposits. The development stage entails completing the mine plan approval process by investigating how mining will impact the environment, determining how to mitigate the risks associated with mineral extraction, and obtaining permits and authorizations associated with the entire life cycle of the mine from federal, state, local, and regulatory entities. After obtaining permits and authorizations, the mine operator constructs the mine infrastructure, such as the necessary buildings, roads, and facilities that will facilitate production. The production stage generally entails drilling, blasting, and hauling ore from mining areas to processing areas. During production, operators crush or grind the ore and apply chemical treatments to extract the minerals of value. The material left after the minerals are extracted—waste rock or tailings (a combination of fluid and rock particles)—is then disposed of, often in a nearby pile or tailings pond. In addition, some operators use a leaching process to recover microscopic hardrock minerals from heaps of crushed ore by percolating solvent (such as cyanide for gold and sulfuric acid for copper) through the heap of ore. Through this heap-leaching process, the minerals adhere to the solvent as it runs through the leach heap and into a collection pond. The mineral-laced solution is then taken from the collection pond to the processing facility, where the valuable minerals are separated from the solution for further refinement.

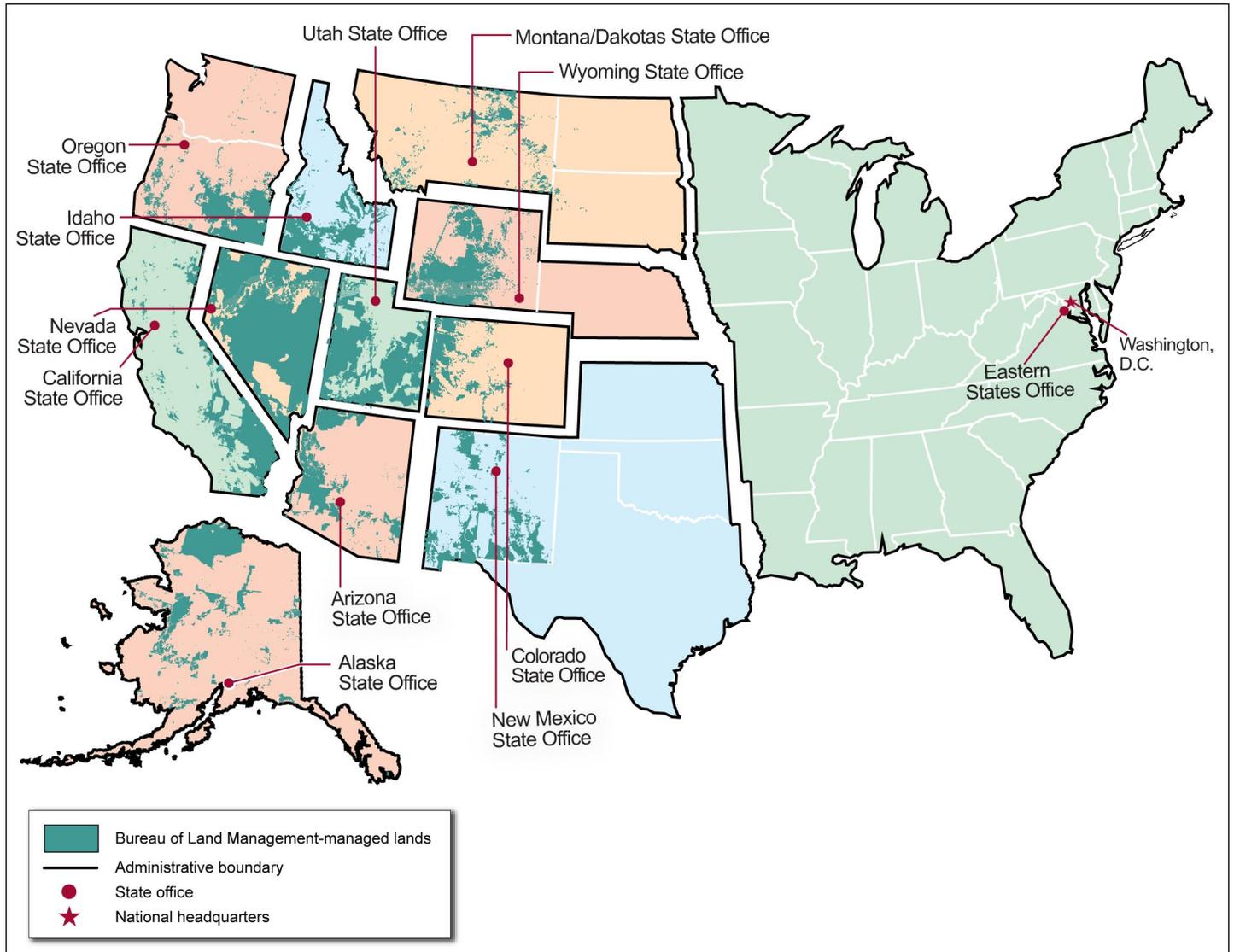
¹⁴Only hardrock minerals continue to be “claimed” under the General Mining Act of 1872. Under U.S. mining laws, minerals are classified as locatable, leasable, or saleable. For the purposes of this report, we use the term “hardrock minerals” as a synonym for “locatable” minerals. Hardrock minerals include those minerals that are not leasable or saleable, for example, copper, lead, zinc, gypsum, magnesium, gold, silver, and uranium. In addition, according to a BLM official, gemstones, exceptional clay, and uncommon varieties of sand, stone, gravel, pumice, pumicite, and cinders are locatable. Leasable minerals include, for example, oil, gas, coal, phosphate minerals, and potash. Saleable minerals include common varieties of sand, stone, and gravel, typically used to construct roads, bridges, dams, and buildings.

Reclamation activities can include reshaping and revegetating disturbed areas; measures to control erosion; and measures to isolate, remove, or control toxic materials.

Organizational Structure of BLM and the Forest Service

BLM manages and oversees hardrock mining on public land through its headquarters office, 12 state offices, 49 district offices, and 126 field offices. Within headquarters, the Energy, Minerals, and Realty Management Directorate is responsible for administering the mining laws and establishing hardrock mining operations policies. The state offices manage BLM programs and land in the geographic areas that generally conform to the boundary of one or more states. Each state office is headed by a state director who reports to the Director of BLM in headquarters, and oversees the implementation of the hardrock mining program by the district and field offices. The district and field offices are responsible for the day-to-day implementation of the hardrock mining program, including reviewing proposed mine plans and inspecting approved mine operations to ensure they comply with laws and regulations. Figure 1 shows BLM-managed land and the location of BLM's headquarters and state offices.

Figure 1: Bureau of Land Management State Offices and Their Administrative Jurisdictions

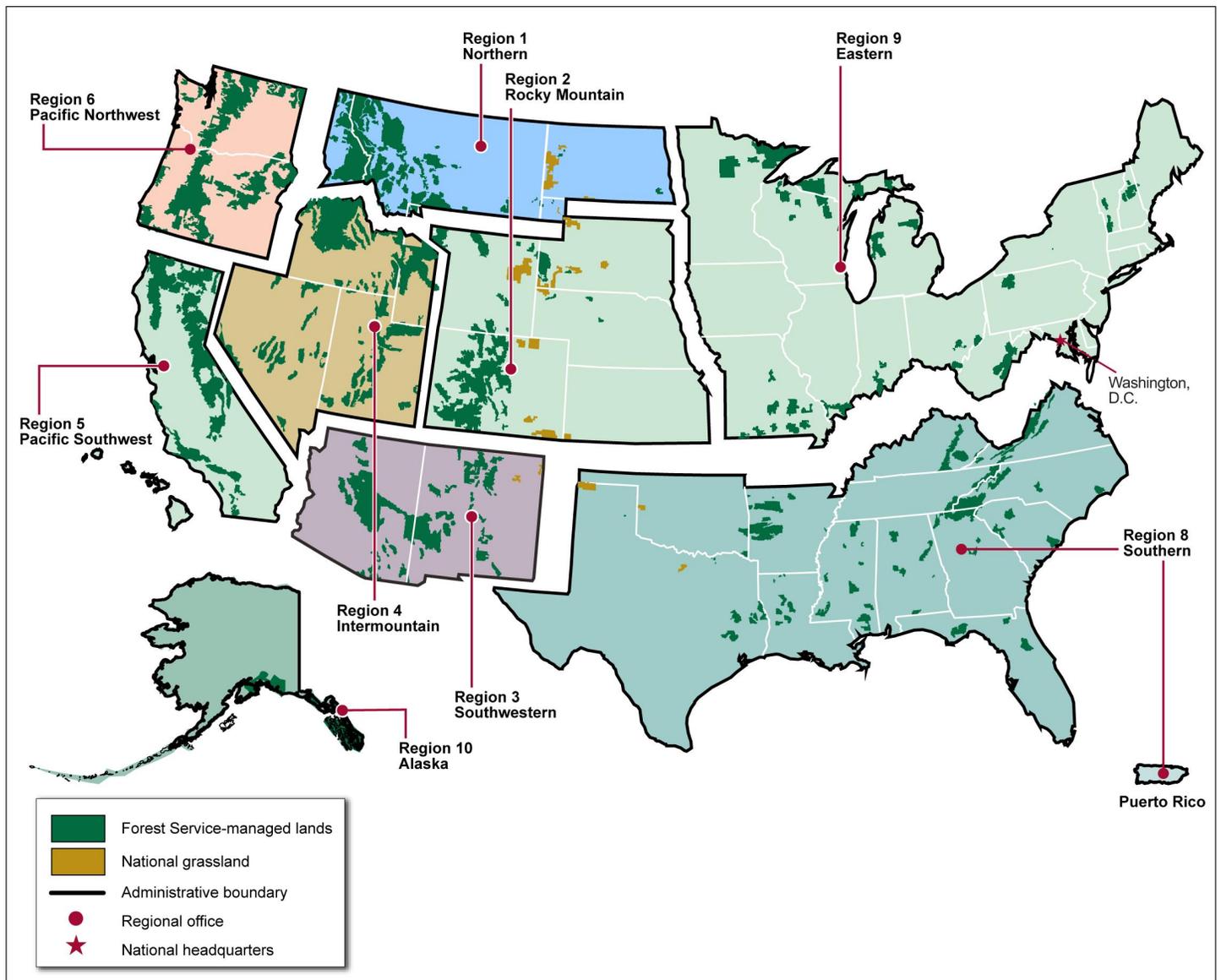


Source: Bureau of Land Management (BLM). | GAO-16-165

The Forest Service oversees hardrock mining operations on the lands it manages through its headquarters office, 9 geographic regions, 174 national forests and grasslands, and its over 600 ranger districts. Within its headquarters office, the Director of Minerals and Geology Management advises the Chief of the Forest Service on issues related to

the extraction of minerals from Forest Service managed lands and conducts reviews of the regions' mineral extraction programs, including their hardrock mineral programs. The Director of Minerals and Geology Management also manages a program known as the Locatable Mineral Administrators program. This program is designed to ensure that the Forest Service employees located in various forest and ranger district offices who are responsible for the day-to-day implementation of the hardrock mineral program have sufficient training and expertise to achieve consistency and quality administering the hardrock minerals program. Under this program, Forest Service employees are to demonstrate an understanding of hardrock mining laws, regulations, and processes to be a certified Locatable Minerals Administrator. Furthermore, only employees who have been certified through this program may implement the hardrock minerals program, for example, by reviewing proposed mine plans and inspecting approved mines to ensure they comply with applicable laws and regulations. Figure 2 shows the location of Forest Service-managed lands and the Forest Service headquarters and regions.

Figure 2: Forest Service Regions and Their Administrative Jurisdictions



Source: Forest Service. | GAO-16-165

Note: The Forest Service does not have a Region 7.

Five-Step Process for Reviewing Mine Plans

BLM and the Forest Service generally follow similar five-step processes for reviewing hardrock mine plans: (1) reviewing the completeness of the proposed plan; (2) conducting an analysis under NEPA of potential impacts to the environment, human health, and cultural and historical

resources; (3) approving of the mine plan; (4) establishing a reclamation bond; and (5) authorizing mine operations.

Review of the Completeness of the Proposed Plan

Under each agency's regulations, before BLM and the Forest Service can perform a substantive evaluation of a mine plan, they must first determine whether the mine plan is complete and has the information specified in the regulations. To do this, the agencies review the mine plan to help determine if it meets regulatory requirements, which call for information on the operator, the proposed mine site, the proposed mine operations, and a description of the existing and proposed means of accessing the mine, among other things.

NEPA Analysis

BLM and the Forest Service analyze the potential impact of the proposed mine on the environment, human health, and cultural resources by conducting an analysis under NEPA. In particular, under NEPA agencies must prepare either an EA or an EIS depending on whether the proposed mine operations are expected to have a potentially significant environmental impact.

The agencies are to prepare an EA to determine whether the proposed project is expected to have a potentially significant environmental impact. According to regulations implementing NEPA, an EA is intended to be a concise public document that, among other things, provides sufficient evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact.¹⁵ It is to include brief discussions of the need for the project, alternatives, the environmental impacts of the proposed project and alternatives, and a listing of individuals and agencies consulted.

The agencies are to prepare an EIS if they determine the proposed project may have significant environmental impacts. An EIS is more detailed than an EA, and NEPA regulations specify that the agency must request comments from the public on the draft EIS. An EIS must, among other things, (1) describe the environment that will be affected, (2) identify alternatives to the proposed project and identify the agency's preferred alternative, and (3) present the environmental impacts of the proposed project and alternatives.

¹⁵40 C.F.R. § 1508.9(a) (2015).

According to BLM and Forest Service officials, while the agencies occasionally develop and produce NEPA documents, they also rely on contractors to complete the EA or EIS. Per NEPA regulations, the agencies are responsible for the content and scope of the NEPA document. For EISs, BLM regulations state that the operator must pay for BLM's internal costs to process a mine plan that requires the preparation of an EIS. These regulations do not require operators to pay for the review of a mine plan that only requires the preparation of an EA. The Forest Service's regulations do not require operators to pay for a review of a mine plan. Instead, the costs associated with conducting the mine plan review must be covered by the Forest Service, unless the mine operator voluntarily chooses to do so.

Approval of Mine Plan

After completing the environmental review, the agency issues a decision on the mine plan. The decision document indicates whether the plan is approved as submitted, approved subject to changes or conditions, or disapproved. However, BLM and Forest Service officials told us that operators generally agree to the agencies' changes to the mine plan that are required to meet all applicable laws and regulations. Consequently, these officials said that they were unaware of an instance where an agency had disapproved a mine plan based on the results of an environmental analysis.

Establishment of a Reclamation Bond

Before a plan may be approved, agency policies require the operator to estimate the costs associated with reclaiming the mine site once the operations have ceased.¹⁶ The operator typically cannot estimate this cost until the mine plan review has sufficiently progressed to determine the size and scope of the mining operations. Once the operator provides the estimate, the agency determines whether it is adequate to fully cover anticipated reclamation costs. If the agency determines that the bond is not adequate, it directs the operator to furnish a new estimate. After the reclamation cost estimate is approved, the operator must furnish the bond prior to commencing operations.

¹⁶Reclamation practices vary by type of operation and by applicable federal, state, and local requirements. However, reclamation generally involves resloping pit walls to minimize erosion, removing or stabilizing buildings and other structures to reduce safety risks, removing mining roads to prevent damage from future traffic, and capping and revegetating leach heaps, tailings, and waste rock piles to control erosion and minimize the potential for contamination of groundwater from acid rock drainage and other potential water pollution problems.

Authorization of Mine Operations

Once the agency has approved the mine plan and the operator furnishes the bond, the agency authorizes operations under its jurisdiction. However, an operator may need to obtain additional permits or authorizations from other federal, state, local, and regulatory entities in order to actually begin operations. For example, operators may need to obtain a permit under Section 404 of the Clean Water Act from the U.S. Army Corps of Engineers for the discharge of dredged or fill material, such as soil from mine excavations into certain waters.

BLM and Forest Service Approved 68 Mine Plans from Fiscal Years 2010 through 2014, Time Frames for Approval Varied, and Tracking Is Limited

From fiscal years 2010 through 2014, BLM approved 66 mine plans, and the Forest Service approved 2 mine plans for hardrock mines that varied by mineral type, mine size, and location. The length of time it took for the agencies to reach the third step of the five-step mine plan review process—the step in which the mine plan is approved—ranged from about 1 month to over 11 years and averaged approximately 2 years. Nineteen percent (13 of 68) of the approved mines are not operating as of November 2015 due to various factors. BLM and the Forest Service’s tracking of the mine plan review process is hindered by limitations with their data systems; as a result, BLM does not have adequate information, and the Forest Service does not have complete information, necessary to track the length of time to complete the mine plan review process.

BLM Approved 66 Plans and Forest Service Approved 2 Plans for Hardrock Mines of Various Types, Sizes, and Locations

From fiscal years 2010 through 2014, BLM approved 66 plans for hardrock mines of various commodity types, sizes, and locations, and the Forest Service approved 2.

Commodity types. Most of the mine plans that BLM and Forest Service received and approved were for gold, clay, and stone, according to agency data, and collectively these commodities accounted for 46 of the 68 total mine plans (68 percent) approved from fiscal year years 2010 through 2014 (see table 1).

Table 1: Types of Commodities Associated with the 68 Hardrock Mine Plans of Operation Approved by the Bureau of Land Management (BLM) and the Forest Service from Fiscal Years 2010 through 2014

Gold	22
Clay	18
Stone	6
Uranium	5

Copper	2
Gemstone	2
Gypsum	2
Iron	2
Unknown	2 ^a
Magnesium	1
Manganese	1
Molybdenum	1
Olivine	1
Shale	1
Thunder eggs ^b	1
Zeolite	1
Total	68

Sources: GAO analysis of BLM and Forest Service data. | GAO-16-165

Note: This table shows the primary commodity associated with the mine plans of operation. However, mines may extract more than one type of commodity. For example, gold mines may extract silver and copper and copper mines may extract gold, silver, and zinc, according to BLM officials.

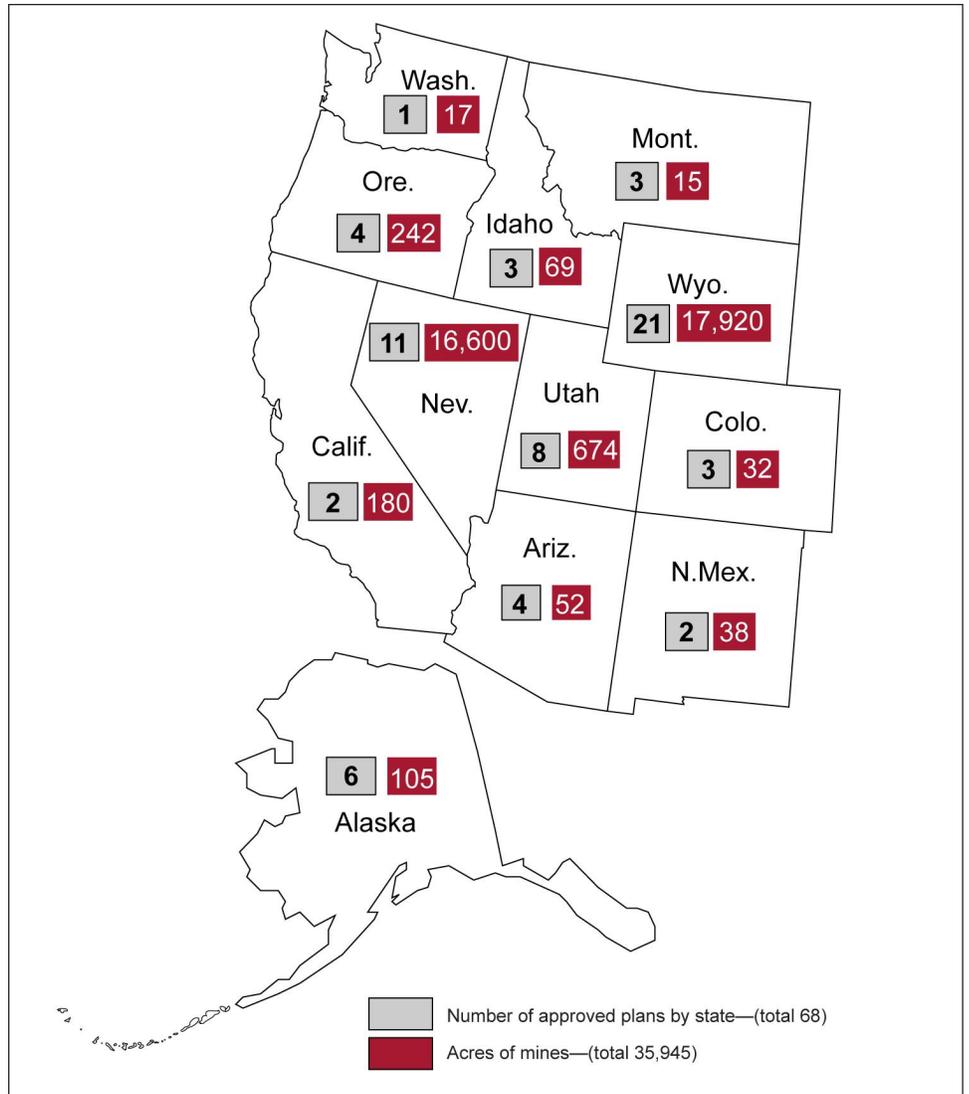
^aAccording to BLM and Forest Service officials, mine operators do not need to specify in the mine plan of operations which hardrock minerals they intend to mine.

^bThunder eggs are ball-shaped masses of rock, ranging from less than 1 inch to several feet in diameter, which are typically cut in half and polished to reveal colorful inner cores.

Mine size. The sizes of the mines proposed in these 68 plans varied greatly, ranging from 5 to 8,470 acres. The average proposed mine was approximately 529 acres, and the 68 mine plans totaled nearly 36,000 acres. Figure 3 shows the total mine acreage by state.

Mine location. All of the mine plans were located in 12 western states—Alaska, Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming. Nearly half were located in Nevada or Wyoming—with 11 and 21 mine plans, respectively. Washington had the fewest—with 1 proposed mine (see fig.3).

Figure 3: Number of Approved Plans and Acres, by State, Associated with the 68 Mine Plans of Operation that Bureau of Land Management (BLM) and Forest Service Approved from Fiscal Years 2010 through 2014

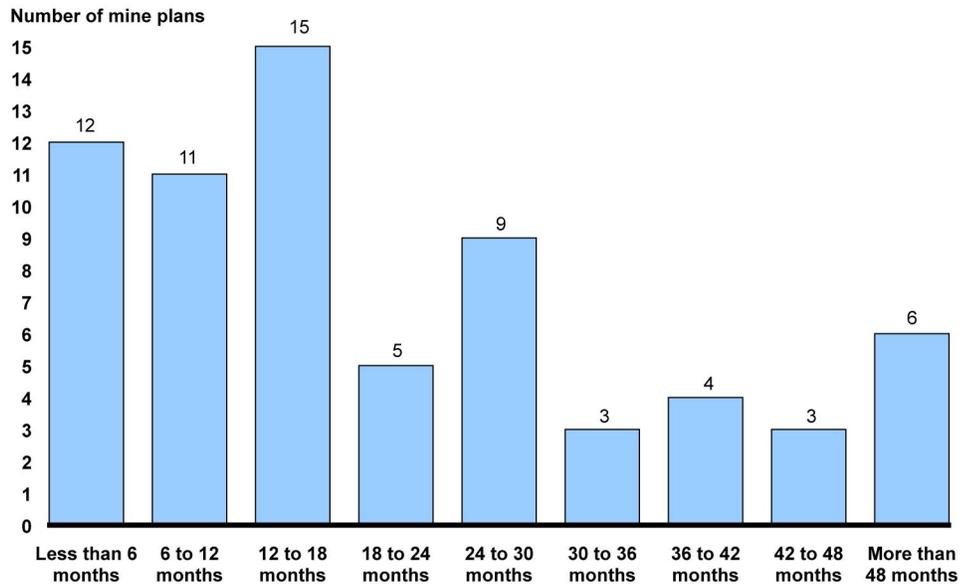


Sources: GAO analysis of Bureau of Land Management and Forest Service data. | GAO-16-165

Time Frames for Approving Plans Ranged from About 1 Month to Over 11 Years and Averaged 2 Years, with 19 Percent of Approved Mines Not Yet Operational Due to Various Factors

The average length of time it took BLM and the Forest Service to complete the first three steps of the mine plan review process and approve 68 mine plans from fiscal years 2010 through 2014 was approximately 2 years. However, the time varied widely, ranging from about 1 month to over 11 years, among the 68 mine plans we reviewed. For example, 1 mine plan took less than 1 month for Forest Service officials in Washington to review and approve. A Forest Service official told us this was, in part, because the mine was located in an area with existing mining operations, and the Forest Service determined that there was no need to conduct additional NEPA analyses. In contrast, another mine plan in Idaho took over 11 years for BLM to review and approve, primarily because of disagreement with the operator over what needed to be included in the mine plan, according to BLM officials. Figure 4 shows the time frames for approving these 68 mine plans.

Figure 4: Time Frames for Approving the 68 Mine Plans of Operations by the Bureau of Land Management (BLM) and the Forest Service from Fiscal Years 2010 through 2014



Sources: GAO analysis of Bureau of Land Management and Forest Service data. | GAO-16-165

Note: Time frames were determined by calculating the number of months between the date the mine plan was submitted to BLM or the Forest Service and the date the plan of operations was approved.

Of the 68 mine plans that BLM and the Forest Service approved over this period, 13 (19 percent) have not begun operations as of November 2015, according to the agencies' data. For 4 of these 13 mines, the operator

had not completed the fourth step of the mine plan review process— establishment of a reclamation bond, which entails furnishing bonds sufficient to fully cover estimated reclamation costs. According to BLM officials, acquiring such bonds can be difficult for some operators, particularly operators with limited financial resources.

For the remaining 9 of the 13 mine plans where operations had not begun as of November 2015, the operator had completed all five steps of the mine plan review process. However, BLM and Forest Service officials said that various factors may explain why these mines have not begun operating. BLM officials noted that, in some instances, an operator may complete the mine plan review process but have difficulties finding investors or securing capital to fund the construction of the mine. In addition, BLM and Forest Service officials stated that mine operators may have met all BLM and Forest Service requirements but may be working to obtain additional permits or approvals from other federal, state, and local entities.¹⁷ For example, mine operators may need to obtain air and water quality permits, business licenses, and utility approvals, among other requirements. Based on a review of NEPA documents, state permitting guides, and studies of hardrock mining requirements, we identified six categories of federal permits and authorizations that mine operators may need to obtain from entities other than BLM and the Forest Service and seven categories of state and local permits and authorizations across 12 western states that may be required depending on the nature of the mining operations, as shown in tables 2 and 3.¹⁸

¹⁷BLM and the Forest Service generally do not centrally track information on operator efforts to obtain additional permits and approvals from other federal, state, or local entities or the reasons why an operator has not yet begun operations.

¹⁸We did not assess the time and cost associated with obtaining each of these categories of permits and authorizations. In some cases, operators may be able to pursue multiple approvals simultaneously.

Table 2: Categories of Federal Permits and Authorizations That Mine Operators May Need to Obtain from Other Federal Agencies to Conduct Mining Operations

Agency	Air quality	Hazardous materials and waste ^a	Operations ^b	Safety ^c	Water quality ^d	Other environmental ^e
U.S. Army Corps of Engineers	No	No	No	No	Yes	No
Bureau of Alcohol, Tobacco, and Firearms	No	No	No	Yes	No	No
U.S. Coast Guard	No	No	Yes	No	No	No
Environmental Protection Agency	Yes	Yes	No	No	Yes	Yes
Federal Aviation Administration	No	No	Yes	Yes	No	No
Federal Communications Commission	No	No	Yes	No	No	No
U.S. Fish and Wildlife Service	No	No	No	No	No	Yes
Department of Labor	No	No	Yes	No	No	No
Mine Safety and Health Administration	No	No	Yes	Yes	No	No
Nuclear Regulatory Commission	No	No	No	Yes	No	No
Department of Transportation	No	Yes	No	No	No	No

Sources: GAO analysis of selected National Environmental Policy Act documents, state permitting guides, and studies of hardrock mining requirements. | GAO-16-165

Notes: Additional permits and authorizations may be needed. Applicability may depend on the nature of the mining operations.

Some requirements included in this table may derive from a federal requirement but be administered at the state or local level. For example, EPA issues National Pollutant Discharge Elimination System (NPDES) permits under the authority of the federal Clean Water Act in some states, such as Idaho, while other states, such as Arizona, issue these permits.

To avoid the potential appearance of redundancy in tables 2 and 3, such requirements are included once as a federal requirement and not as a state requirement. For example, the fact that a mine operator may need to obtain an individual NPDES permit is counted once as a federal requirement and not as a requirement in any state even though, in some cases, it may have to be obtained from the federal government and, in some cases, from a state.

This table excludes additional requirements that federal agencies, as opposed to mine operators, are responsible for. For example, in order for a hardrock mining project to be authorized, federal agencies may need to conduct analyses under the National Environmental Policy Act (NEPA), which may also include consultations under the Endangered Species Act and National Historic Preservation Act. The responsibilities of BLM and the Forest Service under NEPA are discussed in the text of this report; other agencies may also participate in these analyses.

^aAt the federal level, hazardous materials and waste includes requirements related to the management of hazardous waste and underground storage tanks under the Resource Conservation and Recovery Act and a Department of Transportation registration requirement.

^bAt the federal level, operations includes requirements related to air travel, communication, mine and business identification, training, and bridge construction, among others.

^cAt the federal level, safety includes requirements related to safety planning, use and transportation of explosives, and use of radioactive materials, among others.

^dAt the federal level, water quality includes dredge and fill permits, water discharge permits, and underground injection permits, among others.

^eAt the federal level, other environmental includes a Bald Eagle Protection Act requirement and a risk management plan review.

Table 3: Categories of State and Local Permits and Authorizations That Mine Operators May Need to Obtain To Conduct Mining Operations in 12 Western States

State	Air quality	Hazardous materials and waste ^a	Mining	Operations ^b	Safety ^c	Water quality ^d	Other environmental ^e
Alaska	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Arizona	No	Yes	Yes	Yes	Yes	Yes	Yes
California	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Colorado	Yes	No	Yes	Yes	Yes	Yes	No
Idaho	No	No	Yes	Yes	Yes	Yes	No
Montana	No	Yes	Yes	Yes	Yes	Yes	Yes
Nevada	Yes	Yes	Yes	Yes	Yes	Yes	Yes
New Mexico	No	Yes	Yes	Yes	Yes	Yes	Yes
Oregon	No	No	Yes	Yes	Yes	Yes	Yes
Utah	Yes	No	Yes	Yes	Yes	Yes	Yes
Washington	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wyoming	Yes	No	Yes	Yes	Yes	Yes	No

Sources: GAO analysis of selected National Environmental Policy Act documents, state permitting guides, and studies of hardrock mining requirements. | GAO-16-165

Notes: Additional permits and authorization may be needed. Applicability may depend on the nature of the mining operations.

Federal requirements that states have been authorized to implement are not included in this table. For example, EPA issues National Pollutant Discharge Elimination System, or NPDES, permits under the authority of the federal Clean Water Act while other states, such as Arizona, issue these permits.

To avoid the potential appearance of redundancy in tables 2 and 3, such requirements are included once as a federal requirement and not as a requirement in any state. For example, the fact that a mine operator may need to obtain an individual NPDES permit is counted once as a federal requirement and not as a requirement in any state even though in some cases it may have to be obtained from the federal government and in some cases from a state. However, specific federal requirements directly applicable to the states, such as the requirement that states certify that federally permitted or licensed activities which may result in a discharge to navigable waters will comply with applicable effluent limits and water quality standards, are included.

This table excludes additional requirements that state agencies, as opposed to mine operators, are responsible for. For example, in order for a hardrock mining project to be authorized, state agencies may need to conduct analyses under state environmental policy acts or consult with federal agencies under the National Historic Preservation Act.

^aAt the state level, hazardous materials and waste includes requirements related to the transport, storage, and registration of hazardous materials, as well as solid waste disposal, among others.

^bAt the state level operations includes requirements related to notification, land use, utilities, rights of way, water rights, and water storage, among others.

^cAt the state level, safety includes requirements related to dams and explosives, among others.

^dAt the state level, water quality includes state certifications that federally permitted or licensed activities which may result in a discharge to navigable waters will comply with applicable effluent limits and water quality standards, among others.

^eAt the state level, other environmental includes requirements related to species and habitat and cultural resources.

Data Limitations Hinder BLM and Forest Service's Tracking of the Mine Plan Review Process

BLM field and Forest Service ranger district offices maintain records on the mine plans they review and centrally track some data on the time frames related to the mine plan review process in their automated information systems and use these data in agency reports. For example, BLM tracks the length of time required to complete the mine plan review process and reports this information in its annual budget justification. Similarly, the Forest Service tracks and reports in its annual budget justification the number of mineral permits processed in a year, which combines all types of minerals, including hardrock minerals as well as nonhardrock minerals, such as coal, oil and gas.

However, limitations with the data in the systems that BLM and the Forest Service use to compile these reports hinder the agencies' ability to track the mine plan review process. Specifically,

- BLM's LR2000 system was not designed to distinguish between different types of mine plans and cannot adequately track newly proposed mine plans and mine expansions separately from other mine program activities, such as processing requests for mine plan modifications and large-scale exploration permits. In particular, the system does not contain separate codes through which different types of mine program activities could be identified. New mine plans and mine expansions are generally more complex and time-consuming to review than mine plan modifications and mine plans for exploration, according to an agency official. Distinguishing between the length of time needed to review new mine plans and mine expansions versus mine plan modifications and large-scale exploration permits entails making minor modifications to the LR2000 system, which is feasible according to BLM officials.
- The Forest Service's Locatable Mineral database has codes to separately track new mine plans from other types of activities; however, because this system was initially designed as an optional tool to use, the Forest Service did not originally require its staff to use the system. As a result, when we compared data from the Locatable Mineral database against data provided by Forest Service officials, we found the database was incomplete and did not contain records for all mine plans the Forest Service reviewed.¹⁹ We also found that the data

¹⁹While only 2 of the mine plans the Forest Service approved met the criteria for inclusion in our review, it reviewed hundreds of additional, mostly smaller mine plans during this period.

that were available were often missing key information, such as dates for completing certain milestones in the mine plan review process. In recognition of these types of problems, the Forest Service issued a memorandum in February 2014 requiring its staff to use the Locatable Minerals database, according to Forest Service officials. In April 2015, the Forest Service officials noted that gaps in its data remained and reiterated the need to correct these gaps in another memorandum to Forest Service staff. As of November 2015, Forest Service officials told us that they are correcting and updating incomplete information in the database.

Federal standards for internal control state that control activities, such as properly recording information that would be relevant and valuable to management, are an integral part of an entity's planning, implementing, reviewing, and accountability for stewardship of government resources and achieving effective results.²⁰ Without modifying the system to provide adequate information necessary to track the time frames for completing the mine plan review process, BLM is limited in its ability to effectively facilitate the extraction of minerals from federal land and manage the mine plan review process.

BLM and Forest Service Officials in Our Review Experienced 13 Key Challenges That Affected the Time Needed to Review Mine Plans and Have Taken Some Actions but Could Do More

BLM and Forest Service officials we interviewed in the 23 offices (19 BLM and 4 Forest Service) we selected for our review said they have experienced one or more of the 13 key challenges we identified that affected the length of time to review the hardrock mine plans approved from fiscal years 2010 through 2014 (see table 4). BLM and Forest Service officials said they have taken actions to address the two most frequently cited key challenges—the low quality of information operators provided in their mine plans and the agencies' limited allocation of resources for their hardrock mining programs—but the agencies could do more. Of the remaining 11 key challenges, BLM and Forest Service have taken some steps to address them, while others are not necessarily within these agencies' control to affect.

²⁰[GAO/AIMD-00-21.3.1](#).

Table 4: Bureau of Land Management (BLM) and Forest Service Officials in GAO’s Review Said 13 Key Challenges Have Affected the Length of Time to Complete the Hardrock Mine Plan of Operations Review Process

Key challenges	Total number of instances	Range of time officials said this challenge added to the process
Quality of mine plans: The mine plans of operation were incomplete or vague, which required a request for additional information before the review process could continue.	21	1 month to 7 years
Allocation of resources: There were limited resources allocated to the field office, such as number of staff, staff expertise, funding, infrastructure, training, and/or computer technology.	19	A few days to 1 year
Changing mine plans: The operators changed key portions of the mine plans after their initial submission.	16	A few weeks to 6 years
Mine site complexity: The mine site had complex or an unusually high number of potential environmental impacts that were difficult to mitigate, such as impacts on water quality.	15	1 week to 10 years
Quality of contractors’ work: The contractors ^a submitted low-quality work products or failed to make requested changes to draft National Environmental Policy Act (NEPA) ^b documents.	13	1 month to 1 year
Legal issues: The agency had concerns regarding possible litigation or the implications of recent case law, which caused the field office to conduct additional or more extensive NEPA analyses.	11	1 month to 3 years
Quantity and quality of coordination and collaboration: There was limited or ineffective interagency coordination and collaboration ^c during the mine plan review process.	11	2 months to 3 years
Complexity of public comments: The public comments on the mine plan of operation’s NEPA analysis were contentious and technically complex.	8	A few weeks to 6 months
Amount of public comments: There were numerous public comments on the mine plan of operation’s NEPA analysis.	7	1 month to 1 year
Reclamation bond acquisition: The operators had difficulty obtaining bonds for reclamation.	6	2 weeks to 6 months
Balancing competing legal priorities^d: The need to comply with federal laws and regulations has necessitated that agencies balance competing priorities for the land.	5	1 to 2 months
Federal Register notice publication process: The agencies’ processes for publishing notices in the Federal Register were complex and time-consuming.	5	1 month to 1 year
Operator delay requests: The operators requested delays in the mine plan review process after their initial submission.	5	1 month to 1.5 years

Sources: GAO analysis of 23 interviews with BLM and Forest Service officials. | GAO-16-165

Note: Because we selected a nonprobability sample of BLM and Forest Service locations, our findings on challenges that have affected the length of time to review mine plans are not generalizable to all BLM offices and Forest Service ranger districts. In addition, BLM and Forest Service officials in each of the 23 locations we interviewed cited experiencing more than one challenge, so the totals listed in this table add up to more than 23.

^aThese contractors are generally paid by the mining operators but must be selected by the BLM or the Forest Service, according to NEPA regulations.

^b42 U.S.C. §§ 4321-4347 (2015). NEPA requires all federal agencies to evaluate the likely environmental effects of a proposed project using an environmental assessment or, if the project is likely to significantly affect the environment, a more detailed environmental impact statement.

^cBLM and the Forest Service have collaborated with Native American tribes and other federal, local, and state agencies.

^dWe asked the 23 BLM and Forest Service offices that we selected for our review whether they have experienced any contradictions between various policies and guidance that added time to the mine plan review process. However, the responses officials provided were generally related to balancing competing legal priorities rather than contradictions in policies and guidance. As a result, we modified this category to better reflect this information provided.

BLM and Forest Service Have Taken Actions on the Two Most Frequently Cited Challenges but More Could Be Done

BLM and Forest Service have taken some actions to address the two most frequently cited challenges—the low quality of mine plans and limited allocation of resources—but could take additional actions regarding these challenges. Specifically, to address the low quality of mine plans, some BLM and Forest Service officials are holding meetings with operators before they begin developing their mine plans, but the agencies could do more to encourage better quality plans. To address the limited allocation of resources, BLM and Forest Service officials are leveraging existing resources, but the agencies could more fully use their authorities to collect fees and possibly expedite the time it takes to review hardrock mine plans.

BLM and Forest Service Have Taken Some Actions to Address the Low Quality of Mine Plans but Could Do More to Encourage Better Quality Plans

Of the 13 key challenges BLM and Forest Service officials said they experienced, they cited the low quality of information operators provided in their mine plans most frequently. Specifically, in 21 of the 23 locations we contacted (18 BLM and 3 Forest Service), officials said the low quality of the information operators provided in their mine plans has been a challenge during the mine plan review process and has added from 1 month to 7 years to the length of time to review plans. These agencies are responsible for ensuring the mine plan is in compliance with applicable regulations and that the information is accurate and complete. BLM officials said that when they reviewed the completeness of the proposed mine plans—the first step in the mine plan review process—they found that some mine plans were incomplete or that data needed for NEPA analyses was incorrect. When plans were of low quality, some officials said they worked with the mine operators to obtain the necessary additional information, which can require the mine operator to conduct additional analyses. However, these officials said that providing this information can take time, thereby increasing the time it takes to review and approve mine plans. In some cases, these increases can be substantial; for example, according to BLM officials, it took approximately 6 years for a mine operator to provide needed information, such as plans for reclaiming the site and addressing water quality issues. In another

example, Forest Service officials said one operator did not provide additional information at the level of detail needed for the Forest Service to review the mine plan, resulting in a delay of about 18 months. One Forest Service official we contacted attributed the varying mine plan quality, in part, to the size of the mining company. The official said companies that have more resources are more likely to provide higher quality mine plans because they can dedicate these resources to the plan's development.

BLM and Forest Service have taken some actions to address this key challenge. Specifically, in nine locations we contacted, across offices in Alaska, Arizona, Colorado, Nevada, New Mexico, and Wyoming, BLM and Forest Service officials said they have requested that operators voluntarily meet with them and other relevant agencies before the operators begin developing their mine plans. During these pre-mine plan submittal meetings, officials have, for example, provided operators with information on relevant regulations, guidance on the review process and conducting baseline surveys, and examples of mine plans.²¹ In addition, three BLM state offices—Alaska, Arizona, and Nevada—have developed guidance on holding pre-submittal meetings with mine operators and other relevant agencies to help ensure critical information is collected. BLM's surface management handbook states that BLM officials may meet with operators and other agencies before a mine plan is submitted to discuss what information to include in the mine plan and what data may be needed to support a NEPA analysis.²² BLM Alaska, Arizona, and Nevada officials said these pre-submittal meetings have been helpful in reducing the length of the review process. In addition, Nevada BLM state officials said the meetings have helped them improve their workforce planning efforts because they have been better able to determine the staff needed for mine plan reviews and plan accordingly. Furthermore, Nevada BLM staff said the guidance and its implementation throughout the state helps the operators working in multiple locations within the state know what to expect during the permitting process.

²¹Baseline surveys are used to collect data, such as the location of water sources, which are used to develop EISs or EAs required under NEPA.

²²Department of the Interior, Bureau of Land Management, *Surface Management Handbook, BLM Handbook H-3809-1*, Release 3-336 (Washington, D.C.: Sept. 17, 2012).

However, some BLM and Forest Service officials in other states do not always meet with operators prior to their mine plan submittals to help mine operators to improve the quality of information in their mine plans. While BLM's surface management handbook states that BLM officials may meet with operators and other agencies, it neither provides specific guidance on how to implement pre-submittal meetings nor does it instruct BLM offices to notify operators of the option of pre-submittal meetings. As a result, use of these meetings varies among BLM offices. Similar to BLM, the Forest Service has not developed guidance for ranger districts and mining operators on holding pre-plan submittal meetings. According to an official at one Forest Service office, it has held pre-plan submittal meetings, and the official stated this has helped streamline the process. One operator also commented on the advantages of these meetings and said it would have been helpful to know that such meetings were an option to help avoid delays and reduce costs; these costs were roughly \$20,000 to \$30,000 per month, according to the operator. BLM and Forest Service officials leading the hardrock mining programs said they did not think it was necessary to further encourage offices to hold pre-plan submittal meetings, leaving discretion to the regions.

Federal standards for internal control state that management should ensure there are adequate means of communicating with, and obtaining information from, external stakeholders that may have a significant impact on the agency achieving its goals.²³ In addition, internal control activities should provide reasonable assurance that the objectives of the agency are being achieved through effectiveness and efficiency of operations including the use of the entity's resources. Without taking further actions to improve the quality of mine plan submissions by, for example, developing specific guidance to encourage offices to hold pre-mine plan submittal meetings whenever possible, BLM and the Forest Service may be missing opportunities to help expedite the mine plan review process.

BLM and Forest Service Have Taken Some Actions to Address Limited Allocation of Resources but Could Collect More Fees

In 15 BLM and 4 Forest Service locations we contacted, officials said the agencies' limited allocation of resources for their hardrock mining programs has added a few days to 1 year to the mine plan review process. This was the second most frequently cited key challenge. In particular, BLM and Forest Service officials said they do not have enough staff in certain critical positions involved in NEPA analyses, such as

²³[GAO/AIMD-00-21.3.1](#).

archaeologists and biologists. This causes “bottlenecks” in the review process and increases the length of time it takes to review hardrock mine plans, according to officials. BLM and Forest Service officials also said that they have had difficulties recruiting and retaining qualified staff, in part, because private mine operators seek similarly qualified staff and can generally offer higher salaries.

Each agency has taken some actions to address this key challenge. For example, BLM has worked to leverage existing resources by collaborating with other agencies, such as by requesting assistance from U.S. Fish and Wildlife Service employees on a NEPA analysis in one BLM field office. BLM has also undertaken some workforce planning to assess its goals, resource needs, and any existing resource gaps, and the agency has increased salaries for some key positions related to the mine plan review process. BLM also charges operators fees to review EISs and, under the Federal Land Management Policy Act of 1976, can retain those fees to cover the agency’s costs.²⁴ BLM uses these fees to offset the costs associated with reviewing the mine plan for which the fees were recovered, which supplement the hardrock mining program funds it receives through annual appropriations.²⁵

Similarly, Forest Service officials told us they have collaborated with state agencies to leverage existing resources and have provided training for Forest Service staff to more effectively manage the mine plan review process. In addition, some Forest Service officials said they have encouraged some operators to keep their mining activities below 5 acres

²⁴Pub. L. No. 94-579, 90 Stat. 2743 (codified as amended at 43 U.S.C. §§ 1701-1782(2015)).

²⁵However, as we reported in July 2015, BLM had internal control deficiencies with its policies and procedures related to the mining program funds. Specifically, we found that, among other issues, for fiscal year 2013, nonpayroll mining program expenditures showed that BLM did not effectively implement controls to reasonably assure that such transactions were properly recorded and supported. We also found that, at some BLM offices, employees were charging hours of work to the hardrock mining program based on funding allocations or supervisor instructions rather than the actual work performed, as directed by BLM policies. As a result, they might not be fully aware of the mining program’s actual expenditures, which are used to determine their resource needs and gaps. GAO recommended, among other things, that BLM develop internal control activities for regularly monitoring compliance with expenditure-related policies and procedures in the mining law program. Interior concurred with the recommendations. See GAO, *Bureau of Land Management: Improvements Needed in Internal Controls over Mining Law Administration Program Funds*, [GAO-15-562](#) (Washington, D.C.: July 23, 2015).

and under a significant level of disturbance²⁶ so that they are not subject to the mine plan review process. The Forest Service also began conducting regional program reviews in 2013. For these reviews, which occur every 1 to 2 years, staff are requested to perform self-evaluations of their minerals and geology programs, including their staffing and budget planning. Depending on the findings, a program review report may include recommendations on issues, such as the need to develop workforce needs analyses.²⁷ Further, a Forest Service official at a national forest said the forest requested that an operator voluntarily cover the costs associated with preparing and reviewing EISs and hiring contractors to help prepare and review NEPA documents. The operator agreed to do so, which has offset some of Forest Service's costs associated with conducting the NEPA analysis and expedited the mine plan review process, according to a Forest Service official.²⁸

However, neither BLM nor the Forest Service has used all of the tools available to address its resource limitations. Specifically, BLM has not fully used its authority to establish fees to recover some costs associated with conducting mine plan reviews, which could be used to address resource needs. A 1996 opinion by Interior's Solicitor said that BLM has authority to "recover the reasonable processing cost of services that provide a special benefit not shared by the general public to an identifiable recipient and has an obligation to establish fees for all

²⁶According to the Forest Service's policies, the determination of what is significant can come only from a fair, reasonable, and consistent evaluation of proposed mining operations on a case-by-case basis.

²⁷As of December 2015, the Forest Service had reviewed one region, was in the process of reviewing another, and a third region had decided to conduct its own programmatic review.

²⁸According to Forest Service documents, in one instance, such an arrangement was made under the provisions of the Cooperative Funds Act. Cooperative Funds Act of June 30, 1914, Pub. L. No. 63-122, 38 Stat. 415 (codified as amended at 16 U.S.C § 498 (2015)). This act authorizes the Forest Service to accept and use money received as contributions toward cooperative work in forest investigations, or the protection, management, and improvement of the National Forest System.

services for which it has cost recovery authority.”²⁹ Moreover, Interior’s department-wide cost recovery guidance in its accounting handbook states Interior should recover these costs.³⁰ In 2005, Interior finalized a rule that included a schedule of fees, or costs, associated with a wide range of mineral extraction programs, including reviewing mine plans for locatable minerals. This rule established fees for reviewing mine plans that involve conducting an EIS, and the preamble to the rule stated that BLM would later consider issuing a separate rule to propose fees to recover costs associated with reviewing mine plans involving an EA. However, as of December 2015, BLM has neither issued a separate rule nor set a timeline for doing so because officials said they have not made recovering costs for EAs a priority. Consequently, BLM relies on annual appropriations to cover agency costs associated with reviewing mine plans that require only an EA.³¹ By issuing a rule establishing fees associated with reviewing mine plans that involve conducting an EA, BLM may be able to cover some of its costs associated with conducting mine plan reviews, including costs to hire and retain qualified staff, and possibly expedite the time it takes to review hardrock mine plans.

²⁹Department of the Interior, Office of the Solicitor, *BLM’s Authority to Recover Costs of Minerals Documents Processing, M-36987*, Memorandum to the Bureau of Land Management Director (Washington, D.C.: Dec. 5, 1996). The opinion includes discussion of the following three points. First, the Federal Land Policy and Management Act allows BLM to recover the reasonable processing costs of services that provide special benefits not shared by the general public to an identifiable recipient. Second, the Independent Offices Appropriation Act, 1952 (IOAA) expresses the sense of Congress that services provided by federal agencies should be self-sustaining to the extent possible. Pub. L. No. 82-137, 65 Stat. 268 (1951) (codified at 31 U.S.C. § 9701(2015)). Third, the Office of Management and Budget Circular No. A-25 Revised, July 8, 1993, establishes the federal policy on cost recovery that a user charge will be assessed against each identifiable recipient for special benefits derived from federal activities beyond those received by the general public.

³⁰ Department of the Interior, Office of Financial Management, *Accounting Handbook* (Washington, D.C.) accessed September 28, 2015, <https://www.doi.gov/pfm/handbooks/Accounting-Handbook-Index>.

³¹Annual appropriations acts establish an amount of BLM’s appropriation for Management of Land and Resources (MLR) to be used for mining law program operations. The appropriations acts require, however, that the mining claim fees that BLM collects be credited against the MLR appropriation until all MLR funds used for the mining law program are repaid. See, e.g., Department of the Interior, Environment, and Related Agencies Appropriations Act, 2014, Pub. L. No. 113-76, div. G, title I, 128 Stat. 5, 289-90 (2014). To the extent that fees are insufficient to fully offset the MLR appropriation, the LR appropriation absorbs the difference and therefore would partially fund the mining law program. However, for fiscal years 2011 to 2013, mining claim fees have exceeded the MLR appropriation by \$24 to \$28 million per year, and those remaining funds have been returned to the Treasury.

Similar to BLM, the Forest Service relies on annual appropriations for conducting mine plan reviews and does not make use of its authority to collect fees. Specifically, under the Independent Offices Appropriation Act, 1952 (IOAA),³² the Forest Service has the authority to establish a fee structure for mine plan processing activities associated with EISs or EAs, but the agency does not have the authority to retain these fees like BLM does. Further, the IOAA's implementing guidance—Office of Management and Budget Circular A-25—notes that legislative proposals to permit fees to be retained by the agency may be appropriate. However, as of December 2015, Forest Service officials said they had not established a fee structure or made a request to retain these fees because the agency was unaware of these authorities. Without establishing fees for reviewing mine plans and the authority to retain these fees, the Forest Service may be missing opportunities to leverage additional revenue to bolster its resources to review hardrock mine plans.

BLM and the Forest Service Took Some Steps to Address Five Key Challenges Affecting the Review Process, but the Remaining Challenges Are Not Necessarily Within the Agencies' Control

BLM and Forest Service officials we interviewed said they took various steps to address 5 of the other 11 key challenges we identified that have affected the length of time to review the hardrock mine plans approved from fiscal years 2010 through 2014. The remaining 6 challenges are not necessarily within the agencies' control to affect.

Agency officials told us they took some steps to help address the following five key challenges:

- **Changing mine plans:** Officials in 14 BLM and 2 Forest Service locations said operators changing mine plans that are already under review has been a key challenge, adding a few weeks to 6 years to the review process. For example, according to BLM officials, operators have substantially increased the size or scope of the proposed mine or relocated the mine boundaries, roads, and other facilities after the mine plans had been submitted, and the agency had started the review process. In one instance, the operator decided to expand the mine from 5 to 18 acres after surveys conducted to inform NEPA analyses for the mine plan had been completed. As a result, these surveys had to be redone to incorporate the characteristics of

³²The Independent Offices Appropriation Act (IOAA), 1952, as amended, establishes the sense of Congress that each service or thing provided by a federal agency is to be self-sustaining to the extent possible. 31 U.S.C. § 9701 (2015).

the additional acreage, which added approximately 6 months to the review in this instance, according to BLM officials. Similarly, Forest Service officials noted that changing mine plans can add up to 2 months to mine plan reviews, depending on whether the changes require officials to revise completed analyses and reports, the availability of Forest Service officials, and the number of other mine plans that were awaiting review at the time of the change. To help address this key challenge, for example, some BLM officials we spoke to said they have worked with operators to identify a larger area of land to include in their mine plan submission in the event they later decide to expand their mining operations.

- **Quality of contractor's work:** Officials in 11 BLM and 2 Forest Service locations said the quality of work performed by some mine operators' contractors has been a key challenge and has added 1 month to 1 year to the review process. For example, some Forest Service officials said the quality of work performed by contractors that mine operators paid to help conduct work needed for NEPA analyses of mine plans has been poor and resulted in all of the analysis needing to be rewritten. In addition, some BLM officials said that contractors hired by the operator to prepare information for a mine plan of operation have submitted out-of-date information. For example, one operator's contractor submitted information that was 20 years old and did not account for changes that had occurred to the landscape, such as those caused by wildfires. To help address this key challenge, some BLM officials told us that they have provided a list of contractors with good reputations and an apparent understanding of the mine permitting process for mine operations, which helped improve the mine plan quality and expedite the review process.³³ Specifically, one BLM official said they do not have to ask these contractors multiple times for additional information, which reduces the amount of time they need to spend working with the contractors to finalize their NEPA or cultural resource analyses.
- **Quantity and quality of coordination and collaboration:** Officials in 9 BLM and 2 Forest Service locations said coordination and collaboration have been limited in both quantity and quality and has resulted in adding from 2 months to 3 years to the review process. BLM and Forest Service need to coordinate and collaborate with other federal agencies, state agencies, and Native American tribes on

³³The agency is required to select the contractor for preparing an EIS, but it is not required to select the contractor for preparing an EA. However, officials noted challenges associated with some contractors it selected, and some it did not.

issues such as assessing impacts to water quality, wildlife, and cultural resources. However, BLM and Forest Service officials said it can be difficult to do. For example, Forest Service officials said a federal agency delayed the review process for one mine plan because the federal agency did not provide the necessary data in a timely fashion. As a result, Forest Service officials had to redo some analyses needed for the mine plan's EIS, which added time to the review process. To help address this key challenge, some officials said they have developed memorandums of agreement with state agencies, are holding regular meetings with these state agencies, as well as operators, and communicating and consulting with tribes. For example, BLM developed an agreement in November 2003 with the Wyoming Department of Environmental Quality to, among other things, foster federal state coordination and prevent unnecessary administrative delay while managing public lands during mining and exploration. According to BLM officials, this agreement has helped reduce duplication of agency efforts and prioritize agency work related to mine plan reviews.

- **Balancing competing legal priorities³⁴:** Officials in 4 BLM locations and 1 Forest Service location said balancing competing legal priorities has been a key challenge during the mine plan review process and has added 1 to 2 months to the review process. For example, while the General Mining Act of 1872 grants free and open access to federal lands for hardrock mining,³⁵ other laws direct BLM and the Forest Service to protect the environment on the lands they manage. Specifically, the Federal Land Policy and Management Act requires BLM to prevent the “unnecessary or undue degradation” of public lands³⁶ and federal regulations require the Forest Service to regulate activities to “minimize adverse environmental impacts on National Forest surface resources.”³⁷ As a result, these agencies have had to balance the competing interests of providing access to lands for mining with the need to protect the environment.

³⁴We asked the 23 BLM and Forest Service offices that we selected for our review whether they have experienced any contradictions between various policies and guidance that added time to the mine plan review process. However, the responses officials provided were generally related to balancing competing legal priorities rather than contradictions in policies and guidance. As a result, we modified this category to better reflect this information provided.

³⁵30 U.S.C. § 22 (2015).

³⁶43 U.S.C. § 1732(b) (2015).

³⁷36 C.F.R. § 228.8 (2015).

For example, BLM resource officials disagreed with BLM mining and minerals officials about the environmental effects of a proposed mine on the water quality in a salmon spawning area, and it took approximately 1 month to resolve, according to a BLM official. In addition, a Forest Service official said employees developing land and resource management plans sometimes do not consult with employees who work in the minerals program.³⁸ As a result, this official stated that the land and resource management plans do not always take into consideration the requirements of the mining act, and the management plans need to later be revised and amended to reflect both activities. Forest Service officials told us that, to help address this key challenge, they began to provide annual training in 2000 for district, forest, and regional supervisory officials. According to these officials, this training covers issues such as the mine plan review process and statutory obligations to facilitate mining, and has helped educate employees on the importance of balancing competing priorities for the land.

- **Federal Register notice publication process:** Officials in 4 BLM locations and 1 Forest Service location said the agencies' processes for posting Federal Register notices related to NEPA has been a key challenge during the mine plan review process and has added 1 month to 1 year to the review process. For example, some BLM field office staff said that BLM's process for posting Federal Register notices calls for draft notices to be reviewed at many different levels of the agency, but said the process is unclear about who specifically needs to review the draft notices and how long the review will take.³⁹ To address this key challenge, BLM officials started using Interior's new electronic document tracking system, developed by the U.S. Fish and Wildlife Service, in the summer of 2013. A BLM instruction memorandum published in September 2014 directed that this system be used for Federal Register notices.⁴⁰ These officials said Interior's new system

³⁸Forest Service is required by law to develop a land and resource management plan for each national forest or for groups of forests and to revise each plan at least once every 15 years. These plans spell out how the agency intends to (1) meet its responsibilities to protect the lands and resources that it manages and (2) provide products and services to the public.

³⁹Field office officials said they know they need to send the draft to the Washington Office, but are not sure who in the office reviews the document. Washington Office officials said that, at the time of our review, there is no standard amount of time or process for who reviews each notice because the level of review depends on the type and complexity of each mine plan.

⁴⁰Department of the Interior, Bureau of Land Management, *Guidance on Preparing Federal Register Notices Instruction Memorandum No. 2014-146* (Washington, D.C.: Sept. 23, 2014).

expedites the submission and review process because it automatically inputs dates and allows staff to electronically track their edits and forward reports, and is available to all Interior officials for use. Moreover, they said the system offers some capability to track the status of notice submissions.

The remaining six key challenges are not necessarily within the agencies' control to affect. These key challenges include the following:

- **Mine site complexity:** Officials in 13 BLM and 2 Forest Service locations said the complexity of some mine sites has been a key challenge during the mine plan review process and has added 1 week to 10 years to the review process. For example, BLM officials said mine plans that involve land where various cultural resources can be found, such as dinosaur fossils or Native American artifacts, can be challenging to review because of the need to ensure the resources are preserved before the land is disturbed. Some Forest Service officials said environmental complexities, such as the proximity of threatened or endangered species, have made it challenging to review mine plans because of the importance of ensuring these species will not likely be affected by the operations. In one instance, BLM officials said it took approximately 2 weeks to assess whether raptor habitat would be affected by the mine site location and then to develop a mitigation plan to address the potential effects. In contrast, it took approximately 10 years for Forest Service to resolve an issue related to a mine site located in a wilderness area that is habitat for threatened and endangered species, such as the grizzly bear and bull trout. As a result, an extensive analysis for the EIS had to be completed, which added time to the process.
- **Legal issues:** Officials in 8 BLM and 3 Forest Service locations said legal issues have been challenging and have added 1 month to 3 years to the review process. Both BLM and Forest Service officials said that concerns regarding possible litigation or the implications of case law have prompted them to conduct additional or more extensive NEPA analyses during the mine plan review process. For example, some Forest Service officials said that to help avoid potential legal issues, they conducted additional analyses because of the presence of threatened or endangered species.
- **Complexity of public comments:** Officials in 6 BLM and 2 Forest Service locations said that the complexity of public comments has been a key challenge that has added a few weeks to 6 months to the mine plan review process. For example, some BLM officials said addressing comments during the NEPA process regarding issues

such as the mine's potential impact on Native American resources or on air quality can add from 2 weeks to 3 months.

- **Amount of public comments:** Officials in 4 BLM and 3 Forest Service locations said that the number of public comments has been a key challenge that has added 1 month to 1 year to the review process. For example, some Forest Service officials said some mine plans have received as many as 40,000 public comments during the NEPA process on issues such as the mine's potential impact on wildlife, public health, and traffic.
- **Reclamation bond acquisition:** Officials in 6 BLM locations said acquiring reclamation bonds has been a key challenge and has added 2 weeks to 6 months to the review process. For example, BLM officials said some operators have limited resources to dedicate to reclamation. As a result, some operators have experienced difficulty in getting bonds for reclamation, which has delayed mine plan reviews.
- **Operator delay requests:** Officials in 4 BLM locations and 1 Forest Service location said it has been a key challenge when operators request delays in processing mine plans that are already under review and has added 1 month to 1.5 years to the review process. BLM officials said that mine operators have requested delays because demand—and, subsequently prices—for the minerals associated with the proposed mine decreased to a point that operators considered it too expensive to operate the mine.

Conclusions

Since hardrock minerals play an important role in the U.S. economy, BLM and the Forest Service have to balance the need to protect the environment with the need to make federal lands accessible for mining. These agencies rely on the mine plan review process to balance these competing priorities. BLM and Forest Service officials we interviewed reported experiencing numerous challenges affecting the length of time to complete the mine plan review process and have taken some actions to address certain challenges. However, BLM and Forest Service could take additional actions to address the two most frequently cited challenges—the low quality of mine plans of operations and the limited allocation of resources. Specifically, without taking further actions to improve the quality of mine plan submissions by, for example, developing specific guidance to encourage offices to hold pre-mine plan submittal meetings, BLM and Forest Service offices may be missing opportunities to expedite the review process. In addition, by not fully using their authority to charge fees and, in the case of the Forest Service, by not requesting authority to retain those fees, the agencies may be missing opportunities to potentially bolster their resources to expedite the amount of time it takes to review hardrock mine plans. Finally, because BLM does not have

codes that allow it to track newly proposed mines and mine expansions, BLM does not have adequate information to manage and track the length of time to complete the mine plan review process. Without modifying the system to provide such information, BLM is limited in its ability to effectively oversee the extraction of minerals from federal land and manage the mine plan review process.

Recommendations for Executive Action

To ensure effective oversight, strengthen internal controls, and address challenges associated with the hardrock mine plan review process, we are making two recommendations to the Secretary of Agriculture and three to the Secretary of the Interior. Specifically, we recommend that the Secretary of the Agriculture direct the Chief of the Forest Service to

- take actions to improve the quality of mine plan submissions by, for example, developing guidance for mine operators and agency field officials that instructs them to hold pre-plan submittal meetings whenever possible; and
- issue a rule that establishes a fee structure for hardrock mine plan processing activities and request the authority from the Congress to retain any fees it collects.

In addition, we recommend that the Secretary of the Interior direct the Director of BLM to

- take actions to improve the quality of mine plan submissions by, for example, developing guidance for mine operators and agency field officials that instructs them to hold pre-plan submittal meetings whenever possible;
- issue a rule that assesses fees associated with reviewing hardrock mine plans that involve conducting environmental assessments; and
- create new codes in its LR2000 database distinguishing between different types of mine plans to help track the length of time to complete the mine plan review process.

Agency Comments and Our Evaluation

We provided a draft of this report to the Departments of Agriculture and the Interior for review and comment. The Forest Service (responding on behalf of Agriculture) generally agreed with the findings in the report and indicated that our recommendations are consistent with efforts they have underway or plan to incorporate. (See app. II for the comment letter from the Department of Agriculture). Interior generally agreed with the findings and concurred with two of the recommendations on taking actions to improve the quality of mine plan submissions and creating new codes in

LR2000. Interior partially concurred with the third recommendation on issuing a rule. (See app. III for the comment letter from Interior.) Specifically, we recommended that BLM issue a rule to assess fees associated with reviewing hardrock mine plans that involve conducting environmental assessments. In its response, BLM stated that they agree that additional funds for field staff would generally be helpful and that they will undertake a review of the options to address their resource challenges, including rulemaking and potential legislation. We applaud BLM's commitment to review a range of options to address resource challenges that may have led to increased permitting times. We continue to believe, however, that assessing fees for the review of mine plans that involve conducting environmental assessments is one step that BLM should take to address such challenges. As we noted in the report, BLM had this option under consideration since 2005, when it established fees for reviewing mine plans that involve conducting an environmental impact statement, and that the agency has an obligation to establish fees for all services for which it has cost recovery authority. Interior also provided technical comments, which we incorporated as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Secretaries of Agriculture and the Interior, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or fennella@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found

on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.

Sincerely yours,

A handwritten signature in black ink that reads "Anne-Marie Fennell". The signature is written in a cursive style with a large, looping initial "A".

Anne-Marie Fennell
Director, Natural Resources and Environment

Appendix I: Scope and Methodology

This report examines (1) the number of mine plans the Bureau of Land Management (BLM) and the Forest Service approved from fiscal years 2010 through 2014, the time it took these agencies to complete the mine plan review process, and the extent to which these agencies track this process; and (2) the challenges, if any, that have affected the length of time for BLM and the Forest Service to complete the review process, and the actions, if any, these agencies have taken to address these challenges.

To determine the number of mine plans that were approved from fiscal years 2010 through 2014,¹ we examined data from BLM's Legacy Rehost 2000 (LR2000) system and the Forest Service's Locatable Minerals database—automated information systems the agencies use to track key dates and milestones in the mine plan review process. We conducted interviews with BLM and Forest Service officials familiar with these data systems to learn how these data are generated and maintained. Based on our analysis of these data, and comparisons to other publicly available information from federal agencies, we determined that these data from these databases were not sufficiently reliable to measure the time it took these agencies to complete the mine plan review process. Consequently, we worked with agency officials to collect data from BLM field offices and Forest Service ranger districts to develop a list of mine plans approved from fiscal years 2010 through 2014.

To ensure that we reviewed data on comparable projects, we requested data on mine plans that were 5 acres in size or larger and were plans for new mines or mine expansions. We obtained detailed information on dates and milestones associated with these mine plans from BLM and Forest Service district and field officials. We asked BLM and Forest Service officials from the agencies' Washington, D.C., offices to verify the accuracy and completeness of these data. We also compared these data to other publicly available sources, such as published National Environmental Policy Act documents. Based on this review, we determined that these data were sufficiently reliable for our purposes of determining the time frames for completing the mine plan review process. Using these data, we summarized descriptive information about the mine

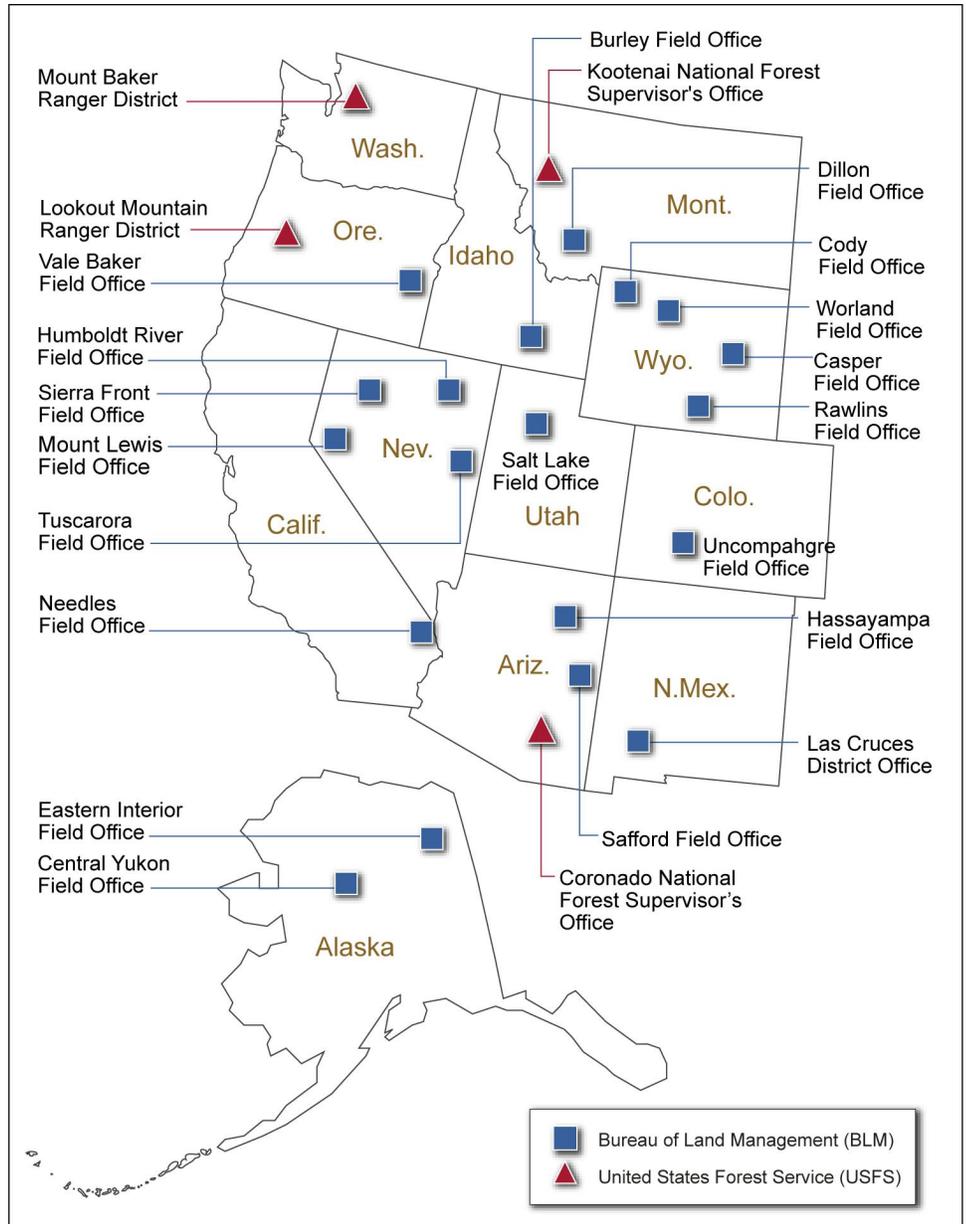
¹We selected the five most recent fiscal years (2010 through 2014), in consultation with agency officials to increase the likelihood that agency staff who worked on these projects would still be employed at the agency and have access to records and documentation about these projects.

plans, such as mine location, number of acres of land disturbed, and the commodity the operator intended to mine. We also calculated and summarized the elapsed days between key milestones in the mine plan review process and the number of approved mine plans that had not begun operations. We also analyzed the extent to which the data systems used by BLM and the Forest Service reflected practices consistent with federal standards for internal control for tracking and recording events and transactions.

To examine any challenges that have affected the length of time for BLM and the Forest Service to review the mine plans, and any actions officials have taken to address these challenges, we identified a list of challenges based on interviews with agency officials, industry representatives, nongovernmental organizations, an academic institution, and a review of nine studies and reports issued from 1997 through 2014 on the mine plan review process and its associated challenges. We identified these studies and reports with assistance from mining associations, industry consultants, and federal agencies. We then categorized and refined this list into 13 key challenges. From our list of mine plans approved from fiscal years 2010 through 2014, we selected 19 BLM and 4 Forest Service locations for additional interviews to ascertain the extent to which these challenges affected the time it took to review mine plans of operations. The Forest Service locations included the only 2 that were part of our list of mine plans approved from fiscal years 2010 through 2014 and 2 additional locations where officials had conducted mine plan reviews that were particularly difficult or complex, according to a senior Forest Service official. We selected locations in each of the 12 western states where hardrock mining occurs. At least one mine plan was reviewed in each of these states in this time frame.² We also selected locations to ensure that the mine plans reviewed by the agency officials varied in the length of time it took for the officials to complete their review. Based on these criteria, we selected 23 BLM and Forest Service locations for additional interviews, as shown in figure 5.

²The 12 states where BLM and Forest Service officials had reviewed a hardrock mine plan from fiscal years 2010 through 2014 were Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Figure 5: Bureau of Land Management (BLM) and Forest Service Office Locations Where GAO Conducted Interviews in May and June 2015.



Sources: GAO; Map Resources (map). | GAO-16-165

Because we selected a nonprobability sample of BLM and Forest Service locations, our findings on challenges that have affected the length of time to review mine plans are not generalizable to all BLM offices and Forest Service ranger districts. The officials we spoke with during these reviews had worked on approximately 74 percent of the mine plans that were approved from fiscal years 2010 through 2014. In each of these interviews, we used a standard set of questions that we developed to discuss this list of challenges with officials who review mine plans. We asked these officials to indicate whether they had experienced each of the challenges and, if so, whether the challenge affected the length of time necessary to complete the mine plan review process and the approximate length of time each challenge added to the process. In addition, we asked whether they experienced other challenges not already identified, as well as the actions they had taken to address these challenges. We then compiled and analyzed the information from these interviews and compared this information to applicable laws and regulations, federal standards for internal control, and agency handbooks and guidance to determine what ways, if any, these challenges could be further addressed.

We conducted this performance audit from July 2014 to January 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Comments from the Department of Agriculture



United States
Department of
Agriculture

Forest
Service

Washington Office

1400 Independence Avenue, SW
Washington, DC 20250

File Code: 1420-2890
Date: DEC 28 2015

Ms. Anne-Marie Fennell
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Fennell:

The United States Department of Agriculture appreciates the opportunity to respond to the U.S. Government Accountability Office (GAO) draft report, "Hardrock Mining: BLM and Forest Service Have Taken Some Actions to Expedite the Mine Plan Review Process, but Could Do More, (GAO-16-165)." The USDA generally agrees with the findings in the GAO draft report.

Timely and accurate mine plan processing is a critical part of how the Forest Service ensures prompt public service. The GAO's recommendations for improving how we could expedite the mine plan review process are consistent with our continued efforts to apply our multiple-use mandates to meet the Forest Service mission. We continue to provide training opportunities at all Forest Service levels in the proper administration and approval of mining plans. As the GAO recommended in their report, the Forest Service will incorporate a pre-plan submittal meetings requirement in the revision of our regulations at 36 CFR 228 Subpart A, Locatable Minerals. We will also continue to seek legal guidance from the Office of General Counsel in exploring our authority to promulgate a rule establishing a fee structure for hardrock mine plan processing activities and request the authority from Congress to retain any fees the Forest Service collects.

Thank you again for the opportunity to review the draft report. If you have any questions, please contact Thelma Strong, Chief Financial Officer, at 202-205-0429 or tstrong@fs.fed.us.

Sincerely,


FOR THOMAS V. TIDWELL
Chief



Caring for the Land and Serving People

Printed on Recycled Paper



Appendix III: Comments from the Department of the Interior



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

JAN 12 2016

Ms. Anne-Marie Fennell
Director
Natural Resource and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Fennell:

Thank you for the opportunity to review and comment on the Government Accountability Office (GAO) draft report entitled, *Hardrock Mining: BLM and Forest Service Have Taken Some Actions to Expedite the Mine Plan Review Process but Could Do More* (GAO-16-165). The Department of the Interior appreciates the GAO's efforts to review the Bureau of Land Management's (BLM) permitting process for the Mining Law Administration Program (MLAP).

The MLAP plan review process is an essential and critical first step to ensuring the responsible and safe development of hard rock mineral resources on public lands, while maintaining the BLM's mission of multiple use and sustained yield. The BLM appreciates that the GAO recognized the complexity of the permitting process by identifying 13 key challenges that affect the duration of plan review and processing; several of which lay outside of the BLM's control. The BLM remains committed to ensuring the plan review process remains efficient while also completing a thorough review that protects important natural resources and ensures public health and safety.

The GAO issued three recommendations in response to its overall findings. We generally agree with the findings; however, we only partially agree with one of the three recommendations. Below is a summary of BLM's response to the recommendations and the actions planned to implement the recommendations.

Recommendation 1: *Take actions to improve the quality of mine plan submissions by, for example, developing guidance for mine operators and agency field officials that instruct them to hold pre-plan submittal meetings whenever possible.*

The BLM concurs with this recommendation. The BLM believes that pre-plan submittal meetings are important and agrees that they may help prevent delays in the permitting process. The BLM also believes that these meetings may help the BLM establish and maintain effective communication with operators at all stages of the process and during operations. It should be noted that currently, pre-plan submittal meetings are voluntary on the part of the operator. Also, pre-plan submittal meetings are contingent upon the BLM either being aware of the desire for a future operation that an operator has planned, or of a plan that is developed well enough at the pre-submittal phase to benefit from a discussion with BLM employees.

By Instruction Memorandum, the BLM will revise the appropriate section of BLM Handbook H-3809-1, "Surface Management," to advise BLM employees to encourage operators to request pre-plan submittal meetings, and require the BLM to conduct these pre-plan submittal meetings when possible and when desired by the operator. The BLM will include general guidelines and will encourage each state office to create state specific guidelines that will better meet the needs of the mining industry in each state.

Recommendation 2: *Issue a rule that assesses fees associated with reviewing hardrock mine plans that involve conducting environmental assessments.*

The BLM partially concurs with the recommendation. The GAO's report suggests that BLM's limited resources have led to increased permitting times, and that by assessing fees the BLM would be able to "hire and retain qualified staff." We appreciate GAO's support for increasing funding opportunities for the BLM and agree that additional funds for field staff would generally be helpful. To address this recommendation, the BLM will undertake a review of options to address our resource challenges, including rulemaking and potential legislation. We will report this finding to the GAO and to Congress.

Recommendation 3: *Create new codes in its LR2000 database distinguishing between different types of mine plans to help track the length of time to complete the mine plan review process.*

The BLM concurs with this recommendation. The BLM will develop new LR2000 codes to differentiate between different types of operations.

If you have any questions, please contact Michael D. Nedd, Assistant Director, Energy, Minerals and Realty Management, at 202-208-4201, or LaVanna Stevenson, BLM Audit Liaison Officer, at 202-912-7077.

Sincerely,



James R. Lyons
Deputy Assistant Secretary
Land and Minerals Management

Enclosure (1)
1. Technical Corrections

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Anne-Marie Fennell, (202) 512-3841 or fennella@gao.gov.

Staff Acknowledgments

In addition to the individual above, Elizabeth Erdmann (Assistant Director), Casey L. Brown, Antoinette Capaccio, Keesha Egebrecht, Cindy Gilbert, Armetha Liles, Marcus D. Lee, Alison D. O'Neill, and Heather Salinas made significant contributions to this report.

Appendix V: Accessible Data

Agency Comment Letter

Text of Appendix II: Comments from the Department of Agriculture

Page 1

United States Department of Agriculture(USDA)

Forest Service

1400 Independence Avenue, SW

Washington, DC 20250

File Code: 14202800

Date: DEC 28 2015

Ms. Anne-Marie Fennell

Director, Natural Resources and Environment

U.S. Government Accountability Office

441 G Street. NW

Washington. DC 20548

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Timely and accurate mine plan processing is a critical part of how the Forest Service ensures prompt public service. The GAO's

recommendations for improving how we could expedite the mine plan review process are consistent with our continued efforts to apply our multiple-use mandates to meet the Forest Service Mission. We continue to provide training opportunities at all Forest Service levels in the proper administration and approval of mining plans. As the GAO recommended in their report, the Forest Service will incorporate a pre-plan submittal meetings requirement in the revision of our regulations at 36 CFR 228 Subpart A, Locatable Minerals. We will also continue to seek legal guidance from the Office or General Counsel in exploring our authority to promulgate a rule establishing a fee structure for hardrock mine plan processing activities and request the authority from Congress to retain any fees the Forest Service collects.

Thank you again for the opportunity to review the draft report. If you have any questions, please contact Thelma Strong, Chief Financial Officer, at 202-205-0429 or tstrong@fs.fed.us.

Sincerely,

THOMAS L. TIDWELL

Chief

Text for Appendix III:
Comments from the
Department of the Interior

Page 1

United States Department of the Interior

OFFICE OF THE SECRETARY

Washington, DC 20240

JAN 12 2016

Ms. Anne-Marie Fennell

Director

Natural Resource and Environment

U.S. Government Accountability Office

441 G Street, NW

Washington, DC 20548

Dear Ms. Fennell:

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The MLAP plan review process is an essential and critical first step to ensuring the responsible and safe development of hard rock mineral resources on public lands, while maintaining the BLM's mission of multiple use and sustained yield. The BLM appreciates that the GAO recognized the complexity of the permitting process by identifying 13 key challenges that affect the duration of plan review and processing; several of which lay outside of the BLM's control. The BLM remains committed to ensuring the plan review process remains efficient while also completing a thorough review that protects important natural resources and ensures public health and safety.

The GAO issued three recommendations in response to its overall findings. We generally agree with the findings; however, we only partially agree with one of the three recommendations. Below is a summary of BLM's response to the recommendations and the actions planned to implement the recommendations.

Recommendation 1: Take actions to improve the quality of mine plan submissions by, for example, developing guidance for mine operators and agency field officials that instruct them to hold pre-plan submittal meetings whenever possible.

The BLM concurs with this recommendation. The BLM believes that pre-plan submittal meetings are important and agrees that they may help prevent delays in the permitting process. The BLM also believes that these meetings may help the BLM establish and maintain effective communication with operators at all stages of the process and during

operations. It should be noted that currently, pre-plan submittal meetings are voluntary on the part of the operator. Also, pre-plan submittal meetings are contingent upon the BLM either being aware of the desire for a future operation that an operator has planned, or of a plan that is developed well enough at the pre-submittal phase to benefit from a discussion with BLM employees.

Page 2

By Instruction Memorandum, the BLM will revise the appropriate section of BLM Handbook H-3809-1, "Surface Management," to advise BLM employees to encourage operators to request pre-plan submittal meetings, and require the BLM to conduct these pre-plan submittal meetings when possible and when desired by the operator. The BLM will include general guidelines and will encourage each state office to create state specific guidelines that will better meet the needs of the mining industry in each state.

Recommendation 2: Issue a rule that assesses fees associated with reviewing hardrock mine plans that involve conducting environmental assessments.

The BLM partially concurs with the recommendation. The GAO's report suggests that BLM's limited resources have led to increased permitting times, and that by assessing fees the BLM would be able to "hire and retain qualified staff." We appreciate GAO's support for increasing funding opportunities for the BLM and agree that additional funds for field staff would generally be helpful. To address this recommendation, the BLM will undertake a review of options to address our resource challenges, including rulemaking and potential legislation. We will report this finding to the GAO and to Congress.

Recommendation 3: Create new codes in its LR2000 database distinguishing between different types of mine plans to help track the length of time to complete the mine plan review process.

The BLM concurs with this recommendation. The BLM will develop new LR2000 codes to differentiate between different types of operations.

If you have any questions, please contact Michael D. Nedd, Assistant Director, Energy, Minerals and Realty Management, at 202-208-4201, or La Vanna Stevenson, BLM Audit Liaison Officer, at 202-912-7077.

Sincerely,

James R. Lyons

Deputy Assistant Secretary

Land and Minerals Management

Enclosure (1)

1. Technical Corrections

Data Tables

Data Table for Figure 3: Number of Approved Plans and Acres, by State, Associated with the 68 Mine Plans of Operation that Bureau of Land Management (BLM) and Forest Service Approved from Fiscal Years 2010 through 2014

State	Number of approved plans by state—(total 68)	Acres of mines—(total 35,945)
Wash.	1	17
Ore.	4	242
Idaho	3	69
Mont.	3	15
Wyo.	21	17,920
Calif.	2	180
Nev.	11	16,600
Utah	8	674
Colo.	3	32
Ariz.	4	52
N.Mex.	2	38
Alaska	6	105

Data Table for Figure 4: Time Frames for Approving the 68 Mine Plans of Operations by the Bureau of Land Management (BLM) and the Forest Service from Fiscal Years 2010 through 2014

Months	Number of mine plans
"Less than 6 months"	12
"6 to 12 months"	11
"12 to 18 months"	15
"18 to 24 months"	5

Months	Number of mine plans
"24 to 30 months"	9
"30 to 36 months"	3
"36 to 42 months"	4
"42 to 48 months"	3
"More than 48 months"	6

Data Table for Figure 5: Bureau of Land Management (BLM) and Forest Service Office Locations Where GAO Conducted Interviews in May and June 2015

State	Bureau of Land Management (BLM)
Ore.	Vale Baker Field Office
Nev.	Humboldt River Field Office
Nev.	Sierra Front Field Office
Nev.	Mount Lewis Field Office
Nev.	Tuscarora Field Office
Calif.	Needles Field Office
Alaska	Eastern Field Office
Alaska	Central Yukon Field Office
Ariz.	Safford Field Office
N.Mex.	Las Cruces District Office
Ariz.	Hassayampa Field Office
Colo.	Uncompahgre Field Office
Utah	Salt Lake Field Office
Wyo.	Rawlins Field Office
Wyo.	Casper Field Office
Wyo.	Worland Field Office
Wyo.	Cody Field Office
Mont.	Dillon Field Office
Idaho	Burley Field Office

State	United States Forest Service (USFS)
Wash.	Mount Baker Ranger District
Ore.	Lookout Mountain Ranger District
Mont.	Kootenai National Forest Supervisor's Office
Ariz.	Coronado National Forest Supervisor's Office

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Mineral Resources: Mineral Volume, Value, and Revenue. [GAO-13-45R](#). Washington, D.C.: November 15, 2012.

Uranium Mining: Opportunities Exist to Improve Oversight of Financial Assurances. [GAO-12-544](#). Washington, D.C. May 17, 2012.

Phosphate Mining: Oversight Has Strengthened, but Financial Assurances and Coordination Still Need Improvement. [GAO-12-505](#). Washington, D.C.: May 4, 2012.

Hardrock Mining: BLM Needs to Revise Its Systems for Assessing the Adequacy of Financial Assurances. [GAO-12-189R](#). Washington, D.C.: December 12, 2011.

Abandoned Mines: Information on the Number of Hardrock Mines, Cost of Cleanup, and Value of Financial Assurances. [GAO-11-834T](#). Washington, D.C. July 14, 2011.

Hardrock Mining: Information on State Royalties and the Number of Abandoned Mine Sites and Hazards. [GAO-09-854T](#). Washington, D.C.: July 14, 2009.

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