No. 21-2116

UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

DINÉ CITIZENS AGAINST RUINING OUR ENVIRONMENT, et al.,
Plaintiffs/Appellants,

v.

DEBRA HAALAND, et al.,
Defendants/Appellees.

Appeal from the United States District Court for the District of New Mexico
No. 1:19-cv-00703 (Hon. William P. Johnson)

UNCITED PRELIMINARY RESPONSE BRIEF FOR APPELLEES (DEFERRED APPENDIX APPEAL)

Of Counsel:

MICHAEL C. WILLIAMS
Attorney-Adviser
Office of the Solicitor
U.S. Department of the Interior

TODD KIM
Assistant Attorney General
CLARE BORONOW
BRIDGET KENNEDY McNEIL
Attorneys
Environment and Natural Resources Division
U.S. Department of Justice
999 18th Street, Suite 370
Denver, CO 80202
(303) 844-1484
bridget.mcneil@usdoj.gov

Oral argument is requested.

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PRIOR OR RELATED APPEALS

This matter relates to a different but similar action in *Diné Citizens Against Ruining Our Environment v. Jewell*, which was first appealed at the preliminary injunction stage (839 F.3d 1276 (10th Cir. 2016)) and later appealed after disposition of the merits (923 F.3d 831 (10th Cir. 2019)).

GLOSSARY

AF	acre feet
APA	Administrative Procedure Act
APD	Application for Permit to Drill
BLM	United States Bureau of Land Management
CEQ	Council on Environmental Quality
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FONSI	Finding of No Significant Impact
IPCC	Intergovernmental Panel on Climate Change
NAAQS	National Ambient Air Quality Standards
NATA	National Air Toxics Assessment
NMAAQS	New Mexico Ambient Air Quality Standards
NEPA	National Environmental Policy Act
RFDS	reasonably foreseeable development scenario
RMP	resource management plan
VOCs	volatile organic compounds

INTRODUCTION

Plaintiffs-Appellants ("the citizen groups") seek to invalidate agency approvals for the development and operation of 370 oil and gas wells in northwestern New Mexico. A prior challenge resulted in a narrow order from this Court requiring the U.S. Bureau of Land Management ("BLM") to assess the cumulative impacts of the operations authorized in five of its decisions on water resources in the region. In addition to complying with that order, BLM voluntarily prepared an updated assessment of impacts to air quality and climate change. These detailed analyses, supported by multiple new studies and technical reports, are found in the 2020 Environmental Assessment ("EA") Addendum.

BLM used the EA Addendum to evaluate the original findings of "no significant impact" for 81 EAs, covering 370 applications for a permit to drill ("APDs"), actions outside the scope of the prior litigation. The agency evaluated whether it could affirm those original findings or whether those actions required further agency consideration. BLM found that the new analyses did not change the prior conclusions that the APD operations would not rise to the level of a significant impact, as defined by the National Environmental Policy Act ("NEPA"). Thus, BLM issued new findings of "no significant impact" for these 81 EAs.

The citizen groups are unsatisfied with both the procedure and the resulting decisions. BLM's approach, however, met the NEPA obligation to take a "hard look" at these issues. The district court correctly rejected the citizen groups' challenges to BLM's analysis, on the merits and in some instances for jurisdictional infirmities, and this Court should affirm that judgment.

STATEMENT OF JURISDICTION

(A) Although the district court lacked jurisdiction as to certain APDs, as explained below, it had subject matter jurisdiction over the case under 28 U.S.C. § 1331 because the claims arise under the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq*. and the Administrative Procedure Act ("APA"), 5 U.S.C. § 701 *et seq*. App. at [ECF No. 95].

(B) This Court has jurisdiction under 28 U.S.C. § 1291 because the district court entered a final judgment on August 3, 2021. App. at [ECF No. 126].

(C) Plaintiffs timely filed their notice of appeal on October 4, 2021. App. at [ECF No. 127]; *cf.* Fed. R. App. P. 4(a)(1)(B), Fed. R. App. P. 26(a)(1)(C).

(D) The appeal is from a final judgment that disposes of all parties' claims.

STATEMENT OF THE ISSUES

1. Are the citizen groups' challenges to unapproved APDs ripe for judicial review? Similarly, are their challenges to expired APDs and APDs covering abandoned wells moot?

2. Did the district court correctly consider BLM's EA Addendum and associated materials after determining that BLM re-evaluated the impacts of the APDs at issue without pre-determining the outcome of that process?

3. Did BLM sufficiently analyze the direct, indirect, and cumulative impacts of the drilling operations authorized in the challenged APDs? Specifically, did BLM take a hard look at the impacts of operations on climate change, groundwater resources, and air quality?

STATEMENT OF THE CASE

A. Statutory and regulatory background

1. The National Environmental Policy Act

NEPA "requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives." *N.M. ex rel, Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 703 (10th Cir. 2009). NEPA imposes procedural obligations that require an agency to consider and publicly disclose the

environmental effects of a proposed action, but does not direct the substance of the decision. *Id*. at 704.

NEPA requires agencies to prepare an Environment Impact Statement ("EIS") for "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C). Agencies can begin this process with preparation of the less-detailed EA, which is "a concise public document" that provides sufficient evidence and analysis for determining whether to prepare an EIS or whether the agency can end the NEPA process with a Finding of No Significant Impact ("FONSI"). 40 C.F.R. § 1508.9(a) (2018).[1]

2. Oil and gas development on federal lands

Congress provided for the leasing and development of oil and gas resources on public lands in the Mineral Leasing Act. 30 U.S.C. § 181. This is typically done through a three-phase decision-making process. *Pennaco Energy, Inc. v. U.S. Dep't of Interior*, 377 F.3d 1147, 1151 (10th Cir. 2004). BLM conducts an appropriate NEPA review at each stage. In the first and broadest phase, BLM develops resource management plans ("RMPs"). "Generally, a [RMP] describes, for a particular area, allowable uses, goals for future condition of the land, and specific

[1] The Council on Environmental Quality ("CEQ") promulgated NEPA's implementing regulations in 1978, with a minor amendment in 1986. *See* 51 Fed. Reg. 15618, 15,619 (Apr. 25, 1986). CEQ revised the regulations in July 2020, but the claims here arise under the prior version of the regulations in effect at the time. Thus, all citations refer to the regulations codified at 40 C.F.R. Part 1500 (2018).

next steps." *Norton v. S. Utah Wilderness All.*, 542 U.S. 55, 59 (2004); *see also* 43 U.S.C. § 1712(a). In the second phase, BLM may issue leases for the development of oil and gas on specific parcels within an area designated as open for leasing in the RMP. 43 U.S.C. § 1712(e). In the third phase, a lessee wishing to drill an oil or gas well submits an APD. No drilling or surface disturbance may occur without BLM's approval of the drilling permit. 43 C.F.R. § 3162.3-1(c). This case challenges BLM actions at the third step – the approval of APDs for individual wells.

B. Factual background

1. Oil and gas development in the San Juan Basin

The San Juan Basin lies in northwest New Mexico and contains one of the country's largest oil and gas fields, which has been in production for over 60 years. App. at [AR002567]. Tens of thousands of oil and gas wells have been drilled and about 23,000 remain active. App. at [AR045052].

Within the San Juan Basin lies the Mancos Shale/Gallup Sandstone formation – a geologic layer containing oil and gas. App. at [AR008134, 8136]. Increased horizontal drilling innovations in the mid-2000s allowed better access to the Mancos Shale. App. at [AR003560; AR008133]. Horizontal wells reduce surface disturbance by allowing one well to access resources that normally would require several vertical wells. App. at [AR009392, AR045055].

For over 70 years, operators in the San Juan Basin have used hydraulic fracturing to stimulate wells. App. at [AR045680]. In 2015, some operators began using "slick-water stimulation." App. at [AR009393]. This process uses more water but can use non-potable water that cannot be used for other purposes. App. at [AR009429].

2. Applicable land management planning processes

The San Juan Basin is currently governed by BLM's 2003 Farmington RMP. App. at [AR002553]. In 2012, BLM decided to prepare a proposed amendment to the plan "to examine changing oil and gas development patterns" in the Mancos Shale "including innovations in horizontal drilling technology and multistage hydraulic fracturing." App. at [AR003550]. As part of that process, BLM prepared a reasonably foreseeable development scenario ("RFDS") to evaluate future development on federal and non-federal lands in the San Juan Basin over a 20-year period, most recently updated in 2018. App. at [AR008127]. The 2018 analysis predicted that full development of the Mancos Shale would result in an estimated 3,200 wells (2,300 horizontal and 900 vertical). App. at [AR008139]. BLM issued a draft RMP Amendment and draft EIS in February 2020. App. at [AR003536]. BLM continues work on a final RMP amendment and final EIS.

C. Proceedings below

1. *Diné CARE I*

Many of the same citizen groups here previously brought a NEPA challenge to a different set of about 300 APDs within the Mancos Shale, focusing on cumulative air and water impacts of wells in the area. Several lessees intervened as defendants. The district court denied a motion for preliminary injunction, a decision affirmed by this Court. *Diné Citizens Against Ruining Our Environment v. Jewell ("Diné CARE I")*, No. 15-cv-0209-JB, 2015 WL 4997207 (D.N.M. Aug. 14, 2015), *aff'd* 839 F.3d 1276 (10th Cir. 2016). At final judgment, the district court ruled against the plaintiffs. *Diné CARE I*, 312 F. Supp. 3d 1031 (D.N.M. 2018). This Court affirmed all but one of the district court's rulings. *Diné CARE I*, 923 F.3d 831 (10th Cir. 2019). The Court found that BLM adequately considered the cumulative air impacts of the foreseeable oil and gas development under NEPA, but that for five EAs, BLM overlooked the cumulative impacts on water resources. *Id*. at 854-57. This Court instructed the district court to vacate and remand those five FONSIs and EAs for further NEPA analysis. *Id.* at 859.

2. The current case

Shortly thereafter, the citizen groups filed this case to challenge APDs covered by 32 different EAs for the same reasons alleged in *Diné CARE I*. App. at [ECF 125 at 3]. They moved for a temporary restraining order and preliminary

injunction. *Id.* The Court declined to treat the motion as one for a temporary restraining order. App. at [ECF No. 60]. In response to the preliminary injunction motion, BLM disclosed that it was already addressing the application of *Diné CARE I* to other EAs in the Mancos Shale. App. at [ECF No. 124 at 4]. In November 2019, BLM published a draft EA Addendum that supplemented 86 EAs in the area. App. at [AR000002]. The citizen groups commented on the draft EA. App. at [AR045091, AR033747]. The case was stayed pending issuance of the final EA Addendum. App. at [ECF No. 125 at 4].

In February 2020, BLM issued the final EA Addendum, which supplemented 81 EAs covering 370 APDs approved between 2014 and 2019. App. at [AR045073-77]. Based on the original analysis in the 81 EAs and the new analysis in the EA Addendum, BLM determined that the APD operations would not result in cumulative impacts beyond those already evaluated. *E.g.*, App. at [AR 045107-113]. Thus, BLM issued 81 new FONSIs for the APD operations assessed in the EAs. App. at [AR 045107-673]. The citizen groups amended their petition to challenge all APDs and EAs covered by the EA Addendum. App. at [ECF No. 95]. After the filing of the administrative record, the citizen groups moved for summary judgment in October 2020.

On August 3, 2021, the district court issued an opinion and order denying the plaintiffs' motion for a temporary restraining order and preliminary injunction

and ruled on the merits of the claims, dismissing them with prejudice. App. at [ECF No. 125]. The district court first found that it lacked jurisdiction over challenges to unapproved or expired APDs and APDs governing now-abandoned wells. *Id*. at 15-16. The district court next ruled that it would consider the supplemental analysis in the EA Addendum, rejecting the argument that BLM improperly predetermined the result of the EA Addendum process. *Id.* at 16-27. The district court then turned to the preliminary injunction analysis, finding that while the citizen groups could show irreparable harm, they could not satisfy the other three factors. *Id.* at 30-63. The bulk of this analysis focused on the merits of the claims, on which the district court upheld BLM's analysis of APD operational impacts on water resources, air quality, and climate change. *Id.* at 39-43, 43-54, 55-62. Finally, the district court rejected the argument that BLM should have considered a "no action" alternative in the EA Addendum. *Id.* at 62-63. Because it fully considered the merits, the Court also granted summary judgment in BLM's favor. *Id.* at 64. Judgment was entered and the citizen groups timely appealed. App. at [ECF Nos. 126, 127].

SUMMARY OF ARGUMENT

1. The citizen groups' challenges to 171 APDs are non-justiciable. 161 APDs have not yet been approved and 10 APDs are expired or govern abandoned

wells. The citizen groups' challenges to these APDs are unripe and moot, respectively, as the district court held.

2. The citizen groups fail to meet the Tenth Circuit's high standard to prove that BLM improperly predetermined the result of the supplemental NEPA process. BLM voluntarily supplemented 81 EAs with additional information on impacts to air quality, groundwater resources, and climate change. BLM then reviewed the entire record for each decision and determined whether the original finding of "no significant impact" could be affirmed or required reconsideration. Because BLM could affirm the original findings, it was reasonable for BLM not to reconsider or reopen the associated decision records. The Court should reject the argument that this process was meaningless without suspension or vacatur of the original decisions. The argument finds no support in NEPA's regulations, runs contrary to circuit law allowing remand without vacatur, and ignores BLM's practical reasons for first assessing whether it could affirm the original decision instead of reflexively re-opening all decisions at issue.

3A. BLM's analysis of climate change satisfied NEPA's "hard look" obligation. BLM scrutinized the climate change impacts of the 370 wells at issue, evaluating emissions from operations and downstream use of the produced oil and gas. BLM explained how it quantified emissions, including the methodology used to estimate methane emissions. In evaluating the cumulative impact of these

emissions, BLM contextualized them at the regional, state, and federal levels – a method upheld by many courts. BLM thus reasonably determined that these emissions do not rise to the level of a significant impact. Finally, BLM explained why, at that time, it did not evaluate the emissions using the carbon budget or social cost of carbon methodologies – a decision over which it has ample discretion.

3B. BLM also took a hard look at the impacts to groundwater resources. It calculated water use for well construction and operation, as well as evaluating the increased water use that could occur if all developers used "slick-water stimulation." Even if all the water withdrawal occurred at the same time, BLM found that the amount would be an insignificant percentage of basin water use levels. The record supports BLM's analysis against the alleged flaws raised by the citizen groups, including whether impacts on particular aquifers could be calculated, as well as consideration of drought and public water supply impacts.

3C. BLM's examination of impacts to air quality also satisfies NEPA. BLM quantified the lifetime emissions from the wells at issue as well as those from the reasonably foreseeable oil and gas development in the region. It then evaluated the emissions levels against nationally recognized standards established to protect public health. BLM found that even the maximum amount of emissions is unlikely to increase overall emissions above those standards. Courts have

repeatedly found that similar analyses satisfy the "hard look" requirement. The citizen groups object to the "temporary" terminology that BLM used to recognize the fact that emission levels are only elevated during short phases of well development, but do not point out any relevant air quality factors that the agency ignored.

4. Finally, while the citizen groups are entitled to no relief, should the Court disagree, it should limit relief to a remand without vacatur for the subset of APDs over which it has jurisdiction. Remand without vacatur is appropriate when a narrow issue may be addressed through additional NEPA evaluation and the decisions could be substantiated on remand. The citizen groups' additional request for injunctive relief should be rejected or, at the very most, remanded to the district court for consideration in the first instance. Contrary to the citizen groups' arguments, such an analysis would be intensely factual and the judicial record is insufficiently developed to allow this Court to craft a narrowly tailored injunction, as is required.

STANDARD OF REVIEW

As NEPA does not provide a private right of action, NEPA claims must be brought under the APA. 5 U.S.C. §§ 704, 706. This Court "give[s] no deference to a district court's review of agency action, reviewing its decision de novo" under the same deferential "arbitrary and capricious" standard. *WildEarth Guardians v.*

Nat'l Park Serv., 703 F.3d 1178, 1182 (10th Cir. 2013). A decision is arbitrary and capricious if the agency:

> (1) entirely failed to consider an important aspect of the problem, (2) offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise, (3) failed to base its decision on consideration of the relevant factors, or (4) made a clear error of judgment.

Id. at 1183. A "presumption of validity attaches to the agency action[,] and the burden of proof rests with the appellants who challenge such action." *Id.* (quotation marks omitted). Finally, deference to the agency "is especially strong where the challenged decisions involve technical or scientific matters within the agency's area of expertise." *Morris v. U.S. Nuclear Reg. Comm'n*, 598 F.3d 677, 691 (10th Cir. 2010).

ARGUMENT

The Court should affirm the judgment below. The citizen groups' challenges to unapproved APDs are unripe and, similarly, the challenges to expired APDs or those governing abandoned wells are moot. On the merits, the district court correctly rejected the citizen groups' predetermination argument and reviewed BLM's detailed supplemental assessment of APD impacts on groundwater, air quality and associated health impacts, and climate change. The agency reasonably re-evaluated each EA to determine whether it could affirm the prior finding of "no significant impact." After making this determination, it issued new findings of "no

significant impact" for each EA. The district court correctly upheld the decisions, finding that BLM had taken a hard look at the issues in satisfaction of NEPA.

I. The Citizen Groups' Challenges to 171 APDs Are Not Justiciable

A. Challenges to Unapproved APDs are Not Ripe

This Court lacks jurisdiction over the citizen groups' challenges to APDs that have not yet been approved because those claims do not challenge final agency actions. A plaintiff seeking judicial review under the APA must challenge a final agency action. 5 U.S.C. § 704; *Catron Cnty. Bd. of Comm'rs v. U.S. Fish & Wildlife Serv.*, 75 F.3d 1429, 1434 (10th Cir. 1996). An agency action is "final" if it "mark[s] the 'consummation' of the agency's decisionmaking process" and is an action "by which 'rights or obligations have been determined' or from which 'legal consequences will flow.'" *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997). The absence of a final agency action is dispositive on the ripeness issue. *Los Alamos Study Grp. v. U.S. Dep't of Energy*, 692 F.3d 1057, 1065 (10th Cir. 2012).

Until BLM issues a final decision either approving or denying an APD, there is no final agency action for this Court to review. As the citizen groups concede, BLM had not yet issued a final decision on 168 of the applications at the time of the district court decision. Appellants' Opening Brief ("Op. Br.") at 4 n.1; App. at [ECF No. 125 at 15-16]. The citizen groups assert that BLM has since approved additional APDs, and then make the unsupported leap that this Court should thus

exercise jurisdiction over all 370 APDs. Op. Br. at 4 n.1. However, the bulk of the APDs over which the district court found it lacked jurisdiction remain pending applications with no final BLM decision. *See* Mankiewicz Decl. ¶ 27 (161 APDs now in this category). Thus, this Court should find that the challenges to these 161 APDs are unripe.

B. Challenges to Expired APDs or APDs for Abandoned Wells are Moot

This Court also lacks jurisdiction over expired APDs and APDs for wells which have been permanently abandoned because those claims are moot. A claim becomes moot when "granting a present determination of the issues offered will" no longer "have some effect in the real world." *Rio Grande Silvery Minnow v. Bureau of Reclamation*, 601 F.3d 1096, 1110 (10th Cir. 2010) (quotation omitted). An approved APD that has expired without the development of a well has produced no harms and cannot produce any harms in the future. Likewise, a well that has been permanently abandoned can no longer harm Plaintiffs, and any harms it may have caused are no longer redressable by the Court. *Park Cnty. Res. Council, Inc. v. USDA*, 817 F.2d 609, 614-15 (10th Cir. 1987), *overruled on other grounds by Vill. of Los Ranchos de Albuquerque v. Marsh*, 956 F.2d 970, 973 (10th Cir. 1992) (APD challenge moot when well drilled and abandoned).

For this reason, the district court correctly found that the challenges to expired APDs or APDs for permanently abandoned wells were moot. The citizen

groups state that they do not challenge this holding. Op. Br. at 4 n.1. Yet they include these APDs in their request for judicial relief. *Id*. at 57. There are now 10 such APDs. *See* Mankiewicz Decl. ¶ 26.[2] In addition to the 161 unripe APDs, these 10 APDs also must be excluded from this Court's judicial review.

II. BLM Did Not Predetermine the Result of Its Supplemental Environmental Analysis

The citizen groups' predetermination arguments rest on a misunderstanding of BLM's actions. The citizen groups claim that BLM's analysis of the challenged APDs is deficient under NEPA because the decisions rest, in part, on supplemental analyses prepared after the initial agency decisions. Op. Br. at 16. In their view, because the decisions remained in place during the supplemental analysis, the outcome was necessarily predetermined. *Id*. But the citizen groups ignore the fact that BLM revisited the EAs as a whole, including the EA Addendum, and appropriately evaluated whether it could affirm the original findings of "no significant impacts." Because BLM could affirm these findings, documented in new FONSIs, it was not required to reopen the original decisions.

After this Court instructed the agency to consider the cumulative impacts of APD operations on water resources in *Diné CARE I*, BLM sensibly evaluated whether the flaws identified by the Court extended beyond the five EAs

[2] At the district court level, there were 4 such APDs.

invalidated in that action. BLM identified 81 other EAs that would benefit from a supplemental analysis of this issue. App. at [AR045037]. Thus, the agency supplemented these 81 EAs with the Addendum analysis of the cumulative impacts of APD operations on water and air resources and climate change. *Id.* BLM then committed to reviewing the supplemented EAs and associated APDs and determining whether to affirm the original finding of "no significant impact" for each EA or "whether to reconsider that decision." *Id.*

The agency made good on that promise, re-evaluating the decision for each of the original EAs. For example, for the 2014 EA analyzing the impacts of operations on two wells in San Juan County, New Mexico (Warner Caldwell Nos. 1A and 3B), the agency considered the original EA, the 2020 EA Addendum, the two APDs, and the 2003 land use management plan. *See* App. at [AR045674, AR045036, AR045722, AR045775, and AR002553]. BLM then made the determination to affirm the original finding of no significant impact, "given the new information and impacts analysis" in the EA Addendum, and issued a new FONSI explaining why none of the ten "significance" factors are met. App. at [AR045107-12].[3] It was therefore reasonable for BLM not to reconsider, much

[3] The citizen groups make much of language in the new FONSIs that the documents were prepared to reaffirm the original findings, Op. Br. at 21, claiming that this shows that BLM did not reconsider the earlier decision. But each new FONSI was issued only after consideration of the full set of relevant documents, including the EA Addendum, and shows that in each case, BLM was able to re-

less reopen, the original 2014 Decision Record which approved the operations proposed in the relevant APDs. *See* App. at [AR045716]. BLM followed the same process for the other 80 EAs at issue.

Parties "must meet a high standard to prove predetermination." *Forest Guardians v. U.S. Fish & Wildlife Serv.*, 611 F.3d 692, 714 (10th Cir. 2010). "[P]redetermination occurs only when 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." *Id.* (emphasis in original). While this does not neatly apply to a NEPA supplementation situation,[4] BLM's actions here still pass the test. After *Diné CARE I*, BLM voluntarily supplemented 81 additional EAs, put that analysis out for public comment, responded to public comment, and then re-evaluated the original environmental impact determination for each of the 81 EAs. Depending on the results of this examination, the agency retained full discretion to affirm the original decision or to reconsider and reopen that decision and make any

affirm its earlier decision. Had the agency been unable to do so for a particular decision, it would have "reconsider[ed] that decision." App. at [AR045037].

[4] For the same reasons, there is little relevance to the caselaw establishing that NEPA must be performed prior to initial leasing or APD decisions. Op. Br. at 19-20. These cases do not speak to whether an agency has predetermined the outcome of a *supplemental* environmental analysis of the initial lease or APD approvals. As long as the agency retains the discretion to reopen the initial decisions, should they need to do so, the fact that the original decision remains in place pending review does not show predetermination.

necessary modifications.[5] "So long as an agency is free to change its mind, environmental information can still play a meaningful role in determining how an agency will act." *Jarita Mesa Livestock Grazing Ass'n v. U.S. Forest Serv.*, 301 F. Supp. 3d 1010, 1035 (D.N.M. 2017).

The citizen groups concede as much, Op. Br. at 21, but assert that without vacatur or suspension of the original decisions, supplemental analysis is meaningless. There are three flaws with this argument. First, neither NEPA nor its implementing regulations require suspension or vacatur of the original decision when an agency determines that supplemental analysis is needed. 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.9(c) (2018). Second, the citizen groups' argument contradicts this Court's allowance of remand without vacatur. *See, e.g.*, *WildEarth Guardians v. U.S. Bureau of Land Mgmt.*, 870 F.3d 1222, 1239-40 (10th Cir. 2017) (remanding NEPA analysis for further analysis of coal leasing decision, but declining to vacate the leases). If vacatur of the underlying decision was always required to ensure the meaningfulness of further environmental analysis, then no

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[5] The citizen groups assert that APD approval is like a contract – one example of a putatively irreversible outcome. Op. Br. at 18 (citing *Wyoming v. U.S. Dept. of Agric.*, 661 F.3d 1209, 1265 (10th Cir. 2011)). If they mean that the APDs could not have been further modified after BLM's consideration of supplemental analyses, this analogy is repudiated by actual breach-of-contract cases. For example, in *Barlow & Haun, Inc. v. U.S.*, 805 F.3d 1049 (Fed. Cir. 2015), the court rejected the claim that BLM breached its lease by adding new worker safety conditions.

court could ever remand without vacatur. But this Court and others rightly trust that agencies will take their remand obligations seriously and, upon completion of the new analysis, take all necessary steps to reconsider, modify, or rescind the initial project decision, if warranted. The fact that the analysis here substantiated BLM's FONSI, and therefore BLM decided not to reopen the original decision, does not make BLM's supplemental NEPA process invalid.

Finally, the notion that BLM cannot be trusted to evaluate whether to affirm or reconsider the original decision (or that suspension or vacatur of the original decisions would change the merits of the supplemental analysis) illogically stresses form over substance. The citizen groups certainly would have preferred for the original decisions to have been suspended or vacated during BLM's supplemental analysis. But an agency is not required to suspend a decision while preparing a supplemental environmental review, and BLM's decision not to do so was reasonable, particularly given the significant disruption of operations to lessees that suspension would cause, which would be similar to those presented to the district court on the question of remedy here. *See* App. at [ECF No. 125 at 33-34] (discussing economic, policy, and public interest losses that would result from the requested vacatur).

The robust supplemental NEPA process, including public notice and comment, consideration of the entire EA package, and the issuance of 81 new

FONSIs, distinguishes this case from *Protect Key West v. Cheney*, 795 F. Supp. 1552 (S.D. Fla. 1992), relied on by the citizen groups. Op. Br. at 23-24. There, the EA was a "wholly inadequate" mere 8 pages. 795 F. Supp. at 1559. Indeed, before completing the NEPA process, the agency prepared "no written studies, analyses or reports on any environmental issue." *Id*. at 1561. In litigation, the Navy and other parties pointed the court to studies conducted for other permitting requirements, completed after issuance of the EA. The court rejected this approach, finding it contradictory to the spirit and the letter of NEPA. *Id*. at 1562. The court thus remanded to the Navy to consider the information as part of the NEPA process. *Id*. at 1563. Here, BLM voluntarily prepared the EA Addendum, took public comment, and then evaluated whether this additional analysis impacted the agency's earlier findings of "no significant impact." Determining that those conclusions remained valid, BLM issued new FONSIs for each of the 81 EAs. This is the opposite of the situation in *Protect Key West*, where the agency did not perform additional NEPA analysis and sought to provide a post hoc rationalization, with non-NEPA documents, for why the agency had still complied with the statute.

Outside of *Protect Key West*, the citizen groups' arguments rely heavily on general statements that environmental analysis must be conducted before an agency decision. Op. Br. at 15-16, 18, 24. But these cases do not speak to situations where the agency decides to supplement its NEPA analysis in order to

reassess its original decision, and so these citations provide no help in assessing the matter before this Court. Similarly, the citizen groups' reliance on *Metcalf v. Daley*, 214 F.3d 1135 (9th Cir. 2000), is of limited value because, while that case does assess a situation in which the agency predetermined its decision, it is not a case in which the original decision was supplemented by additional NEPA analysis. *Metcalf* is not relevant here and has been distinguished by this Court many times. *Wyoming*, 661 F.3d at 1265; *Forest Guardians*, 611 F.3d at 713-15; *Silverton Snowmobile Club v. U.S. Forest Serv.*, 433 F.3d 772, 781 n.2 (10th Cir. 2006).

At bottom, administrative agencies like BLM have "an inherent authority to reconsider their own decisions." *Trujillo v. General Elec. Co*., 621 F.2d 1084, 1086 (10th Cir. 1980). While addressing the flawed NEPA analysis for the 5 EAs from *Diné CARE I*, the agency voluntarily sought to address similar issues with these 81 additional EAs. It reasonably did this through the supplemental NEPA process, which included public comment and new findings of "no significant impact." Because BLM could make these findings, it reasonably concluded that it did not need to reopen the decision records for these 81 EAs. Nothing in the NEPA regulations required BLM to suspend or vacate those decisions while evaluating whether to reaffirm them and the agency had on-the-ground, practical reasons for not doing so. *See supra*, p. 21. That it kept the decision records in place during the

supplemental NEPA process is not de facto proof of predetermination, especially as the agency retained the ability to reconsider the decisions after consideration of the supplemental NEPA analysis. Thus, the citizen groups fail to carry their "heavy burden" to prove predetermination, as required by this Court.

III. BLM's EA Addendum Shows the Agency's Hard Look at Cumulative Impacts

BLM voluntarily supplemented its NEPA analysis for 81 EAs with detailed analyses to ensure that APD operations will not have a significant impact on groundwater resources, air quality, and climate change. Despite the citizen groups' criticism of these analyses, the record shows that BLM considered the relevant factors on these issues and made reasonable findings. "To find otherwise would be to engage in 'flyspeck[ing],'" which the Court "may not do." *Prairie Band Pottawatomie Nation v. Fed. Highway Admin*., 684 F.3d 1002, 1011 (10th Cir. 2012) (quoting *Richardson*, 565 F.3d at 704).

A. The Record Shows a Hard Look at Greenhouse Gas Emissions and Climate Change

NEPA does not require agencies to adopt particular methodologies or models while evaluating the environmental impacts of their actions. *WildEarth Guardians*, 870 F.3d at 1238. Here, the agency provided an adequate analysis of the impacts on climate change and explained its findings on the issue. The EA Addendum built on a BLM 2019 white paper assessing the cumulative greenhouse

gas emissions from operations on BLM lands in New Mexico. App. at [AR045055]. Both documents provided a contextual discussion of the mechanics of climate change, the greenhouse effect, climate change projections, and the role of greenhouse gas emissions. App. at [AR045055-56, AR009436-42]. BLM explained that the two key greenhouse gas emissions resulting from oil and gas operations are carbon dioxide and methane. App. at [AR045056]. The agency summarized the greenhouse gas emissions produced from the extraction and combustion of fossil fuels in 2014, the most recent available data sets. On all federal lands, this was 1,332 million metric tons of carbon dioxide equivalent or 19.4 % of national greenhouse gas emissions and 2.8% of global greenhouse gas emissions.[6] On federal lands in New Mexico, this was about 92 million metric tons of carbon dioxide equivalent or 1.33% of national emissions and 0.19% of global emissions. App. at [AR045056-57, AR009442-43, AR009446].

BLM then calculated the direct emissions from the development and operations of the 370 wells analyzed in the 81 EAs. The highest-possible estimate of annual emissions from all 370 wells, from both construction and operation, was 498,183 metric tons of carbon dioxide equivalent.[7] App. at [AR045057-59]. This

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[6] Because federal lands are also used for carbon storage, this carbon sequestration offsets about 15% of these emissions. App. at [AR045057, AR009443].

[7] Because the wells target both oil and gas resources, BLM conservatively estimated construction emissions assuming all wells are gas wells, which result in

would result in an increase of 0.00076% of total annual United States greenhouse gas emissions and 7.32% increase of annual oil and gas emissions in New Mexico. App. at [AR045059]. BLM also evaluated the emissions from the downstream use of the oil and gas produced from these 370 wells. If all 370 wells produce both oil and gas over their estimated 20-year lifespan, this would add 31,487,076 metric tons of carbon dioxide equivalent. App. at [AR045061].

BLM then analyzed these impacts as part of the broader cumulative impacts of all oil and gas development. If all of the 3,200 reasonably foreseeable Mancos Shale wells on federal and non-federal land are developed, this would emit an additional 398 million metric tons of carbon dioxide equivalent over 20 years. App. at [AR045064]. Of this amount, about 0.124% would result from the 370 construction and operation of the wells analyzed in the EA Addendum. *Id.* For downstream/end use, emissions from these 370 wells would comprise 7% of all downstream emissions from the full development scenario in the area. *Id.*

As discussed below, while the citizen groups critique these analyses, BLM took a hard look at the impacts on climate change and rationally determined that

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higher emissions from venting; BLM then calculated operational emissions assuming all wells are oil wells, which result in higher emissions from maintenance, storage, and transportation. App. at [AR045057]. The overall emission estimate also assumes full development of all 370 wells in one year, both to analyze the greatest possible impact and to be able to compare resulting emissions to other annual data on greenhouse gas emissions. App. at [AR045059].

the development and operation of the 370 wells at issue does not rise to the level of a significant impact.

1. BLM Considered All Direct and Indirect Emissions

The citizen groups raise two critiques, beginning with operational emissions. Recognizing that emissions from construction (the majority of direct emissions) occur only once, the citizen groups concede that BLM properly quantified these emissions. Op. Br. at 27. But they claim that BLM neglected to consider the operational emissions over the lifespan of a given well. *Id*. at 27-28. The record explains how and why BLM quantified emissions the way it did. As discussed above, BLM conservatively quantified the maximum annual emissions from development and operation. In its 2018 Air Resources Technical Report, BLM explained that it uses a one-time emission estimate for both construction and operation because it was infeasible to estimate the lifespan of an individual well or incorporate wells' declining production curves. App. at [AR032896, AR045050]. BLM's emission calculators[8] err on the side of overestimation because well life can vary from a few years to many decades and well production varies with well location, surrounding pressure differentials, and the price of oil and gas. *Id.* In the EA Addendum, BLM employed these conservative calculators in an even more

[8] Emissions calculators are a methodology developed by BLM's air quality specialists to quantify projected emissions. App. at [AR045050].

conservative way, assuming all 370 wells are higher-emitting oil wells and all wells are developed and operational in the same year.[9] App. at [AR045058].

The citizen groups argue that BLM should have still attempted a lifetime quantification. Op. Br. at 28. But the citizen groups' assertion that a lifetime operational estimate would be 2.4 million metric tons of carbon dioxide equivalent is incorrect. Multiplying the annual operations estimate by a 20-year lifespan[10] results in a meaningless number because, as discussed above, the annual operations estimate is a significant overestimate and does not account for declining production rates over a well's lifetime. App. at [AR032896]. Such misunderstandings of the data are precisely why deference is given to technical predictions, and the corresponding choice of methodologies, that fall within the agency's expertise. *See, e.g.*, *Biodiversity Conservation All. v. Jiron*, 762 F.3d 1036, 1060 (10th Cir.

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[9] Recent well development rates in the Mancos-Gallup planning area are significantly lower, from an annual high of 94 wells in 2014 to a low of 15 wells in 2016. App. at [AR045058].

[10] Although using it for their own purposes here, the citizen groups elsewhere critique BLM's assumption of a 20-year lifespan, pointing to one EA (out of 81) for wells estimated to be in operation for 30-50 years. Op. Br. at 27 n.13. But as BLM explained, well lifespan can vary significantly based on several factors and it was infeasible to estimate the lifespan of an individual well. App. at [AR032896]. Additionally, because of prior drilling in the area, newer wells are likely to have more limited lifespans compared to older wells. *Id.* Because BLM needed to evaluate the cumulative impacts of the 370 wells at issue, as the citizen groups insist, it was reasonable for the agency to use the 20-year timeframe from the 2018 reasonably foreseeable development scenario.

2014) (where agency decisions "involve technical or scientific matters within the agency's area of expertise," deference to the agency is "especially strong."); *Hillsdale Env't Loss Prevention, Inc. v. U.S. Army Corps of Engineers*, 702 F.3d 1156, 1178 (10th Cir. 2012) (when the dispute involves a judgment over competing methodologies, the agency's decision is upheld as long as it had a rational basis and considered relevant factors).

As the citizen groups concede, Op. Br. at 27, where it was feasible to quantify emissions over the assumed 20-year lifespan, the agency did so, as shown by the downstream/end-use emissions analysis. App. at [AR045061, AR045064]. Thus, this case is nothing like *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41 (D.D.C. 2019), cited by the citizen groups. Op. Br. at 28. That case involved leasing decisions over a much broader landscape and, in that case, BLM did not even attempt to quantify greenhouse gas emissions. Here, BLM has voluntarily updated its analysis of greenhouse gas emissions and quantified those estimates on an annual basis and over the lifespan of the wells, where possible. Where that was infeasible, BLM so explained and supported its chosen methodology. NEPA requires nothing more.

Next, the citizen groups fault the analysis of the contribution of methane emissions to climate change, focusing on the time-frame over which BLM evaluated the impact of the gas's global warming potential. Op. Br. at 28-31. The

citizen groups assert that, instead of a 100-year time frame, BLM should have used a 20-year period to better reflect the greater near-term impacts of these emissions. Yet the citizens groups concede that BLM discussed both the short- and longer-term horizons for assessing methane's global warming potential. *Id*. at 29 n.15, 30 nn.16-17. The 2018 Air Resources Technical Report specifically recognized methane's higher global warming potential over the shorter 20-year time frame as compared to the 100-year horizon. App. at [AR032918]. The 2019 white paper on greenhouse gas emissions disclosed the 20-year and 100-year global warming potential values of methane from both the fourth and fifth assessment reports of the Intergovernmental Panel on Climate Change ("IPCC"). App. at [AR009441-2]. The white paper also explained that BLM uses the 100-year horizon to track climate change modeling impacts and that it uses the values from the IPCC's fourth report in accordance with international reporting standards. *Id*. Thus, the EA Addendum used the global warming potential values over a 100-year time frame. App. at [AR045056]. In response to public comment, BLM also explained that this time frame is used in the national greenhouse gas emission estimates. App. at [AR045094].

The citizen groups point to one EA from 2017 that references the global warming potential values used in the IPCC's fifth report, using this document to argue that BLM failed to explain why it reverted to the fourth report values in the

2020 EA Addendum.[11] Op. Br. at 30. That particular EA discussed the fifth report values in a qualitative manner; it did not attempt to calculate cumulative greenhouse gas emissions, as BLM did here. When performing such calculations, the 2019 white paper explains that official greenhouse gas emissions are calculated based on the fourth report. App. at [AR09441]; *see also* App. at [AR045094]. The Court should thus reject the citizen groups' argument that this case is like one where a district court found that BLM failed to explain its use of the 100-year time frame or respond to comments critiquing that choice. Op. Br. at 31 (citing *W.Org. of Res. Councils v. BLM*, No. CV 16-21-GF-BMM, 2018 WL 1475470 (D. Mont. Mar. 26, 2018)). As shown above, BLM discussed both the 20-year and 100-year horizons, explained the difference, explained why it uses the 100-year values, and responded to public comments critiquing this choice. This more than satisfies NEPA's goals of public disclosure and informed decisionmaking.

2. BLM Considered the Cumulative Emissions of Oil and Gas Development in the Region

The citizen groups complain that BLM must do more to analyze the significance and severity as well as the cumulative impact of these emissions, Op.

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[11] In asserting that this EA represents the "best available science" on methane's global warming potential value, the citizen groups are mistaken. The value given in that particular EA (a value of 34 over 100-year period) seems to be a clerical error. *Compare* App. at [AR065841] *with* App. at [AR009441-42] (Table 2 provides the values from both the fourth and fifth reports, showing a fifth report value of 28).

Br. at 31-36, but do not explain what else is required. As explained above, the EA Addendum and its supporting documents discuss the impacts of climate change globally and regionally. *See, e.g.*, App. at [AR045056] (predicted regional changes in temperature, precipitation, and water availability); [AR099440] (same). BLM analyzed the increase in annual emissions that can be predicted from the 370 wells at issue, both at the national (0.00076%) and regional (7.32%) level. App. at [AR045059].

The agency also evaluated the total lifetime emissions of these wells, including downstream/end use, in the context of annual national, statewide, and regional emissions.[12] App. at [AR045061-62]. As the district court recognized, the total lifetime emissions, including downstream/end use, would represent 0.48% of total national emissions from all sources and the annual cumulative emissions from all 3,200 of the foreseeable wells in the area would account for 0.23% to 0.44% of total national emissions from all sources.[13] App. at [ECF No. 125 at 59]. BLM

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[12] This is the analysis found missing in *San Juan Citizens Alliance v. BLM*, 326 F. Supp. 3d 1227 (D.N.M. 2018), meaning the citizen groups cannot rely on this case. *E.g.*, Op. Br. at 31, 35.

[13] This is the type of regional-level analysis that the district court found missing in *Wildearth Guardians v. U.S. Bureau of Land Mgmt.*, 457 F. Supp. 3d 880, 895 (D. Mont. May 1, 2020), a case on which the citizen groups rely heavily. BLM's assessment of the regional impacts of the 370 wells, as well as the impact of those wells as part of the entire 3,200 foreseeable wells, thus distinguishes this case. *Wildearth Guardians* was further distinguished by the District of New Mexico, which recognized that the District of Montana invalidated the leasing decisions at

could thus reasonably conclude that, when compared to past, present, and future emissions at the state and national level as well as downstream greenhouse gas emissions, emissions from the 370 wells at issue will "incrementally contribute" to global greenhouse gas emissions. App. at [AR045102]. The citizen groups fail to show that BLM overlooked any context or significance of these emissions.

Besides the district court here, many courts have upheld the contextualization of emissions at the regional, state, and national level to determine whether the impact on climate change is less than significant. *See, e.g.*, *WildEarth Guardians v. Bernhardt*, 501 F. Supp. 3d 1192, 1209-10 (D.N.M. 2020) (contextualization at regional and national levels sufficiently analyzes how the action affects the local and regional environment); *WildEarth Guardians v. Zinke*, No. CV 17-80-BLG-SPW-TJC, 2019 WL 2404860, at *10 (D. Mont. Feb. 11, 2019), report and recommendation adopted sub nom. *WildEarth Guardians v. Bernhardt*, No. CV 17-80-BLG-SPW, 2021 WL 363955 (D. Mont. Feb. 3, 2021) (analyzing emissions as a percentage of national or global emission levels is reasonable and recommended by CEQ)[14]; *WildEarth Guardians v. Jewell*, No.

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issue for a failure to catalogue simultaneous oil and gas projects in the region, not the global effect of greenhouse gas emissions. *See WildEarth Guardians*, 501 F. Supp. 3d at 1209.

[14] Both the citizen groups and amicus curiae argue that BLM should have considered a 2016 revision of the CEQ guidance. Op. Br. at 34; Am. Cur. Br. at 11. As they recognize, that guidance was withdrawn in April 2017. The 2013 guidance

1:16-CV-00605-RJ, 2017 WL 3442922, at *12 (D.N.M. Feb. 16, 2017) (CEQ's guidance on this issue is entitled to deference). BLM's approach here appropriately placed the emissions in these contexts and satisfied the obligation to consider "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7 (2018).

The other flaws the citizen groups allege are equally meritless. For example, they assert that BLM disregarded emissions from all active wells managed by BLM. Op. Br. at 33. But the EA Addendum and the 2019 white paper looked at this issue at two levels: (1) on all federal lands (19.4 % of national emissions and 2.8% of global emissions); and (2) on federal lands in New Mexico (1.33% of national emissions and 0.19% of global emissions). App. at [AR045056-57, AR009442-43, AR009446]. The citizen groups also allege that just listing the quantity of emissions does not provide a meaningful assessment of impacts on the human environment. Op. Br. at 34. But BLM explained that current "global climate models are unable to forecast local or regional effects on resources" nor can they translate emissions from a particular project into effects on climate change globally. App. at [AR045055]. As discussed above, BLM disclosed the anticipated impacts of climate change at the regional level, but it acknowledged that "how these impacts can impact localized communities" is unknown and that

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was the relevant guidance at the time of the 2019 white paper and the EA Addendum.

the current science does not allow the agency to make a reasoned meaningful analysis on impacts to human health.[15] App. at [AR045104]; *see also* App. at [AR 032916, 32893, 32896]. Courts, including the District of Columbia Circuit, have upheld similar climate change analyses and this Court should as well. *See, e.g.*, *WildEarth Guardians v. Jewell*, 738 F.3d 298, 309 (D.C. Cir. 2013) (plaintiff's call for specific effects on the climate was "flyspecking" BLM's satisfactory analysis); *Citizens for a Healthy Cmty. v. BLM*, 377 F. Supp. 3d 1223, 1239 (D. Colo. 2019) (similar analysis equaled a hard look at cumulative climate change impacts).

3. BLM Need Not Assess Emissions Using the Carbon Budget or the Social Costs of Carbon Methodology

The citizen groups suggest that BLM's assessment of greenhouse gas emissions could have been improved by use of a carbon budget, which looks at a project's emissions as a percentage of a cap on emissions associated with global temperature thresholds. Op. Br. at 36-39. In response to public comments, BLM explained that it need not use specific methodologies to determine the impact on global climate change and that the agency's quantification of APD emissions as

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[15] The citizen groups point to a recent report, published in November 2021, as proof that BLM could have made such predictions in the February 2020 EA Addendum. Op. Br. at 36 n.21. Such post-decisional evidence is "[o]bviously ... irrelevant to whether the [agency] properly fulfilled [its] obligations prior to approving a particular project." *Utah Envtl. Cong. v. Troyer*, 479 F.3d 1269, 1282 (10th Cir. 2007). For this reason, the Court should also disregard the portions of the citizen groups' carbon budget argument that rely on this post-decisional report. Op. Br. at 38.

part of the regional, state, national, and global emissions sufficiently discusses the impacts here. App. at [AR045095-7]. Almost every court to consider this issue has agreed, finding that BLM has ample discretion to choose the methodologies employed to satisfy NEPA's requirements. *Zinke*, 368 F. Supp. 3d at 79 (BLM did not need to use plaintiff's suggested carbon budget protocol to satisfy NEPA); *W. Org. of Res. Councils*, 2018 WL 1475470, at *14 ("Plaintiffs identify no case, and the Court has discovered none, that supports the assertion that NEPA requires the agency to use a global carbon budget analysis."); *California v. Bernhardt*, 472 F. Supp. 3d 573, 624 & n.43 (N.D. Cal. 2020) (while invalidating the analysis for other reasons, refusing to find that carbon budget was required).

The citizen groups concede that the choice of methodologies lays within BLM's expertise and discretion, but argue that BLM must explain whether a carbon budget would improve the decisionmaking process. Op. Br. at 39 (citing *WildEarth Guardians v. Bernhardt,* 502 F. Supp. 3d 237, 255 (D.D.C. 2020), *appeal dismissed sub nom. WildEarth Guardians v. Haaland,* No. 21-5006, 2021 WL 3176109 (D.C. Cir. Apr. 28, 2021)). This decision evaluated a supplemental analysis after that court had remanded the decision for BLM to assess whether it should use any certain methodology for quantifying climate change. *Id.* at 255. The court was very clear that it "did not require use of a carbon budget," but held that BLM did not clearly explain whether it used a carbon budget or not in the

supplemental analysis. *Id*. Here, there is no such confusion. As discussed above, BLM responded to public comment suggesting that it employ a carbon budget and explained the portion of its analysis that quantified emissions and compared them to cumulative emissions impacting climate change.

The suggestions of amicus curiae – that BLM should have used the social cost of carbon methodology – miss the mark for the same reason. Amicus Curiae Brief ("Am. Cur. Br.") at 12. And courts have rejected such arguments as well. *Bernhardt*, 501 F. Supp. 3d at 1212 (while the analysis "could have offered additional evidence," it is not required, especially because there "are an infinite number of tests that could be performed, or studies conducted" and "BLM is not required to perform all of them."); *Wilderness Workshop v. BLM*, 342 F. Supp. 3d 1145, 1159-60 (D. Colo. 2018); *W. Org. of Res. Councils*, 2018 WL 1475470, at *14.[16] Here, BLM explained why it was declining to use this methodology, and nothing more is required. In any event, the citizen groups do not argue for this methodology, and this case does not present the exceptional circumstances where

[16] Amicus rely on *High Country Conservation Advocates v. U.S. Forest Service*, 52 F. Supp. 3d 1174, 1190 (D. Colo. 2014). Am. Cur. Br. at 5, 9. However, this case does not stand for proposition that BLM must use social cost of carbon to satisfy NEPA. *See Zinke*, 368 F. Supp. 3d at 78 ("unlike the misleading explanation flagged by the *High Country* court, BLM here provided reasoned explanations for why it declined to use the social cost of carbon protocol."). As BLM also explained here why it declined to use this method, *High Country Conservation Advocates* is irrelevant.

the Court should reach issues raised only by an amicus. *See, e.g.*, *Sierra Club v. EPA*, 964 F.3d 882, 897 n.15 (10th Cir. 2020); *United States v. Bd. of Cnty. Comm'rs*, 843 F.3d 1208, 1215 (10th Cir. 2016).

In sum, BLM provided a reasonable and sufficient analysis of the climate change impacts of authorizing development of the 370 wells at issue. As the district court recognized, the citizen groups' response is to select one of the "many hundreds of discrete environmental possibilities that could result from any kind of development," and argue that BLM has violated NEPA because that possibility was not addressed to their satisfaction. App. at [ECF No. 125 at 61-62]. The district court correctly rejected this approach and this Court should as well. The Court should uphold BLM's assessment of the greenhouse gas emissions and climate change impacts of the APDs at issue.

B. BLM Sufficiently Assessed the Cumulative Impacts of Foreseeable Oil and Gas Development on Water Resources

In response to this Court's decision in *Diné CARE I*, the EA Addendum assessed how the foreseeable development would impact both surface and groundwater resources. App. at [AR045065-71]. BLM first looked at water use in the San Juan Basin, which was 486,660 acre feet ("AF") in 2015. App. at [045065]. Of the total water consumption in the basin, only 10% of that water is taken from groundwater, as the majority of water use is irrigation supplied by

surface water. *Id*. Of total water use, only 2% is used for mining, which includes oil and gas development, and all of that water comes from groundwater. *Id.*

BLM next set out all development activities requiring water, including everything from well simulation to dust suppression on roads. App. at [AR045066]. Most of the water used is for hydraulic fracturing and that amount can vary at each well, depending on the relevant geology and other factors. *Id*. Nonetheless, BLM calculated the average water use for one well, finding that vertical wells in the region use an average of 0.537 AF of water and horizontal wells use an average of 4.8 AF of water.[17] *Id.* The agency also detailed the potential water sources for this water, recognizing that most water in the basin in sourced from groundwater, particularly ten aquifers. *Id.*

BLM then calculated the total water usage for the 370 wells at issue, which is about 1,689 AF. App. at [AR045067]. Even if all of this development were to

[17] The citizen groups claim this estimate ignores additional water used in the "slick water" stimulation process. Op. Br. at 41 n.30. First, because they failed to raise this issue in their public comment letter, see App. at [AR033780-83], they waived this claim. *Forest Guardians v. U.S. Forest Serv*., 495 F.3d 1162, 1170 (10th Cir. 2007). Second, BLM acknowledged the added water use from this process but also noted that the process had been used for only 3% of all wells completed in the area. App. at [AR045066, AR009397]. Nonetheless, BLM calculated the additional amount of water (27 AF per mile) and calculated the water use if all future horizontal wells used this process. App. at [AR045069-70]. If this were to occur, such development cumulatively would use the equivalent of 1.3% of the total basin water withdrawals in 2015. App. at [AR045070]. The district court reasonably found that BLM "clearly considered" this issue. App. at [ECF No. 125 at 40-41].

occur in one year, which is highly unlikely, this water use would constitute only 0.3% of all 2015 water use in the basin and about 3.3% of the 2015 groundwater use in the basin. App. at [AR045068]. While this estimate could be higher if water-intensive stimulation methods increase, it also could be lower if operators recycle produced water for use in hydraulic fracturing. *Id*. The agency next assessed the cumulative impacts of all 3,200 reasonably foreseeable wells over the next 20 years. BLM determined that the total amount of water used for these wells over their lifetime would be 11,615 AF, or 580 AF a year, if averaged over 20 years. App. at [AR045069-70]. This annual amount would constitute 0.12% of all 2015 water use in the basin. *Id.* If all 3,200 wells were slick-water stimulated – again, unlikely – the percentage of water use in the basin would increase to 1.3% of the total 2015 water withdrawals.[18] *Id*.

The citizen groups argue that BLM's analysis still fails to fully examine the impacts unless it determines what percentage this water use represents for the groundwater aquifer capacity in the region. Op. Br. at 41. Because annual water use for full development is estimated to range from 0.12% to 1.3% of all water use in the basin – of which groundwater is only 10% – it is unclear what utility this

[18] The citizen groups use this amount to repeatedly insist that the cumulative impacts equal "40-billion gallons" of groundwater, Op. Br. at 41-42, but even if slick-water stimulation increases from the current amount (3% of wells), it is unlikely to be used for all wells, which is what the citizen groups' figure represents.

type of analysis could serve. Even if it were useful, BLM has explained that this data does not currently exist. App. at [009399] (Sandia National Laboratory is working on a model that BLM hopes to use in the future to understand regional water supply dynamics under different management, policy, and growth scenarios). BLM did discuss the available information on various aquifer yields and recharges. App. at [009398-99]. And it explained that water sources can vary with each project, including water trucked in from other sources, non-potable water from the Entrada aquifer, or other types of non-potable water that are recycled from prior well development. *Id*.; App. at [AR082527-28] (for EA 2018-0103, water will be trucked in from water recycling facilities, an out-of-basin well, and possibly produced water from other existing wells). Thus, BLM took a hard look at how water used for well development will impact aquifers in the region and reasonably concluded that the small increase in usage will not have a significant impact on groundwater aquifers. *See WildEarth Guardians*, 501 F. Supp. 3d at 1215 (upholding similar analysis).

The citizen groups' other objections also fail. They claim that BLM overlooked the cumulative impact of this water use when added to other activities impacting groundwater resources. Op. Br. at 42. But BLM stated that that there are no other reasonably foreseeable future actions, including other future mining projects, that would contribute to cumulative water withdrawals and BLM

reasonably assumed future water use for the other categories would continue at current levels. App. at [AR045070]. The citizen groups also assert that BLM ignored drought conditions. Op. Br. at 42, 43. However, in response to public comments, BLM explained that the analysis of current water usage amounts necessarily already captures any drought in the basin. App. at [AR045098]. Finally, the citizen groups imply that water used for well development may exacerbate water availability issues for households, especially on the Navajo Nation. Op. Br. at 43. But groundwater makes up less than half of the water used for public water supply. App. at [AR045065-6]. And water used for mining is only 2% of total water used in the basin, while 8% of the water is used for the public water supply and another 2% for domestic uses. *Id*. And operators generally lease existing water rights, purchase water from an existing water provider, or purchase non-potable water. App. at [AR009399]. Based on all of this, BLM reasonably determined that water used for oil and gas development will not significantly impact water resources in the basin, including the availability of water for household use.

C. BLM Took a Hard Look at the Health Impacts of Air Emissions

In the EA Addendum, BLM explained that the supplemental evaluation of air quality impacts incorporates the National Ambient Air Quality Standards ("NAAQS"), set by the Environment Protection Agency ("EPA") at levels to

protect human health, as well as the New Mexico Ambient Air Quality Standards ("NMAAQS"). App. at [AR045043-44]. The agency discussed the pollutants produced by oil and gas development – nitrogen oxide and volatile organic compounds ("VOCs"), which combine to form ozone, and particulate matter. App. at [AR045043-46, AR032871-80]. BLM recognized that ozone is the pollutant of most concern for the region and discussed its health effects, especially for sensitive groups. App. at [AR045044, AR045046]. The area is in attainment with the ozone NAAQS even though it has come close to exceeding those levels in the past. App. at [AR045046]. BLM next described the other metrics used to assess the impact of emissions, including EPA's Air Quality Index, a set of daily values corresponding to health concerns, and EPA's National Air Toxics Assessment ("NATA"), which models exposure risks of hazardous air pollutants. App. at [AR045048-50]. The county-level air quality index data in the region shows some days at the "unhealthy" or above levels but the data does not show a trend of degrading air quality. App. at [AR045049]. The most recent NATA data (2014) shows that cancer, neurological risks, and respiratory risks are generally lower in the area than state and national levels as well as levels in the Albuquerque area. App. at [AR045050].

Incorporating the methodology and assumptions for calculating emissions from its 2018 Air Resources Technical Report, BLM next calculated the total

emissions from the 370 wells at issue. App. at [AR045050]. If all 370 wells were drilled and producing at the same time – an unlikely possibility – the maximum increase in annual emissions would be 0.46% to 3.16%, depending on the pollutant. App. at [AR045050-51]. BLM reasonably determined that these amounts are not expected to result in any exceedances of the NAAQS or the NMAAQS, especially since all 370 wells will not be drilled in the same year and annual emissions are likely to be less. App. at [AR045051]. Similarly, these increases are not expected to increase the number of days classified by the air quality index as "unhealthy." App. at [AR045051-52]. BLM recognized that well development could result in localized air quality impacts for nearby residents but determined that the short-term local increases from construction, well completion, and reclamation would not pose a risk to human health because there would be no long-term exposure to elevated levels of pollutants. App. at [AR045052].

BLM then looked at the cumulative impacts of all 3,200 wells when added to the other emission sources in the area, such as the two coal-fired power plants and the other existing oil and gas wells. App. at [AR045052]. The 3,200 wells are anticipated to increase annual emissions in the area by 0.20% to 1.41%, depending on the pollutant. App. at [AR045053-54]. These small increases are not expected to result in any exceedances of the NAAQS or NMAAQS or increase the "unhealthy" number of days as measured by the air quality index. These emissions also would

be offset by "substantial decreases in emissions" resulting from the recent shutdown of units at one of the power plants (with the entire plant proposed for full closure by 2022) and improved technology at the other power plant. App. at [AR045054].

The citizen groups assert that this analysis insufficiently evaluates the impacts to human health from emissions. Op. Br. at 46-47. Yet as discussed above, EPA sets the NAAQS and the air quality index at levels designed to protect human health. Courts, including this one, routinely recognize that measuring an action's emissions against the NAAQS constitutes a hard look at how the action may impact air quality and the human environment. *Hillsdale*, 702 F.3d at 1175 (emissions that would not cause NAAQS exceedance unlikely to be significant); *Diné CARE I,* 839 F.3d at 1283; *Sierra Club v. FERC*, 867 F.3d 1357, 1370 n.7 (D.C. Cir. 2017) (comparing project emissions to NAAQS lets decisionmakers and the public meaningfully evaluate project effects by reference to a generally accepted standard); *Nat. Res. Def. Council, Inc. v. U.S. Dep't of Transp*., 770 F.3d 1260, 1271-72 (9th Cir. 2014) (evaluating whether area remains below NAAQS after project emissions constitutes hard look); *Wilderness Workshop*, 342 F. Supp. 3d at 1164 (discussion of air quality regulatory standards and current conditions of air pollution concentrations was a "sufficiently hard look" at the "human health impacts" of oil and gas development).

These specific holdings are more instructive on this issue than arguments relying on recitations of general NEPA requirements and broad statements that the law requires "more." *E.g.*, Op. Br. at 47 (arguing that BLM must discuss the "actual" effect of emissions, quoting *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172 (9th Cir. 2008)). As the district court found, citing such generalized statements and arguing that BLM failed to disclose the "actual" impacts bears little on evaluating the specific analysis performed by the agency. "It is difficult to know what concrete parameters Plaintiffs attach to phrases like 'actual' and 'general' because Plaintiffs offer nothing of any legal value in defining the terminology of their complaints and the caselaw they cite is largely inapplicable to BLM's extensive, good-faith efforts to satisfy NEPA." App. at [ECF No. 125 at 47].

The citizen groups also argue that BLM must do more than use the county-level NATA data, while confusingly recognizing that NATA data cannot be accurately used below the county level. Op. Br. at 49. [19] BLM recognized this data limitation, but it still provided a qualitative discussion of the more localized

[19] *See also* EPA's "NATA Overview" https://www.epa.gov/national-air-toxics-assessment/nata-overview#How%20to%20access%20NATA (last visited February 24, 2022) (". . . NATA can't give precise exposures and risks for a specific person. Instead, NATA results are best applied to larger areas – counties states and the nation. Results for smaller areas, such as a census tract, are best used to guide follow-up local studies.")

impacts on air quality for nearby residents. App. at [AR045050, AR045052] (recognizing possible VOC and hazardous air pollutant exposure but noting that exposure is dependent on other environmental conditions like wind and humidity). The citizen groups do not explain what other analysis or disclosure BLM could make for impacts at a sub-county level.

The citizen groups' true critique seems to be that BLM's analysis is flawed because it assumes all impacts are temporary and fails to look at long-term impacts of emissions. Op. Br. at 46. But BLM estimated emissions from all phases of each well – construction, operation, maintenance, and reclamation. App. at [AR045051]. While BLM rightly recognized that emissions are "the most acute" during the construction, completion, and reclamation phases (about 30 days each), the estimates still account for emissions during the lifetime of the well. See App. at [AR045095] (Table 8 in the EA Addendum "discloses the impacts from the wells over their assumed 20-year lifespan). The citizen groups seem to call for some prediction of pollutant levels in the future and how that might impact human health, but ignore the analysis BLM performed on this topic, assessing air quality levels in the air over the next 20 years, if all 3,200 wells (including the 370 at issue) were developed.[20] Since those emissions are not anticipated to result in

[20] Because this analysis captures emissions of the past, present, and reasonably foreseeable future actions, including all 3,200 wells as well as the emissions from

NAAQS exceedances or increase "unhealthy" air quality index days, it is unclear what else the citizen groups expect BLM to disclose.

As below, the citizen groups make much of BLM's language choice to term the short-term exposure to increased pollutants during the construction, completion, and reclamation phases as a "temporary nuisance" for those living near oil and gas wells. *E.g.*, Op. Br. at 47 (arguing that this language shows that BLM "callously dismisses" exposures to pollutants). The citizen groups' misunderstanding of the discussion does not explain what other analysis BLM could have performed or why NEPA would require it. The agency reasonably found that the cumulative impacts of the 370 wells, together with the other emissions in the region over the 20-year estimated well lifespan, would not increase emissions to a level that would impact human health, as measured by the NAAQS and the air quality index. Nothing more is required.

In sum, BLM took a hard look at how the 370 wells would impact air quality and human health, using well-accepted methodologies that satisfy NEPA's requirements. The Court should uphold the analysis.

IV. Relief, If Any, Should be Limited to Remand Without Vacatur

Because this Court should uphold the challenged agency actions, the citizen groups should receive no relief. Should this Court disagree, it should remand a

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the two power plants, this assesses the cumulatively significant emissions in the area, as the citizen groups argue is required. Op. Br. at 51.

subset of the agency actions without vacatur, as the relief requested by the citizen groups is overbroad and unwarranted.

First, the citizen groups seek vacatur of 370 APDs but, as discussed above, this Court lacks jurisdiction over 171 of the challenged APDs which are either pending applications, expired APDs, or relating to abandoned wells. Thus, the scope of any relief must be limited to the 199 APDs for which there is a live, final agency action.

Second, the citizen groups overstate their position that remand without vacatur is "unusual" and limited. Op. Br. at 52 n.39. While the Tenth Circuit has acknowledged that vacatur "is a common, and often appropriate, form of injunctive relief," it has declined to require vacatur in a very similar situation as the case before this Court.[21] *WildEarth Guardians*, 870 F.3d at 1239-40. In *WildEarth Guardians*, the Court considered whether to vacate leases that had been granted pursuant to a leasing decision later found to have violated NEPA. The court "decline[d] to vacate the leases" for three reasons: (i) because the "Plaintiffs challenge a fairly narrow issue," the court held that the district court "might

[21] The Court should disregard the citizen groups' suggestion that *Dep't of Homeland Sec. v. Regents of the Univ. of California*, 140 S. Ct. 1891 (2020), impacts "a court's ability to remand an agency decision without vacatur." Op. Br. at 53. In *Regents*, the Supreme Court examined the proper scope of the dueling agency explanations to be considered in support of the challenged agency action at issue. The Court did not consider the availability of remand without vacatur.

fashion some narrower form of injunctive relief based on equitable arguments"; (ii) there were practical questions of "what will happen to the leases which have already been issued and whether mining the lease tracts should be enjoined" and the parties had not specifically addressed that issue; and (iii) some leases were already being developed. 870 F.3d at 1240. Thus, *WildEarth Guardians* refutes the citizen groups' argument that vacatur is the "only remedy" that can redress a NEPA violation. Op. Br. at 52. To the contrary, the case recognizes that practical concerns can inform the decision of whether vacatur is an appropriate remedy.

Here, while BLM believes it has sufficiently examined and explained the impacts of the APD authorizations, the citizen groups' calls for more analysis of the data presented is a "fairly narrow issue"; after further consideration of the issue, it is likely that BLM's decisions could be substantiated on remand. *See, e.g.*, *Rocky Mountain Wild v. Haaland*, No. 18-cv-02468-MSK, 2021 WL 4438032 (D. Colo. Sept. 28, 2021) (declining to vacate leases because, while BLM ignored most recent version of ozone modeling, it considered earlier iteration and further consideration of issue would be unlikely to cause the agency to reach a different leasing decision on remand). Similarly, the citizen groups have not even tried to address the practical consequences of vacatur, which would shut down currently-operating wells irrespective of reservoir, wellbore, and surface protection concerns, affect the associated jobs, and cause the loss of taxes and royalties to the local,

state, and federal governments. *See, e.g.*, App. at [ECF No. 125 at 33-34]. Just as in *WildEarth Guardians*, vacatur is not the appropriate remedy and this Court should limit any remedy to remand without vacatur.

The citizen groups argue that if the FONSIs for the 199 APDs before the Court are not vacated, this Court should enjoin development on those APDs. Op. Br. at 54-57. This request should be rejected. At most, the request should be remanded to the district court. Whether an injunction would be appropriate, and the scope of any such injunction, involves intensely factual issues; for that reason, they should be decided in the first instance by the district court. The record is not sufficiently developed at this point to allow this Court to even have the full scope of these factual issues, let alone to weigh them and craft a narrowly tailored injunction as required. *Garrison v. Baker Hughes Oilfield Operations, Inc*., 287 F.3d 955, 962 (10th Cir. 2002) ("an injunction must be narrowly tailored to remedy the harm shown.")

The citizen groups do not identify which of their "detailed declarations" would support their claim of irreparable injury. Op. Br. at 54. The citizen groups would need to show that harm from specific APDs was imminent, as opposed to any alleged harm from unripe or moot APDs. Furthermore, the citizen groups do not attempt to present a complete discussion of the equities involved here, simply dismissing APD operators' "potential delay and speculative financial loss." Op. Br.

at 55. But as discussed above, there are many other equities involved here, including those held by individuals employed by the operators facing potential job loss, and local, state, and federal governments that would lose taxes and royalties and be unable to spend that money on other government programs. For many of the same reasons, there is a public interest that weighs against enjoining APD development.

Even if something more than remand without vacatur is warranted here – which it is not – all of these complicated factors should be first developed and evaluated at the district court level.

CONCLUSION

For these reasons, the district court's judgment should be affirmed.

Respectfully submitted this 2nd day of March, 2022,

TODD KIM
Assistant Attorney General
JEAN WILLIAMS
Deputy Assistant Attorney General
CLARE BORONOW

/s/ Bridget K. McNeil
BRIDGET KENNEDY McNEIL
Attorneys
Environment and Natural Resources Division
U.S. Department of Justice
999 18th Street, Suite 370
Denver, CO 80202
(303) 844-1484
bridget.mcneil@usdoj.gov

Of Counsel:

MICHAEL C. WILLIAMS
Attorney-Adviser
Office of the Solicitor
U.S. Department of the Interior

STATEMENT REGARDING ORAL ARGUMENT

Though deferring to the Court's judgment on the matter, BLM requests oral argument because it will assist the Court in deciding this appeal.

CERTIFICATE OF COMPLIANCE

I hereby certify:

1. This document complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B)(i) because, excluding the parts of the document exempted by Rule 32(f), this document contains 12,483 words.

2. This document complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type-style requirements of Rule 32(a)(6) because this document has been prepared in a proportionally spaced typeface using Microsoft Word 2016 in 14-point Times New Roman font.

TODD KIM
Assistant Attorney General
JEAN WILLIAMS
Deputy Assistant Attorney General
CLARE BORONOW

/s/ Bridget K. McNeil
BRIDGET KENNEDY McNEIL
Environment & Natural Resources Division
U.S. Department of Justice
999 18th Street, Suite 370
Denver, CO 80202
(303) 844-1484
bridget.mcneil@usdoj.gov

Counsel for Appellees

CERTIFICATE OF DIGITAL SUBMISSION

I hereby certify that with respect to the foregoing:

(1) all required privacy redactions have been made per 10th Cir. R. 25.5;

(2) if required to file additional hard copies, that the ECF submission is an exact copy of those documents; and

(3) the digital submissions have been scanned for viruses with the most re-cent version of a commercial virus scanning program, Windows Defender Antivirus Version 1.359.905.0 (updated Feb. 25, 2022), and according to the program are free of viruses.

TODD KIM
Assistant Attorney General
JEAN WILLIAMS
Deputy Assistant Attorney General
CLARE BORONOW

/s/ Bridget K. McNeil
BRIDGET KENNEDY McNEIL
Environment & Natural Resources Division
U.S. Department of Justice
999 18th Street, Suite 370
Denver, CO 80202
(303) 844-1484
bridget.mcneil@usdoj.gov

Counsel for Appellees

CERTIFICATE OF SERVICE

I hereby certify that on March 2, 2022, I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the Tenth Circuit by using the appellate CM/ECF system. The participants in the case are registered CM/ECF users and service will be accomplished by the appellate CM/ECF system.

TODD KIM
Assistant Attorney General
JEAN WILLIAMS
Deputy Assistant Attorney General
CLARE BORONOW

/s/ Bridget K. McNeil
BRIDGET KENNEDY McNEIL
Environment & Natural Resources Division
U.S. Department of Justice
999 18th Street, Suite 370
Denver, CO 80202
(303) 844-1484
bridget.mcneil@usdoj.gov

Counsel for Appellees

ADDENDUM

42 U.S.C. § 4332 - Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall--

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on--

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of longterm productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

> Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

> (i) the State agency or official has statewide jurisdiction and has the responsibility for such action,
>
> (ii) the responsible Federal official furnishes guidance and participates in such preparation,
>
> (iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and
>
> (iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.
>
> The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by subchapter II of this chapter.

40 C.F.R. § 1502.9 (2018) - Draft, final, and supplemental statements.

Except for proposals for legislation as provided in § 1506.8 environmental impact statements shall be prepared in two stages and may be supplemented.

(a) Draft environmental impact statements shall be prepared in accordance with the scope decided upon in the scoping process. The lead agency shall work with the cooperating agencies and shall obtain comments as required in part 1503 of this chapter. The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.

(b) Final environmental impact statements shall respond to comments as required in part 1503 of this chapter. The agency shall discuss at appropriate points in the

final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised.

(c) Agencies:

(1) Shall prepare supplements to either draft or final environmental impact statements if:

(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or

(ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.

(3) Shall adopt procedures for introducing a supplement into its formal administrative record, if such a record exists.

(4) Shall prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council.

40 C.F.R. § 1508.7 (2018) - Cumulative impact

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.9 (2018) - Environmental assessment

Environmental assessment:

(a) Means a concise public document for which a Federal agency is responsible that serves to:

(1) Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

(2) Aid an agency's compliance with the Act when no environmental impact statement is necessary.

(3) Facilitate preparation of a statement when one is necessary.

(b) Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

43 C.F.R. § 3162.3–1- Drilling applications and plans

(a) Each well shall be drilled in conformity with an acceptable well-spacing program at a surveyed well location approved or prescribed by the authorized officer after appropriate environmental and technical reviews (see § 3162.5–1 of this title). An acceptable well-spacing program may be either (1) one which conforms with a spacing order or field rule issued by a State Commission or Board and accepted by the authorized officer, or (2) one which is located on a lease committed to a communitized or unitized tract at a location approved by the authorized officer, or (3) any other program established by the authorized officer.

(b) Any well drilled on restricted Indian land shall be subject to the location restrictions specified in the lease and/or Title 25 of the CFR.

(c) The operator shall submit to the authorized officer for approval an Application for Permit to Drill for each well. No drilling operations, nor surface disturbance preliminary thereto, may be commenced prior to the authorized officer's approval of the permit.

(d) The Application for Permit to Drill process shall be initiated at least 30 days before commencement of operations is desired. Prior to approval, the application shall be administratively and technically complete. A complete application consists of Form 3160–3 and the following attachments:

(1) A drilling plan, which may already be on file, containing information required by paragraph (e) of this section and appropriate orders and notices.

(2) A surface use plan of operations containing information required by paragraph (f) of this section and appropriate orders and notices.

(3) Evidence of bond coverage as required by the Department of the Interior regulations, and

(4) Such other information as may be required by applicable orders and notices.

(e) Each drilling plan shall contain the information specified in applicable notices or orders, including a description of the drilling program, the surface and projected completion zone location, pertinent geologic data, expected hazards, and proposed mitigation measures to address such hazards. A drilling plan may be submitted for a single well or for several wells proposed to be drilled to the same zone within a field or area of geological and environmental similarity. A drilling plan may be modified from time to time as circumstances may warrant, with the approval of the authorized officer.

(f) The surface use plan of operations shall contain information specified in applicable orders or notices, including the road and drillpad location, details of pad construction, methods for containment and disposal of waste material, plans for reclamation of the surface, and other pertinent data as the authorized officer may require. A surface use plan of operations may be submitted for a single well or for several wells proposed to be drilled in an area of environmental similarity.

(g) For Federal lands, upon receipt of the Application for Permit to Drill or Notice of Staking, the authorized officer shall post the following information for public inspection at least 30 days before action to approve the Application for Permit to Drill: the company/operator name; the well name/number; the well location described to the nearest quarter-quarter section (40 acres), or similar land description in the case of lands described by metes and bounds, or maps showing

the affected lands and the location of all tracts to be leased and of all leases already issued in the general area; and any substantial modifications to the lease terms. Where the inclusion of maps in such posting is not practicable, maps of the affected lands shall be made available to the public for review. This information also shall be provided promptly by the authorized officer to the appropriate office of the Federal surface management agency, for lands the surface of which is not under Bureau jurisdiction, requesting such agency to post the proposed action for public inspection for at least 30 days. The posting shall be in the office of the authorized officer and in the appropriate surface managing agency if other than the Bureau. The posting of an Application for Permit to Drill is for information purposes only and is not an appealable decision.

(h) Upon initiation of the Application for Permit to Drill process, the authorized officer shall consult with the appropriate Federal surface management agency and with other interested parties as appropriate and shall take one of the following actions as soon as practical, but in no event later than 5 working days after the conclusion of the 30–day notice period for Federal lands, or within 30 days from receipt of the application for Indian lands:

> (1) Approve the application as submitted or with appropriate modifications or conditions;
>
> (2) Return the application and advise the applicant of the reasons for disapproval; or
>
> (3) Advise the applicant, either in writing or orally with subsequent written confirmation, of the reasons why final action will be delayed along with the date such final action can be expected.
>
> The surface use plan of operations for National Forest System lands shall be approved by the Secretary of Agriculture or his/her representative prior to approval of the Application for Permit to Drill by the authorized officer. Appeals from the denial of approval of such surface use plan of operations shall be submitted to the Secretary of Agriculture.

(i) Approval of the Application for Permit to Drill does not warrant or certify that the applicant holds legal or equitable title to the subject lease(s) which would entitle the applicant to conduct drilling operations.

(j) [Reserved by 83 FR 49211]