

SJ Quinney College of Law, University of Utah

Utah Law Digital Commons

Utah Law Faculty Scholarship

Utah Law Scholarship

2022

Comments Submitted in Response to Request for Information to Inform Interagency Working Group on Mining Regulations, Laws, and Permitting

Robert B. Keiter

Jamie Pleune

Heather Tanana

Brigham Daniels

Tim Duane

See next page for additional authors

Follow this and additional works at: <https://dc.law.utah.edu/scholarship>

 Part of the [Energy and Utilities Law Commons](#), [Environmental Law Commons](#), [Indigenous, Indian, and Aboriginal Law Commons](#), and the [Oil, Gas, and Mineral Law Commons](#)

Authors

Robert B. Keiter, Jamie Pleune, Heather Tanana, Brigham Daniels, Tim Duane, and Elisabeth Parker

August 30, 2022

Steve Feldgus
Deputy Assistant Secretary for Land and Minerals Management
U.S. Department of the Interior

Response to Request for Information to Inform Interagency Working Group on Mining
Regulations, Laws, and Permitting

Docket No. DOI-2022-0003; 223D0102DM, DS6CS000OO, DLSN00000.000000, DX.6CS25

Dear Mr. Feldgus,

We write to you today from the Wallace Stegner Center for Land, Resources & the Environment at the University of Utah's S.J. Quinney College of Law.¹ The Stegner Center appreciates the opportunity to provide comments in response to the Request for Information to Inform Interagency Working Group on Mining Regulations, Laws, and Permitting (RFI). Building a resilient supply chain and increasing the domestic supply of strategic minerals is an important step in transitioning to renewable energy. We believe that this transition can proceed without compromising our nation's environmental protections or limiting transparency and engagement with the myriad communities with a stake in mining on our public lands.

The White House Report on Building Resilient Supply Chains defined "a resilient supply chain" as "one that recovers quickly from an unexpected event."² Understanding and mitigating environmental risks is critical to building resilient supply chains. The link between environmental degradation and supply chain risks is becoming increasingly apparent to the international finance community. For example, investment analysts have recognized that "biodiversity loss can lead to resource scarcity, supply chain disruption, increased operational costs, liability risks, or permanent loss of a resource or service, all of which can threaten future business operations."³ In these comments, we proceed from the assumption that expediting production of strategic minerals can and should be premised on the goal of no net reduction in environmental protection, and on a similar no net reduction policy regarding public engagement and intergovernmental cooperation. Our goal is to identify opportunities to improve permitting efficiency without weakening or compromising these core values.

Our comments today are limited in scope and do not address all the issues identified in the Request for Information. We recognize that major mining operations may involve a patchwork of federal, Tribal, state, and private lands. Our comments focus on mining activity

¹ The comments below do not necessarily reflect the opinions of the State of Utah, the University, or the College of Law. Our comments do, however, reflect the considered and coordinated opinions of Stegner Center faculty and staff who possess decades of combined experience on issues involving mining law, public land planning and management, federal Indian law, tribal sovereignty and governance, intergovernmental coordination, and federal permitting issues.

² DEPT. OF COMMERCE ET AL., BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH: 100-DAY REVIEWS UNDER EXECUTIVE ORDER 14017, 7 (June 2021)

³ ANUJ SAUSH & IOANNIS SISKOS, THE CONFERENCE BOARD, BIODIVERSITY LOSS: WHAT DOES IT MEAN FOR YOUR BUSINESS? (2021).

that is likely to occur primarily on federally managed public lands. While our focus is on public lands, some of our recommendations, like development of an interagency permitting team, expanding permitting dashboards, and developing a regulatory and permitting information toolkit could improve permitting for mining projects on non-federal lands and for projects that span multiple jurisdictions.

Questions such as what areas “should be off-limits from mining” require a delicate balancing of legitimate competing land uses. We trust that other stakeholders will speak to specific landscapes. We focus instead on a process for identifying areas with resource conflicts and how to incentivize avoidance of those areas. We suggest strategies to expedite permitting for critical mineral mining without compromising environmental protection. We also suggest a strategy for facilitating and incentivizing “high road” business practices by creating a “fast-track” program for mining operations that voluntarily commit to achieving more stringent environmental standards. This approach would be consistent with Recommendation 2 from the White House Report on Building Resilient Supply Chains,⁴ which encouraged the government to play a more active role in “setting standards and incentivizing high-road business practices.”⁵

While amending the General Mining Law would provide a uniquely powerful tool to affect change and respond to issues identified in the RFI (like shifting from a claim to a leasing system and instituting royalties on minerals produced from public lands), we believe that the statutory reform path involves a long political road. Similarly, while significant changes to the regulations implementing mining laws could produce multiple benefits, we acknowledge that this too may represent a lengthy and difficult path. We also acknowledge the excellent work that others are doing on these important issues.

Our comments focus on potential updates to federal public land planning, management, and environmental reviews that we believe could improve permitting efficiency and be implemented with comparative ease. Using existing legal tools to incentivize appropriate development holds unique promise to advance environmental protection, community engagement, and strategic mineral development. Our recommendations do not preclude the compelling need for statutory or regulatory reform, but neither do they require it.

Our recommendations fall into four broad categories: (1) increasing agency capacity to deal with strategic mineral development and associated issues by ensuring sufficient staff, adequate budgets, and institutional knowledge; (2) using land use planning procedures to facilitate mine permitting without causing unnecessary or undue environmental degradation; and (3) creating a voluntary “fast-track” program with a dedicated inter-agency permit processing team for applicants who voluntarily choose to meet the most stringent applicable performance and mitigation standards; and (4) developing incentives to stabilize the strategic mineral supply chain and ensure that strategic minerals are available for domestic needs.

⁴ WHITE HOUSE, BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH: 100-DAY REVIEWS UNDER EXECUTIVE ORDER 14017, 12 & 14 (June 2021) (recommending practices that support “high road” business practices and describing those as ones that “invest in workers, value sustainability, and drive quality”).

⁵ *Id.* at 14.

I. Increasing Agency Capacity to Deal with Strategic Mineral Development and Associated Issues.

We support efforts to make the process for obtaining federal approvals to mine critical minerals faster and more efficient, provided that expedience does not displace analytical rigor, environmental protection, agency transparency, or meaningful public engagement and intergovernmental cooperation.

A. Empirical Evidence of NEPA Review Completion Times.

Over the last several years, the Stegner Center has carefully reviewed data on tens of thousands of projects reviewed pursuant to the National Environmental Policy Act (NEPA). We undertook these studies to better understand the NEPA process, the frequency of and risks associated with NEPA litigation, and to identify factors associated with projects experiencing lengthy reviews. We believe that our empirical studies play a valuable role in designing NEPA reform because of the information they provide, and because our research paints a picture that departs from commonly held assumptions about NEPA. The stories that make for the best headlines are rarely representative of common agency practice. We also believe that our observations about NEPA practices apply more broadly to other federal permitting processes and can inform efforts to build a resilient supply chain.

Our most recent research reviewed over 41,000 U.S. Forest Service (USFS) projects that underwent NEPA review.⁶ Our analysis considered the year of project initiation, the geographic region where the project occurred, the interaction between up to 43 different activities involved in each project, and the level of analysis undertaken for each project. Despite spending months developing a complex multivariate regression model to identify factors associated with project delays, we were successful in predicting only twenty-five percent of the variance on NEPA review completion times. Twenty percent of the variance was attributed to one variable alone—the level of analysis. This result makes sense. Projects subjected to the searching review of an Environmental Impact Statement (EIS) were likely to take longer than projects that underwent only the most basic review required by a Categorical Exclusion. Notwithstanding this predictable result, we also observed that level of analysis alone did not dictate completion times. The fastest 25% of EISs were completed more quickly than the slowest 25% of Environmental Assessments (EAs), which require a less exhaustive analysis. Similarly, the fastest 25% of EAs were completed more quickly than the slowest 25% of CEs, which require only a very limited environmental analysis. This overlap suggests that factors other than the regulatory requirements of NEPA influence completion times. It also demonstrates that the NEPA review process can be completed quickly and efficiently, even at the most rigorous level of review. Thus, eliminating analytical rigor is not necessary to achieve efficient decision-making.

Our research revealed that most NEPA projects are completed within a predictable timeframe, though significant outliers are not uncommon. There are multiple and overlapping explanations for delay. One explanation that should not be overlooked is that the NEPA review process is indeed working as designed, identifying potential issues that would have otherwise escaped consideration and driving a reassessment of options and impacts before an irretrievable commitment of resources occurs. Slower projects may reflect iterative changes to improve the

⁶ See John C. Ruple, Jamie Pleune & Erik Heiny, *Evidence-Based Recommendations for Improving National Environmental Policy Act Implementation*, 46 COLUM. J. ENVTL. L. & POLICY 273 (2022).

proposed action or minimize impacts. This possibility reminds us that NEPA's goal is to make better decisions, not faster decisions.

A report from the Government Accountability Office (GAO) studying hardrock mine permit processing times supports this explanation.⁷ Between 2010 and 2014, the Bureau of Land Management and the Forest Service approved 68 mine plans of operations. The majority (55%) were processed in less than 18 months, and 63% were processed in under two years.⁸ This appears to indicate that permit applications can be processed efficiently. The remaining 37% were spread out over a wide timeframe, with six applications taking longer than four years.

The GAO identified 13 causes of delay and the amount of time associated with each factor. Some explanations for lengthy delays included: (1) incomplete or unacceptably vague permit applications (identified as a problem by 91% of BLM and Forest Service respondents); (2) changes in mine plans that substantially increased the size of the proposed mine or relocated boundaries after the mine plan had been submitted (identified as a problem by 70% of BLM and Forest Service respondents); and (3) efforts to mitigate complex and consequential environmental problems (identified as a problem by 65% of BLM and Forest Service respondents), like impacts to water quality.⁹

From the GAO report, it appears that it is not uncommon for permit applicants to substantially increase the size or scope of the proposed mine or to relocate the proposed mine boundaries, roads, and other facilities after the mine plans had been submitted and the agency had started the review process. Changing mine plans can add months to mine plan reviews, depending on whether the changes require officials to supplement fieldwork to include areas not contained in the original proposal, or require resource specialists to revise completed analyses and reports.¹⁰ Delays such as these are not attributable to federal permitting processes and cannot be avoided by streamlining the permitting process. Updating analysis to reflect new information and changed conditions, moreover, is consistent with agency regulatory obligations.¹¹

In our empirical analysis of Forest Service decisions, we also observed that a less rigorous level of analysis often fails to deliver faster decisions. In other words, reducing environmental analysis does not automatically result in faster decisions. Delays were often attributable to factors external to the NEPA review process. Inadequate agency budgets, staff turnover, delays receiving information from permit applicants, and compliance with other laws were some of the primary causes of delay identified in our research. These observations comport with the GAO's findings, which noted that "limited resources allocated to the field office, such as number of staff, staff expertise, funding, infrastructure, training, and/or computer technology" was the second most common reason for permitting delays (behind only incomplete and vague permit submissions), impacting 28% of mine permitting efforts.¹²

⁷ GOVERNMENT ACCOUNTABILITY, *HARDROCK MINING: BLM AND FOREST SERVICE HAVE TAKEN SOME ACTIONS TO EXPEDITE THE MINE PLAN REVIEW PROCESS BUT COULD DO MORE* (2016) [hereinafter GAO, *HARDROCK MINING*].

⁸ *Id.* at 16.

⁹ *Id.* at 22.

¹⁰ *Id.* at 29-30.

¹¹ *See, e.g.*, 40 C.F.R. § 1502.9(c) (requiring supplements to environmental impact statements if there are substantial changes to the proposed action or significant new circumstances or new information relevant to environmental concerns).

¹² GAO, *HARDROCK MINING* *supra* note 7 at 22.

In the sections below, we focus on ways to expedite mine permit processing by expanding agency capacity. In our research, we observed that agency capacity includes three elements: (1) staff availability; (2) professional confidence to make difficult decisions that may be litigated; and (3) expertise and institutional knowledge. In Section B, we discuss ways to avoid delays caused by insufficient agency capacity and litigation aversion. In Section C, we discuss ways to build agency capacity by facilitating regulatory expertise and expanding institutional knowledge.

B. Avoiding Delay Caused by Insufficient Agency Capacity and Litigation Aversion.

One persistent and overarching cause of delay involves insufficient or inconsistent staff availability. Not only are agencies chronically understaffed, agencies also are frequently forced to temporarily reassign staff in response to changing agency priorities. Nowhere was this better illustrated than with the Forest Service, which frequently reassigns staff in response to wildfires.¹³ These reassignments, while unavoidable in many ways, result in project delays and a lack of continuity between team members. The lesson is clear—agencies must have sufficient, adequately trained, and stable staffing if they are to complete any permitting task in a timely and efficient manner.

The GAO made a similar finding regarding hardrock mine permitting in a report issued in 2016.¹⁴ The second most common source of delay was insufficient agency staff in certain critical positions, which caused a bottleneck in NEPA review process and increased the length of time to review the plan.¹⁵ The GAO's findings are consistent with a report issued by the National Research Council seventeen years earlier.¹⁶ "Staff shortages are likely to be at least partially responsible for the excessive delays experienced in NEPA reviews and issuance of permits."¹⁷ The National Research Council went on to note, "Some land management offices report that they have too few people to conduct inspections, review proposed operating plans, process appeals, and conduct other required activities. This concern extends beyond the numbers of people. . . . Offices responsible for regulating mining projects may not always have access to the trained and experienced personnel required."¹⁸ In other words, there are two distinct elements to agency capacity: (1) staff availability and (2) expertise or institutional knowledge. Both elements affect permitting times. In order to improve permitting efficiency without compromising environmental protection, agencies must have both elements—sufficient staff and the necessary expertise.

The longstanding problem of agency capacity has been exacerbated in recent years. Between 2016 and 2020, the Bureau of Land Management (BLM) reported losing almost 300 senior Washington Office staff who chose to retire or seek other employment rather than

¹³ See U.S. FOREST SERVICE, THE RISING COST OF FIRE OPERATIONS: EFFECTS ON THE FOREST SERVICE'S NON-FIRE WORK (2015).

¹⁴ GAO, HARDROCK MINING *supra* note 7 at 23.

¹⁵ *Id.* at 25.

¹⁶ NATIONAL RESEARCH COUNCIL, HARDROCK MINING ON FEDERAL LANDS 55 (1999) [hereinafter NRC, HARDROCK MINING ON FEDERAL LANDS].

¹⁷ *Id.* at 74.

¹⁸ *Id.* at 115.

relocate.¹⁹ The EPA similarly lost almost 750 senior scientists between 2016 and 2020.²⁰ The departure of senior staff resulted in a loss of expertise and institutional knowledge that cannot be addressed with entry level hires. To the best of our knowledge, efforts to replace staff and restore capacity are still underway. A recent news article highlighted the EPA's struggle to embrace new responsibilities included in the Inflation Reduction Act, while working with a reduced workforce.²¹ "All of this activity creates more demands on an agency that has been struggling to get enough budget to carry out its prior functions even before this happened."²²

Left unaddressed, the problem of insufficient staff capacity will affect regulatory efficiency and environmental protection in the context of hardrock mining for the foreseeable future. Accelerating efforts to restore agency capacity, develop expertise, and restore institutional knowledge are among the fastest ways to improve permitting efficacy and promote supply chain resiliency. To address workforce challenges within the EPA, Congress boosted the agency's budget by 11.3% and called upon the EPA to "prioritize efforts to streamline hiring, support retention, and manage the erosion of expertise stemming from retirement of senior staff."²³ In order to expedite mine permitting, similar efforts must be undertaken to ensure that agencies like BLM, Forest Service, and the EPA have sufficient knowledgeable and experienced staff members capable of processing technical and complex applications for a mine permit.

In our research regarding the Forest Service, we also heard anecdotally that informal policies and agency culture can create unhelpful incentives. The benefits to an employee's professional career that results from swift completion of an environmental review or permitting effort can be overshadowed by the perceived professional risk that can accompany litigation. The incentive is therefore to "bulletproof" NEPA documents by addressing every possible issue rather than focusing the analysis on issues that are truly significant and tailoring the level of analysis to the magnitude of the issue.²⁴ Over-analysis consumes unnecessary and scarce agency resources.

These challenges are not unique to the Forest Service. As one NEPA practitioner in the Department of Transportation observed, "perhaps the most effective action agencies can take to increase efficiencies in the NEPA review process is to get back to the basics with NEPA and halt efforts to make NEPA documents litigation-proof."²⁵ With this in mind, she suggested that agencies avoid wasteful encyclopedic documents by using their discretion to focus the analysis,

¹⁹ Press Release, U.S. Dept. of the Interior, Secretary Haaland Outlines Next Steps to Rebuild Bureau of Land Management (Sept. 17, 2021), ("Of the 328 positions moved out of Washington, D.C., only 41 of the affected people relocated, with 3 moving to Grand Junction. This led to a significant loss of institutional memory and talent.")

²⁰ Taryn MacKinney, Union of Concerned Scientists, Federal Agencies Have Lost Hundreds of Scientists Since 2017. What Comes Next? (Jan. 30, 2021) ("By 2019, the EPA and the Bureau of Ocean Energy Management (BOEM) had both lost 6% of their scientists compared to 2016. But the EPA is far larger than BOEM. A 6% loss is 28 scientists at BOEM—and nearly 750 scientists at the EPA. And while BOEM regained many scientists between 2019 and 2020, the EPA did not.")

²¹ Stephen Lee, *Biden's Climate Win Strains Already-Stretched EPA Workforce*, E&E News (Aug. 8, 2022).

²² *Id.*

²³ *Id.*

²⁴ See also, GAO HARDROCK MINING, *supra* note 7 at 34 ("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.")

²⁵ Helen Leanne Serassio, *Legislative and Executive Efforts to Modernize NEPA and Create Efficiencies in Environmental Review*, 45 Tex. Env'tl. L.J. 317, 333 (2015) [hereinafter Serassio, *Legislative and Executive Efforts to Modernize NEPA*].

methodology, and depth of discussion as necessary to make an informed decision. This can be achieved through transparent analysis, incorporation of documents by reference, tiering to prior environmental reviews where appropriate, and exercising discretion in how to best gather and assess information.²⁶ Although these tools are available, agency officials must also feel confident using them. An informal culture that prioritizes litigation avoidance will continue to eschew these available strategies in favor of bulky, time-consuming bullet-proof documents.

While decisions should rigorously comply with substantive and procedural requirements, the fear of litigation should not delay action. As we found after reviewing data on court cases involving NEPA, litigation is rare, with only 0.22 percent of decisions being challenged in court.²⁷ An investigation by the GAO on the impact of litigation on Forest Service fuel reduction projects between 2006 to 2008 revealed that only 29 out of 1,415 decisions were litigated, and litigation only impacted 1% of the lands slated for fuel reduction.²⁸

Moreover, litigation often involves multiple claims in addition to a NEPA violation. Done properly, the NEPA process functions as an umbrella statute, facilitating compliance with a host of other laws such as the Clean Water Act, the National Forest Management Act, or the National Historic Preservation Act.²⁹ While NEPA documents do not need to be encyclopedic, they must reflect reasoned decisionmaking. “Requiring agencies to make quick decisions does not guarantee that agencies are making good or informed decisions.”³⁰

Short-changing the NEPA process poses a risk of violating other substantive and procedural laws like those noted above by failing to take a hard look at all aspects of a proposed action. A study of twenty years of Forest Service Land Management litigation revealed that in the pool of cases decided on the merits, more than half of the time (67%), the Forest Service would have lost even if NEPA did not exist.³¹ In other words, truncating thoughtful consideration of a project and exploration of alternatives during the NEPA process may create or exacerbate delays caused by litigation.

In conclusion, we believe that the single best way to expedite responsible critical mineral permitting is to increase agency capacity. This can be done by providing agencies with the qualified staff and resources they need to complete environmental analyses and permitting documents, to retain those staff members throughout the entire permitting process, and to

²⁶ *Id.* at 334-37.

²⁷ John Ruple & Kayla Race, *Measuring the NEPA Litigation Burden: A Review of 1,499 Federal Court Cases*, 50 ENVTL. L. 479 (2020). See also Serassio, *Legislative and Executive Efforts to Modernize NEPA*, *supra* note 25 at 333-34 (“The vast majority of CEs, EAs, and EISs are not litigated. On average, NEPA lawsuits represent only two-tenths of one percent of more than 50,000 actions that are documented by federal agencies each year under NEPA. Furthermore, when NEPA documents are litigated, the federal government has been successful in the majority of these cases. In fact, the cases that the federal government usually loses are those in which the agency failed to follow a procedural step or relied upon flawed data.”).

²⁸ U.S. GOV’T ACCOUNTABILITY OFF., GAO 10-337, FOREST SERVICE: INFORMATION ON APPEALS, OBJECTIONS, AND LITIGATION INVOLVING FUEL REDUCTION ACTIVITIES, FISCAL YEARS 2006 THROUGH 2008 1 (2010).

²⁹ See CONG. RSCH. SERV., RL33152, THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): BACKGROUND AND IMPLEMENTATION 1 (2011) (“Most agencies use NEPA as an ‘umbrella’ statute—that is, a framework to coordinate or demonstrate compliance with any studies, reviews, or consultations required by any other environmental laws. . . . Theoretically, if the requirement to comply with NEPA were removed, compliance with each applicable law would still be required.”).

³⁰ Serassio, *Legislative and Executive Efforts to Modernize NEPA*, *supra* note 25 at 327.

³¹ Amanda M.A. Miner et al., *Twenty Years of Forest Service Land Management Litigation*, 112 J. FOR. 32, 36 (2014).

structure performance incentives that reward prompt deliberation, even where the project is unpopular and may result in litigation.

C. Reducing Delay Caused by the Complexity of the Legal and Regulatory Structure by Facilitating Regulatory Expertise and Expanding Institutional Knowledge.

Another significant source of delay involves navigating the intricate and complex array of laws applying to mining operations. Simply figuring out what law applies, how to apply the regulatory standard, and who has authority to issue the relevant permits can be a daunting task for both agency officials and permit applicants. Regarding the regulatory structure of hardrock mine permitting, the National Research Council observed,

[T]he complexity of various programs can make the system difficult to understand, approach, and implement efficiently. As a result, mining regulation, permitting, monitoring, reclamation, closure, and post-closure becomes a series of negotiations carried on against a background of regulatory requirements and programs. This means that governmental regulators at all levels need a significant degree of sophistication and training in order to make these programs efficient and effective. The programs do not—and cannot—operate in cookbook fashion.³²

In other words, implementing a complex regulatory structure requires institutional knowledge and expertise. New agency staff do not have the same experience as the senior staff members they are replacing. Additionally, without senior staff on hand, new agency officials will not have the benefit of mentoring, guidance, or instruction. As a result, the “sophistication and training” necessary to make the mine permitting program efficient and effective is at risk. This loss of institutional memory will affect permit processing times and may reduce the effectiveness of the agency to negotiate environmental protections against the backdrop of regulatory requirements.

Uncertainty about how the permitting process works, the standard to apply, and who is responsible for making a decision causes two types of delay. First, conducting research to confirm the permitting process with each application adds time and creates inefficiencies in the preparation and review of each application. Second, hard problems without obvious answers tend to sit on the back of the desk, especially when there is a fear of repercussion for making the wrong decision. Reducing procedural and legal uncertainty within this complex labyrinth will improve efficiency and assist both regulators and applicants.

1. The legal and regulatory structure for hard rock mining is complex, multi-faceted, and lacks uniformity. Without clear guidance, this legal structure causes delay.

The current legal and regulatory structure varies by mineral category, surface/subsurface estate ownership, and with the agency owning or entity charged with managing surface and subsurface resources.³³ In general, minerals fall within three categories: saleable, leasable, and locatable (hard rock). Each category has different statutory frameworks and regulatory

³² NRC, *HARDROCK MINING ON FEDERAL LANDS* *supra* note 16 at 54.

³³ BRANDON S. TRACY, CONG. RES. SERV., R46728, *POLICY TOPICS AND BACKGROUND RELATED TO MINING ON FEDERAL LANDS* (Mar. 2020) (summary).

standards.³⁴ Distinct regulatory standards by mineral category can cause permitting challenges because the exact same mineral on federal land may be characterized as locatable or leasable, depending on whether the land is public or acquired.³⁵ Similarly, otherwise locatable minerals may be leasable when found on tribal lands.³⁶ A consequence of this fragmented legal structure is that the same mineral could be subject to a leasing system or a claim system depending on whether the lands were acquired, tribal, or public.³⁷ More complexities arise where surface and subsurface ownership involves multiple parties, including states, Tribal governments, and private individuals, and these complexities only increase when split estate issues are involved.³⁸

As of September 30, 2018, there were 872 mine operations authorized to produce solid minerals on federal lands, most of which were hardrock operations.³⁹ About 83 percent (728) were authorized to produce locatable hardrock minerals, while 2 percent (20) were authorized to produce leasable hardrock minerals. The others were authorized to produce non-energy solid minerals or coal. Combined, 1.3 million surface acres on federal lands were associated with mining operations in September 2018. Leasable hardrock mineral operations accounted for 3 percent (35,927 acres),⁴⁰ and produced 143,000 tons of minerals in 2018.⁴¹ Locatable mineral operations disturbed almost ten times more surface area (317,783 acres),⁴² but there is no data on how many tons of minerals were produced in these operations.⁴³ Because locatable minerals are not subject to royalties, federal agencies do not collect data on the quantity of minerals extracted from these mining operations. Thus, in addition to the complexity of the legal structure, information about mining operations for locatable minerals is not readily available.⁴⁴

³⁴ Salable minerals are defined by the Materials Act of 1947 and include low-value common minerals. They are sold to the public at fair market value, often from community pits. Leasable minerals are defined by the Mineral Leasing Act of 1920 and are subject to lease and royalty payments. Locatable minerals are governed by the General Mining Law of 1872. They are not subject to federal royalties and are governed under a different statutory and regulatory framework than leasable minerals.

³⁵ This anomaly arises partially from the definition of a locatable mineral. Originally, the definition of a locatable mineral encompassed all mineral deposits on federal lands that were considered valuable. Now, however, locatable minerals are defined in the negative—minerals are locatable if (a) not leasable under the Mineral Leasing Acts; and (b) not salable under the Minerals Materials Act of 1947. 43 C.F.R. § 3830.11 (2021). As a result of this definition, an otherwise locatable mineral is a leasable mineral in certain circumstances. For example, locatable minerals on acquired federal lands are leasable. BRANDON S. TRACY, CONG. RES. SERV., R46728, POLICY TOPICS AND BACKGROUND RELATED TO MINING ON FEDERAL LANDS 2, 4-5 (MAR. 2020). Similarly, locatable minerals on Forest Service Lands that were acquired under the Weeks Act are also leasable. See ANNE-MARIE FENNELL, GOVERNMENT ACCOUNTABILITY OFFICE, MINING ON FEDERAL LANDS: MORE THAN 800 OPERATIONS AUTHORIZED TO MINE AND TOTAL MINERAL PRODUCTION IS UNKNOWN 2 (MAY 28, 2020).

³⁶ 43 C.F.R. § 3500; BUREAU OF LAND MANAGEMENT, MINING CLAIMS AND SITES ON FEDERAL LANDS BROCHURE (2019) 3 available at https://www.blm.gov/sites/blm.gov/files/PublicRoom_Mining_Claims_Brochure-2019.pdf.

³⁷ *Id.* at 4.

³⁸ *Id.* at 2-6.

³⁹ ANNE-MARIE FENNELL, GOVERNMENT ACCOUNTABILITY OFFICE, MINING ON FEDERAL LANDS: MORE THAN 800 OPERATIONS AUTHORIZED TO MINE AND TOTAL MINERAL PRODUCTION IS UNKNOWN 4 (May 2020).

⁴⁰ *Id.* at 6.

⁴¹ *Id.* at 10.

⁴² *Id.* at 6.

⁴³ *Id.* at 10.

⁴⁴ The GAO noted similar problems involving inadequate hardrock mining information management, recommending that the Bureau of Land Management update its information management systems. See GAO HARDROCK MINING, *supra* note 7 at 35.

The difference between locatable and leasable minerals has consequences for land use management. The Federal Land Policy Management Act (FLPMA) guides the BLM's management of lands that are subject to both mineral leases and claims as well as nearby public lands that may be necessary to access or develop minerals. Management requirements are imposed through its land use planning requirements, and subject to the duty to administer public lands on the basis of multiple use and sustained yield.⁴⁵ Similarly, the National Forest Management Act informs the Forest Service's surface management of lands that are subject to mineral leases and claims as well as lands that must be crossed to access and develop minerals.⁴⁶ In contrast, mining operations for locatable minerals are primarily governed by the General Mining Law of 1872. Land management plans developed pursuant to FLPMA and the National Forest Management Act may directly and severely restrict a mining claimant's ability to access newly staked claims, conduct exploration phase activities on those claims, and to use adjacent lands for other mining related purposes. New management plan requirements are, however, likely to have less impact on existing claims. With a few exceptions, such as lands that have been withdrawn⁴⁷ and Wilderness Study Areas, the BLM's authority to regulate surface management of locatable mineral operations derives primarily from its authority to prevent unnecessary or undue degradation of public lands.⁴⁸

Once a claim or lease has been obtained, access to the minerals secured, and exploration has demonstrated the viability of the operation, the miner will still need to obtain mining plan approval and as well as numerous other environmental and land use approvals. Many states exercise delegated statutory authority over aspects of mine permitting.⁴⁹ Some federal statutes, like the Clean Water Act, contain provisions allowing the federal agency to delegate its permitting authority to the State. In addition to these federal statutes, state or local laws may also impose additional permitting requirements, including state environmental review requirements, like the California Environmental Quality Act. When reviewing the hardrock mining permit application process, the Government Accountability Office identified six categories of federal permits and authorizations and seven categories of state and local permits or authorizations that mine operators may need to obtain from entities other than the BLM and the Forest Service.⁵⁰

⁴⁵43 U.S.C. §§ 1701-1787.

⁴⁶16 U.S.C. §§ 1600-1687.

⁴⁷ Lands that have been withdrawn from mineral entry include national parks, national monuments, tribal lands, most Bureau of Reclamation projects, military reservations, scientific testing areas, national wildlife refuges, and lands withdrawn pursuant to FLPMA section 204. Additionally, mining claims may not be located on lands that have been designated by Congress as part of the National Wilderness Preservation System; designated as a wild portion of a wild and scenic river; or withdrawn by Congress for study as a wild and scenic river. BUREAU OF LAND MANAGEMENT, MINING CLAIMS AND SITES ON FEDERAL LANDS BROCHURE 12 (2019) available at <https://www.blm.gov/programs/energy-and-minerals/mining-and-minerals/locatable-minerals>.

⁴⁸ Memorandum (M-37057) from Solicitor, Dep't of the Interior to Sec'y et al., Dep't of the Interior 8 (Aug. 17, 2020) ("In 1976, Congress enacted FLPMA, which specifically amended the Mining Law to require the Secretary to "by regulation or otherwise, take any action to prevent unnecessary or undue degradation of the lands. 43 U.S.C. § 1732(b). This mandate to prevent "unnecessary or undue degradation" . . . gave BLM the authority to impose limits on how existing and future reasonably incident mining uses under the Mining Law could be conducted.").

⁴⁹ See 43 C.F.R. § 3809.202(a) ("A State may request BLM enter into an agreement for State regulation of operations on public lands in place of BLM administration of some or all of the requirements of this subpart.").

⁵⁰ GAO HARDROCK MINING, *supra* note 7 at 17.

This complexity may contribute to the number one source of delay identified by the GAO in the hardrock mine permitting process—low quality of information provided in a mine plan.⁵¹ According to officials interviewed for the study, the low quality of information provided in a mine plan created a challenge in 21 of the 23 locations studied and added from 1 month to seven years to the length of time to review plans.⁵²

To avoid this source of delay, the GAO recommended that the BLM and the Forest Service expand the use of pre-submittal meetings, during which agency officials can provide operators with information on relevant regulations, guidance on the review process and conducting baseline surveys, and examples of mine plans.⁵³ We agree with this recommendation, and note that in the past certain BLM and Forest Service offices have encouraged pre-submission planning.⁵⁴ Moreover, this practice is consistent with the Federal Permitting Improvement Steering Council’s recommendation that agencies develop tools to help project sponsors produce high quality applications.⁵⁵ Where implemented, pre-application meetings “reduce permit review times by minimizing the number of times the agency must request additional information.”⁵⁶ We also emphasize that conducting these pre-submittal meetings requires both types of agency capacity—staffing and expertise. Our recommendations in the next section focus on ways to augment agency expertise by building institutional knowledge that will help agency officials and permit applicants avoid delays caused by the confusing and overlapping legal and regulatory structure governing hardrock mining.

2. Create a Mine Permitting Hub with flowcharts and environmental checklists to make the legal Structure more transparent, predictable, and manageable.

In the absence of statutory reforms to simplify and update mining laws, one way to expedite the permitting process would be to create a public, geographically-organized database of regulations and permitting requirements. For the purpose of these comments, we will refer to it as the Mine Permitting Hub.

A similar resource was created by the Department of Energy for renewable energy and bulk transmission project development. The Regulatory and Permitting Information Desktop Toolkit (RAPID) collects permitting information, best practices, and reference material.⁵⁷ As the RAPID website recognizes, “Uncertainty about the duration and outcome of the permitting process has been a deterrent to project investment and project construction.”⁵⁸ The website aims to provide easy access, in one location, to permitting and regulatory information for project development in order to optimize the regulatory process, lower project costs, and ease investor risk.⁵⁹ The same challenges face prospective mine permittees. Uncertainty about the duration and outcome of the permitting process deters project investment. This is even more true for entities that are exploring innovative ways to re-mine or re-process previously mined lands or

⁵¹ *Id.* at 23.

⁵² *Id.*

⁵³ GAO HARDROCK MINING, *supra* note 7 at 24.

⁵⁴ Bureau of Land Management, Nevada State Office, Instruction Memorandum NV IM-2011-004 (Nov. 5, 2010).

⁵⁵ FEDERAL PERMITTING IMPROVEMENT STEERING COUNCIL (FPISC), RECOMMENDED BEST PRACTICES FOR ENVIRONMENTAL REVIEWS AND AUTHORIZATIONS FOR INFRASTRUCTURE PROJECTS 24 (JAN. 2017).

⁵⁶ *Id.* at 25.

⁵⁷ Regulatory and Permitting Information Desktop Toolkit: RAPID, <https://openei.org/wiki/RAPID/About>.

⁵⁸ *Id.*

⁵⁹ *Id.*

mine and mill tailings.⁶⁰ A publicly available, geographically organized database of regulatory standards and required permits would help mineral developers as well as federal, state, and Tribal officials navigate overlapping and interrelated permitting programs.

As part of the Mine Permitting Hub, it would be helpful to have an analytical flow-chart helping regulatory officials and permit applicants determine which legal standards apply to a proposed mine, and how multiple permitting requirements fit together. We note that the Washington State Office for Regulatory Innovation and Assistance has developed multiple, very useful flow charts to assist regulators, permit applicants, and the public understand the steps involved in obtaining common permits.⁶¹ Simply creating the flowchart to identify the various permits that are required, permit sequencing, and permit coordination opportunities may foster understanding and coordination, thereby improving permitting efficiency.

A flowchart may also help identify circumstances where legal ambiguity exists and where agency guidance or solicitor opinions would be useful in reducing uncertainty. For example, in the mineral development context, an individual seeking to mine cobalt from the tailings of an abandoned copper mine located on federal public lands would need to know whether their proposal is subject to the General Mining Law of 1872 or the Mineral Leasing Act. (Presumably the General Mining Law would apply, though this may not be the case if the tailings occur on acquired lands.) If the mining proposal is covered by the General Mining Law, is it necessary to submit a plan of operations for exploratory activity due to the cumulative effects of prior use?⁶² Legal guidance would reduce delay caused by research and analysis. Uniform guidance and a clear permitting path also would promote collaboration and communication across multiple jurisdictions. These procedural efficiencies may also decrease litigation aversion and the fear of making an incorrect decision in a complex regulatory arena.

A mine permitting flow chart could also be used to develop location-specific environmental checklists. A checklist could be created proactively for specific regions. Alternatively, a checklist could be developed at the initiation of the mine permitting process on a case-by-case basis. Either option would create transparency and predictability, likely translating into faster and more durable permitting decisions. Mine permitting checklists could identify each potentially relevant permit to be obtained during the mine permitting process, the environmental standards to meet, the lead agency and personnel to be contacted regarding that permit, and appropriate contact information. Such a checklist would be particularly useful where federal, Tribal, and state permitting programs or requirements overlap.⁶³

Creating the mine permitting checklist would help regulatory officials across agencies (state and federal) proactively develop cooperative agreements aimed at coordinating and

⁶⁰ See generally Lynn M. Kornfeld, *Reclamation of Inactive and Abandoned Hardrock Mine Sites: Remining and Liability Under CERCLA and the CWA*, 69 U. Colo. L. Rev. 597 (1998). See also Bart Lounsbury, *Digging Out of the Holes We've Made: Hardrock Mining, Good Samaritans, and the Need for Comprehensive Action*, 32 Harv. Envtl. L. Rev. 149, 164-172 (2008) (exploring benefits and risks of allowing mining companies to enjoy reduced liability under CERCLA and the Clean Water Act through Good Samaritan legislation);

⁶¹ See Washington Governor's Office for Regulatory Innovation & Assistance, Schematics, https://www.oria.wa.gov/site/alias__oria/347/Permitting.aspx#anchor-3430 (last visited July 8, 2022).

⁶² See 43 C.F.R. § 3809.31 (defining special situations that affect what submittals must be made before conducting operations).

⁶³ See 43 C.F.R. § 3809.200 (identifying the types of Federal/State agreements that may affect surface management standards). See also, GAO HARDROCK MINING, *supra* note 6 at 22 (identifying “[q]uantity and quality of coordination and collaboration” as a major factor associated with permitting delays).

harmonizing requisite environmental and engineering studies. It would also help identify specific requirements associated with by land designations.⁶⁴ Further, it would help identify circumstances where a more stringent state law may require a higher level of protection than required under federal regulations.⁶⁵ Consolidating this information at the outset of the permitting process would reduce delays attributable to uncertainty, duplication, and conflicting standards that exist in the current legal and regulatory regime.

A flow chart and environmental checklist would also ensure that mine permit applications are properly prepared and appropriately thorough. According to the Department of Commerce, incomplete permit applications are one source of delay in the permitting process.

[M]ining permit applications often lack sufficient quality or key information needed for regulators to make a decision on an application. Insufficient information in the mining application can significantly delay the permitting process as it may require multiple application iterations until the application is of sufficient quality to allow the permitting agencies to make a decision.⁶⁶

This observation is not surprising given the ambiguity involved in federal regulations,⁶⁷ as well as the vast variety in mining operations governed by these regulations. Notably, the Federal Permitting Improvement Steering Council identified flow charts and checklists as best practices that promote efficiency and help ensure that applicants provide necessary information in a timely manner.⁶⁸

Checklists can serve additional purposes. As discussed in more detail below, a checklist could be refined during the scoping process once environmental review of a permit application begins. This early scoping analysis would ensure the thoroughness of the checklist and avoid surprises later in the permitting process. Checklists and flow charts can also be used to facilitate pre-submittal meetings with operators and other stakeholders and to clarify expectations, thereby improving the quality of mine permitting applications.⁶⁹ Once permitting review begins, the

⁶⁴ See 43 C.F.R. § 3809.11 (identifying special status areas where § 3809.21 does not apply, and an applicant must submit a plan of operations for surface disturbance greater than casual use).

⁶⁵ 43 C.F.R. § 3809.3 (2021).

⁶⁶ DEPT. OF COMMERCE, A FEDERAL STRATEGY TO ENSURE SECURE AND RELIABLE SUPPLIES OF CRITICAL MINERALS 37 (June 4, 2019); see also GAO HARDROCK MINING, *supra* note 7 at 23 (reporting that low quality mine plan submissions were the primary source of delay).

⁶⁷ See, e.g. 43 C.F.R. § 3809.401 (vaguely identifying information that must be included in a plan of operations, and including a vague catch-all requirement of “other information, if necessary to ensure that your operations will comply with this subpart”).

⁶⁸ FEDERAL PERMITTING IMPROVEMENT STEERING COUNCIL, RECOMMENDED BEST PRACTICES FOR ENVIRONMENTAL REVIEWS AND AUTHORIZATIONS FOR INFRASTRUCTURE PROJECTS FOR FISCAL YEAR 2018, 11 (DEC. 2017) [*hereinafter* FPISC, RECOMMENDED BEST PRACTICES 2018] (“Flow charts clarify the process for stakeholders. Checklists assist entities in collecting appropriate and required information. Checklists can identify responsible agencies, facilitate identification of purpose and need, and assist with alternatives development.”).

⁶⁹ GAO HARDROCK MINING, *supra* note 6 at 25 (strongly recommending that the BLM and Forest Service expand the use of pre-submittal meetings with operators whenever possible to expedite the mine plan review process); FPISC, Recommended Best Practices 2018 *supra* note 68 at 11 (recommending the use of checklists, flowcharts, and templates to ensure that the various permitting entities obtain the appropriate information required for environmental review early in the process, thereby reducing the administrative burden of multiple application iterations).

same checklist could be used to create agreed-upon deadlines for decisionmaking, and those deadlines could be posted on a permitting dashboard as has been done in FAST-41 projects.⁷⁰

In summary, flow charts and environmental checklists are two tools that can immediately improve efficiency in the permitting process. These tools support agency capacity by developing institutional knowledge and reducing legal uncertainty. They can also help avoid delays caused by incomplete or vague permit applications. These tools do not require regulatory reform and can be implemented immediately.

3. Create a geographically organized, searchable database of previously drafted NEPA documents.

The RAPID Toolkit has another helpful feature that could be included in the Mine Permitting Toolkit. The RAPID Toolkit provides a link to previously drafted NEPA documents. This feature facilitates tiering and minimizes the risk of duplicative environmental analyses. NEPA regulations encourage using program, policy or plan environmental impact statements, as well as tiering statements of broad scope to those of narrower scope, to eliminate repetitive discussions of the same issue.⁷¹ NEPA documents can also incorporate information by reference.⁷² While mining interests and agency staff presumably have ready access to prior permitting documents for the sites in question, obtaining access to documents or studies at far flung locations that addressed similar issues could expedite environmental analyses. The NEPA database provided on the RAPID website may help overcome this challenge. The website allows a user to search for a document by analysis type, lead agency, and 17 state jurisdictions. The same information should be provided on the Mine Permitting Toolkit.

This database would be more useful if it also provided a map with links to the available documents. An applicant or an agency official could then use a geographic search for relevant environmental documents. Improving access to prior and related environmental documents would help agency officials and permittees identify and avoid repetitive analyses and discussions of the same issues.

These relatively simple actions: (1) creating a mine permitting hub; (2) developing analytical flowcharts and environmental checklists ; and (3) creating a database of previously drafted NEPA documents that can be searched geographically or topically, would help reduce delay caused by the complexity of the legal system governing hardrock mining. Additionally, these actions would expand agency capacity by developing expertise and creating a system of institutional knowledge to offset the loss of senior staff members who may not be available to provide guidance or mentoring to new staff members. Finally, checklists and flowcharts would help stakeholders better understand the mine permitting process, engage more effectively, and appreciate how their input will be addressed through the permitting process.

Although these actions are simple, they are not easy. They cannot be accomplished without adequate funding. Agency budgets must be adjusted with enough resources to achieve these objectives.

⁷⁰ <https://www.permits.performance.gov/>

⁷¹ 40 C.F.R. § 1500.4(h)(i).

⁷² 40 C.F.R. § 1502.21.

II. Land Use Planning as a Tool to Expedite Mine Permitting.

Mining on federal public lands involves compliance with land management laws and regulations that operate independent of the General Mining Law. For simplicity, our comments focus primarily on the BLM's surface use management authority. The BLM manages more land and resources than any other federal agency, with responsibility for over one-tenth of the total surface area of the United States and almost one-third of all minerals.⁷³ The BLM, like the Forest Service, is statutorily charged with managing lands under its care in accordance with multiple use and sustained yield principles, unless lands are set aside for another purpose.⁷⁴ The National Forest Management Act shares many of FLPMA's features, and the logic of comments analyzing FLPMA and its implementing regulations can also extend to the Forest Service's management authority and regulations.⁷⁵

The process for determining which federal public lands should be open to mineral claim and development, and the land use standards that should apply to those lands, are complex and multifaceted, reflecting the myriad values at stake as well as the BLM and USFS's broad and sometimes conflicting statutory mandates. Planning and permitting laws can be used to streamline critical mineral development without compromising environmental protection, transparency, or public and intergovernmental engagement.

Assessing the existence of a mineral deposit within a planning area, the potential for mineral development, and the level of certainty associated with mineral information is a critical component of the BLM's resource inventory process.⁷⁶ This information supports subsequent land management plan development.

Land management laws and regulations can be used to create an expedited permitting path for critical mineral developments that meet rigorous environmental and good governance goals. This approach relies on a suite of incentives and disincentives developed pursuant to existing federal land management laws. These incentives do not require legislation and can be accomplished with relatively minor regulatory changes. We discuss some possible approaches below. As noted earlier, expediting the permitting process through proactive land management decisions depends on sufficient agency capacity to conduct the planning process and complete the requisite analysis. Thus, the recommendations below must work in concert with the recommendation to increase agency budgets, staff, and expertise.

BLM and Forest Service land management plans incorporate closures to future mineral claim entry that are required by other laws, such as the Wilderness Act. Management plans also reflect mineral withdrawals imposed by executive action, such as national monuments designated by a President pursuant to the Antiquities Act. The BLM and USFS may also, in certain circumstances, withdraw public lands from availability for future mineral claim entry.⁷⁷ Such

⁷³ Our Mission, Bureau of Land Management., <https://www.blm.gov/about/our-mission> [<https://perma.cc/CHR6-NY7C>].

⁷⁴ See Jeffrey C. Parsons, *The Right to Say No: Federal Authority over Hardrock Mining on Public Lands*, 16 J. ENVTL. L. & LITIG. 249, 256-267 (2001) (comparing BLM's and the Forest Service's statutory and regulatory authority to manage hardrock mining).

⁷⁵ See Justin R. Pidot, *Compensatory Mitigation and Public Lands*, 61 B.C. L. REV. 1046, 1054 (2020) (using a similar analytical approach to analyze agency authority to require compensatory mitigation from permit applicants).

⁷⁶ See BLM Manual 3031 – ENERGY AND MINERAL RESOURCE ASSESSMENT (discussing the mineral assessment process that supports land management planning).

⁷⁷ 43 U.S.C. § 1714.

withdrawals can be used to direct development away from sensitive resources and avoid conflicts with other uses of federal lands. Withdrawals, however, are generally prospective in nature and do not impact valid rights secured prior to the mineral withdrawal.

BLM managed lands are governed by land use stipulations contained in the applicable land and resource management plans, subject to valid existing rights. Land use stipulations are applied to protect sensitive areas and the resources those areas contain. For example, an area may be identified as an important aquifer recharge area; an area rich in cultural or archaeological resources; as critical breeding, rearing, foraging, or refugia for high valued wildlife species; as a highly valued visual landscape; or based on a host of other possible important values that may exist in isolation or overlap with one another.

Stipulations may, for example, close a sensitive area to all surface disturbing activity. Such a stipulation may be appropriate where, for example, activity on a steep and erosive slope would cause an unacceptable risk of landslides or sediment delivery to a stream or lake. A no surface occupancy stipulation could also be used to protect critical wildlife habitat or cultural resources. These types of measures may be necessary to achieve the BLM's multiple use and sustained yield mission or to avoid unnecessary or undue degradation.⁷⁸ A surface closure, however, does not necessarily close an area to subsurface development. Oil and natural gas resources underlying areas subject to a surface closure may still be accessed and developed using directional drilling technologies if surface facilities are located outside of the closure area. Building on such an approach, a mining company could theoretically conduct underground mining or solution mining beneath an area subject to a surface closure if surface uses associated with mining operations were located outside of the area subject to the no surface occupancy stipulation, were technically and economically feasible, and that the operation complied with all other applicable laws, regulations, and land use stipulations.

Federal land managers may also conclude that adequate resource protection could occur without closing an area to all surface development. The BLM or USFS may, for example, require that surface uses meet strict visual quality standards to minimize use conflicts, or be subject to seasonal restrictions to minimize wildlife conflicts or address soil plasticity. In some instances, it may be impossible to fully develop the land surface under these stipulations, or development may become prohibitively expensive. While strict surface use stipulations may preclude certain types of mine operations, such as surface mining, they may still allow underground mining or solution mining to occur.

Still other areas are subject to normal surface use terms and conditions because these areas can be developed without causing unacceptable impacts, or where impacts are deemed acceptable in light of competing resource values and uses.

Where a mining interest has staked a valid mining claim and that claim preceded development of land use stipulations contained in the applicable land and resource management plan, the mining interest generally retains the legal right to mine even if subsequent land use designations would otherwise preclude mining. The right to access and mine minerals that is available under such valid existing rights, however, is subject to reasonable regulation as needed to protect competing resources and land uses. Land management stipulations that apply to

⁷⁸ Memorandum (M-37039) from Solicitor, Dep't of the Interior, to Sec'y et al., Dep't of the Interior 29 (Dec. 21, 2016). *See generally*, Justin R. Pidot, *Compensatory Mitigation and Public Lands* 61 B.C. L. Rev. 1046, 1069-1093 (2020) (providing a thorough discussion of history and authority of BLM to require mitigation where necessary).

adjacent lands may also impact roads or other means of accessing mine lands as well as the availability of adjacent federal lands for ancillary mining purposes such as overburden or tailings storage.

It is also helpful to remember that the solutions to ensuring a safe and secure supply of critical minerals do not rest solely in the creation of new mines. The land use planning process could be used to identify opportunities to develop critical minerals from existing mining operations and abandoned mine lands, including mine and mill tailings. We support efforts to incentivize reining and reprocessing of abandoned mine and mill sites. Done properly, redeveloping such sites could reduce impacts compared to development of undisturbed sites. If critical minerals can be obtained by reprocessing mine and mill waste, and contaminated sites can be remediated as part of that process, such actions should be a top priority, provided that all environmental standards are included in the mine development proposal. Similarly, updating existing mine operations to promote critical mineral production at existing sites should be prioritized over development of new mine sites.

A. Opportunities to use the land-use planning process as a tool to identify landscape-specific general performance standards, landscape-scale mitigation opportunities, and to avoid unnecessary or undue degradation.

There may be some critical mineral deposits that cannot be accessed without degrading other values, such as watersheds, drinking water, fish stocks, and human safety. In these cases, the BLM should recognize its statutory obligation to avoid unnecessary and undue degradation of public lands.⁷⁹ BLM's mining regulations incorporate stipulations contained in land use plans as general performance standards.⁸⁰ General performance standards may also include mitigation measures identified by the BLM.⁸¹ Thus, all mining operations—whether conducted under a notice or a plan of operations—are required to comply with the applicable BLM land use plans, activity plans, and coastal management plans, as appropriate. Compliance with the general performance standards is required to avoid unnecessary or undue degradation while conducting operations on public lands.⁸²

The land use planning process could also be used to identify landscape-scale mitigation opportunities to minimize or offset unavoidable impacts. The BLM's Mitigation Manual, authorizes the BLM to use the land use planning process to identify resources that are “important, scarce, sensitive, or have a protective legal mandate” and to identify mitigation standards for those resources.⁸³ Using the mitigation hierarchy, (avoid, minimize, and

⁷⁹ 43 U.S.C. § 1732(a).

⁸⁰ 43 C.F.R. § 3809.420(a)(3) (“The following performance standards apply to your notice or plan of operations . . . Land-use plans. Consistent with mining laws, your operations and post-mining land use must comply with the applicable BLM land-use plans and activity plans, and with coastal zone management plans.”); 43 C.F.R. § 3809.320 (requiring notice level operations to comply with performance standards set forth in § 3809.420).

⁸¹ 43 C.F.R. § 3809.420(a)(4).

⁸² 43 C.F.R. § 3809.415 (“You prevent unnecessary or undue degradation while conducting operations on public lands by . . . (a) complying with § 3809.420, as applicable; the terms and conditions of your notice or approved plan of operations; other Federal and State laws related to environmental protection and protection of cultural resources.”).

⁸³ *Id.* § 2.1(D).

compensate), “mitigation standards should seek to achieve a no net loss or net benefit outcome for such resources.”⁸⁴

Seeking mitigation opportunities on a landscape scale provides flexibility to creatively avoid, minimize, or offset impacts caused by a proposed mineral development. The BLM Mitigation Manual supports this observation, noting that “a landscape-scale approach also allows for identification of the most effective compensatory mitigation sites without implying a preference for siting compensatory mitigation closer to or farther away from the impacted site or implying a preference for federally managed lands.”⁸⁵ One way to expedite the mine permitting process would be to use the land use planning process to identify and implement landscape scale strategies to mitigate potential expected environmental and cultural impacts caused by a proposed critical mine development.

Land use planning requires more effort on the front end of a project, but it can produce long-term efficiencies. As the mitigation manual observed, “application of the mitigation hierarchy at a landscape-scale may involve multiple stakeholders and tradeoffs among a broad range of resources.”⁸⁶ However, it may be more efficient and effective in the long-run to engage stakeholders at the initial planning process, when options within the full range of the mitigation hierarchy are available, than to face objections at the later stage of permit approval or denial, when changes are more difficult to make.⁸⁷

For example, in 2012, the Forest Service completed the 4FRI EIS to develop a forest management plan for the largest number of acres in Forest Service history. It was “the largest collaborative landscape-scale restoration initiative in the country, the largest initiative of its kind ever endeavored.”⁸⁸ Despite its ambitious scope, the EIS was completed on time, and when it came to implementation, the Forest Service was not delayed by litigation.⁸⁹ This result was possible because the collaborative process created stakeholder support for the Forest Service decisions, increased trust that the best available science was used in the project, and facilitated design of a Monitoring and Adaptive Management Plan with a multi-party working group that would analyze the monitoring data collected and provide recommendations for adaptive management.⁹⁰

A similar approach could be possible if mine permitting were analyzed with the possibility of landscape-scale mitigation opportunities on the table. It is easy for stakeholders to oppose a project that only offers the opportunity to lose something valued. However, it is possible that the result could be different if stakeholders were offered an opportunity to protect

⁸⁴ *Id.*

⁸⁵ MS-1794 Mitigation § 2.2(E) (2021).

⁸⁶ MS-1794 Mitigation § 2.2(B) (2021).

⁸⁷ *See, e.g.*, Alexandra B. Klass & Allison J. Mitchel, The Energy Transition and Mining: Reconciling the Growth of Renewable Energy with the Need for New Mineral Development, 67 ROCKY MT. MIN. L. INST. 13-1, 13 (2021) (describing permitting delays for the Rhyolite Mine in Nevada caused by the late-stage discovery of the rare Tiehm’s buckwheat on the location of the proposed strip-mine site).

⁸⁸ BRYCE ESCH AND DIANE VOSICK, ECOLOGICAL RESTORATION INSTITUTE, WHITE PAPER, THE FOUR FOREST RESTORATION INITIATIVE (4FRI): THE ROLE OF COLLABORATION IN ACHIEVING OUTCOMES 7 (November 2016).

⁸⁹ Only one lawsuit was filed, and the claimants did not seek injunctive relief. *Id.* at 3, 8 (the case was dismissed within a year for lack of standing).

⁹⁰ *Id.* at 3-8.

the resources they value through trade-offs enabled by compensatory mitigation plans designed at the landscape scale.

B. Opportunities to improve planning and permitting using the NEPA process.

The National Environmental Policy Act (NEPA) applies to major federal actions that are likely to impact the environment. While NEPA does not mandate elimination or avoidance of environmental impacts, it does require disclosure and analysis of alternative means of achieving project goals, the impacts that are likely to result from implementation of each of these alternatives, and opportunities to mitigate impacts. This analysis must precede issuance of a federal permit or authorization. NEPA's disclosure and analysis requirements thus facilitate informed decisionmaking and public engagement. NEPA also appears to provide a mechanism to coordinate compliance with multiple environmental laws, thereby leading to faster permit completion.⁹¹ There are two ways in which the NEPA process could be used to expedite permitting: (1) initiating a programmatic EIS to identify resource conflicts, define general performance standards, and identify mitigation measures likely to be associated with resource conditions; and (2) using the NEPA process to facilitate and promote coordination among permitting authorities.

1. Using a Programmatic EIS to analyze cross-cutting environmental issues and prioritize areas for avoidance.

Although the analysis required by NEPA is most often applied at the site or project level, NEPA can also be used programmatically. Programmatic Environmental Impact Statements (PEISs) have been used successfully to identify areas that are appropriate for renewable energy development, accelerating subsequent analyses and permitting. The Department of the Interior (DOI) was able to create positive screens to expedite solar energy development across a six-state region by identifying factors such as solar exposure and aspect, and access to the electrical grid. Using this information, the DOI compared these positive screens against screens identifying resource constraints, like critical habitat for threatened and endangered species and culturally important landscapes. The DOI then used this comparison to identify areas possessing high resource potential that avoided major resource conflicts.⁹² A similar programmatic effort was used to facilitate wind development across an eleven-state region.⁹³ These programmatic analyses enabled the BLM to direct development toward those areas.

While we support efforts to programmatically identify priority areas for renewable energy development, we believe that it would be difficult to complete a similar programmatic EIS to identify priority areas for strategic mineral development. First, there are fifty different minerals on the DOI's list of critical minerals. Information about deposits of these minerals and what development of each deposit would involve is less readily accessible or uniform than information about solar exposure or wind speed. Developing a base of information sufficient to identify priority development areas for each mineral would be an expensive and time-consuming task.

⁹¹ See John Ruple, Michael Tanana & Merrill Williams, *Does NEPA Help or Harm ESA Critical Habitat Designations? An Assessment of Over 600 Critical Habitat Rules*, 46 *ECOLOGICAL L. Q.* 829 (2020) (finding that projects undergoing NEPA analysis were completed faster than similar projects that were exempt from NEPA review).

⁹² See e.g., Bureau of Land Management, *Approved Resource Management Plan Amendments/Record of Decision (ROD) for Solar Energy Development in Six Southwestern States* (2012).

⁹³ Bureau of Land Management, *Record of Decision, Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments* (2005).

Second, such an assessment would inevitably involve tradeoffs that are likely to differ based on the types of minerals, extraction and refinement methods, and a host of other factors that are difficult to capture adequately at the programmatic scale. Finally, such an analysis, even if possible, may be unworkable under a claim system. Identifying priority development areas would invite competing claims and indirectly affect the value of unpatented mining claims, thereby potentially complicating efforts to consolidate rights to develop minerals. Furthermore, identifying priority critical mineral mining areas would fail to assure that claims within those areas would be developed rather than held for speculative purposes.

Despite these reservations, we believe that there are opportunities to use a programmatic EIS to improve mine permitting efficiency. First, instead of attempting to identify priority development areas, the BLM (or any agency) could utilize NEPA to support critical mineral development by identifying resource conflicts. A PEIS could identify major resource conflicts that would necessitate avoidance or intense mitigation during mineral development. A programmatic review could also identify categories of resources or landscape characteristics, such as riparian zones in an arid environment, that would likely require more deliberate avoidance strategies.⁹⁴ Avoidance areas or mitigation requirements could be identified as performance standards and made enforceable through BLM's surface management regulations.⁹⁵

The analysis area for a PEIS or series of smaller programmatic EISs could be identified based on existing information about mineral deposits contained in BLM mineral assessments, U.S. Geological Survey (USGS) data, and from state sources. Depending on timelines, the analysis area could also be determined based on the Earth Mapping Resources Initiative, which is a partnership between USGS, the Association of American State Geologists, and state geological surveys to jointly fund mapping and sampling projects, including mapping to find new mineral potential.

A PEIS could also identify avoidance areas based on information compiled in the Conservation Atlas, which is under development to support the America the Beautiful Initiative. Presumably, the Conservation Atlas will include information on existing resource conditions as well as critical habitat designations for threatened and endangered species, underground sources of drinking water and sole source aquifer recharge areas, traditional cultural properties, flood prone areas, and a host of other considerations. Such information could be used to begin compiling data about baseline conditions. Gathering baseline data is one source of delay in the permitting process.⁹⁶ Programmatic planning and analysis could reduce this predictable source of delay. Until the Conservation Atlas is available, or if the Atlas contains an incomplete inventory of sensitive lands and resources, other sources of information could be used, as was done to

⁹⁴ See also NRC, *HARDROCK MINING ON FEDERAL LANDS supra* note 16 at 68 (recommending the issuance of advisory guidelines that identify categories of resources or lands that deserve special consideration during the mine permitting process); Bureau of Land Management, *Mitigation Manual 2.1* (2021) ("The BLM identifies and considers mitigation to address impacts to resources in NEPA analyses for proposed land uses, and, as appropriate, requires mitigation to address impacts to resources in the associated decision documents and land use authorizations.").

⁹⁶ 43 C.F.R. § 3809.411(a)(3)(i) (noting that the BLM may not be able to approve a plan where baseline data must be gathered); NRC, *HARDROCK MINING ON FEDERAL LANDS supra* note 16 at 79-80, 86-87 (noting that baseline data is critical to understanding or predicting the effects of a proposed mining operation, but it can be slower and more costly than necessary when data collection and analysis is badly designed or poorly coordinated).

support large scale programmatic efforts like those involving the Greater Sage Grouse or renewable energy.

Second, a programmatic EIS could identify general performance standards for specific types of mining operations, beneficiation practices, or mineral development in specific areas. Identifying best practices would be consistent with the BLM's authority to define general performance standards.⁹⁷ It would also be consistent with the BLM's mitigation policies,⁹⁸ and the BLM's obligation to avoid unnecessary and undue resource degradation. Such performance standards may include technology and practices as well as limitations identified in the relevant land-use plans.⁹⁹

Third, a programmatic EIS could identify best management practices and mitigation measures that are likely to be associated with specific resources.¹⁰⁰ The BLM has authority to identify mitigation measures as part of the general performance standards required for a plan of operations.¹⁰¹ The performance standards that are applicable to a plan of operations also apply to notice-level mining operations.¹⁰² Compliance with these performance standards is necessary to avoid unnecessary or undue degradation.¹⁰³ A programmatic EIS could identify many of these performance standards in advance, rather than a de novo effort upon receipt of a proposed plan of operations.

In summary, the BLM could initiate a programmatic environmental analysis in order to proactively address crosscutting environmental issues that would apply to many different mining operations. This would expedite the permitting process in the long run by avoiding duplicative review at the site or operational level. It would also help create uniformity in the standards applied to mine permit applications.

2. Using the NEPA process to coordinate permitting requirements.

The NEPA process can be used to avoid delay by coordinating permitting and planning requirements. As one senior agency official in the transportation sector observed, "The NEPA process itself is inherently efficient because it provides the platform for agencies to coordinate permitting and planning activities at all levels of the government, thereby avoiding duplicate or sequential reviews and providing the opportunity for potential issues to be identified and resolved early in the process."¹⁰⁴ In a system of overlapping, and at times conflicting,

⁹⁷ 43 C.F.R. 3809.420(a).

⁹⁸ Bureau of Land Management, Mitigation Manual, MS-1794 Mitigation § 2.3 (2021) ("The BLM should identify, consider, and, as appropriate, require the use of BMPs to address reasonably foreseeable impacts to resources, rather than routinely relying on past practices. Depending on the public land use, BLM may seek an applicant's voluntary commitment to follow BMPs or require BMPs as a condition of authorization if allowed under existing legal authority.").

⁹⁹ 43 C.F.R. § 3809.420(a)(1), (3).

¹⁰⁰ Bureau of Land Management, Mitigation Manual, MS-1794 Mitigation 2.2(D) (2021) ("If a mitigation standard has not yet been identified in a land use plan, the BLM may identify mitigation standards for resources that are considered important, scarce, sensitive, or have a protective legal mandate, as appropriate, in other decision documents supported by appropriate NEPA analysis.").

¹⁰¹ 43 C.F.R. § 3809.420(a)(4) ("You must take mitigation measures specified by BLM to protect public lands.").

¹⁰² 43 C.F.R. §3809.320 ("Your notice-level operations must meet all applicable performance standards of §3809.420."); *id.* § 3809.420 (defining performance standards for plans of operations).

¹⁰³ 43 C.F.R. § 3809.415(a).

¹⁰⁴ Serassio, *Legislative and Executive Efforts to Modernize NEPA supra* note 25 at 330.

jurisdictional authority, gaps or duplication of effort are likely to occur absent strong coordination.¹⁰⁵

Done properly, the NEPA process functions as an umbrella statute, facilitating compliance with a host of other laws such as the Clean Water Act, the National Forest Management Act, or the National Historic Preservation Act. Indeed, permitting decisions that undergo NEPA review are often completed faster than those that are exempted from NEPA.¹⁰⁶ We believe this may reflect the interagency coordination that is part of the NEPA process as well as improvements in efficiency that come with improved communication and coordination.

Delays are likely to increase where interagency coordination is lacking.¹⁰⁷ As the National Research Council observed, “Timing of environmental review and permitting is affected by agencies’ ability to coordinate with one another, as well as by the availability of sufficient agency staff and technical resources. Where coordination among state and federal regulatory agencies is high, environmental review and permitting appears to be faster . . . where separate agencies engage in serial permitting, rather than coordinating their review efforts, the process—including data gathering—can take longer.”¹⁰⁸

Early consultation is essential to ensure coordination.¹⁰⁹ Early consultation should include all stakeholders including the relevant federal, state, and county agencies, tribes, citizen groups, and the applicant.¹¹⁰ NEPA’s analytical process can provide a structure for ensuring that a proposed plan of operation “complies with all pertinent Federal and state laws.”¹¹¹ NEPA’s scoping process could be used to identify all relevant state, federal, and local permits that would be necessary, as well as the individual officer responsible for approving or denying a permit. Because the statutory and regulatory regime governing hard rock mining is so complex, simply identifying the applicable legal standards and the responsible official would bring clarity for all regulatory authorities, the public, and the permittee. The scoping process could also define the sequence of permitting, and appropriate timelines for permitting decisions within that sequence. This approach, which has been successfully used for transportation projects, would significantly reduce delays caused by ambiguity, confusion, and reluctance to act.¹¹²

Proactively requiring all stakeholders to engage in NEPA’s scoping process can expedite permitting by identifying issues of contention early and clarifying information that must be gathered. “Agreement might not be reached among all of the stakeholders. However, the issues would be better understood by the public and defined to the benefit of the public, the agencies, and the applicant if early consultation occurred under NEPA and permitting process.”¹¹³

¹⁰⁵ NRC, *HARDROCK MINING ON PUBLIC LANDS* *supra* note 16 at 53.

¹⁰⁶ John Ruple, Michael Tanana & Merrill Williams, *Does NEPA Help or Harm ESA Critical Habitat Designations? An Assessment of Over 600 Critical Habitat Rules*, 46 *ECOLOGY L. Q.* 829 (2020).

¹⁰⁷ *See also*, GAO *HARDROCK MINING*, *supra* note 6 at 22 (identifying challenges involving “[q]uantity and quality of coordination and collaboration” as a leading cause of permitting delay).

¹⁰⁸ NRC, *HARDROCK MINING ON FEDERAL LANDS* *supra* note 16 at 55.

¹⁰⁹ *Id.* at 81 (“Early consultation among all stakeholders is essential for regulatory efficiency.”).

¹¹⁰ *Id.* at 55.

¹¹¹ 43 C.F.R. § 3809(a)(6) (including obligation to “conduct all operations in a manner that complies with all pertinent Federal and state laws” as a general performance standard for plans of operations); *id.* § 3809.415(a) (clarifying that prevention of unnecessary or undue degradation includes compliance with “other Federal and State laws related to environmental protection and protection of cultural resources”).

¹¹² *See generally* Serassio, *Legislative and Executive Efforts to Modernize NEPA* *supra* note 25 at 317.

¹¹³ NRC, *HARDROCK MINING ON PUBLIC LANDS* *supra* note 16 at 81.

Additionally, without providing opportunity to raise concerns during the scoping process, stakeholders may raise concerns late in the process or through litigation. Some of those concerns may require collecting additional baseline data that may have been easily collected at the beginning of the permitting process.¹¹⁴ Thus, a thorough and inclusive scoping process avoids disruptions late in the permitting process.

Including all stakeholders at the beginning of the NEPA process also provides an opportunity to initiate consultation requirements early.¹¹⁵ This approach would provide three benefits. First, engaging in consultation early maximizes the opportunity to avoid problems at the design phase. Second, the opportunity to identify concerns early enough to engage in avoidance makes consultation more meaningful. Third, early collaboration ensures shared mapping and database development, which facilitates decisionmaking.

In summary, the NEPA process can be used to expedite mineral development in two ways. First the BLM could initiate inter-agency programmatic analyses of cross-cutting environmental issues. This would avoid repetitive and duplicative review at the site level. It would also make the permitting process more predictable and transparent by identifying resource conflict areas, clarifying performance standards, and articulating principles that will guide application of the mitigation hierarchy. Second, at the site level, the NEPA process can be used to coordinate permitting requirements and improve communication between permitting officials at the federal state, tribal, and local level. The NEPA process can also be used to initiate consultation requirements early in enough in the process to be meaningful and effective, which can avoid delays in the long run. These procedures can improve timeliness, predictability, and transparency in the permitting process. Achieving these outcomes, however, depends upon sufficient agency capacity and expertise to utilize these tools effectively.

III. Creating a Voluntary Fast-Track Program

The permitting process could be further expedited by creating a voluntary fast-track program for applicants who choose to comply with a uniform set of regulatory and industry best practices, which we will refer to as the Ceiling Standard. A dedicated interagency team with sufficient qualifications and expertise (the Ceiling Permitting Team) could be assigned to process mine related applications that comply with the Ceiling Standard. Memorandums of Understanding could be drafted with each appropriate permitting authority, including state, local, and tribal permitting authorities, agreeing to cooperate with the Ceiling Team or delegating limited permitting authority to the Ceiling Permitting Team. Permit applicants who voluntarily committed to meeting these standards would enjoy access to this dedicated, knowledgeable inter-agency team composed of both regulators and scientists. The Ceiling Permitting Team could be incorporated into the mining sector of the FAST-41 program, which currently accepts mining applications from “covered” projects.¹¹⁶ Permit applicants who commit to meeting the Ceiling

¹¹⁴ *Id.*

¹¹⁵ *See e.g.*, 43 C.F.R. § 3809.411(a)(3)(iii), (iv), (vii) (clarifying that a proposed plan of operations cannot be approved until the BLM completes consultation under the National Historic Preservation Act, the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, tribal consultation, and consultation with the surface management agency where BLM does not have responsibility for managing the surface).

¹¹⁶ Federal Permitting Improvement Steering Council, Adding Mining as a Sector of Projects Eligible for Coverage Under Title 41 of the Fixing America’s Surface Transportation Act, 86 Fed. Reg. 1281 (Jan. 8, 2021).

Standard could be guaranteed admission to the Fast-41 program.¹¹⁷ This would afford applicants two benefits: first, access to a dedicated knowledgeable team of regulators; and second, the interagency coordination, timeliness, and transparency provided by the FAST-41 process. Guaranteeing that a proposal would be subject to FAST-41 or a similar program would also address anecdotal concerns that the mining industry has been frustrated by a perceived inability to secure FAST-41 review. Such a program would create a fast-track opportunity without compromising environmental review or public consultation. The following steps would be necessary to create this program.

Define the ceiling. Create an inter-agency team that develops a synthesized list of the most stringent applicable standards across industries and permitting authorities. In many cases, this would require a comparison of federal and state permitting standards. For example, if Nevada’s Technology-Based Effluent Limitation standard for the applicable National Pollution Discharge Elimination System (NPDES) permit were more stringent than the federal standard, the Nevada standard would define the ceiling. Defining the ceiling would create certainty for agency officials and permit applicants in a variable regulatory field. Incorporation of those standards in a permit application would satisfy permitting requirements of any location, under any jurisdiction. The Ceiling Standards could also include the general performance standards and mitigation requirements identified in a Programmatic EIS, as described in Section II.B.

Create a Ceiling Permitting Process. With the Ceiling Standard clearly defined, a Ceiling Permitting Team could be created. The Ceiling Permitting Team would be an interagency permitting team for critical mineral projects composed of dedicated experts in related disciplines with regulatory or mineral development expertise. To maximize the effectiveness of this team, MOUs could be negotiated with other federal agencies. Similarly, MOUs could also be negotiated with States or tribes exercising delegated authority. States enforcing their own laws, as well as local and tribal permitting authorities could also coordinate their permitting actions with the Ceiling Team through an MOU or a Programmatic Agreement. These agreements could either arrange for permitting authority to be delegated to the Ceiling Permitting Team or it could define the procedures for participation within the Ceiling Team permitting process. Similar agreements have already been used within the FAST-41 program.

The Ceiling Team’s expertise could facilitate fast and efficient processing of applications. It could also reward operators who choose to design high-road operations. This innovation would be consistent with Recommendation 2 from White House report on Building Resilient Supply Chains, “Support the Development of markets that invest in workers, value sustainability, and drive quality.”¹¹⁸ The report recognized that “government could play a more active role in setting standards and incentivizing high-road business practices.”¹¹⁹ Providing a dedicated permitting process for businesses that voluntarily commit to achieving the Ceiling Standards would incentivize high road business practices by rewarding businesses that value sustainability.

Incorporate the Ceiling Team into the Fast 41 Program. The Ceiling Permitting Team could be incorporated into the FAST 41 Program, which has already authorized the inclusion of

¹¹⁷ This could be achieved by expanding the definition of a “covered” project to include projects that voluntarily commit to meeting the Ceiling Standard.

¹¹⁸ WHITE HOUSE, BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH: 100-DAY REVIEWS UNDER EXECUTIVE ORDER 14017, 14 (June 2021).

¹¹⁹ WHITE HOUSE, BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH: 100-DAY REVIEWS UNDER EXECUTIVE ORDER 14017, 14 (June 2021).

mining projects.¹²⁰ Incorporating the Ceiling Permitting Team into the FAST-41 permitting process could help federal agencies coordinate their environmental and project review efforts to improve the timeliness, efficiency, predictability, and transparency of the decision-making processes associated with covered mining projects. Many of the permitting delays associated with hardrock mining involve the same challenges as infrastructure permitting. The FAST-41 team has experience with complex environmental, procedural, and interagency permitting challenges. However, other aspects of mining require unique technical expertise that can be coordinated and provided through the Ceiling Permitting Team. We do not suggest that the Ceiling Permitting Team would supplant the existing FAST-41 program for mining permits. Rather, it would supplement the existing program. Permit applicants who choose not to achieve the Ceiling Standard could still use the FAST-41 program, consistent with the existing requirements for “covered projects.”¹²¹

Within the FAST-41 Program, we emphasize that mine permit applications may not be appropriate for a standardized Recommended Performance Schedule (RPS) of under two years.¹²² Two years may not be a realistic amount of time to gather baseline environmental studies, develop mitigation strategies, and complete meaningful consultation. Where this is the case, the FAST-41 team should be encouraged to exercise discretion and extend the performance schedule.¹²³

Applicants who voluntarily commit to achieving the Ceiling Standards in their operations should be guaranteed admission into the Fast-41 Program. To date, no mining applications have been accepted into the FAST-41 program.¹²⁴ The Federal Register Notice for including mining in the FAST-41 program noted that the Federal Permitting Improvement Steering Council expected only a “small” number of mining projects to be included.¹²⁵ One reason for this projection was the difficulty of satisfying the FAST-41 criteria. In particular, the expectation that “sponsors must provide agencies with information sufficient to create a comprehensive and complete project permitting timetable within 60 days of initial project coverage”¹²⁶ may not be realistic for a mining proposal. The most challenging mining projects may be the ones that would benefit most from the expertise of the FAST 41 Team, in combination with the Ceiling Team. Potentially significant cultural impacts, extensive tribal and local government consultation requirements, and landscape-scale mitigation opportunities all have the highest likelihood of success if they are addressed at the earliest possible stage. The more developed a proposal becomes, the realistic opportunities for avoidance, minimization, and mitigation diminish. For that reason, we believe that within the mining sector, permittees who commit to meeting the

¹²⁰ Federal Permitting Improvement Steering Council, Adding Mining as a Sector of Projects Eligible for Coverage Under Title 41 of the Fixing America’s Surface Transportation Act, 86 Fed. Reg. 1281, 1284 (Jan. 8, 2021) (describing discretionary procedures available within the FAST-41 program where a program exceeds Recommended Performance Schedules).

¹²¹ 42 U.S.C. § 4370m(6).

¹²² 42 U.S.C. § 4370m-1(c)(ii)(II)(aa).

¹²³ *Id.* § 4370m-1(c)(ii)(II)(bb); Federal Permitting Improvement Steering Council, Adding Mining as a Sector of Projects Eligible for Coverage Under Title 41 of the Fixing America’s Surface Transportation Act, 86 Fed. Reg. 1281 (Jan. 8, 2021).

¹²⁴ <https://www.permits.performance.gov/projects/fast-41-covered> (providing a search function to identify projects by sector, but there are no projects within the mining sector).

¹²⁵ Federal Permitting Improvement Steering Council, Adding Mining as a Sector of Projects Eligible for Coverage Under Title 41 of the Fixing America’s Surface Transportation Act, 86 Fed. Reg. 1281, 1285 (Jan. 8, 2021).

¹²⁶ *Id.* at 1285.

Ceiling Standard should be guaranteed admission to the FAST-41 program, even without the ability to define a comprehensive and complete permitting timetable within 60 days.

Finally, if this approach is taken, the availability of a fast-track process through the Ceiling Team should be strategically implemented and thoroughly supported. History demonstrates the importance of these steps. In the late nineties, the EPA attempted to create a multi-media, multi-statute approach for handling environmental issues posed by hardrock mining.¹²⁷ It took three years to develop the National Hardrock Mining Framework. The Framework's goal was to protect human health and the environment through appropriate and timely pollution prevention, control, and remediation.¹²⁸ In 2003, after the Framework had been available for five years, the Office of Inspector General conducted an investigation to determine the efficacy of the program. The Inspector General found "little evidence that the Framework contributed to environmental improvements or protections at specific hardrock mining sites."¹²⁹ Two major reasons for this failure were "lack of an implementation plan" and a "lack of intra- and interagency coordination."¹³⁰ Despite spending three years developing the Framework, the EPA had no plan or strategy for implementing the Framework once it was completed.¹³¹ Additionally, amongst agencies, there were varying priorities, with no plans to identify, acknowledge, or work with the priorities of other agencies.¹³² Finally, even though an interagency coordinating committee was established, it was not promoted or supported by leadership.¹³³ This Inspector General report serves as a good reminder that even the most thoughtful legal structures are still operated by humans. Efficiency cannot be achieved with regulatory improvements alone. The human elements of communication, coordination, inclusion, and support are necessary as well and must be adequately supported.

In summary, creating a Ceiling Team to implement a voluntary fast-track permit processing program for entities whose operations satisfy the Ceiling Standard could go a long way to achieving this administration's goals of reducing the time, cost, and risk of permitting without compromising strong environmental and consultation benchmarks.

IV. Recognizing voluntary private or international standards that set a higher duty than existing federal or state law.

The Department of Interior should consider incorporating international and private standards to define Best Management Practices (BMPs), particularly within the context of impact avoidance, minimization, and mitigation. According to the BLM's Mitigation Manual, BMPs are "state-of-the-art, efficient, appropriate, and practicable mitigation measures for avoiding minimizing, rectifying, and reducing or eliminating impacts over time."¹³⁴ Many mining companies are adjusting their practices to conform with international standards or industry practices that extend beyond existing federal and state laws and focus on avoiding, minimizing,

¹²⁷ CAROLYN COPPER ET AL., OFFICE OF INSPECTOR GENERAL, IMPLEMENTATION, INFORMATION, AND STATUTORY OBSTACLES IMPEDE ACHIEVEMENT OF ENVIRONMENTAL RESULTS FROM EPA'S NATIONAL HARDROCK MINING FRAMEWORK REPORT No. 2003-P-00010, 4 (Aug. 2003).

¹²⁸ *Id.*

¹²⁹ *Id.* at 15-16.

¹³⁰ *Id.* at 8-9.

¹³¹ *Id.* at 8.

¹³² *Id.* at 9.

¹³³ *Id.*

¹³⁴ Bureau of Land Mgmt., U.S. Dep't of the Interior, Mitigation Manual (MS-1794) 2.3, G-1 (2021).

or rectifying environmental and cultural impacts associated with mining operations. These practices, which include commitments to reduce greenhouse gas emissions, incorporate culturally sensitive practices, or mitigate losses of biodiversity, reflect quickly evolving industry standards that are often driven by investors and the financial market. Although these standards may not directly correspond to existing federal or state regulatory requirements, they may be relevant to defining BMPs within the context of mitigation. Incorporating these standards by reference would promote consistency, create a more level playing field, and reward good actors.

The international investment community is becoming increasingly concerned about the environmental effects of its decisions, particularly as those decisions relate to climate change and biodiversity. In January 2020, the World Economic Forum released a report observing that more than half of the world's total GDP is moderately or highly dependent on nature.¹³⁵ “As nature declines, the prospects for business success and future prosperity dwindle.”¹³⁶ The report recognized that the financial sector sat at an awkward junction. On the one hand, banks, investors, and insurance companies were exposed to financial losses caused by the unraveling of ecosystem services. On the other hand, these same institutions were funding projects that contributed to the degradation of ecosystem services. The report concluded that the financial community should develop a nature-related risk disclosure that would embed nature risks and opportunities into corporate strategy and oversight.¹³⁷

The financial community moved quickly. The Taskforce on Nature-related Financial Disclosures (TNFD) was launched on June 4, 2021. The TNFD seeks to develop a “risk management and financial disclosure framework to support a shift in global financial flows away from nature-negative outcomes and towards nature-positive outcomes.”¹³⁸ The TNFD builds off other industry standards, which have made progress toward developing biodiversity metrics and standards for phrases like “nature-positive.”¹³⁹ For example, from 2016-2019, environmental professionals in England worked on developing a biodiversity metric.¹⁴⁰ Those generated the “Biodiversity Net Gain Standard” released by the British Standards Institute in 2021.¹⁴¹ That same year, England became the world's first jurisdiction to require “biodiversity net gain” as part of the planning approval process for buildings and major infrastructure projects.¹⁴² The Netherlands and France have also developed standards.¹⁴³ Building off these efforts, the

¹³⁵ CELINE HERWEIJER ET AL., NATURE RISK RISING: WHY THE CRISIS ENGULFING NATURE MATTERS FOR BUSINESS AND THE ECONOMY, WORLD ECONOMIC FORUM 8 (Jan. 2020).

¹³⁶ *Id.* at 12.

¹³⁷ *Id.* at 22.

¹³⁸ Alastair Marsh, *BlackRock, HSBC Join Biodiversity Disclosure Initiative TNFD* Bloomberg (Sept. 29, 2021)

¹³⁹ See, e.g. SCIENCE BASED TARGETS NETWORK, SCIENCE-BASED TARGETS FOR NATURE: INITIAL GUIDANCE FOR BUSINESS (Sept. 2020); BOTANIC GARDENS CONSERVATION INTERNATIONAL, GLOBAL BIODIVERSITY STANDARD, <https://www.biodiversitystandard.org/> (announcing development of biodiversity standard to combat inadvertent destruction of biodiversity during tree planting, restoration, and reclamation projects); PARTNERSHIP FOR BIODIVERSITY ACCOUNTING FINANCIALS (PBAF), PAVING THE WAY TOWARDS A HARMONIZED BIODIVERSITY ACCOUNTING APPROACH FOR THE FINANCIAL SECTOR (Sept. 2020)

¹⁴⁰ See, e.g. The Biodiversity Metric 3.1 (JP039) available at <http://nepubprod.appspot.com/publication/6049804846366720> (providing the most current version as well as archived versions of the metric).

¹⁴¹ BRITISH STANDARDS INSTITUTE, PROCESS FOR DESIGNING AND IMPLEMENTING BIODIVERSITY NET GAIN—SPECIFICATION BS 8583:2021 at 1 (2021).

¹⁴² Yarema Ronish et al., Biodiversity—Gaining Ground? 24 ELR 1(3) (Mar. 2022).

¹⁴³ ASSOCIATION FRANCAISE DE NORMALISATION (AFNOR), BIODIVERSITY : A STANDARDIZED METHOD TO BUILD ACTION PLANS (Jan. 25, 2021) <https://normalisation.afnor.org/en/news/biodiversity-standardized-method-build->

International Standards Organization (ISO) is in the process of developing a Biodiversity standard.¹⁴⁴ These standards focus on identifying, quantifying, and mitigating effects to biodiversity caused by a development project. They are voluntary and developed through consensus with industry, scientific, and governmental stakeholders.¹⁴⁵

There are many voluntary private biodiversity and climate standards under development.¹⁴⁶ Many of these standards impose more stringent requirements than existing federal or state laws. For example, some standards focus on achieving goals related to the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity.¹⁴⁷ The standards include commitments like net-zero climate emissions, no net-nature loss, biodiversity accountability, or biodiversity net gain. Each of these standards also include monitoring, reporting, and verification requirements to ensure compliance. Some standards also require third-party verification on reports, which provide further assurances of compliance. Multi-national corporations may also seek to adhere to these standards for legal or financial reasons.¹⁴⁸

action-plans/?_ga=2.126794125.1054837577.1654042120-1474643323.1654042120 (announcing the availability of standard NF X32-001, a voluntary standard providing a method to conduct biodiversity protection); PARTNERSHIP FOR BIODIVERSITY ACCOUNTING FINANCIALS (PBAF), PAVING THE WAY TOWARDS A HARMONIZED BIODIVERSITY ACCOUNTING APPROACH FOR THE FINANCIAL SECTOR 12 (Sept. 2020) (describing development of various biodiversity standards from the Netherlands).

¹⁴⁴ INTERNATIONAL STANDARDS ORGANIZATION (ISO), ROADMAP ISO/TC 331 BIODIVERSITY (Version Feb. 2022). *See also* GLOBAL SUSTAINABILITY STANDARDS BOARD (GSSB), GRI TOPIC STANDARD PROJECT FOR BIODIVERSITY: PROJECT PROPOSAL (Sept. 29, 2021) (proposing to review and update the Global Reporting Initiative’s Biodiversity Standard GRI 304 with anticipated completion in 2023).

¹⁴⁵ *See, e.g.*, SUSTAINABLE FINANCE PLATFORM, BIODIVERSITY IN THE FINANCIAL SECTOR—FROM PLEDGES TO ACTION (2021) (acknowledging that “biodiversity is a complex subject, definitions are still fluid, scoping of responsibilities is ongoing, and biodiversity footprinting methods are still being developed,” but still providing case studies of efforts undertaken by a variety of financial institutions); FINANCE FOR BIODIVERSITY: GUIDE ON BIODIVERSITY MEASUREMENT APPROACHES (Jan. 2022) (providing regularly updated description of available methodologies geared toward the financial sector and designed to assess biodiversity-related risks and opportunities); JOHAN LAMMERANT ET AL., EU BUSINESS @ BIODIVERSITY PLATFORM, ASSESSMENT OF BIODIVERSITY MEASUREMENT APPROACHES FOR BUSINESSES AND FINANCIAL INSTITUTIONS: UPDATE REPORT NO. 3 (Mar. 2021) (describing 19 available biodiversity measurement methodologies, providing case studies, and introducing a decisionmaking wheel for businesses to select the most functional method).

¹⁴⁶ Stephen Kim Park, *Investors as Regulators: Green Bonds and the Governance Challenges of the Sustainable Finance Revolution*, 54 STAN. J. INT’L L. 1 (2018) (identifying four mechanisms of private standards that are quasi regulatory: investor-based standards, market-oriented schemes; specialized indices; and external assurances).

¹⁴⁷ *See, e.g.* FINANCIAL STABILITY BOARD, TASKFORCE FOR CLIMATE-RELATED FINANCIAL DISCLOSURES (May 2022) available at https://assets.bbhub.io/company/sites/60/2022/05/TCFD_Overview_Booklet_Digital.pdf (“G20 Finance Ministers and Central Bank Governors asked the Financial Stability Board (FSB) to review how the financial sector can take account of climate-related issues. The FSB established the Task Force on Climate-Related Financial Disclosures to develop recommendations); INTERNATIONAL STANDARDS ORGANIZATION, ISO/TC331 BIODIVERSITY (establishing a taskforce to develop standardization in the field of biodiversity and to develop principles, framework, requirements, and guidance in that field); BRITISH STANDARDS INSTITUTE, BIODIVERSITY, BS 8683 BIODIVERSITY NET GAIN (June 2021).

¹⁴⁸ Alexandra N. Farmer et al., *Increasing Focus on Biodiversity-Related Financial Risk Presents New Challenges and Opportunities in Energy and Infrastructure* 2 PRATT’S ENERGY LAW REPORT (Feb. 2022) (describing recent policy, regulatory, soft law, and voluntary initiatives pushing energy and infrastructure companies to incorporate biodiversity concerns into management decisions even where it is not yet legally required).

As an industry, mining is both under scrutiny and participating in this trend.¹⁴⁹ For example, Rio Tinto, operating in 26 countries on six continents, committed to having a net positive impact on biodiversity in all its mining operations.¹⁵⁰ All of the international biodiversity standards require information that is relevant, and even duplicative of information required during the permitting process. Committing to a net biodiversity gain imposes more stringent mitigation requirements than existing regulations. All standards require monitoring and disclosure regarding the efficacy of mitigation efforts.

These private standards could be utilized to define Best Management Practices (BMPs) within the context of project siting, mineral exploration, mining and related operational best management practices, reclamation, and mitigation. For example, the ISO is currently developing a Biodiversity Standard.¹⁵¹ When released, this standard would be a candidate for analysis as a BMP clarifying mitigation performance standards for biodiversity.¹⁵² The BLM has authority to “identify, consider, and, as appropriate, require the use of BMPs to address reasonably foreseeable impacts to resources rather than routinely relying on past practices.”¹⁵³ Where appropriate, the BLM and/or the Ceiling Team should analyze private standards to determine whether they satisfy definition of a Best Management Practice. An analysis could be internally initiated or requested by an individual.

There are three benefits to recognizing robust international and industry standards. First, incorporating international standards and industry best practices would create consistent expectations and a level playing field. If done well, this approach could raise all boats with respect to environmental and social justice objectives. Second, incorporating appropriate private standards would reward operators who voluntarily choose to meet a more stringent standard. Finally, incorporating appropriate private standards would encourage the development and authenticity of international standards focused on achieving laudable goals, such as the Post-2020 Global Biodiversity Framework, or climate-focused targets established through the United Nations Framework Convention on Climate Change, or culturally-focused standards, such as the United Nations Declaration on the Rights of Indigenous People.

The White House 100-Day Report on Building Resiliency recognized that “government could play a more active role in setting standards and incentivizing high-road business practices.”¹⁵⁴ This includes strong domestic standards, as well as “advocating for the establishment of global standards” in order to support the private sector’s ability to create and

¹⁴⁹ JOHAN LAMMERANT ET AL., EU BUSINESS @ BIODIVERSITY PLATFORM, ASSESSMENT OF BIODIVERSITY MEASUREMENT APPROACHES FOR BUSINESSES AND FINANCIAL INSTITUTIONS: UPDATE REPORT NO. 3 (Mar. 2021) (providing detailed list of biodiversity metrics and case studies of their adoption and application in industries ranging from banking to agriculture to mining).

¹⁵⁰ Anuj Saush and Loannis Siskos, *Biodiversity Loss: What does it Mean for your Business?* THE CONFERENCE BOARD 19 (June 2021).

¹⁵¹ ISO, ROADMAP ISO/TC 331 BIODIVERSITY (Version Feb. 2022).

¹⁵² Bureau of Land Mgmt., U.S. Dep’t of the Interior, Mitigation Manual (MS-1794) 2.5 (B) (“The BLM should use performance standards to monitor and assess the effectiveness of the mitigation measure in achieving the required outcome.”).

¹⁵³ *Id.*

¹⁵⁴ WHITE HOUSE, BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH: 100-DAY REVIEWS UNDER EXECUTIVE ORDER 14017, 14 (June 2021).

adopt resilient practices.¹⁵⁵ Incorporating international standards into the Ceiling Permitting Process would meet this goal.

V. Developing Incentives to Stabilize the Strategic Mineral Supply Chain and Ensure that Strategic Minerals are Available for Domestic Needs.

Finally, while not included directly in the RFI, we recognize that strategic minerals are commodities that are bought and sold through global markets. With worldwide demand for strategic minerals projected to increase dramatically in coming years, we believe that the federal government should take steps to ensure that increased domestic production results in increased domestic availability, and that minerals needed to satisfy our nation's strategic interests are not lost to foreign interests via global markets. Two existing federal programs may serve as useful models as the Working Group moves forward with its efforts.

The Strategic Petroleum Reserve (SPR) provides an example of a federal reserve that is managed to mitigate the impact of supply chain disruptions. The SPR was created in response to crude oil supply disruptions that occurred in the 1970s and the reserve contains up to 700 million barrels of unprocessed crude oil. Access to the reserve is controlled pursuant to the 1975 Energy Policy and Conservation Act, primarily to counter a severe supply interruption. The three most recent releases from the SPR have been in response to supply chain disruptions and rapid increases in the price of refined products. If the SPR is used as a model for critical mineral supply chain buffering, the federal government would need to determine which minerals to include as well as the quantities to include. Presumably, the federal government would prefer refined minerals (analogous to gasoline and jet fuel) as opposed to feedstock (analogous to crude oil), but that assumption needs validation.

In contrast to the SPR, the National Defense Stockpile (NDS) includes strategic minerals. The NDS is intended to mitigate against disruption of supplies needed for national defense purposes rather than interruptions impacting the broader economy. The NDS does not include all of the minerals identified in the Department of the Interior's most recent list of critical minerals. Minerals contained in the NDS also are not held in quantities sufficient to address broader national economic objectives, and most of the minerals in the NDS are not available for non-defense purposes. The NDS would therefore need to be expanded to include more minerals and larger quantities of critical minerals if the NDS is to address the full range of nationally strategic minerals and their uses. Alternatively, the NDS could serve as a model for a new stockpile designed for strategic rather than defense purposes.

We are encouraged by recent legislation to expand the size of the NDS. Further expanding our national reserve of strategic minerals would create an additional incentive to increase domestic mineral production. Price guarantees or long-term purchase agreements that are conditioned upon satisfaction of the substantive and procedural environmental best management practices noted above could incentivize appropriate development, while discouraging development in sensitive areas or without appropriate consultation.

VI. Conclusion.

The 150 year-old General Mining Law's claim system does little to frontload environmental or social justice concerns into the mineral location and development process. The law simply was not enacted with those objectives in mind. The General Mining Law's single-

¹⁵⁵ *Id.* at 14.

mindful emphasis on locating claims and proving a valuable discovery to secure a property right that defeats most other federal interests, we believe, is fundamentally at odds with the last half century's emphasis on proactive planning and efforts at impact avoidance, minimization, and mitigation in advance of development. The divergent goals of the General Mining Law and modern environmental laws guarantee conflict. The federal government needs to address the single-minded focus on minerals reflected in the General Mining Law.

While we see value in robust reforms to the General Mining Law and its implementing regulations, the current state of political division and rancor motivates us to seek other opportunities to improve the critical mineral supply chain without compromising environmental protection, government transparency, or public and intergovernmental engagement. We believe that significant improvements in permitting efficiency and transparency can be achieved through more efficient use of the existing legal structure. Our comments therefore focus primarily on expanding agency capacity, improving permitting coordination, and developing a voluntary fast-track program.

Federal agencies are severely understaffed and much of the recent employee attrition has occurred at senior levels, resulting in a devastating loss of expertise and institutional knowledge. The most expedient way to accelerate responsible critical mineral permitting is to rebuild agency capacity—both boots on the ground and institutional knowledge. Additional measures, such as flow charts and environmental checklists can also promote efficiency by rebuilding institutional knowledge, reducing legal ambiguities, and avoiding delay caused by incomplete permit applications.

With expanded agency capacity and expertise, much can be accomplished through careful and proactive planning under existing federal authorities. Careful and proactive planning can facilitate avoidance of unacceptably sensitive areas, and early integration of environmental and social justice priorities into mine development planning. Federal agencies such as the BLM and USFS can use existing land management planning and impact assessment tools to identify sensitive resources and direct development away from those locales. Land use planning can help identify appropriate avoidance, minimization, and mitigation strategies at a landscape scale. These analyses can occur programmatically or at a regional level and expedite site-level analyses by avoiding duplicative analysis of similar issues.

The Department of the Interior should consider developing a voluntary fast-track program for critical mineral projects that commit to achieving stringent environmental and cultural standards. This program could be incorporated into the mining sector of the FAST-41 program. Finally, a multitude of voluntary international private standards are being developed to further define best practices related to climate mitigation, biodiversity preservation, and cultural respect. The Department of the Interior and its sister agencies should consider whether these standards fit the definition of a Best Management Practice. If so, these standards may be an effective way to align mitigation practices imposed on mineral operations.

In closing, we thank you for allowing us the opportunity to provide comments and we commend the Administration for undertaking this Request for Information. We hope that our comments help identify opportunities to reduce time, cost, and risk of permitting without compromising strong environmental and consultation benchmarks.

Sincerely,

Robert B. Keiter

Wallace Stegner Professor of Law, University Distinguished Professor & Director, Wallace Stegner Center

S.J. Quinney College of Law, The University of Utah

[Institutional affiliation provided for identification purposes only.]

Jamie Gibbs Pleune

Associate Professor of Law (Research) & Wallace Stegner Center Fellow

S.J. Quinney College of Law, The University of Utah

[Institutional affiliation provided for identification purposes only.]

Heather J. Tanana

Associate Professor of Law (Research) & Wallace Stegner Center Fellow

S.J. Quinney College of Law, The University of Utah

[Institutional affiliation provided for identification purposes only.]

Brigham Daniels

Visiting Professor of Law & Wallace Stegner Center Fellow

S.J. Quinney College of Law, The University of Utah

[Institutional affiliation provided for identification purposes only.]

Tim Duane

Visiting Professor of Law & Wallace Stegner Center Fellow

S.J. Quinney College of Law, The University of Utah

[Institutional affiliation provided for identification purposes only.]

Elisabeth Parker

Research Associate & Wallace Stegner Center Fellow

S.J. Quinney College of Law, The University of Utah

[Institutional affiliation provided for identification purposes only.]