

**THE WILDERNESS SOCIETY
COALITION TO PROTECT AMERICA'S NATIONAL PARKS * NATURAL
RESOURCES DEFENSE COUNCIL * ROCKY MOUNTAIN WILD**

May 14, 2025

SUBMITTED VIA EMAIL TO: BLM_NM_Q3_2025PROTEST@BLM.GOV

BLM New Mexico State Office
Attention: State Director
301 Dinosaur Trail
Santa Fe, NM 87508

**Re: Q3 July 2025 Protest: Lease Parcels for the New Mexico Bureau of Land
Management 2025 Third Quarter Competitive Oil and Gas Lease Sale (DOI-
BLM-NM-P020-2024-1408-EA) (Carlsbad Field Office)**

To Whom It May Concern:

The Wilderness Society, Coalition to Protect America's National Parks, Natural Resources Defense Council, and Rocky Mountain Wild respectfully protest the below-listed parcels in the New Mexico Bureau of Land Management (BLM) Third Quarter 2025 Competitive Oil and Gas Lease Sale. The reference identification for this lease sale is DOI-BLM-NM-P020-2024-1408-EA. On April 14, 2025, the BLM released the Environmental Assessment,¹ Finding of No Significant Impact,² and Notice of Competitive Lease Sale,³ offering 16 parcels containing 7,501.76 acres. For the reasons stated herein, our groups protest all parcels being offered.⁴

This protest is filed on behalf of the above-listed organizations. Contact information for each organization filing this protest is as follows:

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¹ BUREAU OF LAND MGMT., ENVIRONMENTAL ASSESSMENT, DOI-BLM-NM-P020-2024-1408-EA (Apr. 14, 2025) [hereinafter EA].

² BUREAU OF LAND MGMT., FINDING OF NO SIGNIFICANT IMPACT, DOI-BLM-NM-P020-2024-1408-EA (Apr. 14, 2025) [hereinafter FONSI].

³ BUREAU OF LAND MGMT., NOTICE OF COMPETITIVE OIL AND GAS INTERNET LEASE SALE (Apr. 14, 2025).

⁴ Please see the list of all parcels protested in Appendix B. We are not protesting NM-2025-07-0490 because, as the BLM states, it was removed from the sale. See FONSI at 11 n.3.

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I, Ben Tettlebaum, have been authorized to file this protest on behalf of the above organizations.

I. INTERESTS OF THE PROTESTING PARTIES

Our organizations have a long-standing interest in the management of BLM lands in New Mexico and engage frequently in the decision-making processes for land use planning and project proposals that could potentially affect our public lands and mineral estate, including the oil and gas leasing process and associated lease sales. Our members and staff enjoy myriad recreational, scientific, and other opportunities on BLM-managed public lands, including hiking, biking, nature-viewing, photography, and quiet contemplation in the solitude offered by wild places. Our missions are to work for the protection and enjoyment of the public lands for and by our members and the public.

The Wilderness Society (TWS) is a national non-profit membership organization that works to unite people to protect America's wild places. Founded in 1935, TWS is headquartered in Washington, D.C., with offices throughout the country and over 100,000 members. TWS aims to transform federal land management to prioritize climate resilience and biodiversity protection and help develop and advance policies for just and equitable public land conservation on behalf of all people. In working toward this mission, TWS elevates the voices of communities that might otherwise be unable to engage in federal processes affecting public lands and waters. For years, TWS has advocated for reform of BLM's oil and gas leasing program. TWS has used in-house science, policy, and legal expertise to comment on and engage in the oil and gas leasing process.

The **Coalition to Protect America’s National Parks (Coalition)** represents over 4,100 National Park Service (NPS) retirees, former and current employees, and volunteers, who collectively have more than 50,000 years of national park management and stewardship experience. The Coalition studies, educates, speaks, and acts for the preservation of America’s National Park System. Our membership includes former Park Service directors, regional directors, superintendents, resource specialists, rangers, maintenance and administrative staff, and a full array of other former employees, volunteers, and supporters. We have advocated for BLM oil and gas leasing reforms and commented on Bureau leasing proposals for a number of years due, in part, to the many adverse impacts that oil- and gas-based carbon emissions are having on irreplaceable natural and cultural resources across America's National Park System.

The **Natural Resources Defense Council (NRDC)** is an international non-profit membership organization that works to safeguard the earth—its people, its plants and animals, and the natural systems on which all life depends. Founded in 1970, NRDC works to represent the interests of our over 3 million members and online activists, including those who live in or visit Wyoming. Alongside frontline communities, NRDC has worked since its founding to safeguard this country’s critical natural resources using the best available science, data, and legal analysis. The keystone of this work has long been our advocacy to ensure resilient and thriving ecosystems across the landscapes managed by the federal government, particularly the BLM. We have a longstanding history of engaging in oil and gas leasing on public lands and land management planning.

Rocky Mountain Wild (RMW) is a non-profit conservation non-profit works to protect, connect, and restore wildlife and wild lands in the Southern Rocky Mountain region. RMW envisions a biologically healthy future for our region – one that includes a diversity of species and ecosystems, thriving populations of wildlife, and a sustainable coexistence between people and nature. Using research, community science, legal action, and advanced geospatial analysis, we offer solutions for conserving our most at-risk animal and plant species and landscapes. We review and engage in BLM oil and gas lease sales with a goal of reducing the impacts of oil and gas leasing on wildlife and wildlands.

II. STATEMENT OF REASONS IN SUPPORT OF THE PROTEST OF THE THIRD QUARTER 2025 COMPETITIVE OIL AND GAS LEASE SALE PARCELS.

The EA and FONSI contain several flaws that undergird this protest and counsel deferral of parcels from this lease sale, including but not limited to the following violations of the National Environmental Policy Act (NEPA), the Federal Land Policy and Management Act (FLPMA), and the Administrative Procedure Act (APA):

- Leasing under the outdated Resource Management Plan for the Carlsbad Field Office.
- Failing to properly analyze and defer parcels in wildlife habitat and impacts to ungulate species.
- Failing to follow its own leasing regulations.
- Failing to properly analyze and defer parcels in areas with high karst or cave potential and that are in a critical karst or cave resource area.

- Failing to properly analyze and defer parcels in areas with low oil and gas development potential.
- Failing to adequately analyze the impacts of greenhouse gas (GHG) emissions and climate change.
- Failing to take a hard look at impacts to groundwater from well construction practices and hydraulic fracturing.
- Failing to address its obligation to avoid methane waste.
- Arbitrarily eliminating analysis of environmental justice.

As to NEPA, the BLM has failed to properly evaluate the reasonably foreseeable environmental impacts of this proposed lease sale. *See e.g.*, 42 U.S.C. §§ 4331–4347. NEPA fosters informed decision making by federal agencies and promotes informed public participation in government decisions. *See Balt. 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.* (internal citation omitted); *accord Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 553 (1978).⁵ 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 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 Regulatory Comm’n*, 867 F.3d 1357, 1371 (D.C. Cir. 2017) (internal quotation omitted).

The BLM should grant this protest because the agency has failed to properly analyze and address resource conflicts and the environmental effects discussed below.

a. The BLM has ample authority to defer lease parcels proposed for this lease sale.

As an initial matter, the BLM is not mandated to lease any particular parcel for oil and gas development and production. Under the Mineral Leasing Act (MLA), lands “known or believed to contain oil or gas deposits *may* be leased” by the Interior Department. 30 U.S.C. § 226(a) (emphasis added). If DOI chooses to lease lands, sales are held only “where *eligible* lands are *available*.” *Id.* § 226(b)(1)(A) (emphases added). For nearly a century, the U.S. Supreme

⁵ *See Kleppe v. Sierra Club*, 427 U.S. 390, 410, 413 (1976); *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, 825 (D.C. Cir. 1976); *City of Davis v. Coleman*, 521 F.2d 661, 666–677 (9th Cir. 1975); *Brooks v. Coleman*, 518 F.2d 17, 18 (9th Cir. 1975); *Natural Resources Defense Council v. Callaway*, 524 F.2d 79, 89 (2d Cir. 1975); *Env’tl. Def. Fund, Inc. v. Corps of Eng’rs of U.S. Army*, 492 F.2d 1123, 1135 (5th Cir. 1974); *Swain v. Brinegar*, 517 F.2d 766 (7th Cir. 1975); *Minnesota Public Interest Research Group v. Butz*, 498 F.2d 1314, 1322 (8th Cir. 1974); *Natural Resources Defense Council v. Morton*, 458 F.2d 827, 834–36 (D.C. Cir. 1972); *Hanly v. Kleindienst*, 471 F.2d 823, 830–31 (2d Cir. 1972); *Calvert Cliffs’ Coordinating Comm., Inc. v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971).

Court and federal circuit courts have consistently recognized this “broad” and “considerable” discretion over the federal onshore leasing program.⁶

Where conflicts with other uses exist, the BLM must analyze the deferral of lease parcels. The MLA does not contravene FLPMA’s resource conservation requirements. Lands merely being designated as “open” for leasing under a particular Resource Management Plan (RMP) does not mean the BLM is required to lease them. 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.” 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,” 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) (emphasis added). The BLM must “take any action necessary to prevent unnecessary and undue degradation of the lands.” *Id.* § 1732(b). “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 added).

The BLM is therefore not obligated to lease any specific parcel of public land for oil and gas development. The agency retains the authority to defer any or all lease sale parcels, even after bidding has concluded.⁷ Most importantly for purposes of this protest, where conflicts with

⁶ See *Udall v. Tallman*, 380 U.S. 1, 4 (1965) (“The Mineral Leasing Act [MLA] 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, as opposed to passively responding to expressions of interest.”); *W. Energy Alliance v. Salazar*, 709 F.3d 1040, 1044 (10th Cir. 2013) (“The MLA, as amended by the Reform Act of 1987, continues to vest the Secretary with considerable discretion to determine which lands will be leased.”); *Bob Marshall Alliance 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.”); *McDonald v. Clark*, 771 F.2d 460, 463 (10th Cir. 1985) (“It is clear that the Secretary has broad discretion in this area. While the statute gives the Secretary the authority to lease government lands under oil and gas leases, this power is discretionary rather than mandatory.”); *Burglin v. Morton*, 527 F.2d 486, 488 (9th Cir. 1975) (“The permissive word ‘may’ in Section 226(a) allows the Secretary to lease such lands, but does not require him to do so. Although Section 226(c) requires the Secretary to issue the lease to the first qualified applicant if the land is leased, the Secretary has discretion to refuse to issue any lease at all on a given tract.”).

⁷ 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 *Justheim Petroleum v. Dep’t of Interior*, 769 F.2d 668, 671 (10th Cir. 1985) (language in 30 U.S.C. § 226 mandating that “lands to be leased . . . shall be leased to the highest

other uses exist, the agency *must* affirmatively evaluate deferral of parcels in its alternatives analysis under NEPA. As discussed below, while the EA discusses a modified leasing alternative, the BLM fails to explain why it is now choosing to lease parcels previously deemed as having conservation conflicts and therefore a low preference for leasing, directing deferral under the BLM's own regulations.

b. The BLM has failed to ensure that leasing is compliant with FLPMA.

FLPMA creates a framework governing the BLM's management of public lands. *See* 43 U.S.C. §§ 1701–1772. It provides for management of public lands under principles of multiple use and sustained yield. *See id.* § 1732(a).

Land use plans or RMPs project both the present and future use of the land. The BLM uses RMPs to identify which areas will be open to oil and gas leasing and development. *See* 43 C.F.R. § 1601.0-5(n). RMPs establish, among other things, “[l]and areas for limited, restricted or exclusive use,” “[a]llowable resource uses . . . and related levels of production or use to be maintained,” “[r]esource condition goals and objectives to be attained,” and “[p]rogram constraints and general management practices.” *Id.*; *see* 43 U.S.C. § 1712(a). FLPMA prohibits the BLM from taking actions inconsistent with the provisions of RMPs. *See* 43 U.S.C. § 1732(a); 43 C.F.R. § 1610.5-3(a) (“All future resource management authorizations and actions . . . shall conform to the approved plan.”).

RMPs may grant the BLM authority to lease in certain areas. *See* 30 U.S.C. § 226(b)(1)(A); 43 C.F.R. § 3120.1-2(a). Before issuing leases, however, 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 would no longer support a new leasing decision if important new data, policies, or changed circumstances exist that were not considered when it was approved. *See* H-1601-1 — LAND USE PLANNING HANDBOOK, SECTION VII.C, DETERMINING WHEN IT IS NECESSARY TO REVISE AN RMP; 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 to support new leasing, such as an EIS.

The Carlsbad RMP is old and stale. It fails to adequately account for or address the environmental impacts on resources and land uses due to climate change. It contains no

responsible qualified bidder” did not require issuing a lease, but only required awarding lease to that bidder “if [the Secretary] is going to lease at all”); *Wyoming v. U.S. Dep’t of the Interior*, No. 22-CV-247-SWS, 2024 U.S. Dist. LEXIS 235015, at *43 (D. Wyo. Dec. 31, 2024) (“When considering statutory language, the use of the word ‘may’ creates a presumption of discretion under normal rules of statutory interpretation, in contrast with the mandatory ‘shall.’” (cleaned up)); *W. Energy All. v. Salazar*, No. 10-cv-0226, 2011 U.S. Dist. LEXIS 98380, at *9–23 (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); 89 Fed. Reg. at 30,945 (“[T]he 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.”).

discussion of climate change or GHG emissions; nor does the 1997 Amendment.⁸ Additionally, this RMP is still being revised. As a result, the BLM should not be leasing in this field office at this time.

c. The BLM has failed to properly analyze and defer parcels in areas with high karst or cave potential and that are in a critical karst or cave resource area.

The BLM designated the following 11 parcels as being in areas with high karst potential: NM-2025-07-0485; -0487; -0488; -0492; -0493; -0497; -0499; -6853; -6854; -6856; and -6857. *See* EA at 3-40, Table 3-10. Additionally, the following five parcels are designated as within a critical karst resource area: NM-2025-07-0492; -0493; -0497; -0499; and -6853. *See id.* The following four parcels are designated as within an area with a critical cave potential area: NM-2025-07-0492; -0493; -0497; and -0499. *See id.* And these 8 parcels are designated as within a high cave potential area: NM-2025-07-0485; -0487; -0488; -6852; -6853; -6854; -6856; and -6857. *See id.* The EA further designates all these parcels as having low preference for leasing under 43 C.F.R. § 3120.32(d), “presence of . . . important . . . resources.” *See id.* App C. at C-1, Table C-1 n. §. In fact, the BLM admits that “[a]ll but three of the nominated lease sale parcels overlap areas of high or critical potential for cave and karst features” and that “[l]ow determinations . . . indicate the presence of . . . karst features” that are “incompatible with oil and gas development.” *Id.* Despite this admission, the BLM is moving forward with leasing these parcels because of stipulations and conditions of approval. *See id.* Such measures are inadequate to protect these areas. The BLM must therefore follow its own policy and low preference for leasing designation of these parcels and delete them from this sale.

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.

The entire area which makes up the Carlsbad Field Office should be studied thoroughly to assess the vulnerabilities to 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 or reinjection of “produced water,” or seismic activity that has been linked to hydraulic fracturing and produced water, could have a devastating and irreversible impact 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’s caverns. According to a 2007 NPS Geologic Resource Evaluation Report: Hundreds of producing oil and gas wells have been drilled north, east, and south of Carlsbad Caverns National Park. Exploratory wells have been drilled within a few thousand feet of the

⁸ BLM CARLSBAD FIELD OFFICE, APPROVED RESOURCE MANAGEMENT PLAN (SEPT. 1988); BLM CARLSBAD FIELD OFFICE, APPROVED RESOURCE MANAGEMENT PLAN (Oct. 1997).

north and east boundaries of Carlsbad Caverns, and some of these have encountered voids at the same depth as major passages in Lechuguilla Cave (NPS 1996). At least 61 wells drilled near the park have encountered lost circulation zones in the Capitan and Goat Seep Formations, suggesting that unexplored cave passages were intersected during drilling (NPS 1993, 1996). Substantial hydrocarbon reserves and known cave resources exist immediately north of the park boundary. It 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. 1], <http://npshistory.com/publications/cave/nrr-2007-003.pdf>.

A Stanford University study released in April 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 (Feb. 8, 2018) [Ex. 2], <https://news.stanford.edu/2018/02/08/seismic-stress-map-profiles-induced-earthquake-risk-west-texas-new-mexico/>. In addition, a Durham University Study released in February 2018 noted, “The risk of human-made earthquakes due to fracking is greatly reduced if high-pressure fluid injection used to crack underground rocks is 895m away from faults in the Earth’s crust.” DURHAM UNIVERSITY, HUMAN-MADE EARTHQUAKE RISK REDUCED IF FRACKING IS 895M FROM FAULTS, SCIENCEDAILY (Feb. 27, 2018) [Ex. 3], <https://www.sciencedaily.com/releases/2018/02/180227233301.htm>. Hydraulic fracking in the Permian basin was not remotely close to current levels 15 years ago. Not only does this underscore the issue of the BLM not adequately responding to comments, it also indicates the BLM is not using the best available science. The National Environmental Policy Act (NEPA) requires the BLM to “ensure[] that the agency, in reaching its decision, will have available and will carefully consider detailed information concerning significant environmental impacts.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

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 \$53 million in local economic output and supported 655 jobs in 2017. According to a National Parks Conservation Association report, however:

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. In the 1980s, Carlsbad received more than 700,000 visitors every year, but from 1993 to 2016 visitation decreased from 690,000 to 470,000, more than 30%.

N. LUND, OUT OF BALANCE: NATIONAL PARKS AND THE THREAT OF OIL AND GAS DEVELOPMENT, NATIONAL PARKS CONSERVATION ASSOCIATION (2017) [Ex. 4], <https://npca.s3.amazonaws.com/documents/3435/a76acale-52cf-4e53-841d-3c658a0b9082.pdf?1496846464>.

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 argues for 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 must grant the protest of these parcels.

d. The BLM has failed to properly analyze and defer leasing parcels in big game habitat.

All parcels overlap a priority corridor region for pronghorn. The BLM has designated all parcels as having a “low” preference for leasing based on the “habitat” preference criterion. *See* EA, App. C at C-1, Table C.1. The BLM is not deferring any of these parcels and has failed to properly analyze the adverse effects of leasing them.

FLPMA requires the BLM to manage public lands “in a manner that will provide food and habitat” for all wildlife. 43 U.S.C. § 1701(a)(8). Research makes clear that big game suffer considerable losses from leasing and development on their critical winter range. *See, e.g.,* Adele K. Reinking et al., *Across Scales, Pronghorn Select Sagebrush, Avoid fences, and Show Negative Responses to Anthropogenic Features in Winter*, 10(5) ECOSPHERE 1, 1–14 (May 2019) [Ex. 5], <https://esajournals.onlinelibrary.wiley.com/doi/epdf/10.1002/ecs2.2722>. Peer-reviewed research has demonstrated that mule deer respond unfavorably to oil and gas development in migratory habitats, often missing out on high-quality forage during the spring migration. *See* Ellen O. Aikens et al., *Industrial energy development decouples ungulate migration from the green wave*, 6 NATURE ECOLOGY. & EVOLUTION 1733, 1733–1741 (Oct. 2022) [Ex. 6], <https://doi.org/10.1038/s41559-022-01887-9>. Extensive leasing in important habitat has significant adverse impacts on big game herds.

Anthropogenic impacts have cumulatively resulted in significant direct loss of habitat available to big game. This direct loss of wildlife habitat is often amplified with the indirect losses that occur due to noise pollution, disturbance, and the overall fragmentation of remaining habitat. Habitat fragmentation and reduced connectivity is of increasing concern as big game species attempt to navigate through their annual life cycles between seasonal ranges. Ultimately, these impacts and ongoing habitat loss reduce carrying capacity for the renowned big game populations the state has historically supported. Federal lands are especially important in providing high priority habitat for big game, specifically winter ranges and migration habitats on BLM lands, which tend to be lower-lying areas with less severe winter conditions compared to higher-elevation summer ranges.

BLM’s response is deferring deeper analysis to the application for permit to drill (APD) stage and claims mitigation is sufficient to address adverse impacts. These justifications fall short. The mitigation hierarchy sequences avoidance as the first line of defense. *See* DEP’T OF THE INTERIOR, DEP’T MANUAL: IMPLEMENTING MITIGATION AT THE LANDSCAPE-SCALE 1, 3 (Oct. 23, 2015). Mitigation is different from avoidance. The BLM cannot defer impacts analysis to the APD stage. *See Wilderness Soc’y v. U.S. Dep’t of the Interior*, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *61 (quotation marks omitted).

e. The BLM has failed to adequately analyze and defer parcels in areas with low oil and gas development potential.

The BLM will preference lands with “high potential” for oil and gas development. 43 C.F.R. § 3120.32(e). 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.”). Offering parcels on low potential lands precludes management for other uses. 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.

The BLM designated seven parcels as having low preference for leasing based on low development potential: NM-2025-07-0488; -0492; -0493; -0497; -0499; -6852; and -6583. *See* EA, App. C at C-1, Table C-1. The BLM must defer these parcels from this sale.

f. The BLM has failed to adequately analyze groundwater impacts.

As with the previous environmental assessment for the lease sale, this EA again fails to adequately address groundwater impacts. To isolate and protect usable water, groundwater zones should be isolated with both casing and cementing. Rebecca Tisherman, et al., *Examination of Groundwater Resources in Areas of Wyoming Proposed for the June 2022 BLM Lease Sale* (May 12, 2022) [hereinafter Tisherman Report] [Ex. 7], https://eplanning.blm.gov/public_projects/2015538/200495187/20062621/250068803/Exhibit%20119-%20PSE%20WY%20Report%20May%202022%20Final.pdf; Dominic DiGiulio, *Dominic DiGiulio, Examination of Groundwater Resources in Areas of Montana Proposed for the March 2018 BLM Lease Sale* (Dec. 22, 2017) [hereinafter DiGiulio Report] [Ex. 8], https://eplanning.blm.gov/public_projects/nepa/87551/136880/167234/Earthjustice_Protest_1-12-2018.pdf (Exhibit D to David Katz and Jack and Bonnie Martinell’s protest of the March 13, 2018, BLM Montana-Dakotas oil and gas lease sales).

The EA ignores reasons the D.C. District Court in *Wilderness Society* found the BLM’s groundwater analysis lacking: statements by industry trade associations explaining that only “economically viable” groundwater is considered usable, and (relatedly) that companies construct wells to protect groundwater only to a depth where there are already existing water wells nearby. *Wilderness Soc’y*, No. 22-cv-1871 (CRC), at *30–32.

The EA offers no reason to expect that the problems identified by the Tisherman report will not be repeated here in New Mexico. The BLM has offered no evidence showing that it made a reasoned decision when approving the wells in the Tisherman report that their casing and cementing comply with the agency’s usable water regulations and protect all usable water zones.

For shallow fracturing, the EA also falls short. The BLM regulations require protecting usable waters regardless of whether they already have been tapped with a water well. The BLM

fails to 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.

Regardless of the evidence of improper well cementing, the BLM is not analyzing impacts and potential risks to groundwater. The agency cannot simply defer that analysis to the APD stage. Ample information is available now to consider those risks. For example, satellite imagery shows which parcels contain ephemeral streams, intermittent streams, ponds, or reservoirs, and satellite imagery shows riparian habitat. Yet, the BLM includes no site-specific information on these waterbodies in the EA. The BLM again claims it can defer analysis to the APD stage. *See* EA, App. D at D-52, Table D-1. As noted above, failing to analyze these groundwater issues at the leasing stage is arbitrary and capricious. *See Wilderness Soc’y*, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *61 (quotation marks omitted).

g. The BLM fails to properly analyze GHG emissions and climate effects and factor GHG emissions and climate effects into its leasing decisions.

The EA fails to properly consider GHG emissions and their effect on climate change. The BLM must not only properly analyze and quantify the direct, indirect, and cumulative GHG emissions and climate impacts that may result from leasing, but it must also factor GHG emissions into its leasing decisions. *See Wilderness Soc’y*, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *91. The agency must consider GHG analysis when making its decision on a lease sale. As one court recently explained: “Any 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.” *Id.* at *87. The agency must also 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(2)(A), (B), (D), (I) & (K). The BLM has the tools to undertake this analysis but has failed to do so here.

The MLA requires the Secretary of the Interior to lease lands for oil and gas development only in the public interest. *See* 30 U.S.C. § 192. In its NEPA analysis, the BLM can and must consider adverse effects to health and the environment—part of the public interest—when determining whether to lease. *See* 43 U.S.C. § 1732(b) (requiring the BLM to prevent unnecessary and undue degradation); *cf. Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d at 1373–74 (explaining that whether an agency must analyze certain environmental effects under NEPA turns on the question, “What factors can [the agency] consider when regulating in its proper sphere,” and holding that the agency consider direct and indirect environmental effects because the statute at issue indeed vested the agency with authority to deny the project based on harm to the environment (internal quotation marks omitted)). Such adverse environmental effects include those caused by GHG emissions and impacts on the climate.

Court decisions 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.⁹ The BLM must ensure 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 impacts of other federal lease sales in the state, region, and nation, as well as impacts from GHG emissions from non-Federal sources. The 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 simply dismissed as insignificant compared to national or global total GHG emissions. *See, e.g., WildEarth Guardians*, 368 F. Supp. 3d at 77. “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 that the impacts of proposed actions must be evaluated based on 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).¹⁰

The Interior Department had “adopt[ed] . . . [the EPA’s] new 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 on DOI comparison of available estimates of social cost of greenhouse gases (SC-GHG), at 1, 8 (Oct. 16, 2024) [Ex. 9], https://eplanning.blm.gov/public_projects/2036015/200638053/20126874/251026854/20241016.DOI%20SC_GHG%20Info%20Memo.pdf (directing the BLM to “adopt the EPA’s 2023

⁹ *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. FERC*, 6 F.4th 1321, 1329–30 (D.C. Cir. 2021); *Sierra Club v. Fed. Energy Regulatory 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. U.S. Bureau of Land Mgmt.*, 870 F.3d 1222, 1236–38 (10th Cir. 2017); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 550 (8th Cir. 2003); *Wilderness Soc’y*, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *83–92 (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, 67–77 (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 [greenhouse gas] emissions from the leased parcels and, it failed to sufficiently compare those emissions to regional and national emissions”).

¹⁰ *See also Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 973–74 (9th Cir. 2006) (holding 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 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, 1214–16 (9th Cir. 1998) (overturning Forest Service EA that analyzed impacts of only one of five concurrent logging projects in the same region); *San Juan Citizens All. v. United States BLM*, 326 F. Supp. 3d 1227, 1248 (D.N.M. 2018) (holding that BLM failed to take a hard look at the cumulative impact of GHG emissions (citing *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008) (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”))).

estimates of the Social Cost of Greenhouse Gases (SC-GHG) as the best available science (as of September 30, 2024)"). In an EA for the Quarter 1 2025 New Mexico Oil and Gas Lease Sale, the BLM explicitly stated that it was rescinding its October 16, 2024, memorandum. *See* BLM, CARLSBAD FIELD OFFICE OIL AND GAS LEASE SALE ENVIRONMENTAL ASSESSMENT at 88, QUARTER 1 (2025). But the BLM failed to provide proper justification for changing its position.

In this EA, BLM likewise eliminates analysis of social cost estimates without *any* explanation for this change in position. *See 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's only apparent substantive justification for not including such quantification is that "costs attributed to GHGs are often so variable and uncertain that they are unhelpful for the BLM's analysis." EA, App D. at D-4, Table D-1. That bare assertion, with no reference or explanation to support it, is insufficient to justify a change in position. For years and over multiple projects, the BLM has quantified climate impacts, primarily relying on the well-supported SC-GHG estimates. *See, e.g.*, BLM, ENVIRONMENTAL ASSESSMENT: WYOMING 2023 SECOND QUARTER COMPETITIVE LEASE SALE at 54–55 (2023). The BLM must provide such analysis for this lease sale.

The Draft EA *does* quantify the *benefits* of leasing. The BLM discusses various economic and other financial benefits of leasing, including listing revenue impacts. *See, e.g.*, EA at 3-58. Yet, the BLM is utterly silent on quantifying the monetary costs of moving forward with leasing, despite having quantified these costs for years in its leasing EAs using the widely accepted SC-GHG tool. The BLM asserts that the EA is merely analyzing "economic impact," not "economic benefit" in an attempt to distance itself from a cost-benefit analysis. *E.g., id.* at 3-88. But this wordplay cannot excuse the agency from considering only one side of the economic equation of this lease sale. The BLM must consider the full lifecycle of development activities and GHG emissions that are reasonably foreseeable under a BLM oil and gas lease. SC-GHG is a useful tool to aid in this analysis. While NEPA does not require a cost-benefit analysis, it is "nonetheless arbitrary and capricious to quantify the *benefits* of the lease modifications and then explain that a similar analysis of the *costs* was impossible when such an analysis was in fact possible and was included in an earlier draft EIS." *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014) (emphases in original). Courts have rejected agency refusals to properly quantify the impact of GHG emissions.¹¹ It is

¹¹ *See, e.g., Montana Env't Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1094–99 (D. Mont. 2017) (rejecting agency's failure to incorporate the federal SCC estimates into its cost-benefit analysis of a proposed mine expansion); *see also Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 679 (7th Cir. 2016) (holding estimates of the social cost of carbon (SCC) used to date by agencies were reasonable); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190–93 (D. Colo. 2014) (holding the SCC was an available tool to quantify the significance of GHG impacts, and it was "arbitrary and capricious to quantify the *benefits* of the lease modifications and then explain that a similar analysis of the *costs* was impossible") (emphasis in original). An agency may not assert that the social cost of fossil fuel development is zero: "by deciding not to quantify the costs at all, the agencies effectively zeroed out the costs in its quantitative analysis." *High Country Conservation Advocates*, 52 F. Supp. 3d at 1192; *see Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200 (9th Cir. 2008) (holding that while there is a range potential social cost figures, "the value of carbon emissions reduction is certainly not zero").

therefore arbitrary and capricious for the BLM to justify this sale based on economic “impacts” without even considering the societal costs from the GHG emissions and their adverse “impacts” on climate change and whether those costs outweigh the project’s purported monetary benefits. *See, e.g., High Country Conservation Advocates*, 52 F. Supp. 3d at 1191.

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 or replace it with a comparable tool to quantify climate impacts, the BLM has failed to “identify and develop methods and procedures” to ensure that this “presently unquantified environmental . . . value” is “given appropriate consideration in decisionmaking.”

The BLM must not only analyze GHG emissions. It must also address how GHG emissions inform its leasing decisions. “[T]he 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.” *Wilderness Soc’y*, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *91. The BLM “must . . . explain how its GHG analysis inform[s] the decision to select” its preferred alternative. *Id.* at *91–92. If the BLM does “not consider GHG emissions when rendering its decision . . . it would . . . overlook[] what is widely regarded as the most pressing environmental threat facing the world today.” *Id.*, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *87–88. Here, the BLM has failed to explain how GHG emissions estimated to result from leasing factored into its decision-making.

h. The EA fails to analyze the impacts of oil and gas leasing on environmental justice.

The BLM fails to take a hard look at environmental justice. The EA does not mention “environmental justice,” except in response to comments. Courts have repeatedly held that agencies must take a hard look at environmental justice pursuant to NEPA.¹² The BLM fails to explain this change in position when it previously analyzed adverse effects of oil and gas activity on environmental justice communities. The agency’s failure to include this analysis in the EA is arbitrary and capricious both because it has failed to explain its change in position and because, by ignoring environmental justice, the agency has failed to consider an important part of the problem.

i. The EA fails to properly analyze methane emissions that would result from this lease sale.

The EA scarcely touches on methane emissions. 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, including the economic, public health, and public welfare impacts of venting

¹² *See, e.g., Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 87 (4th Cir. 2020); *Latin Ams. for Social & Econ. Dev. v. Fed. Highway Admin.*, 756 F.3d 447, 465 (6th Cir. 2014); *Coliseum Square Ass’n, Inc. v. Jackson*, 465 F.3d 215, 232 (5th Cir. 2006); *Cmtys. Against Runway Expansion, Inc. v. FAA*, 355 F.3d 678, 689 (D.C. Cir. 2004).

and flaring. *See, e.g.*, ENVIRONMENTAL DEFENSE FUND, FLARING AERIAL SURVEY RESULTS (2021) [Ex. 10], <https://www.permianmap.org/flaring-emissions/>. In 2019 alone, venting or flaring accounted for roughly 150 billion cubic feet of methane, resulting in the loss of over \$50 million in federal royalty revenue. This waste also means lost royalty revenues for taxpayers and Tribes. An analysis conducted by Synapse Energy Economics determined the value of lost gas in the form of: (1) lost royalties; (2) lost state revenue from taxes; and (3) lost revenue from wasted natural gas that could be used for other purposes. The study found that \$63.3 million in royalties, \$18.8 million in state revenue from taxes (from the top six states), and \$509 million in gas value was lost due to venting, flaring, and leaks on federal and Tribal lands. OLIVIA GRIOT ET AL., ONSHORE NATURAL GAS OPERATIONS ON FEDERAL AND TRIBAL LANDS IN THE UNITED STATES: ANALYSIS OF EMISSIONS AND LOST REVENUE, SYNAPSE ENERGY ECONOMICS INC. at 3 (Jan. 20, 2023) [hereinafter GRIOT ET AL.] [Ex. 11], https://blogs.edf.org/energyexchange/files/2023/01/EMBARGOED_EDF-TCS_Public_Lands_Analysis.pdf. The report found that, in 2019, leaks accounted for 46% and flaring for 54% of lost gas. *See id.* at 23.

Venting and flaring on Tribal and federal public lands has significant health impacts on frontline and fence line communities. *See e.g.*, Jeremy Proville et al., *The demographic characteristics of populations living near oil and gas wells in the USA*, 44 POPULATION AND ENV'T 1 (2022) [Ex. 12], <https://doi.org/10.1007/s11111-022-00403-2>. Proximity to oil and gas infrastructure creates disproportionate adverse health risks and impacts on Indigenous communities in particular. *See, e.g., id.* at 2–5. According to an Environmental Defense Fund (EDF) analysis, roughly 1,100 adults with asthma, 800 adults with chronic obstructive pulmonary disease, 700 adults with coronary heart disease, and 400 adults who have experienced a stroke live within a half mile of a flaring well. *See* GRIOT ET AL. Another study links flaring to shorter gestation and reduced fetal growth. *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'tl. Health Perspectives 077003-1, 077003-1 to 077003-8 (2020) [Ex. 13]. Reducing waste from flaring on federal and Tribal lands would lessen these harms. The BLM's failure to address methane emissions is arbitrary and capricious.

CONCLUSION

We appreciate your consideration of the information and concerns addressed in this protest, as well as the information in the attached exhibits.

Please do contact us if you have any questions.

Respectfully,



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APPENDIX A

**Exhibit Index to Protest of Lease Parcels for the New Mexico Bureau of Land Management
2025 Third Quarter Oil and Gas Lease Sale (DOI-BLM-NM-P020-2024-1408-EA)**

<u>Appendix</u>	<u>Exhibit No.</u>	<u>Title/Description</u>
C	1	NAT'L PARK SERV., CARLSBAD CAVERNS NATIONAL PARK: GEOLOGIC RESOURCE EVALUATION REPORT (2007).
C	2	STANFORD UNIVERSITY, SEISMIC STRESS MAP DEVELOPED BY STANFORD RESEARCHERS PROFILES INDUCED EARTHQUAKE RISK FOR WEST TEXAS, NEW MEXICO (Feb. 8, 2018)
C	3	DURHAM UNIVERSITY, HUMAN-MADE EARTHQUAKE RISK REDUCED IF FRACKING IS 895M FROM FAULTS, SCIENCEDAILY (Feb. 27, 2018)
C	4	N. LUND, OUT OF BALANCE: NATIONAL PARKS AND THE THREAT OF OIL AND GAS DEVELOPMENT, NATIONAL PARKS CONSERVATION ASSOCIATION (2017)
C	5	Adele K. Reinking et al., <i>Across Scales, Pronghorn Select Sagebrush, Avoid fences, and Show Negative Responses to Anthropogenic Features in Winter</i> , 10(5) ECOSPHERE 1 (May 2019)
D	6	Ellen O. Aikens et al., <i>Industrial energy development decouples ungulate migration from the green wave</i> , 6 NATURE ECOLOGY. & EVOLUTION 1733 (Oct. 2022)
D	7	Rebecca Tisherman, et al., <i>Examination of Groundwater Resources in Areas of Wyoming Proposed for the June 2022 BLM Lease Sale</i> (May 12, 2022)
D	8	Dominic DiGiulio, <i>Dominic DiGiulio, Examination of Groundwater Resources in Areas of Montana Proposed for the March 2018 BLM Lease Sale</i> (Dec. 22, 2017)
E	9	U.S. Dep't of the Interior, Informational Memorandum on DOI comparison of available estimates of social cost of greenhouse gases (SC-GHG) (Oct. 16, 2024)
E	10	ENVIRONMENTAL DEFENSE FUND, FLARING AERIAL SURVEY RESULTS (2021)
E	11	OLIVIA GRIOT ET AL., ONSHORE NATURAL GAS OPERATIONS ON FEDERAL AND TRIBAL LANDS IN THE UNITED STATES: ANALYSIS OF EMISSIONS AND LOST REVENUE, SYNAPSE ENERGY ECONOMICS INC. (Jan. 20, 2023)
E	12	Jeremy Proville et al., <i>The demographic characteristics of populations living near oil and gas wells in the USA</i> , 44 POPULATION AND ENV'T (2022)
E	13	Lara J. Cushing et al., <i>Flaring from Unconventional Oil and Gas Development and Birth Outcomes in the Eagle Ford Shale in South Texas</i> , 128 ENVTL. HEALTH PERSPECTIVES 077003-1 (2020)

APPENDIX B**Complete List of Protested Parcels**

- NM-2025-07-0492
- NM-2025-07-0493
- NM-2025-07-0497
- NM-2025-07-0499
- NM-2025-07-6853
- NM-2025-07-0485
- NM-2025-07-0487
- NM-2025-07-0488
- NM-2025-07-6854
- NM-2025-07-6856
- NM-2025-07-6857
- NM-2025-07-0477
- NM-2025-07-0479
- NM-2025-07-6852
- NM-2025-07-6858