THE WILDERNESS SOCIETY * COALITION TO PROTECT AMERICA'S NATIONAL PARKS * NEW MEXICO WILD * ROCKY MOUNTAIN WILD

September 4, 2026

SUBMITTED VIA E-PLANNING

Gera Ashton
Acting State Director for BLM New Mexico
U.S. Bureau of Land Management
301 Dinosaur Trail Santa Fe, NM 87508

Project Contacts:

Nathan Combs
ncombs@blm.gov
(505) 954-2110

Cody Mccullah
cmccullah@blm.gov
(505) 954-2027

Re: Scoping Comments on Parcels for the New Mexico Bureau of Land Management First Quarter 2027 Competitive Oil & Gas Lease Sale (DOI-BLM-NM-F010-2026-0077-EA)

To Whom It May Concern:

Thank you for the opportunity to submit these scoping comments on parcels under consideration for the Bureau of Land Management's (BLM's) New Mexico First Quarter 2027 Oil and Gas Lease Sale.[1] Our organizations and members are deeply invested in sound stewardship of public lands and committed to ensuring that public land management prioritizes the health and resilience of ecosystems, benefits the public and local communities, protects biodiversity, and mitigates the impacts of climate change.

For this sale, the BLM is considering 13 parcels covering 3,904 acres in New Mexico, with two additional parcels proposed for sale in Oklahoma. As the BLM prepares for this lease sale and evaluates which parcels to offer for lease, the agency must continue to abide by its obligations under all applicable federal, state, and local laws and regulations and all federal court rulings.

[1] There is insufficient information about the parcels in question to submit complete comments. Accordingly, we will be able to provide additional input only when a draft Environmental Assessment (EA) is released, which we fully expect will occur.

I. The BLM must ensure that leasing complies with the Federal Land Policy and Management Act (FLPMA).

Under FLPMA, the BLM must manage public lands according to "multiple use" and "sustained yield" and "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values; that will preserve and protect certain public lands in their natural condition; [and] that will provide food and habitat for fish and wildlife and domestic animals." 43 U.S.C. §§ 1701(a)(7) & (8), 1712(c)(1), 1732(a). Multiple use obligates the agency to make the "most judicious use" of public lands and their resources to "best meet the present and future needs of the American people." *Id.* § 1702(c). This requires taking "into account the long-term needs of future generations" and ensuring "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment." *Id.* Sustained yield mandates "achiev[ing] and maint[aining] in perpetuity . . . a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use." *Id.* § 1702(h). "It is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses. . . . Development is a *possible* use, which BLM must weigh against other possible uses—including conservation to protect environmental values. . . ." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009) (emphasis in original). FLPMA also requires the BLM to "take any action necessary to prevent unnecessary and undue degradation of the lands." 43 U.S.C. § 1732(b).

A. The BLM has authority to defer lease parcels—and must evaluate deferral of lease parcels—proposed for this sale.

In order to comply with these FLPMA resource conservation mandates, the BLM must analyze the deferral of lease parcels and defer parcels where conflicts with other uses exist. Accordingly, under the Mineral Leasing Act (MLA), the BLM has traditionally exercised broad discretion over whether to lease lands for oil and gas development as well as over the conditions under which leasing occurs.[2] While the MLA provides for quarterly lease sales in each state "where eligible lands are available," the courts have made clear that this language does not reduce the BLM's discretion, because (among other reasons) lands are not "available" for leasing under the MLA until all statutory requirements are met and legal reviews are complete. *See, e.g.*,

[2] *See Udall v. Tallman*, 380 U.S. 1, 4 (1965) ("The Mineral Leasing Act of 1920 . . . left the Secretary discretion to refuse to issue any lease at all on a given tract."); *United States ex rel. McLennan v. Wilbur*, 283 U.S. 414, 419 (1931) (ruling that the Interior Secretary possesses "general powers over the public lands as guardian of the people," which include the authority to deny oil and gas lease applications); *Mont. Wildlife Fed'n v. Haaland*, 127 F.4th 1, 44–45 (9th Cir. 2025) ("We note that there is no doubt that the government has the authority affirmatively to determine which parcels shall be offered for oil and gas leasing . . . ."); *Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1230 (9th Cir. 1988) ("[T]he Mineral Leasing Act gives the Interior Secretary discretion to determine which lands are to be leased under the statute. . . . Thus refusing to issue the . . . leases . . . would constitute a legitimate exercise of the discretion granted to the Interior Secretary under that statute.").

W. Energy All. v. Biden, No. 21-CV-13-SWS, 2022 WL 18587039, *9 (D. Wyo. Sept. 2, 2022). Moreover, the MLA itself requires that the agency "regulate all surface-disturbing activities conducted pursuant to any lease . . . in the interest of conservation of surface resources," that it lease lands for oil and gas development only in the public interest, and that it include in each lease provisions to ensure "the safeguarding of the public welfare." 30 U.S.C. §§ 187, 192, 226(g); *see also Powder River Basin Res. Council v. U.S. DOI*, No. 22-CV-2696 (TSC), 2026 WL 555013, at *5 (D.D.C. Feb. 27, 2026); *NRDC v. Berklund,* 458 F. Supp. 925, 936 n.17 (D.D.C. 1978), *aff'd*, 609 F.2d 553 (D.C. Cir. 1979) (interpreting "safeguarding of the public welfare" to provide "broad authority to set lease terms to prevent environmental harm").

B. The BLM must address the impact of the 2025 Reconciliation Act on the proposed lease sale, and must demonstrate that this lease sale complies with FLPMA's substantive obligations in light of that impact.

The recently enacted 2025 Reconciliation Act contains several amendments to the statutes governing the BLM's management of oil and gas development. *See* Pub. L. No. 119-21, § 50101, 139 Stat. 72, 137-39 (2025). In its analysis of this proposed lease sale, the BLM must explain the impact of the 2025 Reconciliation Act and must demonstrate—in light of that impact—that the lease sale complies with the BLM's substantive obligations under FLPMA. While these obligations apply to all the resources in the areas proposed for leasing, they are of particular concern with regard to wildlife habitat and cave and karst resources.

i. The BLM must address any changes that the 2025 Reconciliation Act makes with respect to its deferral authority.

Among other changes to the leasing process, the 2025 Reconciliation Act amends the MLA to replace language providing that lands subject to disposition which are known or believed to contain oil or gas deposits "*may* be leased," 30 U.S.C § 226(a) (2024) (emphasis added), with a provision stating that such lands "*shall* be made available for leasing . . . not later than 18 months after the date of receipt . . . of an expression of interest in leasing the applicable parcel." 30 U.S.C. § 226(a) (2025) (emphasis added). The 2025 Reconciliation Act also amends the provision of the MLA providing for quarterly lease sales "where eligible lands are available" to define "eligible lands" as those "not excluded from leasing by a statutory prohibition" and "available" lands as those designated as open for leasing under a Resource Management Plan (RMP) and "that have been nominated for leasing through the submission of an expression of interest, are subject to drainage in the absence of leasing, or are otherwise designated as available pursuant to regulations adopted by the Secretary." *Id.* § 226(b)(1)(A). Additionally, the 2025 Reconciliation Act provides that any oil and gas leases issued "may not require any stipulations or mitigation requirements not included in the approved resource management plan." *Id.* § 226(a)(2)(A)(ii).

As discussed above, *see* discussion *supra* Section I.A, under the MLA, the BLM has traditionally exercised broad discretion to defer parcels from leasing in order to comply with its obligations under FLPMA. Since the passage of the 2025 Reconciliation Act, the BLM has been inconsistent with respect to how it has interpreted the Act's impact on its discretion to defer parcels nominated for leasing. While the BLM has not yet issued formal guidance outlining how it will implement the 2025 Reconciliation Act, in some instances, the agency has interpreted the Act as leaving room for this discretion. In response to public comment on the New Mexico Second Quarter 2026 lease sale, for example, the agency unequivocally stated that it has discretion to defer parcels, quoting from the 2025 Reconciliation Act to support the proposition:

> The BLM has discretion to offer or defer any parcel during any sale. 30 U.S.C. § 226(a) ("Any parcel of land subject to disposition . . . that is known or believed to contain oil or gas deposits shall be made available for leasing . . . if the Secretary determines that the parcel of land is open to oil or gas leasing under the approved resource management plan applicable to the planning area …that is in effect on the date on which the expression of interest was submitted to the Secretary."). . . . [T]he BLM AO retains the discretion to lease none, some, or all the nominated lease parcels.

BLM FARMINGTON FIELD OFFICE, COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, NEW MEXICO QUARTER 2 2026 DOI-BLM-NM-F010-2026-0001-EA, D-29 (Mar. 20, 2026). Similarly, in its protest dismissal for the Utah Quarter 1 2026 lease sale, the agency stated that "[t]he Reconciliation Act requires the BLM to offer at least 50 percent of available parcels nominated for oil and gas development in a minimum of 4 oil and gas lease sales in Utah each fiscal year. Nothing in the Reconciliation Act precludes the BLM from considering alternatives that would offer fewer than 50 percent of the nominated parcels in any single lease sale." BLM UTAH STATE OFFICE, DECISION ON PROTEST OF THE INCLUSION OF 57 PARCELS IN THE MARCH 2026 COMPETITIVE OIL AND GAS LEASE SALE, 10 (Apr. 2026).

Moreover, the BLM has in many cases continued to exercise its authority to defer lease sale parcels since the passage of the 2025 Reconciliation Act. *See, e.g.*, BLM WYOMING, DECISION RECORD DOI-BLM-WY-0000-2026-0001-EA, 1–2 (June 9, 2026) (for the Wyoming Second Quarter 2026 lease sale, selecting Alternative 3, which defers parcels based on sage-grouse prioritization, the need for Surface Management Agency (SMA) consent, conflicts with existing coal leases, and tribal consultation requirements); BLM WYOMING, DECISION RECORD DOI-BLM-WY-0000-2025-0003-EA, 1–2 (May 11, 2026) (for the Wyoming First Quarter 2026 lease sale, selecting Alternative 3, which defers parcels based on sage-grouse prioritization); BLM WYOMING, 2025 FOURTH QUARTER COMPETITIVE OIL AND GAS LEASE SALE DECISION RECORD DOI-BLM-WY-0000-2025-0002-EA, 2 (Dec. 3, 2025) (for the Wyoming Q4 2025 lease sale held on December 3, 2025, deferring parcels due to sage-grouse prioritization and lack of SMA consent); BLM COLORADO, DECISION RECORD FOR SEPTEMBER 2025 COMPETITIVE OIL AND

GAS LEASE SALE DOI-BLM-CO-0000-2025-0001-EA (Sept. 8, 2025) (for the Colorado Q3 2025 lease sale held on September 9, 2025, deferring portions of two parcels due to their overlap with the Yellow Creek Area of Critical Environmental Concern); BLM WYOMING, 2025 THIRD QUARTER COMPETITIVE OIL AND GAS LEASE SALE DECISION RECORD DOI-BLM-WY-0000-2025-0001-EA, 3 (Sept. 16, 2025) (for the Wyoming Q3 2025 lease sale held on September 16, 2025, deferring five parcels based on greater sage-grouse prioritization).

On the other hand, the agency has elsewhere interpreted the Act as significantly altering its discretion throughout the oil and gas development process, potentially requiring the BLM to offer for lease all lands designated as open if requested by industry. In its recently issued Oil and Gas Leasing proposed rule, for example, the agency stated that the 2025 Reconciliation Act "requires the BLM to offer a parcel within 18 months of receipt of the lands within an [expression of interest]." 91 Fed. Reg. 38084, 38103 (June 24, 2026) (to be codified at 43 CFR Parts 3000, 3100, 3110, 3120, 3130, 3140, 3150, 3160, and 3180).[3] The agency has also proffered this interpretation in a recent court filing. *See* Federal Defendants' Opening Brief at *44, *Mont. Wildlife Fed'n v. Burgum*, No. 22-35367 (9th Cir. filed Jan. 14, 2026) ("[T]he [Act] requires the [BLM] to offer parcels nominated by industry through an expression of interest for lease within 18 months of receipt of the nomination, so long as those lands are open to leasing under the applicable resource management plan.").[4] The BLM Bakersfield Field Office offered a similar interpretation in an errata to its Supplemental EIS for its RMP. *See* BLM BAKERSFIELD FIELD OFFICE, ERRATA FOR BAKERSFIELD FIELD OFFICE COMMENT RESPONSE (June 4, 2026) ("The BLM issues this errata to clarify that, under the [2025 Reconciliation Act], BLM must offer for lease within 18 months of receipt of an expression of interest any parcel subject to disposition under the MLA that is known or believed to contain oil or gas deposits, so long as the parcel is open to leasing under the applicable approved resource management plan."). And, in the oil and gas lease sale context, the BLM Montana-Dakotas office recently stated that the "BLM's discretion at the leasing stage is limited by the [2025 Reconciliation Act's]'s amendments to the Mineral Leasing Act and, regardless, does not create a mandatory duty to exercise deferral in the absence of supporting analysis. The exercise of discretion occurs within the bounds of existing

[3] Commenters note that the comment period is currently open for this proposed rule and it has not been finalized. Therefore, the BLM is still guided by its 2024 BLM's Fluid Mineral Leases and Leasing Process Rule (Leasing Rule) for purposes of this lease sale, and commenters will refer to the BLM's obligations under the Leasing Rule throughout this comment.

[4] *See also* Intervenor-Defendant State of Wyoming Notice of Supplemental Authority at *2–3, *W. Watersheds Proj. v. Bernhardt*, 1:18-cv-00187 (D. Idaho filed Aug. 12, 2025) (in litigation to which the United States is a party, the state of Wyoming interpreting the 2025 Reconciliation Act as stripping the BLM of discretion to determine which parcels should be offered for lease; "mandat[ing]" an approach in which the BLM's response to industry nominations may "create[] widespread leasing, even in sensitive habitat"; and restricting the BLM's ability to impose protective mitigations or stipulations on leases beyond those identified in the RMP, limiting the agency's role to "passively processing expressions of interest").

RMPs." BLM MONTANA-DAKOTAS, APPENDIX K MONTANA-DAKOTAS QUARTER 3 2026 OIL AND GAS LEASE SALE RESPONSE TO COMMENTS, 167 (June 1, 2026).

Regardless of these differing interpretations, the BLM is not required to actually *lease* parcels. The agency retains the authority to defer lease sale parcels, even after bidding has concluded. *See McDonald v. Clark*, 771 F.2d 460, 463 (10th Cir. 1985) (holding that the "fact that land has been offered for lease does not bind the Secretary to actually lease the land, nor is the Secretary bound to lease the land when a qualified applicant has been selected"); *see also W. Energy All. v. Salazar*, No. 10-CV-0226, 2011 WL 3737520, at *4–7 (D. Wyo. June 29, 2011) (holding that BLM is not required to issue leases after offering them at auction; it only needs to make a decision within 60 days on *whether* to issue the leases).

However, the position advanced by the agency in its recent proposed rule and elsewhere gives rise to serious questions about the BLM's ability to balance oil and gas development against other public-land values and achieve its statutory obligations. The BLM must address those questions and clarify its interpretation of the 2025 Reconciliation Act as it applies to the proposed leasing. To the extent that the BLM believes that the 2025 Reconciliation Act restricts its discretion over oil and gas leasing, the agency faces additional burdens in demonstrating that its proposed lease sale comports with FLPMA's substantive mandates. A recent case in the District of Montana illustrates this point; there, the judge stated that "FLPMA's requirements to maintain sustainable wildlife populations and avoid unnecessary or undue degradation of public lands . . . remain in force under [the 2025 Reconciliation Act]. . . . The statutory text of [the 2025 Reconciliation Act] does not effectively eliminate BLM's discretion so broadly as to mandate the sale and issuance of leases without oversight." *Mont. Wildlife Fed'n v. Burgum*, No. CV-18-69-GF-BMM, 2026 WL 1707576, at *5 (D. Mont. June 12, 2026). The court also looked to the 2025 Reconciliation Act's legislative history to determine that the "shall be made available" language in the 2025 Reconciliation Act means something different than "shall offer" and does not require leasing. Indeed, on May 20, 2025, "Congress contemplated, and ultimately rejected," language requiring "that BLM 'shall . . . offer' lands within 18 months," *id.* (quoting H.R. 1, 119th Cong. § 80101(a)(1) (May 20, 2025)), and "later amended the bill to require only that the lands 'shall be made available for leasing' within 18 months," *id.* (first quoting 30 U.S.C. § 226(a)(1); and then quoting *INS v. Cardoza-Fonseca*, 480 U.S. 421, 442–43 (1987) ("Few principles of statutory construction are more compelling than the proposition that Congress does not intend sub silentio to enact statutory language that it has earlier discarded in favor of other language.")). And, as the court stated, the 2025 Reconciliation Act defines lands that are eligible for leasing to exclude lands that cannot be leased due to a statutory prohibition, which "restrict[s] BLM from selling and issuing leases that violate FLPMA's mandates for the protection of public lands and resources." *Id.* (citing 30 U.S.C. § 226(b)(1)(A)).

The BLM has traditionally followed a three-step process for managing oil and gas development on public lands. *W. Energy All. v. Zinke*, 877 F.3d 1157, 1161 (10th Cir. 2017). At

the first step, the BLM develops RMPs for each land management unit. *Id.*; 43 U.S.C. § 1712(a). Each RMP specifies those lands that will be open or closed to oil and gas leasing and under what conditions. *Zinke*, 877 F.3d at 1161; 43 C.F.R. § 1601.0-5(n). At the second step, the BLM may (but is not required to) offer leases in areas designated as open, subject to the requirements of the RMP. *New Mexico*, 565 F.3d at 689 n.1; *Zinke*, 877 F.3d at 1161; 43 C.F.R. § 1610.5-3. At the final step, lessees file applications for permits to drill (APDs), and the BLM reviews those applications before deciding whether to approve and issue the permit. *New Mexico*, 565 F.3d at 689 n.1; 43 C.F.R. § 3162.3-1(c).

The fundamental assumption in this multi-stage development process—and one on which all RMPs rest—is that the designation of lands as open to leasing at the RMP-stage is *not* a decision that those lands will be offered for lease or leased. The BLM has long exercised discretion to determine—in service of its FLPMA obligations to manage for multiple-use and sustained-yield—not to offer to lease or to ultimately lease lands designated as open. Indeed, based on this fundamental assumption, the BLM's RMPs list the vast majority of public land—over 80%—as open to oil and gas leasing. THE WILDERNESS SOCIETY, OPEN FOR DRILLING: THE OUTSIZED INFLUENCE OF OIL & GAS ON PUBLIC LANDS, 2 (2025) [Ex. 1], https://www.wilderness.org/sites/default/files/media/file/Open%20for%20Drilling_TWS%20Report.pdf. But the BLM has elected not to lease the majority of these lands. *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-22-103968, OIL AND GAS LEASING: BLM SHOULD UPDATE ITS GUIDANCE AND REVIEW ITS FEES, 18 (Nov. 2021) (finding that between 2009 and 2019, the BLM nominated 87 million acres for leasing but only offered 18 million acres—or 21% of nominated land—at auction).

To the extent that the BLM believes that the 2025 Reconciliation Act removes the agency's discretion not to offer for lease or to lease areas designated as open in an RMP, and instead obligates the agency to offer for lease or to lease any open land for which it receives an industry expression of interest (EOI), the BLM's assessment of its compliance with its duties under FLPMA must account for that fundamental change. For example, if the BLM believes it now has a non-discretionary duty to offer for lease or to lease all lands designated as open if requested by industry, it must demonstrate that those current open-to-leasing designations in an RMP comport with FLPMA's multiple use and sustained yield requirements. And if—as is likely—they do not, the BLM must revisit those designations in light of such a fundamental change in its discretion.

The obligation to comply with FLPMA's substantive sustained yield and unnecessary and undue degradation requirements applies at each stage of the BLM's three-step oil and gas management process. *See, e.g.*, 40 C.F.R. § 3120.32 (requiring the BLM to address substantive FLPMA obligations in determining whether to offer lands for lease). The BLM, however, has frequently taken the position in litigation that it can satisfy its substantive FLPMA obligations by imposing any needed protective conditions at the final stage of the process, when approving

APDs. *See, e.g.*, *Dakota Res. Council v. DOI*, 2024 WL 1239698, at *22 (D.D.C. 2024); *Bd. of Cnty. Comm'rs v. BLM*, 584 F. Supp. 3d 949, 978 (D. Colo. 2022); *Roosevelt Conservation P'ship v. Salazar*, 661 F.3d 66, 78 (D.C. Cir. 2011).

> If the BLM determines that the 2025 Reconciliation Act precludes the agency from imposing lease stipulations or other mitigations beyond those included in the governing RMP, then the agency must demonstrate complete compliance with its substantive FLPMA obligations *before* holding the proposed lease sale. It cannot defer the development of protective measures without assessing the adequacy of the requirements in the RMP. On the other hand, if the BLM believes it continues to have discretion to impose additional conditions on leases beyond those in the RMP, it needs to make that clear, including by proposing appropriate stipulations to protect wildlife and other public-land values during the lease sale process.

Moreover, while the 2025 Reconciliation Act may prohibit the application of stipulations or mitigation requirements not included in the RMP at the leasing stage, the agency has correctly interpreted this requirement as not applying to conditions of approval or mitigation that can be implemented at the permitting stage, nor does it apply to the agency's ability to apply stipulations specified by Federal surface management agencies for lands managed by those other agencies. 91 Fed. Reg. at 38097. Given the BLM's ongoing obligations under FLPMA to provide for multiple use and sustained yield and to prevent unnecessary and undue degradation, and the MLA's direction to include lease provisions to ensure the safeguarding of the public welfare, the BLM must develop and implement new, site-specific mitigation measures at the permitting stage as necessary to comply with those obligations, and it must continue to apply stipulations deemed necessary by the relevant surface management agencies.

The BLM cannot fall back on the assertion that the relevant RMPs are adequate to satisfy FLPMA. To the contrary, the RMPs at issue defer determination of what mitigations or stipulations are necessary for certain important issues to the leasing stage. *See, e.g.*, BLM FARMINGTON FIELD OFFICE, FARMINGTON RESOURCE MANAGEMENT PLAN WITH RECORD OF DECISION, 2-7 (Dec. 2003) (deferring some analysis of the necessary mitigations or stipulations to a later, site-specific phase, stating that "[d]evelopment in [certain] areas will be considered on a case-by-case basis and will contain site-specific mitigation designed . . . to prevent fragmentation of areas determined to provide important wildlife habitat.").

ii. The BLM must address other changes made by the 2025 Reconciliation Act.

In addition to the aforementioned potential changes to the BLM's deferral authority made by the 2025 Reconciliation Act, the Act makes other process changes, the effect of which the agency must also address. As indicated above, the 2025 Reconciliation Act provides that any oil and gas leases issued "shall be subject to the terms and conditions of the approved resource management plan" and "may not require any stipulations or mitigation requirements not included

in the approved resource management plan." 30 U.S.C. § 226(a)(2)(A). In addition to addressing the implications of this language on its substantive FLPMA mandates, the BLM must also address which RMP—and therefore which RMP's stipulations—will apply to a parcel once leased.

While the BLM has not issued a formal interpretation of this language, the agency has indicated that it is interpreting the 2025 Reconciliation Act as requiring it to apply stipulations from the RMP that was in place at the time of the EOI submission. *See, e.g.*, CARLSBAD FIELD OFFICE, OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, NEW MEXICO QUARTER 3 2026, DOI-BLM-NM-P020-2026-0484-EA, 2 (Apr. 15, 2026) ("[O]il and gas lease parcels are subject to the terms and conditions of the approved RMP that is in effect at the time a parcel's EOI is submitted."). In proffering this interpretation, the BLM appears to be conflating the RMP that is relevant for purposes of determining whether land is open or closed to leasing with the RMP that contains the applicable stipulations and mitigation requirements. The 2025 Reconciliation Act provides that land is deemed open to oil and gas leasing based on the "approved resource management plan . . . that is in effect on the date on which the expression of interest was submitted to the Secretary (referred to in this subsection as the 'approved resource management plan')." 30 U.S.C. § 226(a)(1). The question is whether this definition applies to 30 U.S.C. § 226(a)(2), which subjects leasing to the stipulations included in the "approved resource management plan." *Id.* § 226(a)(2). From a policy perspective, there is at least a plausible argument in terms of fairness to industry to apply the open and closed designations from the time that industry submitted its EOI. It makes no sense at all, however, to subject leases issued today to stipulations from previous RMPs that are no longer in effect, nor does it make sense to craft terms and conditions under an RMP only to have them not apply to presently-issued leases. The resulting situation—in which two leases may be issued at once in adjoining parcels but subject to different stipulations based on the time of EOI submission—is an absurd result that ought to be avoided. *See United States v. LKAV*, 712 F.3d 436, 440 (9th Cir. 2013) ("[S]tatutory interpretations which would produce absurd results are to be avoided." (alteration in original) (quoting *Ariz. St. Bd. for Charter Schs. v. U.S. Dep't of Educ.,* 464 F.3d 1003, 1008 (9th Cir. 2006))). Subjecting presently-issued leases to outdated terms and conditions also runs afoul of the BLM's obligations under FLPMA to provide for multiple use and sustained yield and to prevent unnecessary and undue degradation, and the MLA's directive to include lease provisions that ensure the safeguarding of the public welfare.

The 2025 Reconciliation Act also states that, in conducting a lease sale, the agency "shall offer not less than 50 percent of available parcels nominated for oil and gas development under the applicable resource management plan." § 50101(c)(2)(A), 139 Stat. at 138. The BLM must explain how it determines what parcels comprise the denominator for this requirement. In other words, which nominated parcels are netted into that number—all those nominated within the last year? Two years? Throughout history? The 2025 Reconciliation Act also reinstates the requirement, previously repealed by the Inflation Reduction Act, calling on the BLM to lease any

unsold parcels noncompetitively. § 50101(a)(2), 139 Stat. at 137; 30 U.S.C. § 226(b)(3)(C). The BLM must address the impact of this requirement.

Finally, the 2025 Reconciliation Act added the requirement that all parcels offered for lease be tied to an EOI. *Compare* 30 U.S.C § 226(a) (2024) ("All lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits may be leased by the Secretary."), *with* 30 U.S.C. § 226(a)(1) (2025) ("Any parcel of land subject to disposition under this chapter that is known or believed to contain oil or gas deposits shall be made available for leasing . . . by the Secretary of the Interior, not later than 18 months after the date of receipt by the Secretary of an expression of interest . . . ."). The BLM is thus prohibited from self-nominating, and must provide proof of an EOI for each parcel it offers for sale.

C. The BLM must consider deferral of the following parcels due to conservation conflicts.

For this lease sale, the BLM must consider whether to defer—and, if conflicts exists, must defer—parcels based on the agency's FLPMA resource conservation mandates. The following subsections discuss conservation conflicts and the associated parcel deferral recommendations.

i. The BLM should defer parcels in big game habitat.

The 5 parcels listed below overlap big game priority habitat for two species as designated by the New Mexico Department of Game and Fish (NMDGF) Crucial Habitat Assessment Tool (CHAT) for Terrestrial Species of Economic and Recreational Importance (Terr SER):[5]

NMP106817942
NMP106817943
NMP106817944
NMP106823692
NMP106823693

The agency is obligated to consider these parcels for deferral and to defer or remove them from sale where leasing would impair big game habitat pursuant to its obligations under FLPMA and the Leasing Rule. *See* 43 U.S.C. §§ 1701(a)(7) & (8), 1702(l), 1712(c)(1), 1732(a) (directing the BLM to manage public lands according to "multiple use" and "sustained yield" and including

[5] While NMDGF's CHAT does not provide an indication as to the precise species and habitat type implicated in each parcel, CHAT includes as priority habitat "corridors, winter range, and stop-over sites based on data from the [United States Geological Survey] USGS series of ungulate migrations publications and other sources." It designates priority habitat for bighorn sheep, pronghorn, elk, and mule deer. N.M. Dep't of Game & Fish, *Crucial Habitat Metadata*, NM CHAT, https://nmchat.org/data-metadata.html (last visited Dec. 8, 2025).

"wildlife and fish" as one of the resources expressly included in the definition of "multiple use"; directing the BLM to manage lands "in a manner that . . . will provide food and habitat for fish and wildlife and domestic animals"; and identifying "fish and wildlife development and utilization" as one of the six "principal or major uses" of the public lands); 43 C.F.R. § 3120.32(b) (directing the agency to preference "lands that would not impair the proper functioning of [fish and wildlife] habitats or corridors").

Avoiding parcels in important big game habitat is also consistent with the BLM's responsibilities under Secretarial Order 3362 to work with the Western states to "conserve and/or improve priority western big-game winter range and migration corridors in sagebrush ecosystems and in other ecotypes as necessary." U.S. DEP'T OF THE INTERIOR, SECRETARIAL ORDER NO. 3362, IMPROVING HABITAT QUALITY IN WESTERN BIG-GAME WINTER RANGE AND MIGRATION CORRIDORS, 2 (Feb. 9, 2018), https://www.doi.gov/document-library/secretary-order. The Secretarial Order recognizes that "[r]obust and sustainable elk, deer, and pronghorn populations contribute greatly to the economy and well-being of communities across the West," and that "hunters and tourists travel to Western States from across our Nation and beyond to pursue and enjoy this wildlife," contributing billions of dollars to State and local economies. *Id.* The BLM is directed to conserve and restore big game habitat by, among other things, "avoiding development in the most crucial winter range or migration corridors during sensitive seasons," "minimizing development that would fragment winter range and primary migration corridors," and "limiting disturbance of big game on winter range." *Id.* at 5.

The agency itself has recognized that substantial population loss of certain big game species is due in part to oil and gas development. *See Wilderness Soc'y*, 2024 WL 1241906, at *17.

With respect to big game winter range, research makes clear that oil and gas development can have substantial negative effects, including habitat avoidance and population declines. *See e.g.*, Hall Sawyer et al., *Mule Deer and Energy Development—Long Term Trends of Habituation and Abundance*, 23 GLOB. CHANGE BIOLOGY 4521, 4521–29 (Apr. 4, 2017) [Ex. 2], https://onlinelibrary.wiley.com/doi/10.1111/gcb.13711 (analyzing 17 years of telemetry data from GPS-radio collared mule deer that used crucial winter range on lands that were converted for natural gas development, showing a 36% decrease in population and substantial habitat loss due both to physical displacement as well as avoidance behaviors, and finding further that the avoidance behavior did not lessen over time, i.e., that the animals do not habituate to the disturbance); Hall Sawyer et al., *Long-Term Effects of Energy Development on Winter Distribution and Residency of Pronghorn in the Greater Yellowstone Ecosystem* 1 CONSERVATION SCI. & PRAC. 1, 1–11 (July 2, 2019) [Ex. 3], https://conbio.onlinelibrary.wiley.com/doi/10.1111/csp2.83 (analyzing winter range residency behaviors of pronghorn antelope across a 15-year period, and finding significant declines in the amount of time pronghorn were resident on winter ranges due to oil and gas development and an

increase in the percentage of the population that stopped using the winter range entirely, as well as an increased avoidance of, on average, 408 meters from well pads); Adele K. Reinking et al., *Across Scales, Pronghorn Select Sagebrush, Avoid Fences, and Show Negative Responses to Anthropogenic Features in Winter*, 10 ECOSPHERE 1, 1–14 (May 2019) [Ex. 4], https://esajournals.onlinelibrary.wiley.com/doi/epdf/10.1002/ecs2.2722 (another study showing pronghorn avoidance due to oil and gas development in their crucial winter range); Joseph M. Northrup et al., *Quantifying Spatial Habitat Loss from Hydrocarbon Development through Assessing Habitat Selection Patterns of Mule Deer*, 21 GLOB. CHANGE BIOLOGY 3961, 3965, 3968 (Aug. 12, 2015) [Ex. 5], https://onlinelibrary.wiley.com/doi/10.1111/gcb.13037 (study showing that mule deer on winter range avoided well pads with active drilling at a distance of at least 600 meters and up to 1000 meters at night; deer completely avoided areas within 200 meters of well pad edges, with some demonstrating avoidance of 600 meters from producing pads during the day and 800 meters at night).

In addition to the aforementioned obligations that the BLM has with respect to big game habitat in general, the BLM has obligations specific to migratory habitat and habitat connectivity. For example, IM 2023-005, which builds upon the BLM's efforts to implement Secretarial Order 3362, directs the BLM to "fulfill aspects of its multiple use and sustained yield mandate by ensuring habitats for native fish, wildlife, and plant populations are sufficiently inter-connected." BLM, INSTRUCTION MEMORANDUM NO. 2023-005, CHANGE 1, HABITAT CONNECTIVITY ON PUBLIC LANDS (Nov. 18, 2022). Moreover, a USGS corridor mapping team has used federal support provided by this Secretarial Order to identify migration corridors for hundreds of herds in Western states, creating a resource that is critical for the BLM to consult when making decisions about where to lease in accordance with its multiple use obligations. *See* U.S. GEOLOGICAL SURVEY, UNGULATE MIGRATIONS OF THE WEST VOLS. 1–5 (Dec. 2023), https://pubs.usgs.gov/publication/sir20205101.

Extensive research over the past decade has documented significant impacts from oil and gas development on migrating big game, including habitat fragmentation, displacement, and loss. For example, migrating mule deer show strong fidelity >80% to their migration corridors and exhibit very little flexibility in whether or where they migrate. Hall Sawyer, et al. *Migratory Plasticity Is Not Ubiquitous Among Large Herbivores*, 88 J. OF ANIMAL ECOLOGY 450, 450–60 (Nov. 17, 2018) [Ex. 6], https://doi.org/10.1111/1365-2656.12926. This species does not demonstrate habituation to oil and development when migrating; instead, individuals increase the speed with which they move through disturbed areas of their corridors, and spend less time foraging in the corridor, leading to poorer nutritional outcomes from reduced access to high quality forage. Teal B. Wyckoff et al., *Evaluating the Influence of Energy and Residential Development on the Migratory Behavior of Mule Deer*, 9 ECOSPHERE 1, 1–13 (Feb. 23, 2018) [Ex. 7], https://esajournals.onlinelibrary.wiley.com/doi/10.1002/ecs2.2113. A 14-year study on a mule deer herd found that the herd's ability to track springtime green-up forage—which supports antler growth, nursing of offspring, and abundance—declined by 39% when energy development

occurred in its migration corridor. Ellen O. Aikens et al., *Industrial Energy Development Decouples Ungulate Migration from the Green Wave*, 6 NATURE ECOLOGY & EVOLUTION 1733, 1733–41 (Oct. 6, 2022) [Ex. 8], https://www.nature.com/articles/s41559-022-01887-9.

A recent study demonstrated that mule deer migrating long distances have higher survival and reproduction rates. Deer that migrate more than 50 km to higher elevations in the summer find better forage and because of this, build up about twice as much body fat as non-migratory deer. That additional fitness means migrating deer are about 20% more likely to survive each year; successful reproduction rates are also higher. Overall, migrating deer populations tend to grow, while resident deer populations are likelier to decline over time. Migration gives mule deer a significant survival advantage—and thus maintaining functional migratory habitats is essential to long term herd health. Anna C. Ortega et al., *Foraging Benefits Promote Fitness in Migratory Mule Deer*, 36 CURRENT BIOLOGY 799, 799–808 (Feb. 2, 2026) [Ex. 9], https://www.sciencedirect.com/science/article/abs/pii/S0960982225016793.

ii. The BLM should defer parcels in areas with low oil and gas development potential.

The following 4 parcels are on lands with low development potential. The BLM should therefore designate them as low preference for leasing and defer them from this lease sale:

NMP106817915
NMP106818005
NMP106823531
NMP106823568

The MLA directs the BLM to hold periodic oil and gas lease sales for lands which are "known or believed to contain oil or gas deposits." 30 U.S.C. § 226(a); *see Vessels Coal Gas, Inc.*, 175 IBLA 8, 25 (2008) ("It is well-settled under the MLA that competitive leasing is to be based upon reasonable assurance of an existing mineral deposit."). The BLM's regulations also call for preferencing lands with "high potential" for oil and gas development. 43 C.F.R. § 3120.32(e).

Leasing lands with no or low potential for oil and gas development violates FLPMA's multiple use mandate because it precludes management for other uses. *Wilderness Workshop v. BLM*, 342 F. Supp. 3d 1145, 1166 (D. Colo. 2018) ("[I]f [low and medium potential] areas were open for leasing, even if there is a minimal chance for development, it would detract from BLM designating that land for other uses."); *see also, e.g.*, BLM COLORADO RIVER VALLEY FIELD OFFICE, PROPOSED COLORADO RIVER VALLEY RMP/FINAL EIS (2014), 3-135 (deciding against managing lands for protection of wilderness characteristics despite those lands "meet[ing] the overall criteria for wilderness character" in the Grand Hogback unit based on the presence of oil and gas leases, even though the leases were non-producing). The BLM itself has reiterated this

point, explaining that the preference criteria are meant to "ensure that oil and gas leasing on public lands focuses development where there is the most potential for recovery and allows the agency to manage public lands for other uses." 89 Fed. Reg. at 30,956. Accordingly, the BLM should analyze for deferral—and defer—parcels on land with low development potential.

iii. The BLM should defer parcels in lesser prairie-chicken (LPC) habitat.

The below 4 proposed parcels overlap LPC modeled habitat, focal areas, and active leks,[6] and the BLM should evaluate them for deferral:

NMP106817942
NMP106817943
NMP106817944
NMP106818007

The agency is obligated to consider these parcels for deferral and to defer or remove them from sale where leasing would impair LPC habitat pursuant to its obligations under FLPMA and the Leasing Rule. *See* 43 U.S.C. §§ 1701(a)(7) & (8), 1702(l), 1712(c)(1), 1732(a) (directing the BLM to manage public lands according to "multiple use" and "sustained yield" and including "wildlife and fish" as one of the resources expressly included in the definition of "multiple use"; directing the BLM to manage lands "in a manner that . . . will provide food and habitat for fish and wildlife and domestic animals"; and identifying "fish and wildlife development and utilization" as one of the six "principal or major uses" of the public lands); 43 C.F.R. § 3120.32(b) (directing the agency to preference "lands that would not impair the proper functioning of [fish and wildlife] habitats or corridors").

The LPC population and range have decreased dramatically in the last two hundred years. According to a report issued in 1980, since the 1800s, the overall occupied range of the LPC has decreased 92 percent—a figure which incorporates a 78 percent decrease in their range since 1963. MAPLE A. TAYLOR ET. AL., USDA FOREST SERV., STATUS, ECOLOGY, AND MANAGEMENT OF THE LESSER PRAIRIE CHICKEN: GEN. TECH. REP. RM-77, 4 (Sept. 1980) [Ex. 10], https://dn790009.ca.archive.org/0/items/IND81013612/IND81013612.pdf. This decrease in LPC

[6] The Western Association of Fish and Wildlife Agencies defines focal areas as "focal areas for LPC conservation" and modeled habitat as "modeled . . . available and potential habitat." W. Ass'n of Fish & Wildlife Agencies, *LPC Crucial Habitat (CHAT)*, ARCGIS, https://www.arcgis.com/home/item.html?id=89f7f4a84f6c478d98367e8a6a89260e (last visited Apr. 3, 2026). In addition, leks are considered active where "[o]ne or more leks have been documented within the last 5 years," whereas a historic lek area is one where "[a]t least one lek has occurred in the past, but a lek has not been documented in the last five years," though the Association cautions that "this does not mean a lek doesn't still occur there - it may just not have been surveyed or detected recently." W. Ass'n of Fish & Wildlife Agencies, *LPC Active Historic Leks*, ARCGIS, https://m.arcgis.com/home/item.html?id=c1f7405057e64485bd62ec03dfd18f73#overview (last visited Apr. 3, 2026).

range is accompanied by a marked decrease in its population numbers. Total LPC population estimates have declined from 150,000 birds in the mid-1980s to around 27,000 birds in 2022. Elisabeth C. Teige et al., *Assessment of Lesser Prairie-Chicken Translocation Through Survival and Lek Surveys*, 47 WILDLIFE SOC'Y BULLETIN 1, 3 (Oct. 10, 2023) [Ex. 11], https://wildlife.onlinelibrary.wiley.com/doi/10.1002/wsb.1493#:~:text=Lesser%20prairie%2Dchicken%20population%20estimates,2022); Kristen Nasman et al, *Range-Wide Population Size of the Lesser Prairie-Chicken: 2012 to 2022*, W. ASS'N OF FISH & WILDLIFE AGENCIES, ii (Oct. 20, 2022) [Ex. 12], https://wafwa.org/wp-content/uploads/2022/11/LPC_RangeWidePopSize2012-2022.pdf. In New Mexico, LPCs are concentrated in patches within the few regions in New Mexico they still occupy, and only 26 percent of suitable habitat occupied by the LPC is considered large enough to support the populations. Kristine Johnson et al., *GIS Habitat Analysis for Lesser Prairie-Chickens in Southeastern New Mexico*, 6 BMC ECOLOGY 1, 3 (Dec. 4, 2006) [Ex. 13], https://link.springer.com/article/10.1186/1472-6785-6-18.

In order to survive and thrive, the LPC requires large tracts of relatively intact native grasslands. The LPC requires continuous areas of habitat that are at least 25,000 acres and connected to other large areas of habitat. *See* WildEarth Guardians et al., *Petition to List the Lesser Prairie Chicken (Tympanuchus Pallidicinctus) and Three Distinct Population Segments Under the U.S. Endangered Species Act & Emergency Listing Petition for the Shinnery Oak Prairie & Sand Sage Prairie Distinct Population Segments*, 20 (Sept. 8, 2016) [Ex. 14], https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/petition/135.pdf [hereinafter Wildearth Guardians, *Petition*]. Without large enough tracts of land, and sufficient corridors connecting this land to other large tracts of land, the LPC population is likely to significantly decrease. This is particularly true because LPC are habitat specialists, meaning that they are uniquely adapted to their specific environment. As a result, the decline in LPC population size associated with habitat destruction and fragmentation is greater than the effect of acreage of habitat lost alone. *See* Darren J. Bender et al., *Habitat Loss and Population Decline: A Meta-Analysis of the Patch Size Effect*, 79 ECOLOGY 517, 517–33 (Mar. 1998) [Ex. 15], https://www.researchgate.net/publication/246352915_Habitat_Loss_and_Population_Decline_A_Meta-Analysis_of_the_Patch_Size_Effect. As a result of its habitat-specific adaptations, it is far more difficult for the LPC to adapt to new environments. Unlike habitat generalist species, in which population decline due to habitat loss is mitigated by the species' ability to adapt to a new habitat, the LPC cannot generally make up for lost habitat by finding and adapting to new land. Having sizeable and reliable habitat is also critically important for LPC because they regularly return to the same mating sites, called leks. The species typically has high fidelity to lek sites; males and females often return to the same lek sites year after year, underscoring the importance of consistent and suitable LPC habitat to the continued survival of the species. William E. Van Pelt et al., *Lesser Prairie-Chicken Range-Wide Conservation Plan*, W. ASS'N OF FISH & WILDLIFE AGENCIES, 14 (Oct. 2013) [Ex. 16],

https://eplanning.blm.gov/public_projects/2021616/200533749/20078003/250084185/Exhibit%20219%20-%20LPC%20rangewide%20conservation%20plan.pdf.

Each population of the LPC is genetically unique, and this is particularly true of the LPC New Mexico population. Sara J. Oyler-McCance et al., *Rangewide Genetic Analysis of Lesser Prairie-Chicken Reveals Population Structure, Range Expansion, and Possible Introgression*, 17 CONSERVATION GENETICS 643, 653 (Jan. 28, 2016) [Ex. 17], https://link.springer.com/article/10.1007/s10592-016-0812-y. The LPC population in New Mexico resides in an ecoregion known as the Shinnery Oak Prairie, and members within this population exhibit especially unique genetic patterns. Lyman McDonald et al., *Range-Wide Population Size of the Lesser Prairie-Chicken: 2012, 2013, 2014, 2015, and 2016*, TECH. REP. FOR THE W. ASS'N OF FISH & WILDLIFE AGENCIES (July 21, 2016) [Ex. 18], https://www.researchgate.net/publication/306556358_RANGE-WIDE_POPULATION_SIZE_OF_THE_LESSER_PRAIRIE-CHICKEN_2012_2013_2014_2015_AND_2016; McCance, *Rangewide Genetic Analysis of Lesser Prairie-Chicken Reveals Population Structure, Range Expansion, and Possible Introgression* at 653. In fact, numerous genetic studies comparing LPC populations of New Mexico to the nearest neighboring population in Oklahoma have documented substantial genetic differences between these regions that suggest significant, if not complete, isolation by distance. Wildearth Guardians, *Petition* at 9 (collecting studies). This isolation has resulted in a number of adaptations that make the population uniquely suited to the conditions of the Shinnery Oak Prairie. *Id.* at 9–13. The particular adaptations of the New Mexico LPC make this population highly biologically significant, and loss of this specific population of the LPC would mean substantial and irrevocable loss of intra-species biodiversity.

iv. The BLM should defer parcels in areas with high karst or cave potential and that are in critical karst or cave resource areas.

The following 5 parcels are in areas with critical karst designations or high potential, and the BLM should evaluate them for deferral:

NMP106817915 (critical)
NMP106818020 (critical)
NMP106823568 (critical)
NMP106823531 (critical)
NMP106823535 (high potential)

The agency is obligated to consider these parcels for deferral and to defer or remove them from sale where leasing would impair critical karst or cave resources pursuant to its obligations under FLPMA. *See* 43 U.S.C. §§ 1711(a), 1712(c), 1732(b) (obligating the BLM to take its resource inventory into account when preparing management plans and authorizing uses,

observing the principles of multiple use and sustained yield, and requiring the BLM to "prevent unnecessary or undue degradation of the lands").

These parcels are located within an area in known soluble rock types with high or medium densities of significant cave systems or bedrock fractures that lead to the rapid recharge of karst groundwater aquifers from surface runoff. These areas provide critical drinking water supplies for major communities, ranching operations, and springs that support rivers and vital riparian habitat. Further, those cave and karst areas are close to the protected cave systems at Carlsbad Caverns National Park and could very well be connected through underground passages or fractures that have not yet been mapped. In fact, 4 of the scoped parcels are within 10 miles of Carlsbad Caverns National Park:

NMP106817915
NMP106818005
NMP106823531
NMP106823568

The entire area which makes up the Carlsbad Field Office should be studied thoroughly to assess the vulnerabilities of aquifer resources and fragile karst resources—which can also be home to unique wildlife and habitat—as the cave and karst system throughout the region is deeply interconnected. Carlsbad Caverns is a designated World Heritage Area and indeed attracts visitors from around the world. A single leak from hydraulic fracturing, reinjection of "produced water," or seismic activity that has been linked to hydraulic fracturing and produced water could have devastating and irreversible impacts on the National Park and on public health and safety. In recent years, exploratory wells have run into empty space at about the same depth as Carlsbad Caverns. According to a 2007 National Park Service ("NPS") Geologic Resource Evaluation Report, hundreds of producing oil and gas wells have been drilled north, east, and south of Carlsbad Caverns. In that report, NPS noted that "[i]t is probable that exploratory drilling will intersect openings that connect with caves in the park. Resources inside the park could be at risk of contamination from toxic and flammable gases and other substances associated with the exploration and production of oil and gas." NAT'L PARK SERV., CARLSBAD CAVERNS NATIONAL PARK: GEOLOGIC RESOURCE EVALUATION REPORT, 10 (2007) [Ex. 19], http://npshistory.com/publications/cave/nrr-2007-003.pdf.

The increased threat of seismic activity due to development in this region is well documented. A Stanford University study released in February 2018 documents seismic threats in the Permian Basin resulting from injection wells. Stanford University, *Seismic Stress Map Developed by Stanford Researchers Profiles Induced Earthquake Risk for West Texas, New Mexico*, STANFORDREPORT (Feb. 8, 2018) [Ex. 20], https://news.stanford.edu/2018/02/08/seismic-stress-map-profiles-induced-earthquake-risk-west-texas-new-mexico/. In addition, researchers recommend that fracking be at least 895m from faults to avoid human-caused earthquakes, and given the close connection between caves and

fault lines, development in these areas presents great risk. Durham University, *Human-made Earthquake Risk Reduced if Fracking is 895m from Faults*, SCIENCEDAILY (Feb. 27, 2018) [Ex. 21], https://www.sciencedaily.com/releases/2018/02/180227233301.htm.

In addition to the potential impacts to cave systems, poorly planned leasing and oil and gas development can have a negative impact on a sustainable local tourism economy. Carlsbad Caverns and Guadalupe Mountains National Parks combined generated over $70.8 million in local economic output and supported 580 jobs in 2024. NAT'L PARK SERV., 2024 NATIONAL PARK VISITOR SPENDING EFFECTS, 21, 27 (Sept. 2025) [EX. 22], https://www.nps.gov/nature/customcf/NPS_Data_Visualization/docs/NPS_2024_Visitor_Spending_Effects.pdf. The breadth and density of oil and gas development around Carlsbad Caverns is one of the factors that has already taken a toll on the park's popularity; visitation to Carlsbad decreased to 410,778 visitors in 2025 from just over 792,000 in 1989. *Carlsbad Caverns NP*, IRMA PORTAL NATIONAL PARK SERVICE (last visited Apr. 30, 2026) [Ex. 23], https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20Graph%20(1904%20-%20Last%20Calendar%20Year)?Park=CAVE. The development that might be driving visitors away includes blighting of the viewshed with drill rigs, pump jacks, and other industrialization, and the loss of dark night skies from excessive lighting and flaring in the area—all of which underscores the importance of taking care in managing leasing and land use activities near Carlsbad Caverns, Guadalupe Mountains, and other publicly accessible caves, recreational areas, groundwater resources, and agricultural activities in the area.

As such, the BLM should evaluate these parcels for deferral.

D. The BLM may not proceed with this lease sale if the governing field office RMPs are invalid.

Under FLPMA, the BLM may issue decisions such as leases, permits, rights of way, and other authorizations only "in accordance with" a valid land use plan. 43 U.S.C. § 1732(a). FLPMA's implementing regulations likewise provide that all "resource management authorizations and actions . . . shall conform to the approved [RMP]." 43 C.F.R. § 1610.5-3(a). BLM cannot proceed with approving new leases or authorizations or take other action predicated on a plan that is not in effect. Doing so would violate FLPMA along with the recently enacted 2025 Reconciliation Act (and the MLA, which it amended) and be contrary to law in violation of the APA.

The Congressional Review Act (CRA) requires federal agencies to submit rules to Congress for review before they can take effect. 5 U.S.C. § 801(a)(1)(A). Historically, land management agencies like the BLM have not submitted their land or resource management plans to Congress, taking the position that such plans are not "rules" for CRA purposes. However, after the Government Accountability Office determined, at the request of members of Congress, that

four BLM RMPs/Resource Management Plan Amendments (RMPAs) were "rules" for purposes of the CRA,[7] Congress voted in the fall of 2025 to disapprove those four RMPs/RMPAs under the terms of the CRA, subjecting such plans to the CRA's procedural requirements for the first time.[8] This legislative action and its associated significant adverse and destabilizing consequences for federal land management raise serious questions as to whether land or resource plans or amendments approved after passage of the CRA in 1996 are in effect if they have not been submitted to Congress under the CRA's requirements. *See* 5 U.S.C. § 801(a)(1)(A).

The BLM must address these questions before proceeding with this lease sale. The BLM Farmington Field Office approved its RMP in 2003,[9] the Carlsbad Field Office amended its 1988 RMP in 1997,[10] and the Pecos District Office partially amended the Carlsbad Field Office's RMP in 2008.[11] Since then, the BLM has not transmitted any of those RMPs to Congress under the CRA, which renders the status of the RMPs questionable. The BLM should not proceed with issuing leases based on an RMP that never took effect. Doing so may violate FLPMA, the 2025 Reconciliation Act, and the MLA and may therefore be contrary to law, in violation of the APA.

E. Even assuming the RMPs are valid and in effect, they are inadequate to support leasing.

Before issuing leases pursuant to an RMP, the agency must confirm that the applicable RMP is up to date and that the underlying environmental analysis will support a contemporary leasing decision. If an RMP is more than five years old, the BLM must reevaluate and confirm that the analysis and any underlying assumptions remain valid. *See* 42 U.S.C. § 4336b. An RMP

---

[7] *See* U.S. GOV'T ACCOUNTABILITY OFF., APPLICABILITY OF THE CONGRESSIONAL REVIEW ACT TO CENTRAL YUKON RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN, B-337200 (2025); U.S. GOV'T ACCOUNTABILITY OFF., APPLICABILITY OF THE CONGRESSIONAL REVIEW ACT TO NORTH DAKOTA FIELD OFFICE RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN, B-337175 (2025); U.S. GOV'T ACCOUNTABILITY OFF., APPLICABILITY OF THE CONGRESSIONAL REVIEW ACT TO MILES CITY FIELD OFFICE RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT, B-337163 (2025); U.S. GOV'T ACCOUNTABILITY OFF., APPLICABILITY OF THE CONGRESSIONAL REVIEW ACT TO BUFFALO FIELD OFFICE RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT, B-337503 (2025).

[8] *See* H.R.J. Res. 104, 119th Cong. (2025) (providing for CRA disapproval of the Miles City Field Office Record of Decision and Approved Resource Management Plan Amendment); H.R.J. Res. 105, 119th Cong. (2025) (providing for CRA disapproval of North Dakota Field Office Record of Decision and Approved Resource Management Plan); H.R.J. Res. 106, 119th Cong. (2025) (providing for CRA disapproval of Central Yukon Record of Decision and Approved Resource Management Plan); H.R.J. Res. 130, 119th Cong. (2025) (providing for congressional disapproval of the Biden administration's Buffalo Field Office RMP Amendment).

[9] BLM FARMINGTON FIELD OFFICE, RESOURCE MANAGEMENT PLAN WITH RECORD OF DECISION (Dec. 2003) [hereinafter FARMINGTON RMP].

[10] BLM CARLSBAD FIELD OFFICE, APPROVED RESOURCE MANAGEMENT PLAN (Sept. 1988) [hereinafter CARLSBAD RMP]; BLM CARLSBAD FIELD OFFICE, APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT (Oct. 1997) [hereinafter CARLSBAD RMPA].

[11] BLM PECOS DISTRICT OFFICE, SPECIAL STATUS SPECIES RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT (Apr. 2008) [hereinafter PECOS RMPA].

no longer supports a new leasing decision if there is important new data, policies, or changed circumstances that were not considered when it was approved. *See* BLM, H-1601-1 — LAND USE PLANNING HANDBOOK, 46 (2005); 43 C.F.R. § 1610.5-6. If an RMP is too old or stale to support a new leasing decision, the BLM must revise the RMP or undertake a new, thorough environmental analysis, such as an Environmental Impact Statement (EIS), to support new leasing. This issue is all the more pressing now, as the BLM is attempting to remove process such as leasing preference criteria and public participation periods as "duplicative of existing established processes for land use planning" 91 Fed. Reg. at 38103. The BLM cannot continue to rely on increasingly old and outdated RMPs while simultaneously eliminating any means to obtain and address new information past the land use planning stage.

The plans governing lands subject to this lease sale are old or stale; the Farmington RMP, Carlsbad RMPA, and Pecos RMP range from 18 to 29 years old. In addition, none of the RMPs covering the parcels under consideration for this lease sale discusses climate change or GHG emissions. *See* CARLSBAD RMP; CARLSBAD RMPA; FARMINGTON RMP; PECOS RMPA.

Consequently, the BLM should defer leasing in these areas until the agency can consider new inventories and analyze how best to protect the resources. At the very least, the agency must undertake a thorough analysis that considers the potential impacts that new leasing and development would have on sensitive resources.

Even where implicated RMPs were finalized within the last five years, the BLM must take a hard look at new resource inventories and stipulations at the lease sale stage to ensure that new leases comply with existing plans, reflect updated inventory data, and adequately protect sensitive resources. Failure to consider, analyze, and disclose these issues would violate NEPA and FLPMA.

II. The BLM must ensure that leasing complies with NEPA and the APA.

The BLM must evaluate the environmental impacts of this proposed lease sale under NEPA. *See* 42 U.S.C. §§ 4331–4347. NEPA fosters informed decision-making by federal agencies and promotes informed public participation in government decisions. *See Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 97 (1983). To meet those goals, NEPA requires that the BLM "consider every significant aspect of the environmental impact of a proposed action" and inform the public of those impacts. *Id.* (quoting *Vt. Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 553 (1978)).[12] The BLM must take a "hard look" at the environmental effects before making any leasing decisions, ensuring "that the agency, in reaching its decision, will have

[12] *Accord City of Rochester v. U.S. Postal Serv.*, 541 F.2d 967, 973–74 (2d Cir. 1976); *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 827 (D.C. Cir 1976); *City of Davis v. Coleman*, 521 F.2d 661, 673–77 (9th Cir. 1975); *Env't. Def. Fund, Inc. v. Corps of Eng'rs of U.S. Army*, 492 F.2d 1123, 1135 (5th Cir. 1974); *NRDC v. Morton*, 458 F.2d 827, 834–36 (D.C. Cir. 1972); *Calvert Cliffs' Coordinating Comm., Inc. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971).

available, and will carefully consider, detailed information concerning significant environmental impacts." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349–50 (1989). Environmental "[e]ffects are reasonably foreseeable if they are sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision." *Sierra Club v. Fed. Energy Reg. Comm'n*, 867 F.3d 1357, 1371 (D.C. Cir. 2017) (internal quotation marks and citation omitted). The agency must undertake a thorough analysis that considers the potential impacts (direct, indirect, and cumulative[13]) of new leasing and development.

The BLM must analyze these environmental impacts at the lease sale stage. It is well established that leasing constitutes an "irreversible, irretrievable commitment of resources," and that the BLM is therefore obliged to analyze such impacts at this stage. *Sierra Club v. Peterson*, 717 F.2d 1409, 1412 (D.C. Cir. 1983). Federal courts have repeatedly rejected agency attempts to avoid analyzing reasonably foreseeable future impacts by claiming that considering them at the lease sale stage would be speculative. *See, e.g.*, *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1078–79 (9th Cir. 2011); *Conner v. Burford*, 848 F.2d 1441, 1450 (9th Cir. 1988); *W. Watersheds Project v. Bernhardt*, 543 F. Supp. 3d 958, 992 (D. Idaho 2021); *Wildearth Guardians v. BLM*, 457 F. Supp. 3d 880, 888 (D. Mont. 2020); *Wilderness Soc'y*, 2024 WL 1241906, at *17.

The BLM must also ensure that it is considering this environmental analysis as part of its decision-making process under the APA. The APA authorizes judicial review of agency actions and provides that courts "shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary[and] capricious." 5 U.S.C. § 706(2)(A). An agency acts arbitrarily and capriciously when it, among other things, "entirely fail[s] to consider an important aspect of the problem" or fails to conduct a "reasoned evaluation of the relevant factors." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983); *San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 995 (9th Cir. 2014) (quoting *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 378 (1989)). As one court explained, the agency's failure to consider environmental harm as part of its decision-making process is "at odds with the APA['s mandate] to consider an important aspect of the problem." *Wilderness Soc'y*, 2024 WL 1241906, at *24 (citation and internal quotation marks omitted).

A. The BLM must adequately analyze the environmental impacts of leasing.

Given the aforementioned conflicts between the proposed parcels and conservation values, *see* discussion *supra* Section I.C, as well as the consequences that oil and gas leasing can

[13] Courts have long held that NEPA's mandate includes considering cumulative effects. *See, e.g.*, *Swain v. Brinegar*, 542 F.2d 364, 369–70 (7th Cir. 1976); *Henry v. Fed. Power Comm'n*, 513 F.2d 395, 406–07 (D.C. Cir. 1975); *Sierra Club v. Morton*, 510 F.2d 813, 824–25 (5th Cir. 1975); *Hanly v. Kleindienst*, 471 F.2d 823, 830-31 (2d Cir. 1972); *Kleppe v. Sierra Club*, 427 U.S. 390, 410, 413 (1976); *NRDC v. Callaway*, 524 F.2d 79, 89 (2d Cir. 1975); *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975); *Minn. Pub. Interest Res. Grp. v. Butz*, 498 F.2d 1314, 1322 (8th Cir. 1974).

have related to a plethora of environmental issues including climate, groundwater, methane emissions, public health, and environmental justice, the BLM must sufficiently analyze the environmental impacts of leasing and consider those impacts as part of its decision-making in order to comply with its obligations under NEPA and the APA. The following subsections discuss various issues that the BLM must address as part of its environmental analysis.

i. The BLM must provide adequate analysis of impacts of leasing on big game.

As previously discussed, there is overlap between parcels being considered for leasing and big game habitat. *See* discussion *supra* Section I.C.i. The BLM must provide a thorough analysis of the reasonably foreseeable impacts to big game populations from development on these particular lease parcels, and must consider those impacts when deciding whether to move forward with affected parcels. The effect of leasing on big game population is an important factor in these decisions given the well-documented impacts that leasing has on big game populations. *See* discussion *supra* Section I.C.i.

A thorough evaluation of these impacts is mandated by NEPA and the APA. *See* 42 U.S.C. § 4332(C)(i) (mandating consideration of "reasonably foreseeable environmental effects of the proposed agency action"); *Wilderness Soc'y*, 2024 WL 1241906, at *17–19 (finding that the BLM's analysis of the impacts of oil and gas drilling on big game was inadequate under NEPA); *State Farm*, 463 U.S. at 43 (holding that an agency acts arbitrarily and capriciously when it "fail[s] to consider an important aspect of the problem").

The BLM's prior approach to analyzing big game has been found to violate NEPA because it relied on analysis prepared for the agency's RMPs and lacked "anything resembling an estimate of how the lease sale [at issue] will impact these species." *Wilderness Soc'y*, 2024 WL 1241906, at 18–19. This approach is especially inadequate here because many of the BLM's RMPs are old or stale, and therefore do not benefit from new research that has augmented scientific understanding of the major impact that oil and gas development has on big game. *See id.* at *17.

The BLM must also consider how drilling on the proposed parcels will add to habitat impairment from past, present, and reasonably foreseeable future drilling elsewhere in New Mexico's big game habitat. In doing so, the agency must provide a baseline of impacts from existing development, including how much critical winter range acreage is directly disturbed or impaired in connection with ongoing and future development. The BLM has an obligation to determine whether the direct, indirect, and cumulative effects of this lease sale will have a significant impact on big game, and thus whether an EIS is required.

ii. The BLM must provide adequate analysis of impacts of leasing on LPC.

As indicated above, there is overlap between parcels being considered for leasing and LPC habitat. *See* discussion *supra* Section I.C.iii. LPC population has decreased dramatically and the species is highly susceptible to impacts from oil and gas development given their reliance on large tracts of intact habitat. *See* discussion *supra* Section I.C.iii. As a result, it is particularly important for the BLM to provide a thorough analysis of the impacts of drilling in LPC habitat, and to consider those impacts when making its leasing decisions.

The agency must provide a thorough evaluation of impacts to LPC pursuant to its obligations under NEPA and the APA. *See* 42 U.S.C. § 4332(C)(i) (mandating consideration of "reasonably foreseeable environmental effects of the proposed agency action"); *WildEarth Guardians v. U.S. Dep't of Agric. Animal & Plant Health Inspection Serv. Wildlife Servs.*, 135 F.4th 717, 730 (9th Cir. 2025) ("If a project may have potentially significant impacts on . . . a local wildlife population, the agency must analyze such impacts."); *State Farm*, 463 U.S. at 43 (holding that an agency acts arbitrarily and capriciously when it "fail[s] to consider an important aspect of the problem").

iii. The BLM must provide adequate analysis of impacts of leasing on cave/karst resources.

As discussed above, some of the leasing parcels at issue overlap areas with critical karst designations or high potential for cave/karst resources. *See* discussion *supra* Section I.C.iv. Given the ecological importance of cave and karst resources, and the threat that oil and gas development poses on those resources, it is vital for the BLM to analyze those impacts and consider them as part of its leasing decisions. *See* discussion *supra* Section I.C.iv.

Given the critical drinking water that these resources provide, the threat that development in these areas has for increased seismic activity, and the importance of these areas for tourism, *see* discussion *supra* Section I.C.iv., the agency provide a thorough evaluation of impacts to cave and karst resources as part of its environmental analysis, *see* 42 U.S.C § 4321 (describing the underlying purpose of NEPA as including "stimulat[ing] the health and welfare of man"); *id.* § 4331(a) (declaring it to be the policy of the government to "use all practicable means and measures. . . in a manner calculated to foster and promote the general welfare, to . . . fulfill the social, economic, and other requirements of present and future generations of Americans"); *id.* § 4331(b) (requiring agencies to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings"); *State Farm*, 463 U.S. at 43 (holding that an agency acts arbitrarily and capriciously when it "fail[s] to consider an important aspect of the problem").

iv. The BLM must analyze greenhouse gas (GHG) emissions and climate effects, and must factor GHG emissions and climate effects into its leasing decisions.

Given that the climate is "widely regarded as the most pressing environmental threat facing the world today," the BLM must give appropriate attention to its consideration of GHG emissions and climate impacts. *Wilderness Soc'y*, 2024 WL 1241906, at *24. NEPA requires the BLM not only to properly analyze and quantify the direct, indirect, and cumulative GHG emissions and climate impacts that may result from leasing, but also to factor GHG emissions into its leasing decisions. *Id.* at *25 (stating that the BLM "must . . . explain how its GHG analysis inform[s] the decision to select" its preferred alternative, noting that "the complexity of the task does not give the [BLM] a free pass to avoid making these tough decisions by asserting that GHG emissions did not factor into its decision-making"); *see also Powder River Basin Res. Council*, 2026 WL 555013, at *7 (finding that the "BLM violated its obligation to rigorously evaluate a reasonable range of alternatives to its proposed action" in contravention of NEPA's requirements by "eliminating . . . greenhouse gas reduction alternatives without further analysis"). As one court explained, "[a]ny claim that the analysis of GHG emissions was informational only and did not inform BLM's decision-making is hard to square with [NEPA's] purpose[and] is equally at odds with the APA." *Wilderness Soc'y*, 2024 WL 1241906, at *24. NEPA also requires the agency to consider unquantified effects, recognize the worldwide and long-range character of climate change impacts, and incorporate this analysis of ecological information into its environmental analysis. *See* 42 U.S.C. § 4332(A), (B), (D), (I), (K). The BLM has the tools to undertake this analysis. Failing to do so for this lease sale would be arbitrary and capricious.

The requirement to consider GHG emissions and climate impacts is further reinforced by other components of the statutory scheme. For example, the MLA's requirement to lease lands for oil and gas development only in the public interest and FLPMA's mandate to prevent unnecessary and undue degradation both demand the BLM to consider adverse effects to health and the environment. *See* 30 U.S.C. § 192; 43 U.S.C. § 1732(b); *Sierra Club v. Fed. Energy Reg. Comm'n*, 867 F.3d at 1373–74 (holding that where an agency is vested with statutory authority to deny a project based on harm to the environment, that agency must consider direct and indirect environmental effects—including GHG emissions—as part of its decision).

Court decisions clearly establish that NEPA mandates consideration and analysis of the indirect and cumulative climate impacts of BLM fossil fuel production decisions, including at the leasing stage.[14] The Supreme Court's recent decision in *Seven County Infrastructure Coalition v.*

[14] *See, e.g.*, *350 Mont. v. Haaland*, 50 F.4th 1254, 1266–70 (9th Cir. 2022); *Vecinos para el Bienestar de la Comunidad Costera v. Fed. Energy Reg. Comm'n*, 6 F.4th 1321, 1329–30 (D.C. Cir. 2021); *Sierra Club v. Fed. Energy Reg. Comm'n*, 867 F.3d at 1371–75 (requiring quantification of indirect greenhouse gas emissions); *Ctr. for Biological Diversity v. Nat'l Highway Transp. Safety Admin.*, 538 F.3d 1172, 1215–16 (9th Cir. 2008) (requiring assessment of the cumulative impacts of climate change); *WildEarth Guardians v. BLM*, 870 F.3d 1222, 1236–38

Eagle County, 605 U.S. 168 (2025), does not alter the BLM's NEPA obligations to analyze GHG emissions and climate impacts for this lease sale. *Seven County* affirmed that agencies must still analyze indirect effects under NEPA. *See id.* at 187 ("To be clear, the environmental *effects* of the project at issue may fall within NEPA even if those *effects* might extend outside the geographical territory of the project or might materialize later in time . . . . But if the project at issue might lead to the construction or increased use *of a separate project* . . . the agency need not consider the environmental effects *of that separate project*." (emphases in original)); *id.* at 189 (holding that the Surface Transportation Board rightly considered indirect effects such as soil erosion from new rail embankments and air pollution from trains in evaluating the environmental effects of a railroad line construction); *see also Las Vegas Paiute Tribe*, 200 IBLA 172, 187 (2025) (applying the Court's holding in *Seven County* to find that the tribe was likely to succeed on the merits of its claim that the BLM had unlawfully failed to consider how a transfer of land for development might impact the tribe's water availability or its ability to exercise water rights, because those were reasonably foreseeable potential impacts of the land sale).

Here, the downstream GHG emissions that will result from this lease sale require analysis. Oil and gas development and extraction is the precise purpose of the leases being issued and is thus not too proximately separate in time or place. *Cf. Seven County*, 605 U.S. at 187 (distinguishing between an agency's obligation to conduct NEPA analysis where "effects might extend outside the geographical territory of the project or might materialize later in time" and effects of "a possible future project or one that is geographically distinct from the project at hand"—"for example, a housing development that might someday be built near a highway"—that do not require NEPA analysis). And here, unlike in *Seven County*, the BLM controls the oil and gas leasing process and thus possesses regulatory authority over managing the oil or gas subject to the prospective leasehold. *Cf.* 605 U.S. at 175 ("[T]he Board possesses no authority or control over potential future oil and gas development in the Basin." (citation modified)); *id.* at 195 (Sotomayor, J., concurring in judgment) ("[T]he Board cannot control the products transported on the proposed rail line." (citation modified)). As such, under a rule of reason, the BLM must analyze the GHG emissions that would result because it manages and exerts authority over oil or gas development and extraction, which is the direct result of this lease sale.

The BLM must ensure that it fully considers not only the GHG emissions from prospective wells drilled on the leases sold at this lease sale—and the climate change impacts of those GHG emissions—but also the cumulative impacts from other federal lease sales in the state, region, and nation, as well as impacts of GHG emissions from non-federal sources. The

(10th Cir. 2017); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 550 (8th Cir. 2003); *Wilderness Soc'y*, 2024 WL 1241906, at *24 (explaining that the BLM cannot "overlook[] what is widely regarded as the most pressing environmental threat facing the world today"); *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 63 (D.D.C. 2019) (invalidating nine BLM NEPA analyses in support of oil and gas lease sales because "BLM did not take a hard look at drilling-related and downstream GHG emissions from the leased parcels and, it failed to sufficiently compare those emissions to regional and national emissions").

BLM must consider GHG emissions in the aggregate along with other foreseeable emissions. Such analysis is necessary to meet the cumulative impacts demands of NEPA.

The indirect and cumulative impacts must be given meaningful context—including within carbon budgets—rather than being simply dismissed as insignificant compared to national or global total GHG emissions. *See, e.g.*, *WildEarth Guardians*, 368 F. Supp. 3d at 77 (finding that the "BLM's refusal to quantify GHG emissions rendered the EAs' cumulative impacts analyses inadequate" because it failed to "quantify the emissions from each leasing decision—past, present, or reasonably foreseeable—and compare those emissions to regional and national emissions, setting forth with reasonable specificity the cumulative effect of the leasing decision at issue"). "Without establishing the baseline conditions . . . there is simply no way to determine what effect the proposed [action] will have on the environment and, consequently, no way to comply with NEPA." *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988). Excluding climate change effects from the environmental baseline ignores the reality of the already deteriorating, climate-impacted state of the resources, ecosystems, human communities, and structures that will be affected. The BLM's climate effects analysis "must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum." *Grand Canyon Trust v. Fed. Aviation Admin.*, 290 F.3d 339, 342 (D.C. Cir. 2002).[15] In addition, the BLM must make a significance determination "that is grounded in the record and available scientific evidence" and does not just summarily dismiss the impacts as minor relative to other global sources of GHGs. *350 Montana*, 50 F.4th at 1266–70.

a. The BLM must quantify climate impacts with a tool such as the social cost of greenhouse gases.

In analyzing these impacts, the BLM must consider the full lifecycle of development activities and GHG emissions that are reasonably foreseeable under a BLM oil and gas lease. The social cost of greenhouse gases (SC-GHG) is a useful tool to aid in this analysis. Courts have rejected agency refusals to properly quantify the impact of GHG emissions and have approved of social cost estimates as an available tool to do so. *See, e.g.*, *Mont. Env't Info. Ctr. v. U.S. Off. of Surface Mining*, 274 F. Supp. 3d 1074, 1094–99 (D. Mont. 2017) (rejecting agency's failure to incorporate the federal social cost of carbon (SCC) estimates into its cost-benefit

[15] *See also Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 973–74 (9th Cir. 2006) (holding the agency's cumulative impacts analysis insufficient based on failure to discuss other mining projects in the region); *Kern v. BLM*, 284 F.3d 1062, 1078 (9th Cir. 2002) (holding that the BLM arbitrarily failed to include cumulative impacts analysis of reasonably foreseeable future timber sales in the same district as the current sale); *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214 (9th Cir. 1998) (holding a Forest Service EA inadequate where it analyzed impacts of only one of five concurrent logging projects in the same region); *San Juan Citizens All. v. BLM*, 326 F. Supp. 3d 1227, 1248 (D.N.M. 2018) (finding that the BLM failed to take a hard look at the cumulative impact of GHG emissions, "concluding that an agency 'must provide the necessary contextual information about the cumulative and incremental environmental impacts' because even though the impact might be 'individually minor,' its impact together with the impacts of other actions would be 'collectively significant'" (quoting *Ctr. for Biological Diversity*, 538 F.3d at 1217)).

analysis of a proposed mine expansion); *High Country Conservation Advocs. v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190–93 (D. Colo. 2014) (rejecting the agency's post-hoc attempts to justify not using SCC estimates); *Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 679 (7th Cir. 2016) (holding that SCC estimates used to date by agencies were reasonable).[16] While "NEPA does not require agencies to perform a full cost-benefit analysis . . . this does not support a decision to overlook GHGs and their corresponding social costs entirely." *Wilderness Soc'y*, 2024 WL 1241906, at *24–25. Moreover, it is "arbitrary and capricious to quantify the *benefits* . . . and then explain that a similar analysis of the *costs* was impossible when such an analysis was in fact possible." *High Country Conservation Advocs. v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014) (emphases in original).

Merely listing the tons of GHGs emitted by a project is insufficient under NEPA if the agency "does not reveal the meaning of those impacts in terms of human health or other environmental values," since "it is not releases of [pollution] that Congress wanted disclosed" but rather "the effects, or environmental significance, of those releases." *NRDC v. Nuclear Reg. Comm'n*, 685 F.2d 459, 486–87 (D.C. Cir. 1982), *rev'd on other grounds*, *Balt. Gas & Elec. Co.*, 462 U.S. at 106–07. In other words, the actual effects and relevant factors that must be analyzed and disclosed to the public are the incremental climate impacts caused by a project's GHG emissions, including: property lost or damaged by sea-level rise; increases in energy demand; lost agricultural productivity; and human health impacts, such as cardiovascular and respiratory mortality from heat-related illnesses, changing disease vectors like malaria and dengue fever, increased diarrhea, and changes in associated pollution that cause or exacerbate other health conditions. These impacts are all included to some degree in the different assessment models included in SC-GHG estimates. *See, e.g.*, ENV'T PROT. AGENCY, REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES, 45-61 (2023) [Ex. 24] [hereinafter GREENHOUSE GAS REPORT].

Even in combination with a general, qualitative discussion of climate change, an agency that only calculates the tons of GHGs emitted fails to meaningfully assess the actual incremental impacts to property, human health, productivity, and so forth.[17] An agency therefore falls short of

[16] An agency may not assert that the social cost of fossil fuel development is zero. *See High Country Conservation Advocs.*, 52 F. Supp. 3d at 1192 ("[B]y deciding not to quantify the costs at all, the agencies effectively zeroed out the cost in its quantitative analysis."); *Ctr. for Biological Diversity*, 538 F.3d at 1200 (holding that while there is a range potential social cost figures, "the value of carbon emissions reduction is certainly not zero").

[17] *See Ctr. for Biological Diversity*, 538 F.3d at 1216–17 (rejecting analysis under NEPA when agency "quantifie[d] the expected amount of [carbon dioxide] emitted" but failed to "evaluate the incremental impact that these emissions will have on climate change or on the environment more generally," noting that this approach impermissibly failed to "discuss the *actual* environmental effects resulting from those emissions" or "provide the necessary contextual information about the cumulative and incremental environmental impacts" that NEPA requires (emphasis in original) (internal quotation marks omitted)); *California v. Bernhardt*, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020) ("[F]raming sources as less than 1% of global emissions is dishonest and a prescription for climate disaster[.] Mere quantification [of greenhouse gas emissions] is insufficient." (citation omitted)); *Mont. Env't Info. Ctr. v. U.S. Off. of Surface Mining*, 274 F. Supp. 3d 1074, 1096–99 (D. Mont. 2017) (rejecting the argument that the agency

its legal obligations and statutory objectives by disclosing only volume estimates. To take an analogous example, courts have held that just quantifying the acres of timber to be harvested or the miles of road to be constructed does not constitute a "description of *actual* environmental effects," even when paired with a qualitative "list of environmental concerns such as air quality, water quality, and endangered species," when the agency fails to assess "the degree that each factor will be impacted." *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995 (9th Cir. 2004) (emphasis in original) ("A calculation of the total number of acres to be harvested in the watershed is . . . not a sufficient description of the actual environmental effects that can be expected from logging those acres."); *see also Or. Nat. Res. Council v. BLM*, 470 F.3d 818, 822–23 (9th Cir. 2006).

Monetizing climate damages using the SC-GHG helps the agency assess the incremental and actual effects of emissions on the public interest. SC-GHG calculates how the emission of an additional unit of GHG affects atmospheric greenhouse concentrations, how that change in atmospheric concentrations changes temperature, and how that change in temperature incrementally contributes to economic damages, including property damages, energy demand effects, lost agricultural productivity, human mortality and morbidity, lost ecosystem services and non-market amenities, among other impacts. *See, e.g.*, INTERAGENCY WORKING GRP. ON SOC. COST OF CARBON, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS (Feb. 2010) [Ex. 25]. The SC-GHG captures the factors that actually affect public welfare and assesses the degree of impact to each factor, in ways that merely estimating the volume of emissions cannot.

The Interior Department previously "adopt[ed] . . . [the EPA's 2023] estimates of the social cost as the best available science." 90 Fed. Reg. 4779, 4779 (Jan. 16, 2025); *see* U.S. DEP'T OF THE INTERIOR, INFORMATIONAL MEMORANDUM: DOI COMPARISON OF AVAILABLE ESTIMATES OF SOCIAL COST OF GREENHOUSE GASES (SC-GHG), 1, 8 (Oct. 16, 2024) [Ex. 26] (directing the BLM to "adopt the EPA's 2023 estimates of the Social Cost of Greenhouse Gases (SC-GHG) as the best available science (as of September 30, 2024)"). For years and over multiple projects, the BLM has quantified climate impacts, primarily relying on well-supported SC-GHG estimates. *See, e.g.*, BLM WYOMING, ENVIRONMENTAL ASSESSMENT, DOI-BLM-WY-0000-2023-0001-EA, 2023 SECOND QUARTER COMPETITIVE LEASE SALE, 60 (2023); BLM PECOS DISTRICT OFFICE, OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, CHAVES AND LEA COUNTIES, NEW MEXICO, JUNE 2022, DOI-BLM-NM-P000-2021-0001-EA, 76-77 (2022); *see also* PETER HOWARD ET AL., INSTITUTE FOR POLICY INTEGRITY, ZERO RATIONALITY: WHAT OIRA'S NEW MEMORANDUM GETS WRONG ON MONETIZING CLIMATE IMPACTS, 2-3 (May 2025)

"reasonably considered the impact of greenhouse gas emissions by quantifying the emissions which would be released if the [coal] mine expansion is approved, and comparing that amount to the net emissions of the United States"); *High Country Conservation Advocs. v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014) ("Beyond quantifying the amount of emissions relative to state and national emissions and giving general discussion to the impacts of global climate change, [the agencies] did not discuss the impacts caused by these emissions.").

[Ex. 27] [hereinafter ZERO RATIONALITY] (noting that "[f]ederal agencies have used SC-GHG estimates for more than 15 years," first using the estimates developed in 2010 by the Interagency Working Group on the Social Cost of Greenhouse Gases, and then using EPA's 2023 estimates).

The BLM is now omitting SC-GHG from its environmental analysis, without replacing it with any other adequate quantitative evaluation of the costs of emissions. *See e.g.*, BLM WYOMING, RESPONSE TO PUBLIC COMMENTS: 2026 SECOND QUARTER COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, DOI-BLM-WY-0000-2026-0001-EA, 62-66 (2026); BLM CARLSBAD FIELD OFFICE, OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, QUARTER 1 2025, DOI-BLM-NM-P020-2024-0740-EA, 87-88 (Feb. 2025) (omitting its quantification of climate impacts in its final EA, despite having included it in the draft EA). But the BLM failed to provide proper justification for changing its position. *Cf. FCC v. Fox TV Stations, Inc.*, 556 U.S. 502, 515 (2009) (holding that an agency must provide "good reasons" for a change in position and must provide "a more detailed justification" when a "new policy rests upon factual findings that contradict those which underlay [an agency's] prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account").

The BLM has used the same or similar justifications across lease sales to rationalize its omission of this quantification, all of which fall flat.[18] First, the BLM asserts that "NEPA does not require agencies to prepare SCC or SC-GHG estimates or cost-benefit analyses." *See e.g.*, BLM, WYOMING RESPONSE TO PUBLIC COMMENTS: 2026 SECOND QUARTER COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT DOI-BLM-WY-0000-2026-0001-EA, 66 (2026); BLM, CARLSBAD FIELD OFFICE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, QUARTER 1 2025 DOI-BLM-NM-P020-2024-0740-EA, 88 (Feb. 2025). This contention does not address the issue of the agency changing position nor does it address the arbitrariness of quantifying the benefits of leasing without quantifying the costs. Second, the BLM maintains that "the full social benefits of carbon-based energy production have not been monetized, and quantifying only the costs of GHG emissions, but not the benefits, would yield information that is both potentially inaccurate and not useful," a confusing and misleading statement given that the agency's analysis often quantifies benefits but not costs. *See e.g.*, BLM FARMINGTON FIELD OFFICE, COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, NEW MEXICO QUARTER 2 2026 DOI-BLM-NM-F010-2026-0001-EA, D-9, E-34 to E-36 (Mar. 2026). And third, the agency states that "costs attributed to GHGs are often so variable and uncertain that they are unhelpful for BLM's analysis." *See e.g.*, BLM, WYOMING RESPONSE TO PUBLIC COMMENTS: 2026 SECOND QUARTER COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT DOI-BLM-WY-0000-2026-0001-EA, 66 (2026); BLM,

[18] The Office of Information and Regulatory Affairs' May 5, 2025, memorandum directing agencies to minimize consideration of climate impacts likewise contains deeply flawed reasoning that cannot support failure to use SC-GHG. *See* EXEC. OFF. OF THE PRESIDENT, OFF. OF MGMT. & BUDGET, MEMORANDUM M-25-27, MEMORANDUM FOR REGULATORY POLICY OFFICERS AT DEPARTMENTS AND AGENCIES AND MANAGING AND EXECUTIVE DIRECTORS OF COMMISSIONS AND BOARDS RE: GUIDANCE IMPLEMENTING SECTION 6 OF EXECUTIVE ORDER 14154, ENTITLED "UNLEASHING AMERICAN ENERGY" (May 5, 2025).

CARLSBAD FIELD OFFICE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, QUARTER 1 2025 DOI-BLM-NM-P020-2024-0740-EA, 88 (Feb. 2025).

This third contention, with no reference or explanation to support it, is insufficient to justify a change in position. Contrary to the BLM's assertions, the tool's estimates are based on nearly two decades of extensive expert development and peer review. *See* ZERO RATIONALITY at 1. The Environmental Protection Agency's (EPA's) 2023 SC-GHG report underwent public comment and peer review by eminently qualified experts. *See* ENV'T PROT. AGENCY, DETAILS OF EXTERNAL PEER REVIEW PANEL PROCESS FOR THE REVIEW OF EPA'S "REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES," 2-4 (2023) [Ex. 28] (listing peer reviewers). EPA valued climate impacts using the best available scientific information, relying on three state-of-the-art damage functions from leading climate economists and research laboratories: the Climate Impact Lab with experts from the University of Chicago and the University of California, Berkeley among other institutions; the Resources for the Future Social Cost of Carbon Initiative in collaboration with dozens of researchers from private and public institutions across the globe; and a meta-analysis from Dr. Thomas Sterner and Dr. Peter Howard that integrates and combines many other published estimates. *See* GREENHOUSE GAS REPORT at 47, 52. Collectively, these three damage functions capture various market and non-market damages caused by climate change, including impacts on health, energy, labor productivity, agriculture, and coastal regions. *Id.* at 52 tbl.2.3.1, 55 tbl.2.3.2. The choice to combine three independently constructed damage functions helped to ensure that analysis was rigorous and to safeguard against overreliance on any one methodology. Subsequently, numerous federal agencies (including the Department of the Interior, as noted above) assessed EPA's updated estimates and determined that the updated estimates reflect the best available science on monetizing GHG emissions. *See* OFF. OF MGMT. & BUDGET, REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND AGENCY COMPLIANCE WITH THE UNFUNDED MANDATES REFORM ACT: FISCAL YEAR 2023, 21-22 & n.52 (2024) [Ex. 29], https://bidenwhitehouse.archives.gov/wp-content/uploads/2025/01/FY23-Benefit-Cost-Report.pdf.

Moreover, federal courts have repeatedly recognized that agency analysis necessitates making predictive judgments under uncertain conditions, explaining that "[r]egulators by nature work under conditions of serious uncertainty," *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1221 (D.C. Cir. 2004), and "are often called upon to confront difficult administrative problems armed with imperfect data." *Mont. Wilderness Ass'n v. McAllister*, 666 F.3d 549, 559 (9th Cir. 2011). As the Ninth Circuit has explained, "the proper response" to the problem of uncertain information is not for the agency to ignore the issue but rather "for the [agency] to do the best it can with the data it has." *Id.*

Experts have also accounted for uncertainty in SC-GHG estimation in rigorous ways. In addition to applying three damage models developed by different experts to develop its SC-GHG

estimates, as indicated above, EPA incorporated a range of probabilistic socioeconomic and emissions scenarios. *See* GREENHOUSE GAS REPORT at 21–33. Further, to address uncertainty and how it compounds throughout the different modules, EPA used a Monte Carlo simulation-based approach. *See id.* at 2. And while this approach produced a range of estimates, EPA provided average estimates at different discount rates including a "central" discount rate of 2%. *See id.* at 12. Accordingly, EPA both rigorously accounted for uncertainty and provided a single central SC-GHG estimate that regulators can apply, and the Interagency Working Group on the Social Cost of Greenhouse Gases, in its estimates, did so as well. *See* ZERO RATIONALITY at 3–4.

Failing to properly quantify climate impacts in this process would thus be arbitrary and capricious.

Finally, NEPA requires agencies to "identify and develop methods and procedures . . . which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations." 42 U.S.C. § 4332(2)(B). A livable climate is a "presently unquantified environmental amenit[y]." By neglecting to use SC-GHG, the BLM would be failing to "identify and develop methods and procedures" to ensure that this "presently unquantified environmental . . . value" is "given appropriate consideration in decisionmaking."

v. The BLM must take a hard look at impacts to groundwater from well construction practices and hydraulic fracturing.

NEPA and the APA require the BLM to thoroughly evaluate the impact of oil and gas development on groundwater before issuing leases. *See WildEarth Guardians v. BLM*, 457 F. Supp. 3d at 886–89; *see also* 42 U.S.C § 4321 (describing the underlying purpose of NEPA as including "stimulat[ing] the health and welfare of man"); *id.* § 4331(b) (requiring agencies to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings"); *State Farm*, 463 U.S. at 43 (holding that an agency acts arbitrarily and capriciously when it "fail[s] to consider an important aspect of the problem").

Groundwater is a critical resource that supplies many communities—particularly rural ones—with drinking water. Protecting these resources is imperative for protecting human health and the environment, especially because groundwater will become more important as increased aridity and higher temperatures due to climate change alter water use, quality, and availability. The EPA has acknowledged that future access to drinking water "will likely be affected by changes in climate and water use" and that existing drinking water resources "may not be sufficient in some locations to meet future demand," necessitating increased reliance on "groundwater . . . to meet the demand for drinking water." U.S. ENV'T PROT. AGENCY, HYDRAULIC FRACTURING FOR OIL AND GAS: IMPACTS FROM THE HYDRAULIC FRACTURING WATER CYCLE ON DRINKING WATER RESOURCES IN THE UNITED STATES, EPA/600/R-16/236F, 2-1 (Dec. 2016) [Ex. 30], https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990

[hereinafter HYDRAULIC FRACTURING REPORT]. As a result, the BLM must protect aquifers currently being used for drinking water as well as any aquifers that could serve as drinking water sources in coming decades, including aquifers that are deeper and higher salinity than those commonly utilized today.

Oil and gas drilling typically involves boring wells to depths thousands of feet below the surface, often through or just above groundwater aquifers. Without proper oil or gas well construction and vertical separation between aquifers and the production zone, oil and gas development can contaminate underground sources of water. *See* HYDRAULIC FRACTURING REPORT at ES-28 to ES-33; Gayathri Vaidyanathan, *Fracking Can Contaminate Drinking Water*, SCI. AM. (Apr. 4, 2016) [Ex. 31], https://www.scientificamerican.com/article/fracking-can-contaminate-drinking-water/; Dominic C. DiGiulio & Robert A. Jackson, *Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming Field*, 50 ENV'T SCI. & TECH. 4524, 4524-36 (2016) [Ex. 32] [hereinafter DiGiulio 2016]; Tetiana Cantlay et al., *Contamination of Private Water Supplies After a Well Communication Event (Frac-Out) in Southwest Pennsylvania*, NATURE (2025), [Ex. 33], https://www.nature.com/articles/s41598-025-16976-5.epdf.

In practice, usable water lacks adequate protection. Federal rules and regulations do not provide specific directions for the BLM and operators on how to protect usable water. As a result, agency regulations, like the requirement at 43 C.F.R. § 3172.7 (formerly Onshore Order No. 2) to "protect and/or isolate all usable water zones," are inconsistently applied and often disregarded. *See* BLM, REGULATORY IMPACT ANALYSIS FOR THE FINAL RULE TO RESCIND THE 2015 HYDRAULIC FRACTURING RULE, 44 (Dec. 2017), https://downloads.regulations.gov/BLM-2017-0001-0464/content.pdf (removing the Usable Water Requirement in the 2015 Final Rule, which "provided more detail about what would be considered isolation of usable water zones"); *Wilderness Soc'y*, 2024 WL 1241906, at *8 ("Beyond the general directive to protect usable water sources, however, Onshore Order No. 2 does not specify what exactly operators must do to ensure compliance. Nor does it expressly require operators to test underground water sources to identify all usable water zones before drilling can commence. The Bureau tried to close this regulatory gap in 2015 by imposing new standards . . . but it later reversed course in 2017 when it rescinded the 2015 Rule . . . .").

In fact, industry has admitted that it often does not protect usable water. The Western Energy Alliance and the Independent Petroleum Association of America told the BLM that the "existing practice for locating and protecting usable water" does not measure the "numerical quality of water" underlying drilling locations and therefore does not consider whether all usable water would be protected during drilling. Comment from Western Energy Alliance and Independent Petroleum Association of America on RIN 1004-AE52, Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule (82 Fed. Reg. 34,464), 59 (Sept. 25, 2017), https://www.regulations.gov/document?D=BLM-2017-0001-0412. Reports

studying existing federal oil and gas wells in Wyoming and Montana confirm these industry admissions that well casing and cementing practices do not always protect underground sources of usable drinking water. *See* REBECCA TISHERMAN ET AL., PSE HEALTH ENERGY, EXAMINATION OF GROUNDWATER RESOURCES IN AREAS OF WYOMING PROPOSED FOR THE JUNE 2022 BLM LEASE SALE (May 11, 2022) [hereinafter TISHERMAN REPORT] [Ex. 34]; DOMINIC DIGIULIO, PSE HEALTH ENERGY, EXAMINATION OF GROUNDWATER RESOURCES IN AREAS OF MONTANA PROPOSED FOR THE MARCH 2018 BLM LEASE SALE (Jan. 10, 2018) [hereinafter DIGIULIO REPORT] [Ex. 35]. And a study of hydraulic fracturing in Pavillion, Wyoming, indicated that oil and gas drilling had contaminated underground sources of drinking water in that area due to lack of vertical separation between the aquifer and target formation. *See* DiGiulio 2016 at 4532. Indeed, courts have invalidated BLM lease sales in recent years due to the agency's failure to grapple with this evidence. *See Wilderness Soc'y*, 2024 WL 1241906, at *8–11; *WildEarth Guardians*, 457 F. Supp. 3d at 886–89.

Given these risks to a critical resource, the BLM must evaluate potential groundwater impairment from any lease parcels it proposes to offer.

First, as a threshold matter, the BLM must provide a detailed accounting of all groundwater resources that could be impacted in the areas considered for leasing, including usable aquifers that are not currently being used as a drinking water supply. The accounting must include, at minimum, all aquifers with up to 10,000 parts per million total dissolved solids (ppm TDS) (the standard for usable water and underground sources of drinking water). This data is readily available from the USGS and other resources, *see* TISHERMAN REPORT at 4–5; DIGIULIO REPORT at 1–2, and the BLM cannot substitute existing drinking water wells or other inadequate proxies for a full accounting of all potentially usable groundwater resources in the area. The BLM must provide an explanation of the impacts to usable water zones where fracking is already occurring (even if those zones are not currently being used as a drinking water source), and how that fracking may degrade the quality of groundwater.

Second, the BLM must use that accounting to assess how new oil and gas wells might impact groundwater resources. That evaluation must assess the sufficiency of protective measures that will be employed during all phases of the operation, including the depth of surface casing, the extent to which deeper areas of the wellbore are both cased and cemented (especially across zones containing groundwater with less than 10,000 ppm TDS), and vertical separation between aquifers and the oil and gas formations likely to be hydraulically fractured. In assessing these protections, the BLM cannot presume that state and federal regulations will protect groundwater, because of the shortcomings and industry noncompliance described above.

Third, the BLM may not defer its analysis until the APD stage because information is readily available at the lease sale stage to evaluate groundwater risks. *See WildEarth Guardians*, 457 F. Supp. 3d at 888. As noted above, data is available to identify the presence, depth, quantity, and quality of aquifers in the area of proposed leasing. The BLM can look to nearby existing oil

and gas wells for a forecast of the likely depth of new wells and whether those wells present concerns over adequate casing and cementing. A failure to conduct such an analysis would violate NEPA. *See id.*

vi. The BLM must properly analyze the impacts of venting, flaring, and leaks that would result from this lease sale.

Venting (the release of natural gas), flaring (the burning off of natural gas), and leaks during oil and gas production are a major cause of methane emissions, a potent GHG. Based on the BLM's aforementioned obligation to consider GHG emissions at the lease sale stage, the BLM must take the requisite hard look at the impacts of methane emissions that will result from development of and production on these lease parcels. *See* discussion *supra* Section II.A.iv; *see also, e.g.*, *W. Org. of Res. Councils v. BLM*, No. CV 16-21-GF-BMM, 2018 WL 1475470, at *15, 18 (D. Mont. Mar. 26, 2018) (at the land use planning stage, finding that the BLM violated NEPA where it failed to acknowledge evolving science to properly quantify the magnitude of methane pollution of future leasing/development).

In 2019 alone, venting, flaring, and leaks accounted for over 160 billion cubic feet of methane. OLIVIA GRIOT ET AL., SYNAPSE ENERGY ECONOMICS INC., ONSHORE NATURAL GAS OPERATIONS ON FEDERAL AND TRIBAL LANDS IN THE UNITED STATES: ANALYSIS OF EMISSIONS AND LOST REVENUE, 3 (Jan. 20, 2023) [hereinafter GRIOT REPORT] [EX. 36], https://blogs.edf.org/energyexchange/files/2023/01/EMBARGOED_EDF-TCS_Public_Lands_Analysis.pdf. A study conducted in 2020 found that, in the Permian Basin, companies lose 3.5% of the gas that they produce and that flares malfunction about 10% of the time, venting methane directly into the atmosphere. ENV'T DEF. FUND, PERMIANMAP FINAL REPORT, 9 (2021) [Ex. 37]. Researchers noted that the oil and gas industry is one of the world's largest sources of methane emissions. *Id.* at 4.

Venting, flaring, and leaks have additional implications, including on the economy and on public health. The wasted gas leads to millions in lost revenue every year. An analysis conducted by Synapse Energy Economics calculated the economic value of gas lost in 2019 due to venting, flaring, and leaks on federal and Tribal lands, and found a loss of $63.6 million in royalties, $18.8 million in state revenue from taxes (from the top six states), and $509 million in lost potential sales revenue. GRIOT REPORT at 3.

Venting and flaring also has significant health impacts. Proximity to flaring has been linked to shorter gestation, preterm birth, and lower birthweight. *See* Lara J. Cushing et al., *Flaring from Unconventional Oil and Gas Development and Birth Outcomes in the Eagle Ford Shale in South Texas*, 128 ENV'T HEALTH PERSPECTIVES 077003-1, 077003-1 to 077003-8 (2020) [Ex. 38], https://pubmed.ncbi.nlm.nih.gov/32673511/. A study published in 2024 estimates that emissions from venting and flaring cause over $7.4 billion in health damages, 710 premature deaths, and 73,000 asthma exacerbations among children annually. Huy Tran et al.,

Air Quality and Health Impacts of Onshore Oil and Gas Flaring and Venting Activities Estimated Using Refined Satellite-Based Emissions, 8 GEOHEALTH 1, 1 (Mar. 6, 2024) [Ex. 39], https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023GH000938. Given that oil and gas wells are disproportionately sited near historically marginalized populations, these communities suffer from these and other adverse health impacts at a disproportionate rate. *See* Jeremy Proville et al., *The Demographic Characteristics of Populations Living Near Oil and Gas Wells in the USA*, 44 POPULATION & ENV'T 1, 10-12 (June 17, 2022) [Ex. 40], https://doi.org/10.1007/s11111-022-00403-2. Indeed, the aforementioned 2024 study found that of the early deaths caused by flaring and venting, one in three occurred in low-income census tracts, 30% occurred in Hispanic/Latino census tracts, and 10% occurred in predominantly Native census tracts. Huy Tran, *Air Quality and Health Impacts of Onshore Oil and Gas Flaring and Venting Activities Estimated Using Refined Satellite-Based Emissions* at 11. Similar proportions of impact were seen for childhood asthma exacerbations among these census tracts, with a slightly larger proportion of impact in Hispanic/Latino tracts (40%). *Id.*

The BLM should not issue additional oil and gas leases until the agency addresses the issue of venting and flaring, and the agency must adequately grapple with these impacts pursuant to its obligations under NEPA.

vii. The BLM must analyze the impacts of oil and gas leasing on public health.

Protecting public health is fundamental to the underlying purpose of NEPA, which includes "stimulat[ing] the health and welfare of man" and mandates that agencies consider the degree to which their proposed actions affect public health or safety. 42 U.S.C § 4321. NEPA requires federal agencies "to use all practicable means, consistent with other essential considerations of national policy" to "assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings." *Id.* § 4331(b). To protect public health and promote informed agency decision-making, transparency, and public participation, NEPA imposes "action-forcing procedures . . . requir[ing] that agencies take a hard look at environmental consequences," *Robertson*, 490 U.S. at 350, which includes public health.

Oil and gas development poses myriad public health concerns. An extensive and ever-growing body of peer-reviewed research has shown what people living near oil and gas operations already know firsthand: proximity to drilling operations—including hydraulic fracturing—and other oil and gas facilities is linked to adverse health risks and impacts. These risks and impacts include, but are not limited to:

- Reproductive harms, including birth defects, low birth weight, preterm births, miscarriages, and infant mortality;

- Respiratory health effects, including asthma, lung disease, breathing difficulty, and, most recently, increased vulnerability to COVID-19;
- Eye, skin, and throat irritation and rashes;
- Cardiovascular effects, including higher blood pressure and other indicators of, or precursors to, heart disease;
- Possible disruption of the endocrine system (a system of glands producing hormones that regulate a variety of functions in the body, including metabolism, growth and development, reproduction, sleep, and mood);
- Cancer, including lung cancer, childhood cancers such as leukemia, and other types of cancer;
- Motor vehicle injuries and fatalities, and other health and safety risks associated with increased vehicle traffic (and the air pollutants it emits) from oil and gas development;
- Injuries and fatalities from explosions, fires, spills, and leaks; and
- Trauma and psychological stress.

See ZOTERO, PHYSICIANS, SCIENTISTS, AND ENGINEERS FOR HEALTHY ENERGY, REPOSITORY FOR OIL AND GAS ENERGY RESEARCH (ROGER) DATABASE, HEALTH, https://www.zotero.org/groups/248773/repository_for_oil_and_gas_energy_research_roger_-_pse_healthy_energy/collections/SASKSKDG (last visited Aug. 27, 2026). The ROGER database contains the best available scientific information, which shows the voluminous public health risks and impacts associated with oil and gas activities that result from the BLM's leasing decisions. *See, e.g.*, Longxiang Li et al., *Exposure to Unconventional Oil and Gas Development and All-Cause Mortality in Medicare Beneficiaries*, 7 NATURE ENERGY 177, 177–85 (Jan. 27, 2022) [Ex. 41], https://pmc.ncbi.nlm.nih.gov/articles/PMC9004666/; Zoya Banan & Jeremy M. Gernand, *Emissions of Particulate Matter Due to Marcellus Shale Gas Development in Pennsylvania: Mapping the Implications*, 148 ENERGY POLICY 1, 1–10 (Jan. 2021) [Ex. 42]; Katie Jo Black et al., *Economic, Environmental, and Health Impacts of the Fracking Boom*, 13 ANN. REV. OF RES. ECON. 311, 311–34 (Oct. 2021) [Ex. 43], https://www.annualreviews.org/content/journals/10.1146/annurev-resource-110320-092648; Roxana Z. Witter et al., *Occupational Exposures in the Oil and Gas Extraction Industry: State of the Science and Research Recommendations*, 57 AM. J. OF INDUS. MED. 847, 847–56 (Mar. 14, 2014) [Ex. 44].

There is a "robust" collection of studies specific to impacts to infant health—"including preterm births, low birth weight, small-for-gestational age births, and congenital malformations"—an effect that can be seen within a large radius of residences, potentially up to

10 miles. SETH B.C. SHONKOFF ET AL., PSE HEALTH ENERGY, PUBLIC HEALTH DIMENSIONS OF UPSTREAM OIL AND GAS DEVELOPMENT IN CALIFORNIA: SCIENTIFIC ANALYSIS AND SYNTHESIS TO INFORM SCIENCE-POLICY DECISION MAKING, 3-16 to 3-17 (June 21, 2024) [Exs. 45a & 45b], https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report_20240621.pdf ("We have a high level of certainty in the findings from the body of epidemiological studies for perinatal . . . health outcomes because of the consistency of results across multiple studies conducted using different methodologies, in different locations, with diverse populations, and during different time periods."); *see* Lisa M. McKenzie et al., *Birth Outcomes and Maternal Resident Proximity to Natural Gas Development in Rural Colorado*, 122 ENV'T HEALTH PERSPECTIVES 412, 414 (2014) [Ex. 46], https://pmc.ncbi.nlm.nih.gov/articles/PMC3984231/ (finding that babies whose mothers lived within 10 miles of multiple oil and gas wells were 30% more likely to be born with heart defects than babies born to mothers who did not live close to oil and gas wells); *see also, e.g.*, Janet Currie et al., *Hydraulic Fracturing and Infant Health: New Evidence from Pennsylvania*, 3 SCI. ADVANCES 1, 1–9 (Dec. 13, 2017) [Ex. 47], https://www.science.org/doi/10.1126/sciadv.1603021?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed (finding evidence of significant decline in birth weight where there was in utero exposure to fracking sites within 3 km of a mother's residence). Another well studied health impact among residents living near drilling and fracking operations is on respiratory health, including asthma, reduced lung function, and asthma hospitalization. SETH B.C. SHONKOFF, PUBLIC HEALTH DIMENSIONS OF UPSTREAM OIL AND GAS DEVELOPMENT IN CALIFORNIA at 3-17 to 3-18.

Another recent study shows the negative implications of fracking and drilling near people's homes on mental health. In particular, the study found two key institutional barriers driving negative mental health impacts for people living near unconventional oil and gas production, namely: "1) uncertainty, due to inaccessible, untransparent information about environmental and public health risks and 2) powerlessness to meaningfully impact regulatory or zoning processes." Stephanie A. Malin, *Depressed Democracy, Environmental Injustice: Exploring the Negative Mental Health Implications of Unconventional Oil & Gas Production in the United States*, 70 ENERGY RSCH. & SOCIAL SCI. 1, 2 (Sept. 11, 2020) [Ex. 48], https://pmc.ncbi.nlm.nih.gov/articles/PMC7486049/. In turn, "these institutional barriers make [unconventional oil and gas] production a chronic stressor – which can be more insidious, negative, and, significantly, can generate longer-term mental health impacts." *Id.*

The BLM must take a hard look at the adverse health risks and effects associated with proximity to oil and gas activity and facilities and disclose them to the public. The agency should disclose, at minimum, how many residences are within approximately 1, 5, and 10 miles of the proposed leases.

The BLM must take a hard look not only at direct health impacts and proximity-related health impacts of oil and gas development, but also at cumulative health risks and impacts. Cumulative health risks and impacts can arise not only from multiple pollutant exposures, and cumulative pollution exposures over time, but also from compounding structural, social, and economic factors, many of which are rooted in systemic inequities and injustices. To adequately analyze human health impacts, the BLM should incorporate findings from regionally relevant health impact assessments (HIAs). An HIA is a preventative health tool that anticipates the human health impacts of new or existing development projects, programs, or policies. The overall goal of this type of assessment is to identify and minimize negative health effects of a particular action, such as oil and gas development and production.

viii. The BLM should thoroughly analyze the impacts of oil and gas leasing on environmental justice.

The BLM must analyze the lease sale's impact on environmental justice to determine whether development "will have a disproportionately adverse effect on minority and low income populations." *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 87 (4th Cir. 2020) (quoting *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 541 (8th Cir. 2003)).

Courts have repeatedly held that agencies must take a hard look at environmental justice pursuant to their obligations under NEPA and the APA. *See e.g.*, *Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs*, 255 F. Supp. 3d 101, 140 (D.D.C. 2017) ("[T]he Corps did not properly consider the environmental-justice implications of the project and thus failed to take a hard look at its environmental consequences."); *Nat'l Ass'n for Advancement of Colored People Erie Unit 2262 v. Fed. Highway Admin.*, 648 F. Supp. 3d 576, 591 (W.D. Pa. 2022) ("[C]ourts may overturn a NEPA approval where a 'bare-bones' environmental justice analysis, concluding the community would not be disproportionately harmed, violates NEPA's 'hard look' requirement."); *Coliseum Square Ass'n, Inc. v. Jackson*, 465 F.3d 215, 232 (5th Cir. 2006) ("[W]e review the agency's consideration of environmental justice issues under the APA's . . . 'arbitrary and capricious' standard."); *Latin Ams. for Social & Econ. Dev. v. Fed. Highway Admin.*, 756 F.3d 447, 465, 476–77 (6th Cir. 2014) (discussing the agency's "hard look" at environmental justice impacts).

It is particularly important to consider environmental justice implications prior to oil and gas leasing given that oil and gas wells are disproportionately sited near low-income communities and communities of color. *See* Jeremy Proville, *The Demographic Characteristics of Populations Living Near Oil and Gas Wells in the USA* at 10–12. This means that these communities suffer from the aforementioned health consequences of proximity to oil and gas development at a disproportionate rate, *see* discussion *supra* Section II.A.vii, in addition to all of the other consequences that proximity to this development can entail, including on recreation, property value, aesthetics, water quality, infrastructure strain, noise, and quality of life.

B. The BLM must consider a range of reasonable alternatives.

The BLM must evaluate a range of reasonable alternatives in the NEPA document prepared for this lease sale. *See* 42 U.S.C. 4332(2)(F) (requiring agencies to "study, develop, and describe technically and economically feasible alternatives"). The range of alternatives is the "heart" of a NEPA document because "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson*, 565 F.3d at 708; *see also California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982) (stating that the "touchstone" is whether the agency's "selection and discussion of alternatives fosters informed decision-making and informed public participation").

An environmental review offering a choice between leasing every parcel nominated and leasing nothing at all under the no-action alternative fails to present a reasonable range of alternatives. A middle-ground alternative must consider deferring at least some parcels. *Rocky Mountain Wild v. Bernhardt*, 506 F. Supp. 3d 1169, 1185–88 (D. Utah 2020) (finding that the BLM's inclusion of two "polar opposite alternatives" to "lease all or lease none" of the available parcels "fell short of NEPA's requirements"); *see also Powder River Basin Res. Council*, 2026 WL 555013, at *6–7 (finding that the "BLM violated its obligation to rigorously evaluate a reasonable range of alternatives to its proposed action" by "eliminating reduced rate of development . . . without further analysis" because "[i]t is beyond doubt that NEPA requires consideration of reasonable alternatives to a contemplated action that minimize or reduce the environmental effects of its decision").

Inclusion of middle-ground alternatives is particularly important when considering impacts to specific resources, such as big game and LPC habitat. For this lease sale, the BLM must evaluate an alternative that would defer leasing on some or all parcels in big game and LPC habitat, along with deferrals based on other use conflicts.

C. The BLM must properly evaluate mitigation measures.

NEPA requires the BLM to include a discussion of possible mitigation measures in its EA.[19] *See WildEarth Guardians v. U.S. Fish & Wildlife Serv.*, 784 F.3d 677, 698 (10th Cir. 2015) (holding that an EA must "explore mitigation measures where it acknowledges the possibility that the agency action will cause environmental harm"). The BLM must, in the following order: seek to avoid impacts, minimize impacts, and, only if those approaches are insufficient to fully mitigate the impacts, appropriately and sufficiently compensate for any remaining impacts. 43 C.F.R. § 6102.5.1.

[19] For a discussion of the 2025 Reconciliation Act's bearing on the agency's obligation to explore mitigation measures, see discussion *supra* Section I.B.

D. The BLM's NEPA analysis for this lease sale must reflect the impacts of the 2025 Reconciliation Act.

As discussed in detail above, the recently enacted 2025 Reconciliation Act contains several amendments to the statutes governing the BLM's management of oil and gas development. *See* discussion *supra* Section I.B. To the extent that the BLM believes that the 2025 Reconciliation Act removes the agency's discretion not to offer for lease or to lease areas designated as open in an RMP, and instead obligates the agency to offer for lease or to lease any open land for which it receives an industry expression of interest, the BLM's NEPA analysis must account for that fundamental change. If the BLM must lease all lands for which it has received an expression of interest, and cannot apply mitigation measures and stipulations not contained in the RMP to the leases, it must account for this in its NEPA analysis of all affected lease sales, including this lease sale. For instance, the BLM must consider important questions such as: apart from the parcels being considered for this sale, how many additional expressions of interest have been submitted that overlap with big game and LPC habitat? How many additional expressions of interest in these same areas are foreseeable in the coming years? And how would the BLM's non-discretionary response to any such expressions of interest affect its compliance with fundamental NEPA mandates for oil and gas leasing, discussed below?

As set forth above in section I.B.i, the BLM developed its underlying RMPs on the assumption that additional mitigation measures or stipulations would be developed during the leasing stages of oil and gas development. The NEPA analyses for the RMPs also rely on that assumption. *See, e.g.*, BLM FARMINGTON FIELD OFFICE, FARMINGTON PROPOSED RESOURCE MANAGEMENT PLAN AND FINAL ENVIRONMENTAL IMPACT STATEMENT VOL. I, 2-232 (Mar. 2003) ("Development in [certain] areas would be considered on a case-by-case basis and would contain site-specific mitigation stipulations.").

The BLM is obligated, at the leasing stage, to prepare a NEPA analysis that accurately reflects the agency's understanding of the oil and gas leasing process as amended by the 2025 Reconciliation Act. If the BLM understands the 2025 Reconciliation Act to limit its discretion over the leases to be offered and the mitigation measures and stipulations that subsequently can be applied to those leases, the NEPA analysis must reflect that understanding. The BLM cannot tier to the EISs for the RMPs, which all assume that the BLM has discretion to apply additional mitigation and stipulations at the leasing stage. *See, e.g.*, *Wilderness Soc'y*, 2024 WL 1241906, at *16 ("Having deferred analysis of future lease sales when preparing its RMPs, the Bureau cannot now point back to those plans in lieu of doing additional analysis."); *W. Watersheds Project*, 543 F. Supp. 3d at 991–92 (finding that the BLM's tiering to RMP EISs was insufficient to fulfill its NEPA duties given that the agency "expressly deferred . . . analysis [of site-specific impacts] to later implementing decisions"); *Dine Citizens Against Ruining Our Env't v. Bernhardt*, 923 F. 3d 831, 856–57 (10th Cir. 2019) (holding that the BLM erred in tiering EAs for APDs to flawed analysis of water use in RMP EIS); *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d at 71 (holding

that the BLM erred in tiering lease sale NEPA analyses to RMP EISs that relied on outdated data and methodologies and were too broad to support forecasts at the leasing stage).

In short, the BLM must prepare a NEPA analysis for the proposed lease sale that reflects any change in agency discretion over oil and gas development under the 2025 Reconciliation Act and that displays for the public the environmental impacts of that change.

III. The BLM may not rely on the so-called energy emergency in its oil and gas leasing.

Evidence does not support the existence of a "national energy emergency" as declared in Executive Order 14156, 90 Fed. Reg. 8,433 (Jan. 29, 2025), or the associated emergency procedures set forth in the "Alternative Arrangements for NEPA Compliance," *see* DEP'T OF THE INTERIOR, ALTERNATIVE ARRANGEMENTS FOR NEPA COMPLIANCE (Apr. 2025), https://www.doi.gov/sites/default/files/documents/2025-04/alternative-arrangements-nepa-during-national-energy-emergency-2025-04-23-signed_1.pdf; Dep't of the Interior, *Department of the Interior Implements Emergency Permitting Procedures to Strengthen Domestic Energy Supply* (Apr. 23, 2025), https://www.doi.gov/pressreleases/department-interior-implements-emergency-permitting-procedures-strengthen-domestic [collectively, "Emergency Procedures"]. For detailed discussion as to why the declaration of a national energy emergency is unjustified and why the BLM cannot use the Emergency Procedures for leasing, please refer to the May 16, 2025, letter submitted to the Secretary of the Interior, which this comment letter incorporates by reference. *See* Letter from Earthjustice et al. to Doug Burgum, Sec. of the Interior on Department of the Interior Emergency NEPA Procedures (May 16, 2025) [Ex. 49].[20]

As discussed in detail in that letter, the Emergency Procedures are unlawful for numerous reasons, including that: (1) they are premised on the baseless and unsupported declaration of a "national energy emergency"; (2) they conflict with the Department of the Interior's NEPA regulation on emergency responses; (3) they violate the Department's public participation obligations; (4) they fail to conform to the requirements for APA notice and comment rulemaking; and (5) they are inconsistent with the timeframes and participation periods mandated by the BLM's oil and gas leasing regulations. The Department must clarify that the Emergency Procedures cannot be used to approve onshore oil and gas leasing because, among other reasons, they are inconsistent with the timeframes and participation periods mandated by 43 C.F.R. § 3120.42(b). The BLM's regulation contains no exceptions and requires the BLM to provide a 30-day scoping period, 30-day comment period, a Notice of Competitive Lease Sale at least 60 calendar days prior to the lease auction, and a 30-day protest period following the posting of the

[20] As one recent example highlighting the absurdity of the so-called energy emergency, the unsold parcels from the Colorado December 2025 lease sale that were reoffered in a replacement sale mandated by the 2025 Reconciliation Act all went unsold at the replacement sale. *See* BLM COLORADO, FEDERAL OIL & GAS LEASE SALE JANUARY 8, 2026 (BLMCO-2026-Q1) SALE RESULTS SUMMARY (Jan. 9, 2026).

Notice of Competitive Lease Sale. The Emergency Procedures are inconsistent with these requirements and thus cannot be used to approve onshore oil and gas leasing.

Despite the unlawfulness of doing so, the BLM has relied on the so-called energy emergency in its oil and gas leasing process. The BLM's recently issued Instruction Memorandum (IM) 2025-028 commands the agency to offer for lease "all eligible parcels"—regardless of leasing preference designation—based on the national energy emergency declaration. BLM, INSTRUCTION MEMORANDUM 2025-028: OIL AND GAS LEASING – LAND USE PLANNING AND LEASE PARCEL REVIEWS, 5 (May 8, 2025). This IM is unlawfully directing BLM offices to offer parcels for lease irrespective of conflicts with wildlife habitat, cultural resources, or the other issues identified in the agency's leasing preference criteria, *see* 43 C.F.R. § 3120.32, premised on the unlawful national energy emergency. In accordance with this directive, the BLM has in some instances elected to move forward all eligible parcels even after designating all of them as low preference for leasing based on conflicts with conservation values. *See, e.g.*, BLM PECOS DISTRICT OFFICE, COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, NEW MEXICO QUARTER 2 2026 DOI-BLM-NM-P000-2026-0001-EA, 187–89 (Mar. 2026); BLM FARMINGTON FIELD OFFICE, COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, NEW MEXICO QUARTER 2 2026 DOI-BLM-NM-F010-2026-0001-EA, C-1 (Mar. 2026). As discussed in more depth below, to comply with the agency's obligations pursuant to its own leasing regulations and the statutory requirements of FLPMA and NEPA, the BLM must rescind this IM and disregard its invalid directives for this lease sale. *See* discussion *infra* Section IV.

IV. The BLM may not rely on IM 2025-028, which undercuts its obligations under NEPA and FLPMA.

In direct tension with its regulations, the BLM's recently released IM 2025-028 mandates that the agency move forward all "eligible" parcels for leasing regardless of their preference designation or resource conflicts. IM 2025-028 at 5. The IM's directive is unlawful not only because it roots the command to offer all parcels in the illegitimate energy emergency declaration, *see id.*; discussion *supra* Section III, but also because: (a) the IM conflicts with the BLM's legal requirements; and (b) it represents a substantive agency rule that requires, but did not receive, notice and comment under the APA.

First, the IM conflicts with the BLM's obligations under FLPMA and NEPA. The BLM's eligibility determination is general and performed before the BLM has examined what specific resource conflicts might exist for nominated parcels. The BLM cannot ascertain those conflicts until it conducts the environmental analysis and examines resource conflicts for the specific parcels at issue for a particular sale. Thus, the IM's directive to move forward all "eligible" parcels binds the agency to offering parcels for lease irrespective of their resource conflicts. This violates the BLM's obligations under FLPMA.

The IM also fails to recognize that lands must not only be "eligible" for leasing but also "available." By requiring that all lands the BLM determines are "eligible" be leased, without also determining whether acreage is "available," the IM violates both the MLA and the agency's own regulations. *See* 30 U.S.C. 226(b)(1)(A) ("Lease sales shall be held for each State where eligible lands are *available* at least quarterly and more frequently if the Secretary of the Interior determines such sales are necessary.") (emphasis added); 43 C.F.R. § 3120.11 ("All lands eligible *and available* for leasing *may be offered* for competitive auction . . . ." (emphases added)).

Indeed, the BLM has recognized the importance of retaining the ability to defer parcels after conducting its environmental review. Pursuant to the Leasing Rule, "[w]hen determining *whether* the BLM should offer lands specified in an expression of interest at lease sales, the BLM *will evaluate* the [agency's] *obligations* to manage public lands for multiple use and sustained yield and to take any action required to prevent unnecessary or undue degradation of the lands and their resources." 43 C.F.R. § 3120.32 (emphases added). During the scoping process, the BLM must evaluate what lands to offer based on the preference criteria. *See id.* This means the BLM's own regulations require the agency to retain discretion after scoping to determine whether to offer—or defer—certain lands. Otherwise, the BLM cannot fulfill its multiple use and sustained yield obligations under FLPMA or account for resource conflicts with industry-nominated parcels. The BLM discussed this need in the final Leasing Rule, explaining that it "changed the 'shall' to 'may'" in 43 C.F.R. § 3120.11, which now states that "[a]ll lands eligible and available for leasing may be offered for competitive auction." 89 Fed. Reg. at 30,945. The agency did so "to clarify that the Secretary retains the discretion to decide, *even after lands have been determined to be eligible and available*, what lands will ultimately be offered for lease." 89 Fed. Reg. at 30,945 (emphasis added).

To meet its legal mandates under FLPMA, the BLM must maintain the ability to defer lease parcels that involve resource conflicts. *See* discussion *supra* Section I. For example, as discussed above, BLM offices must retain the discretion to defer nominated parcels due to conservation conflicts such as big game habitat. *See* discussion *supra* Section I.C.

By encouraging use of Determinations of NEPA Adequacy (DNAs), *see* IM 2025-028 at 4, the IM also undercuts the BLM's mandate under NEPA to take a "hard look" at environmental impacts. The IM encourages the use of a DNA where the "proposed leasing action is adequately analyzed in an existing NEPA document and is in conformance with the approved RMP." *Id.* But, as discussed earlier, the BLM's EAs are often tiered to severely outdated RMPs. *See* discussion *supra* Section I.E.; *see also, e.g.*, BLM, PECOS DISTRICT OFFICE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, EDDY AND ROOSEVELT COUNTIES, NEW MEXICO, QUARTER 4 2025, DOI-BLM-NM-P000-2025-0001-EA, 2 (Apr. 2025) (relying on RMPs from as far back as 1997 and 1988). Relying on such outdated RMPs to justify a DNA would violate NEPA's hard-look requirement, in addition to the requirements under NEPA and FLPMA to avoid relying on old or stale environmental analysis.

The IM's directive to use a DNA and forego additional NEPA analysis is particularly problematic given that the agency has engaged in a practice of conducting abbreviated NEPA analyses that fail to meet the BLM's obligations. In some recent EAs, for example, the agency has analyzed most of the issues "in brief," rather than analyzing issues in depth for specific resource conflicts based on the scoping parcels. *See, e.g.*, BLM FARMINGTON FIELD OFFICE, COMPETITIVE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, QUARTER 2 2026 DOI-BLM-NM-F010-2026-0001-EA, 18-59 (Mar. 20, 2026) (analyzing all but three issues "in brief"); BLM PECOS DISTRICT OFFICE, OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT, NEW MEXICO, QUARTER 4 2025, DOI-BLM-NM-P000-2025-0001-EA, i–ii (Apr. 2025) (analyzing all but four issues "in brief").

Curtailing NEPA analysis at the leasing stage is undermined by the BLM's pattern and practice of deferring analysis to the permitting stage and then failing to properly conduct that analysis. For example, in the recent Colorado Third Quarter 2025 Draft EA, the BLM failed to conduct any analysis of site-specific big game impacts, deferring review to the Application for Permit to Drill (APD) stage. BLM, DRAFT ENVIRONMENTAL ASSESSMENT QUARTER 3 2025, DOI-BLM-CO-0000-2025-0001-EA, E-12 (Mar. 14, 2025) ("[I]n-depth analyses will be conducted as necessary once an action is proposed . . . ."). The BLM also deferred detailed analysis on vegetation issues. *See id.* at E-5 to E-6. In other lease sale EAs, the BLM has punted analysis of recreation impacts, BLM, ENVIRONMENTAL ASSESSMENT DOI-BLM-WY-000-2025-0001-EA, 2025 THIRD QUARTER COMPETITIVE LEASE SALE, 12 (Apr. 2025), socioeconomic impacts, *id.* at 76, and groundwater impacts, *see, e.g.*, BLM, ENVIRONMENTAL ASSESSMENT DOI-BLM-WY-000-2021-0003-EA, 2022 FIRST QUARTER COMPETITIVE LEASE SALE, 209 (Apr. 2022). The BLM "cannot escape" proper analysis at the leasing stage "by claiming that a more precise analysis is not feasible and promising a more probing review of the site-specific effects at the APD stage." *Wilderness Soc'y*, 2024 WL 1241906, at *17 (quotation marks omitted).

Moreover, during the APD process itself, the BLM regularly fails to conduct the analysis it claims must wait for the permitting stage. The BLM has a practice of issuing drilling permits without any opportunity for public comment on the underlying EA and without providing any environmental analysis on the drilling project. In fact, the BLM routinely issues APDs without first providing the EAs, decision records, or any notice that the APDs have already been approved until well after the approval date, leaving the public completely in the dark on the decision-making process.

The BLM's Automated Fluid Minerals Support System (AFMSS) has repeatedly reported approving APDs *before* the BLM has released the EAs and decision records. (AFMSS includes only basic well information and does not provide EAs or decision records, so the public has no way of understanding how or why BLM issued the approvals.) The BLM, in several instances, has then released the EAs and decision records for the APDs on its National NEPA Register site months or *years* after they were apparently approved. In one instance, the BLM posted basic well

information on its National NEPA Register website for four APDs in March 2022. In early August 2022, the website reported after the fact that three of the four APDs were *previously approved* as of August 8, 2022, otherwise providing only basic well information with no EA or decision record. *Nearly two years later*, in April 2024, BLM posted the EA and decision record on the National NEPA register website. *See* BLM, BLM National NEPA Register, DOI-BLM-CA-C060-2022-0065-EA, https://eplanning.blm.gov/Project-Home/?id=68b004d1-a7f2-f011-8407-001dd806295a (navigate to "Documents" page) (showing EA and decision record dated August 2, 2022, with the release date nearly two years later, on April 11, 2024) (last visited May 4, 2026).

This practice of releasing environmental documents on the National NEPA Register site months or even years after they were apparently approved is common. For example, in the Bakersfield Field Office, the BLM approved an APD package of 50 wells in July 2021, and did not post its DNA—which was dated November 2021—until August 2025, over *four years later*. *See* BLM, BLM National NEPA Register, DOI-BLM-CA-C060-2021-0074-DNA, https://eplanning.blm.gov/Project-Home/?id=56ddbacb-a7f2-f011-8406-001dd802fdea (navigate to "Documents" page) (last visited May 4, 2026). In addition, in the Carlsbad Field Office, the EA, FONSI, and Decision Record Documents were released on the National NEPA Register on February 8, 2024, but the documents were dated December 20, 2024. Given that this timing does not make sense, and therefore assuming that the document was incorrectly dated 2024 instead of December 2023, these documents were posted two months *after* their approval date. The posted documents have no dates or signatures authorizing the Decision Records or FONSI to verify if the opportunity to comment period took place. These nine APDs from operator COG Operating LLC are labelled as "Completed" for the EA, even with no published decision date. *See* BLM National NEPA Register, DOI-BLM-NM-P020-2024-0438-EA, https://eplanning.blm.gov/eplanning-ui/project/2030996/570 (navigate to "Documents" page) (last visited May 4, 2026). In another example out of the Carlsbad Field Office in New Mexico, on February 21, 2025, the BLM posted the EA, a Finding of No Significant Impact (FONSI), and Decision Record for APDs for 39 horizontal oil and gas wells from the operator EOG Resources, Inc. *See* BLM, BLM National NEPA Register, DOI-BLM-NM-P020-2024-1325-EA, https://eplanning.blm.gov/eplanning-ui/project/2034305/510 (navigate to "Documents" page) (last visited May 4, 2026). In this instance, the BLM released the EAs and decision records for these APDs on its National NEPA Register site the same day as the decision date. This is a prevalent issue in Wyoming as well. For example, in the Casper Field Office, on February 23, 2024, the BLM released the EA, FONSI, and Decision Record in one document for seven horizontal oil and gas wells from one multi-well pad from the operator, 1876 Resources, LLC. The decision date posted on the National NEPA Register is also February 23, 2024. *See* BLM National NEPA Register, DOI-BLM-WY-P060-2024-0034-EA, https://eplanning.blm.gov/eplanning-ui/project/2030779/570 (navigate to "Documents" page) (last visited May 4, 2026).

The agency has also approved APDs a day to a week after posting notice of the application, leaving no time for the public to learn about the application, let alone review and comment on it. *See, e.g.*, BLM, BLM National NEPA Register, DOI-BLM-CA-C060-2022-0046-EA, https://eplanning.blm.gov/Project-Home/?id=e1b104d1-a7f2-f011-8407-001dd806295a (navigate to "Documents" page) (last visited Aug. 27, 2026).

In summary, the BLM's failures to adequately review environmental impacts, in addition to its failures to provide opportunity for public comment and to release environmental documents, mean that the analyses the BLM punts from the leasing stage to the APD stage are woefully inadequate (or never take place at all). As such, the BLM cannot use a DNA for this lease sale or defer environmental analysis to the APD stage.

Moreover, the IM prohibits the BLM from satisfying its requirement under NEPA to analyze a reasonable range of alternatives because the agency is required to consider only the no-action alternative and a full-leasing alternative. *See* IM 2025-028 at 5; discussion *supra* Section II.B. The IM thus unlawfully (and impractically) constrains the BLM's ability to realize its statutory and regulatory obligations.

Second, the IM is akin to a "substantive agency rule . . . that carries the force and effect of law" by creating new obligations. *See W. Watersheds Project v. Zinke*, 441 F. Supp. 3d 1042, 1067 (D. Idaho 2020), *aff'd in part, rev'd in part on other grounds and remanded sub nom. Mont. Wildlife Fed'n v. Haaland*, 127 F.4th 1 (9th Cir. 2025) (citing *Sacora v. Thomas*, 628 F.3d 1059, 1070 (9th Cir. 2010) (holding that interpretative rules cannot be "inconsistent with" existing laws or "impose new rights or obligations")). "'The critical factor' in determining whether a directive constitutes a general statement of policy is 'the extent to which the challenged [directive] leaves the agency, or its implementing official, free to exercise discretion to follow, or not to follow, the [announced] policy in an individual case.'" *W. Watersheds Project v. Zinke*, 441 F. Supp. 3d at 1067 (alterations in original) (quoting *Mada-Luna v. Fitzpatrick*, 813 F.2d 1006, 1012–13 (9th Cir. 1987)).

IM 2025-028 appears to leave the agency and its offices no discretion to defer parcels or consider any other leasing alternative. Moreover, as noted, the IM directly conflicts with the BLM's Leasing Rule. The IM's prescriptions render the leasing preference criteria a meaningless paperwork exercise, nullifying the agency's own regulatory requirements. Accordingly, the agency was required to undergo notice-and-comment procedures pursuant to the APA for this IM but failed to do so.

V. BLM must disclose its use of artificial intelligence (AI) for any components of this scoping process.

The BLM must disclose any use of AI throughout this lease sale process, and if AI is used, the BLM must describe the AI tools employed and explain how the agency has used them.

Given the Office of Management and Budget Memorandum issued last year, which directs agencies to "accelerate the Federal use of AI," commenters understand that the BLM's use of AI as part of this leasing process is likely. *See* OFF. OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, MEMORANDUM M-25-21, ACCELERATING FEDERAL USE OF AI THROUGH INNOVATION, GOVERNANCE, AND PUBLIC TRUST, 2 (Apr. 3, 2025) [hereinafter MEMORANDUM M-25-21]. While AI can be used appropriately to improve agency efficiency, its use must be properly moderated and disclosed such that the public has the opportunity to identify and correct errors. FLPMA, NEPA, the BLM's regulations, and case law emphasize rigorous public engagement in all public lands processes, including leasing. *See, e.g.*, 43 U.S.C. § 1702(d) (defining "public involvement" to mean "the opportunity for participation by affected citizens in rulemaking, decisionmaking, and planning with respect to the public lands, including public meetings or hearings held at locations near the affected lands, or advisory mechanisms, or such other procedures as may be necessary to provide public comment in a particular instance); *Montana Wildlife Fed'n v. Haaland*, 127 F.4th 1, 41 (9th Cir. 2025) (emphasizing NEPA's requirement that the public have the "ability to provide 'meaningful' input into the agency's decision"); 43 C.F.R. § 3120.42(b) (providing several opportunities for public comment and input throughout the leasing process). The disclosure of the use of AI is essential to a transparent and rigorous public engagement process. And while high volumes of comments certainly could leave an agency searching for efficiency-improving measures, the BLM should be aware that the practice of AI-generated response to comments erodes the public trust that the NEPA process is designed to cultivate. *Cf.* MEMORANDUM M-25-21 at 13 (noting that while "[a]gencies must continue to develop AI that serves the public by . . . increasing government efficiency," "[a]gencies must ensure their AI use is trustworthy, secure, and accountable").

Any undisclosed use of AI could render the BLM's leasing process unlawful. Courts have interpreted the arbitrary and capricious language to require reasoned decision-making from the agency. *See, e.g.*, *Fox v. Clinton*, 684 F.3d 67, 74 (D.C. Cir. 2012). When agencies rely on computer-generated results, like computer models, courts have long held that "ultimate responsibility for the policy decision remains with the agency rather than the computer." *Sierra Club v. Costle*, 657 F.2d 298, 334–35 (D.C. Cir. 1981). Courts have also specified that agencies must respond to comments "in a reasoned manner." *Conf. of State Bank Supervisors v. Off. of Thrift Supervision*, 792 F. Supp. 837, 846 (D.D.C. 1992). Using AI without sufficient human oversight to respond to relevant comments may not fulfill an agency's legal duty of consideration because AI does not think in a reasoned manner. To the extent that the BLM uses AI in this scoping process—or intends to use it in the remainder of the lease sale process—without explaining the assumptions and methodology behind that use, any action taken will be unlawful under the arbitrary and capricious standard.

To the extent that the BLM uses AI in this leasing process, it is consequently obligated to document its use and any relevant inputs and outputs for the public. In addition, given the rapid and developing use of AI and the importance of the associated obligations concerning its proper

use and disclosure, the BLM cannot reasonably remain silent on the use of AI in leasing even where no such product was used. In sum, to ensure public confidence in the BLM's compliance with NEPA requirements, and judicial confidence in their ability to review a complete record, the BLM should confirm whether it will use AI tools throughout this leasing process. The public is entitled to know whether the absence of information on the agency's use of AI is because none was in fact used, or whether it will be used, and how.

VI. Conclusion.

We appreciate your consideration of these comments. Should you have any questions, please do not hesitate to contact us.

Respectfully submitted,

Adina Nadler (on behalf of the below-listed parties)
Associate Attorney
The Wilderness Society
1801 Pennsylvania Ave NW #200
Washington, DC 20006
(202) 429-2627
anadler@tws.org

Emily Thompson
Executive Director
Coalition to Protect America's National Parks

Sally Paez
Staff Attorney
New Mexico Wild

Alison Gallensky
Conservation Geographer, Leadership Team
Rocky Mountain Wild

Exhibit Index to TWS et al. Scoping Comments on Parcels for the New Mexico Bureau of Land Management First Quarter 2027 Competitive Oil & Gas Lease Sale (DOI-BLM-NM-F010-2026-0077-EA)

Appendix	Exhibit No.	Title/Description
A	**1**	THE WILDERNESS SOCIETY, OPEN FOR DRILLING: THE OUTSIZED INFLUENCE OF OIL & GAS ON PUBLIC LANDS (2025)
A	**2**	Hall Sawyer et al., *Mule Deer and Energy Development—Long Term Trends of Habituation and Abundance*, 23 GLOB. CHANGE BIOLOGY 4521 (Apr. 4, 2017)
A	**3**	Hall Sawyer et al., *Long-Term Effects of Energy Development on Winter Distribution and Residency of Pronghorn in the Greater Yellowstone Ecosystem* 1 CONSERVATION SCI. & PRAC. 1 (July 2, 2019)
A	**4**	Adele K. Reinking et al., *Across Scales, Pronghorn Select Sagebrush, Avoid Fences, and Show Negative Responses to Anthropogenic Features in Winter*, 10 ECOSPHERE 1 (May 2019)
A	**5**	Joseph M. Northrup et al., *Quantifying Spatial Habitat Loss from Hydrocarbon Development through Assessing Habitat Selection Patterns of Mule Deer*, 21 GLOB. CHANGE BIOLOGY 3961 (Aug. 12, 2015)
A	**6**	Hall Sawyer, et al. *Migratory Plasticity Is Not Ubiquitous Among Large Herbivores*, 88 J. OF ANIMAL ECOLOGY 450 (Nov. 17, 2018)
A	**7**	Teal B. Wyckoff et al., *Evaluating the Influence of Energy and Residential Development on the Migratory Behavior of Mule Deer*, 9 ECOSPHERE 1 (Feb. 23, 2018) [
A	**8**	Ellen O. Aikens et al., *Industrial Energy Development Decouples Ungulate Migration from the Green Wave*, 6 NATURE ECOLOGY & EVOLUTION 1733 (Oct. 6, 2022)
A	**9**	Anna C. Ortega et al., *Foraging Benefits Promote Fitness in Migratory Mule Deer*, 36 CURRENT BIOLOGY 799 (Feb. 2, 2026)
A	**10**	MAPLE A. TAYLOR ET. AL., USDA FOREST SERV., STATUS, ECOLOGY, AND MANAGEMENT OF THE LESSER PRAIRIE CHICKEN: GEN. TECH. REP. RM-77 (Sept. 1980)
A	**11**	Elisabeth C. Teige et al., *Assessment of Lesser Prairie-Chicken Translocation Through Survival and Lek Surveys*, 47 WILDLIFE SOC'Y BULLETIN 1 (Oct. 10, 2023)
A	**12**	Kristen Nasman et al, *Range-Wide Population Size of the Lesser Prairie-Chicken: 2012 to 2022*, W. ASS'N OF FISH & WILDLIFE AGENCIES (Oct. 20, 2022)
A	**13**	Kristine Johnson et al., *GIS Habitat Analysis for Lesser Prairie-Chickens in Southeastern New Mexico*, 6 BMC ECOLOGY 1 (Dec. 4, 2006)
A	**14**	WildEarth Guardians et al., *Petition to List the Lesser Prairie Chicken (Tympanuchus Pallidicinctus) and Three Distinct Population Segments Under the U.S. Endangered Species Act & Emergency Listing Petition for*

		the Shinnery Oak Prairie & Sand Sage Prairie Distinct Population Segments (Sept. 8, 2016)
A	**15**	Darren J. Bender et al., *Habitat Loss and Population Decline: A Meta-Analysis of the Patch Size Effect*, 79 ECOLOGY 517 (Mar. 1998)
B	**16**	William E. Van Pelt et al., *Lesser Prairie-Chicken Range-Wide Conservation Plan*, W. ASS'N OF FISH & WILDLIFE AGENCIES (Oct. 2013)
C	**17**	Sara J. Oyler-McCance et al., *Rangewide Genetic Analysis of Lesser Prairie-Chicken Reveals Population Structure, Range Expansion, and Possible Introgression*, 17 CONSERVATION GENETICS 643 (Jan. 28, 2016) [
C	**18**	Lyman McDonald et al., *Range-Wide Population Size of the Lesser Prairie-Chicken: 2012, 2013, 2014, 2015, and 2016*, TECH. REP. FOR THE W. ASS'N OF FISH & WILDLIFE AGENCIES (July 21, 2016)
C	**19**	NAT'L PARK SERV., CARLSBAD CAVERNS NATIONAL PARK: GEOLOGIC RESOURCE EVALUATION REPORT (2007)
C	**20**	Stanford University, *Seismic Stress Map Developed by Stanford Researchers Profiles Induced Earthquake Risk for West Texas, New Mexico*, STANFORDREPORT (Feb. 8, 2018)
C	**21**	Durham University, *Human-made Earthquake Risk Reduced if Fracking is 895m from Faults*, SCIENCEDAILY (Feb. 27, 2018)
C	**22**	NAT'L PARK SERV., 2024 NATIONAL PARK VISITOR SPENDING EFFECTS (Sept. 2025)
C	**23**	*Carlsbad Caverns NP*, IRMA PORTAL NATIONAL PARK SERVICE
C	**24**	ENV'T PROT. AGENCY, REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES (2023)
C	**25**	INTERAGENCY WORKING GRP. ON SOC. COST OF CARBON, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS (Feb. 2010)
C	**26**	U.S. DEP'T OF THE INTERIOR, INFORMATIONAL MEMORANDUM: DOI COMPARISON OF AVAILABLE ESTIMATES OF SOCIAL COST OF GREENHOUSE GASES (SC-GHG) (Oct. 16, 2024)
C	**27**	PETER HOWARD ET AL., INSTITUTE FOR POLICY INTEGRITY, ZERO RATIONALITY: WHAT OIRA'S NEW MEMORANDUM GETS WRONG ON MONETIZING CLIMATE IMPACTS (May 2025)
C	**28**	ENV'T PROT. AGENCY, DETAILS OF EXTERNAL PEER REVIEW PANEL PROCESS FOR THE REVIEW OF EPA'S "REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES" (2023)
C	**29**	OFF. OF MGMT. & BUDGET, REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND AGENCY COMPLIANCE WITH THE UNFUNDED MANDATES REFORM ACT: FISCAL YEAR 2023, 21-22 & n.52 (2024)
D	**30**	U.S. ENV'T PROT. AGENCY, HYDRAULIC FRACTURING FOR OIL AND GAS: IMPACTS FROM THE HYDRAULIC FRACTURING WATER CYCLE ON DRINKING WATER RESOURCES IN THE UNITED STATES, EPA/600/R-16/236F (Dec. 2016)

D	**31**	Gayathri Vaidyanathan, *Fracking Can Contaminate Drinking Water*, SCI. AM. (Apr. 4, 2016)
D	**32**	Dominic C. DiGiulio & Robert A. Jackson, *Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming Field*, 50 ENV'T SCI. & TECH. 4524 (2016)
E	**33**	Tetiana Cantlay et al., *Contamination of Private Water Supplies After a Well Communication Event (Frac-Out) in Southwest Pennsylvania*, NATURE (2025)
E	**34**	REBECCA TISHERMAN ET AL., PSE HEALTH ENERGY, EXAMINATION OF GROUNDWATER RESOURCES IN AREAS OF WYOMING PROPOSED FOR THE JUNE 2022 BLM LEASE SALE (May 11, 2022)
E	**35**	DOMINIC DIGIULIO, PSE HEALTH ENERGY, EXAMINATION OF GROUNDWATER RESOURCES IN AREAS OF MONTANA PROPOSED FOR THE MARCH 2018 BLM LEASE SALE (Jan. 10, 2018)
E	**36**	OLIVIA GRIOT ET AL., SYNAPSE ENERGY ECONOMICS INC., ONSHORE NATURAL GAS OPERATIONS ON FEDERAL AND TRIBAL LANDS IN THE UNITED STATES: ANALYSIS OF EMISSIONS AND LOST REVENUE (Jan. 20, 2023)
E	**37**	ENV'T DEF. FUND, PERMIANMAP FINAL REPORT (2021)
E	**38**	Lara J. Cushing et al., *Flaring from Unconventional Oil and Gas Development and Birth Outcomes in the Eagle Ford Shale in South Texas*, 128 ENV'T HEALTH PERSPECTIVES 077003-1 (2020)
E	**39**	Huy Tran et al., *Air Quality and Health Impacts of Onshore Oil and Gas Flaring and Venting Activities Estimated Using Refined Satellite-Based Emissions*, 8 GEOHEALTH 1 (Mar. 6, 2024)
E	**40**	Jeremy Proville et al., *The Demographic Characteristics of Populations Living Near Oil and Gas Wells in the USA*, 44 POPULATION & ENV'T 1 (June 17, 2022)
E	**41**	Longxiang Li et al., *Exposure to Unconventional Oil and Gas Development and All-Cause Mortality in Medicare Beneficiaries*, 7 NATURE ENERGY 177 (Jan. 27, 2022)
E	**42**	Zoya Banan & Jeremy M. Gernand, *Emissions of Particulate Matter Due to Marcellus Shale Gas Development in Pennsylvania: Mapping the Implications*, 148 ENERGY POLICY 1 (Jan. 2021)
E	**43**	Katie Jo Black et al., *Economic, Environmental, and Health Impacts of the Fracking Boom*, 13 ANN. REV. OF RES. ECON. 311 (Oct. 2021)
E	**44**	Roxana Z. Witter et al., *Occupational Exposures in the Oil and Gas Extraction Industry: State of the Science and Research Recommendations*, 57 AM. J. OF INDUS. MED. 847 (Mar. 14, 2014)
F, G	**45a & 45b**	SETH B.C. SHONKOFF ET AL., PSE HEALTH ENERGY, PUBLIC HEALTH DIMENSIONS OF UPSTREAM OIL AND GAS DEVELOPMENT IN CALIFORNIA: SCIENTIFIC ANALYSIS AND SYNTHESIS TO INFORM SCIENCE-POLICY DECISION MAKING (June 21, 2024)

H	**46**	Lisa M. McKenzie et al., *Birth Outcomes and Maternal Resident Proximity to Natural Gas Development in Rural Colorado*, 122 ENV'T HEALTH PERSPECTIVES 412 (2014)
H	**47**	Janet Currie et al., *Hydraulic Fracturing and Infant Health: New Evidence from Pennsylvania*, 3 SCI. ADVANCES 1 (Dec. 13, 2017)
H	**48**	Stephanie A. Malin, *Depressed Democracy, Environmental Injustice: Exploring the Negative Mental Health Implications of Unconventional Oil & Gas Production in the United States*, 70 ENERGY RSCH. & SOCIAL SCI. 1 (Sept. 11, 2020)
H	**49**	Letter from Earthjustice et al. to Doug Burgum, Sec. of the Interior on Department of the Interior Emergency NEPA Procedures (May 16, 2025)