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Bureau of Land Management
20 M Street, S.E., Room 4204
Washington, DC 20003

Comments submitted via BLM’s e-planning page,
hard copy and exhibits via U.S.P.S.

Re: Comments on BLM’s Federal Coal Leasing Moratorium Draft Environmental Assessment

Dear BLM:

On behalf of Earthjustice, the Center for Biological Diversity, Sierra Club, WildEarth Guardians, Montana Environmental Information Center, Citizens for Clean Energy, Defenders of Wildlife, and Western Environmental Law Center, we submit these comments regarding the U.S. Bureau of Land Management’s (“BLM”) Environmental Assessment for Lifting the Pause on the Issuance of New Federal Leases for Thermal (Steam) Coal.

These comments also hereby incorporate by reference the prior July 28, 2016 comments of (a) Earthjustice, Sierra Club, and Defenders of Wildlife; (b) the Center for Biological Diversity and Utah Physicians for a Healthy Environment; and (c) WildEarth Guardians, including all exhibits, on the BLM’s earlier Notice of Intent to Prepare a Programmatic Environmental Impact Statement To Review the Federal Coal Program, 81 Fed. Reg. 17,720 (Mar. 30, 2016).

I. INTRODUCTION

The BLM’s Environmental Assessment (“EA”) is rushed, riddled with errors, and appears to represent an attempt to re-litigate issues recently resolved in litigation before a U.S. District Court. The federal coal program accounts for approximately two-fifth’s of the nation’s coal and approximately 14 percent of its total greenhouse gas pollution, yet the BLM addresses these consequences in a brief, error-ridden environmental assessment asserting those impacts are “insignificant.” The BLM further disregards the concerns of States, tribes, and the public by offering a shockingly abbreviated period for comment. Despite the court’s unambiguous ruling that Secretary Zinke’s 2017 decision to end the coal pause was a federal action requiring environmental review, the BLM’s EA engages in a series of errors, obfuscations, and minimizing
tactics to try to suggest that the decision was, in fact, meaningless. The resulting document makes a travesty of the National Environmental Policy Act’s (“NEPA”) requirements to employ high-quality information and analysis and to involve the public in government agency decision-making.

As set forth in more detail below, the BLM’s EA process is fundamentally flawed. The truncated public comment process fails to provide affected communities with a meaningful opportunity for public participation. BLM has attempted to curtail its analysis by adopting arbitrarily narrow definitions of its “purpose and need,” by arbitrarily disregarding its own prior factual findings regarding the need for a leasing moratorium, and by mischaracterizing the effects of the moratorium. The EA then, based on its improperly narrow scope of review, turns a blind eye to the massive and well-documented climate, health, and other adverse impacts of the coal leasing program. Exacerbating these analytical problems, what analysis the EA does contain is riddled with factual and mathematical errors, and fails to provide the agency or the reader with meaningful context for the decision. The EA violates NEPA’s core requirement by failing to consider any of a wide range of available alternatives and by improperly dismissing as “insignificant” what is perhaps the federal government’s single most polluting decision. Finally, the BLM appears intent on improperly shirking its mandatory statutory obligations to consult with tribes and wildlife agencies regarding the cultural and ecological impacts. BLM has failed to show any evidence to contradict its own 2016 reasoning: leasing more federal coal without comprehensive environmental review risks locking in new coal leases at terms distinctly disadvantageous for the nation and for humanity.

BLM should withdraw the EA, reinstate the leasing pause, and prepare a good-faith Environmental Impact Statement prior to any further coal leasing. Such an Environmental Impact Statement must consider a real range of alternatives, the full costs of coal combustion, and the urgent need to plan for a stable future and fair transition for coal-affected communities.

II. BACKGROUND

A. The National Environmental Policy Act

NEPA “is our basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a). NEPA has two fundamental purposes: (1) to guarantee that agencies take a “hard look” at the consequences of their actions before the actions occur by ensuring that “the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989); and (2) to ensure that “the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision,” id. at 349. NEPA “emphasizes the importance of coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that ‘the agency will not act on incomplete information, only to regret its
decision after it is too late to correct.’” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9th Cir. 1998) (internal citation omitted).

Under NEPA, agencies must take a “hard look” at the impacts of the proposed action, which includes all direct, indirect, and cumulative impacts that will result from the action, including unavoidable adverse environmental effects. 40 C.F.R. § 1508.9. Direct effects are those “caused by the action and occur at the same time and place,” while indirect effects are those “caused by the action” that occur “later in time or farther removed in distance, but are still reasonably foreseeable.” *Id.* § 1508.8. Cumulative impacts result from the “incremental impact[s]” of the proposed action when added to the impacts of other past, present, and reasonably foreseeable future actions, whether undertaken by other federal agencies or third parties. *Id.* § 1508.7. “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” *Id.*

**B. Federal Coal Leasing Law**

Under the Mineral Leasing Act of 1920, 30 U.S.C. § 181 et seq., and the Federal Coal Leasing Amendments Act of 1976 (“FCLAA”), Public Law 94-377, 90 Stat. 1083 (Aug. 4, 1976) (codified at 30 U.S.C. § 181 et seq.), the Secretary of the Interior has broad authority to lease public lands for coal mining operations after conducting a competitive bidding process. See 30 U.S.C. § 201(a)(1). Pursuant to this authority, the Secretary promulgated regulations that delegate authority to BLM to administer two different coal leasing processes: (1) the regional leasing process, which applies in areas designated as “coal production regions,” *see* 43 C.F.R. §§ 3420.2–3420.5-2; and (2) the leasing-by-application process, which applies in all other areas, *see id.* pt. 3425. Both processes are forms of competitive leasing, and allow BLM to accept only bids that meet or exceed fair market value, as determined by an appraisal. *See id.* § 3422.1; 30 U.S.C. § 201(a).

The regional leasing process applies to areas designated as “coal production regions,” and requires BLM to set “regional leasing levels.” 43 C.F.R. § 3420.2. Regional leasing levels account for “U.S. coal production goals and projections of future demand for Federal coal;” “national energy needs,” “industry interest in coal development in the region;” “[t]he level of competition within the region;” “[a]dvice from Governors of affected States as expressed through the regional coal team;” and the potential economic, social, and environmental effects of coal leasing on the region. By contrast, the leasing-by-application process applies primarily in “areas outside coal production regions,” *id.* § 3425.0, and requires applicants to propose specific tracts of federal lands for leasing, *id.* §§ 3425.0-2–3425.5. The leasing-by-application process does not require BLM to establish regional leasing levels, but the BLM must nevertheless evaluate the lands for leasing in a comprehensive land use plan, *id.* § 3425.2, and perform an environmental analysis prior to any lease sale, *id.* § 3425.3. *See also* 30 U.S.C. § 201(a)(3). Although BLM established the Powder River Basin as a coal production region in 1979, BLM decertified the region in 1990. *See Decertification of the Powder River Coal
Indeed, BLM has now decertified all coal production regions, rendering the regional leasing process inapplicable. From 1990 through the present, all competitive coal leasing has been conducted through the leasing-by-application process.

In addition to BLM’s competitive leasing procedures for new leases, BLM is authorized modify existing leases to include contiguous coal tracts, provided that the combined total of all modifications for any given lease after 1976 may not exceed 960 acres or the number of acres in the original lease, whichever is less. 30 U.S.C. § 203(a)(3). BLM may authorize lease modifications after preparing an environmental assessment or environmental impact statement, 43 C.F.R. § 3432.3(c), and upon finding that: “(1) The modification serves the interests of the United States; (2) there is no competitive interest in the lands or deposits; and (3) the additional lands or deposits cannot be developed as part of another potential or existing independent operation,” id. § 3432.2(a). Lease modifications are not subject to competitive bidding, but BLM must nonetheless receive, at a minimum “the fair market value of the lease of the added lands, either by cash payment or adjustment of the royalty applicable to the lands added to the lease by the modification.” Id. § 3432.2(c).

The Secretary of the Interior has broad discretion to establish the terms of federal coal leases. Each lease shall include “provisions ... necessary to insure the sale of the production of such leased lands to the United States and to the public at reasonable prices, for the protection of the interests of the United States, for the prevention of monopoly, and for the safeguarding of the public welfare.” 30 U.S.C. § 187. Further, each lease must set annual rents and royalties, require diligent development, and “include such other terms and conditions as the Secretary shall determine.” Id. § 207(a), (b)(1). Federal coal leases have an initial duration of twenty years, and are renewable for ten-year terms thereafter. Id. § 207(a); 43 C.F.R. § 3451.1(a)(1). “[R]entals and royalties and other terms and conditions of the lease will be subject to readjustment at the end of its primary term of twenty years and at the end of each ten-year period thereafter if the lease is extended.” 30 U.S.C. § 207(a); see also 43 C.F.R. § 3451.1(a)(1) (“All leases issued after August 4, 1976, shall be subject to readjustment at the end of the first 20-year period and, if the lease is extended, each 10-year period thereafter.”).

BLM has the discretion to end federal coal leasing. The FCLAA provides that the Secretary “is authorized” to identify tracts for leasing and thereafter “shall, in his discretion ... from time to time, offer such lands for leasing ....” 30 U.S.C. § 201; see also WildEarth Guardians v. Salazar, 859 F. Supp. 2d 83, 87 (D.D.C. 2012) (“Under the [FLCAA], the Secretary is permitted to lease public lands for coal mining operations after conducting a competitive bidding process” (emphasis added)). Further, the Secretary has discretion to reject lease applications on the grounds that “leasing of the lands covered by the application, for

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1 Indeed, BLM has now decertified all coal production regions, rendering the regional leasing process inapplicable.
environmental or other sufficient reasons, would be contrary to the public interest.” 43 C.F.R. § 3425.1-8(a)(3).

Federal public lands coal is a “leasable” mineral sold under the Mineral Leasing Act, which provides that “[d]eposits of coal . . . and lands containing such deposits owned by the United States . . . shall be subject to disposition in the form and manner provided by this chapter.” 30 U.S.C. § 181. The MLA further explicitly authorizes the Secretary to prescribe all “necessary and proper rules and regulations” to implement the provisions of the Act. 30 U.S.C. § 189.

Under the current language and structure of the MLA, coal leasing is discretionary. Prior to the 1976 Coal Leasing Amendments and the 1977 passage of SMCRA, the statute and courts distinguished between the issuance of prospecting permits, which were discretionary, Arnold v. Morton, 529 F.2d 1101 (9th Cir. 1976), and “preference right” leases, which were not, See Natural Resources Defense Council v. Berklund, 458 F. Supp. 925 (D.D.C. 1978). The MLA as amended in 1976, however, now explicitly provides that leasing is discretionary:

The Secretary of the Interior is authorized to divide any lands subject to this Act which have been classified for coal leasing into leasing tracts of such size as he finds appropriate and in the public interests and which will permit the mining of all coal which can be economically extracted in such tract and thereafter he shall, in his discretion, upon the request of any qualified applicant or on his own motion, from time to time, offer such lands for leasing and shall award leases thereon by competitive bidding.


Lease tracts must also be included in a comprehensive land-use plan and “consistent” with such plans. 30 U.S.C. § 201(a)(3). The Act provides that ”[t]he Secretary of the Interior is authorized to prescribe necessary and proper rules and regulations to do any and all things necessary to carry out and accomplish the purposes of this chapter.” 30 U.S.C. § 189. The current MLA coal regulations provide for two slightly different leasing processes, “competitive regional leasing” for designated “coal producing regions” and “leasing-by-application” elsewhere. 43 C.F.R. §§ 3420, 3422.
In practice, since 1990, all contemporary leasing occurs under the lease-by-application process. In 2011, a U.S. District Court interpreted the scope of the Secretary’s discretion not lease or not to lease under 30 U.S.C. § 201(a)(1), and held that this post-1990 Interior practice of ignoring designation of “coal producing regions” in favor of an ad hoc “lease by application” was permissible under the MLA’s broad leasing language and grant of rulemaking authority. WildEarth Guardians v. Salazar, 793 F.Supp.2d at 63. The court reasoned:

The Court takes note of the fact that the Act makes no mention of coal production regions, the competitive regional leasing process, or the leasing-by-application process. Instead, Congress simply conferred upon the Secretary the broad authority "to divide any lands . . . which have been classified for coal leasing into leasing tracts of such size as he finds appropriate and in the public interest," and vested him with the "discretion, upon the request of any qualified applicant or on his own motion, from time to time, [to] offer such lands for leasing and [to] award leases thereon on competitive bidding." 30 U.S.C. § 201(a)(1). Rather than defining the precise contours of the competitive leasing process, Congress elected to confer upon the Secretary "sweeping authority" to promulgate regulations in this area, Indep. Petroleum Ass’n of Am., 279 F.3d at 1040, expressly authorizing him to "prescribe [any and all] necessary and proper rules and regulations" to discharge his discretion, 30 U.S.C. § 189. In other words, the Act simply has nothing to say about certifying, decertifying, or recertifying coal production regions.

WildEarth Guardians, 793 F.Supp.2d at 63 (emphasis added).

C. Federal Law and Practice Show that the Secretary Has the Power to Pause or End Federal Coal Leasing.

Statute, case law, and history all make clear that BLM is incorrect when it asserts that the “statutory and regulatory framework does not provide explicit authority to pause BLM’s leasing of federal coal deposits.” EA at 1. In fact, the Mineral Leasing Act, 30 U.S.C. §§ 181, 189, & 201(a)(1), and its implementing regulations, do confer such authority.

Under the MLA’s conferral of discretion to the Secretary to make rules for coal “subject to disposition,” Congress has given the Secretary ample authority to pause or end new coal leasing-by-application, whether temporarily or permanently. 30 U.S.C. § 201’s authority to classify and divide coal lease tracts “as he finds appropriate and in the public interest,” coupled with the “necessary and proper rules and regulations” of 30 U.S.C. § 189, authorizes the Secretary to make determinations as to where and how to lease coal – including the

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determination that the leasing of any new coal is inappropriate and/or against the public interest.

Such a determination can include either a permanent or indefinite cessation of approval of new leases-by-application, or, as adopted in 2016, a temporary moratorium for purposes of a programmatic review. See 40 C.F.R. § 1502.4(b) (authorizing EIS “for broad Federal actions such as the adoption of new agency Programs”); National Wildlife Fed. v. Appalachian Regional Comm’n, 677 F.2d 883, 888 (D.C. Cir. 1981) (agencies to use discretion and judgment in determining whether to prepare programmatic EIS); Izaak Walton League of Am. v. Marsh, 210 U.S. App. D.C. 233, 655 F.2d 346, 374 n.73 (D.C. Cir. 1981) (“Even when the proposal is one of a series of closely related proposals, the decision whether to prepare a programmatic impact statement is committed to the agency’s discretion.”).

It is well-established that BLM is not required to lease public lands for energy development. See, e.g., U.S. ex rel. McLennan v. Wilbur, 283 U.S. 414 (1931) (upholding President Hoover’s oil leasing moratorium under the Mineral Leasing Act). BLM must be guided by its statutory mandate to administer federal coal leasing in a manner that protects the Nation’s “environmental, air and atmospheric, [and] water resource[s],” 43 U.S.C. § 1701(a)(8), takes into “account the long-term needs of future generations,” and considers “the use of some land for less than all of the resources” to accomplish these objectives. Id. § 1702(c). In addition, Congress directed that federal coal leasing should occur as the Secretary “finds appropriate and in the public interest.” 30 U.S.C. § 201. BLM’s rules require that, “[a]n application for a lease shall be rejected in total or in part if the authorized officer determines that … leasing of the lands covered by the application, for environmental or other sufficient reasons, would be contrary to the public interest.” 43 CFR § 3425.1-8. In other words, coal leasing must not occur unless it is in the public interest. Indeed, in Krueger v. Morton, 539 F.2d 235, 240 (D.C. Cir. 1976) the Court of Appeals upheld a prior moratorium as a valid exercise of “discretionary judgment concerning the manner of executing powers entrusted to the Secretary” (under the pre-1976 MLA) pending the last programmatic review of the coal program.

There is not just explicit authority, but also historical precedent, for the Secretary to impose a coal leasing moratorium as an exercise of discretion over public property. Beginning in the early 1970s, under the pre-1976 “preference right” coal leasing scheme, speculation on coal leases was widespread. Even prior to the enactment of the 1976 Coal Leasing Amendments and SMCRA, the Department of the Interior recognized widespread problems, and in 1973, the then Secretary issued Order No. 2952, which provided:

In the exercise of my discretionary authority under Section 2(b) of the Mineral Leasing Act, as amended (30 U.S.C. § 201(b)), I have decided not to issue prospecting permits for coal under that section until further notice and to reject pending applications for such permits in order to allow the preparation of a
program for the more "orderly" development of coal resources upon the public lands of the United States under the Mineral Leasing Act, with proper regard for the protection of the environment.

Accordingly, no prospecting permits for coal under Section 2(b) of the Mineral Leasing Act, supra, shall be issued until further notice. All pending applications for such permits shall be rejected. . . .

United States Department of the Interior, Secretarial Order 2952 (Feb. 1973); see also Krueger, 539 F.2d at 237.

During the 1973 moratorium, the Interior Department undertook a series of national and local EISs for coal leasing. Lease applicants challenged the moratorium, alleging that the 1973 moratorium failed to implement the policy of the Mining and Minerals Policy Act of 1970, 30 U.S.C. § 21a, to “foster and encourage the development of coal resources.” The court in Krueger rejected this argument, finding that

the Secretary had the right, before receiving or approving applications, to order a pause for refreshment of his judgment by further investigation, public input, comprehensive consideration, and rulemaking directed toward the hopefully better implementation of the Mineral Leasing Act in light of NEPA and other significant factors.

Krueger, 539 F. Supp.2d at 239. Importantly, in reviewing that earlier programmatic EIS, the court in NRDC v. Hughes held that NEPA obligated Interior to consider the alternative of no new national coal leasing program whatsoever. NRDC v. Hughes, 437 F.Supp. 981, 990-91 (D.D.C. 1977) (requiring DOI to address “the threshold question as to whether the proposed [coal leasing] policy is even necessary’’); see also Hunter v. Morton, 529 F.2d 645, 649 (10th Cir. 1976) (holding that 1973 coal leasing moratorium, S.O. 2952, was committed to agency discretion).

D. The 2016 Leasing Pause and its Reversal

The most recent moratorium on federal coal leasing—and the one at issue in the EA—was embodied in then-Secretary of the Interior Sally Jewell Secretarial Order 3338 (“SO 3338”), issued January 15, 2016. SO 3338 was the result of public listening sessions in the summer of 2015, which generated around 94,000 public comments, and evolving science and policy considerations that necessitated reforms to the federal coal leasing program. SO 3338 directed BLM to prepare a programmatic EIS (“PEIS”) to evaluate regulatory reforms to help the Interior Department meet its obligation “to ensure conservation of the public lands, the protection of their scientific, historic, and environmental values, and compliance with applicable


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environmental laws,” as well as its “statutory duty to ensure a fair return to the taxpayer.” Under the order, BLM was required to consider in the PEIS, at a minimum: (a) how, when, and where to lease coal; (b) fair return to the American public for federal coal; (c) the climate change impacts of the federal coal program, and how best to protect the public lands from climate change impacts; (d) the externalities related to federal coal production, including environmental and social impacts; (e) whether lease decisions should consider whether the coal would be for export; and (f) the degree to which federal coal fulfills the energy needs of the United States.5

While commencing a programmatic review of federal coal leasing, Secretary Jewell determined it was appropriate to suspend new coal leasing while the comprehensive review was underway to avoid “locking in for decades the future development of large quantities of coal under current rates and terms that the PEIS may ultimately determine to be less than optimal.”6 Although mining under existing leases would continue, the moratorium prevented BLM, subject to certain exceptions, from processing new lease applications. In explaining the need for the moratorium, Secretary Jewell stated, “[g]iven the serious concerns raised about the federal coal program and the large reserves of undeveloped coal already under lease to coal companies, it would not be responsible to continue to issue new leases under outdated rules and processes.”7

In March 2016, BLM invited public comments as part of the NEPA “scoping” process for the PEIS “to assist the BLM in identifying and refining the issues and policy proposals to be analyzed in depth and in eliminating from detailed study those policy proposals and issues that are not feasible or pertinent.”8 Federal Defendants also took the first step toward engaging tribal nations affected by federal coal leasing, including the Northern Cheyenne Tribe, by sending letters inviting government-to-government consultation.9 During the spring and summer of 2016, BLM held public meetings and accepted more than 200,000 public comments on the impacts of and alternatives to federal coal leasing.10

On January 11, 2017, BLM released a report detailing the agency’s initial conclusions based on its review of the public comments and expert analyses. The 2017 Scoping Report concluded “that modernization of the Federal coal program is warranted.”11 Specifically, “[t]he three general areas requiring modernization are: fair return to Americans for the sale of their public coal resources; impact of the program on the challenge of climate change and on other environmental issues; and efficient administration of the program in light of current market

5 SO 3338, at 7-8.
6 Id. at 8.
8 Notice of Intent, 81 Fed. Reg. 17,720, 17,727 (Mar. 30, 2016); 40 C.F.R. § 1501.7 (scoping is “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action”).
9 See 2017 Scoping Report, at 3-5.
10 Id. at 4-3.
11 Id. at ES-4.
conditions including impacts on communities.” 12 Consistent with SO 3338, the 2017 Scoping Report retained the moratorium on most new coal leasing during the review process. 13

Just over two months later, following the inauguration of President Trump, newly confirmed Secretary of the Interior Ryan Zinke on March 29, 2017 signed Secretarial Order 3348 ("SO 3348"), terminating the ongoing PEIS process and ending the moratorium. Before signing SO 3348, Secretary Zinke failed to engage in any consultation with affected tribes, despite a specific request for such consultation in a March 2, 2017 letter from the Northern Cheyenne Tribe to Secretary Zinke. 14 The Tribe’s request observed that “[t]wo of the largest coal mines that are to be part of the programmatic review [under Secretarial Order 3338] are within a few miles of the Northern Cheyenne Reservation.” 15 These two mines together had—and still have—four pending lease applications, encompassing 426 million tons of coal, that were suspended under the moratorium. 16 To date, the federal government has not responded to the Northern Cheyenne Tribe’s request for consultation.

A mere two pages long, SO 3348 was unaccompanied by any environmental analysis, public input, or reasoned analysis to justify the government’s radical reversal in judgment based on the science or facts before it. The Order directed BLM to “process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of Secretary’s Order 3338.”


The same day Secretary Zinke signed SO 3348, the Northern Cheyenne Tribe and conservation organizations—including many of the organizations submitting these comments—challenged the government’s action under NEPA and the Administrative Procedures Act (“APA”) in the U.S. District Court for the District of Montana. On April 19, 2019, the court sided with the plaintiffs, ruling that the government violated its NEPA obligations by failing to engage in any environmental review of SO 3348. *Citizens for Clean Energy v. U.S. Dep’t of Interior*, No. CV-17-30-GF-BMM, 2019 WL 1756296 (D. Mont. Apr. 19, 2019).

The court concluded that the plaintiffs raised “a substantial question as to whether the project may cause significant environmental impacts,” and “[t]he Zinke Order constitutes a major federal action sufficient to trigger NEPA.” *Id.* at *9 (citation omitted). Although the court did not direct BLM to perform any specific type of NEPA analysis, the court recognized that “[i]f Federal Defendants determine that an EIS would not be necessary … Federal Defendants must supply a ‘convincing statement of reasons’ to explain why the Zinke Order’s impacts would be

12 *Id.*
13 SO 3338, at 8-9; 2017 Scoping Report, at 6-52
15 *Id.*
16 *Id.*
insignificant.” *Id.* at *11* (citation and quotation omitted).

Although the EA purports to respond to the court’s order, BLM mischaracterizes that order and its direction to BLM, the agency attempts in the EA to relitigate arguments that the court already found meritless. Specifically, BLM claims without citation that “[t]ypically, secretarial orders that merely establish policy are not reviewable under the APA because they do not constitute final agency action,” and states that BLM nonetheless “has elected to analyze the environmental impacts of lifting the coal pause through an EA in an effort to be responsive to [the court’s] ruling.” *Id.* The EA also asserts that SO 3348 “d[id] not affect the legal rights or obligations of any party.” *Id.* But as the court explained in rejecting these very arguments,

The Zinke Order articulated its purpose as to “process coal lease applications and modifications expeditiously in accordance with regulations and guidance existing before the issuance of [the Jewell Order].” *Id.* In other words, the Zinke Order served to lift the environmental protections that the Jewell Order had provided during the pendency of the preparation of a new PEIS. The legal consequences that flow from the Zinke Order are evident. With the Zinke Order’s implementation, all BLM land became subject to lease applications with terms of twenty years. The Zinke Order directed new lease applications to be “expedite[d].” The PEIS process immediately stopped without full review of the concerns raised in the Jewell Order. The Zinke Order satisfies the legal consequences requirement under Bennett.


The court also distinguished the plaintiffs’ challenge to SO 3348 from the situation addressed by the D.C. Circuit Court of Appeals in *Western Organization of Resource Councils v. Zinke*, 892 F.3d 1234 (D.C. Cir. 2018) (“*WORC*”), which commenced before the Department of the Interior either imposed or lifted the moratorium. Contrary to BLM’s statement in the EA, the D.C. Circuit did not “determine[] that completion of a PEIS for federal coal leasing activities is ... unnecessary.” *Id.* Instead, the D.C. Circuit observed that “coal combustion is the single greatest contributor to the growing concentration of greenhouse gases in the atmosphere” and agreed that WORC had “raise[d] a compelling argument that the Secretary should now revisit the issue and adopt a new program or supplement its PEIS analysis.” *Id.* at 1244. Yet the D.C. Circuit affirmed the district court’s dismissal of the plaintiffs’ claim that Federal Defendants must prepare a supplemental EIS for the ongoing federal coal program, because the plaintiffs “failed to identify any specific pending action ... that qualifies as a ‘major Federal action’ under NEPA.” *Id.* at 1243. As the Montana court explained, “[t]he Zinke Order lifted the Jewell Order’s moratorium and directed BLM to expedite coal leases. This action provides the agency action

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17 Draft EA at 3.
18 Draft EA at 3 n.5.
19 Draft EA at 2.
that proved missing from *WORC.* *Citizens for Clean Energy,* 2019 WL 1756296, at *7.

Most fundamentally, BLM in the EA misunderstands the court’s direction to evaluate the environmental consequences of SO 3348. BLM has undertaken a wholly backward-looking analysis only of the lease applications that BLM processed in the three years since Secretary Jewell announced the moratorium, i.e., from January 2016 to March 2019. But the court did not so limit the scope of BLM’s analysis. Instead, as the court observed, the moratorium had increased protections for “approximately 65,000 acres of public land that were subject to pending lease applications.” *Id.* at *8. “With the Zinke Order’s implementation, *all BLM land* became subject to lease applications with terms of twenty years.” *Id.* at *10 (emphasis added).

Regardless of the aspirational timeframe for the completion of the PEIS initiated in 2016, as described below, the consequence of lifting the coal leasing moratorium was to open the door the new leasing and mining of all federal coal. The court’s order requires BLM to evaluate the full scope of potential environmental consequences of this decision.

### III. BLM’S TRUNCATED PUBLIC COMMENT PERIOD FAILS TO PROVIDE A MEANINGFUL OPPORTUNITY FOR PUBLIC PARTICIPATION IN THE NEPA PROCESS.

Public involvement in the decisionmaking process is one of NEPA’s primary objectives. NEPA’s implementing regulations require agencies to “[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures.” 40 C.F.R. § 1506.6. Courts have “adopt[ed] th[e] rule” that “[a]n agency, when preparing an EA, must provide the public with sufficient environmental information, considered in the totality of circumstances, to permit members of the public to weigh in with their views and thus inform the agency decision-making process.” *Bering Strait Cit. for Responsible Res. Dev. v. U.S. Army 6 Corps of Eng’rs,* 524 F.3d 938, 953 (9th Cir. 2008). Accordingly, an agency “must offer significant pre-decisional opportunities for informed public involvement in the environmental review process . . . before the EA is finalized.” *Sierra Nevada Forest Prot. Campaign v. Weingardt,* 376 F. Supp. 2d 984, 992 (E.D. Cal. 2005).

Here, BLM’s exceedingly limited opportunity for public comment – particularly given the scope of the necessary analysis and the many flaws in the EA – fall well short of the requirement that agencies allow an opportunity for meaningful public participation in the environmental review process. Further, as discussed below, the hasty preparation of this Environmental Assessment, in less than six weeks, has resulted in numerous avoidable analytical, factual, and mathematical errors. BLM released its EA on May 22, 2019. The agency initially provided a fifteen-day public comment period – five of which were either weekends or a national holiday – but modified that to add an additional two business days (through June 10, 2019) because of technical problems with BLM’s e-planning website that effectively prevented either review of the Environmental Assessment or the submission of electronic comments during at least a day of that period.
More than 50 conservation organizations, the Northern Cheyenne Tribe, four state Attorneys General and the Chair of Congress’s House Natural Resources Committee all requested modest extensions of the public comment period. To date, we are not aware of any response by BLM either approving or denying these many requests. As the undersigned organizations explained in their request for extension, additional time is necessary for the public to meaningfully participate here.

BLM’s proposed action is massive in its scope and the breadth of its impacts. BLM has proposed restarting leasing as part of a nationwide federal coal leasing program that encompasses approximately 570 million acres of public lands and minerals and provides approximately 40 percent of the coal used to generate electricity in the U.S. The resumption of federal coal leasing proposed by BLM thus has sweeping environmental consequences for public lands, energy production, public health, and climate. A nineteen-day period for public comment, with no public hearings, simply does not provide an opportunity for affected communities to be heard or for the public to adequately review and comment on a proposed action with a scope of this magnitude.

The current approach – limiting public comment to twelve work days, six weekend days, and one federal holiday for a proposal to indefinitely restart a nationally applicable program affecting public lands in at least eight states – stands in stark contrast to the considerable steps the Department of Interior took to ensure meaningful public participation when it evaluated potential changes to the federal coal leasing program in 2015 and 2016. For example, during the summer of 2015, the Department held five public “listening sessions” across the country and received more than 92,000 written comments. Then, in the summer of 2016, as part of the NEPA scoping process for the Programmatic Environmental Impact Statement (PEIS) process called for by Secretarial Order 3338, the Department held public hearings in six cities, initiated consultation with all federally recognized tribes, and received more than 214,000 comments during a 90-day public comment period.

NEPA regulations require agencies to “[e]ncourage and facilitate public involvement” and to “[m]ake diligent efforts to involve the public.” 40 C.F.R. §§ 1500.2(d), 1506.6(a). Because the resumption of federal coal leasing has sweeping environmental consequences for public lands, energy generation, public health, and climate, and is a matter of significant public and Congressional interest, a nineteen-day period for public comment appears to be the polar opposite of the “diligent efforts” NEPA requires. See, e.g., Fund for Animals v. Norton, 281 F. Supp. 2d. 209, 226 (D.D.C. 2003) (finding that the agency provided “insufficient time in which to comment on the EA” by providing a two week comment period, and that “the agency’s approach to public involvement and consideration of what public input it did receive do not

20 See, e.g., letter of Center for Biological Diversity, et al. to BLM (May 29, 2019). Attached as Exhibit 2; letter from Reps. Raul M. Grijalva and Alan S. Lowenthal to Interior Secretary David Bernhardt (May 23, 2019). Attached as Exhibit 3.
support a finding that it took a ‘hard look’ at the problem and alternative means of addressing it”).

For these reasons, we reiterate our call that BLM provide a new, 90-day public comment opportunity, hold public hearings to engage affected communities, and initiate consultation with affected Native American tribes.

IV. BLM HAS IMPROPERLY DEFINED THE PURPOSE AND SCOPE OF ITS EA.

The EA considers an impermissibly constrained scope of environmental effects because it adopts an overly narrow purpose and need that ignores the statutory context for BLM’s decision on the moratorium and arbitrarily disregards BLM’s prior findings grounded in that statutory context.

A. The EA Adopts an Overly Narrow Purpose and Need That Disregards the Statutory Context for BLM’s Action.

The EA adopts an overly narrow purpose and need for NEPA review that is inconsistent with BLM’s statutory mandate in administering the federal coal leasing program and ignores the backdrop against which its decision to re-open public lands to coal leasing occurred. An environmental review document must “briefly specify the underlying purpose and need to which the agency is respond[ing] in proposing the alternatives including the proposed action.” 40 C.F.R. § 1502.13. “An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action, and the EIS would become a foreordained formality.” Nat’l Parks & Conservation Ass’n v. Bureau of Land Mgmt., 606 F.3d 1058, 1070 (9th Cir. 2010) (quoting Friends of Southeast’s Future v. Morrison, 153 F.3d 1059, 1066 (9th Cir.1998)).

The EA claims as its purpose responding to the district court’s order in Citizens for Clean Energy, and its need as “analyz[ing] and disclos[ing] the environmental impacts of the Zinke Order’s termination of the Federal coal leasing pause set forth in the Jewell Order, as they relate to the BLM’s issuance of Federal coal leases not otherwise exempt or excluded from the pause.”21 In other words, BLM has allowed for only one action—“the Zinke Order’s termination of the Federal coal leasing pause,” which has already occurred—within the scope of this purpose and need statement. In this way, BLM’s EA is an impermissible “foreordained formality.” Nat’l Parks & Conservation Ass’n, 606 F.3d at 1070.

21 EA, at 7.
Not only is the stated purpose-and-need unreasonably narrow, it overlooks the “statutory context” for BLM’s administration of the federal coal program. *League of Wilderness Defs.-Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 689 F.3d 1060, 1070 (9th Cir. 2012) (“In assessing the reasonableness of a purpose and need specified in an EIS, [courts] must consider the statutory context of the federal action.”) (citation omitted); *see also Westlands Water Dist. v. U.S. Dep’t of Interior*, 376 F.3d 853, 866 (9th Cir. 2004) (“Where an action is taken pursuant to a specific statute, the statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS.”); *Theodore Roosevelt Conservation P’ship v. Salazar*, 661 F.3d 66, 73 (D.C. Cir. 2011) (“The agency should also “always consider the views of Congress” to the extent they are discernible from the agency's statutory authorization and other directives.”) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991)).

BLM’s statutory obligations are broader than reflected in the EA. As BLM observed in its purpose and need discussion in the 2017 Scoping Report:

> BLM’s stewardship role as a proprietor and sovereign regulator, which is charged by Congress with managing and overseeing mineral development on the public lands, not only for the purpose of ensuring safe and responsible development of mineral resources, but also to ensure conservation of the public lands; the protection of their scientific, historic, and environmental values; and compliance with applicable environmental laws. In addition, the BLM has a statutory duty to ensure a fair return to the taxpayer and broad discretion to decide where, when, and under what terms and conditions mineral development should occur.22

Thus, while BLM in the EA states its purpose as evaluating a decision it already made under the Zinke Order to re-open public lands to coal-leasing and expedite those leasing decisions, this fails to consider BLM’s self-described statutory obligations to “ensure conservation of the

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22 2017 Scoping Report, at 6-1 to 6-2; *see also* SO 3338, at 7 (“The Department is authorized to undertake this effort in its stewardship role as a proprietor and sovereign regulator which is charged by Congress with managing and overseeing mineral development on the public lands, not only for the purpose of ensuring safe and responsible development of mineral resources, but also to ensure conservation of the public lands, the protection of their scientific, historic, and environmental values, and compliance with applicable environmental laws. Additionally, the Department has the statutory duty to ensure a fair return to the taxpayer and broad discretionary authority to decide where, when, and under what terms and conditions, mineral development should occur, including with regard to the issuance of Federal coal leases.”).
public lands” and to evaluate “where, when, and under what terms and conditions mineral development should occur.”

The EA’s purpose and need statement reveals BLM’s singular goal: to reluctantly do the paperwork the Montana district court ordered to justify a decision BLM already made to terminate the federal coal-leasing moratorium and expedite coal leases without any reforms to the federal coal program. However, “NEPA’s purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” 40 C.F.R. § 1500.1(c). BLM’s superficial NEPA exercise thwarts this goal.

Rather than the constrained purpose and need set forth in the EA, BLM should identify as its purpose the evaluation of alternatives to meet its statutory mandates to responsibly manage public coal resources and conserve public land. At a minimum, BLM is required to evaluate whether to terminate the federal coal leasing moratorium and, if so, how. While adherence to the Zinke Order may be one alternative for BLM to consider, it cannot be the only action alternative, as discussed below. BLM must adopt a purpose and need for environmental review consistent with legal requirements.

B. The EA Disregards BLM’s Prior Findings Regarding the Need for Federal Coal Leasing Reforms and the Coal-Leasing Moratorium.

In its narrow focus on justifying a foregone conclusion to terminate the coal-leasing moratorium and abandon reforms, the EA silently reverses BLM’s prior, contrary findings. It is a well-established principle of administrative law that “[u]nexplained inconsistency” between agency actions is “a reason for holding an interpretation to be an arbitrary and capricious change.” Organized Vill. of Kake v. U.S. Dep’t of Agric., 795 F.3d 956, 966 (9th Cir. 2015) (en banc), cert. denied sub nom. Alaska v. Organized Vill. of Kake, Alaska, 136 S. Ct. 1509 (2016) (quoting Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs., 545 U.S. 967, 981 (2005)). Thus, an agency must provide a “reasoned explanation” for its reliance on factual findings that contradict earlier findings. F.C.C. v. Fox Television Stations, Inc., 556 U.S. 502, 515 (2009); see also Organized Vill. of Kake, 795 F.3d at 968-69 (discussing standard in Fox). Under these principles, when an agency repeals a regulatory change, it is “not writing on a ‘blank slate,’” and thus “it [is] incumbent upon [the agency] to provide a reasoned explanation as to why the industry concerns it previously rejected ... now justif[y] returning to the” pre-repeal framework. California by & through Becerra v. United States Dep’t of the Interior, No. C 17-5948 SBA, 2019

23 2017 Scoping Report, at 6-2.
24 See infra, Pt. VIII (alternatives discussion).

Although BLM now apparently believes a coal-leasing moratorium is unnecessary, it has not provided a reasoned explanation for that choice, where the underlying facts and evidence that previously motivated BLM and the Interior Department to adopt the moratorium have not changed. In the 2017 Scoping Report that capped the first stage of that NEPA process, BLM observed that “[w]hile energy markets, communities, environmental conditions, and national priorities have changed dramatically, the program has remained fairly static in its administration over the last thirty years.”

Based on BLM’s analysis and scoping comments, BLM concluded:

The three general areas requiring modernization are: fair return to Americans for the sale of their public coal resources; impact of the program on the challenge of climate change and on other environmental issues; and efficient administration of the program in light of current market conditions including impacts on communities.

In particular, BLM concluded that the federal coal program “must ensure appropriate alignment with US climate goals and adequately reflect the impact of the program on climate change. Virtually every community in the US is being impacted by climate change, and Federal programs have an obligation to be administered in a way that will not worsen and help address these impacts.” Accordingly, before the Zinke Order, BLM had already determined that program reforms were necessary.

Moreover, BLM had determined that a moratorium on most new coal leasing was essential to avoid irreversible environmental impacts that could be prevented by the reform efforts underway, including measures to address the climate impacts of leasing, mining, and burning federal coal. In announcing federal coal leasing reforms, Secretary Jewell recognized BLM’s “responsibility to all Americans to ensure that the coal resources [the federal government] manages are administered in a responsible way to help meet our energy needs and that taxpayers receive a fair return for the sale of these public resources.”

Further, Secretary Jewell acknowledged that, “over the past few years, it has become clear that many of the decades-old regulations and procedures that govern the federal coal program are outdated and may not reflect the realities of today’s economy or current understanding of environmental

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26 Id. (emphasis added).
27 Id. at 6-3 (emphasis added).
and public health impacts from coal production.” Thus, while committing to review these failures, the Interior Department also determined that the moratorium on new coal leasing was needed to ensure that future leases “incorporate lessons learned from the comprehensive review to ensure that taxpayers receive a fair return for the sale of these public resources.” The 2017 Scoping Report reiterated the need for reforms to the federal coal program to “ensure that the public owners of this coal receive a full and fair return for this resource,” and maintained the moratorium until such reforms could be analyzed.

Secretary Zinke failed to offer any legitimate rationale for the decision to terminate the moratorium in light of these prior findings when he issued SO 3348, and the EA fares no better. As described above, BLM identified a narrow purpose and need for its EA of responding to the Court Order in Citizens for Clean Energy to evaluate the environmental consequences of its decision to lift the Zinke Order. BLM does not acknowledge, let alone attempt to distinguish, the conditions that previously led the agency to conclude that suspending coal leasing was necessary to prevent irreversible environmental harm from new leases under suboptimal conditions. The only rationale provided for lifting the moratorium was BLM’s abandonment of reforms: “In the absence of any legal obligation, funding, or intent to move forward with completing the PEIS, the purpose of the pause no longer exists.”

In the EA, BLM offers no “reasoned explanation” for reversing their conclusions on the need for a coal-leasing moratorium to prevent environmental harm from an outdated coal program. Organized Vill. of Kake, 795 F.3d at 968-69.

V. THE EA’S NO ACTION ALTERNATIVE MISCHARACTERIZES THE EFFECTS OF THE MORATORIUM AND THUS UNDERSTATES THE ENVIRONMENTAL CONSEQUENCES OF LIFTING IT.

Related to BLM’s failure in the EA to adopt an appropriate purpose and need that acknowledges BLM’s statutory obligations and prior findings, BLM also fails to evaluate its action against a regulatory and environmental baseline that accurately reflects conditions under the Jewell Order. “Establishing appropriate baseline conditions is critical to any NEPA analysis. ‘Without establishing the baseline conditions which exist ... before [a project] begins, there is simply no way to determine what effect the [project] will have on the environment and, consequently, no way to comply with NEPA.’” Great Basin Res. Watch v. Bureau of Land Mgmt., 844 F.3d 1095, 1101 (9th Cir. 2016) (quoting Half Moon Bay Fishermans’ Marketing Ass’n v.

29 Id.
30 Id. at 3
31 2017 Scoping Report, at 6-2.
32 Draft EA, at 7.
33 Draft EA, at 2.
Carlucci, 857 F.2d 505, 510 (9th Cir. 1988)). Both in its purpose and need statement and
description of the “no action alternative,” the EA fails NEPA’s standards for establishing an
appropriate baseline. As a result of these errors, the EA fails to take a “hard look” at the
environmental effects of the Zinke Order. Id. at 1104.

In its purpose and need statement, the EA acknowledges that BLM must evaluate the
impacts of reversing the Jewell Order. This is consistent with the court’s order in Citizens for
Clean Energy, which recognized:

[T]he Zinke Order served to lift the environmental protections that the Jewell
Order had provided during the pendency of the preparation of a new PEIS.
...With the Zinke Order’s implementation, all BLM land became subject to lease
applications with terms of twenty years. The Zinke Order directed new lease
applications to be “expedit[ed.]” The PEIS process immediately stopped without
full review of the concerns raised in the Jewell Order.

Yet BLM’s EA fails to acknowledge the scope of the Jewell Order and moratorium, which form
the baseline against which BLM’s asserted need to justify reopening public lands must be
evaluated.

“The ‘no action’ alternative may be thought of in terms of continuing with the present
course of action until that action is changed.” Ass’n of Pub. Agency Customers, Inc. v. Bonneville
Power Admin., 126 F.3d 1158, 1188 (9th Cir. 1997) (quoting Forty Most-Asked Questions, 46
Fed. Reg. 18,026, 18,027) (rejecting argument that the “no action” alternative should reflect
non-renewal of certain power supply contracts). Under the Jewell Order, the status quo was a
prohibition on most new federal coal leasing, with no expiration date. As of March 29, 2017,
when Secretary Zinke issued SO 3348, BLM had pending lease and lease-modification
applications encompassing nearly 2.9 billion tons of federal coal, covering more than 86,000
acres, none of which could have been authorized had the moratorium remained in effect.

And while the immediate effect of the moratorium was significant, BLM signaled that it
would lead to broad-scale, programmatic reforms—including potentially changes that would
affect whether and how leasing occurs. As discussed above, BLM concluded that reforms to the
federal coal leasing program were necessary. And the 2017 Scoping Report identified a

34 Draft EA, at 7.
35 Citizens for Clean Energy, 2019 WL 1756296, at * 10 (citing and quoting SO 3348).
36 Michael D. Nedd, Information/Briefing Memorandum for the Asst. Sec’y, Land and Minerals Mgmt.,
“Five Promising Areas for Coal Leasing and Development, Production Trends, Leasing Information and
Regulation/Administrative Challenges and Opportunities,” at Attachment 4a (Feb. 13, 2017). Attached as
Exhibit 5.
37 2017 Scoping Report, at 6-2.
number of alternatives for further consideration to address these reform needs. Among other things, the Report summarized potential programmatic-level royalty reforms, adjusting lease levels based on a carbon budget, and the development of landscape scale strategic leasing plans. In addition, BLM stated that it would “fully analyze a no new leasing alternative as part of the PEIS as a means to reduce greenhouse gas emissions.” In addition, BLM identified (as it must in any NEPA process) a no action alternative, under which “the Federal coal program would continue to be administered in the manner in which it is administered currently” and BLM “would not address concerns raised by numerous parties about the Federal coal program, including concerns raised by the GAO, the OIG, members of Congress, interested stakeholders, and the public.”

BLM established an aspirational schedule for completing the PEIS and Record of Decision by March 2019, three years after the NEPA process commenced. However, as BLM recognized in March 2017, “it is highly unlikely that the PEIS could have been completed in the allotted timeframe because the process is already roughly one year behind schedule.” Indeed, BLM pointed to this delay as a reason justifying its decision in the Zinke Order to end the moratorium.

The EA for the Zinke Order adopts a baseline for comparing environmental effects that impermissibly overlooks all of these circumstances. This baseline unreasonably assumes that, following a comprehensive review of reforms to address identified problems with the federal coal-leasing program, BLM would have rejected all reforms, ended the moratorium, and restarted leasing under the terms that BLM previously determined “require[ed] modernization.” Additionally, BLM’s no action alternative unreasonably assumes that BLM would have restarted leasing in March 2019, even though BLM previously acknowledged that BLM’s completion of the PEIS and Record of Decision in that timeframe was “highly unlikely.” Such unreasonable speculation about the outcome and timeframe of the PEIS process is arbitrary. See Great Basin Res. Watch, 844 F.3d at 1101 (affirming that “whatever method the agency uses, its assessment of baseline conditions ‘must be based on accurate information and defensible reasoning’”) (quoting Or. Nat. Desert Ass’n v. Jewell, 840 F.3d 562, 570 (9th Cir.).

38 Id. at 6-26 to 6-32.
39 Id. at 6-6.
40 Id. at 6-19
41 Id. at 6-32.
42 Id. at ES-3.
44 Id.
46 Nedd Memorandum, at 10-11.
2016)); *Ctr. for Biological Diversity v. U.S. Dep’t of Interior*, 623 F.3d 633, 642-46 (9th Cir. 2010) (In NEPA review of proposed land exchange, it was arbitrary for the Department of the Interior to effectively conclude that environmental consequences would be identical with and without the land exchange where the regulatory framework is different in the two scenarios.).

As a result of BLM’s unreasonable identification of baseline conditions, the EA dramatically understates the Zinke Order’s effects. The EA explains “[t]he limited scope of the leasing pause reduced the potential impact of its rescission, and by extension, any potential impacts of the Zinke Order.”

While the outcome of continuing with the Jewell Order is uncertain, the *least* likely outcome is that the moratorium would only have been in place for three years, from January 2016 to March 2019, after which federal coal leasing would have resumed without the adoption of any reforms. BLM must identify a no action alternative (or more than one no action alternatives) that reasonably reflects likely future scenarios. Here, this means that BLM must examine at least one scenario in which the moratorium remains in place indefinitely, preventing the issuance of leases and lease modifications subject to the moratorium. If it fails to do so, BLM will fail to accurately describe the effects of its decision to reverse the moratorium, in violation of NEPA.

VI. THE EA FAILS TO TAKE A HARD LOOK AT THE DIRECT, INDIRECT, AND CUMULATIVE IMPACTS OF FEDERAL COAL LEASING.

A. BLM’s Improperly Narrow Scope of Review Fails to Allow Adequate Consideration of the Impacts of BLM’s Decision to Lift the Moratorium.

As explained above, BLM’s EA improperly narrows the scope of its analysis, thus omitting any discussion of the massive climate, public health, and environmental consequences of its action. In the EA, BLM presents backward-looking analysis only of the lease applications, analyzing only the applications that BLM processed in the three years since Secretary Jewell announced the moratorium, i.e., from January 2016 to January 2019. BLM justifies this approach on two flawed assumptions: (1) that BLM would necessarily have completed the PEIS process and lifted the moratorium by the time of the District Court’s order in April 2019; and (2) that BLM’s decision at the end of the moratorium would necessarily have been to lift the moratorium without any changes to the federal coal leasing program. But BLM does not support these assumptions and the District Court did not suggest BLM could constrain its analysis on remand in this manner. Despite BLM’s initial estimate of the timeframe for the completion of the PEIS, the result of BLM’s preferred action in the EA – lifting the coal leasing moratorium – would be to open the door the new leasing and mining of all federal coal.

47 Draft EA at 2.
Instead, BLM views its decision to lift the moratorium through a narrow lens that assumes the moratorium would have ended in March 2019 without any changes to the federal coal leasing program. EA at 1. In explaining the impact of the No Action alternative, BLM states, “[t]here were 45 lease applications pending with the BLM when the Jewell Order was Issued. (See Table 1.1) The processing and review of these 45 applications would have continued March 2019 at the same rate without the pause or without the Zinke Order.” EA at 12 (emphasis added). But that is not necessarily so. A decision not to lift the moratorium would keep the moratorium in place indefinitely, since Secretary Jewell’s Secretarial Order 3338 did not impose a hard stop on the coal leasing pause as BLM’s EA appears to assume. NEPA requires BLM to evaluate the full scope of the reasonably foreseeable environmental consequences of this decision, as well as the impacts of reasonable alternatives to BLM’s preferred course.

BLM was clearly contemplating changes to the coal leasing program through the moratorium and PEIS process. As recognized in the Department of Interior’s January 2017 PEIS scoping report, “obviously, adjustments to the Federal coal program have the potential to impact Federal coal production” in addition to employment, royalties, and other issues.48 BLM also explained that changes to the program could have significant climate impacts that needed to be analyzed. “[P]olicy options also have the potential to impact greenhouse gas emissions directly through limitations on production or indirectly through mechanisms that factor in the environmental externalities of coal production.”49 Indeed, as noted above, Secretarial Order 3338 mandated the leasing pause precisely because the Interior Department concluded changes to the leasing program might be necessary.

Continuing to conduct lease sales or approve lease modifications during this programmatic review risks locking in for decades the future development of large quantities of coal under current rates and terms that the PEIS may ultimately determine to be less than optimal.

Secretarial Order 3338 at 8.

B. BLM’s Improperly Constrained Analysis Fails to Take a Hard Look at the Reasonably Foreseeable Impacts of BLM’s Proposed Action.

1. BLM erroneously suggests all mining impacts will be mitigated.

In the EA, BLM makes the unsupportable assertion that post-mining activities will mitigate the damage caused by mining: “After coal mining extracts the resource, a combination of public and private stakeholders . . . direct reclamation, avoidance and remediation efforts to mitigate any adverse impacts.” EA at 3. As an initial matter, it is unclear what BLM refers to

49 Id.
when it refers to “avoidance” efforts that occur “after” coal mining. In the coal mining context, “avoidance” typically refers to efforts taken to “avoid” impacting natural resources such as streams or wetlands through pre-mining site selection or otherwise restricting a mining company’s authorization to impact specified resources. More importantly, BLM’s suggestion that reclamation and remediation can effectively “mitigate any adverse impacts” is unsupported, contradicted by all evidence, and arbitrary and capricious. Even setting aside the abysmal track record of post-mining reclamation in the U.S., those efforts are directed merely at restoring the mine to an extent that it can return to its pre-mining use. Those efforts do not mitigate for the harm to air quality, aquatic resources, wildlife, or productive farming and ranching lands during the years of active mining operations. Nor do they in any way mitigate significant indirect impacts such as those from transporting or burning coal, including massive climate pollution. BLM must remove this flawed assertion from future iterations of this NEPA process.

2. **BLM improperly refuses to quantify mining- and transportation-related greenhouse gas emissions from the vast majority of leases identified.**

   In the EA, although BLM purports to provide the cumulative greenhouse gas (“GHG”) emissions from burning coal in coal-fired power plants, EA at 20, Table 3.3, BLM declined to quantify direct GHG emissions that result from mining or the indirect GHG emissions that result from shipping coal via train and coal trucks. This is true for each of the 57 coal leasing applications listed in Table 3.1, EA at 16-18. As BLM explained, “[d]irect emissions of GHGs (onsite mining processes) and indirect GHG emissions from storage and transportation . . . were not quantified.” EA at 15.

   BLM provides a variety of unavailing justifications for this omission. First, that it would entail a “degree of speculation inherent in quantifying these emissions” that would “not provide additional useful information to the public or decision maker.” EA at 15. Yet NEPA analysis frequently involves a degree of speculation as to foreseeable future impacts, and BLM fails to explain why it nonetheless found it both possible and “useful to the public or decision maker” provide mining and transportation-level GHG emissions for the three leases issued between March 2017 and March 2019. EA at 19, Table 3.2. Next, BLM notes that “these emissions have or will be evaluated” in site-specific NEPA reviews. EA at 16. But BLM fails to explain why if those emissions “have” been estimated already or “will be” in the future, it could not foresee those emissions now. BLM also asserts that quantification of direct and indirect GHG emissions “are likely to be negligible compared to the downstream combustion emission.” *Id.* Yet BLM fails to provide any support or basis for that assertion. Table 3.2, which provides GHG emissions from the mining, transportation, and combustion of three coal leases, estimates that mining and transportation accounted for 5.45 of 30.97 million metric tons of CO2e/year, accounting for more than 16 percent of the total annual GHG emissions from those three mines. EA at 19.
3. BLM fails to analyze or disclose the market effects of its decision as part of its analysis of environmental impacts.

The EA concludes that “not lifting the coal leasing pause” until March 2019 – what it deems the No Action alternative – “would have no direct effect on the quantity of GHG emissions potentially emitted from the mining actions other than to delay the timing of those emission by an estimated 24 months.” EA at 19. This framing stems from BLM’s flawed assumptions that the moratorium would have remained in place only until March 2019, and that BLM would necessarily have decided not to implement any meaningful change as a result of what would have been a multi-year effort to study and modernize the federal coal leasing program.

Here, BLM must use a proper scope for its evaluation of impacts. The No Action alternative would not merely delay leasing by two years, as BLM asserts, but would reinstate the Jewell Order, which both created the moratorium and initiated the PEIS process. As noted earlier, Secretary Jewell’s Order did not set a deadline for lifting the moratorium. Thus, the evaluation of the difference between the No Action alternative and BLM’s preferred alternative (immediately re-initiating leasing in line with the Zinke Order) would capture a considerably larger share of the federal coal program than merely the three leases BLM identified as having been approved earlier as a result of the Zinke Order and analyzed in the EA.

In its revised environmental review for this action, BLM must accurately account for the different market impacts of its considered alternatives in order to understand and compare greenhouse gas emissions across alternatives. This information is necessary for the public and BLM to adequately understand and comment on the proposed action. In particular, BLM must evaluate the potential energy models – and ultimately use one or more of these models – in order to adequately analyze how various alternatives would affect coal supply, coal combustion, and greenhouse gas emissions.

In April 2016, researches at Harvard University and Vulcan Philanthropies released a paper that utilized the Integrated Planning Model to analyze the market and climate impacts of incorporating a “carbon adder” into federal coal royalties.\(^\text{50}\) Their findings indicated that if the Clean Power Plan (“CPP”) is either struck down or otherwise not implemented, incorporating the Interagency Working Group’s social cost of carbon into federal coal royalty rates could achieve roughly three-quarters of the emissions reductions that EPA anticipates under the Clean Power Plan. The analysis also finds that in a scenario where the CPP is upheld by the courts and ultimately implemented, incorporating the social cost of carbon into federal coal royalties would result in a slight up-tick in mining non-federal coal reserves, but this substitution would be tempered by a shift to electricity generation by gas and renewables.\(^\text{51}\)


\(^{51}\) Id. at 3.
Under both a Clean Power Plan and non-Clean Power Plan Scenario, the modeling conducted as part of the study revealed that adding the social cost of carbon into federal coal royalties would increase revenue to the federal government and states even while reducing the total amount of coal mined and greenhouse gases emitted.

Under NEPA agencies must provide a clear basis for choice among considered alternatives, and in particular here BLM must distinguish between the climate impacts of Action and No Action alternatives. 42 U.S.C. §§ 4332(2)(C), 4332(2)(E), and 40 CFR §§ 1502.14(f), 1508.9(b). In the context of climate change, BLM must, at the bare minimum, analyze and disclose the difference in greenhouse gas emission levels between alternatives, but it has completely failed to do so here. In order to understand the difference between the No Action and preferred alternatives, as well as those of any other reasonable alternatives identified through a legally-defensible NEPA process, BLM must analyze the extent to which the market effects change from one alternative to the next. As BLM explained in the PEIS scoping report, “[t]he environmental (including climate change) and economic impacts of reform alternatives depend, in large part, on the estimated substitution effects.” BLM also explained that “identifying substitution will be a critical early data element to enable BLM to subsequently determine” critical issues, including changes to electricity generation, federal and state revenues, employment, and GHG emissions.

There are a variety of economic models available to BLM that would allow the agency to reasonably assess the market and substitution effects of various alternatives here. In stark contrast to the EA’s unsupported assertion that the No Action alternative would have no impact on long-term GHG emissions, using these models would inform BLM and the public’s understanding of how considered alternatives would alter the mix of fuels used to generate electricity in the U.S. NEPA requires agencies to use the tools available to them in order to ascertain essential information or explain why they cannot do so. 40 C.F.R. § 1502.22. Under the applicable NEPA regulations, if an agency intends not to include essential information in its NEPA review, it “shall” explain (1) why such essential information is incomplete or unavailable; (2) its relevance to reasonably foreseeable impacts; (3) a summary of existing science on the topic; and (4) the agency’s evaluation based on any generally accepted theoretical approaches. Id. § 1502.22(b). Given that other agencies have long used energy models to analyze market and climate impacts of their proposals, that information is plainly “available” within the meaning of the regulation, and BLM must utilize these available tools to understand the impacts of various alternatives in this PEIS.

51 Id.
The attached report of economist Dr. Thomas Power\textsuperscript{54} analyzes available energy economy models and concludes that the two models best suited to this type of analysis, based on the prior use by other agencies and the known characteristics of the models, are the Energy Information Administration’s (“EIA”) National Energy Modeling System (“NEMS”), used by EIA to generate its widely cited Annual Energy Outlook reports, and ICF International’s Integrated Planning Model (“IPM”), used by EPA to evaluate market responses to various policy proposals since at least 2004.\textsuperscript{55}

EIA’s NEMS model is an energy-economy model that projects future energy prices, supply, and demand and can be used to isolate variables such as changes in coal supply and variations in delivered coal price. NEMS uses input data from all sectors of the energy economy to forecast national energy supply and demand balance for varying sets of regulatory and fuel price scenarios. The model has a high degree of sophistication in its structure, which allows the model to give solutions for many types of problems. As noted by the Surface Transportation Board, which used NEMS to evaluate the market effects of a proposal to build a coal rail line, NEMS “not only forecasts coal supply and demand but also quantifies environmental impacts.” 


According to ICF, its Integrated Planning Model (IPM) uses a linear optimization framework and can be used to evaluate changes in wholesale power dispatch taking into account system reliability, environmental constraints, fuel choice, transmission, and capacity expansion.\textsuperscript{56} ICF has been used in recent years to evaluates the market and environmental impacts of several high-profile proposals related to the extraction and transportation of fossil fuels, including the U.S. State Department’s review of the Keystone XL tar sands pipeline, the Surface Transportation Board’s evaluation of the proposed Tongue River Railroad, EPA’s evaluation of the Clean Power Plan, the Forest Service’s supplemental evaluation of a proposed coal mining loophole for the Colorado Roadless Rule, and Washington Department of Ecology’s evaluation of the Millennium Bulk coal export terminal.

Three recent cases from the D.C. Circuit Court of Appeals, the Tenth Circuit Court of Appeals, and the District of Montana have all rejected federal agency NEPA reviews that either denied the proposed project would have any market effect, or claimed that the market effect was too uncertain. The Tenth Circuit Court of Appeals invalidated BLM’s EIS because the agency asserted that there would be no difference in the market or climate effects of a decision to authorize the expansion of two coal mines that operate of public lands in Wyoming. “Even if we could conclude that the agency had enough data before it to choose between the preferred


and no action alternatives, this perfect substitution assumption arbitrary and capricious because the assumption itself is irrational (i.e., contrary to basic supply and demand principles).” *WildEarth Guardians v. BLM*, 870 F.3d 1222, 1236 (2017).

The D.C. Circuit similarly rejected a Federal Energy Regulatory Commission (“FERC”) NEPA review for the Sabal Trail natural gas pipeline where FERC had dodged meaningful analysis of substitution effects by asserting that the project’s GHG emissions “might be partially offset” by the market replacing the project’s gas with either coal or other gas supply. *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1375 (D.C. Cir. 2017). The Court dismissed FERC’s failure to study this issue, stating, “[a]n agency decisionmaker reviewing this EIS would thus have no way of knowing whether total emissions, on net, will be reduced or increased by this project, or what the degree of reduction or increase will be. In this respect, then, the EIS fails to fulfill its primary purpose.” *Id.*

The federal district court in Montana, like the Tenth Circuit, rejected a Department of Interior environmental assessment where the agency claimed its decision would not likely have any impact on nationwide GHG emissions because other coal mines would be available to meet a supposedly immutable demand for coal if BLM were to select the No Action alternative. *Montana Environmental Information Center v. OSM*, 274 F.Supp.3d 1074, 1098 (D. Mont. 2017). In *MEIC*, the federal Office of Surface Mining Reclamation and Enforcement (“OSM”) asserted in its environmental assessment that, “[t]he No Action Alternative would not likely result in a decrease in CO₂ emissions attributable to coal-burning power plants in the long term. There are multiple other sources of coal that could supply the demand for coal.” *Id.*

The *MEIC* court squarely rejected OSM’s assertion:

This conclusion is illogical, and places [OSM’s] thumb on the scale by inflating the benefits of the action while minimizing its impacts. It is the kind of “inaccurate economic information” that “may defeat the purpose of [NEPA analysis] by impairing the agency’s consideration of the adverse environmental effects and by skewing the public’s evaluation of the proposed agency action.”

*Id.* (quoting *NRDC v. Forest Service*, 421 F.3d 797, 811 (9th Cir. 2005)).

In each instance, the reviewing court invalidated NEPA reviews that relied on unsupported assertions that the climate impacts of the proposed agency action were similar to the No Action alternative. In each instance, but unlike in the NEPA analysis upheld in *Mayo Clinic*, the agency had failed to use any of the available economic models to allow it to address market impacts as part of the necessary environmental review.

New, peer-reviewed scientific literature since the 2016 close of the scoping period for Programmatic EIS reinforces the conclusion that U.S. federal coal leasing levels exert a substantial influence on the price, and resulting consumption, of coal, particularly in the absence of the Clean Power Plan. In a 2018 paper published in Nature Climate Change, Peter
Erickson and Michael Lazarus estimated a future reference case for U.S. coal, estimated the quantities of federal production that would be affected by a permanent leasing moratorium, and then modeled the market response to those production cuts through 2030.\textsuperscript{57} Their analysis looked at market responses both with and without implementation of the Clean Power Plan. Employing the Integrated Planning Model (IPM), which includes all U.S. coal resources and power plants, the authors concluded:

For coal, results from IPM indicate that, absent the Clean Power Plan, each EJ [exajoule] of coal no longer supplied (due to lease restrictions) to domestic power markets in 2030 would lead to substitution of 0.31 EJ from other coal supplies, especially from the Illinois Basin and Northern Appalachia. The net drop in national coal consumption would be 0.69 EJ for each EJ of federal coal not produced because of the lease restrictions. Gas consumption would also increase 0.35 EJ, to make up for the lost coal-based electricity.

For coal export markets, we find that each EJ of US coal no longer exported to Asian power markets (e.g., South Korea and the Philippines) would yield a drop in net coal consumption of 0.30 EJ, accounting for partial substitution by other, higher cost sources of coal (e.g., from Indonesia and Australia). This ratio is within the range of results of global steam coal market modeling analysis, which found that each unit of coal not supplied to the Pacific coal market would lead to a reduction in coal consumption of between 0.1 and 0.4 units, depending on whether the supply market was less constrained (lower result) or more constrained (higher result) (Haftendorn et al. 2012).

The higher price of coal would also lead to some switching to natural gas in Asian power markets (less so than in the US, given that gas is more costly and less available in Asia), amounting to an increase in natural gas consumption of 0.07 EJ for every EJ of US coal no longer exported due to the lease restrictions.

In total, for coal, we find that leasing restrictions would reduce production by 5.4 EJ in 2030. The drop in CO2 emissions from the consumption of federal coal (largely from the Powder River Basin) in that year would be about 490 Mt CO2, as shown in Fig. 1b. Increased coal and gas supplies from other sources would add back 162 Mt CO2 and 90 Mt CO2, respectively, resulting in a net overall reduction in emissions of 240 Mt CO2.\textsuperscript{58}

This analysis, looking at both domestic and international market effects and substitution of gas and other fuels, concludes that, particularly in the absence of the Clean Power Plan, reductions in federal coal production result in a continued reduction in net emissions. Given the demonstrated availability of modeling tools to understand the market and climate response of


\textsuperscript{58} Id. at 8.
coal supply decisions, the EA’s refusal to employ available, widely-accepted scientific and economic methods is inexcusable. See 40 C.F.R. § 1500.1(b) (requiring that environmental analysis include information “of high quality” and must include “[a]ccurate scientific analysis.”) Further, given the ready availability of market-modeling mechanisms and new, peer-reviewed literature examining the impacts of U.S. coal leasing policy on supply, price, and consumption, it is wholly unreasonable for BLM to assume, without any analysis, that “[t]he lifting of the coal leasing pause would not change the cumulative levels of GHG emissions resulting from coal leasing.” EA at 20.

4. BLM fails to disclose the social costs of its decision to lift the moratorium.

Once BLM accurately discloses the amount of the GHG emissions associated with its decision to lift the moratorium, it must also assess the impact that those emissions have on the environment. The social cost of carbon protocol (often abbreviated as “SCC” in agency documents) is an appropriate tool for BLM to use for this assessment. The social cost of carbon provides an estimate of the economic damage, in dollars, caused by each incremental ton of carbon dioxide emitted into the atmosphere, including impacts such as increased drought, wildfires, decreased agricultural productivity, and sea level rise, among others. By translating climate impacts, and tons of greenhouse gasses in particular, into dollars, the social cost of carbon offers BLM an easy to use and easy to understand tool that would allow the public and decisionmakers to better understand the climate impacts of BLM’s decision here.

In three recent cases addressing the climate impacts of coal mine expansions or energy infrastructure projects, where the agency’s NEPA analysis quantified greenhouse gas emissions but claimed that it was impossible to discuss the effects thereof, federal courts held that the agency’s refusal to use the social cost of carbon to illustrate the impact of these emissions was arbitrary and capricious. Sierra Club v. FERC, 867 F.3d 1357, 1374 (D.C. Cir. 2017); Montana Envt’l Info. Ctr. v. U.S. Office of Surface Mining, 274 F. Supp. 3d 1074, 1097 (D. Mont. 2017); High Country Conservation Advocates v. United States Forest Serv., 52 F. Supp. 3d 1174, 1190-91 (D. Colo. 2014).

Developed by more than a dozen federal agencies and offices, the Interagency Working Group on the Social Cost of Greenhouse Gases’ (“IWG”) social cost of carbon protocol is an appropriate tool for analyzing the climate impacts of the GHG emissions associated with lifting the federal coal leasing moratorium. NEPA does not, of course, require agencies to monetize adverse impacts in all cases. See 40 C.F.R. § 1502.23. NEPA does, as mentioned previously in this letter, require BLM to take a hard look at the “ecological . . . aesthetic, historic, cultural, economic, social, [and] health,” effects of its actions, “whether direct, indirect, or cumulative.” 40 C.F.R. § 1508.8. Monetization of costs may be required where available “alternative mode[s] of [NEPA] evaluation [are] insufficiently detailed to aid the decision-makers in deciding whether to proceed, or to provide the information the public needs to evaluate the project effectively.” Columbia Basin Land Prot. Ass’n v. Schlesinger, 643 F.2d 585, 594 (9th Cir. 1981); see also Ctr.
for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 538 F.3d 1172, 1201 (9th Cir. 2008) (NHTSA violated NEPA where it failed to monetize the benefits of GHG emission reductions from more stringent fuel economy standards even while it monetized the adverse costs of such standards due to depressed automobile sales and employment).

BLM addresses the social cost of carbon protocol at pages 22-24 of the EA, but ultimately makes several unavailing excuses for its refusal to use this tool to better inform itself and the public of the climate impacts of BLM’s decision to reinitiate federal coal leasing. First, BLM states that “[m]ost notably, this action is not a rulemaking for which the SCC protocol was originally developed.” EA at 23. Although BLM is correct that the social cost of carbon was originally developed specifically for use in evaluating the climate impacts of federal rulemakings, nothing about the tool itself precludes its use in evaluating project-level impacts or evaluations of federal agency decisions that alter nationwide programs. The tool measures the economic harm caused by each additional ton of carbon dioxide emitted into the atmosphere without regard to whether those emissions result from an agency rulemaking or an agency’s approval of an individual project. The social cost of carbon protocol operates the same in either scenario: it offers decisionmakers and the public a way to understand the climate impacts of a proposed course of action and alternatives. The tool does not distinguish between those carbon dioxide emissions that result from agency rulemakings and those that result from agency decisions on nationally-applicable operations such as the federal coal leasing program.

Second, BLM notes that the IWG has been disbanded pursuant to an Executive Order issued by President Trump. EA at 23. While they likely underestimate the true costs of greenhouse gas emissions, the IWG’s social cost metrics remain the best estimates yet produced by the federal government for monetizing the impacts of greenhouse gas emissions and are “generally accepted in the scientific community,” 40 C.F.R. § 1502.22(b)(4). This is true notwithstanding Executive Order 13,783, which disbanded the Interagency Working Group and formally withdrew its technical support documents.59 Indeed, that Executive Order did not find fault with any component of the IWG’s analysis. To the contrary, it encourages agencies to “monetiz[e] the value of changes in greenhouse gas emissions” and instructs agencies to ensure such estimates are “consistent with the guidance contained in OMB Circular A-4.”60 The IWG tool, however, illustrates that agencies can appropriately comply with the guidance provided in Circular A-4. Indeed, OMB participated in the IWG and did not object to the group’s conclusions despite the existing of Circular A-4 at that time. As agencies follow the Circular’s standards for using the best available data and methodologies, they will necessarily choose similar data, methodologies, and estimates as the IWG, since the IWG’s work continues to represent the best estimates presently available.61 Thus, the IWG’s 2016 update to the estimates of the social

60 Id. § 5(c).
61 Richard L. Revesz et al., Best Cost Estimate of Greenhouse Gases, 357 SCIENCE 6352 (2017) (explaining that, even after Trump’s Executive Order, the social cost of greenhouse gas estimate of around $50 per
costs of greenhouse gases remains the best available and generally accepted tool for assessing the impact of greenhouse gas emissions, notwithstanding the fact that this document has formally been withdrawn.

Third, BLM notes that NEPA does not require agencies to prepare a cost-benefit analysis. EA at 23. This point is true but not relevant. BLM need not prepare a cost benefit analysis for the social cost of carbon to be useful to the public and decisionmakers. NEPA requires BLM to analyze the reasonably foreseeable effects of its decisions. These effects necessarily include an analysis of “economic” and “social” costs, 40 C.F.R. § 1508.8(b), and the social cost of carbon provides one method for BLM to conduct this analysis. In the absence of another available method, and BLM has offered none, the social cost of carbon remains a useful way to analyze and understand the climate impacts of agency action. Surely this tool is preferable to no method whatsoever, which is what BLM currently presents in the EA.

Fourth, BLM asserts that the social cost of carbon “does not measure the actual incremental impacts of a project on the environment and does not include all damages or benefits from carbon emissions.” EA at 23. Here, BLM misunderstands the usefulness of the social cost tool, as it is intended to estimate the harm caused by small, incremental additions of carbon dioxide to the atmosphere, down to the single ton. Moreover, BLM dismisses this tool, which estimates economic damages of environmental harms, in favor of using ‘tons of GHG emissions’ – essentially substituting the amount of pollution as a measure of the impact that pollution has on the environment. The estimates of social cost are based on reasonable forecasts of the actual physical effects greenhouse gas emissions will have on the environment, including temperature, sea level rise, ecosystem services, and other physical impacts, together with assessments of how these physical changes will impact agriculture, human health, etc. The social cost protocol identifies the social cost imposed by a ton of emissions’ pro rata contribution to these environmental problems. This either amounts to an assessment of physical impacts or the best available generally accepted alternative to such an assessment; either way, the tool is appropriate for use under NEPA. 40 C.F.R. § 1502.22(b)(4).

As further justification, BLM also claims that inclusion of the social cost of carbon would be misleading without also including “the full societal benefits of coal-fired energy production” which “have not been monetized.” EA at 23. Yet BLM offers no explanation as to why it would be necessary, when offering an assessment of climate impacts of a decision to lift the moratorium on federal coal leasing, as is required under NEPA and the District Court’s Order, BLM would necessarily have to also monetize the societal benefits of using coal to benefit electricity, apparently without any bounds as to location of that electricity generation or whether the source of the coal came from public lands or elsewhere. Apparently also part of this line of reasoning, BLM notes that the social cost of carbon is presented as a range of values

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for each year of emissions, and that this can lead to a wide range of potential damages. *Id.* But a lack of consensus as to a single most appropriate intergenerational discount rate is not reason for refusing to use the social cost protocol. As the 2010 Technical Support Document explained, a range of three discount rates – 2.5, 3, and 5 percent – “reflect reasonable judgments” and “span a plausible range” of appropriate discount rates, and are consistent with OMB Circular A-4. 62 (The IWG also recommended use of a 3 recent rate at the 95th percentile to model climate “tipping points”).

Although some analysts assert that any analysis of multi-generational, potentially catastrophic problems such as climate change merits a lower discount rate than this range would reflect, the IWG’s “central” value of 3 percent falls within the range supported by a majority of economists. 63 Indeed, the Circular itself provides a general recommendation for a 3 percent rate; and while it also identifies a 7 percent rate as appropriate for use in other circumstances, the Circular itself states that the 7 percent figure should not be used when assessing impacts that, like climate change, will affect the public as a whole. Furthermore, OMB, together with the rest of the Interagency Working Group, has explicitly affirmed that the 7 percent rate is inappropriate when addressing climate change. 64 Thus, as explained by the IWG, uncertainty as to the most appropriate discount rate is a reason to provide social cost estimates using the range of plausible rates—which the Department of Interior and other agencies have done in other proceedings 65—but it is not a reason for ignoring the social cost of greenhouse gas emissions entirely. *See Center for Biological Diversity, 538 F.3d at 1200* (disagreement over cost of carbon emissions does not allow agency to forgo estimating cost where, “while the record shows . . . a range of values, the value of carbon emissions reduction is certainly not zero.”). Similarly, as the federal district court in Colorado stated in addressing the social cost of carbon, “[c]ommon sense tells me that quantifying the effect of greenhouse gases in dollar terms is difficult at best. The critical importance of the subject, however, tells me that a ‘hard look’ has to include a ‘hard look’ at whether this tool, however imprecise it might be, would contribute to a more informed assessment of the impacts than if it were simply

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65 *See, e.g.*, FERC, Final EIS, Constitution Pipeline and Wright Interconnect Projects, CP13-499 (Oct. 2014), Accession No. 20141024-4001, at 4-256 to 4-257 (“For 2015, the first year of project operation, . . . the project’s social cost of carbon for 2015 would be $1,638,708 at a discount rate of 5 percent, $5,325,802 at 3 percent, and $8,330,100 at 2.5 percent.”).
ignored.” High Country Conservation Advocates v. U.S. Forest Serv., 52 F. Supp. 3d 1174, 1193 (D. Colo. 2014). Here, no matter the precise range of values analyzed, BLM acted arbitrarily in failing to include any value for these costs. By failing “to offer non-arbitrary reasons why the [social cost of carbon] protocol should not have been included,” BLM violated NEPA. Id. at 1191.

5. BLM fails to disclose the wildlife impacts of lifting the moratorium

Even accepting arguendo BLM’s erroneous premise that the scope of its analysis extends only to three already-issued leases, BLM fails to disclose impacts to greater sage-grouse, a BLM sensitive species, from the Alton Coal Development area. The EA asserts that “none [of the three leases] would affect greater sage-grouse.” EA at 10. The Alton coal lease area includes an active lek (breeding area) for the southernmost remaining rangewide population of the greater sage-grouse. The Panguitch sage-grouse population, and Alton/Sink Valley subpopulation, are biologically important for sage-grouse conservation:

The tract does not exhibit textbook habitat characteristics, possibly because the tract is near the southernmost edge of the species’ distribution. For most animal species, habitat conditions near the edge of a species’ distribution are often considered suboptimal when compared to habitat near the core of the distribution. Populations that occupy this “fringe” habitat are also more prone to extirpation from stochastic, or unpredictable, events (Doherty et al. 2003); however, these populations may also exhibit important adaptations to suboptimal habitat.

BLM asserts that resumption of leasing, including the Alton lease, will not affect sage-grouse because

[t]he lease included stipulations and design features specifically to prevent, minimize, and restore impacts from mining operations on greater sage-grouse and their habitat. This included management actions to ensure conformance with the Kanab Resource management Plan (RMP), as amended by the 2015 Utah Greater Sage-Grouse ARMPA. After leasing, there were changes to the greater sage-grouse management in Kanab RMP through the 2019 Utah Greater Sage-Grouse ARMPA; however, changes made as part of the 2019 Utah ARMPA would not have changed the management applied to the Alton lease.

EA at 10.

66 BLM, Final Environmental Impact Statement for the Alton Coal Tract Lease by Application at 3-152 (July 2018).
The BLM’s assertion, however, that management of the Alton lease is unaffected by the 2019 Utah sage-grouse plan amendments is demonstrably incorrect. The 2015 Utah Sage-Grouse Approved Resource Management Plan Amendments (ARMPA) imposed a non-waivable 3% disturbance cap and 1 per 640 acre development density imitation, at both the project and total habitat area level, on habitat disturbance from mining activities within Priority Habitat Management Areas (PHMA), including within the Alton coal lease area. The 2019 Utah plan amendments, however, altered that plan provision to allow exceedances of the 3% disturbance cap and 640-acre density cap where BLM determines the project would improve some sage-grouse habitat. BLM has acknowledged that this change may result in loss of habitat and impacts to local grouse populations:

The ability to exceed the disturbance and density caps could result in loss and degradation of site-specific Greater Sage-Grouse habitat and impacts on local grouse populations. . . . [H]owever, exceedances to the caps would only be allowed if site-level analysis indicates the project . . . will improve the condition of Greater Sage-Grouse habitat. There is a risk that allowing this exceedance could result in the loss of a specific type of habitat that mitigation may not address[.]”

Contrary to BLM’s assertion in the EA, the habitat disturbance cap for the Alton coal lease is not included as a lease stipulation, but instead derives from the applicable resource management plan. Appendix B to the Alton Coal Record of Decision contains all the applicable lease stipulations, which do not include a non-waivable 3% disturbance cap. Instead, it provides that:

Prior to the Lessee conducting surface-disturbing activities on the lease, a sage-grouse mitigation compliance plan must be submitted to the BLM AO for review and approval. The plan shall conform to the Greater Sage-Grouse Mitigation Plan as found in Appendix E of the FEIS. The Lessee shall use sage-grouse decisions identified in the BLM-KFO RMP, as amended. The plan shall describe how the Lessee will conform to the provisions of the plan and the locations of where the activities will be conducted for plan compliance.

The BLM’s FEIS for the Alton lease makes clear that the disturbance cap applies by virtue of the currently-applicable Resource Management Plan, not lease stipulation:

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68 Bureau of Land Management, Final Environmental Impact Statement for Utah Sage-Grouse Resource Management Plan Amendments 4-16 to 4-17 (2018); see also id. at 4-289.
69 BLM, Alton Coal Tract Lease by Application Record of Decision, Appendix B at B-3 (August 2018); see id. at F-27 (sage-grouse mitigation plan, with no provision for disturbance or density caps).
However, through the ARMPA (BLM 2015a), the KFO RMP (as amended) now includes a disturbance cap requirement meant to protect sage-grouse habitat. Therefore, the acreage of surface disturbance resulting from mining operations would be subject to the disturbance cap requirements, which would be calculated on an annual basis. 70

Because the density and disturbance requirements for the Alton tract derive from the applicable RMP, not lease stipulations, the 2019 Utah sage-grouse plan amendments mean that those requirements are now waivable. Because there are two adjacent mining operations, the Coal Hollow Mine and North Fee Area mine, in the immediate vicinity of Alton and the affected sage-grouse population, 71 it is foreseeable that total disturbance in the area may approach or exceed the (now-waivable) 3% cap. Because of the 2019 Utah plan amendments, BLM may now allow the Alton and neighboring mines to exceed the 3% disturbance cap and 1 site per 640-acre density limit, resulting in negative effects to the southernmost remaining active greater sage-grouse population.

BLM’s coal leasing EA asserts that “[t]he 2019 Utah ARMPA changes related to coal unsuitability, mitigation requirements, disturbance and density caps, and lek buffers all require close coordination with the appropriate State of Utah agency to ensure sagebrush ecosystems are conserved, enhanced, or restored.” EA at 10. The 2019 ARMPA changes now require, however, only that this coordination result in some improvement to some sage-grouse habitat – not necessarily net improvement nor improvement to the affected habitat. As BLM acknowledged, this may not result in loss of habitat and population for the Alton-area sage-grouse breeding population. 72 Thus, the EA is incorrect when it asserts that sage-grouse impacts need not be considered because there will be no such impacts on the Alton tract, and that the 2019 plan amendments did not affect the management of mining at the Alton tract. Under the 2019 Utah Sage-Grouse Plan Amendments, cumulative disturbance of sage-grouse habitat from Alton and neighboring mines may now exceed 3% of the Priority Habitat Management Area. Because the Alton FEIS assumed the 3% disturbance cap would be met, but the 2019 Utah Plan Amendments rendered that cap waivable, disturbance of more than 3% of the Alton PHMA area is a previously-unexamined impact to a significant subpopulation that would not have occurred but for the BLM’s decision to resume coal leasing, including the Alton lease tract. As BLM has previously acknowledged, due to their isolation and unusual habitat, the Panguitch population and Alton subpopulation are both uniquely vulnerable and uniquely adapted, and thus significant to the overall conservation and recovery of the species.

70 Alton FEIS at 4-5.
71 Alton FEIS at 4-335 to 4-336.
72 2019 Utah ARMPA FEIS at 4-16 to 4-17.
6. BLM’s conclusion that re-starting federal coal leasing will have no socio-economic impacts contradicts the administration’s stated purpose for ending the leasing pause.

The EA asserts that “BLM does not find there to be any socioeconomic impact from the Zinke Order and lifting the leasing pause ....” EA at 25; see also id. at 26 (“As there are no direct or indirect effects to socioeconomics associated with coal production levels, there cannot be any cumulative effects.”). This is a rather fantastic claim given that President Trump campaigned on reversing the leasing pause to end the so-called “war on call,” and to reverse the long-term slide in coal mine employment.\textsuperscript{73}

The President, and Secretary Zinke, echoed these statements when they acted to end the lease pause. “We will put our miners back to work” in part by “lifting the ban on federal leasing for coal production,” the President said upon issuing an Executive Order.\textsuperscript{74} Secretary Zinke announced his Secretarial Order rescinding the ban by stating: “Today I took action to sign a series of directives that put America on track to achieve the President’s vision for energy independence and bringing jobs back to communities across the country.”\textsuperscript{75} Mr. Zinke also denounced the leasing moratorium as “costly” and “punitive.”\textsuperscript{76}

The Interior Department cannot have it both ways. Re-starting federal coal leasing cannot be both responsible for ending a “costly” moratorium and for “bringing jobs back,” and simultaneously have zero socio-economic impacts. At a minimum, BLM must explain the apparent disconnect between the administration’s alleged justification for ending the leasing pause and its conclusions about the lack of impact from ending the pause.

VII. THE EA’S EVALUATION OF COAL TONNAGE AND GHG EMISSIONS CONTAINS NUMEROUS ERRORS

NEPA requires that environmental analysis include information “of high quality” and must include “[a]ccurate scientific analysis.” 40 C.F.R. § 1500.1(b). The EA’s data, particularly

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that relating to the leases at issue and the greenhouse gas emissions attributable to those leases, fail to meet these standards.

Two of the EA’s tables, which address coal tonnage of various leases impacted or exempted from Secretary Jewell’s moratorium (Table 3.1, EA at 16-18), as well as the greenhouse gas emissions from those leases (Table 3.3, EA at 20), contain numerous errors. These errors, some of which are described below, are more than mere flyspecks because the tables and information they contain concerning coal mining inform the EA’s conclusion that there is only a “negligible” difference between the GHG emissions of the action and no action alternatives. EA at 20. Further, the math and other errors demonstrate the sloppy, slap-dash nature of BLM’s rushed effort, violating the agencies duty to provide “high quality” information.

**Math errors: Table 3.1.** Table 3.1 purports to sum all the numbers in the far-right column, “coal applied for/Authorized (million tons),” at the bottom of page 18, to provide “Total tons considered in cumulative = 3,402.55” million tons. This number includes mining actions from three categories: (1) mining actions considered exempt under the Jewell Order; (2) mining action paused under the Jewell Order; and (3) mining action submitted after the Zinke order. Table 3.1’s cumulative number must be wrong because the sum – 3,402.55 – includes a number in the hundredths of millions of tons. None of the individual leases in Table 3.1 include a figure that has a number in that last decimal place.

Further, when one sums the numbers for “Coal Applied for/Authorized” in that far-right column, the total equals 3,655.0 million tons, not 3,402.55 million tons as the EA states at the bottom of Table 3.1 on page 18. Subtotaling the numbers in Table 3.1 for each of the three categories renders the following data:

- Exempt: 1,012.2 million tons
- Paused: 2,551.2 million tons
- New: 91.6 million tons

**Total:** 3,655.0 million tons

It is impossible to tell where the EA’s 3,402.55 million tons figure comes from. BLM must explain or correct these errors in any subsequently prepared NEPA document.

**Math errors: Table 3.3.** Table 3.3 is poorly explained and contains what appears to be errors that present values for certain percentages that are 100 times too low.77

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77 The table also contains a typographical error. The second column, “Coal Applied for/Authorized (million tons),” identifies the volume of “Exempt” tons as “8.44.48” million tons. EA at 20. We assume
The third and fourth columns contain data, in millions of tons of CO2e attributable to the three categories of leases, for “Cumulative GHG Emissions Indirect (Combustion)” over a 100-year time horizon (column 3) and over a 20-year time horizon (column 4). These numbers are then apparently compared, in columns 5, 6, and 7, as percentages of 2017 GHG emissions in three sectors: electricity generation (column 5), the energy sector as a whole (column 6) and total U.S. GHG emissions (column 7). The table, however, does not explain which coal emissions – those in column 3 (100-year) or in column 4 (20-year) – it is comparing to the different sector emissions. This matters because the 20-year CO2e estimates for coal mining (column 4) total 6,903.6 million tons, more than 40 million tons greater than those for 100-year CO2e estimates (column 4), which total 6,858.2 million tons.

More importantly, however, the CO2e estimates for GHG pollution from coal leases each total nearly 7 billion tons, which is more than all of the U.S. GHG emissions from all sources in 2017, according to the EA. See EA at 20, note to Table 3.3 (stating that “U.S. Total GHG Emissions 2017 = 6,472 MMmt”). The nearly 7 billion tons of CO2e is also substantially more than the 4.9 billion tons for the U.S. energy sector in 2017, and roughly four times more than the 1.7 billion tons for electricity sector fossil fuel emissions. See id., notes to Table 3.3. Because the GHG figures for the coal leases is more than the emissions for all sectors identified, it is unclear why columns 5, 6, and 7 conclude that the coal leases amount to a tiny percentage the three sectors.

In fact, it appears that for each of the numbers in columns 5, 6, and 7, the correct percentage figures are 100 times larger than that indicates in Table 3.3. For example, the 1,713.4 million tons of cumulative GHG emissions for “exempt” leases in column 4 of the table is roughly 100% of the 1,732 tons of emissions from the U.S. energy sector in 2017, not the 1.0% listed in column 5 of the table. BLM appears to have simply misunderstood the meaning of “percent” and failed to multiply the fractions by 100.

If BLM corrects the table, the total GHG tonnage for the leases addressed in the EA appear huge by comparison to total U.S. GHG emissions and emissions from the electricity sector. For example, the volume of CO2e pollution from the “paused” leases alone is 290% of – or nearly three times more than – emissions attributable to all fossil-fuel-based U.S. electricity generation in 2017. Even the volume of GHGs attributable to leases approved since the Zinke order – nearly 100 million tons of CO2e – represents about 6% of all fossil-fuel-based U.S. electricity generation in 2017. Halting those leases would have the equivalent impact of shutting down 10 large coal-fired power plants for a year.

Immediately following Table 3.3, the EA characterizes the volume of GHGs attributable to the coal leases at issue as “negligible.” EA at 20. To the extent that characterization is
derived from the percentage figures in Table 3.3, that characterization is false. Any subsequently prepared NEPA document must correct both the table and the EA’s inaccurate characterization of the GHG pollution attributable to the leases.

**Errors in volume of coal reported for individual leases.** Table 3.1 contains errors related to the volume of at least four leases under the heading “Mining Actions Paused under the Jewell Order.” EA at 17 (Table 3.1). One of these errors mistakenly makes one lease appear to be more than 700 million tons larger than the tonnage applied for.

**Book Cliffs lease.** The table identifies the “Bookcliffs [sic]” mine as an LBA for 783.0 million tons of coal. This not only misspells the lease at issue (BLM identifies it elsewhere as “Book Cliffs”), it appears to overstate the LBA’s volume by a factor of 10. The last public documents BLM published on the mine (in 2014) indicate that the lease by application area for the Book Cliffs contained about 78 million tons of coal. See Bureau of Land Management, Notice of Intent To Prepare an Environmental Impact Statement, 79 Fed. Reg. 3,243 (Jan. 17, 2014) (the “Book Cliffs LBA Tract includes approximately 78 million tons of in-place Federal coal”), available at https://www.govinfo.gov/content/pkg/FR-2014-01-17/pdf/2014-00884.pdf (last viewed June 10, 2019).

**New Elk lease.** Table 3.1 appears to incorrectly state that New Elk Coal Co. LBA totals 9 million tons. EA at 17. But BLM issued a scoping notice in late February 2019 that states “[t]he lease application area contains an estimated 15 million tons of coal in place, of which approximately 11 million tons are estimated to be recoverable.” BLM, Opportunity to Comment, New Elk Coal Co., LLC, Coal Lease by Application (Feb. 12, 2019) at 2, available at https://eplanning.blm.gov/epl-front-office/projects/nepa/118470/166253/202607/NECC_LBA_scoping_letter_signed.pdf (last viewed June 10, 2019); see also BLM’s webpage here: https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectld=118470 (using same figures). The EA does not explain why it uses the 9 million ton figure as opposed to the 11 million ton figure BLM used in its recent scoping documents.\(^79\)


\(^79\) Further muddying the waters, BLM’s web page for the lease application indicates that New Elk applied to lease 18.7 million tons of coal. See BLM, Form, Application Summary and Fair Market Value (FMV) Information for an Individual LBA or LMA, New Elk Coal Company LLC, COC-71978 (LBA), available at https://eplanning.blm.gov/epl-front-office/projects/nepa/78796/133678/163382/COC71978_Table_1_2018-02-13.pdf (last viewed June 10, 2019).
West Antelope II LMA. Table 3.1 identifies the West Antelope II lease modification as containing 13.6 million tons. EA at 17. However, according to the application, the LMA contained 15.75 million mineable tons; the company applying for the LMA offered to mine 14.82 million tons. See West Antelope II LMA Coal Data Sheet, available at: https://eplanning.blm.gov/epl-front-office/projects/nepa/67029/134098/163859/WestAntelope2south_LMA_WYW177903.pdf. While the LMA was originally subject to an exemption to the Jewell Order’s pause (because BLM had issued the original decision record before the Jewell Order was issued), the difference in coal amounts is an error that should be corrected in the EA.

Additionally, the IBLA vacated, not merely remanded, the West Antelope II LMA because it was not authorized by the correct BLM official. After the IBLA’s decision, the lease was re-issued with a new decision record on November 30, 2017. Thus, the new lease decision would have been subject to the Jewell Order’s pause. As such, the lease’s company’s correct tonnage should be incorporated into BLM’s NEPA analysis as a lease subject to the pause.

Spring Creek lease. Table 3.1 lists the Spring Creek LBA at 198.2 million tons of coal. EA at 17. This comports with Spring Creek Coal’s 2013 lease application, and BLM’s 2016 scoping notice. See BLM, Notice of Intent to Prepare EIS, 81 Fed. Reg. 90380 (Dec. 14, 2016). However, a fact sheet from BLM’s coal data website indicates that the project proponent submitted a modified application on July 3, 2017 which requested reduced acreage, and also a reduced volume of coal to be mined by nearly 30 million tons, to 170.2 million tons. See https://eplanning.blm.gov/epl-front-office/projects/nepa/109491/148546/182400/Table_1_Spring_Creek_105485.pdf (last viewed June 10, 2018). In any subsequently prepared NEPA document, BLM must use the more recent 170.2 million ton figure, or explain why it is declining to do so.

Errors in categorization of leases. BLM asserts that the New Elk LBA would be “[p]aused under the Jewell Order.” EA at 17. The moratorium did “not apply to metallurgical coal.” SO 3338 at 3. The New Elk mine and its predecessors has produced metallurgical-grade coal for decades. The New Elk lease should be placed under a different category, “Mining Actions considered Exempt under the Jewell Order.” If BLM fails to place it under this category, the agency must explain why.

We also question whether the leases for Cordero Rojo (WYW180711) and Black Thunder (WYW164812) should be categorized as “actions considered exempt” from the coal leasing moratorium. For the Black Thunder lease (North Hilight LBA) BLM has decided that it will reconsider the leasing decision via a supplemental NEPA document due to the length of time that has passed since the agency completed its original environmental review (June 30, 2010) and record of decision (Feb. 1, 2012). This will likely result in the issuance of a new Record of Decision for the lease.\(^\text{81}\)

For Cordero Rojo (Maysdorf South LBA) the company plans to submit a modified application with a lower amount of coal because of the change in market conditions from the time of its original application.\(^\text{82}\) This modification will result in supplemental NEPA analysis and a new record of decision for the lease. Because the agency will make new decisions on the leases, any such leases would likely be subject to the moratorium. If BLM fails to place these leases in the category of leases paused by the moratorium, the agency must explain why.

**Questions of judgment about inclusion of leases.** Table 3.1 identifies leases as “withdrawn” under each of the three categories identified in the table: exempt, paused, and action submitted after the Zinke Order. These withdrawn leases are then included in the total tons of coal “considered in cumulative”; and are then also included for purposes of calculating greenhouse gas emissions in Table 3.3, “Cumulative GHG Emissions Comparison.” BLM must explain why it takes this approach. It is unclear how withdrawn leases can add to GHG emissions, because the coal from withdrawn leases will not be mined or burned. Removing the “withdrawn” leases from each of the categories of leases would result in substantially different numbers, and total volume of coal about 20% less, than the total numbers in Tables 3.1 and 3.3.

For example, Table 3.3, second column, sums the total volume of coal applied for, in millions of tons:

<table>
<thead>
<tr>
<th>Category</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exempt</td>
<td>844.48</td>
</tr>
<tr>
<td>Paused</td>
<td>2,510.16</td>
</tr>
<tr>
<td>New</td>
<td>47.91</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,402.55</strong></td>
</tr>
</tbody>
</table>

EA at 20. Note that the total is consistent with the inaccurate number for total tons included at the bottom of Table 3.1. However, if one uses the data for individual leases from Table 3.1, and removes the “withdrawn” leases for each category, the totals would be substantially less:

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\(^{82}\) See letter of B. Jones, Cloud Peak Energy to M. Rugwell, BLM (June 15, 2017). Attached as Exhibit 25.
Exempt:  844.5
Paused:  1,810.4
New:  68.9

**Total:**  2,723.8

Not accounting for the GHG “emissions” of withdrawn leases thus results in a total tonnage of coal that is 20% lower than the figure the EA uses in Table 3.3. This would, perforce, mean that the total GHG emissions asserted to result from emissions as calculated in Table 3.3, are inaccurate. In any subsequently prepared NEPA document, BLM must explain why “withdrawn” leases have climate impacts, and identify the correct figure for GHG emissions from non-withdrawn leases.

**Omission of important information.** Table 3.1 identifies 17 leases (including two withdrawn leases) that were allegedly “exempt” from Secretary Jewell’s moratorium. However, the table does not indicate which of the Jewell Order’s several exemption categories applied and why. It is therefore impossible for the reader to understand whether or how these leases were exempted. Any subsequently prepared NEPA document must include the omitted information.

The EA also fails to address GHG emissions (or any other impacts) caused by the mining of federal and/or private coal that will only occur because BLM has approved the mining of adjacent Federal coal. For example, the two West Elk Lease Modifications identified in Table 3.1 constitute 10.1 million tons of coal, as Table 3.1 indicates. However, the Supplemental Final EIS prepared by BLM and the Forest Service on the project states that these two federal actions permit Arch Coal to economically mine an additional 7.5 million tons of coal – including 3.3 million tons of adjacent federal coal and 4.2 million tons of private coal – that would otherwise not be mined.83

Similarly, the New Elk Coal Co. lease (COC71978) is listed as 9.0 million tons. BLM prepared an EA for the lease-by-application in 2010 indicating that “[t]he [federal] coal lease is necessary so that New Elk can access privately-held minerals to the north of the current mine

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83 See U.S. Forest Service, Supplemental Final Environmental Impact Statement, Federal Coal Lease Modifications COC-1362 & COC-67232, at 90 (Aug. 2017) (“the leasing and development of the [West Elk] lease modifications also allow for the production of 4.2 million tons of fee coal on adjacent lands (project record), as well as an additional 3.3 million tons from existing adjacent federal coal reserves to the north.”). Excerpts attached as Exhibit 26.
According to the New Elk’s application, the federal lease will permit access to at least 21 million additional tons of private coal.

Any subsequently prepared NEPA document must include in its calculation of GHG impacts those that will occur as a result of mining and burning this additional federal and private coal.

The EA’s errors concern some of the most significant aspects of the analysis—namely, what coal leases the pause impacted, how much coal is at stake, and how that volume of coal may result in what volume of greenhouse gases. As a result, some of the most critical aspects of BLM’s analysis are false or misleading. Therefore, BLM must prepare, and circulate for review, a supplemental draft NEPA document so that both the public and the decisionmaker may have an opportunity to review accurate data. See 40 C.F.R. § 1503.4(a). As the Council on Environmental Quality’s NEPA regulations dictate:

NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.

40 C.F.R. § 1500.1; see also 40 C.F.R. § 1502.24. BLM’s rushed and error-filled Environmental Assessment plainly fails to meet the requirement for “high quality” information and accurate scientific analysis.

VIII. BLM MUST ANALYZE NEW INFORMATION RELEVANT TO THE DIRECT, INDIRECT, AND CUMULATIVE IMPACTS OF LIFTING THE MORATORIUM.

A. Mining and Combustion Cause Climate Impacts.

Conservation groups provided extensive scoping comments to BLM on the 2016 PEIS relating to the greenhouse gas pollution consequences of mining and leasing federal coal, and the incompatibility of potential future federal coal development with carbon budgets associated with limiting warming to 1.5 C. The comments detailed relationships between greenhouse gas emissions and global warming, and the dire social and environmental harms that are predicted to be associated with warming beyond a 1.5 C threshold. The comments discussed how the Paris Agreement codifies the international consensus that climate change is driven primarily by human-caused greenhouse gas pollution and is an “urgent threat” of global

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84 BLM, Environmental Assessment, New Elk Coal Company, Coal Lease Application, COC 071978, at 7 (2010). Attached as Exhibit 27.
They discuss how and why the 1.5 C threshold for warming forms a basis for the 2016 Paris Accord, wherein the United States joined hundreds of other nations in committing to its critical goals—both binding and aspirational—that mandate bold action on the United States’ domestic policy to rapidly reduce greenhouse gas emissions. Those comments cited, discussed, and provided numerous agency and independent scientific analyses demonstrating that federal coal combustion is a nationally and globally significant cause of greenhouse gas pollution, that the potential greenhouse gas pollution from additional federal coal leasing and development would (1) be incompatible with carbon budgets associated with a 1.5 warming limit and (2) undermine global efforts to avoid dangerous thresholds of warming and associated climate disruption. We incorporate those comments in their entirety, including all of their cited sources, by reference here.

Since the close of the scoping period in July 2016, nearly three years ago, new research has further established that there is no room in the global carbon budget for new fossil fuel extraction, including from federal coal, if we are to avoid the worst dangers from climate change. Instead, new fossil fuel production and infrastructure must be halted and much existing production must be phased out to meet the Paris Agreement climate targets and avoid catastrophic climate damages.

The United States has committed to the climate change target of holding the long-term global average temperature “to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels” under the Paris Agreement. The Paris Agreement established the 1.5°C climate target given the evidence that 2°C of warming would lead to catastrophic climate harms. However, the worlds’ nations are

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86 Id., Recitals.
88 Analyses by the Carbon Tracker Initiative estimated that 80% of proven fossil fuel reserves must be kept in the ground to have a reasonable probability (75-80%) of staying below even 2°C. This estimate includes only the fossil fuel reserves that are considered currently economically recoverable with a high probability of being extracted. See Carbon Tracker Initiative at 2, 6.
90 Intergovernmental Panel on Climate Change, Global Warming of 1.5°C, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change,
not currently on track to meet these goals.\textsuperscript{91} Scientific research has estimated the global carbon budget—the remaining amount of carbon dioxide that can be emitted—for maintaining a likely chance of meeting the Paris climate targets, providing clear benchmarks for United States and global climate action.\textsuperscript{92}

Importantly, a 2016 global analysis found that the carbon emissions that would be released from burning the oil, gas, and coal in the world’s currently operating fields and mines would fully exhaust and exceed the carbon budget consistent with staying below 1.5°C.\textsuperscript{93} The reserves in currently operating oil and gas fields alone, even excluding coal mines, would likely lead to warming beyond 1.5°C.\textsuperscript{94} An important conclusion of the analysis is that no new fossil fuel extraction or infrastructure should be built, and governments should grant no new permits for extraction and infrastructure. Furthermore, many of the world’s existing oil and gas fields and coal mines will need to be closed before their reserves are fully extracted in order to limit warming to 1.5°C.\textsuperscript{95} In short, the analysis established that there is no room in the carbon budget for new fossil fuel extraction or infrastructure anywhere, including in the United States, and much existing fossil fuel production must be phased out to avoid the catastrophic damages from climate change.\textsuperscript{96}


\textsuperscript{92} The 2018 IPCC special report on Global Warming of 1.5°C estimated the carbon budget for a 66 percent probability of limiting warming to 1.5°C at 420 GtCO\textsubscript{2} and 570 GtCO\textsubscript{2} from January 2018 onwards, depending on the temperature dataset used. At the current emissions rate of 42 GtCO\textsubscript{2} per year, this carbon budget would be expended in just 10 to 14 years. See Intergovernmental Panel on Climate Change, Global Warming of 1.5°C, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (October 6, 2018), at SPM-16.

\textsuperscript{93} Oil Change International, The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production, (September 2016), http://priceofoil.org/2016/09/22/the-skys-limit-report/ at Table 3. “). Attached as Exhibit 32. According to this analysis, the CO\textsubscript{2} emissions from developed reserves in existing and under-construction global oil and gas fields and existing coal mines are estimated at 942 Gt CO\textsubscript{2}, which vastly exceeds the 1.5°C-compatible carbon budget estimated in the 2018 IPCC report on Global Warming of 1.5°C at 420 GtCO\textsubscript{2} to 570 GtCO\textsubscript{2}.

\textsuperscript{94} The CO\textsubscript{2} emissions from developed reserves in currently operating oil and gas fields alone are estimated at 517 Gt CO\textsubscript{2}, which would likely exhaust the 1.5°C-compatible carbon budget estimated in the 2018 IPCC report on Global Warming of 1.5°C at 420 GtCO\textsubscript{2} to 570 GtCO\textsubscript{2}.


\textsuperscript{96} This conclusion was reinforced by the IPCC Fifth Assessment Report which estimated that global fossil fuel reserves exceed the remaining carbon budget (from 2011 onward) for staying below 2°C (a target
A 2019 analysis underscored that the United States must halt new fossil fuel extraction and rapidly phase out existing production to avoid jeopardizing our ability to meet the Paris climate targets and avoid the worst dangers of climate change. The analysis showed that the U.S. oil and gas industry is on track to account for 60 percent of the world’s projected growth in oil and gas production between now and 2030—the time period over which the IPCC concluded that global carbon dioxide emissions should be roughly halved to meet the 1.5°C Paris Agreement target. Between 2018 and 2050, the United States is poised to unleash the world’s largest burst of CO₂ emissions from new oil and gas development—primarily from shale and largely dependent on fracking—estimated at 120 billion metric tons of CO₂ which is equivalent to the lifetime CO₂ emissions of nearly 1,000 coal-fired power plants. Based on a 1.5°C IPCC pathway, U.S. production alone would exhaust nearly 50 percent of the world’s total allowance for oil and gas by 2030 and exhaust more than 90 percent by 2050. Additionally, if U.S. coal production is to be phased out over a timeframe consistent with equitably meeting the Paris goals, at least 70 percent of U.S. coal reserves in already-producing mines must stay in the ground. In short, if not curtailed, U.S. fossil fuel expansion will impede the world’s ability to meet the Paris climate targets and preserve a livable planet.

These analyses highlight that the United States has an urgent responsibility to lead in the transition from fossil fuel production to 100 percent clean energy, as a wealthy nation with ample financial resources and technical capabilities, and due to its dominant role in driving climate change and its harms. The U.S. is currently the world’s largest oil and gas producer and third-largest coal producer. The U.S. is also the world’s largest historic emitter of greenhouse gas pollution, responsible for 25 percent of cumulative global CO₂ emissions since 1870, and is currently the world’s second highest emitter on an annual and per capita basis. The U.S. must focus its resources and technology to rapidly phase out extraction while investing in a just

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incompatible with the Paris Agreement) by 4 to 7 times, while fossil fuel resources exceed the carbon budget for 2°C by 31 to 50 times. See Bruckner, Thomas et al., 2014: Energy Systems in Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press (2014), at Table 7.2.


98 IPCC, Global Warming of 1.5°C, at SPM-15.

99 Oil Change International, Drilling Toward Disaster: Why U.S. Oil and Gas Expansion Is Incompatible with Climate Limits.

100 LeQuéré, Corinne et al., Global carbon budget 2018, 10 Earth System Science Data 2141 (2018) at Figure 5, 2167 “). Attached as Exhibit 35; Global Carbon Project, Global Carbon Budget 2018 (published on 5 December 2018) https://www.globalcarbonproject.org/carbonbudget/18/files/GCP_CarbonBudget_2018.pdf at 19 (Historical cumulative fossil CO₂ emissions by country). “). Attached as Exhibit 36.
transition for affected workers and communities currently living on the front lines of the fossil fuel industry and its pollution.  

Research on the United States’ carbon budget and the carbon emissions locked in U.S. fossil fuels similarly supports the conclusion that the U.S. must halt new fossil fuel production and rapidly phase out existing production to avoid the worst dangers of climate change. An analysis of U.S. fossil fuel resources demonstrates that the potential carbon emissions from already leased fossil fuel resources on U.S. federal lands would essentially exhaust the remaining U.S. carbon budget consistent with the 1.5°C target. This 2015 analysis estimated that recoverable fossil fuels from U.S. federal lands would release up to 349 to 492 GtCO$_2$eq of carbon emissions, if fully extracted and burned.  

Of that amount, already leased fossil fuels would release 30 to 43 GtCO$_2$eq of emissions, while as yet unleased fossil fuels would emit 319 to 450 GtCO$_2$eq of emissions. Thus, carbon emissions from already leased fossil fuel resources on federal lands alone (30 to 43 GtCO$_2$eq) would essentially exhaust the U.S. carbon budget for a 1.5°C target (25 to 57 GtCO$_2$eq), if these leased fossil fuels are fully extracted and burned. The potential carbon emissions from unleased federal fossil fuel resources (319 to 450 GtCO$_2$eq) would exceed the U.S. carbon budget for limiting warming to 1.5°C many times over. This does not include the additional carbon emissions that will be emitted from fossil fuels extracted on non-federal lands, estimated up to 500 GtCO$_2$eq if fully extracted and burned.

In 2018, the U.S. Geological Survey and Department of the Interior estimated that carbon emissions released from extraction and end-use combustion of fossil fuels produced on federal lands alone—not including non-federal lands—accounted for approximately one quarter of total U.S. carbon emissions during 2005 to 2014. This research further establishes that the United States must halt new fossil fuel projects and close existing fields and mines

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103 Robiou du Pont, Yann et al., Equitable mitigation to achieve the Paris Agreement goals, 7 Nature Climate Change 38 (2017), at Supplemental Table 1. ”). Attached as Exhibit 39.
105 Ecoshift Consulting, et al., The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels, Prepared for Center for Biological Diversity & Friends of the Earth (2015) at 3 (“the potential GHG emissions of federal fossil fuels (leased and unleased) are 349 to 492 Gt CO2e, representing 46 percent to 50 percent of potential emissions from all remaining U.S. fossil fuels”).
before their reserves are fully extracted to achieve the Paris climate targets and avoid the worst damages from climate change.

Research that models the emissions pathways needed to meet the Paris climate targets also shows that a rapid end to fossil fuel extraction is critical. The 2018 IPCC special report on *Global Warming of 1.5°C* concluded that pathways to limit warming to 1.5°C with little or no overshoot require “a rapid phase out of CO₂ emissions and deep emissions reductions in other GHGs and climate forcers.” In pathways consistent with 1.5°C, global net anthropogenic CO₂ emissions must decline by about 45 percent from 2010 levels by 2030 and reach net zero around 2045 or 2050. Additionally, 1.5°C-consistent pathways require a full decarbonization of the power sector by mid-century. The report makes clear the necessity of immediate, deep greenhouse gas reductions to avoid devastating climate change-driven damages, and underscores the high costs of inaction or delays, particularly in the next crucial decade, in making these cuts.

Consistent with and preceding the 2018 IPICC report, a 2017 study found that “global consumption and production of fossil fuels—particularly coal and oil—will need to end almost entirely within 50 years” and that “[G]iven the scale of such a transition, nations may need to consider policies that constrain growth in fossil fuel supplies in addition to those that reduce demand.” In their analysis of the emissions implications of a supply-constraining measures, they found that ceasing the issuance of new leases for federal fossil fuels in the United States (US) “could reduce global carbon dioxide emissions by an estimated 280 million tons annually by 2030, comparable to that of other major climate policies adopted or considered by the Obama administration.” They conclude that “measures to constrain fossil fuel supply…deserve further consideration at subnational levels in the US or by other countries now, and by future US administrations.”

Ending the approval of new fossil fuel production and infrastructure is also critical for preventing “carbon lock-in,” where approvals and investments made now can lock in decades-worth of fossil fuel extraction that we cannot afford. New approvals for wells, mines, and fossil fuel infrastructure—such as pipelines and marine and rail import and export terminals—require upfront investments that provide financial incentives for companies to continue production for decades into the future. As summarized by Green and Denniss (2018):

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108 Id. at SPM-15.
109 Id. at 2-29.
111 Davis, Steven J. and Robert H. Socolow, Commitment accounting of CO₂ emissions, 9 Environmental Research Letters 084018 (2014); Erickson, Peter et al., Assessing carbon lock-in, 10 Environmental Research Letters 084023 (2015); Erickson, Peter et al., Carbon lock-in from fossil fuel supply
When production processes require a large, upfront investment in fixed costs, such as the construction of a port, pipeline or coal mine, future production will take place even when the market price of the resultant product is lower than the long-run opportunity cost of production. This is because rational producers will ignore ‘sunk costs’ and continue to produce as long as the market price is sufficient to cover the marginal cost (but not the average cost) of production. This is known as ‘lock-in.’\(^{112}\)

Given the long-lived nature of fossil fuel projects, ending the approval of new fossil fuel projects is necessary to avoid the lock-in of decades of fossil fuel production and associated emissions.

A 2019 study highlighted the importance of immediately halting all new fossil fuel infrastructure projects to preserve a livable planet. The study found that phasing out all fossil fuel infrastructure at the end of its design lifetime, starting immediately, preserves a 64 percent chance of keeping peak global mean temperature rise below 1.5°C.\(^{113}\) This means replacing fossil fuel power plants, cars, aircraft, ships, and industrial infrastructure with zero carbon alternatives at the end of their lifespans, starting now. The study found that delaying mitigation until 2030 reduces the likelihood that 1.5 °C would be attainable to below 50 percent, even if the rate of fossil fuel retirement were accelerated. In other words, every year of delay in phasing out fossil fuel infrastructure makes “lock-in” more difficult to escape and the possibility of keeping global temperature rise below 1.5°C less likely. The study concluded that although difficult, “1.5 °C remains possible and is attainable with ambitious and immediate emission reduction across all sectors.”

The 88 billion tons of publicly-owned coal that BLM administers across 570 million acres of public land is a globally significant source of greenhouse gas pollution. Mining of federal coal accounts for approximately 40% of all U.S. coal production. In 2018, the U.S. Geological Survey and Department of the Interior estimated that carbon emissions released from extraction and end-use combustion of fossil fuels produced on federal lands alone—not including non-federal lands—accounted for approximately one quarter of total U.S. carbon emissions during 2005 to 2014.\(^{114}\) The study found that approximately 735 million metric tons of carbon dioxide

\(^{112}\) Green, Fergus and Richard Denniss, Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies, 150 Climatic Change 73(2018).

\(^{113}\) Smith, Christopher J. et al., Current fossil fuel infrastructure does not yet commit us to 1.5°C warming, Nature Communications, doi.org/10.1038/s41467-018-07999-w (2019).

combustion emissions in 2014, more than 13 percent of all U.S. carbon dioxide pollution in that year.

**B. Coal Bankruptcies**

The EA also fails to disclose or analyze substantial new, post-2016 information indicating that changes in the coal market, including large coal company bankruptcies in 2015 and 2016, has left state mining regulatory bodies with insufficient financial resources to manage coal mine reclamation. Research has shown that large coal companies frequently shed regulatory obligations in bankruptcy by placing those obligations in underfunded, and later sold, subsidiaries. These developments present serious challenges for OSMRE, state reclamation agencies, coal mining communities, and coal company employees. As a result, BLM’s decision to end the pause on federal coal leasing without completing, or even considering, reforms to the federal coal program that might address reclamation obligations in an era of declining coal, fails to consider a significant effect of locking in new coal leases under existing terms.

In a March 2018 report to Congress on coal mine reclamation, the U.S. Government Accountability Office examined the extent to which OSMRE oversees financial assurances for coal mine reclamation.\(^{115}\) The Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. §§ 1201-1328 (“SMCRA”), and implementing regulations, impose minimum requirements for regulatory standards for reclamation following coal mining. Generally, SMCRA requires that mine operators submit sufficient financial assurance for OSMRE or state regulators to complete reclamation if the operator cannot. These assurance include surety bonds, collateral bonds, or “self-bonds,” wherein the operator promises to pay reclamation costs. \textit{Id.} at 8-9. The GAO investigation found that the third of these in particular, self-bonding, creates several substantial difficulties for state and federal regulators. These include: not knowing the complete financial health of operators; difficulty in determining whether operators qualify for self-bonding; difficulty replacing existing self-bonds with other assurances if needed; difficulty in managing the risk of self-bonding; and difficulty establishing additional financial assurances after a permit is issued. \textit{Id.} at 19-24. The Gao concluded that “[b]ankruptcies of coal mine operators in 2015 and 2016 have highlighted risks that OSMRE and state regulatory authorities face in managing self-bonding—a risk that many be greater today than when self-bonding was first authorized under SMCRA.” \textit{Id.} at 26. The risk of self-bonding failures, with resulting risks to the financial solvency of state regulators and ultimately to the success of regulation, has not been examined in the EA. Indeed, the EA assumes, erroneously, that lifting the coal leasing pause will have no socioeconomic impacts. EA at 24-25.

The unexamined economic risks of continuing federal coal leasing without reform goes beyond just self-bonding. Additional recent research in the Stanford Law Review found that, in

four large coal company bankruptcies between 2015 and 2017, four of the largest coal
companies shed almost $5.2 billion in retiree and reclamation liabilities. 116 Coal companies then
“disposed of these regulatory obligations by placing them in underfunded subsidiaries that they
later spun off.” The fifth major public land coal operator, Cloud Peak, additionally filed for
bankruptcy on May 10, 2019. As the study found when coal companies shed environmental and
retiree obligations in bankruptcy, “the communities affected by coal companies’ bankruptcies
bear these costs in the form of worse health, poor financial security, and diminished land and
water quality.”117 Although SMCRA theoretically requires coal companies to internalize
reclamation costs, the coal bankruptcies of 2015-2017 demonstrated that the bankruptcy
process allowed large coal operators to continue to operate after discharging its reclamation
and retiree obligations onto a short-lived spin-off corporation, which then abandons those
obligations. 118 The study finds that this is exactly what occurred with the Patriot, Alpha, Arch,
and Peabody bankruptcies. 119 “In summary,” it concludes, “coal companies have adopted three
mutually reinforcing strategies to evade their environmental and retiree liabilities through
bankruptcy.”120 They take advantage of SMCRA’s self-bonding provision; they repeatedly spin
off subsidiaries containing depleted assets and significant liabilities; and they employ
techniques to continue to operate despite being arguably insolvent. 121 The result is that
external parties – retirees, communities, and state regulators – bear an unintended and
disproportionate share of the environmental, financial, and social costs of coal mining. The EA
makes no mention whatsoever of this significant new information regarding changes in the coal
industry and bankrupt coal companies’ pattern of evasion of regulatory and retiree obligations
in the bankruptcy process. Once again, the BLM’s discretionary system to resume federal coal
leasing, absent review or reform, ensures that these problems will continue to worsen as BLM
locks in new coal leases at terms disadvantageous to the public good.

IX. NEPA REQUIRES THAT AGENCIES ANALYZE A REASONABLE RANGE OF ALTERNATIVES FOR ENVIRONMENTAL ASSESSMENTS.

In taking the “hard look” at environmental impacts, an EA must “study, develop, and
describe” reasonable alternatives to the proposed action, a mandate that derives from the
statute itself as well as CEQ regulations. 42 U.S.C. § 4332(2)(C) (requiring the federal
government to “include in every recommendation or report on proposals for ... major Federal
actions significantly affecting the quality of the human environment ... alternatives to the
proposed action”); id. at § 4332(2)(E) (“study, develop, and describe appropriate alternatives to
recommended courses of action in any proposal which involves unresolved conflicts concerning

117 Id. at 26.
118 Id. at 28.
119 Id. at 32-54.
120 Id. at 56.
121 Id. at 56-57.
alternative uses of available resources”); 40 C.F.R. § 1508.9(b) (an EA “[s]hall include brief discussions ... of alternatives”).

Federal courts acknowledge that the mandate to analyze a range of reasonable alternative applies to EAs as well as EISs. “NEPA requires that alternatives ... be given full and meaningful consideration,” whether the agency prepares an EA or an EIS. Native Ecosystems Council v. U.S. Forest Serv., 428 F.3d 1233, 1245 (9th Cir. 2005). See also Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 538 F.3d 1172, 1217 (9th Cir. 2008) (setting aside EA that analyzed the no action and four additional alternatives, because the court concluded the agency reviewed a “very narrow range of alternatives”); Envl. Prot. Info. Ctr. v. Blackwell, 389 F. Supp. 2d 1174, 1199 (N.D. Cal. 2004) (“an EA must consider a reasonable range of alternatives”). “[C]onsideration of alternatives is critical to the goals of NEPA even where a proposed action does not trigger the EIS process.” Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228-29 (9th Cir. 1988). See also Or. Natural Desert Ass’n v. Singleton, 47 F. Supp. 2d 1182, 1195 (D. Or. 1998) (“The requirement of considering a reasonable range of alternatives applies to an EA as well as an EIS” (citing 40 C.F.R. § 1508.9(b)). “A properly-drafted EA must include a discussion of appropriate alternatives to the proposed project.” Davis v. Mineta, 302 F.3d 1104, 1120 (10th Cir. 2002) (granting injunction where EA failed to consider reasonable alternatives). See also Ayers v. Espy, 873 F. Supp. 455, 473 (D. Colo. 1994) (in preparing an EA, an agency “must consider a range of alternatives that covers the full spectrum of possibilities.”).

This alternatives analysis “is at the heart of the NEPA process, and is ‘operative even if the agency finds no significant environmental impact.’” Diné Citizens Against Ruining Our Env’t v. Klein, 747 F. Supp. 2d 1234, 1254 (D. Colo. 2010) (quoting Greater Yellowstone Coal. v. Flowers, 359 F.3d 1257, 1277 (10th Cir. 2004)). See also W. Watersheds Project v. Abbey, 719 F.3d 1035, 1050 (9th Cir. 2013) (in preparing EA, “an agency must still give full and meaningful consideration to all reasonable alternatives” (emphasis added) (internal quotation and citation omitted)); 40 C.F.R. § 1502.14 (describing alternatives analysis as the “heart of the environmental impact statement”). When an agency considers reasonable alternatives, it “ensures that it has considered all possible approaches to, and potential environmental impacts of, a particular project; as a result, NEPA ensures that the most intelligent, optimally beneficial decision will ultimately be made.” Wilderness Soc’y v. Wisely, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007) (quotations omitted) (citing Calvert Cliffs’ Coordinating Comm., Inc. v. United States Atomic Energy Comm’n, 449 F.2d 1109, 1114 (D.C. Cir. 1971); see also N. Alaska Envtl. Ctr. v. Kempthorne, 457 F.3d 969, 978 (9th Cir. 2006) (quoting same). “Informed and meaningful consideration of alternatives” is “critical to the goals of NEPA,” ensuring that agency decision-makers assess a project’s costs, benefits, and environmental impacts in the correct context. Bob Marshall Alliance, 852 F.2d at 1228-29. Reasonable alternatives must be analyzed for an EA even where a FONSI is issued because “nonsignificant impact does not equal no impact. Thus, if an even less harmful alternative is feasible, it ought to be considered.” Ayers v. Espy, 873 F. Supp. 455, 473 (D. Colo. 1994) (internal citation omitted).
Federal courts have routinely struck down EAs for failing to consider a range of reasonable alternatives. See, e.g., Wilderness Soc’y v. Wisely, 524 F. Supp. 2d at 1312 (rejecting an EA for oil and gas leasing that considered only the proposed action and a no-action alternative, holding that BLM should have considered a “potentially appealing middle-ground compromise between the absolutism of the outright leasing and no action alternatives” that would have reduced environmental impacts); Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 538 F.3d at 1217; W. Watersheds Project, 719 F.3d at 1050 (finding EA arbitrary and capricious where it failed to consider “reduced-grazing” alternatives); Pac. Coast Fed’n of Fishermen’s Ass’ns v. Dep’t of Interior, 655 F. App’x 595, 599 (9th Cir. 2016) (holding that agency’s “decision [in EA] not to give full and meaningful consideration to the alternative of a reduction in maximum interim contract water quantities was an abuse of discretion, and the agency did not adequately explain why it eliminated this alternative from detailed study”); Wild Fish Conservancy v. Nat’l Park Serv., 8 F. Supp. 3d 1289, 1300 (W.D. Wash. 2014) (finding agency’s EA deficient because the “conclusion that there is not a meaningful difference, or viable alternative, between 0% and 90% [of fish survival] [was] suspect”), aff’d, 687 F. App’x 554 (9th Cir. 2017); Native Fish Soc’y v. Nat’l Marine Fisheries Serv., 992 F. Supp. 2d 1095, 1110, (D. Or. 2014) (holding that agency “erred in failing to consider a reasonable range of alternatives” in EA, and finding that “[g]iven the obvious difference between the release of approximately 1,000,000 smolts and zero smolts, it is not clear why it would not be meaningful to analyze a number somewhere in the middle”).

Courts also have consistently rejected failures to consider viable middle-ground alternatives in EAs and EISs. See Nat. Res. Def. Council v. U.S. Forest Serv., 421 F.3d 797, 813-14 (9th Cir. 2005); Muckleshoot Indian Tribe v. United States Forest Serv., 177 F.3d 800, 813 (9th Cir. 1999); Wilderness Workshop v. BLM, 342 F. Supp. 3d 1145, 1166-67 (D. Colo. 2018); Colo. Envtl. Coal. v. Salazar, 875 F. Supp. 2d 1233, 1248-50 (D. Colo. 2012). See also Colo. Envtl. Coal. v. Dombeck, 185 F.3d 1162, 1175 (10th Cir. 1999) (agencies must analyze mid-range and/or reduced-impact alternatives in order to “provide legitimate consideration to alternatives that fall between the obvious extremes.”).

Multiple courts have specifically held that BLM violated NEPA by failing to consider an adequate range of alternatives before issuing fossil fuel leases. See, e.g., Bob Marshall All., 852 F.2d at 1228-30 (9th Cir. 1988); Wisely, 524 F. Supp. 2d at 1293, 1310-12; S. Utah Wilderness All. v. Norton, 457 F. Supp. 2d 1253, 1263-64 (D. Utah 2006); Mont. Wilderness Ass’n v. Fry, 310 F. Supp. 2d 1127, 1145-46 (D. Mont. 2004).

In determining whether an alternative is “reasonable,” and thus requires detailed analysis, courts look to two guideposts: “First, when considering agency actions taken pursuant to a statute, an alternative is reasonable only if it falls within the agency’s statutory mandate. Second, reasonableness is judged with reference to an agency’s objectives for a particular project.” Diné Citizens Against Ruining Our Env’t, 747 F. Supp. 2d at 1255 (quoting New Mexico
ex rel. Richardson, 565 F.3d at 709); see also Bering Strait, 524 F.3d at 955 (an agency need not discuss “alternatives similar to alternatives actually considered, or alternatives which are infeasible, ineffective, or inconsistent with the basic policy objectives for management of the area.” (internal citation omitted).

That said, “[a]n alternative may not be disregarded merely because it does not offer a complete solution to the problem.” Citizens Against Toxic Sprays v. Bergland, 428 F. Supp. 908. 933 (D. Or. 1977), citing Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 836 (D.C. Cir. 1972). As one court explained, “[o]bviously, any genuine alternative to a proposed action will not fully accomplish all of the goals of the original proposal. One of the reasons that Congress has required agencies to set out and evaluate alternative actions is to give perspective on the environmental costs, and the social necessity, of going ahead with the original proposal.” Town of Matthews v. United States Dept of Transp., 527 F. Supp. 1055, 1058 (W.D.N.C. 1981).

BLM’s NEPA Handbook further explains that the agency “must consider alternatives if there are unresolved conflicts concerning alternative uses of available resources (40 CFR 1508.9(b)). There are no unresolved conflicts concerning alternative uses of available resources if consensus has been established about the proposed action based on input from interested parties, or there are no reasonable alternatives to the proposed action that would be substantially different in design or effects.” BLM NEPA Handbook, Sec. 8.3.4.2, available at https://www.ntc.blm.gov/krc/uploads/366/NEPAHandbook_H-1790_508.pdf (last viewed June 10, 2019).

Any alternative that is unreasonably excluded will invalidate the NEPA analysis. “The existence of a viable but unexamined alternative renders an [EA] inadequate.” W. Watersheds Project v. Abbey, 719 F.3d 1035, 1050 (9th Cir. 2013) (quoting Westlands Water Dist. v. US. Dept of Interior, 376 F.3d 853, 868 (9th Cir. 2004)); see also Diné Citizens Against Ruining Our Env’t, 747 F. Supp. 2d at 1256 (same). The agency’s obligation to consider reasonable alternatives applies to citizen-proposed alternatives. See Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 538 F.3d 1172, 1217-19 (9th Cir. 2008) (finding EA deficient, in part, for failing to evaluate a specific proposal submitted by petitioner); Colo. Envtl. Coal. v. Dombeck, 185 F.3d 1162, 1171 (10th Cir. 1999) (agency’s “[h]ard look” analysis should utilize “public comment and the best available scientific information”) (emphasis added).

Finally, courts require that an agency adequately and explicitly explain in the EA any decision to eliminate an alternative from further study. See Wilderness Soc’y, 524 F. Supp. 2d at 1309 (holding EA for agency decision to offer oil and gas leases violated NEPA because it failed to discuss the reasons for eliminating a “no surface occupancy” alternative); Ayers, 873 F. Supp. at 468, 473.
A. The EA Fails to Analyze a Range of Reasonable Alternatives.

The EA defines the purpose and need for the proposed action as:

Respond[ing] to the U.S. District Court of Montana’s Order issued on April 19, 2019, Citizens for Clean Energy et al. v. U.S. Dep't of the Interior et al., No. CV-17-30-GF-BMM, 2019 WL 1756296 (D. Mont. Apr. 19, 2019), indicating that the Zinke Order constituted a major Federal action triggering compliance with NEPA. This EA analyzes the environmental impacts of Federal coal leases, not exempt or excluded from the Jewell Order’s coal leasing pause, issued between March 29, 2017, and March 2019.

EA at 7. As discussed above, this definition is incorrect and illegal. The purpose and need for this NEPA review is more properly: whether to lift the coal leasing moratorium, and if so, how.

Based on BLM’s improper definition of purpose and need, the EA assesses only two alternatives: (1) the “no action” alternative, which the agency describes as “retain[ing] the pause on the issuance of coal leases established by the Jewell Order through the timeframe in which the BLM would have completed the PEIS evaluating Federal coal leasing,” which, according to BLM, is 24 months; and (2) the resumption of normal leasing procedures in March 2017, as occurred after the Interior Department’s unlawfully adopted Secretarial Order 3348 (the Zinke Order) in violation of law. EA at 11, 12. BLM “did not identify any additional preliminary alternatives” that the agency declined to analyze in detail. EA at 14.

As discussed above, BLM’s definition of the “no action” alternative is also incorrect. BLM must assess a true “no action” alternative, which would be the continuation of the “pause” on leasing indefinitely, particularly because the Interior Department has made clear that it has no interest or funds to complete the PEIS. It was the completion of the PEIS and the likely adoption of new policies for the federal coal program that was to trigger the pause’s end.

Even assuming BLM properly defined the purpose and need, which it did not, there are a number of other reasonable alternatives that the agency must consider to comply with NEPA.

We note that it is absurd for BLM to conclude that there are only two alternatives to address the question of whether and how to lift the coal leasing moratorium for all coal leasing when for individual coal leases, BLM commonly reviews three or more alternatives. See, e.g., BLM, Final EIS, Alton Coal Tract Lease by Application (July 2018) at Chapter 2 (describing four alternatives), available at https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=118877 (last viewed June 10, 2019).

The True No Action Alternative – No Additional Leasing. BLM must consider an alternative that would leave the coal moratorium in place indefinitely, as contemplated by
Secretarial Order 3338 (the Jewell Order). Such an alternative would “pause” all new coal leases except those subject to exceptions. It is reasonable to assume that the moratorium would continue indefinitely under the “no action” alternative, given DOI’s lack of interest or funds to complete the PEIS, which was the Jewell’s Order’s stated prerequisite to lifting the “pause.” Such an alternative would permit the agency to understand the impacts to a variety of resources of a controlled winding down of the federal coal program. Because the agency has billions of tons of coal under lease, enough, on average, to allow mines dependent on federal coal to keep mining through approximately 2041 there would likely be few immediate mine closures.

This alternative would broaden the range of alternatives, staking out one end of the spectrum, and resulting in different potential impacts to climate and socioeconomics because it would likely result in an end to climate emissions and surface impacts from federal coal mining by about 2040. It would address at least one key unresolved conflict at the heart of federal coal leasing program: the climate costs of coal leasing.

As noted above, BLM has authority to pause coal leasing, as it has done in the past, and has the authority to choose not to lease coal where such leasing would not be in the public interest. Given the huge climate, air, and water pollution, and habitat destruction attributable to the mining and burning of federal coal, BLM has the discretion to reject federal coal lease applications indefinitely. This alternative thus falls within the agency’s statutory mandate. It would also meet a properly-defined purpose and need for the project. The court’s order states that the Interior Department violated the law by failing to account for the “environmental harm that could result from lifting the moratorium.” Citizens for Clean Energy v. United States Dept. of Interior, 2019 U.S. Dist. LEXIS 67259, at*26 (D. Mont. Apr.19, 2019). An alternative that addresses continuation of the moratorium meets the purpose and need because it will place in sharp relief the contrast between leaving the pause in place and lifting it.

**Picking an end-date for the federal coal program.** Studies prepared by the IPCC and others have indicated that unless greenhouse gas emissions are reduced to net zero by 2030, the world’s climate may reach a tipping point that will result in a cascade of impacts that may severely threaten human civilization and biodiversity as we know it on Earth. Given that carbon sequestration is not now economically feasible, one reasonable alternative for management of the federal coal program would require the Interior Department to review the existing reserves of each mine that is reliant on federal coal, and ensure that no leasing occurs where a mine will have any reserves after 2030.

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122 Even if BLM does not agree that the “no action” alternative should be defined as extending the leasing pause indefinitely, a “no leasing” alternative is a reasonable alternative for the reasons stated here and so BLM must consider it in detail in any subsequently prepared NEPA document.

Like the “no leasing” alternative, the specific end-date alternative: is within the Interior Department’s authority; would ensure a time-table for winding down the federal coal program; and would enable the Interior Department to consider the trade-offs between continued mining and the climate crisis. It is distinguishable, however, from the no leasing alternative because it could allow some leasing to occur and it would arguably set a more even playing field for mines by making clear that all would have a chance to mine through 2030. It might also more directly encourage the development of carbon capture and storage technology.¹²⁴

**Alternatives inspired by the Coal PEIS Scoping Report.** The Interior Department developed a transparent public process pursuant to the Jewell Order to draft a scoping report based on half-dozen meetings held across the nation, including in coal country, and on more than 200,000 public comments solicited by the agency. BLM, Federal Coal Program, PEIS Scoping Report (Jan. 2017) at ES-3. Through that process, the Interior Department identified a suite of options to ensure that American taxpayers received fair value for the sale of coal they own in the Scoping Report. See id. at 6-6 (detailing “options proposed for analysis”). The Scoping Report identifies four “policy objectives”: ensuring a fair return to taxpayers; reducing and/or accounting for greenhouse gas emissions; improving resource protection and management; and increasing the efficiency of the leasing process. To address the purpose and need for the project – whether and how to lift the moratorium – a number of reasonable alternatives can be identified based on those policy objectives, including those that follow.

**Ensuring taxpayers receive fair market value for federal coal.** BLM should analyze an alternative that lifts the moratorium but that increases taxpayers’ return. Such an alternative should include:

- Making the royalty rate commensurate with the rate used on offshore oil and gas (18.75 percent) (see Scoping Report at 6-7);
- Eliminating the use of royalty rate reductions;
- Increasing the per-acre rental rate (currently a minimum of $3 per acre) to, for example, $100 per acre;
- Increasing the minimum bonus bid to $250 per acre reflect inflation since the minimum bid level was set in 1982 (see id. at 6-10);
- Implementing inter-tract or modified inter-tract bidding processes to increase competition (see id. at 6-11 – 6-12); and

¹²⁴ Note that this alternative could be consonant with the “carbon budget” approach outlined in the Interior Department’s Scoping Report at 6-16 – 6-19.
This alternative would lift the moratorium, allowing coal leasing to re-start, but would make marginal coal leases less attractive, while likely increasing taxpayer returns, a beneficial socio-economic impact. It would thus present an intermediate level of leasing between lifting the moratorium and leaving it in place, and would allow that leasing to continue indefinitely, making the alternative distinguishable from an alternative that would set an end date for leasing. BLM has authority to undertake all of these changes, although some would require rulemakings.

**Reducing greenhouse gas emissions.** As noted, the climate pollution impacts of coal mining and combustion are one of the most unresolved conflicts concerning alternative uses of coal. The Scoping Report suggested potential actions to limit the climate emissions from the federal coal program:

- Address climate pollution externalities by assessing a per-ton royalty rate “adder” that recoups for the taxpayer the global social cost of carbon (see id. at 6-13 – 6-16);

- Mandate the flaring or capture of methane from underground mines.

This alternative would likely discourage much, but not necessarily all, additional federal coal leasing, and provide even greater recovery to the Treasury than the “market value” alternative. It would not set a date certain for winding down the coal program, but would result in ending leasing to more polluting and more marginal mining operations. The Interior Department has the authority to adopt rules or policy to implement these changes.

**Improving resource protection and management.** BLM should consider an alternative that better protects wildlife by amending the unsuitability criteria. See, e.g., Scoping Report at 6-20 – 6-21. The alternative would identify areas as unsuitable for leasing, including: sage grouse habitat; inventoried roadless areas; lands with wilderness characteristics; and lands within 500 feet of public buildings or homes. See id. at 6-21.

This alternative would permit BLM to weigh the costs and benefits of coal mining in areas that threaten sensitive resources while allowing most mining to continue. DOI has the authority to modify the suitability regulations. This alternative would address a different set of tradeoffs than those at stake in addressing climate or return to the American taxpayer.

**Conclusion.** If BLM declines to analyze any of these proposed alternatives, BLM must explain, and must provide a rational basis for, why the agency declined to do so. Failure to explain its rationale would violate NEPA. See Wilderness Soc’y, 524 F. Supp. 2d at 1309; Ayers, 873 F. Supp. at 468, 473.
X. BLM MUST PREPARE AN EIS.

NEPA requires federal agencies to prepare an environmental impact statement for any “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). “An EIS must be prepared if substantial questions are raised as to whether a project may cause significant degradation of some human environmental factor.” Ocean Advocates, 402 F.3d at 864 (internal quotation, ellipsis, and bracket omitted) (quoting Idaho Sporting Cong. v. Thomas, 137 F.3d 1146, 1149 (9th Cir. 1998)). “To trigger this requirement a plaintiff need not show that significant effects will in fact occur, but raising substantial questions whether a project may have a significant effect is sufficient.” Id. (internal quotation and bracket omitted) (quoting Idaho Sporting Cong., 137 F.3d at 1150). If an agency opts not to prepare an EIS, and issues a FONSI, “[t]he FONSI must contain a ‘convincing statement of reasons’ why the project’s impacts are not significant.” Ctr. for Biological Diversity v. BLM, 937 F. Supp. 2d 1140, 1153 (N.D. Cal. 2013) (quoting Blue Mountains Biodiversity Project, 161 F.3d at 1211).

To determine significance, Council for Environmental Quality (CEQ) regulations require agencies to consider the context and intensity of the proposed action. 40 C.F.R. § 1508.27 (a)-(b). Context requires consideration of the action in various contexts, including “the affected region,” and short- and long-term effects. Id. § 1508.27 (a). To assess the intensity of the impact, agencies must address a non-exclusive list of ten factors:

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

40 C.F.R. § 1508.27(b). The presence of “one of these factors may be sufficient to require preparation of an EIS.” Ocean Advocates, 402 F.3d at 865. Continued coal development is one of the most harmful activities on Earth, implicating each of the ten intensity factors. The impacts of climate change are already causing widespread harm in the United States and abroad.125 Coal is one of the largest sources of greenhouse gas emissions in the United States and the world. Federal coal is one of the largest sources of greenhouse gas emissions in the United States.126 This is the quintessential cumulative effects problem.

In addition to climate impacts, continued large-scale combustion of federal coal is the source of widespread premature death and sickness in the United States and wherever coal is burned.127 While increased regulation and coal plant closures have reduced premature mortality from coal in the United States by nearly 90% over the past two decades, particulate matter from coal combustion still kills over 3,000 people in the country each year.128 Globally, air pollution, to which coal is a significant contributor, is associated with 4.9 million deaths annually.129 Coal combustion is also linked to increased cancer rates.130 The significant

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128 Id.
externalities associated with coal production and combustion cause exorbitant costs to the public, significantly exceeding the value of the coal.\textsuperscript{131} Considering this, lifting the federal coal leasing moratorium would be both highly uncertain and highly controversial. The controversy is only increased by the fact that successive administrations have taken diametrically opposed positions regarding the wisdom of continued coal development. Moreover, the worsening impacts of climate change continue to raise the specter of uncertain and unexpected impacts, including the simultaneous occurrence of multiple extreme events or the passing of critical thresholds or tipping points that may result in irreversible or abrupt changes.\textsuperscript{132} Climate change, which will be cumulatively worsened by lifting the coal moratorium, is also an increasing driver of global insecurity, driving global migration, and threatening national security.\textsuperscript{133} Climate change due to increased coal combustion from lifting the coal leasing moratorium will also have significant impacts on biodiversity and threatened and endangered species.\textsuperscript{134}

XI. BLM MUST CONSULT WITH THE FISH AND WILDLIFE SERVICE ON THE IMPACTS OF ENDING THE MORATORIUM.

The BLM is obligated to conserve species listed under the Endangered Species Act ("ESA"), 16 U.S.C. § 1536. Under section 7 of the ESA, federal agencies must “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical.” 16 U.S.C. § 1536(a)(2). Congress enacted the ESA in 1973 to provide for the conservation of endangered and threatened fish, wildlife, plants and their natural habitats.\textsuperscript{135} The ESA imposes substantive and procedural obligations on all federal agencies with regard to listed and proposed species and their critical habitats.\textsuperscript{136} BLM’s decision to lift the pause on issuance of new federal coal leases is clearly an “agency action” within the ESA’s statutory and

\textsuperscript{132} USGCRP, Fourth National Climate Assessment Volume I at 32.
\textsuperscript{134} USGCRP, Fourth National Climate Assessment Volume II at 79.
\textsuperscript{135} Id. §§ 1531, 1532.
\textsuperscript{136} See id. §§ 1536(a)(1), (a)(2) and (a)(4) and § 1538(a); 50 C.F.R. § 402.
regulatory definition of those terms. Because the direct, indirect, and cumulative effects of BLM’s discretionary action to resume coal leasing will affect numerous species listed under the ESA, BLM must consult with the Fish and Wildlife Service (and National Marine Fisheries Service where applicable) to ensure that its action will not jeopardize listed species or adversely modify their critical habitat. 16 U.S.C § 1536(a)(2).

Under section 7 of the ESA, federal agencies must “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical.” The definition of agency “action” is broad and includes “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies,” including programmatic actions, such as the BLM action at issue here.

The duties in ESA section 7 are only fulfilled by an agency’s satisfaction of the consultation requirements, and only after the agency lawfully complies with these requirements may an action that “may affect” a protected species go forward. See Pac. Rivers Council v. Thomas, 30 F.3d 1050, 1055-57 (9th Cir. 1994). Here, BLM is considering the final agency action resuming new leasing under existing terms of the federal coal program, without completing a programmatic review or reforms to that program. The decision to end the pause on leasing is definitively a federal agency action. Citizens for Clean Energy v. U.S. Dep’t of Interior, No. CV-17-30-GF-BMM, 2019 WL 1756296 at *10 (D. Mont. Apr. 19, 2019). As BLM previously found, the coal program “includes land use planning, processing applications (e.g., for exploration licenses and lease sales), estimating the value of proposed leases, holding lease sales, and post-leasing actions....” According to prior BLM finding, “[t]he Federal coal program has other potential impacts on public health and the environment, beyond climate impacts, that will also be assessed in the Programmatic EIS. These include the effects of coal production on... wildlife, including endangered species....” Based on this admission, it is clear that BLM must undertake programmatic consultation in order to fulfill its duties pursuant to Section 7 of the ESA. Consistent with the Services’ revised regulations defining “framework programmatic action,” the programmatic consultation on BLM’s revised coal program should acknowledge that it is a framework programmatic consultation under which any incidental take will be subsequently authorized under a permit-specific Section 7 or Section 10 process.

139 81 Fed. Reg. at 17,722.
140 Id. at 17726.
141 See 80 Fed. Reg. 26,832 (May 11, 2015) (adding definition of “framework programmatic action” to 50 C.F.R. § 402.02 and adding 50 C.F.R. § 402.14(i)(1)(6) on incidental take statements not being required at the programmatic level where subsequent actions resulting in incidental take will be separately
Lifting the pause on new federal coal leases is an “agency action” within the meaning of the ESA and its regulations, as it is a discretionary decision whereby BLM proposes to (a) make public lands and coal available for leasing and development, and (b) to lock in the conditions under which said coal will be leased, by resuming leasing without completing the previously-initiated programmatic environmental review or adopting any changes to the terms of the four-decade-old coal leasing program. This action “may affect” numerous listed species, both from the immediate land and water impacts of coal mining and transport, and from the toxic and climate pollution emissions resulting from ensuing coal combustion.

It is well-established that programmatic decisions are subject to the ESA’s consultation requirement. A programmatic decision to continue or modify the federal coal leasing program is an “agency action” for purposes of the ESA. The ESA defines agency action as “any action authorized, funded, or carried out” by a federal agency. 16 U.S.C. § 1536(a)(2). The phrase is further defined in ESA regulations as “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies.” 50 C.F.R. § 402.02. These include: “(b) the promulgation of regulations” and “(d) actions directly or indirectly causing modifications to the land, water or air.” Id. The meaning of “agency action” is broadly construed under ESA section 7(a)(2). NRDC v. Houston, 146 F.3d 1118, 1128 (9th Cir. 1998); Pacific Rivers Council v. Thomas, 30 F.3d 1050, 1055 (9th Cir. 1995). As the Supreme Court has held:

One would be hard pressed to find a statutory provision whose terms were any plainer than those in § 7 of the Endangered Species Act. Its very words affirmatively command all federal agencies “to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence” of an endangered species or “result in the destruction or modification of habitat of such species. . . .” This language admits of no exception.


The lifting of the pause leasing of federal lands for coal extraction is a discretionary BLM action that has the potential to adversely affect listed species. See NRDC v. Jewell, 749 F.3d 776, 784 (9th Cir. 2014): (“We reaffirm that Section 7(a)(2) requires such consultation, so long as the agency has ‘some discretion’ to take action for the benefit of a protected species.”) Ending the consultation on); id. at 26,833 (“This altered view as to incidental take for framework programmatic actions, however, does not undermine the duty to consult under section 7(a)(2) of the ESA. Framework programmatic actions will trigger formal consultation if the action may affect listed species or their designated critical habitat.”)

142 See, e.g., New Mexico v. Bureau of Land Management, 565 F.3d 683, 689, n.1 (10th Cir. 2009); Conner v. Burford, 848 F.2d 1441 (9th Cir. 1988); Lane County Audubon Society v. Jamison, 958 F.2d 290 (9th Cir. 1988); Pacific Rivers Council v. Thomas, 30 F.3d 1050 (9th Cir. 1994); Silver v. Babbitt, 924 F.Supp. 976 (D. Ariz. 1995).
pause on federal coal leasing will “directly or indirectly cause modifications to the land, water or air,” 50 C.F.R. § 402.02, both through resuming issuance of new coal leases, and setting the conditions for those leases by ending the pause prior to any reforms to the federal leasing program. Once a lease is sold, the lessee acquires certain contractual rights constraining BLM authority. Therefore, once the lease is sold, it will be too late for BLM to ensure that sufficient protections will be in place to protect this species from the cumulative impacts of extraction-related activities. This is the precise reason the Department of the Interior previously adopted the coal leasing pause – to ensure that coal leases would not lock in availability of coal on terms that further review may show to be against the public interest.

BLM asserts that ESA Section 7 consultation is unnecessary because “[t]he BLM has determined that the decision to lift the coal leasing pause does not constitute an ‘undertaking’ as defined by the Endangered Species Act (ESA) or the National Historic Preservation Act (NHPA). As such, no consultation under section 7 of the ESA or section 106 of the NHPA is necessary.” EA at 32. This is incorrect, and suggests that the BLM has not engaged in even the most rudimentary examination of its ESA obligations. “Undertaking” is not a term defined in the ESA or its regulations. It is, of course, a term defined under the NHPA, 54 U.S.C. § 306108. BLM’s failure to even examine the separate statutory and regulatory terms of the two statutes suggests that the agency has not made even the threshold inquiry into whether its action “may affect” listed species.

Where activities have the potential to adversely impact listed species, those impacts must be addressed “at the earliest possible time,” in order to avoid delay, ensure that impacts are avoided and opportunities for mitigation are not overlooked.143 Furthermore, under the ESA an analysis of the effects of an action must consider actions that are interrelated or interdependent.144 BLM must consider the effects of coal mining, transport, combustion and disposal activities at the stage of ending lifting the pause on new coal leasing. It is BLM’s current action – ending the coal leasing pause prior to completion of a programmatic environmental review – that forecloses possibility of meaningful examination of cumulative effects or of conditioning future leases on reforms to the coal leasing program.

The threshold for effects that trigger ESA section 7 consultation is low, and is met when an action “may affect” threatened or endangered species and their critical habitat. 50 C.F.R. § 402.14(a); see also Western Watersheds Project v. Kraayenbrink, 632 F.3d 472, 498 (9th Cir. 2011) (citation omitted) (describing “may affect” threshold); Pacific Rivers Council v. Shepard, No. 03:11-CV-00442-HU, 2011 WL 7562961, at *9 (D. Or. Sept. 29, 2011), report and recommendation adopted as modified, No. 03:11-CV-442-HU, 2012 WL 950032 (D. Or. Mar. 20, 2012)) (affirming “how low the threshold is for triggering such consultation”). The “may affect” standard is broadly interpreted, and includes proposed actions that may indirectly affect listed species, and regardless of whether a species or habitat occurs on BLM lands.145

143 See i.e. 50 C.F.R. §§ 402.14(a), (g)(8).
144 50 C.F.R. §§ 402.14 and 402.02.
145 BLM Manual 6840.1F1a
ESA regulations define “effects of the action” as:

Effects of the action refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

50 C.F.R. § 402.02. The Services have clarified that “[a]ny possible effect, whether beneficial, benign, adverse or of an undetermined character, triggers the formal consultation requirement.”

ESA consultation applies “to all actions in which there is discretionary involvement or control.” 50 C.F.R. § 402.03. More specifically, “[s]ection 7(a)(2) consultation is required so long as a federal agency retains ‘some discretion’ to take action for the benefit of a protected species.” NRDC v. Jewell, 749 F.3d 776, 784 (9th Cir. 2014) (en banc) (“Whether an agency must consult does not turn on the degree of discretion that the agency exercises regarding the action in question, but on whether the agency has any discretion to act in a manner beneficial to a protected species or its habitat.”). Here, in lifting the pause on coal leasing, BLM took the discretionary, affirmative action under the MLA, FLPMA, and NEPA to resume issuance of coal leasing without exercising its discretion to delay such leasing until such time as potentially beneficial changes to the federal coal program.

Further, BLM cannot rely on the 1996 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations Under the Surface Mining Control and Reclamation Act of 1977, because that Biological Opinion (a) covers only mine reclamation activities, not the many other indirect effects of federal coal leasing, including but not limited to

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coal transport, combustion, and waste disposal; (b) is over two decades old and does not address substantial subsequent listings and scientific information; and (c) it is inapplicable on its own terms because the Fish and Wildlife Service and Office of Surface Mining and Reclamation reinitiated consultation on the SMCRA program in April 2017, thus invalidating the 1996 SMCRA Biological Opinion.

A. BLM Must Consult Regarding the Mercury Impacts of the Coal Program’s Foreseeable Coal Combustion.

The indirect effects of coal leasing and mining include atmospheric emissions of mercury from coal combustion. Mercury is a potent and widely distributed neurotoxin with serious adverse health effects on human health and development as well as the behavior, reproduction, and survival of threatened and endangered species. The United Nations estimates that 26% of global mercury emissions (339-657 metric tons/year) come from the combustion of coal in power plants.\(^{148}\) Courts have held that agencies must consider the indirect effects of even microscopic levels of mercury from coal leasing, mining and combustion decisions:

the record reveals that even microscopic changes in the amount of mercury deposition can have significant impacts on threatened and endangered species in the area impacted by the Four Corners Power Plant. See AR 1-2-14-1990 (concluding that a .1% increase in mercury deposition in the basin is likely to jeopardize the continued existence of the Colorado pikeminnow). Given the potentially significant impacts of mercury pollution, OSM's failure to discuss or analyze the deleterious impacts of combustion-related mercury deposition in the area of the Four Corners Power Plant is troubling.\(^{149}\)

The deposition of mercury and selenium within the Colorado River Basin continues to threaten both human health and endangered species, including but not limited to the four Colorado River endangered fish (Colorado pikeminnow, razorback sucker, humpback chub, and bonytail). Current scientific information indicates continuing mercury and selenium contamination in the Colorado River Basin, which has the potential to detrimentally affect these species.

Consumption through the food chain is the primary mechanism of bioaccumulation of mercury in the endangered fish, and particularly affects the Colorado pikeminnow’s diet as the largest of the endangered Colorado River fish.\(^{150}\)

atmospheric mercury deposition called “cold condensation” from coal-fired power plant emissions (Id. at 205). This atmospheric deposition and watershed runoff is the most prevalent source of mercury in the Colorado River, but mercury pollution from old gold smelters in the Basin have also infiltrated this river system through decades of runoff from smaller tributaries (Id. at 215). In Grand Canyon, there is a high concentration of mercury in the atmosphere due to emissions from the coal burning Navajo Generating Station in Page, Arizona, resulting in direct negative effects on the endangered fishes’ habitat in the lower Colorado River Basin.\(^{151}\)

Mercury contamination is especially concerning because all four listed Colorado River fish species depend on aquatic invertebrates as a food source. Other piscivorous animals and non-native fish that prey on these juvenile fish, in turn, accumulate mercury, which continues up the food chain, bioaccumulating in adult fish. Concentrations of mercury exceeding 8 micrograms (µg/g) in fish organs or eggs may result in reproductive dysfunction and abnormalities (Herrmann et al. 2016 at 204). Walters et al. (2015) found that mean mercury concentrations for three native species and three non-native species from a Colorado River sample site exceeded the risk threshold for piscivorous mammal consumption (Id. at 2390).

Because of the scale of the federal coal leasing program (over 40% of U.S. coal production), BLM must quantify, consider, and consult on, the indirect mercury emissions from combustion of coal, its contribution to global mercury atmospheric concentrations and deposition rates, and its ensuing effects on sensitive, threatened, and endangered species, including the four Colorado River listed fish.

1. **BLM Must Consult Regarding the Climate Impacts of the Coal Program’s Foreseeable GHG Emissions.**

In reviewing the impacts of resuming federal coal leasing program without changes, the Bureau of Land Management must consider the impacts, including climate impacts, on threatened and endangered species. Specifically, the Bureau must consult with the Fish and Wildlife Service and National Marine Fisheries Service as required by section 7 of the Endangered Species Act.

When an agency action “may affect listed species or critical habitat” the agency must consult with expert wildlife agencies, Fish and Wildlife Service and National Marine Fisheries Service, using the “best scientific and commercial data available.”\(^{152}\) ESA consultation serves as an essential function to guide federal actions and identify mitigation to avoid harming listed species. Through consultation, the Services may specify reasonable and prudent alternatives

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152 50 C.F.R. § 402.14(a).
that will avoid jeopardizing listed species and “suggest modifications” to the action to “avoid the likelihood of adverse effects” to the listed species.\textsuperscript{153}

Here, the Bureau must consult on the federal coal leasing program to ensure that the combustion and emissions impacts of coal leasing do not further imperil endangered species. Agencies are required to consult on programs that manage federal lands and leasing, including this coal leasing program.\textsuperscript{154} The ESA expressly and broadly requires an agency to comply with Section 7 for “any action” it authorizes or funds.\textsuperscript{155} As noted above, “action” is broadly defined to include “all activities or programs of any kind authorized, funded, or carried out, in whole or in part” by federal agencies and includes actions that may directly or indirectly cause modifications to the land, water, or air.”\textsuperscript{156} The coal leasing program may affect numerous threatened and endangered species, and it is essential that such consultation evaluate the effects of the coal leasing program’s significant contribution to greenhouse gas emissions and the resulting harm to listed species and their habitats from climate change.

In May 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), a body created and supported by United Nations member states, released its Summary for Policymakers of the forthcoming Global Assessment Report on Biodiversity and Ecosystem Service.\textsuperscript{157} Over 450 expert authors and contributors synthesize data and information from 15,000 scientific and government sources to determine the status of biodiversity around the world. A key message of this account is that up to 1 million species, roughly one-eighth of the planet’s known species, are threatened with extinction. According to this report, climate change is currently ranked third among threats to biodiversity (behind land use change and direct exploitation), but “It poses a growing risk owing to the accelerated pace of change and interactions with other direct drivers.” The report further estimates that “Almost half (47 percent) of threatened terrestrial mammals, excluding bats, and one quarter (23 percent) of threatened birds may have already been negatively affected by climate change in at

\textsuperscript{153} 16 U.S.C. § 1536(b); 50 C.F.R. § 402.13.
\textsuperscript{154} See e.g., \textit{Cal. ex rel. Lockyer v. United States Dep’t of Agric.}, 459 F. Supp. 2d 874, 912 (N.D. Cal. 2006) (finding that the Forest Service violated the ESA by failing to consult on the effects of the State Petitions Rule (which replaced the Roadless Rule) and noting that “[t]he fact that consultation would only address impacts at the programmatic level does not excuse the need to do so); \textit{aff’d sub nom Cal. ex rel. Lockyer v. USDA}, 575 F.3d 999 (9th Cir. 2009); see also \textit{Alliance for Wild Rockies v. U.S. Dept. of Agric.}, 772 F.3d 592, 598-99 (9th Cir. 2014) (reaffirming “that environmental management plans constitute federal agency actions under the ESA”).
\textsuperscript{155} 16 U.S.C. § 1536(a)(2) (emphasis added); \textit{Pac. Rivers Council v. Thomas}, 30 F.3d 1050, 1054 (9th Cir. 1994) (“there is little doubt that Congress intended to enact a broad definition of agency action in the ESA”).
\textsuperscript{156} 50 C.F.R. § 402.02 (emphasis added).
\textsuperscript{157} Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (May 2019). Attached as Exhibit 51.
least part of their distribution,” and notes that certain hotspots of biodiversity and ecosystem services, such as coral reefs, are particularly threatened by the impacts of climate change.

As greenhouse gas emissions and the resulting harms from climate change grow, the Fish and Wildlife Service and National Marine Fisheries Service are increasingly recognizing climate change as a significant threat to listed species. The Services determined that climate change is a threat (and a listing factor) in the listing rules for the vast majority of species listed as threatened and endangered in recent years. The Center for Biological Diversity’s 2016 analysis of listing rules found that climate change was determined to be a threat for 96% and 91% of all species listed in 2012 and 2013, respectively. The table below includes examples of species listed during 2006-2013 for which climate change was a listing factor. Climate change is also a growing threat to many threatened and endangered species that were first listed for other reasons.

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
<th>Year listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elkhorn coral</td>
<td>Acropora palmate</td>
<td>2006</td>
</tr>
<tr>
<td>Staghorn coral</td>
<td>Acropora cervicornis</td>
<td>2006</td>
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<tr>
<td>Steelhead trout (Puget Sound DPS)</td>
<td>Oncorhynchus mykiss pop. 37</td>
<td>2007</td>
</tr>
<tr>
<td>Polar bear</td>
<td>Ursus maritimus</td>
<td>2008</td>
</tr>
<tr>
<td>Black abalone</td>
<td>Haliotis cracherodii</td>
<td>2009</td>
</tr>
<tr>
<td>Pacific eulachon (Southern DPS)</td>
<td>Thaleichthys pacificus</td>
<td>2010</td>
</tr>
<tr>
<td>DeBeque phacelia</td>
<td>Phacelia scopulina var. submutica</td>
<td>2011</td>
</tr>
<tr>
<td>Casey's june beetle</td>
<td>Dinacoma caseyi</td>
<td>2011</td>
</tr>
<tr>
<td>Miami blue butterfly</td>
<td>Cyclurgus thomasi bethunebakeri</td>
<td>2012</td>
</tr>
<tr>
<td>Franciscan Manzanita</td>
<td>Arctostaphylos franciscana</td>
<td>2012</td>
</tr>
<tr>
<td>24 Hawaiian species</td>
<td></td>
<td>2012</td>
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<tr>
<td>Llanero coqui</td>
<td>Eleutherodactylus juanariveroi</td>
<td>2012</td>
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<tr>
<td>Choctaw bean</td>
<td>Villosa choctawensis</td>
<td>2012</td>
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<tr>
<td>Round ebonyshell</td>
<td>Fusconaia rotulata</td>
<td>2012</td>
</tr>
<tr>
<td>Southern kidneyshell</td>
<td>Ptychobranchus jonesi</td>
<td>2012</td>
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<tr>
<td>Alabama pearlshell</td>
<td>Margaritifera marrianae</td>
<td>2012</td>
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<tr>
<td>Fuzzy pigtoe</td>
<td>Pleurobema strodeanum</td>
<td>2012</td>
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<tr>
<td>Narrow pigtoe</td>
<td>Fusconaia Escambia</td>
<td>2012</td>
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<tr>
<td>Tapered pigtoe</td>
<td>Fusconaia burkei</td>
<td>2012</td>
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<tr>
<td>Southern sandshell</td>
<td>Hamiota australis</td>
<td>2012</td>
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<tr>
<td>Hawaiian Islands false killer whale</td>
<td>Pseudorca crassidens</td>
<td>2012</td>
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<tr>
<td>Bearded seal (Beringia DPS)</td>
<td>Erignathus barbatus</td>
<td>2012</td>
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<tr>
<td>Ringed seal (Arctic DPS)</td>
<td>Pusa hispida</td>
<td>2012</td>
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<tr>
<td>38 Hawaiian species</td>
<td></td>
<td>2013</td>
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<tr>
<td>Diminutive amphipod</td>
<td>Gammarus hyalleloides</td>
<td>2013</td>
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<tr>
<td>Pecos amphipod</td>
<td>Gammarus pecos</td>
<td>2013</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Year</td>
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<td>----------------------------------------</td>
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<tr>
<td><em>Diamond tryonia</em></td>
<td><em>Pseudotryonia adamantina</em></td>
<td>2013</td>
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<tr>
<td><em>Phantom tryonia</em></td>
<td><em>Tryonia cheatumi</em></td>
<td>2013</td>
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<tr>
<td><em>Gonzales tryonia</em></td>
<td><em>Tryonia circumstriata (=stocktonensis)</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Phantom springsnail</em></td>
<td><em>Pyrgulopsis texana</em></td>
<td>2013</td>
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<tr>
<td><em>Diamond darter</em></td>
<td><em>Crystallaria cincotta</em></td>
<td>2013</td>
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<tr>
<td><em>Gierisch mallow</em></td>
<td><em>Sphaeralcea gierischii</em></td>
<td>2013</td>
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<tr>
<td><em>Jollyville Plateau salamander</em></td>
<td><em>Eurycea tonkawae</em></td>
<td>2013</td>
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<tr>
<td><em>Austin blind salamander</em></td>
<td><em>Eurycea waterloensis</em></td>
<td>2013</td>
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<tr>
<td><em>Jemez Mountains salamander</em></td>
<td><em>Plethodon neomexicanus</em></td>
<td>2013</td>
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<tr>
<td><em>Neosho mucket</em></td>
<td><em>Lampsilis rafinesqueana</em></td>
<td>2013</td>
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<tr>
<td><em>Rabbitsfoot</em></td>
<td><em>Quadrula cylindrica cylindrica</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Mount Charleston blue butterfly</em></td>
<td><em>Plebejus shasta charlestonensis</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Slabside pearlymussel</em></td>
<td><em>Pleuronaia dolabelloides</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Fluted kidneyshell</em></td>
<td><em>Pytchobranchus subtentum</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Acuna cactus</em></td>
<td><em>Echinomastus erectocentrus var. acunensis</em></td>
<td>2013</td>
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<tr>
<td><em>Fickeisen plains cactus</em></td>
<td><em>Pediocactus peeblesianus fickeiseniae</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Florida bonneted bat</em></td>
<td><em>Eumops floridanus</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Cape Sable thoroughwort</em></td>
<td><em>Chromolaena frustrata</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Florida semaphore cactus</em></td>
<td><em>Consolea corallicola</em></td>
<td>2013</td>
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<tr>
<td><em>Aboriginal prickly-apple</em></td>
<td><em>Harrisia (=Cereus) aboriginum (=gracilis)</em></td>
<td>2013</td>
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<tr>
<td><em>Blue-billed curassow</em></td>
<td><em>Crax alberti</em></td>
<td>2013</td>
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<tr>
<td><em>Brown-banded antpitta</em></td>
<td><em>Grallaria milleri</em></td>
<td>2013</td>
</tr>
<tr>
<td>15 Hawaiian species</td>
<td><em>Vetericaris chaceorum</em></td>
<td>2013</td>
</tr>
<tr>
<td><em>Spring pygmy sunfish</em></td>
<td><em>Elassoma alabamae</em></td>
<td>2013</td>
</tr>
</tbody>
</table>

In recent years, several species have been listed primarily because of climate change threats resulting from continued greenhouse gas emissions, including the polar bear in 2008, the bearded seal and ringed seal in 2012, and 20 coral species in 2014. The best-available science has concluded that the survival and recovery of these climate-vulnerable species depends on a return to lower atmospheric CO₂ concentrations than the present level of 400 ppm. As such, the massive greenhouse gas emissions stemming from the federal coal program are clearly not consistent with the survival and recovery of these species.

For example, NMFS’ 2015 Final Recovery Plan for Elkhorn and Staghorn Coral includes a recovery criterion with specific targets for ocean temperature and ocean acidification conditions that must be achieved for these corals to survive and recover. As noted in the

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158 NMFS. 2015. Recovery Plan for Elkhorn (Acropora palmata) and Staghorn (A. cervicornis) Corals. Prepared by the Acropora Recovery Team for the National Marine Fisheries Service, Silver Spring, Maryland. See Recovery Criterion 5: “Sea surface temperatures across the geographic range have been reduced to Degree Heating Weeks less than 4; and Mean monthly sea surface temperatures remain...
Final Recovery Plan, meeting this criterion is consistent with a return to an atmospheric CO\textsubscript{2} concentration of less than 350 ppm, as concluded by numerous scientific studies that have examined coral species viability in response to ocean warming and ocean acidification.\textsuperscript{159} Recognizing the responsibility of all federal agencies to promote listed species’ conservation, the Final Recovery Plan further includes a recovery criterion calling for the adoption of “adequate domestic and international regulations and agreements” to abate threats from increasing atmospheric CO\textsubscript{2} concentrations.\textsuperscript{160} The plan also includes a recovery action to “develop and implement U.S. and international measures to reduce atmospheric CO\textsubscript{2} concentrations to a level appropriate for coral recovery.”\textsuperscript{161}

Similarly, the 2015 Draft Polar Bear Conservation Plan acknowledges that the polar bear cannot be recovered without decisive action to mitigate the primary threat to the species—greenhouse gas ("GHG") emissions driving sea-ice loss:

The single most important step for polar bear conservation is decisive action to address global warming (Amstrup et al. 2010, Atwood et al. 2015), which is driven primarily by increasing atmospheric concentrations of greenhouse gases. Short of actions that effectively addresses the primary cause of diminishing sea ice, it is unlikely that polar bears will be recovered.\textsuperscript{162}

The best-available science on polar bear viability and sea-ice loss under climate change indicates that returning the atmospheric CO\textsubscript{2} concentration to ~350 ppm is needed for polar bear survival and recovery. Amstrup et al. (2010), published in the journal \textit{Nature}, provides the best-available science on the greenhouse gas emissions pathways and atmospheric concentrations needed for polar bear recovery. This study found that polar bear probability of persistence increases when greenhouse gases are reduced significantly in the near future, and that the best-possible on-the-ground management to reduce other threats plays an important, below 30°C during spawning periods; and Open ocean aragonite saturation has been restored to a state of greater than 4.0, a level considered optimal for reef growth.”

\textsuperscript{159} These studies include: (1) Veron et al. (2009) which recommends an atmospheric CO\textsubscript{2} concentration of less than 350 ppm to protect coral reef health, and suggests a target of 320 ppm which is the level that pre-dates the onset of mass bleaching events; (2) Donner (2009) which suggests an atmospheric CO\textsubscript{2} concentration target below 370 ppm to avoid degradation of coral reef ecosystems; (3) Simpson et al. (2009) which correlates a Caribbean open-ocean aragonite saturation state of 4.0, which is recommended by the plan, with an atmospheric CO\textsubscript{2} level at 340 to 360 ppm; and (4) Frieler et al. (2012) which shows that limiting warming to ~1°C above pre-industrial levels is needed to protect Caribbean coral reefs from degradation. A 1°C target is consistent with an emissions trajectory that peaks in the next few years at 400 ppm, declines sharply thereafter (~6% decline per year), and returns atmospheric CO\textsubscript{2} to below 350 ppm in the early 2100s (Hansen et al. 2013).

\textsuperscript{160} See Recovery Criterion 8.

\textsuperscript{161} See Recovery Action 9.

although secondary, role in increasing persistence probabilities. Importantly, Amstrup et al. (2010) showed that the commitment scenario—in which CO$_2$ stays at a constant level of 368 ppm and radiative forcing remains at $\sim$2.2 watts/m$^2$—is consistent with polar bear recovery in all ecoregions. These findings are compatible with studies that have found that returning the atmospheric CO$_2$ concentration to between 350 and 400 ppm by 2100, and subsequently below 350 ppm, is needed to recover Arctic sea ice.

Because each significant new addition of greenhouse gases increases the extinction risk for many listed species, the massive greenhouse gas emissions stemming from the federal coal program, which contributes approximately 14% of all US fossil fuel CO$_2$ emissions, clearly affect many listed species. The continuation of the federal coal program jeopardizes climate-change-vulnerable species, while an end to coal leasing on public lands would be consistent with their continued survival and recovery. As such, the Bureau must consult with the Fish and Wildlife Service and National Marine Fisheries Service on the impacts to listed species of the significant greenhouse gas emissions from the federal coal program.

XII. **BLM MUST SATISFY ITS FIDUCIARY TRUST AND STATUTORY OBLIGATIONS TO CONSULT WITH TRIBES IMPACTED BY BLM’S DECISION TO RE-OPEN FEDERAL COAL LEASING.**

A. **BLM Has Trust and Statutory Obligations to Consult with Tribal Nations Affected by Federal Coal Leasing.**

   1. **BLM’s Trust Obligations to Tribes Impacted by Federal Coal Leasing.**

   The U.S. Supreme Court has long recognized the “undisputed existence of a general trust relationship between the United States and the Indian people.” *United States v. Mitchell*, 463 U.S. 206, 225 (1983). As BLM recognized in the 2017 Scoping Report, “[a]n important basis for this relationship is the trust responsibility of the United States to protect tribal sovereignty, self-determination, tribal lands, tribal assets and resources, and treaty and other federally recognized and reserved rights.” The trust duty commits the federal government to protect

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163 Amstrup, S.C. et al. 2010. Greenhouse gas mitigation can reduce sea-ice loss and increase polar bear persistence. Nature 468: 955-960. Because sea-ice habitat decreases relatively linearly with increases in mean global temperature rise in their models, the study concluded that the loss of sea-ice habitat and corresponding “declines in polar bear distribution and numbers are not unavoidable” if immediate and rapid GHG reductions were to be implemented, thus emphasizing the need for rapid, decisive action on emissions reductions.


Indian tribes’ rights, resources, and interests. *Cherokee Nation v. State of Ga.*, 30 U.S. 1, 2 (1831). In discharging this responsibility, federal agencies must observe “obligations of the highest responsibility and trust” and “the most exacting fiduciary standards.” *Seminole Nation v. United States*, 316 U.S. 286, 296-97 (1942). As BLM has further recognized:

Tribal interests are not on an equal footing with the interests of most other groups and individuals. Tribes are different from other public land constituencies. They are neither *stakeholders* nor *just another public group* whose interests should be considered. Their special relationship with the United States Government is rooted in history and defined by law. Indian tribal issues and concerns must be identified through government-to-government consultation and public participation techniques, including those forms of notification utilized in the NEPA process.166


2. BLM’s Obligations to Tribes Under the Mineral Leasing Act and NEPA.

BLM also has obligations under the Mineral Leasing Act and NEPA regulations toward tribal governments affected by the decision to rescind the federal coal-leasing moratorium. BLM’s regulations direct that federal coal is to be “developed in consultation, cooperation, and coordination with ... Indian tribes.” 43 C.F.R. § 3420.0–2. Under NEPA, federal agencies are required to “[i]nvite the participation of ... any affected Indian tribe” at the very outset of environmental review. 40 C.F.R. § 1501.7(a)(1). Further, to satisfy their trust obligations, “agencies must at least show ’compliance with general regulations and statutes not specifically aimed at protecting Indian tribes,’” including NEPA’s requirement to prepare an EIS for major federal actions with potentially significant environmental effects. *Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768, 788 (9th Cir. 2006) (quoting *Morongo Band of Mission Indians v. F.A.A.*, 161 F.3d 569, 574 (9th Cir. 1998)); see also *Quechan Tribe of Fort Yuma Indian Reservation v. U.S. Dep’t of Interior*, 755 F. Supp. 2d 1104, 1110 (S.D. Cal. 2010) (stating that “[v]iolation of this fiduciary duty [to tribes] to comply with ... NEPA requirements during the process of reviewing and approving projects vitiates the validity of that approval and may require that it be set aside”).

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3. BLM’s Consultation Obligations Under the National Historic Preservation Act.

BLM has tribal consultation obligations under the National Historic Preservation Act (“NHPA”). “Congress enacted the [NHPA] in 1966 to foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony.” *CTIA-Wireless Ass’n v. FCC*, 466 F.3d 105 (D.C. Cir. 2006), citing 16 U.S.C. § 470-1(1). The NHPA has been characterized as a “stop, look, and listen” statute that requires agencies to fully consider the effects of its actions on historic, cultural, and sacred sites. *See, e.g., Te-Moak Tribe of Western Shoshone v. Nevada v. U.S. Dep’t of Interior*, 608 F.3d 592, 606 (9th Cir. 2010).

Section 106 of the NHPA requires that prior to issuance of any federal funding, permit, or license, agencies must take into consideration the effects of that “undertaking” on historic properties. 54 U.S.C. § 306108. Agencies “must complete the section 106 process prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license.” 36 C.F.R. § 800.1 (emphasis added).

The NHPA also created the Advisory Council on Historic Preservation (“ACHP”), an independent agency charged with implementing the Act, as well as the National Register of Historic Places, the nation’s official registry of historically and culturally important sites. 54 U.S.C. §§ 304101, 304102. The section 106 process requires consultation between agencies and Indian Tribes on federally funded or authorized “undertakings” that could affect sites that are on, or could be eligible for, listing in the National Register, including sites that are culturally significant to Indian Tribes. 54 U.S.C. § 302706 (properties “of traditional religious and cultural importance to” a Tribe may be included on the National Register, and federal agencies “shall consult with any Indian Tribe...that attaches religious or cultural significance” to such properties); 36 C.F.R. § 800.2(c)(2). “Consultation is the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process.” *Id.* § 800.16(f).

Consultation must occur regarding sites with “religious and cultural significance” to Indians even if they occur on ancestral or ceded land. *Id.* § 800.2(c)(2)(ii)(D). An agency official must “ensure” that the process provides Tribes with “a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties....articulate its views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects.” *Id.* § 800.2(c)(ii)(A). This requirement imposes on agencies a “reasonable and good faith effort” by agencies to consult with Tribes in a “manner respectful of tribal sovereignty.” *Id.* § 800.2(c)(2)(ii)(B); see also *id.* § 800.3(f) (any Tribe that “requests in writing to be a consulting party shall be one”). Section 106 consultation involves a multi-step

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process to evaluate potential effects to listed or potentially eligible sites. See, e.g., Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 800, 805 (9th Cir. 1999).

ACHP defines a “federal undertaking” as a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including:

- those carried out by or on behalf of a federal agency;
- those carried out with federal financial assistance;
- those requiring a federal permit, license or approval; and
- those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency.

36 C.F.R. § 800.16(y). For each such undertaking, an agency must determine the area of potential effects, id. § 800.4(a)(1), and within such area, identify historic properties within the APE that could potentially be affected, id. § 800.4(b). The agency must evaluate the historic significance of such sites, and determine whether they are potentially eligible for listing under the National Register. Id. § 800.4(c). Next, the agency must evaluate the potential effects that the undertaking may have on those properties, id. § 800.5, and, finally, the agency must resolve any such adverse effects through the development of mitigation measures, id. § 800.6. At every one of these steps, the agency must consult with Indian tribes that attach religious and cultural significance to affected sites, even if they are outside Tribal lands. Id. §§ 800.2(c)(ii)(D), 800.3(f), 800.4(a), 800.5(c)(2), 800.6.

ACHP regulations also provide an alternative compliance mechanism under which agencies can negotiate a “programmatic agreement” with the ACHP to resolve “complex project situations or multiple undertakings.” Id. § 800.14(b). Such agreements are suitable for “when effects on historic properties are similar and repetitive or are multi-State or regional in scope;” “when effects on historic properties cannot be fully determined prior to approval of an undertaking;” or when “nonfederal parties are delegated major decisionmaking responsibilities,” among other situations. Id. § 800.14(b)(1). Programmatic agreements require consultation with Tribes, among others, as well as public participation. Id. These agreements function similarly to a programmatic EIS, in that later projects under the umbrella of the agreement require site-specific consultation and analysis.

4. Department of the Interior’s Tribal Consultation Policy.

To implement its tribal consultation obligations, Secretarial Order 3317 sets forth consultation goals and objectives, including an acknowledgment that “[g]overnment-to-government consultation between appropriate Tribal officials and the Department requires Departmental officials to demonstrate a meaningful commitment to consultation by identifying
and involving Tribal representatives *in a meaningful way early in the planning process.*"\(^{168}\) The Order further clarifies that consultation should happen repeatedly as a proposal moves through various phases, stating: “Efficiencies derived from the inclusion of Indian tribes in all stages of the tribal consultation will help ensure that future Federal action is achievable, comprehensive, long-lasting, and reflective of tribal input.”\(^{169}\)

Pursuant to its legal obligations, including Secretarial Order 3317, the Department of the Interior has developed a policy on consultation with tribes that applies to BLM and the Zinke Order.\(^{170}\) Under the policy, “[w]hen considering a Departmental Action with Tribal Implications, a Bureau or Office must notify the appropriate Indian Tribe(s) of the opportunity to consult pursuant to this Policy.”\(^{171}\) “Departmental Action with Tribal Implications” is defined as “[a]ny Departmental regulation, rulemaking, policy, guidance, legislative proposal, grant funding formula changes, or operational activity that may have a substantial direct effect on an Indian Tribe on matters including, but not limited to:

1. Tribal cultural practices, lands, resources, or access to traditional areas of cultural or religious importance on federally managed lands;
2. The ability of an Indian Tribe to govern or provide services to its members;
3. An Indian Tribe’s formal relationship with the Department; or
4. The consideration of the Department’s trust responsibilities to Indian Tribes.”\(^{172}\)

While BLM may initiate consultation under the Policy consistent with its trust and statutory obligations, any tribe may also “request that the Department initiate consultation when the Indian Tribe believes that a Bureau or Office is considering a Departmental Action with Tribal Implications.”\(^{173}\) The Policy states that it does not apply to “matters that are in litigation or in settlement negotiations, or matters for which a court order limits the Department’s discretion to engage in consultation,”\(^{174}\) however, if there is a limitation relating to legal obligations, including litigation, the BLM must “explain the constraints to the Indian Tribe.”\(^{175}\)

\(^{168}\) Secretarial Order 3317, at 1 (emphasis added).
\(^{169}\) Id.
\(^{171}\) Id. § VII.A, p. 7.
\(^{172}\) Id. § III, p. 3.
\(^{173}\) Id. § VII, p. 8.
\(^{174}\) Id. § III, p. 3.
\(^{175}\) Id. § VII.E.2, p. 12.
B. BLM Must Consult With Affected Tribes to Satisfy its Trust and Statutory Obligations on the Re-Start of Federal Coal Leasing.

Despite the EA’s contrary claim, BLM is obligated to consult with tribes affected by BLM’s decision to re-open federal coal to leasing and mining to satisfy its trust and statutory obligations, consistent with the Department of the Interior’s policy on tribal consultation. Indeed, in connection with the PEIS under the Jewell Order, BLM recognized “the potential for decisions made through the PEIS to impact resources and values of Tribes across the United States,” and invited consultation with 212 tribal entities.\(^\text{177}\)

The EA erroneously asserts that “the decision to lift the coal leasing pause does not constitute an “undertaking” as defined by ... the National Historic Preservation Act (NHPA). As such, no consultation under ... section 106 of the NHPA is necessary.” First, BLM’s disavowal of tribal consultation obligations ignore the agency’s trust responsibilities and statutory obligations under NEPA and the Mineral Leasing Act. Because the Zinke Order is a major federal actions requiring preparation of an EIS, as described above, BLM is obligated to “[i]nvite the participation of ... any affected Indian tribe” in its environmental review process. 40 C.F.R. § 1501.7(a)(1). Further, BLM must, under the Mineral Leasing Act, make decisions around federal coal development “in consultation, cooperation, and coordination with ... Indian tribes.” 43 C.F.R. § 3420.0–2. This obligation should apply to programmatic decisions—not just individual leases—where such decisions commit BLM to leasing in a manner that affects tribal interests and resources.

Further, BLM is wrong that the Zinke Order does not constitute a federal undertaking under the NHPA. The decision to end the federal coal leasing moratorium and open up thousands of acres of land to new coal leasing—including land with cultural and spiritual significance to tribes—is an undertaking because it is a “program funded in whole or in part under the direct ... jurisdiction of a federal agency.” 36 C.F.R. § 800.16(y). The EA offers no analysis to support a contrary conclusion.

The Department of the Interior’s Policy on Consultation also requires meaningful tribal consultation on the Zinke Order, because that Order constitutes a “policy ... or operational activity that may have a substantial direct effect on an Indian Tribe” or tribes. Further, at least one tribe—the Northern Cheyenne Tribe, whose traditional homelands encompass the entire Powder River Basin and whose Reservation in present-day southeast Montana is surrounded by federal coal mining—expressly requested such consultation, both before the

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\(^{176}\) Draft EA, at 32.

\(^{177}\) Draft EA, at 3-5.

\(^{178}\) Draft EA, at 32.

\(^{179}\) Dep’t of the Interior Policy on Consultation with Indian Tribes § 3, p. 3.
Zinke Order issued and since BLM published the EA.\textsuperscript{180} Thus, BLM’s own policy directs its meaningful engagement with the Northern Cheyenne Tribe and other tribes whose lands, cultural and spiritual resources, and other interests are affected by BLM’s decision to end the moratorium on federal coal leasing.\textsuperscript{181}

Although BLM asserts that the Policy on Consultation “does not apply to matters that are in litigation,” EA, at 32, this does not absolve BLM of obligations under the Policy for the Zinke Order. As a threshold matter, the policy is a non-binding guidance document that cannot, and does not, abrogate the Department’s trust obligations and government to government relationship with Indian tribes. The Department policy which has legal effect, Secretarial Order 3317, requires “a meaningful commitment to consultation by identifying and involving Tribal representatives in a meaningful way early in the planning process.” Furthermore, the exception described in the DOI policy appears to pertain to circumstances in which a Tribe has sued the Department for breach of a specific money-mandating trust obligation, not for breach of trust arising from violation of a generally-applicable statute. It does not make sense that Indian tribes across the country are deprived of consultation on a major federal program with implications that will last for decades, simply because the Department violated NEPA and lost in court. Finally, there is no litigation bar to consultation where the court already resolved on their merits the plaintiffs’ claims in \textit{Citizens for Clean Energy}, and specifically deferred consideration of the Northern Cheyenne Tribe’s claim that BLM and the Department of the Interior violated their trust obligations to the Tribe when it issued the Zinke Order in violation of NEPA. 2019 WL 1756296, at *11-12. If BLM refuses to consult with affected tribes and to comply with NEPA in connection with its post-hoc review of the Zinke Order, it will be repeating the legal violations that it made when it issued the Zinke Order in the first instance.

For all of these reasons, BLM may not continue to implement the Zinke Order unless and until it meaningful engages with affected tribes.

\textsuperscript{180} See Letter from L. Jace Killsback, President of Northern Cheyenne Tribe, to Secretary of the Interior Ryan Zinke (Mar. 2, 2017); Letter from Rynalea Whiteman Peña, President of Northern Cheyenne Tribe, to Secretary of the Interior David Bernhardt (May 23, 2019).

\textsuperscript{181} Although BLM asserts that the Policy “does not apply to matters that are in litigation,” Draft EA, at 32, this does not absolve BLM of obligations under the Policy for the Zinke Order. The court already resolved on their merits the plaintiffs’ claims in \textit{Citizens for Clean Energy}, and specifically deferred consideration of the Northern Cheyenne Tribe’s claim that BLM and the Department of the Interior violated their trust obligations to the Tribe when it issued the Zinke Order in violation of NEPA. 2019 WL 1756296, at *11-12. If BLM refuses to consult with affected tribes and to comply with NEPA in connection with its post-hoc review of the Zinke Order, it will be repeating the legal violations that it made when it issued the Zinke Order in the first instance.
XIII. CONCLUSION

BLM’s review of the coal leasing program comes at a crucial time for our climate and our communities, but the EA fails to take seriously the immensity of the program’s impacts. The science is clear: by keeping federal coal unburned, we improve our chances of avoiding a climate catastrophe. On the other hand, business as usual almost guarantees a crisis. The NEPA process provides a much needed opportunity both to understand the full range and depth of the program’s impacts and to take action to reduce or eliminate the program’s detrimental effects. In this letter we emphasize the need to evaluate the program’s climate change impacts, safety and health impacts to communities, impacts on wildlife, the economics of the program including royalty rates, leasing prices, exports, and the role that economics plays in increasing coal consumption at a time when we desperately need to transition to clean energy sources. In evaluating these impacts for each of the studied alternatives, it should be clear that ending federal coal leasing and taking immediate action to reduce climate change impacts on existing leases is essential. We also urge that BLM take action to ensure a “just transition” for workers and for affected communities as a whole.

Sincerely,

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