IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

DINÉ CITIZENS AGAINST RUINING OUR ENVIRONMENT, *et al.*, Plaintiffs, v. DAVID BERNHARDT, *et al.*, Federal Defendants.	)	Case No. 1:19-cv-00703-WJ-JFR

PLAINTIFFS' OPENING MERITS BRIEF

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GLOSSARY OF TERMS

2003 RMP	2003 Resource Management Plan
2014 RFDS	2014 Reasonably Foreseeable Development Scenario
APA	Administrative Procedure Act
APD	Application for Permit to Drill
ARTR	Air Resources Technical Report
BLM	Bureau of Land Management
CEQ	Counsel on Environmental Quality
CH_4	Methane
Citizen Groups	Diné Citizens Against Ruining Our Environment *et al.*
CO_2	Carbon Dioxide
EA	Environmental Assessment
EIS	Environmental Impact Statement
FFO	Farmington Field Office
FLPMA	Federal Land and Policy Management Act
FONSI	Finding Of No Significant Impact
GHG	Greenhouse Gas
Mancos RMPA	Mancos Shale Resource Management Plan Amendment
NEPA	National Environmental Policy Act
RFDS	Reasonably Foreseeable Development Scenario
RMP	Resource Management Plan
VOC	Volatile Organic Compound

INTRODUCTION

Oil and gas development across the Greater Chaco Landscape poses significant risks to the region's people and environment—depleting scarce water resources, degrading air quality and threatening public health, and emitting greenhouse gases contributing to the global climate crisis. With much of this activity centered on federal lands, the National Environmental Policy Act ("NEPA") requires that the public and federal decision-makers be fully informed regarding the scope of environmental consequences resulting from federal decisions that treat this region—and its communities—as an energy sacrifice zone.

Despite clear precedent from the Tenth Circuit mandating consideration of the cumulative impacts of past, present, and reasonably foreseeable future oil and gas development, the Bureau of Land Management ("BLM") continues to consider its obligations under NEPA as a paperwork exercise, unconnected to the agency's decision-making responsibility. Narrowly focused on promoting oil and gas development to the detriment of its multiple-use mandate, BLM has authorized construction of hundreds of new horizontal wells in the region over the past several years without full consideration of the significant environmental impacts of its decisions.

Plaintiffs Diné Citizens Against Ruining Our Environment, San Juan Citizens Alliance, Sierra Club, and WildEarth Guardians (together "Citizen Groups") challenge BLM's failure to comply with NEPA when approving 370 new wells in its Farmington Field Office. *See* ECF No. 95, Appx. A. These decisions should be vacated to ensure BLM analyzes the environmental impacts of its decisions *before* committing additional federal resources and perpetuating a legacy of exploitation and degradation to the land, water, air, and human communities of the Greater Chaco Landscape.

BACKGROUND

I. BLM's Oil and Gas Planning and Management Framework

Oil and gas development is just one of the multiple uses managed in accord with the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. §§ 1701 *et seq*. FLPMA provides, "[i]n managing the public lands," BLM "shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." *Id.* § 1732(b). FLPMA further provides that BLM must manage the public lands "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." *Id.* § 1701(a)(8).

BLM manages onshore oil and gas development through a three-phase process. In the first phase, BLM prepares a Resource Management Plan ("RMP") in accordance with FLPMA and associated planning regulations, 43 C.F.R. § 1600 *et seq*., along with an environmental impact statement ("EIS") required by NEPA. BLM determines in the RMP which lands containing federal minerals, including oil and gas, will be open to leasing and under what general conditions, and analyzes the landscape-level cumulative impacts from predicted implementation-stage development. Underlying BLM's assumptions regarding the pace and scope of oil and gas development for the duration of the RMP is a reasonably foreseeable development scenario ("RFDS").

In the second phase, BLM identifies the boundaries for lands to be offered through lease sales and proceeds to sell and execute leases for those lands. 43 C.F.R. § 3120 *et seq*. After a lease is issued, BLM may impose "reasonable measures," consistent with lease terms and conditions. *Id.* § 3101.1-2.

In the third phase, at issue here, the lessee submits an application for permit to drill ("APD") for BLM's approval prior to developing an oil or gas well. *Id.* § 3162.3-1(c). At this stage, BLM may condition APD approval on the lessee's adoption of conditions delimited by the lease and the lessee's surface use rights. *Id.* § 3101.3-1(h)(i).

II. Factual Background

A. Environmental Impacts of Oil and Gas Development in the Greater Chaco Area

This litigation challenges BLM decisions to allow the drilling and production of 370 new oil and gas wells in the Mancos Shale/Gallup formations ("Mancos Shale") in the San Juan Basin of northwestern New Mexico—specifically within the Greater Chaco Landscape. Despite its great cultural, spiritual, archaeological, and ecological significance, Greater Chaco is already over 90% leased for oil and gas development. Today nearly 40,000 oil and gas wells fragment this unique landscape, harming people and communities, as well as air quality, water quality and quantity, climate, and ecological systems. AR008132.

The use of new extraction technologies, including horizontal drilling and multi-stage hydraulic fracturing, has increased risks and impacts compared to those from traditional extraction technologies previously considered by BLM.[1] The agency has acknowledged that "[a]s full-field development occurs [as a result of new horizontal drilling technology], especially in the shale oil play, additional impacts may occur that previously were not anticipated in the [2001] RFDS or analyzed in the current 2003 RMP/EIS, which will require an EIS-level plan amendment and revision of the RFDS for complete analysis of the Mancos Shale/Gallup

[1] Hydraulic fracturing, or "fracking," is an oil and gas drilling "stimulation" technique in which fluids are injected under high pressure to fracture the underlying formation that holds the oil or gas. AR043966.

Formation." 79 Fed. Reg. 10,548 (Feb. 25, 2014). In 2014, BLM began preparing an RMP Amendment and EIS to analyze, for the first time, the environmental impacts of horizontal drilling and fracking in the Mancos Shale ("Mancos RMPA/EIS"). In 2018, BLM released a revised RFDS for oil and gas activities in preparation for the Mancos RMPA/EIS, with a baseline projection of 3,200 new wells. AR008132. BLM issued its draft Mancos RMPA/EIS on February 28, 2020, which has yet to be finalized. The impacts of the 370 challenged Mancos Shale wells, as well as 3,200 foreseeable wells from the 2018 RFDS, will be added to a legacy of nearly 40,000 historic wells across the basin.

B. *Diné CARE* Tenth Circuit Decision

This suit follows a May 2019 decision by the United States Court of Appeals for the Tenth Circuit, *Diné CARE v. Bernhardt*, 923 F. 3d 831 (10th Cir. 2019). There, the Tenth Circuit held that BLM failed to assess the cumulative impacts to water resources, *id.* at 857, because "[o]nce the 2014 RFDS issued, it became reasonably foreseeable to the BLM that the projected wells would be drilled, so the BLM needed to consider the cumulative impacts of all those wells, even if the wells were not going to be drilled imminently." *Id.* at 854.

C. The Challenged Agency Actions

Following the Tenth Circuit's decision in *Diné CARE*, this lawsuit originally challenged BLM's approval of 271 oil and gas wells, analyzed in 32 separate environmental assessments ("EAs") within the Greater Chaco area. ECF No. 1. After this case was filed, however, BLM prepared an EA Addendum and issued 81 separate findings of no significant impact ("FONSI"), covering a total of 370 Mancos Shale wells.[2] BLM did not issue new decision records for the

[2] While BLM's EA Addendum purports to apply to 82 separate EAs, the agency only identifies 81 separate EAs in its list of "EAs Affected by the Proposed Addendum." AR045042-43.

EAs, nor did it reconsider its prior APD approvals. Citizen Groups filed an amended complaint on May 1, 2020, challenging BLM's approval of the 370 APDs. ECF No. 95. Collectively, the challenged agency actions include the original EAs, decision records, EA Addendum, and updated FONSIs.

D. The EA Addendum

On December 9, 2019—several months *after* Citizen Groups first initiated this litigation—BLM posted a draft EA Addendum for public comment. On January 6, 2020, Citizen Groups submitted comments to BLM detailing numerous outstanding deficiencies in BLM's *post-facto* NEPA analysis. AR033747-814. In February 2020, BLM finalized the EA Addendum and issued separate FONSIs for each of the challenged APD approvals. AR045036-045673.

According to BLM, the EA Addendum was intended "to update the analysis for resources potentially inadequately covered in the original analysis." AR045092. However, pending completion of the EA Addendum, BLM never cancelled or suspended the original APD approvals. Instead, BLM stated that it was *not* "reapproving the APDs," which were "approved at the time that BLM prepared the original [81] EAs and those approvals have not been vacated or withdrawn." AR045091.

STANDARD OF REVIEW

Courts review BLM's compliance with NEPA under the Administrative Procedure Act ("APA"). 5 U.S.C. § 706; *see also Utah Shared Access Alliance v. Carpenter*, 463 F.3d 1125, 1134 (10th Cir. 2006). Courts "shall…hold unlawful and set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law." 5 U.S.C. § 706(2)(A). Under this standard of review, the Court must "ascertain whether the agency examined the relevant data and articulated a rational connection

between the facts found and the decision made. "In reviewing the agency's explanation, the reviewing court must determine whether the agency considered all relevant factors and whether there has been a clear error of judgment." *Olenhouse v. Commodity Credit Corp.*, 42 F.3d 1560, 1574 (10th Cir. 1994). This includes a "thorough, probing, and in-depth review" of the administrative record. *Wyoming v. United States*, 279 F.3d 1214, 1238 (10th Cir. 2002) (quote omitted).

CITIZEN GROUPS HAVE STANDING

Citizen Groups satisfy Article III standing by demonstrating "injury in fact, causation, and redressability." *Friends of the Earth v. Laidlaw*, 528 U.S. 167, 168 (2000). An organization has standing when "(a) its members would otherwise have standing to sue in their own right; (b) the interests it seeks to protect are germane to the organization's purpose; and (c) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 343 (1977).

The Tenth Circuit has applied a two-part test to determine injury-in-fact, which a plaintiff satisfies by showing: (1) that the alleged NEPA violation "created an increased risk of actual, threatened, or imminent environmental harm," and (2) "that this increased risk of environmental harm injures its concrete interests." *Comm. to Save Rio Hondo v. Lucero*, 102 F.3d 445, 449 (10th Cir. 1996). In other words, "[u]nder [NEPA], an injury results not from the agency's decision, but from the agency's *uninformed* decisionmaking." *Id*. at 452.

"[E]nvironmental plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity." *Laidlaw*, 528 U.S. at 183. Use of the affected area does not require the plaintiff "to show it has traversed each bit of land that will be affected by a

challenged agency action." *S. Utah Wilderness All. v. Palma,* 707 F.3d 1143, 1155 (10th Cir. 2013). It is sufficient for the plaintiff to show that its members have "traversed through or within view of the parcels of land where oil and gas development will occur, and plans to return." *Id* at 1154; *see also Diné CARE*, 923 F.3d at 841-43 (finding standing to challenge drilling permits where plaintiffs demonstrated a nexus to affected areas, and rejecting plaintiff's need to establish a geographic nexus to each well). Moreover, a plaintiff need not show actual environmental harm from complained-of activity. "Reasonable concern[]" that harm will occur is enough. *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp*., 629 F.3d 387, 397 (4th Cir. 2011).

Citizen Groups' members have demonstrated injury-in-fact by describing both their geographic nexus to areas affected by the challenged drilling permits and how they are directly harmed by BLM's failure to comply with NEPA.[3] Citizen Groups' members have a geographical nexus to the areas affected by Mancos Shale drilling activities and the challenged APDs, as demonstrated in their declarations describing living, working, recreating, engaging in cultural and spiritual practices, and otherwise using areas adjacent to and near the locations where horizontal drilling and fracking of Mancos Shale wells is occurring, and from which the effects of this drilling are visible and audible.[4] Citizen Groups' members describe specific harms from ongoing Mancos Shale development, and how these harms will be increased "due to [the BLM's] alleged uninformed decisionmaking." *Lucero*, 102. F.3d at 451. For example, Citizen Groups' members describe how the character of the landscape has been altered, the viewing of Mancos Shale drilling rigs and flares, impacts from fracking trucks, impacts to resources, impacts to their

[3] *See* Eisenfeld Decl. ¶¶2, 4-5, 8-9, 11 (Exhibit 1); Grant Decl. ¶¶ 4, 7, 9-10, 13 (Exhibit 2); King-Flaherty Decl. ¶¶ 5, 9, 12, 15-18, 20-22 (Exhibit 3); Pinto Decl. ¶¶ 4, 5, 8-12 (Exhibit 4); Seamster Decl. ¶¶ 3, 13 (Exhibit 5); Nichols Decl.(Exhibit 6) ¶¶ 5-8, 12-17.
[4] Eisenfeld Decl. ¶¶ 2, 3, 8; Grant Decl. ¶¶ 7-8, 10-12; King-Flaherty Decl. ¶¶ 5, 8-12, 15-18; Pinto Decl. ¶¶ 8-11; Seamster Decl. ¶¶ 8, 13; Nichols Decl. ¶¶ 5-8, 12-17.

use and enjoyment of the region, and procedural harm from BLM's failure to comply with NEPA.[5] Having already witnessed the impact of oil and gas development on nearby landscapes, Citizen Groups' members identify imminent injuries from the increased risk of environmental harm caused by more drilling and development of Mancos Shale wells, including injuries to their use and enjoyment of the areas, and from increased concerns about threats to their health and safety.[6] As *Diné CARE* found in similar circumstances, Citizen Groups have met the injury-in-fact prong of standing. 923 F.3d at 841-43.

To establish traceability in NEPA cases, the Tenth Circuit has explained that a plaintiff "need only trace the risk of harm to the agency's alleged failure to follow [NEPA] procedures." *Lucero*, 102 F.3d at 452. Here, Citizen Groups' members' injuries are traceable to BLM's authorizations of Mancos Shale APDs without adequately evaluating the impacts of such drilling under NEPA, which increases the risk of environmental harm to Citizen Groups' concrete recreational, aesthetic, and health related interests. *Diné CARE*, 923 F.3d at 843-44. Citizen Groups' members discuss BLM's failure to consider negative impacts to air, water, landscapes, climate, cultural resources, and other resources due to oil and gas development, and how these unanalyzed impacts cause their injuries.[7] As in *Diné CARE*, Citizen Groups have met the causation prong of standing. *Id.*

Redressability is satisfied by showing that a plaintiff's "injury would be redressed by a favorable decision requiring the [agency] to comply with [NEPA's] procedures." *Lucero*, 102. F.3d at 452; *see also Diné CARE*, 923 F.3d at 844 (accord). "Under [NEPA], 'the normal

[5] Eisenfeld Decl. ¶¶ 4, 8-10; Grant Decl. ¶¶ 9-12; King-Flaherty Decl. ¶¶ 10-12, 16, 18; Pinto Decl. ¶¶ 4, 5, 8-12; Seamster Decl. ¶¶ 13-14; Nichols Decl. ¶¶ 7-8, 12-13, 15-17.
[6] Eisenfeld Decl. ¶¶ 9- 11; Grant Decl. ¶¶ 13-14; King-Flaherty Decl. ¶¶ 20-22; Pinto Decl. ¶¶ 8-12; Seamster Decl. ¶¶ 9, 13-14; Nichols Decl. ¶¶ 12-18.
[7] Eisenfeld Decl. ¶ 11; Grant Decl. ¶¶ 13, 15; King-Flaherty Decl. ¶ 22; Nichols Decl. ¶ 18.

standards of redressability' are relaxed; a plaintiff need not establish that the ultimate agency decision would change upon [NEPA] compliance." *Lucero*, 102 F.3d at 452 (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992)). Citizen Groups' members' injuries would be redressed by a favorable result in this case because BLM would be required to sufficiently analyze the cumulative, landscape-level environmental impacts from the authorization of 370 new Mancos Shale wells. Such analysis is fundamental to NEPA's role in agency decisionmaking, and could lead to a denial of the drilling permits or the application of additional stipulations that would lessen the potential impacts to people, the environment, and nearby communities.

ARGUMENT

I. BLM's Decisions to Approve Mancos Shale APDs Were Unlawfully Predetermined Prior to Completion of the Environmental Review Required by NEPA

NEPA is our "basic national charter for the protection of the environment." 40 C.F.R. § 1500.1.[8] At its core, NEPA's "twin aims" are to promote "informed agency decisionmaking and public access to information." *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 707 (10th Cir. 2009). Accordingly, NEPA requires federal agencies to analyze and publicly disclose the environmental impacts of their actions and evaluate all reasonable alternatives to lessen or avoid those impacts. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.14. "By focusing both agency and public attention on the environmental effects of proposed actions, NEPA facilitates informed decisionmaking by agencies and allows the political process to check those decisions." *Richardson*, 565 F.3d at 703.

[8] All references to the NEPA regulations are to those in effect at the time of BLM's decision-making, which occurred entirely before recent amendments effective September 14, 2020. 85 Fed. Reg. 43304 (July 16, 2020).

Environmental analysis can only be useful in informing agency decision-makers if the analysis is conducted *prior* to a decision being made. *See Colorado Envtl. Coal. v. Salazar*, 875 F. Supp. 2d 1233, 1245 (D. Colo. 2012) ("The purpose of NEPA is to require agencies to pause before committing resources to a project to consider the likely environmental consequences of a decision, as well as of reasonable alternatives to it."); *Richardson,* 565 F.3d at 707 (accord). "NEPA's effectiveness depends entirely on involving environmental considerations in the initial decisionmaking process." *Metcalf v. Daley*, 214 F.3d 1135, 1145 (9th Cir. 2000). Accordingly, NEPA regulations require environmental analysis to be "prepared early enough so that it can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5.[9]

Here, however, BLM prepared an Addendum to supplement all of the challenged EAs *after* the agency's decisions to approve the 370 APDs were already made—and without suspending or vacating its APD approvals—rendering such supplemental analysis of no value to the agency's decisionmaking. Accordingly, BLM's reliance on the *post-facto* EA Addendum to paper over deficiencies in its original analyses represents an unlawful rationalization of prior decisions. 40 C.F.R. § 1502.5.

As the Tenth Circuit articulated, unlawful "predetermination" occurs where "an agency *irreversibly and irretrievably* commits itself to a plan of action that is dependent upon the NEPA environmental analysis producing a certain outcome, *before* the agency has completed that environmental analysis—which of course is supposed to involve an objective, good faith inquiry into the environmental consequences of the agency's proposed action." *Forest Guardians*

[9] "This same regulation implies that the same requirement holds for EAs." *Front Range Nesting Bald Eagle Studies v. U.S. Fish & Wildlife Serv.*, 353 F. Supp. 3d 1115, 1131–32 (D. Colo. 2018) (citing 40 C.F.R. § 1502.5(b)).

v. U.S. Fish & Wildlife Serv., 611 F.3d 692, 714 (10th Cir. 2010). While agency staff need not remain subjectively impartial during the environmental review process, the agency cannot irretrievably commit resources prior to completing that review. *Id.* By not suspending or vacating the APDs before completing needed analysis of impacts to water resources, air quality, health, and climate through the EA Addendum, BLM unlawfully predetermined the outcome of its NEPA process.

Notably, BLM's EA Addendum and updated FONSIs admitted as much—expressly disclaiming reconsideration of its prior APD approvals, and only purporting "to update the analysis for resources potentially inadequately covered in the original analysis." AR045092. BLM explained the agency was not "reapproving the APDs," which were "approved at the time that BLM prepared the original [81] EAs and those approvals have not been vacated or withdrawn." AR045091. Thus, BLM had already irreversibly and irretrievably committed to approving the 370 APDs and refused to reevaluate that commitment. AR045091-92. Accordingly, BLM's analysis in the EA Addendum was predetermined to result in a FONSI for all of the challenged APDs, and the supplemental environmental review would have no bearing on this outcome. This process is expressly forbidden by NEPA. *Forest Guardians*, 611 F.3d at 714.

Environmental analysis under NEPA "must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made." *Id.* at 712 (quote omitted. Thus, BLM's attempt to paper over its inadequate analyses is no minor procedural error, rather it undermines the fundamental purpose of NEPA. Instead of informing the agency's decision-making process, as Congress intended, BLM's *post-hoc* supplemental analysis served only to "rationalize or justify decisions already made,"

violating both the spirit and letter of NEPA and its regulations. *Id.* at 712-13; *see also* 40 C.F.R. § 1502.5.

The risks of upholding this type of after-the-fact analysis were examined in *Protect Key West, Inc., v. Cheney*, 795 F. Supp. 1552, 1561–62 (S.D. Fla. 1992). There, the Navy prepared an EA to assess the impacts of a proposed new housing project, issued a FONSI, and then conducted additional studies assessing environmental and engineering issues related to the project. When the adequacy of the EA was challenged, the Navy "argue[d] that the studies, surveys, and investigations conducted after the decision was made to proceed with the…project 'cure[d]' any defects in the original EA," and supported the previously-issued FONSI. *Id.* at 1560. As here, Plaintiffs argued that "the subsequent studies, reports, analyses, performed after the fact, cannot and do not cure the defective EA." *Id.*

Recognizing the EA to be "a fundamental crossroads in the [NEPA] process," the court found it "clear that the Navy's theory of 'cure' in this case would violate the letter and spirit of NEPA." *Id.* at 1561. Because "[t]he documentation offered in support of the EA's 'findings' was prepared *after* the EA and FONSI were issued," and after the agency's decision was made, the court found that "[a]ccepting the Navy's argument would render the EA/FONSI process a mere formality." *Id. Protect Key West* recognized that allowing *post-facto* 'cure' of BLM's inadequate NEPA analysis would undermine the fundamental purpose of the statute. *See id.* at 1561-62.

Just as in *Protect Key West*, here BLM has attempted to cure its "potentially inadequate[]" original analysis with an after-the-fact update, completed only after this litigation was filed. AR045092. NEPA, however, is not intended to be a "mere bureaucratic formality," but to ensure that "federal agencies meaningfully consider the potential environmental impacts of a proposed action *before* undertaking that action." *Diné CARE v. OSMRE*, No. 12-CV-01275-JLK,

2015 WL 1593995, at *3 (D. Colo. Apr. 6, 2015). Thus, while NEPA primarily lays out procedural requirements, the statute is fundamentally intended to drive on-the-ground results:

> Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

40 C.F.R. § 1500.1(c).

By refusing to reconsider the issuance of the challenged APDs, BLM rendered preparation of the EA Addendum a purely paperwork exercise, completely disconnected from the agency's decision-making process. Accordingly, BLM's FONSIs were unlawfully predetermined prior to completion of the environmental review required by NEPA, and approval of the APDs was arbitrary, capricious, and in violation of NEPA.

II. The Court Should Reject the EA Addendum as a *Post-Hoc* Rationalization for BLM Decisions Already Made

As the Tenth Circuit has repeatedly explained, courts "may affirm agency action, if at all, only on the grounds articulated by the agency itself." *High Country Conservation Advocates v. U.S. Forest Serv.*, 951 F.3d 1217, 1225 (10th Cir. 2020) (quoting *Olenhouse*, 42 F.3d at 1565). Courts are not permitted to consider the "post-hoc rationalization" for an agency action offered either by counsel or the agency itself. *Id.* "Post-hoc examination of data to support a pre-determined conclusion is not permissible because '[t]his would frustrate the fundamental purpose of NEPA, which is to ensure that federal agencies take a 'hard look' at the environmental consequences of their actions, early enough so that it can serve as an important contribution to the decision making process.'" *Sierra Club v. Bosworth*, 510 F.3d 1016, 1026 (9th Cir. 2007) (quote omitted).

Here, to withstand challenge, BLM's decisions to approve the APDs must be supported based solely on the record before the agency at the time of its APD decisions. *High Country*, 951 F.3d at 1225. BLM's *post-hoc* attempt to rationalize its earlier decisions to approve Mancos Shale APDs—through preparation of the EA Addendum after Citizen Groups had filed this litigation—had no bearing on the agency's actual decision-making process. In fact, BLM expressly disclaimed any reconsideration of its decisions to approve the APDs. AR045092. Accordingly, in evaluating the validity of the NEPA analysis underlying BLM's decisions to approve the 370 challenged APDs, the Court should not consider the *post-facto* EA Addendum.

III. BLM Failed to Take a Hard Look at Environmental Impacts

NEPA imposes "action-forcing procedures…requir[ing] that agencies take a hard look at environmental consequences." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989). The purpose of the "hard look" requirement is to ensure that the "agency has adequately considered and disclosed the environmental impact of its actions and that its decision is not arbitrary or capricious." *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 97-98 (1983). These "environmental consequences" may be direct, indirect, or cumulative. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8. BLM determines whether such impacts are significant by accounting for both the "context" and "intensity" of those impacts. *Id.* § 1508.27.

Here, BLM failed to satisfy its NEPA obligations. And, as detailed above, all post-APD decision NEPA documentation—such as the EA Addendum—should not be considered when evaluating the sufficiency of BLM's hard look. However, even when such documents are included, BLM has still failed to satisfy NEPA.[10]

[10] Plaintiffs acknowledge that the content of the underlying EAs has changed somewhat over time. For example, the most recent EA challenged here (DOI-BLM-NM-F010-2019-0047-EA), takes certain steps to cure earlier deficiencies in BLM's analyses, but is a notable outlier from

A. BLM Failed to Take a Hard Look at Impacts to Water Resources

Among the environmental impacts BLM must evaluate are "the cumulative impacts of a project." *WildEarth Guardians v. U.S. Fish & Wildlife Serv.*, 784 F.3d 677, 690 (10th Cir. 2015) (quote omitted). Cumulative effects include the impacts of all past, present, and reasonably foreseeable actions, regardless of what entity or entities undertake the actions. 40 C.F.R. § 1508.7; *see also id.* § 1508.25(a)(2) (Cumulative actions include those that, "when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.").

In a directly analogous case, *Diné CARE*, the Tenth Circuit held that "BLM was required to, but did not, consider the cumulative impacts on water resources associated with drilling the 3,960 reasonably foreseeable horizontal Mancos Shale wells." 923 F.3d at 857. The Tenth Circuit reasoned that BLM's 2014 RFDS (AR008969), "made it reasonably foreseeable that 3,960 horizontal Mancos Shale wells would be drilled, and NEPA therefore required the BLM to consider the cumulative impacts of those wells in the agency's individual EAs for subsequent horizontal Mancos Shale well APDs." *Id.* at 852-53. Accordingly, "BLM therefore acted arbitrarily and capriciously in issuing FONSIs and approving APDs associated with these EAs." *Id.* at 857.

During the preceding litigation, BLM continued to approve new Mancos Shale wells through individual, site-specific EAs. The agency's analyses of impacts to water resources in each of those EAs, challenged here, fail to analyze the cumulative magnitude of impacts across

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the other challenged EAs. AR082674. Further, while the additional information provided in the 2019 EA highlights the gross inadequacies of BLM's earlier analyses, the 2019 EA still consistently—and unlawfully—substitutes *quantification* for *analysis*. *See* AR082674-84 (water resources); AR082652-62 (air quality); AR082662-082668 (climate).

the Greater Chaco Landscape, mirroring the water impacts analyses already found deficient by the Tenth Circuit. *Diné CARE*, 923 F.3d at 857. The EAs supporting the challenged APDs plainly show that BLM never considered the cumulative water resources impacts from water extraction needed to support BLM's projections of 3,960[11] reasonably foreseeable Mancos Shale wells.[12]

BLM has acknowledged these failings. AR045037. However, rather than withdrawing its APD approvals and reinitiating the NEPA process, the agency instead compelled Citizen Groups to bring this action and then prepared the *post-hoc* EA Addendum in an attempt to cure the deficiencies. As detailed above, the EA Addendum is not properly before the Court. Nevertheless, even if the EA Addendum was properly incorporated into NEPA documentation for the challenged APDs, BLM still fails to satisfy its hard look mandate in two ways. Although the EA Addendum attempts to quantify cumulative water usage from both the 370 challenged APDs and the 3,200 reasonably foreseeable future wells, BLM: (1) fails to quantify direct water consumption from slick water completed wells; and (2) provides *no analysis* of the impacts that direct or cumulative groundwater consumption would have on water resources.

First, BLM's EA Addendum does not assess water consumption from wells utilizing the new "slick water" stimulation technique, which requires a massive average of 54-acre feet of

[11] At the time many of the original EAs were prepared, the applicable projection of new wells was 3,960, from the 2014 RFDS. A new RFDS was prepared in 2018 that provided a baseline projection of 3,200 new wells. AR008132. According to BLM's EA Addendum, the 2018 RFDS is being retroactively applied to APDs approved since the beginning of fiscal year 2014 as a basis for the supplemental analysis. AR045037. Because the EA Addendum is *post-hoc*, the Court should consider whether all pre-February 2018 APD EAs properly analyzed the cumulative impacts of the 2014 RFDS (AR008969) estimate of 3,960 wells.

[12] *See, e.g.,* AR050639 (DOI-BLM-NM-F010-2014-0267-EA); AR051960, 051974, 051977 (DOI-BLM-NM-F010-2015-042-EA); AR056974, 056982-93, 056983, 056994 (DOI-BLM-NM-F010-2016-0210-EA); AR065809, 065827 (DOI-BLM-NM-F010-2017-0010-EA); AR081661-63, 081707, 081721-72 (DOI-BLM-NM-F010-2018-0047-EA).

water per well—more than 10 times as much as other hydraulically fractured horizontal wells.[13] Table 16a in the EA Addendum, identifying direct water impacts from the 370 challenged APDs, includes only groundwater consumption for non-slick water completed wells. AR045068. The table identifies total water consumption of 17.7-acre feet from 33 vertical wells, and 1,671.6-acre feet from 337 horizontal wells, for a "total direct impact" of 1,689.3-acre feet of groundwater consumed. AR045068. Wells using "slick water" completion are entirely absent from this quantification. Yet BLM has admitted that at least 20 slick water wells have already been drilled (AR045066), and an overall trend of operators utilizing "slick water stimulation beginning in 2015." AR009393. Considering just the 20 slick water wells already drilled, BLM's direct quantification of water consumption failed to account for 1,080-acre feet—or over 351 million gallons of water.

BLM attempts to build "slick water stimulation" into its consideration of cumulative impacts, noting that "[i]f the slick water trends noted above are realized and remain consistent over the 20-year development scenario timeframe, total cumulative water volumes would be closer to…125,000 AF, or 6,250 AF in any given year." AR045070. This is over 40 billion gallons of water that would be lost from the hydrologic cycle in northwest New Mexico.

Yet BLM says nothing about the *impact* of this level of additional water consumption on the environment. BLM quantifies water use, but fails to actually satisfy NEPA's aim by evaluating the *severity* of adverse effects to groundwater resources. *Robertson*, 490 U.S. at 352; 42 U.S.C. § 4332(C)(ii). Neither the 2003 RMP/EIS, the individual EAs, nor the EA Addendum include any assessment of the current status or condition of water resources sourced for the

[13] BLM estimated "a water use average of 27 AF per lateral mile on average for slick water stimulation" (AR045066), and later relied on "an average of a 2-mile lateral for each horizontal well." AR045069. BLM estimates 4.8 AF on average for horizontal wells. AR045068.

fracking of oil and gas wells. Instead, BLM dismisses such water consumption as "cumulatively represent[ing] about 1.3 percent of San Juan Basin 2015 water withdrawals." AR045070. BLM thus fails to consider the cumulative impacts of 40-billion gallons of water consumption *when added to* other activities collectively impacting groundwater resources, as required by NEPA. 40 C.F.R. § 1508.7.

Second, BLM does not analyze the impacts of groundwater withdrawals for well development on surrounding groundwater sources. The EA Addendum states that "[w]ater uses of oil and gas development in the New Mexico portion of the San Juan Basin are typically sourced from groundwater[,]" and identifies "ten major confined aquifers in the San Juan Basin." AR045066. In particular, the Nacimiento Formation and the Ojo Alamo Sandstone are used for the hydraulic fracturing of oil wells in the southern portion of the San Juan Basin—the location of Mancos Shale development. AR045067. Yet none of the NEPA documents on which BLM relies provides any statement, let alone analysis, of the current or projected condition of these groundwater aquifers. Moreover, even BLM's *post-hoc* 2019 Water Support Document—which explicitly states that "site-specific NEPA analysis" will occur at the APD stage—offers only that "[w]ater level monitoring by the U.S. Geological Survey during the 1980s reveals that long-term use of a well drilled into these aquifers will cause water levels to drop, potentially affecting neighboring wells." AR009416.

The condition of these water resources is of critical importance, particularly as New Mexico suffers from an historic drought (AR033883), and BLM recognizes that predicted warming will cause "decreases in overall water availability by one quarter to one third" of current levels. AR045056. Further, approximately 40% of families in the Navajo Nation already lack running water in their homes, compounding the impacts of additional water depletion in the

region. AR044604. Without assessing projected additional groundwater withdrawals from oil and gas in context of the ongoing decline in groundwater levels and the crisis in water availability on the Navajo Nation, "there is simply no way to determine what effect the [proposed] project will have on the environment and, consequently, no way to comply with NEPA." *Or. Natural Desert Ass'n v. Rose*, 921 F.3d 1185, 1190 (9th Cir. 2019) (quote omitted).

B. BLM Failed to Take a Hard Look at Air Quality and Human Health Impacts

Protecting public health is fundamental to NEPA's purpose, and requires federal agencies to consider the degree to which their proposed actions affect public health or safety. 42 U.S.C. § 4321; 40 C.F.R. § 1508.27(b)(2). NEPA's use of the term "human environment" expressed Congressional recognition of the link between environmental integrity and human well-being, including the clear relationship between air quality and human health. AR041094. NEPA regulations specifically include "health" among the environmental impacts an agency must analyze, 40 C.F.R. § 1508.8, and courts have affirmed NEPA's requirement that agencies take a hard look at health effects. *See, e.g., Middle Rio Grande Conserv. Dist. v. Norton*, 294 F.3d 1220, 1229 (10th Cir. 2002). Recently, in *Wilderness Workshop v. Bureau of Land Mgmt.,* 342 F. Supp. 3d 1145 (D. Colo. 2018), the court recognized BLM's duty to take a hard look at health impacts in its NEPA analyses at the oil and gas leasing and development stages.[14] NEPA also requires BLM to take a hard look at air quality impacts. *See, e.g., Pennaco*, 377 F.3d at 1159

[14] Specifically, the court reasoned, "in the context of oil and gas leasing, the site-specific impacts occur in the later stages of leasing and development," but "this is not to question the veracity or importance of the firsthand accounts and reports [about health impacts] plaintiffs note; this is merely the improper procedural stage to raise such issues." *Wilderness Workshop*, 342 F. Supp. 3d 1145 at 1163 (citing *Pennaco Energy v. U.S. Dep't of Interior*, 377 F. 3d 1147, 1151-1152 (10th Cir. 2004)).

(finding that BLM failed to analyze impacts to air quality from a new type of oil and gas development). Here, BLM has failed to take a hard look at both air quality and health impacts.

The record clearly documents the health impacts from dangerous oil and gas related air pollution.[15] Health Impact Assessments ("HIAs") and Health Impact Reviews ("HIR")—such as the information submitted to BLM by the Counselor HIA Committee regarding effects of oil and gas development on people living in Greater Chaco (AR097837-46)—provide useful analysis and disclosure of air quality and health risks and impacts, particularly from a community-based perspective. AR041094. BLM had such information available before finalizing its EA Addendum, yet the agency cites only one health study in a "list of references" and otherwise ignores health related impacts to nearby communities. AR045082. Moreover, the individual EAs barely mention health impacts, let alone take the hard look NEPA demands.[16]

1. Quantifying air emissions without analyzing their effects does not constitute a hard look at air quality and health impacts.

NEPA requires BLM to do more than merely quantify projected air emissions—it must also *analyze* their *impacts*. While the EA Addendum quantifies annual air emissions from the challenged APDs, it does not actually analyze the health or other effects of such emissions. AR045051. To take the required "hard look" at air quality and health impacts, BLM must disclose what quantitative estimates mean in terms of "actual environmental effects." *See Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216 (9th Cir. 2008) (Stating: "While the EA quantifies the expected amount of CO_2…it does not evaluate the

[15] *See, e.g.*, AR041103, 041112, 041141, 043036, 043170, 043646-58; 043671-97; 043702-963; 043964-89; 043990-4009; 044010-16, 044438.
[16] *See, e.g.*, AR050626-30 (DOI-BLM-NM-F010-2014-0267-EA); AR051981-86 (DOI-BLM-NM-F010-2015-042-EA); AR057004-09 (DOI-BLM-NM-F010-2016-0210-EA); AR065837-44 (DOI-BLM-NM-F010-2017-0010-EA); AR081675-80 (DOI-BLM-NM-F010-2018-0047-EA).

'incremental impact' that these emissions will have on climate change or on the environment more generally…. The EA does not discuss the *actual* environmental effects resulting from those emissions."); *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 995 (9th Cir. 2004) (tallying "the number of acres to be harvested" and "the total road construction anticipated" were "a necessary component" of the analysis, but do not amount to NEPA's required "description of *actual* environmental effects").

Quantification alone, even when paired with a qualitative "list of environmental concerns such as air quality [and] water quality" is not a hard look when the agency fails to assess "the degree that each factor will be impacted." *Klamath-Siskiyou,* 387 F.3d at 995. Here, BLM's NEPA analysis includes no consideration of the "degree" that air quality and human health will be impacted by development of the challenged ADPs. Instead, BLM offers only vague descriptions of air quality regulations, divorced from any discussion of emissions from the challenged APDs. AR045043-54. For example, in response to comments on the draft EA Addendum, BLM asserts that it "does not fail to address cumulative health impacts" because it includes an "explanation of the Air Quality Index," which can help people understand when they "may want to take measures to protect their own health." AR045100. However, "general statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided." *Kern v. Bureau of Land Mgmt.,* 284 F.3d 1062, 1075 (9th Cir. 2002) (quote omitted). BLM's vague, decontextualized "explanation" is no substitute for the required analysis of direct, indirect, and cumulative emissions *and impacts from these APD approvals*.

2. BLM's mischaracterization of air pollution exposures as a "temporary nuisance" is arbitrary.

BLM mischaracterizes exposures to air pollutants, including particulate matter, volatile organic compounds ("VOCs"), and ozone,[17] as a "temporary nuisance" which "would not pose a risk to human health…because there would be no long-term exposure to elevated levels of toxic air pollutants." AR045052. This statement is arbitrary, unsupported by the record, and contrary to scientific understanding.

First, BLM ignores potentially significant emissions from oil and gas operations, which are likely to last for *decades*.[18] BLM projects each individual well to cause "significant" air emissions for only 90 days, during separate construction, completion, and reclamation phases of 30 days each. AR045051-52. BLM does include operations emissions in its *annual* projected criteria pollutant emissions table. AR045051-52. However, calculating and disclosing only a single year's worth of emissions obfuscates the potentially significant emission levels and corresponding impacts that will accumulate over *decades* of operations. Without a complete and accurate picture of full life-cycle emissions of wells, BLM cannot possibly take NEPA's requisite hard look at the impacts of well development—including health impacts—and evaluate their significance. 40 C.F.R. § 1508.27. ("[S]ignificance cannot be avoided by terming an action temporary or by breaking it down into small component parts"). The U.S. EPA has recognized the importance of assessing such cumulative risks and impacts over time (and from multiple

[17] Ozone, "a criteria pollutant that is of most concern" in the Greater Chaco region, is not directly emitted from oil and gas wells, but is a secondary pollutant that results from interactions between directly emitted pollutants (VOCs and nitrogen oxides) in the presence of sunlight. AR045044.
[18] BLM assumes an average well-life of 20 years; however, this is not the actual "well life," but has been arbitrarily defined as such based on the RFD planning period. AR045061, 045095. In reality operations may occur for far beyond 20 years, as is the case for many wells operating in the San Juan Basin.

exposures). AR043410-538. Yet BLM failed to incorporate such readily available and emerging cumulative risk assessment frameworks into its analysis.

Second, BLM altogether ignores the cumulative impacts from multiple wells concentrated in a nearby area. Even if BLM were correct that exposure to harmful emissions was only short-term, the agency must analyze these emissions and their impacts—no matter the duration—*in addition* to those from other past, present, and reasonably foreseeable future oil and gas activities in the Greater Chaco. 40 C.F.R. § 1508.7; 40 C.F.R. § 1508.27(a) (recognizing *both* "short- and long-term effects are relevant" in assessing the "context" of an action and its environmental impacts). Such consideration was core to the Tenth Circuit's decision in *Diné CARE,* which required analysis of the cumulative impacts "associated with drilling the 3,960 reasonably foreseeable horizontal Mancos Shale wells." 923 F.3d at 857. Yet BLM instead downplays the significance of new emissions, and ignores their potential health impacts, by *comparing* them to total emissions in San Juan, Sandoval, Rio Arriba, and McKinley counties. AR045051. *See, e.g., Mont. Envtl. Info. Ctr. v. OSMRE*, 274 F. Supp. 3d 1074, 1096–99 (D. Mont. 2017) (rejecting the argument that the agency "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").

Finally, the record demonstrates that even short-term exposure to oil- and gas-related air pollution can have significant, long-lasting health impacts. For example, relatively short-term exposure to particulate matter and ozone has been linked to increased hospital admissions,

adverse cardiovascular effects, emergency room visits, and even deaths. AR094066.[19] As numerous health studies in the record show, health impacts from oil- and gas-related air pollution are more than a mere "nuisance," no matter how "temporary" such emissions may be.[20]

3. BLM fails to consider poor existing air quality in the San Juan Basin.

Ozone levels monitored across the San Juan Basin are already so dangerously high that the American Lung Association has given San Juan County a failing "F" grade for smog (ground-level ozone) pollution. AR044943. While ozone levels "have not yet exceeded" the National Ambient Air Quality Standards ("NAAQS") in San Juan County, BLM acknowledges that levels "come close" to that regulatory limit and that "breathing [ozone] can have human health effects particularly for sensitive groups (children, the elderly, and those with chronic lung conditions like bronchitis, emphysema, and asthma)." AR045046. Yet BLM does not actually analyze the possible effects of adding additional ozone precursor emissions from the challenged APDs into a region with already-high existing ozone levels, nor does the agency engage in any actual analysis of health impacts to "sensitive" groups, or anyone else.[21]

BLM cannot avoid taking a hard look at air quality and health impacts simply because the NAAQS and other air quality standards are not currently being violated. *WildEarth Guardians v. OSMRE,* 104 F.Supp.3d 1208*,* 1227-28 (D. Colo. 2015) ("It is the duty of [the federal agency] to determine whether a mining plan modification would contribute to such an effect, whether or not

[19] *See also* U.S. EPA, National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65292, 65302 (Oct. 26, 2015); U.S. EPA, National Ambient Air Quality Standards for Particulate Matter, 78 Fed. Reg. 3086, 3086, 3095 (Jan. 15, 2013).
[20] *See, e.g.*, AR041103, 041112, 041141, 043036, 043170, 043646-58; 043671-97; 043702-963; 043964-89; 043990-4009; 044010-16, 044438.
[21] Instead, when noting that ozone NAAQS exceedances could lead to NAAQS nonattainment status, BLM focuses on impacts to "industrial development for the area," not public health concerns. AR045046.

the mine is otherwise in compliance with the Clean Air Act's emissions standards."); *see also Edwardsen v. U.S. Dept. of Interior*, 268 F.3d 781, 789 (9th Cir. 2001) ("that the area will remain in compliance with the NAAQS is not particularly meaningful…" and the "more relevant measure would be the degree to which [the proposal] contributes to the degradation of air quality"). This is particularly the case with respect to ozone because concentrations as low as *60 ppb* (well below the current 70 ppb NAAQS) have been shown to cause adverse health effects, such as reduced lung function and airway inflammation, even in young, healthy adults. AR094066; 80 Fed. Reg. at 65303, 65353.

By acknowledging general air quality-related health risks to "sensitive groups" without analyzing impacts or re-considering its decisions to approve Mancos Shale APDs, BLM violates NEPA by failing to articulate "a rational connection between the facts found and the choices made." *Motor Vehicle Mfrs. v. State Farm*, 463 U.S. 29, 43 (1983) (quote omitted); *see also State of California v. Bernhardt,* No. 4:18-cv-05712-YGR, 2020 WL 4001480 at *35 (July 15, 2020) (on appeal) ("Where BLM has acknowledged increased risk, it cannot then conclude impacts are not significant absent a comprehensive analysis."). BLM's cursory dismissal of increased ozone-related health risks and effects on "sensitive groups" is arbitrary in light of ample record information about the presence of some of these "sensitive groups"—including children and those with asthma—in New Mexico and the Greater Chaco area. In New Mexico, ozone smog causes over 12,000 children to suffer asthma attacks, and is responsible for almost 9,000 missed school days. AR033895. In San Juan and Rio Arriba Counties, child asthma hospitalizations exceed the New Mexico state average (AR044071), and Rio Arriba and McKinley Counties have some of the highest rates of asthma emergency department visits in Northern New Mexico. AR044063. Exacerbating these risks and impacts is that, in 2017, over

40% of San Juan county residents stated that they have difficulty accessing health care. AR044123.

This is exactly the kind of health information *Wilderness Workshop* indicated is "important" for the agency to consider, especially at the APD stage. 342 F. Supp. 3d at 1163. It is also the kind of health information agencies are directed to incorporate into their NEPA analyses under the CEQ Guidance on Environmental Justice in the NEPA process, as interpreted by courts and highlighted in EA Addendum comments. AR033892; *see also, e.g., Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs*, 440 F. Supp. 3d 1, 9 (D.D.C. 2020) (citing the CEQ guidance and recognizing that "Indian tribes are one of the populations that must be considered" in required environmental justice analysis under NEPA); *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 92 (4th Cir. 2020) (even where air quality standards were met, the "failure to consider the disproportionate impact [of air emissions] on those closest to the [facility] resulted in a flawed analysis").

This guidance emphasizes the importance of using public health data to identify "the potential for multiple or cumulative exposure to human health or environmental hazards in the affected population and historical patterns of exposure to environmental hazards, to the extent such information is reasonably available." AR043620. BLM's unexplained failure to consider these important factors in its NEPA analyses for these APD approvals, particularly in light of ample, "reasonably available" information in the record, is arbitrary.

C. BLM Failed to Take a Hard Look at Greenhouse Gas Emissions and Climate Impacts.

BLM's analysis of greenhouse gas emissions and resulting climate change impacts is similarly flawed. "NEPA's primary function is 'information-forcing,' compelling federal agencies to take a hard and honest look at the environmental consequences of their decisions."

American Rivers v. FERC, 895 F.3d 32, 49 (D.C. Cir. 2018). Under NEPA's hard look requirement, an agency's analysis of environmental impacts must be "fully informed," "well-considered," and based on "[a]ccurate scientific analysis." *NRDC v. Hodel*, 865 F.2d 288, 294 (D.C. Cir. 1988) (quote omitted); 40 C.F.R. §§ 1500.1(b), 1502.24.

BLM's EA Addendum, various Air Resources Technical Reports ("ARTR"), and the Cumulative BLM New Mexico Greenhouse Gas Emissions Report ("Cumulative Emissions Report"), are all *post-hoc* rationalizations that did not inform the agency's decision to approve the 370 challenged APDs, and thus should not be considered. And, as with other resources discussed above, mere quantification of greenhouse gas ("GHG") emissions is not a substitute for an actual hard look at impacts.

1. BLM erroneously minimized the magnitude of direct and indirect emissions.

BLM's analysis failed to quantify or analyze the *total* direct emissions of oil and gas production, and misleadingly minimized the magnitude of emissions. "Direct effects…are caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a); *see also id.* § 1502.16(a) (recognizing agency consideration must include "any adverse environmental effects which cannot be avoided…the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitment of resources" within the context of "[d]irect effects and their significance"). *See also* 40 C.F.R. § 1508.27(a); *Friends of the Earth v. U.S. Army Corps of Eng'rs,* 109 F. Supp. 2d 30, 38 (D.D.C. 2000) (chastising agency for failing to consider direct impacts of project implementation and thus failing to take a "hard look").

First, BLM failed to define how it quantified GHG emissions in the EA Addendum, or to reconcile inconsistencies in the stated warming potential of methane across the agency's NEPA

documentation. BLM offers that "[t]he two primary GHGs associated with the oil and gas industry are CO2 and CH4." AR045056. Methane ("CH_4") has greater radiative forcing (i.e., a greater capacity to warm the atmosphere), but a shorter atmospheric lifetime, than carbon dioxide ("CO_2").[22] Thus, relative to CO_2, methane has much greater climate impacts in the near-term. AR100615. The EA Addendum used a 100-year warming potential for methane, recognizing that it "has a global warming potential that is 21 to 28 times greater than the warming potential of CO2." AR045056.[23] However, the agency failed to account for methane's 20-year warming potential in its analysis, which the IPCC currently identifies as 87. AR101271. This failure results in a significant underrepresentation of quantified emissions.

NEPA analyses must provide a "full and fair discussion of significant environmental impacts." 40 C.F.R. § 1502.1. Environmental information made available to the public "must be of high quality," and BLM must provide "[a]ccurate scientific analysis" which proves "essential to implementing NEPA." 40 C.F.R. § 1500.1(b). NEPA also requires BLM to ensure the "scientific integrity" of its analysis, including "both short- and long-term effects." 40 C.F.R. §§ 1502.24, 1508.27(a). Accordingly, BLM must analyze climate impacts in the near-term if the agency is to consider measures to avoid significant climate warming, and, importantly, a near-term analysis is also consistent with BLM's planning period and assumption of a 20-year well life. AR045061.[24] Thus, "BLM's unexplained decision to use the 100-year time horizon, when

[22] *See* AR032993-94 (recognizing importance of GWP and including 100- and 20-year GWP for methane); AR034578-79 (explaining methane's 100- and 20-year GWP).
[23] Elsewhere BLM states: "Methane is 34 times more potent at trapping greenhouse gas emissions than CO2 when considering a time horizon of 100 years (Intergovernmental Panel on Climate Change, 2013)." AR065841. The 2019 Air Resources Technical Report uses a GWP of 28, but also identifies a 20-year GWP of 84. AR032994.
[24] The Cumulative Emissions Report recognizes GWP values for a 20-year time horizon, but BLM fails to carry that time horizon over to its analysis. AR009441.

other more appropriate time horizons remained available, qualifies as arbitrary and capricious under these circumstances. BLM's unexplained decision to use the 100-year time horizon further fails to satisfy NEPA's purpose of 'foster[ing] informed decision-making.'" *W. Org. of Res. Councils v. Bureau of Land Mgmt.*, No. 4:16-cv-00021-BMM, 2018 WL 1475470, at *15 (D. Mont., Mar. 26, 2018) (citing *California v. Block*, 690 F.2d 753, 761 (9th Cir. 1982)).

Second, the EA Addendum also failed to quantify total direct emissions over the estimated 20-year life of the challenged wells, and instead erroneously only quantified annual emissions. AR045058. BLM quantified direct emissions as those from "well construction" and "operations"—distinguishing between the two with respect to source and emission rate between gas wells and oil wells. AR045057-58. Because "well construction" is a temporally limited event—i.e., a well is only constructed once—quantifying these emissions on an annual basis makes sense. However, by their nature "operations" emissions occur over the entire life of the well, and certainly are not limited to a single year. Elsewhere BLM acknowledges this fact, for example, by quantifying downstream/end-use emissions over the assumed 20-year well life. AR045061.[25] Failing to quantify direct "operations" emissions over the entire predicted life of the well underrepresents emissions by over 2.4 million metric tons ("MMT") of CO_2e.[26] BLM's quantification errors are compounded in the agency's consideration of combined downstream/end-use GHG emissions, where BLM claims to estimate total emissions over a predicted 20-year well life, but only includes a single year's operations emissions in that calculation. AR045058, 045061. Thus, "BLM failed to take a hard look at the environmental

[25] *See supra* n.12 (explaining that actual operations may extend for decades beyond BLM's assumed 20-year well-life).
[26] Derived by taking "Highest Potential GHG emissions from operations" of 120,194.5 $MTCO_2e$ and multiplying by 20 years. *See* AR045058.

impacts of [the project] because it failed to quantify and forecast aggregate GHG emissions from oil and gas development." *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 71 (D.D.C. 2019).

Finally, NEPA requires more than a mere disclosure of the volume of emissions: BLM must analyze the significance and severity of such emissions, so that decision-makers and the public can determine whether and how those emissions should influence the choice among alternatives. *See Robertson,* 490 U.S. at 351-52 (recognizing that NEPA analysis must discuss "adverse environmental effects which cannot be avoided[,]" which is necessary to "properly evaluate the severity of the adverse effects"); *San Juan Citizens Alliance v. Bureau of Land Mgmt.,* 326 F. Supp. 3d 1227, 1242 (D.N.M. 2018) (finding the BLM arbitrarily failed to "discuss the potential impacts of [greenhouse gas] emissions."); *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 106 (D.D.C. 2006) (agency's significance determination is arbitrary where agency provided "no determinate criteria" for evaluating significance "other than [the agency's] conclusory say-so"). As detailed below, BLM never analyzed the significance and severity of direct, indirect, and cumulative emissions realized by its APD approvals.

2. BLM failed to consider the severity of cumulative greenhouse gas emissions.

BLM also failed to take a hard look at cumulative greenhouse gas emissions and resulting climate change impacts. An agency cannot satisfy this requirement under NEPA with "[g]eneral statements about 'possible effects' and 'some risk'" without providing "a justification regarding why more definitive information could not be provided." *Kern,* 284 F.3d at 1075 (quote omitted). "NEPA also requires that agencies do more than merely catalogue relevant projects in the area." *WildEarth Guardians v. Bureau of Land Mgmt*., No. CV-18-73-GF-BMM, 2020 WL 2104760, at *9 (D. Mont. May 1, 2020). The agency must provide sufficient detail in its analysis to assist the

"decisionmaker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts." *Id.*

Recognizing the vulnerability of its underlying EA analyses here,[27] BLM engaged in a complex scheme of *post-hoc* documentation as an attempt to cure these failures—not through analysis of GHG emissions and impacts, but through a mountain of paper, charts, and datasets. Courts have rejected similar attempts, and cannot "defer to a void." *Or. Natural Desert Ass'n v. Bureau of Land Mgmt.*, 625 F.3d 1092, 1121 (9th Cir. 2010). As *San Juan Citizens Alliance* explained: "BLM's reliance on the broad analysis within the ARTR is permitted by regulation, as discussed above. However, BLM must nonetheless *conduct a site-specific analysis within the EA*." 326 F. Supp. 3d at 1249 (emphasis added). Moreover, "[t]o encourage tiering, however, hardly means that tiering alone proves sufficient to satisfy NEPA's various requirements. NEPA regulations encourage tiering 'to eliminate repetitive discussions of the same issues' in different levels of environmental review. 40 C.F.R. § 1502.20. BLM instead has used tiering as a means to avoid discussions of the same general topic, even when no risk of repetition exists." *WildEarth Guardians*, 2020 WL 2104760, at *10.

The Court should not consider BLM's *post-hoc* documentation. *See supra.* However, even if all of BLM's various documents are cobbled together and viewed as a single analysis, the agency's cumulative analysis still falls short. NEPA requires a more searching analysis than merely disclosing various categories of greenhouse gas pollution. Rather, BLM must examine

[27] *See, e.g.*, AR050630-31 (DOI-BLM-NM-F010-2014-0267-EA); AR051981, 051983-84, 051986 (DOI-BLM-NM-F010-2015-042-EA); AR057004-07, 057009 (DOI-BLM-NM-F010-2016-0210-EA); AR065837, 065841-42, 065484 (DOI-BLM-NM-F010-2017-0010-EA); AR081675, 081677-80 (DOI-BLM-NM-F010-2018-0047-EA).

the "ecological[,]… economic, [and] social" impacts of those emissions, including an assessment of their "significance." 40 C.F.R. §§ 1508.8(b), 1502.16(a)-(b).[28] BLM failed to do so here.

BLM's piecemeal documentation offers various charts and datasets, but at no point does the agency connect the dots to assess the significance and severity of cumulative emissions. For example, an aggregated reading of multiple documents ultimately reveals that that there are "approximately 21,150 active oil and gas wells in the San Juan Basin" (AR065844), that total emissions from the 370 challenged wells is 31,487,075.8 MT of CO_2e (AR045061), that cumulative end-use combustion emissions from 3,200 foreseeable wells is 398.4 MMT of CO_2e (AR009454), followed by a comparison of such emissions to historic rates of oil and gas production in the U.S., New Mexico, and BLM planning area (AR009458). BLM also generally acknowledges the rise in global concentrations of GHGs since the industrial revolution (AR032991), that "warming of the climate system is unequivocal" and that "human influence has been the dominant cause of the observed warming" (AR032995).

Yet BLM never makes the connection between these quantified figures and the effects of its decisions challenged here. The agency's indifference is exemplified by the EA Addendum, which sets forth that:

> [F]oreseeable Greenhouse Gas (GHG) emissions of the original Proposed Action, when compared to the reasonably foreseeable past, present, and future potential emissions of the state and nation as well as the foreseeable downstream GHG emissions, will incrementally contribute to global GHG emissions with *de minimis* impacts to cumulative GHG emissions.

[28] *See also* Sec. Order 3289 (requiring BLM to "appl[y] scientific tools to increase understanding of climate change and to coordinate an effective response to its impacts," and mandating that "management decisions made in response to climate change impacts must be informed by [this] science.").

AR045300; *see also*, *e.g.*, AR065844 (EA stating "[t]he very small increase in GHG emissions that could result from implementing the proposed alternative would not produce climate change impacts that differ from the No Action Alternative."). *San Juan Citizens Alliance*, under analogous circumstances, has already rejected BLM's approach:

> It is the broader, significant 'cumulative impact' which must be considered by an agency, but which was not considered in this case. Without further explanation, the facile conclusion that this particular impact is minor and therefore 'would not produce climate change impacts that differ from the No Action Alternative,' is insufficient to comply with Section 1508.7.

326 F. Supp. 3d. at 1248 (citing *Center for Biological Diversity*, 538 F.3d at 1217); *see also* *WildEarth Guardians*, 2020 WL 2104760, at *11 (accord). Thus, BLM's dismissive approach "does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large impact."[29]

Even assuming *arguendo* the environmental impacts of developing a single Mancos Shale well are minimal, these impacts may nevertheless be significant when added to the impacts of existing and future federal oil and gas wells. *WildEarth Guardians*, 368 F. Supp. 3d at 77. In the context of climate change, it is precisely the incremental contribution of emissions across myriad sources that have, together, resulted in the current crisis. The record demonstrates not only the magnitude of the threat posed by climate change, but also the need for federal decisionmaking to consider how a given project's impacts contribute to or otherwise amplify this

[29] Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51,866, 51,866 (Aug. 5, 2016) (referencing final guidance document available at: https://ceq.doe.gov/docs/ceq-regulations-andguidance/nepa_final_ghg_guidance.pdf) (withdrawn by 82 Fed. Reg. 16576 (Apr. 5, 2017)).

threat.[30] BLM was aware of this threat, citing Intergovernmental Panel on Climate Change's ("IPCC") findings regarding the effects of greenhouse gas emissions on climate change, and the government's own National Climate Assessment. *See*, *e.g.*, AR045055-57 (AR Addendum describing climate effects); AR009436-42 (Cumulative Emissions Report).[31]

Nevertheless, here, BLM offers "no quantified assessment" of the "combined environmental impacts" of its APD decisions. *Klamath-Siskiyou*, 387 F.3d at 994; *see also* 40 C.F.R. § 1508.7. No combination of documentation BLM offers has satisfied this duty, in violation of NEPA. *See Am. Rivers*, 895 F.3d at 55 (agency violated NEPA by failing to assess significance of cumulative impacts of project *together with* other past and continuing impacts).

3. BLM failed to evaluate greenhouse gas emissions in context of carbon budgets.

BLM cannot satisfy its NEPA obligations without "properly evaluat[ing] the severity of the adverse effects" from GHG emissions resulting from the 370 challenged Mancos Shale wells. *Robertson*, 490 U.S. at 352. BLM attempted to escape this obligation by claiming "[t]he incremental contribution of global GHGs from a proposed land management action cannot be translated into effects on climate change globally or in the area of any site-specific action."

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[30] *See* Sec. Order No. 3226 (Jan. 19, 2001) (acknowledging the "consensus in the international community that global climate change is occurring and that it should be addressed in governmental decision making," and establishing the responsibility of agencies "to consider and analyze potential climate change impacts when…developing multi-year management plans, and/or when making major decisions regarding the potential utilization of resources under the Department's purview."); AR056346 (Sec. Order No. 3289 (Sept. 14, 2009) (reinstating Sec. Order 3226)); Exec. Order 13514, 74 Fed. Reg. 52117 (Oct. 8, 2009) (requiring federal agencies to "measure, report, and reduce their greenhouse gas emissions from direct and indirect activities").

[31] *See also* AR101512-14 (IPCC summarizing near-term climate impacts); AR101588-90 (IPCC summarizing long-term climate impacts); AR034629 (National Climate Assessment providing key findings for climate models, scenarios, and projections).

AR009438. Such statements do not disclaim BLM of its duty to analyze the severity of emission impacts or NEPA's goal of informed decision-making. *See Scientists' Inst. for Pub. Info. v. Atomic Energy Comm.*, 481 F.2d 1079, 1092 (D.C. Cir. 1973) (rejecting agency attempt to "shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'"). It is also no excuse for failing to consider "whether, or how, to alter" the plan "to lessen cumulative impacts." *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 810 (9th Cir. 1998) (quote omitted).

One of the measuring standards available to the agency for analyzing the magnitude and severity of BLM-managed oil and gas emissions is by applying those emissions to the remaining global carbon budget. A "carbon budget" offers a cap on the remaining stock of GHGs that can be emitted while still keeping global average temperature rise below scientifically-established warming thresholds—beyond which climate change impacts may result in severe and irreparable harm to the biosphere and humanity. AR093995.

As detailed by the IPCC, carbon budgeting is essential to understanding and accounting for the severity and significance of emissions, and for developing a pathway toward climate stabilization. AR036654-55.[32] Such consideration is consistent with BLM's mandate under NEPA, and a measure that the agency cannot simply ignore. *See Robertson,* 490 U.S. at 349 (holding that relevant information must be made available to the public).

The record shows that for an 80% probability of staying below the 2°C warming threshold, there was a global "carbon budget" of 890 gigatons CO_2 ("$GtCO_2e$") emissions as of

[32] *See also* AR036611-12 (detailing mitigation pathways to limit warming below 2°C threshold), AR036635 (detailing anthropogenic greenhouse gas emissions as the driver of climate change), AR036655-65 (detailing climate impacts).

2000.[33] AR095563.[34] Global emissions totaled 234 $GtCO_2$ between 2000 and 2006, with current annual energy sector emissions of approximately 36 $GtCO_2e$ per year. *Id.* Thus, the remaining global carbon budget to stay under the 2°C threshold of warming is currently around 188 $GtCO_2e$, which, at current emissions levels, will be exceeded by 2025. Neither the math, nor the timeline, is encouraging.

Burning the world's proven fossil fuel reserves would result in 2,800 $GtCO_2e$ of emissions. AR095564. "Emitting the carbon from all proven fossil fuel reserves would therefore vastly exceed the allowable CO_2 emission budget for staying below 2°C." AR095564. In the United States, the potential GHG emissions of federal fossil fuels alone are as much as 492 $GtCO_2e$, which itself would significantly exceed the remaining global carbon budget. AR097146.

"In determining whether an action will significantly affect the environment, agencies must consider both the context in which the action will take place and the intensity of its impact." *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1274 (10th Cir. 2004); 40 C.F.R. § 1508.27. Rather than embrace this obligation, the agency offers only that "[t]he BLM is not required to use any specific protocols or methodologies, such as the…global carbon budget, to determine the impact of the APDs on climate change." AR045095-96. BLM relied on the expertise of the IPCC for its qualitative discussion of climate impacts,[35] but arbitrarily ignored

[33] The IPCC's Special Report on Global Warming of 1.5°C—which postdates many of the challenged APDs—offered updated figures, and that for a 66% chance of limiting warming to 1.5 ºC, the remaining global carbon budget is as low as 420 $GtCO_2$ as of 2018. AR034272.
[34] *See also* AR097800 (calculating an upper-bound global carbon budget of 886 $GtCO_2$ as of 2000 for an 80% probability of staying below 2°C, and subtracting emissions from the first decade, leaving a budget of 565 $GtCO_2e$ from 2010 forward); AR036654 (According to the IPCC global emissions must be limited to 1,000 $GtCO_2e$ as of 2000 for a 66% chance of staying below 2°C); AR095685 (providing an available carbon emissions quota from 2000 of "1,400, 2,300 and 3,200 $GtCO_2$ for warming limits of 2, 2.5 and 3°C at 50% chance of success").
[35] *See, e.g.,* AR045055-57 (relying on IPCC expertise); AR009436-42 (same)

the IPCC's chosen methodology for understanding the severity and significance of emissions, in violation of NEPA.

IV. BLM's Failure to Consider a No Action Alternative Violated NEPA

The "heart" of an environmental analysis under NEPA is the analysis of alternatives to the proposed project, and agencies must evaluate all reasonable alternatives to a proposed action. *Colorado Environmental Coal. v. Dombeck*, 185 F.3d 1162, 1174 (10th Cir. 1999) (quoting 40 C.F.R. § 1502.14). An agency must gather "information sufficient to permit a reasoned choice of alternatives as far as environmental aspects are concerned." *Greater Yellowstone*, 359 F.3d at 1277 (citing *Colorado Envtl. Coal*, 185 F.3d at 1174). In order to "provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement," an EA must evaluate a legitimate 'no action' baseline. 40 C.F.R. § 1508.9(a)(1), (b); *see also Davis v. Mineta,* 302 F.3d 1104, 1120 (10th Cir. 2002) ("A properly-drafted EA must include a discussion of appropriate alternatives to the proposed project.") (citing 42 U.S.C. § 4332(2)(E); 40 C.F.R. § 1508.9(b)). As courts have explained, the "no action alternative in an [EA or] EIS allows policymakers and the public to compare the environmental consequences of the status quo to the consequences of the proposed action." *Pac. Coast Fed'n of Fishermen's Assocs. v. U.S. Dep't of Interior*, 929 F. Supp. 2d 1039, 1048 (E.D. Cal. 2013) (insertion in original). "The no action alternative is meant to provide a baseline against which the action alternative may be compared." *Id.*

Despite this mandate, BLM entirely omits any alternatives analysis in its EA Addendum, including consideration of the no-action alternative. AR045092 (claiming "it is not necessary to re-evaluate the No Action alternative in the EA Addendum"). Absent consideration of the no-action alternative, the EA Addendum fails to provide the comparative framework needed for

BLM to fully assess the impacts of authorizing the drilling of 370 new Mancos Shale wells and 3,200 foreseeable future wells across the Greater Chaco landscape. Failure to consider the no-action alternative further renders BLM's EA Addendum a purely paperwork exercise—as BLM *never even contemplated* the possibility that additional analysis of the cumulative impacts of the challenged APDs on climate, water resources, air quality, and public health could alter the agency's decision-making and lead to denial or revocation of any of the challenged drilling permits. Similarly, BLM's failed to consider the potential that supplemental analysis of impacts on climate, water resources, or air quality could lead the agency to impose additional conditions of approval on the APDs to mitigate such impacts.

BLM's failure to consider a "no-action alternative" illustrates the agency's patent failure to take seriously its obligations under NEPA. By attempting to simply paper over the inadequacies of its original analyses through the EA Addendum—without any consideration of altering its pre-determined course of action—BLM has demonstrated its belief that NEPA compliance can be reduced to a "mere bureaucratic formality." *Diné CARE v. OSMRE*, 2015 WL 1593995, at *3. To the contrary, the no-action alternative requirement is intended to ensure that agencies are fully informed of the environmental impacts of their actions. BLM's failure to consider alternatives to its pre-determined decisions to approve the APDs was arbitrary, capricious, and in violation of NEPA and its regulations. 40 C.F.R. § 1508.9(b); 42 U.S.C. § 4332(2)(E).

V. CITIZEN GROUPS ARE ENTITLED TO THE RELIEF REQUESTED

A. Vacatur.

Based on the seriousness of the NEPA failures articulated herein, the only appropriate remedy is to vacate the challenged APDs. Under the APA courts "shall…hold unlawful and set

aside agency action" that is found to be arbitrary or capricious. 5 U.S.C. § 706(2)(A). Vacatur is the normal remedy for an agency action that fails to comply with NEPA. *WildEarth Guardians v. Bureau of Land Mgmt.*, 870 F.3d 1222, 1239 (10th Cir. 2017). Vacatur is the only remedy that serves NEPA's fundamental purpose of requiring agencies to look *before* they leap, and the only one that avoids a "bureaucratic steam roller." *Davis*, 302 F.3d at 1115 (quote omitted). NEPA regulations instruct that the NEPA process must "not be used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5.[36] Thus, vacatur will also insure that any subsequent BLM review is not a pro-forma exercise in support of a "predetermined outcome." *Mont. Wilderness Ass'n v. Fry*, 408 F. Supp. 2d 1032, 1038 (D. Mont. 2006); *accord Diné CARE v. OSMRE*, 2015 WL 1593995, at *3 (vacating mining approval to assure NEPA compliance on remand would not become "a mere bureaucratic formality."). Remand without vacatur would not provide adequate relief.

Recently, the overarching concern that remand without vacatur would result merely in *post-hoc* rationalization was central to the U.S. Supreme Court's decision in *Dep't of Homeland Sec. v. Regents of the Univ. of California*, 140 S. Ct. 1891 (2020). As Chief Justice Roberts explained:

> Requiring a new decision before considering new reasons promotes "agency accountability," *Bowen v. American Hospital Assn.*, 476 U.S. 610, 643 (1986), by ensuring that parties and the public can respond fully and in a timely manner to an agency's exercise of authority. Considering only contemporaneous explanations for agency action also instills confidence that the reasons given are not simply "convenient litigating position[s]." *Christopher v. SmithKline Beecham Corp.*, 567 U.S. 142, 155 (2012) (internal quotation marks omitted). Permitting agencies to invoke belated justifications, on the other hand, can upset "the orderly functioning of the process of review," *SEC v. Chenery Corp.*, 318 U.S. 80, 94 (1943), forcing

[36] While courts retain equitable discretion to depart from vacatur to craft an alternate remedy for violations, they do so only in unusual and limited circumstances. *See W. Oil & Gas v. EPA*, 633 F.2d 803, 813 (9th Cir. 1980) (fashioning alternative remedy where vacatur would thwart the objective of the statute at issue).

both litigants and courts to chase a moving target.

Dep't of Homeland Sec., 140 S. Ct. at 1909. Indeed, this decision may have altogether recast a court's ability to remand an agency decision without vacatur. Moreover, multiple courts in directly analogous cases considering BLM oil and gas drilling and leasing decisions have found vacatur the appropriate remedy where BLM violated NEPA. *See*, *e.g.*, *Diné CARE*, 923 F.3d at 859 (vacating drilling permits); *San Juan Citizens Alliance*, 326 F. Supp. 3d 1227 (vacating oil and gas leases); *Western Watersheds Project v. Zinke*, 441 F. Supp. 3d 1042, 1088 (D. Idaho 2020) (accord); *WildEarth Guardians*, 2020 WL 2104760, at *13 (accord).

In vacating BLM approvals for Mancos Shale APDs, the Tenth Circuit recently explained that courts need not analyze injunction factors where vacatur provides NEPA plaintiffs with sufficient relief. *Diné CARE*, 923 F.3d at 859. Accordingly, here, "[b]ecause vacatur is 'sufficient to redress [Citizen Groups'] injury, no recourse to the additional and extraordinary relief of an injunction [is] warranted.'" *Id.* (quoting *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 166 (2010)). Accordingly, Citizen Groups request that the Court vacate BLM's drilling authorizations.

B. Injunctive Relief.

Even if the Court applies the injunction factors when considering relief, including enjoining APD development, the *Monsanto* factors support enjoining APD development.[37] First, Citizen Groups provided detailed declarations from their members showing that development on the challenged APDs is, and will continue to, eliminate or significantly degrade their members'

[37] A party seeking a permanent injunction must demonstrate: "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; (4) that the public interest would not be disserved by a permanent injunction." *Monsanto*, 561 U.S. at 156-57.

use and enjoyment of the lands near and adjacent to the APDs due to dust, fumes, flares, and noise from drill rigs, fracking trucks, and associated drilling infrastructure.[38] Thus, APD development will irreparably harm Citizen Groups' members. *Davis*, 302 F.3d at 1115-16; *see also San Luis Valley Ecosystem Council v. U.S. Fish and Wildlife Serv.*, 697 F. Supp. 2d 1233, 1240 (D. Colo. 2009) (finding irreparable harm from drilling two exploratory oil and gas wells).

Second, Citizen Groups' injuries are not compensable by money damages. *Amoco Prod. Co. v. Village of Gambell*, 480 U.S. 531, 545 (1987) ("Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable."); *see also, Catron Cnty. Bd. of Comm'rs, N.M. v. U.S. Fish & Wildlife Serv.*, 75 F.3d 1429, 1440 (10th Cir. 1996) (accord). Citizen Groups do not seek money damages, and no amount of money could compensate for members' losses to their recreational and aesthetic interests caused by APD development.

Third, the balance of harms tips decidedly in Citizen Groups' favor, whose members face irreparable environmental and health impacts, compared to Operators' potential delay and speculative financial loss. *Valley Cmty. Pres. Comm'n v. Mineta*, 373 F.3d 1078, 1087 (10th Cir. 2004) (holding "financial concerns alone generally do not outweigh environmental harm"). As recognized in *Wyo. Outdoor Council v. U.S. Army Corps of Eng'rs,* energy needs do not automatically outweigh environmental considerations. As the court explained:

> …mineral resources should be developed responsibly, keeping in mind those other values that are so important to the people of Wyoming, such as preservation of Wyoming's unique natural heritage and lifestyle. The purpose of NEPA…is to require agencies…to take notice of these values as an integral part of the decisionmaking process.

351 F. Supp. 2d 1232, 1260 (D. Wyo. 2005). If irreparable environmental harm "is sufficiently

[38] *See supra* n.3-7.

likely…the balance of harms will usually favor the issuance of an injunction to protect the environment." *Amoco*, 480 U.S. at 544. Here, allowing APD development to continue in the absence of a lawful NEPA analysis could preclude opportunities to prevent irreparable impacts once development's full environmental impacts are known and disclosed.

Finally, the public interest would not be disserved by enjoining APD development to protect public lands and natural resources, and is necessary to preserve the status quo while BLM fulfills its obligations under NEPA. *WildEarth Guardians*, 368 F. Supp. 3d at 84 (enjoined issuance of additional drilling permits on leased parcels). "[P]reserving nature and avoiding irreparable environmental injury" and "careful consideration of environmental impacts before major projects go forward" are in the public interest. *Alliance for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1138 (9th Cir. 2011) (quote omitted). Moreover, "[t]here is an overriding public interest in the preservation of biological integrity and the undeveloped character of the Project area that outweighs public or private economic loss in this case." *Colorado Wild v. U.S. Forest Serv.,* 299 F.Supp.2d 1184, 1190-91 (D. Colo. 2004). And, the "protection of human health, safety and the affected communities also serves the public interest." *San Luis & Delta-Mendota Water Auth. v. Locke*, No. 1:09-cv-01053, 2010 WL 500455, at *8 (E.D. Cal. 2010). Absent a grant of vacatur, an injunction in this case is vital to protecting the public interest by preventing ongoing harm to human health, cultural sites, and the environment from Mancos Shale development.

CONCLUSION

For the foregoing reasons, Citizen Groups respectfully request that this Court declare that BLM's approval of 370 Mancos Shale drilling permits violate NEPA and its implementing

regulations, vacate and remand BLM's EAs, and suspend and enjoin BLM from any further drilling authorizations pending BLM's full compliance with NEPA.

Respectfully submitted this 2nd day of October, 2020.

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CERTIFICATE OF COMPLIANCE WITH RULE 32(a)

This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because this brief contains 12,963 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

Dated this, 2nd day of October, 2020.

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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO
CERTIFICATE OF SERVICE (CM/ECF)

I hereby certify that on October 2, 2020, I electronically filed the foregoing PLAINTIFFS' OPENING MERITS BRIEF with the Clerk of the Court via the CM/ECF system, which will send notification of such filing to other participants in this case.

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