THE UNDUE DEGRADATION OF "UNDUE DEGRADATION": HOW *LOPER BRIGHT* THREATENS TO WEAKEN ENVIRONMENTAL PROTECTIONS FOR DOMESTIC LITHIUM MINING OPERATIONS

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INTRODUCTION

On October 24, 2024, the Bureau of Land Management (BLM) approved the Rhyolite Ridge Lithium-Boron Project, a seven-thousand-acre mining operation in the middle of the Nevada desert.[1] Denoted as the "first domestic lithium project to get full regulatory approval under the Biden Administration," the new mine is projected to supply enough batteries to power roughly 370,000 electric vehicles (EVs) every year for the next twenty-three years.[2] Despite concern that the mine parallels and threatens the habitat for the Tiehm's buckwheat (the only known habitat containing the critically endangered and culturally significant flower),[3] the BLM has been adamant that its environmental analysis of the impacted land was sufficient "to ensure [that] we protect species as we provide critical minerals to the nation."[4] Many have raised concerns about these statements, however, following a BLM whistleblower complaint alleging that the agency, charged with granting mining permits on federal land, had "repeatedly disregarded its own environmental rules and regulations to fast-track permits on public land."[5]

Since the dawn of the new millennium, there has been growing enthusiasm within the global economy for creating a future that is less dependent on fossil fuels, such as coal and natural gas, through the development of renewable energy infrastructure. A critical part of this "clean energy transition[]" depends on the production and manufacture of batteries, particularly lithium-ion batteries for computers and EVs, and the critical minerals needed to create

1. Jeniffer Solis, *Feds Approve Rhyolite Ridge Lithium Mine in Nevada*, NEV. CURRENT (Oct. 25, 2024, at 05:05 ET), https://nevadacurrent.com/2024/10/25/feds-approve-rhyolite-ridge-lithium-mine-in-nevada/ [https://perma.cc/SC7Q-8YG4].

2. *Id.*

3. *See id.*

4. Jeniffer Solis, *BLM Environmental Review Gives Go-Ahead to Proposed Rhyolite Ridge Lithium Mine in Nevada*, NEV. CURRENT (Sep. 24, 2024, at 06:11 ET), https://nevadacurrent.com/2024/09/24/blm-environmental-review-gives-go-ahead-to-proposed-rhyolite-ridge-lithium-mine-in-nevada/ [https://perma.cc/C5QU-3R2Z].

5. Adam Federman, *'This Is the Wild West Out Here': How Washington Is Bending over Backward for Mining Companies in Nevada at the Expense of Environmental Rules*, POLITICO MAG. (Feb. 9, 2020, at 06:51 ET), https://www.politico.com/news/magazine/2020/02/09/nevada-lithium-mine-environmental-investigation-bureau-land-management-100595 [https://perma.cc/2ZYC-KQJY].

them.[6] EVs are particularly driving the push for increased battery development, as the United States is currently projected to have over twenty-six million EVs in circulation by 2030.[7] For countries looking to be economic leaders in this emerging economy of renewables and technology more generally, access to the raw materials comprising batteries is crucial, as the "rising demand benefits the economies of nations that hold significant quantities of key minerals."[8]

However, this transition to a clean energy economy and the concurrent necessary battery production, while steadily increasing, has been anything but smooth in the United States. Currently, China is the leader in the processing, refining, and exporting of lithium and lithium-ion batteries, accounting for over two-thirds of the United States's imports of lithium-ion batteries in 2023, a number thought to understate the country's reliance on Chinese-developed lithium batteries.[9] This dependence on its geopolitical rival for critical materials has raised economic, environmental, and national security concerns in the United States as the federal government attempts to establish a foothold in the lithium-ion battery industry.[10]

Regardless of the country's lithium-ion battery manufacturing capabilities, another challenge has arisen in acquiring the raw materials to build the batteries in the first place. The United States still imports most of its domestic supply of processed and refined

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6. INT'L ENERGY AGENCY, THE ROLE OF CRITICAL MINERALS IN CLEAN ENERGY TRANSITIONS 8, 15, 28, 130 (2022), https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions [https://perma.cc/7QUX-C4GG]; *see* Jessica Colarossi, *The Race to a Battery-Powered Future*, B.U.: THE BRINK (Jan. 18, 2024), https://www.bu.edu/articles/2024/the-race-to-a-battery-powered-future/ [https://perma.cc/W98Q-KJ89].

7. Colarossi, *supra* note 6.

8. Nurcan Kilinc-Ata, Mohamed Alshami & Kashif Munir, *How Do Strategic Mineral Resources Affect Clean Energy Transition? Cross-Sectional Autoregressive Distributed Lag (CS-ARDL) Approach*, 36 MIN. ECON. 643, 649 (2023).

9. Joseph Webster, *What US Tariffs on Chinese Batteries Mean for Decarbonization—and Taiwan*, ATL. COUNCIL: ENERGY SOURCE BLOG (May 13, 2024), https://www.atlanticcouncil.org/blogs/energysource/what-us-tariffs-on-chinese-batteries-mean-for-decarbonization-and-taiwan/ [https://perma.cc/4RX4-7M6C].

10. *See* Press Release, The White House, FACT SHEET: Biden-Harris Administration Takes Further Action to Strengthen and Secure Critical Mineral Supply Chains (Sep. 20, 2024), https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2024/09/20/fact-sheet-biden-harris-administration-takes-further-action-to-strengthen-and-secure-critical-mineral-supply-chains/ [https://perma.cc/KLY2-GJ6Q].

lithium from other countries, primarily from mines in Argentina,[11] making lithium and other critical minerals "vulnerable to geopolitical conflicts that could delay ... battery production in the United States" from foreign adversaries such as China.[12]

To address the country's shortage of crucial minerals needed for battery development, the federal government has begun focusing on expanding its domestic mining capacity of lithium and other "critical minerals" to reduce the country's "strategic vulnerability for both its economy and military to adverse foreign government action, natural disaster, and other events that can disrupt supply of these key minerals."[13] As a result, the Biden administration invested billions of dollars to bolster the country's lithium supply chain, including around three billion dollars towards developing domestic lithium mining and related operations for precious earth minerals production, primarily focusing on mines in Nevada, Arizona, and California.[14]

The decision to increase domestic mining operations is not without critics, particularly those concerned about the significant harm that lithium mining operations can cause to the environment.[15] Environmental organizations have criticized the federal government over the last several years for failing to ensure that new mining operations conduct themselves in an environmentally

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11. *See* BRANDON S. TRACY, CONG. RSCH. SERV., R47227, CRITICAL MINERALS IN ELECTRIC VEHICLE BATTERIES 1, 11 (2022), https://www.congress.gov/crs-product/R47227 [https://perma.cc/6HJQ-XXN9]. The United States's dependence on importing unprocessed South American lithium is especially pronounced given that the "Lithium Triangle" countries of Chile, Argentina, and Bolivia are believed to hold "more than 75 percent of the world's supply" of lithium. Samar Ahmad, *The Lithium Triangle: Where Chile, Argentina, and Bolivia Meet*, HARV. INT'L REV. (Jan. 15, 2020), https://hir.harvard.edu/lithium-triangle/ [https://perma.cc/D3JR-46YD].

12. Elizabeth H. Rudolf, Comment, *Out of Sight, out of Mind: Addressing the Unseen but Potentially Detrimental Issues of the Lithium-Ion Battery Supply Chain*, 96 TUL. L. REV. ONLINE 28, 30 (2022), https://static1.squarespace.com/static/ 5b2192e1fcf7fd542880539a/t/6307bf9072e73e209e3d1cbe/1661452177077/02+96.ORudolf.final.2+%281%29.pdf [https://perma.cc/3A2Q-EQFA].

13. Exec. Order No. 13817, 3 C.F.R. 397 (2017).

14. *See* The White House, *supra* note 10; *Biden Administration To Invest $35M in Lithium Mining in SoCal*, CBS NEWS (Feb. 23, 2022, at 09:15 ET), https://www.cbsnews.com/losangeles/news/biden-administration-to-invest-35m-in-lithium-mining-in-socal/ [https://perma.cc/3AAQ-5DHK].

15. *See* Rennie B. Kaunda, *Potential Environmental Impacts of Lithium Mining*, 38 J. ENERGY & NAT. RES. L. 237, 241-43 (2020).

conscious manner, leading to expansive agency approval of new mines despite potential concerns.[16] If a future presidential administration wanted to respond to those criticisms and impose stricter environmental regulations on lithium mining operations, an efficient and practical solution has traditionally been to turn to the administrative state.[17] Indeed, agency rulemaking is often viewed as a particularly effective option when faced with congressional inaction.[18] However, recent Supreme Court decisions have placed the BLM, the primary agency handling mining claims found on federal land,[19] on uncertain grounds at a critical juncture in which effective and stable regulations are necessary to balance evolving national and international economic pressures with adequate environmental protections.

This Note will argue that the Supreme Court's *Loper Bright Enterprises v. Raimondo* decision—which effectively removes judicial deference to agency determinations related to statutory interpretation[20]—endangers the BLM's interpretation of its unique

16. *Compare, e.g.*, THEA RIOFRANCOS, ALISSA KENDALL, KRISTI K. DAYEMO, MATTHEW HAUGEN, KIRA MCDONALD, BATUL HASSAN, MARGARET SLATTERY & XAN LILLEHEI, CLIMATE & CMTY. PROJECT, ACHIEVING ZERO EMISSIONS WITH MORE MOBILITY AND LESS MINING 7-9, 22-23, https://climateandcommunity.org/wp-content/uploads/2023/01/23_03_08_ENG-Lithium.pdf [https://perma.cc/9PS2-VAH2] (describing the practical impacts of the "deficient and seriously outdated" mining regulations in the United States), *with* U.S. GOV'T ACCOUNTABILITY OFF., GAO-16-165, HARDROCK MINING: BLM AND FOREST SERVICE HAVE TAKEN SOME ACTIONS TO EXPEDITE THE MINE PLAN REVIEW PROCESS BUT COULD DO MORE 12, 32 (2016) (revealing that the BLM and U.S. Forest Service enforcement officials, the two administrative agencies who primarily handle the development of new mining operations on federal land, were "unaware of an instance where an agency had disapproved a mine plan based on the results of an environmental analysis").

17. *See, e.g.*, Andrew P. Morriss, Roger E. Meiners & Andrew Dorchak, *Between a Hard Rock and a Hard Place: Politics, Midnight Regulations and Mining*, 55 ADMIN. L. REV. 551, 571-75 (2003) (outlining President Bill Clinton's push to drastically modify federal mining regulations through administrative rulemaking when Congress failed to address the administration's policy concerns).

18. *See* Kathryn E. Kovacs, *Rules About Rulemaking and the Rise of the Unitary Executive,* 70 ADMIN. L. REV. 515, 555 (2018) ("When neither Congress nor agencies make policy efficiently, the President naturally fills the void."); *cf.* Wesley Sze, Note, *Did* X *Mark the Spot?:* Brand X *and the Scope of Agency Overrides of Judicial Decisions*, 68 STAN. L. REV. 235, 274 (2016) ("[A]gency rulemaking provides an efficient vehicle for agencies to address serial litigation involving the interpretation of statutory language.... Allowing agencies to promulgate regulations that entirely sidestep this process can be immensely more expedient and resource efficient.").

19. 43 C.F.R. pt. 3800 (2024).

20. 144 S. Ct. 2244, 2272-73 (2024).

statutory mandate within the Federal Land Policy and Management Act of 1976 (FLPMA). Specifically, the BLM's responsibility to prevent the "unnecessary or undue degradation" of the environment is in danger of a static judicial interpretation that could detrimentally impact the Agency's ability to protect the environment and ecosystem surrounding the growing number of approved lithium mines.[21] Such a judicial interpretation would run counter to the spirit of the FLPMA and would handicap the BLM's capabilities in considering the many competing interests that have stakes in federal public land development that is likely to harm the environment and conservationism.

Part I of this Note will provide background information regarding the current economic landscape and global supply chain for lithium mining. Part II will examine the current administrative regulatory scheme that dictates hard-rock lithium mining before detailing the challenges this structure faces since the *Loper Bright* decision. More specifically, the BLM will be stuck with a regulatory framework that weakens meaningful environmental protections for new lithium mining operations, given the Court's transition away from a deferential scheme that permitted agencies to change their regulations without statutory clarification[22] and toward one that awards no deferential leeway for an agency to adapt its own policies once the Court has given the final word.[23] Finally, Part III will discuss the next steps for courts in their inevitable review of the BLM's statutory interpretations and proffer some strategies the BLM should implement to expand its environmental protection capabilities, helping to ensure that the "clean energy transition" is, in fact, as clean as possible. Despite the risk that the BLM faces in losing

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21. 43 U.S.C. § 1732(b); *see* Min. Pol'y Ctr. v. Norton, 292 F. Supp. 2d 30, 33-37 (D.D.C. 2003) (providing a general overview of BLM's evolving interpretation of, inter alia, the definition of "unnecessary or undue degradation" found within the FLPMA's modifications of the General Mining Law).

22. *See Loper Bright*, 144 S. Ct. at 2282 (Gorsuch, J., concurring) (discussing how agencies, under *Chevron* deference, had authority to "change their minds about the law's meaning at any time, even when Congress ha[d] not amended the relevant statutory language in any way").

23. *See id.* at 2258-60 (majority opinion); *see also* Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944) (establishing *Skidmore* deference under which an agency's interpretation of an ambiguous statute, while possibly possessing some persuasive weight, is nonetheless "not controlling upon the courts by reason of their authority").

its ability to modify its interpretation of its FLPMA obligations, now is the time for the BLM to act proactively and make the change itself.

I. BACKGROUND ON LITHIUM DEVELOPMENT

As the name suggests, lithium-ion battery development and manufacturing are dependent on several natural resources, especially the mining, refining, and processing of lithium. Lithium is naturally found through two methods: evaporating lithium-rich water extracted from salt brines[24] and mining solid rocks, specifically for minerals found within pegmatite.[25] Compared to other earth minerals, lithium is relatively complicated to mine when found in pegmatite ore, as the material's reactive and unstable nature makes finding large deposits challenging.[26] As a result, miners are forced to engage in a "segregative process" of production whereby "a relatively small amount of a valued substance is isolated from a much larger mass of less valuable material."[27] The results of this process are mining operations that require extraordinary amounts of energy and infrastructure to mine a mineral that will, most likely, be used towards producing extraordinary amounts of energy and infrastructure. Given the growing consumer demand and significant economic incentives for countries to mine and process lithium, there are struggles amongst global powers to develop and control the critical mineral's supply chain, leading to a

24. *See* Kaunda, *supra* note 15, at 239-41. New lithium processes that would decrease the carbon footprint of the lithium mining are currently in development. The most promising of these new mining techniques is "direct lithium extraction," a form of saltwater brine extraction that utilizes special filters that more efficiently remove lithium from the brine than the current extraction methods while reducing the operation's ecological disruption. *See How Is Lithium Mined?*, MIT CLIMATE PORTAL (Feb. 12, 2024), https://climate. mit.edu/ask-mit/how-lithium-mined [https://perma.cc/55AB-J89S]. However, this Note is limited to observing the policy of hard-rock lithium mining—and, consequently, hard-rock mining in general.

25. *See* Kaunda, *supra* note 15, at 239-40. Different lithium producers focus on different minerals found within pegmatite to extract unprocessed lithium, including spodumene in Australia. *See id.*; MIT CLIMATE PORTAL, *supra* note 24.

26. *See* Kaunda, *supra* note 15, at 239-41.

27. Gavin Bridge, *Contested Terrain: Mining and the Environment*, 29 ANN. REV. ENV'T & RES. 205, 210 (2004).

global arms race over lithium mining, production, and refinement capabilities.[28]

A. Current State of the Global Lithium Supply Chain

Once lithium is mined and sufficiently processed from ore, it is sent to refinement plants where the critical mineral is further transformed into a suitable state for the production of different economic goods.[29] The demand for minerals for the production of EV and battery storage technologies is projected to continuously increase over the next few decades, with lithium "see[ing] the fastest growth rate," potentially "growing by over 40 times" by the year 2040.[30] International lithium production has hit record highs of over 240,000 tons, with Australia and Chile producing over 57 percent of the world's supply in 2024.[31]

1. The Domestic Desire to Acquire Control of the Lithium Supply Chain

Many of the mines in these countries were funded and developed by China, with the country acquiring "around $5.6 billion worth of lithium assets" and "host[ing] 60% of the world's lithium refining capacity for batteries" as of 2021.[32] This early development and full-scale control over much of the global lithium supply chain has put pressure on other countries, particularly the United States, either

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28. *See, e.g.*, Cecilia Jamasmie, *Global Lithium Raises Alarm over Potential Foreign Takeover*, MINING.COM (Nov. 8, 2024, at 03:56 ET), https://www.mining.com/global-lithium-raises-alarm-over-potential-foreign-takeover/ [https://perma.cc/9PLP-SYYF].

29. *See* Natasha Frost, *Australia Tries to Break Its Dependence on China for Lithium Mining*, N.Y. TIMES (May 23, 2023), https://www.nytimes.com/2023/05/23/business/australia-lithium-refining.html [https://perma.cc/LU9N-D7NX].

30. INT'L ENERGY AGENCY, *supra* note 6, at 50; *see* Laura Bergla, Blair Miller-McFeeley & Andrea Folds, *The Clean Energy Dilemma: How the Push for Clean Energy Could Threaten Indigenous Communities and an Exploration of Potential Alternatives*, 33 COLO. ENV'T L.J. 285, 287 (2022).

31. U.S. DEP'T OF THE INTERIOR, U.S. GEOLOGICAL SURV., MINERAL COMMODITY SUMMARIES 2025 110-11 (version 1.2 2025), https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-lithium.pdf [https://perma.cc/J42U-PFBY].

32. Govind Bhutada, *This Chart Shows Which Countries Produce the Most Lithium*, WORLD ECON. F. (Jan. 5, 2023), https://www.weforum.org/stories/2023/01/chart-countries-produce-lithium-world/ [https://perma.cc/LG9C-6LVL].

to acquire more foreign lithium assets, develop its own domestic lithium supply, or risk Chinese domination over a critical resource needed to power modern society.[33]

Today, China's lithium production far outpaces the United States', which "accounted for over one-third of global lithium production in 1995" before being dethroned by Chile in 2010.[34] Though the United States lags far behind China and other countries in both lithium mining and production,[35] recent administrations from both political parties have made efforts to expand the country's lithium capacity. In 2017, during his first term, President Trump issued an executive order directing agencies to research how to "reduce the Nation's reliance on critical [imported] minerals"—including lithium—through domestic lithium mining and production.[36] President Biden continued this policy to expand the country's lithium capabilities, focusing on bolstering the EV and battery supply chains through increased federal government support for new domestic mining projects.[37] Congress provided new funding programs to assist the President's objectives in 2024, as the Bipartisan Infrastructure Law allocated roughly seven billion dollars toward the development of a domestic lithium-ion battery supply chain[38]: a supply chain dependent on the mining and processing of lithium ore. Different federal agencies also began to become involved, with the Department of Defense and Department of

33. *See* Camille Erickson, *China Mining, Battery Companies Sweep Up Lithium Supplies in Acquisition Blitz*, S&P GLOB. (Nov. 1, 2021), https://www.spglobal.com/market-intelligence/en/news-insights/articles/2021/11/china-mining-battery-companies-sweep-up-lithium-supplies-in-acquisition-blitz-67205411 [https://perma.cc/9TLF-DD2J].

34. *See* Bhutada, *supra* note 32.

35. *See id.*

36. Exec. Order No. 13817, 3 C.F.R. 397, 398 (2017); *see* Final List of Critical Minerals 2018, 83 Fed. Reg. 23295 (May 18, 2018).

37. *See, e.g.*, Scott Sonner, *Energy Department Conditionally Approves $2.26 Billion Loan for Huge Lithium Mine in Nevada*, AP NEWS (Mar. 15, 2024, at 19:36 ET), https://apnews.com/article/lithium-mine-biden-energy-loan-nevada-5532948703330fc9578da7159b8e4d9c [https://perma.cc/F3YC-BSNF]; Ernest Scheyder, *Biden Boosts for Ioneer's Nevada Lithium Mine to Nearly $1 Billion*, REUTERS (Jan. 17, 2025, at 15:59 ET), https://www.reuters.com/markets/commodities/biden-boosts-loan-ioneers-nevada-lithium-mine-nearly-1-billion-2025-01-17/ [https://perma.cc/75AP-WHLT].

38. *See* Vehicle Technologies Office, *Funding Selections: Bipartisan Infrastructure Law Battery Recycling, Reprocessing, and Battery Collection Funding Opportunity*, DEP'T OF ENERGY, https://www.energy.gov/eere/vehicles/funding-selections-infrastructure-investment-and-jobs-act-battery-recycling [https://perma.cc/4QV5-95VA].

Energy (DOE) providing millions of dollars in grants and government contracts to encourage private businesses to bolster the domestic lithium supply chain from source to final product.[39]

The second Trump Administration has sought to continue this momentum by increasing the federal government's participation in quickly creating this new domestic supply chain. In October 2024, the DOE announced its plan to become a minority shareholder in multiple companies engaged in mining projects across Nevada with the express justification of weaning the country off its dependence on Chinese imports.[40] These strategies to bolster new mining infrastructure with federal funding are in line with the Trump Administration's recent efforts, beginning in 2017, to "unleash America's vast energy and mineral resources" through lightning-fast permitting of new lithium mines.[41]

Producing a domestic lithium supply chain provides many benefits for the United States, primarily when considering the nation's economic and national security perspectives on this critical mineral. The modern American economy is dependent on batteries, with a 2021 analysis indicating that approximately 20 percent of the economy—a staggering "$8.1 trillion worth of industrial economic output"—relies on some form of battery production, most of which uses minerals that are mined, produced, and refined outside the country.[42]

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39. *See, e.g.*, Press Release, Dep't of Def., Department of Defense Awards $11.8 Million to Accelerate Development of Domestic Lithium Carbonate Processing and Production, (Aug. 5, 2025), https://www.defense.gov/News/Releases/Release/Article/3861583/department-of-defense-awards-118-million-to-accelerate-development-of-domestic/ [https://perma.cc/9PFK-7EDU]; Madeleine Ngo, *Energy Dept. Offers $2.3 Billion Loan to Boost Lithium Production*, N.Y. TIMES (Mar. 14, 2024), https://www.nytimes.com/2024/03/14/us/politics/us-lithium-loan-electric-vehicles.html [https://perma.cc/4PP2-HTD8].

40. *See* Michelle Chapman, *US Takes a Stake in Another Company, This One is Operating a Massive Lithium Mine in Nevada*, AP NEWS (Oct. 1, 2025, at 11:54 ET), https://apnews.com/article/trump-biden-china-lithium-gm-doe-nevada-d76ca97db7573c4dcc4a35c2f117caf7 [https://perma.cc/NTM3-BXLW].

41. Press Release, Permitting Council, Trump Administration Announces Addition of Three New Critical Mining Projects to the Federal Permitting Dashboard (June 27, 2025), https://www.permitting.gov/newsroom/press-releases/trump-administration-announces-addition-three-new-critical-mining-projects [https://perma.cc/8CWJ-ZVWJ]; *see* Exec. Order No. 14154, 90 Fed. Reg. 8353, 8355-56 (Jan. 29, 2025).

42. BATTERY COUNCIL INTERNATIONAL, THE BATTERY FUELED ECONOMY: US DOMESTIC AND SUPPORTED CANADIAN ACTIVITY 8, https://batterycouncil.org/wp-content/uploads/2024/01/EBP-economic-impact-study-FINAL1.30.24.pdf [https://perma.cc/2PXT-MJ5G]; *see* Bhutada,

The United States mainly imports processed and refined lithium from China to manufacture lithium-ion batteries.[43] Specifically, the United States is concerned with "specialized batteries" used for military-grade equipment and machinery and must rely on these imports to meet the Nation's military needs.[44] This disparity could put the United States in a challenging geopolitical position, especially when China has stockpiled "63 percent of the world's rare earth mining and has the most reserves of [rare earth minerals]" of any country, substantially more than the sixth-ranked United States.[45] Should the United States ever find itself in a situation where China is unwilling to continue exporting lithium-ion battery components—such as a souring trade war[46]—the United States would be left militarily and economically vulnerable.[47]

2. Environmental Consequences of Lithium Production

Like most mining of precious earth minerals, however, lithium mining has the potential to substantially harm the environment if not properly mitigated. Mining of pegmatite lithium ore, for example, requires significant energy consumption to properly extract the minute amounts of lithium from the mined materials.[48] The

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supra note 32.

43. Ellen Wald, *The US Wants to End Its Reliance on Chinese Lithium. Its Policies Are Doing the Opposite.*, ATL. COUNCIL: NEW ATLANTICIST (Jan. 23, 2024), https://www.atlanticcouncil.org/blogs/new-atlanticist/the-us-wants-to-end-its-reliance-on-chinese-lithium-its-policies-are-doing-the-opposite/ [https://perma.cc/SB5G-XD32].

44. *Id.*; *see* INTERAGENCY TASK FORCE IN FULFILLMENT OF EXECUTIVE ORDER 13806, ASSESSING AND STRENGTHENING THE MANUFACTURING AND DEFENSE INDUSTRIAL BASE AND SUPPLY CHAIN RESILIENCY OF THE UNITED STATES 82-83 (2018), https://media.defense.gov/2018/Oct/05/2002048904/-1/-1/1/ASSESSING-AND-STRENGTHENING-THE-MANUFACTURING-AND-DEFENSE-INDUSTRIAL-BASE-AND-SUPPLY-CHAIN-RESILIENCY.PDF [https://perma.cc/HB78-3EN8].

45. DANIEL F. RUNDE & AUSTIN HARDMAN, CENTER FOR STRATEGIC & INTERNATIONAL STUDIES, ELEVATING THE ROLE OF CRITICAL MINERALS FOR DEVELOPMENT AND SECURITY 3 (2023), https://www.csis.org/analysis/elevating-role-critical-minerals-development-and-security [https://perma.cc/FAR6-4ZM4].

46. *See* Megan Cerullo, *What Are the Risks of a U.S.-China Trade War, and Can Conflict Be Averted?*, CBS NEWS: MONEYWATCH (Feb. 5, 2025, at 14:17 ET), https://www.cbsnews.com/news/trump-tariffs-china-tariffs-what-to-know/ [https://perma.cc/K832-FR2H].

47. *See* Wald, *supra* note 43.

48. Thomas Cherico Wanger, *The Lithium Future—Resources, Recycling, and the Environment*, 4 CONSERVATION LETTERS 202, 205 (2022).

"segregative" processing needed to acquire usable lithium happens in several stages, each one "producing a separate waste stream."[49] Even "ore mining and processing in general" create harmful negative environmental impacts, such as toxic waste and pollution that impact "physical land rearrangements," causing permanent harm to the surrounding habitat and its biodiversity.[50] Beyond its ecological impacts, lithium mining is notorious for its disproportionate impacts on Indigenous communities, as nearly 80 percent of currently identified lithium deposits are found "within 35 miles of Native American reservations."[51] And these issues do not begin to mention the general environmental impacts associated with large mining operations, including increased greenhouse gas emissions and human-caused climate change.[52] While the benefits of lithium are significant in helping humanity achieve a "clean energy" transition to reach a "net-zero" emissions future, there is still substantial work that must be accomplished, requiring short term environmental impacts for long-term benefits.[53]

All of these real and potential impacts, both positive and negative, highlight the inherent paradox of lithium mining: projects that are primarily designed to further the "clean" energy transition must rely on "dirty" mines for the resources they need to succeed.[54] As a result, the federal government must consider and adequately weigh the many competing interests vying for control of this burgeoning domestic lithium production.[55] However, recent developments in administrative jurisprudence indicate that BLM's ability to create a nuanced approach to this environmental paradox—something the Agency was specifically tasked to balance by

49. *See* Bridge, *supra* note 27, at 210.

50. Wanger, *supra* note 48, at 205.

51. Thea Riofrancos, Alissa Kendall, Kristi K. Dayemo, Matthew Haugen, Kira McDonald, Batul Hassan & Margaret Slattery, *The Effects of Lithium Mining*, CLIMATE & CMTY. INST. (June 2023), https://climateandcommunity.org/research/effects-of-lithium-extraction/ [https://perma.cc/QKA4-XXNK].

52. *See* Jonathan Craig & Andrew Latham, *Carbon Matters: Fossil Fuels and the Energy Transition*, 310 EPJ WEB CONFS. at 1, 2, 8 2024, https://doi.org/10.1051/epjconf/202431000002 [https://perma.cc/RHS4-XV85].

53. *Id.* at 5, 7.

54. Marco Tedesco, *The Paradox of Lithium*, COLUM. CLIMATE SCH.: STATE OF THE PLANET (Jan. 18, 2023), https://news.climate.columbia.edu/2023/01/18/the-paradox-of-lithium/ [https://perma.cc/U47L-5VL5].

55. *See* Rocky Mountain Oil & Gas Ass'n v. Watt, 696 F.2d 734, 738 (10th Cir. 1982).

Congress[56]—could become much more challenging in a time when such an approach is needed the most.

B. Prospecting the Definition of "Undue Degradation"

For the United States to drastically increase its domestic mining capacity, prospective lithium companies must grapple with the current federal laws and administrative regulations mandating how lithium mining and processing projects can proceed. Traditionally, hard rock mining on federally-controlled lands was governed by the General Mining Act of 1872.[57] While the Mining Act is still good law to this day, many of the statutory mining mandates applicable to the BLM's role within the Department of the Interior (DOI) in adjudicating and approving new mining projects were superseded by the FLPMA.[58] Signed into law by President Gerald Ford in 1976,[59] Congress passed the FLPMA as a response to calls to create federal mechanisms for "the proper management of the public lands in the modern era."[60] With the intent to balance competing interests between ensuring that "public lands [are] managed in a manner that will protect the quality" of said lands and "recogniz[ing] the Nation's need for domestic sources of minerals ... from the public

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56. *See id.* ("The FLPMA requires Interior to recognize competing values.").

57. 17 Stat. 91-96 (codified as amended in scattered sections of 30 U.S.C.); *see* Min. Pol'y Ctr. v. Norton, 292 F. Supp. 2d 30, 32 (D.D.C. 2003). This Note will not analyze the intricacies of the relationship between the Mining Law and the BLM beyond recognizing that the Mining Law allows private parties to stake claims to precious minerals, such as lithium, on public lands to obtain exclusive mining rights without paying royalties to the federal government. *See* Union Oil Co. of Cal. v. Smith, 249 U.S. 337, 348-49 (1919).

58. *See Min. Pol'y Ctr.*, 292 F. Supp. 2d at 33; *Rocky Mountain Oil & Gas Ass'n*, 696 F.2d at 738.

59. *See* Derrick Henry, *Since Its Passage in 1976, FLPMA Has Helped the BLM Meet the Moment*, U.S. BUREAU OF LAND MGMT.: MEDIUM (Oct. 19, 2022), https://www.blm.gov/blog/2022-10-19/its-passage-1976-flpma-has-helped-blm-meet-moment [https://perma.cc/88HD-FM84].

60. Earthworks v. U.S. Dep't of the Interior, 496 F. Supp. 3d 472, 478, 481 (D.D.C. 2020) (quoting U.S. v. Locke, 471 U.S. 84, 87 (1985)). Much of environmental agency law is governed by the National Environmental Policy Act, *see What is the National Environmental Policy Act?*, U.S. ENV'T PROT. AGENCY (Apr. 11, 2025), https://www.epa.gov/nepa/what-national-environmental-policy-act [https://perma.cc/QL9R-WPEV], but this Note will focus exclusively on the environmental interests served by the FLPMA and its relatively exclusive relationship with the BLM.

lands," the FLPMA substantially broadened the BLM's authority.[61] This expansion was so pronounced that the FLPMA is frequently called the "Organic Act of the Bureau of Land Management."[62] To achieve this balancing act, the FLPMA is designed to remove executive agencies' unilateral authority to prevent mineral extraction from public lands while providing the Secretary of the Interior, and by extension the BLM, the delegated authority to "take any action necessary to prevent unnecessary or undue degradation of the lands" surrounding the project.[63] However, the limits of what constitutes "unnecessary or undue degradation" (the UUD Standard) of public lands was evidentially ambiguous and substantially broad from the beginning, forming the perfect opportunity for the BLM to engage in statutory interpretation.[64]

In 1980, the BLM first promulgated agency regulations designed to protect public lands from "unnecessary or undue degradation and to ensure that ... areas disturbed during the search for and extraction of mineral resources" are reclaimed.[65] Commonly referred to as "3809 Regulations,"[66] the new rules interpreting the FLPMA were

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61. 43 U.S.C. § 1701(a)(8), (12). The fundamental philosophy behind the FLPMA is based on developing a public lands ownership model where "these lands are to be held in perpetuity by the federal government and managed to serve the diverse needs of the American public." Note, *Interest Representation and the Federal Land Policy and Management Act*, 80 MICH. L. REV. 1303, 1303 (1982).

62. Friends of the Floridas v. U.S. Bureau of Land Mgmt., 746 F. Supp. 3d 1039, 1143 (D.N.M. 2024); *see* John A. Carver, Jr., *BLM Organic Act—Federal Land Policy and Management Act of 1976: Fruition or Frustration*, 54 DENV. L.J. 387, 387-88 (1977) (highlighting how the FLPMA was specifically worded to "broaden the BLM's ultimate jurisdiction" to encompass mineral rights on public lands); *see also* BUREAU OF LAND MANAGEMENT, THE FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 AS AMENDED iii (2016), https://www.blm.gov/sites/default/files/AboutUs_LawsandRegs_FLPMA.pdf [https://perma.cc/42AB-JN59] ("The Federal Land Policy and Management Act is central to everything we do at the Bureau of Land Management. All of the actions we take rely on the authorities that were built into this law by Congress and the President. We use FLPMA every day to guide our management of over 10 percent of the land in the United States and one-third of the nation's minerals.").

63. 43 U.S.C. § 1732(b); *see* Zachary Bray, *We Are All Growing Old Together: Making Sense of America's Monument-Protection Laws*, 61 WM. & MARY L. REV. 1259, 1317 (2020).

64. *See* Morriss et al., *supra* note 17, at 565.

65. Surface Management of Public Lands Under Mining U.S. Laws, 45 Fed. Reg. 78902 (Nov. 26, 1980).

66. *See* Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. 69998, 69998 (Nov. 21, 2000). The name creatively derives from the UUD Standard's location in the Code of Federal Regulations. *See* 43 C.F.R. § 3809.1(a) (2025).

designed, at least from an environmental standpoint, to apply minimal environmental standards beyond those already prescribed by other statutes.[67]

The 3809 Regulations went untouched for twenty years until 2000 when the BLM, under the waning days of President Bill Clinton's administration, promulgated new rules despite political pushback from Congress.[68] Meant to fundamentally broaden the scope of the UUD Standard, the regulations were designed to raise the burden for prospective miners and surveyors to prove that their new projects would not permanently harm the surrounding landscape.[69] Previously, all that a prospective mining operation needed to prove was whether a "prudent operator" would reasonably believe that "unnecessary or undue degradation" of the environment would occur as a result of the project.[70]

However, these new 3809 Regulations mandated that the BLM should deny any proposed project that would result in "substantial irreparable harm that cannot be mitigated and which would not otherwise be prevented by other laws."[71] These standards were designed to encourage those making new mining claims on federal lands to be more conscious of their impacts on the environment, incentivizing them to take preemptive measures to mitigate any "substantial" damage while still procuring the economic benefit of the mine.[72]

These more robust environmental standards on new mining operations, however, would not last long. Shortly following the passage of the new 3809 Regulations and the start of the President George W. Bush administration, the BLM quickly eliminated the substantial damage standard for its "dramatic" changes and

67. *See* Morriss et al., *supra* note 17, at 569-70.

68. Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. at 69998; *see* Morriss et al., *supra* note 17, at 574-83 (showcasing the administrative procedural struggle between Congress and the Department of Interior over reforming the 3809 regulations).

69. Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. at 70016.

70. *Id.* at 70015-16.

71. *Id.* at 70016.

72. *See id.*

returned to a prudent operator standard.[73] In effect, this standard "eliminate[s] BLM's authority to prevent 'undue degradation' in excess of what is 'necessary to mining' as long as it is not already prohibited by existing federal law," an incredibly deferential standard towards approving new mining projects.[74] These changes have lasted through the present day and have received deference from reviewing courts.[75]

At its core, the UUD Standard was designed to force the BLM "to balance the competing interests of providing access to lands for mining with the need to protect the environment."[76] The FLPMA's "broad statutory framework" provides the BLM with extraordinary discretion in deciding the most effective mechanisms to preserve the public lands based on the current administration's economic and environmental priorities.[77] Without a heightened standard restricting the BLM from considering environmental issues, there is nothing in the way of the agency maintaining a proper balance of interests to ensure the appropriate management of public lands. Because a challenge to the 2001 variation of the 3809 Regulations

73. Mining Claims Under the General Mining Laws; Surface Management, 66 Fed. Reg. 54837-38 (Oct. 30, 2001) (codified at 43 C.F.R. pt. 3800 (2001)).

74. Roger Flynn, *Daybreak on the Land: The Coming of Age of the Federal Land Policy and Management Act of 1976*, 29 VT. L. REV. 815, 835 (2005).

75. *See* 43 C.F.R. § 3809.5 (2024); *see, e.g.*, Min. Pol'y Ctr. v. Norton, 292 F. Supp. 2d 30, 45-46 (D.D.C. 2003) ("The 2001 Regulations are neither 'procedurally defective' nor 'arbitrary or capricious in substance,' nor 'manifestly contrary' to the FLPMA. Thus, the regulations must be accorded due deference.").

76. U.S. GOV'T ACCOUNTABILITY OFF., *supra* note 16, at 31.

77. Gardner v. U.S. Bureau of Land Mgmt., 638 F.3d 1217, 1222 (9th Cir. 2011); *see* Morriss et al., *supra* note 17, at 552, 558-59.

appears inevitable,[78] the court is poised to lock these low standards in place until Congress decides to provide more specific guidance.

II. MINING REGULATIONS IN A POSTDEFERENCE WORLD

For the last forty years, *Chevron* deference served as a staple of federal administrative law, providing a two-step framework whereby courts would defer to an agency's interpretation of a relevant statutory provision if, inter alia, the statute itself was ambiguous, and the agency's interpretation was reasonable.[79] Whether a statute was considered ambiguous was dependent on Congress's intent, as derived from the statutory text and its legislative history.[80] And while a court might disagree with how an agency decided to interpret and apply the statutory language, a court could not substitute its own judgment for the reasonable "wisdom of the agency's policy."[81]

While the two-step deferential judicial standard for agency interpretation is practically synonymous with the *Chevron* decision itself, a less-discussed characteristic of the *Chevron* framework is the fundamental idea that an agency can reinterpret its statutory mandates even after a court has spoken on the issue. This dynamic

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78. As new challenges to agency interpretations are starting to increase in volume, courts have been more than willing to reexamine agencies' statutory interpretations, regardless of whether the agency has already litigated said interpretations. *Contrast* Moctezuma-Reyes v. Garland, 124 F.4th 416, 422, 424 (6th Cir. 2024) (interpreting "exceptional and extremely unusual hardship" under the Immigration and Nationality Act despite the Board of Immigration Appeals's interpretation previously being used in other litigation for decades (citing In re Monreal-Aguinaga, 23 I. & N. Dec. 56, 65 (B.I.A. 2001))), *and* Int'l Fresh Produce Ass'n v. U.S. Dep't of Lab., 758 F. Supp. 3d 575, 590-91 (S.D. Miss. 2024) (rejecting the Department of Labor's argument that its H-1 visa rules could still be actively challenged through litigation despite that these regulations have not been historically or recently challenged), *with* Loper Bright Enters. v. Raimondo, 144 S. Ct. 2244, 2273 (2024) (qualifying the overturning of the *Chevron* doctrine by declining to "call into question" prior decisions decided under the deferential framework).

79. Chevron U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 866 (1984), *overruled by*, *Loper Bright*, 144 S. Ct. 2244; *see* United States v. Shimer, 367 U.S. 374, 383 (1961).

80. *Chevron*, 467 U.S. at 842-43, 861-62 ("If, however, the court determines Congress has not directly addressed the precise question at issue ... the question for the court is whether the agency's answer is based on a permissible construction of the statute.").

81. *Id.* at 866 ("When a challenge to an agency construction of a statutory provision, fairly conceptualized, really centers on the wisdom of the agency's policy, rather than whether it is a reasonable choice within a gap left open by Congress, the challenge must fail.").

interpretation—as most notably articulated in *National Cable & Telecommunications Ass'n v. Brand X Internet Services*—refers to the ability of an agency to make changes to its interpretation of ambiguous statutes over time "since the whole point of *Chevron* [was] to leave the discretion provided by the ambiguities of a statute with the implementing agency."[82]

The *Brand X* Court allowed agencies to make these types of interpretations by holding that "[a] court's prior judicial construction of a statute trumps an agency construction otherwise entitled to *Chevron* deference only if the prior court decision holds that its construction follows from the unambiguous terms of the statute and thus leaves no room for agency discretion."[83] If a statute was sufficiently ambiguous, then the agency could essentially "re-characterize what might otherwise be binding precedent" from the courts,[84] providing no judicial limitations on its ability to constantly reevaluate and update its own regulations in the face of an ever-evolving political, economic, and social landscape.

Because an agency's "initial ... interpretation [was] not instantly carved in stone," an agency was permitted, and even encouraged, to "consider varying interpretations and the wisdom of its policy on a continuing basis."[85] In other words, an agency was free to experiment with different interpretations and modify them over time, even if a court had held that a specific interpretation was the "best" interpretation—assuming that the statute in question was, in fact, ambiguous.[86] The Court's decision in *Loper Bright Enterprises v. Raimondo* flipped this analysis completely on its head.[87] In its decision, the Court seemed to implicitly reestablish *Skidmore* deference,[88] a type of deference that was "the Supreme Court's best

82. 545 U.S. 967, 981 (2005) (quoting Smiley v. Citibank (S.D.), N.A., 517 U.S. 735, 742 (1996)).

83. *Brand X*, 545 U.S. at 982.

84. Sebastian Watt, *Abolishing the Shelter of Ambiguity: A New Framework for Treasury Regulation Deference Clarifying* Chevron *and* Brand X, 117 PENN. ST. L. REV. 617, 633 (2012).

85. *Brand X*, 545 U.S. at 981 (quoting *Chevron*, 467 U.S. at 863-64); *see also* Jim Rossi, *Respecting Deference: Conceptualizing* Skidmore *Within the Architecture of* Chevron, 42 WM. & MARY L. REV. 1105, 1113-14 (2001) (discussing step two of the *Chevron* framework).

86. *See Brand X*, 545 U.S. at 983.

87. *See* 144 S. Ct. 2244, 2273 (2024) ("*Chevron* is overruled.").

88. *See id.* at 2262, 2267; Charles A. Bower, *Balancing* Chevron*,* Skidmore*, and Major Questions: A Novel Framework for Judicial Deference to Agency Legal Interpretations*, 89

expression of its policy of judicial deference toward" agencies for over forty years.[89] Under *Skidmore* deference, courts are "entitled to respect" the statutory interpretations of agencies "to the extent that those interpretations have the 'power to persuade.'"[90]

With *Chevron* overturned, courts are granted the final word in deciding the "best interpretation" of an ambiguous statute.[91] However, courts are granted more than just the final word under this new regime: The federal judiciary has been granted the power to lock in the "correct" interpretation of statutory provisions, leading to situations in which an agency cannot change a provision's meaning as it could before.[92] Although the Court has not specifically addressed the fate of *Brand X* since *Loper Bright*, the Court made clear that when the judiciary decides on the "best reading" of a statute, such a decision will "resolve the ambiguity" and thus preclude agencies from making any changes that might conflict with that reading.[93] As a result, the judiciary has taken on authority traditionally provided to federal agencies under *Chevron* to be the final arbiter of statutory interpretation, essentially barring an agency from making any changes in the future without Congressional action to modify the statute in question.[94]

BROOK. L. REV. 1185, 1201-02 (2024).

89. Kristin E. Hickman & Matthew D. Krueger, *In Search of the Modern* Skidmore *Standard*, 107 COLUM. L. REV. 1235, 1236 (2007).

90. Christensen v. Harris Cnty., 529 U.S. 576, 587 (2000) (quoting Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944)).

91. Thomas W. Merrill, *The Demise of Deference—And the Rise of Delegation to Interpret?*, 138 HARV. L. REV. 227, 228 (2024). For a comprehensive history and evolution of the *Chevron* doctrine leading up to its eventual upheaval, see generally THOMAS W. MERRILL, THE CHEVRON DOCTRINE: ITS RISE AND FALL, AND THE FUTURE OF THE ADMINISTRATIVE STATE (2022).

92. *See Loper Bright*, 144 S. Ct. 2266-68 (quoting Encino Motorcars, LLC. v. Navarro, 579 U.S. 211, 220 (2016)).

93. *See id.* Given the Supreme Court's overruling of *Chevron* deference and disdain for agencies curtailing the "correct interpretation of the laws," it seems all but inevitable that *Brand X* has practically been overruled or, if not, will be in due time. *See* Baldwin v. United States, 140 S. Ct. 690, 692, 695 (2020) (mem.) (Thomas, J., dissenting from denial of certiorari) ("*Brand X* takes on the constitutional deficiencies of *Chevron* and exacerbates them.").

94. *See Loper Bright*, 144 S. Ct. at 2294-95 (Kagan, J., dissenting) ("In one fell swoop, the majority today gives itself exclusive power over every open issue—no matter how expertise-driven or policy-laden—involving the meaning of regulatory law.").

A. The BLM's Recognized Statutory Interpretation: Mineral Policy Center v. Norton

Previously, the BLM found little opposition to the various interpretations of "unnecessary or undue degradation" that it applied to new mining operations starting on BLM-managed federal lands. The agency's authority to interpret the FLPMA was solidified in *Mineral Policy Center v. Norton*, in which the Mineral Policy Center (MPC)—a mining-skeptical environmental nonprofit now known as Earthworks[95]—directly challenged BLM's transition from the 2000 regulations to the 2001 regulations.[96] Describing the less strict environmental rules as "run[ning] counter to BLM's statutory duty," MPC argued that the court should not award deference to the 2001 regulations because the new rules "substantially weaken, and in many instances eliminate, the BLM's authority to protect the public's lands, waters, ... and other resources threatened by industrial mining operations in the West."[97]

The court first rejected the Secretary of the Interior's interpretation of the UUD Standard as requiring only "unnecessary degradation" and not "undue degradation," for "as long as a proposed mining activity is 'necessary to mining,' the BLM has no authority to prevent it" when the operators are otherwise following federal and state mining regulations.[98] Instead, the FLPMA provides the BLM with a clear mandate "to prevent[ ] not only unnecessary degradation, but also degradation that, while necessary to mining, is undue or excessive."[99]

However, the court declined to force the BLM to reconsider its effort to lighten the burden on new mining projects with respect to environmental factors, holding that the 2001 Regulations neither "fail[ed] to prevent unnecessary or undue degradation of the public lands" nor "toiled under an erroneous view of [the agency's] own

95. *See Mineral Policy Center Becomes EARTHWORKS*, EARTHWORKS (Mar. 1, 2004), https://earthworks.org/releases/mineral_policy_center_becomes_earthworks/ [https://perma.cc/C3D4-Q27G].

96. 292 F. Supp. 2d 30, 32 (D.D.C. 2003).

97. *Id.*

98. *Id.* at 41.

99. *Id.* at 43.

authority."[100] Because the court found that these regulatory changes were not arbitrary or capricious under the Administrative Procedure Act or unreasonable, the 2001 regulations were "accorded due deference" under the *Chevron* doctrine.[101] This decision was the first time that the UUD Standard was given parameters by the Court, a standard that the BLM has consistently been willing to push the boundaries of in all of its public land use decisions.[102] However, since the *Mineral Policy Center* decision, courts have continuously upheld the BLM and Department of Interior's interpretations of the UUD Standard given the clear delegation of discretion to them from Congress.[103]

B. Loper Bright*'s Impending Impact*

As the country grapples with the exponential transition to clean energy and more developers start to submit mining operation proposals, the BLM will need to sufficiently balance the interests of protecting the environment from "undue degradation" against the substantial forces racing for domination of the global economy.[104] The substantial weight of these economic and geopolitical forces

100. *Id.* at 45.

101. *Id.* at 45-46. *Contrast* Nat'l R.R. Passenger Corp. v. Bos. & Me. Corp., 503 U.S. 407, 417 (1992) ("Judicial deference to reasonable interpretations by an agency of a statute that it administers is a dominant, well-settled principle of federal law .... If the agency interpretation is not in conflict with the plain language of the statute, deference is due."), *with* Loper Bright Enters. v. Raimondo, 144 S. Ct. 2244, 2285 (2024) (Gorsuch, J., concurring) ("Chevron deference ... precludes courts from exercising the judicial power vested in them by Article III to say what the law is. It forces judges to abandon the best reading of the law.... It requires judges to change, and change again, their interpretations of the law.").

102. *See* Flynn, *supra* note 74, at 835-38.

103. *See* Or. Nat. Desert Ass'n v. Gammon, No. 06-523-140, 2007 WL 9809179, at *3 (D. Or. June 28, 2007) ("Because the Secretary has broad discretion over such matters, claims that the Secretary failed to ... prevent undue and unnecessary degradation of lands, and reclassify lands, are not susceptible to judicial enforcement."); *see also, e.g.*, Norton v. S. Utah Wilderness All., 542 U.S. 55, 66-67 (2004) (holding that the Administrative Procedure Act does not contemplate courts adopting a supervisory role in managing the DOI's "day-to-day agency management").

104. *See* Peter Cook & Seaver Wang, *Digging into the Clean Energy Minerals Reform Act*, BREAKTHROUGH INST. (Feb. 29, 2024), https://thebreakthrough.org/issues/energy/digging-into-the-clean-energy-minerals-reform-act [https://perma.cc/EV5J-NPU7]; Ian Thomsen, *Global Power Shift? Northeastern Experts Weigh In on China's Future in the World Economy*, NE. GLOB. NEWS (Nov. 1, 2024), https://news.northeastern.edu/2024/11/01/china-global-economy/ [https://perma.cc/5SMB-Z3JB].

requires strong agency processes to adequately serve the FLPMA's statutory mandate to "preserve and protect certain public lands in their natural condition" and "public land areas of critical environmental concern" as much as possible despite recognizing the need for economic and social development.[105]

Herein lies the fundamental problem with the inevitable static judicial interpretations of the BLM's obligations under the FLPMA: The BLM will no longer be able to adequately "recognize [the] competing values" behind the statute.[106] Under *Chevron* deference, the BLM's ability to interpret which mining operations truly resulted in "unnecessary or undue degradation" was almost akin to a rational basis review of agency decision-making, entitling BLM to address what constitutes the "best use" of public lands "one step at a time."[107] Under *Skidmore* deference, the new deference standard adopted following *Loper Bright*, the courts now decide what constitutes best use,[108] potentially leading to a situation whereby the FLPMA's statutory objectives and the BLM's responsibility to manage public lands begin to clash.

The FLPMA "represents an attempt by Congress to balance the use of the public lands by interests as diverse as the lands themselves" and mandated that the "BLM should manage the public lands by using the Act's procedures in a dynamic, evolving manner to accommodate these competing demands."[109] The BLM's statutory responsibility to manage all of these competing interests must be "viewed in a dynamic rather than a static context" as the FLPMA intended, otherwise the Agency cannot truly balance "the complex entirety of land management decisions" that comes with approving new mining projects.[110] As a result, the advent of a judicial interpretation under *Skidmore* deference will stifle the BLM's ability to meet those demands itself.

With the rise of lithium mining, the demands of the American and global economy have evolved, thus a narrow and static

105. 43 U.S.C. § 1701(a)(8), (11).

106. Rocky Mountain Oil & Gas Ass'n v. Watt, 696 F.2d 734, 738 (10th Cir. 1982).

107. Utah v. Andrus, 486 F. Supp. 995, 1003 (D. Utah 1979) (citing Williamson v. Lee Optical Co., 348 U.S. 483, 489 (1955)).

108. *See supra* notes 86-87 and accompanying text.

109. *Rocky Mountain Oil & Gas*, 696 F.2d at 738; *see* 43 U.S.C. § 1702(c).

110. *Andrus*, 486 F. Supp. at 1003.

interpretation of the UUD Standard will not adequately serve to protect the environmental protection standards that the economic considerations were meant to compete with. Because of the BLM's broad authority to approve these mining projects, there are no statutory or regulatory guidelines preventing the Agency from giving more credence to one interest over another,[111] a predicament that will almost certainly lead to economic interests overtaking environmental ones. This deficiency is further compounded by the second Trump administration and current Supreme Court's tendency to consistently weaken environmental regulations and rules among executive agencies.[112]

Indeed, the judiciary has established its authority to "play a commanding role" in shaping the future of federal mining regulation.[113] Regardless of how the courts decide to balance competing interests over new lithium mining projects on federal land, once it is decided, the "scale of [administrative] justice"[114] will find that its hinges have rusted. In short, the current UUD Standard—while better than nothing—is inadequate to serve the needs that it was intended to protect when it was first created.

Following *Loper Bright*, courts could potentially decide to adopt the BLM's interpretation of its obligations under the FLPMA, but calling such a decision a win for environmental and conservation interests would be a misnomer. Instead, once a judicial interpretation is locked in place, future administrations will be powerless to adapt the 3809 Regulations into a means of providing meaningful mechanisms to adequately balance environmental and economic interests. Further exacerbated by Congress's failure to provide a solution,[115] the BLM might have to rely solely on the National

111. *See* Min. Pol'y Ctr. v. Norton, 292 F. Supp. 2d 30, 44-45 (D.D.C. 2003).

112. *See* Melina Walling, *What to Know About Trump's First Executive Actions on Climate and Environment*, AP NEWS (Jan. 27, 2025, at 13:13 ET), https://apnews.com/article/trump-executive-orders-climate-change-environmental-policy-e4fb2b2495c0bcf880fab46605936b09 [https://perma.cc/5K53-7HMX]; *see also* Richard E. Levy & Robert L. Glicksman, *Judicial Activism and Restraint in the Supreme Court's Environmental Law Decisions*, 42 VAND. L. REV. 343, 346 (1989) (arguing that the Supreme Court has retreated from activism by "emphasizing judicial restraint in its environmental decisions").

113. Loper Bright Enters. v. Raimondo, 144 S. Ct. 2244, 2311 (2024) (Kagan, J., dissenting).

114. *See id.* at 2285-86, 2289, 2292 (Gorsuch, J., concurring).

115. *See* David Schecter, Grace Manthey, Sarah Metz, Tracy Wholf, Chance Horner & Samantha Wender, *The Majority of Americans Support Climate Reforms. Why Won't Congress*

Environmental Policy Act (NEPA) regulations to properly represent environmental interests in new lithium mining operations—a mechanism that courts are slowly weakening over time.[116]

III. THE JUDICIAL WAITING GAME

A. How / When the Judiciary Will Examine the UUD Standard

The future of federal lithium mining—and mining in general—is safe for now. Since *Loper Bright*, no cases have asked the courts to clarify the BLM's interpretation of the UUD Standard in the context of hard-rock mining. However, cases have been filed that involved the BLM's approval of nonmining public land management plans, primarily regarding federally designated off-highway vehicle (OHV) routes through federal land.[117] In a case that involved OHV routes through the Mojave Desert that addressed the judicial interpretation of the UUD Standard, the Northern District of California held that the "broad wording" of the FLPMA "provides the BLM with discretion on how to achieve the objective of preventing unnecessary or undue degradation of the public lands."[118] In using that discretion, potential claimants can seek a claim that the BLM violated the UUD Standard only if they demonstrate that the "BLM [ ] failed to perform a mandatory duty" or that its "actions [were] arbitrary and capricious or otherwise not in accordance with the law" as prescribed by the Administrative Procedure Act.[119]

Another post-*Loper Bright* case involved a proposed magnesium mining project in New Mexico, and an environmental group challenged the BLM's decision to authorize the mining corporation to simultaneously engage in both resource exploration and mining because, in part, doing so would violate both the UUD Standard and

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Deliver?, CBS NEWS (Sep. 23, 2024), https://www.cbsnews.com/politicalclimate/ [https://perma.cc/986F-8RPK].

116. *See, e.g.*, Marin Audubon Soc'y v. Fed. Aviation Admin., 121 F.4th 902, 914 (invalidating the rulemaking authority of the Council of Environmental Quality to promulgate binding NEPA regulations upon other agencies).

117. *See, e.g.*, Ctr. for Biological Diversity v. Culver, No. 21-cv-07171, 2024 WL 4505468, at *1, *23 (N.D. Cal. Oct. 15, 2024).

118. *Id.* at *24.

119. *Id.*; *see* 5 U.S.C. § 706(1)-(2).

the 3809 Regulations.[120] The case was decided on *Kisor* deference to the 3809 Regulations rather than statutory interpretation of the FLPMA,[121] but the court cited *Mineral Policy Center* when reaffirming the BLM's broad authority to consider what factors satisfy the UUD standard without requiring the BLM to engage in a "specific sequence" of certain actions.[122] In fact, the 3809 Regulations only seem to require that the BLM use "'reasonable and customary' sequencing that avoids 'unnecessary impacts and facilitate[s] reclamation.'"[123]

These decisions, while not addressing the viability of the 3809 Regulations themselves, seem to reinforce the BLM's broad statutory mandate to decide what constitutes "unnecessary or undue degradation."[124] Once the judiciary reexamines the 3809 Regulations, it is unclear what changes the court will make to the BLM's statutory interpretation. At least for applying *Skidmore* deference under this new deferential regime, some justices have proffered the idea that *Skidmor*e and *Chevron* deference are fundamentally similar, especially in their recognition that deference is applied primarily when Congress delegates decision-making authority to the agencies to make those interpretations.[125]

Regardless, whether the judiciary decides to completely defer to the BLM's interpretation is beside the point. Once the courts interpret how to define "unnecessary or undue degradation" in relation to the BLM's obligation under FLPMA, the Agency will lose its authority to bolster the 3809 Regulations in the future to provide for more interagency safeguards protecting environmental interests. This is a pivotal consideration as the federal government is actively

120. Friends of the Floridas v. U.S. Bureau of Land Mgmt., 746 F. Supp. 3d 1039, 1053-54, 1178-79 (D.N.M. 2024), *appeal filed*, No. 24-2164 (10th Cir. Oct. 31, 2024).

121. *Id.*; *see also* Kisor v. Wilkie, 139 S. Ct. 2400, 2415 (2019) (providing for the modern standard of *Auer* deference under which the courts will defer to an agency's interpretation of its own regulations).

122. *Friends of the Floridas*, 746 F. Supp. 3d at 1179, 1181-82.

123. *Id.* (alteration in original) (quoting C.F.R. § 3809.420(a)(2) (2023)).

124. *See, e.g.*, Ctr. for Biological Diversity v. Culver, No. 21-cv-07171, 2024 WL 4505468, at *23-24 (N.D. Cal. Oct. 14, 2024) (noting the "broad wording" of the BLM's statutory mandate provides the bureau "with discretion on how to achieve the objective of preventing unnecessary or undue degradation of the public lands").

125. Christensen v. Harris Cnty., 529 U.S. 576, 596 (2000) (Breyer, J., dissenting).

pushing to expand its domestic lithium mining capabilities.[126] When the interest in "the Nation's need for domestic sources of minerals" is extraordinarily strong, the FLPMA mandates that the BLM balances this force, in part, by concurrently managing public lands "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values."[127]

However, given the current 3809 Regulations and incidents of the BLM inadequately upholding its environmental interest-balancing responsibilities,[128] freezing the BLM's interpretation in place will ultimately be counterproductive to the FLPMA's core objectives. And with the current Supreme Court's general animosity toward federal environmental standards, particularly toward regulations from the Environmental Protection Agency, the time for the BLM and Congress to act is fleeting.[129]

B. What Can Be Done in the Interim?

The discussion of the BLM's agency-specific environmental responsibilities circles back to an important question for the future of the "clean energy transition": How will these fundamental changes in administrative law impact the prospect of lithium mining and production in the United States? The answer to that question remains unknown, but the BLM does not need to wait quietly for the court to provide an answer before it can act.

The most obvious solution in the interim is for the BLM to take a greater role in adequately enforcing the UUD Standard in mining contexts. Given the great national importance placed upon lithium production (and critical resource mining in general), there is concern that the BLM is not properly applying the regulations it does have

126. *See supra* notes 10-14 and accompanying text.

127. 43 U.S.C. § 1701(a)(8), (12).

128. *See* Federman, *supra* note 5.

129. *See* Coral Davenport, *A String of Supreme Court Decisions Hits Hard at Environmental Rules*, N.Y. TIMES (June 29, 2024), https://www.nytimes.com/2024/06/29/climate/supreme-court-epa.html [https://perma.cc/XZ3L-Q7PK].

for mining companies that operate at the expense of local ecosystems.[130]

The BLM should also promulgate new rules that modify the 3809 Regulations, specifically rules that mandate greater environmental protections by setting a higher regulatory bar for the BLM to approve new projects. Similar to the short-lived 2000 regulations, a new rule interpreting the UUD Standard to "better protect significant resources from substantial irreparable harm" could elevate environmental interests to a level playing field with the powerful economic and geopolitical interests that seem to dominate the BLM decision-making.[131] An "additional threshold for undue and unnecessary degradation,"[132] as long as it works to limit the BLM's discretion to essentially ignore the spirit of the FLPMA, could solve the problem facing a post-*Loper Bright* UUD Standard before it even begins.

Finally, Congress can—and will always—have a role in clearly identifying the authority and restraint that an agency must follow when carrying out its delegated responsibilities.[133] Congress should act now to amend the FLPMA to provide greater clarity about the meaning of "unnecessary or undue degradation." Most importantly, Congress needs to provide for a higher standard of environmental protections inherent within the UUD Standard—like those briefly adopted in the 2000 regulations[134]—to ensure that the balancing test prescribed by the FLPMA actually achieves Congress's intended goal when passing the legislation.[135]

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130. *See* Heidi Kyser, *BLM Whistleblower: Government Is Giving Public Lands to Robber-Barons*, NPR (Feb. 14, 2020, at 19:27 PT), https://knpr.org/show/knprs-state-of-nevada/2020-02-14/blm-whistleblower-government-is-giving-public-lands-to-robber-barons [https://perma.cc/W5RZ-EMHZ].

131. Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. 69998, 70000 (Nov. 21, 2000).

132. *Id.* at 70016.

133. *See* Loper Bright Enters. v. Raimondo, 144 S. Ct. 2244, 2273 (2024) ("[W]hen a particular statute delegates authority to an agency consistent with constitutional limits, courts must respect the delegation, while ensuring that the agency acts within it.").

134. *See* Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. at 70000, 70016.

135. *See* 43 U.S.C. § 1701(a) (1976).

CONCLUSION

In 2021, the BLM approved a proposed lithium mining project in Nevada called Thacker Pass, a project set to remain in operation for forty-one years.[136] This project is expected to use around 5,200 acre-feet of water per year from nearby groundwater reserves with real potential to contaminate the local soil and water with the "354 million cubic yards of clay tailings waste" produced during its lifetime.[137] The water contamination resulting from this project and the mining of the massive amounts of clay needed to extract enough lithium "would degrade nearly 5,000 acres of winter range used by pronghorn antelope and hurt the habitat of the sage grouse" and "destroy a nesting area for a pair of golden eagles."[138] Regardless, the BLM approved the mine, defeating several legal challenges from local tribes that argued the mines would lead to the undue degradation of their sacred lands.[139] Now, the mine is set to open in 2028.[140]

Was approval of this mine needed for the United States to build its own domestic lithium supply chain, become less reliant on Chinese lithium and battery imports, and remain a competitive economic force in the global economy? Likely so.[141] Will such a mine uphold the FLPMA's values of promoting the "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of

136. *See* Riofrancos et al., *supra* note 51.

137. *Id.*

138. Ivan Penn & Eric Lipton, *The Lithium Gold Rush: Inside the Race to Power Electric Vehicles*, N.Y. TIMES (May 6, 2021), https://www.nytimes.com/2021/05/06/business/lithium-mining-race.html [https://perma.cc/2DRE-TX4K].

139. *See generally* Reno-Sparks Indian Colony v. Haaland, 663 F. Supp. 3d 1188 (D. Nev. 2023) (denying local tribes' motion for injunctive relief against further construction of lithium mine), *appeal dismissed*, 2024 WL 2317688 (9th Cir. Jan. 4, 2024); Reno-Sparks Indian Colony v. Haaland, No. 3:23-cv-00070-MMD-CLB, 2023 WL 7412483 (D. Nev. Nov. 9, 2023) (finding that local tribes did not plausibly allege a violation of FLPMA in connection with the construction of Thacker Pass lithium mine).

140. *See* Karl Friedhoff, *The United States Pursues Its Lithium Independence*, CHI. COUNCIL ON GLOB. AFFS. (June 4, 2024), https://globalaffairs.org/commentary-and-analysis/blogs/united-states-pursues-its-lithium-independence [https://perma.cc/PH54-BE5S].

141. *See id.*; Wald, *supra* note 43.

the environment"?[142] Likely not.[143] This is a trend that is almost bound to continue, particularly in the aftermath of a potential judicial decision on the "best interpretation" of the FLPMA's "unnecessary or undue degradation" standard.

All in all, the core objectives of the FLPMA are to ensure that the BLM has both the tools and guidance necessary "to balance the competing interests of providing access to lands for mining with the need to protect the environment."[144] In light of global geopolitical pressures, the United States has shown its willingness to focus heavily on expanding the interests of mining companies and lithium supply chain development while focusing less on actually ensuring that the environment is not destroyed beyond repair by those mining operations.[145]

However, the judiciary's willingness to issue binding interpretations that usurp previously established agency interpretations[146] threatens to substantially complicate those matters. As a result, the BLM and Congress must act now to ensure that the FLPMA—with its lack of a comprehensive UUD Standard along with judicial restraints on that standard—does not all but remove the environment as a factor in the BLM's public land management analysis. But only in due time will we know for sure.

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142. 43 U.S.C. § 1702(c).

143. *See* Federman, *supra* note 5; Kyser, *supra* note 130.

144. US GOV'T ACCOUNTABILITY OFF., *supra* note 16, at 31-32.

145. *See* Riofrancos et al., *supra* note 51.

146. *See, e.g.*, Moctezuma-Reyes v. Garland, 124 F.4th 416, 420-22, 424 (6th Cir. 2024).

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