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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF WYOMING

WILDEARTH GUARDIANS and SIERRA CLUB, Petitioners,	)	
v.	)	
UNITES STATES BUREAU OF LAND MANAGEMENT, Respondent,	)	
and	)	
STATE OF WYOMING, BTU RESOURCES NATIONAL MINING ASSOCIATION, and WYOMING MINING ASSOCIATION, Respondent-Intervenors.	)	Case No 1: 12-CV-00085-J Case No. 2: 13-CV-00042 Case No. 3: 13-CV-00090

PETITIONERS' OPENING BRIEF IN CASE NO. 13-CV-00042

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INTRODUCTION

Between March 1, 2011 and February 1, 2012 the U.S. Bureau of Land Management ("BLM") issued four Records of Decision ("RODs") authorizing the leasing of just over 2.3 billion tons of Federal coal in the North Hilight, South Hilight, North Porcupine, and South Porcupine coal lease tracts ("the Leases") that expand the North Antelope Rochelle and Black Thunder coal mines in Wyoming's Powder River Basin. This case challenges BLM's decisions to approve the Leases without taking the steps required by Federal law to protect air quality and climate.

In its Environmental Impact Statement ("EIS") supporting the four RODs, BLM failed to properly analyze the impacts of the Leases' emissions of particulate matter and nitrogen dioxide, or consider reasonable alternatives that would have lessened these emissions. These failures violate the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq*., and the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. § 1701 *et seq*.

BLM further failed to analyze and disclose the climate impacts of the more than 3.3 billion metric tons of carbon dioxide ("CO_2") emissions that will result from the combustion of this coal. BLM masked the true impacts of its decision by claiming, incorrectly, that other coal would completely replace production from the Leases in electricity generation such that there would be no difference in the amount of coal mined

and burned, or CO_2 emitted, if BLM were to select the No Action alternative advocated by Petitioners.

STATEMENT OF FACTS

The Powder River Basin ("PRB") in northeastern Wyoming and southeastern Montana is the largest coal production region in the United States. BLM 30730.[1] In 2008, 43 percent of all coal in the U.S. came from the PRB, with Wyoming PRB mines accounting for 38.5 percent U.S. coal. AR 771-72. All of the top ten highest-producing coal mines in the U.S. are located in the PRB. BLM 30731.

The North Antelope Rochelle and Black Thunder mines, and the four Wright Area leases that will expand these mines,[2] are dominant forces in the U.S. coal sector. The Leases will expand the two largest coal mines in the country (BLM 25747, 31463), emit particulate matter (both PM_{10} and $PM_{2.5,}$) and more than 3,856 tons of nitrogen oxides per year (AR 393), and generate more than 2 billion tons of Federal coal, which will emit roughly 3.3 billion tons of CO_2 when this coal is burned to generate electricity. AR 775.

Between 2004 and 2006, BLM received 12 applications to lease Federal coal in the Wyoming portion of the PRB from coal companies operating existing mines in the

[1] Cites to "BLM ___" refer to the record created for the cases against BLM. Cites to "AR ___" refer to the North Porcupine record created for the case against the Forest Service.

[2] The North and South Hilight leases would expand the Black Thunder Mine; the North and South Porcupine leases would expand the North Antelope Rochelle mine. BLM 25658, AR 179.

area. BLM 30749. The applications are for "maintenance coal tracts" which extend the life of an existing mine. AR 179. Rather than combine the lease applications, BLM grouped sets of applications into separate EISs, one of which was the Wright Area EIS. AR 80.

In July 2010, BLM issued its Final EIS ("the Wright FEIS" or "FEIS") for six coal leases, including North Hilight, South Hilight, North Porcupine, and South Porcupine.[3] AR 79. The Leases extend the life of the Black Thunder and North Antelope Rochelle mines for a combined 18 years. In the FEIS, BLM considered three alternatives, including a no-action alternative, for each of the leases at issue. AR 214-69. The only difference in the two action alternatives is that BLM's preferred alternative increased the acreage and amount of recoverable coal. AR 212. This appeal was filed after Petitioners provided comments on both the Draft EIS and FEIS, and after BLM signed its Records of Decision in 2011 and 2012. BLM 24328-832; BLM 30718-61.

STANDARD OF REVIEW

BLM's actions are reviewed under the "arbitrary and capricious" standard. 5 U.S.C. § 706(2)(A). Agency action is unlawful and must be set aside where it "fails to meet statutory, procedural or constitutional requirements or if it was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Olenhouse v.*

[3] The Wright EIS also included the West Hilight and West Jacobs Ranch lease tracts, which are not at issue.

Commodity Credit Corp., 42 F.3d 1560, 1574 (10th Cir. 1994) (internal quotations omitted).

Under this standard "[the court] must ensure that the agency 'decision was based on a consideration of the relevant factors' and examine 'whether there has been a clear error of judgment.'" *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1167 (10th Cir. 1999) (citations omitted). Agency action will be set aside if:

> [T]he agency has relied on factors which Congress had not intended it to consider, entirely failed to consider an important aspect of the problem, 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.

Id. (*quoting Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

In the NEPA context, an agency's action is arbitrary and capricious when the agency has not "adequately considered and disclosed the environmental impact of its actions." *Utah Shared Access Alliance v. U.S. Forest Serv.*, 288 F.3d 1205, 1208 (10th Cir. 2002). The court applies a "rule of reason" in determining whether FEIS deficiencies "are significant enough to defeat the goals of informed decisionmaking and informed public comment." *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1163 (10th Cir. 2002); *Colo. Envtl. Coal.*, 185 F.3d at 1174 (holding the rule of

reason requires "sufficient discussion of the relevant issues and opposing viewpoints to enable [an agency] to take a hard look at the environmental impacts.").

ARGUMENT

I. PETITIONERS HAVE ARTICLE III STANDING TO CHALLENGE BLM'S NEPA REVIEW OF ITS COAL LEASING DECISIONS.

Petitioners meet the Article III standing requirements—injury in fact, traceability, and redressability—to challenge BLM's inadequate NEPA review. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992). BLM's failure to adequately analyze the air pollution from the Leases—including fine particulates (PM_{10} and $PM_{2.5}$) and over 3,000 tons per year of smog-inducing nitrogen oxides—increases the risk that Petitioners will suffer harm to their aesthetic and recreational interests when they use the Thunder Basin National Grassland into which the Leases extend. AR 393; Nichols Decl. ¶¶ 6-10, Map at Exh. A. This increased risk of harm is fairly traceable to BLM's failure to conduct a proper analysis of the Leases' air pollution impacts, and would be redressed by a court order requiring a proper NEPA analysis. Petitioners are nonprofit organizations whose missions include the protecting the environment and public health, Nichols Decl. ¶¶ 3-6; Phillips Decl. ¶¶ 2-3, and Petitioners have associational standing on behalf of their members, including those who use and enjoy the Thunder Basin National Grassland and other public lands. *Hunt v. Wash. State Apple Adver. Comm'n*, 432 U.S. 333, 343 (1977). Because Petitioners seek to protect their members' recreational and aesthetic interests in

these areas, Nichols Decl. ¶¶ 9-13, Petitioners' injuries fall squarely within the "zone of interests" NEPA was designed to protect. *Comm. to Save the Rio Hondo v. Lucero*, 102 F.3d 445, 448 (10th Cir. 1996).

Because Petitioners have standing to challenge BLM's inadequate review of the Leases' air quality impacts, Petitioners also have standing to challenge other defects in BLM's NEPA review, including its failure to adequately analyze and disclose the climate impacts of the Leases. As the Supreme Court has made clear, while a plaintiff must establish standing "for each form of relief sought," once that standing is established a plaintiff may raise other arguments as to why the agency failed to comply with its statutory mandate. *DaimlerChrysler Corp. v. Cuno,* 547 U.S. 332, 352 n.5 (2006).[4] The injury relied on for purposes of Article III standing does not need to be substantively connected to the merits of a plaintiff's argument, *Duke Power Co. v. Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 78-79 (1978), and here Petitioners' conventional pollutant injuries also support their standing to assert that BLM failed to adequately consider the climate impacts of the Leases.

But even assuming *arguendo* that Petitioners do need to establish separate standing to challenge BLM's climate analysis, Plaintiffs meet the three-part standing test.

[4] *See also Sierra Club v. Adams*, 578 F.2d 389, 391-93 (D.C. Cir. 1978) (plaintiffs' standing to challenge one aspect of an EIS provided standing to challenge all aspects because all arguments provided the bases for seeking the same type of relief).

Petitioners satisfy the "injury-in-fact" prong with member and expert declarations attesting to the climate-related injuries they are already suffering (*e.g.*, harm to their coastal property), as well as the imminent risk of future harms they face. Petitioners satisfy the traceability test through record evidence and the declaration of a climate scientist demonstrating that: (1) the Leases will result in the release of a staggering 3.3 billion tons of CO_2 when the coal is burned to produce electricity, AR 775, which will meaningfully contribute to global climate change, and (2) the Leases will thus increase the risk of the types of localized, climate-related harms that Petitioners' members are already suffering (McCracken Decl. ¶¶ 14, 51, 52, 54, 55, 56, 58, 60). To further demonstrate causation and redressability, Petitioners also rely on the declaration of an economist who explains that if BLM had selected the No Action alternative based on a proper NEPA analysis, the price of coal would increase significantly ($8 per ton in the U.S.), which would lead to a substantial reduction in domestic coal consumption and a corresponding reduction in greenhouse gas emissions, thus lessening the risk of climate-related harm to Petitioners' members. Power Decl. ¶¶ 27-31. Petitioners' procedural injuries are thus fairly traceable to BLM's failure to comply with NEPA and redressable by a court order requiring BLM to adequately consider the impacts of its decision before authorizing the Leases. Petitioners thus have standing to challenge BLM's inadequate NEPA review.

A. Petitioners have standing to challenge BLM's failure to adequately address air pollution from the Leases in its EIS.

1. Petitioners will suffer injury in fact.

In NEPA cases, the Tenth Circuit has refined the 'injury in fact' step of the standing inquiry into a two-part test: a NEPA plaintiff must show (1) that in making its decision without following NEPA procedures, "the agency created an increased risk of actual, threatened, or imminent environmental harm;" and (2) "that this increased risk of environmental harm injures its concrete interest." *Sierra Club v. U.S. Dep't of Energy*, 287 F.3d 1256, 1265 (10th Cir. 2002) (*citing Comm. to Save Rio Hondo v. Lucero*, 102 F.3d 445, 449 (10th Cir. 1996)).

Petitioners satisfy both prongs of this test. First, BLM created an increased risk of actual, threatened or imminent environmental harm by failing to fully analyze and disclose impacts from emissions of ozone precursors nitrogen dioxide and particulate matter ($PM_{2.5}$), or alternatives that would reduce these emissions. The Leases will emit more than 3,800 tons of nitrogen oxides per year, in addition to particular matter and other pollutants that lead to ozone (smog). AR 393. EPA has linked smog to a variety of health impacts, including difficulty breathing, lung damage, and respiratory illness. *See, e.g.*, U.S. EPA, Proposed NAAQS for Ozone, 75 Fed. Reg. 2938 (Jan. 19, 2010).

Second, this increased risk of environmental harm from BLM's uninformed decision injures the concrete recreational and aesthetic interests of Petitioners' members who recreate in the Thunder Basin National Grassland, including areas near the Leases. "[E]nvironmental plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened' by the challenged activity." *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc.*, 528 U.S. 167, 183 (2000). WildEarth Guardians and Sierra Club member Jeremy Nichols has visited the Thunder Basin National Grassland near the Leases in 2005, 2008, and every spring or summer since 2010, with his next outing scheduled for spring 2014. Nichols Decl. ¶¶ 7, 9, 10, 13-15. He visits the Grasslands to hike, enjoy the open skies, and observe wildlife. *Id.* ¶¶ 13-15. Mr. Nichols has observed effects of the existing Black Thunder and North Antelope Rochelle Mines, including machinery, haze, dust clouds, and orange clouds caused by nitrogen dioxide pollution, *id.* ¶¶ 16-23, all of which lessen his aesthetic and recreational enjoyment of the area. *Id.* ¶18. Development of the Leases will further degrade air quality and pose an increased health risk to Mr. Nichols by producing increased levels of particulate matter, nitrogen oxides, and ozone. AR 393. BLM's failure to adequately analyze the air quality impacts of the leases thus poses an actual and imminent threat of harm to Nichols' concrete

recreational and aesthetic interests in areas affected by the Leases, sufficient to satisfy the injury-in-fact prong of the standing test.

2. Petitioners' increased risk of injury is fairly traceable to BLM's NEPA violations.

Petitioners satisfy the causation prong of the standing inquiry because the increased risk of harm to their members' concrete interests is fairly traceable to BLM's failure to adequately consider the air pollution impacts of the challenged Leases. In examining the "fairly traceable" standard, the Tenth Circuit has explained that "in the context of a [NEPA] claim, the injury is the increased risk of environmental harm to concrete interests" and that once a plaintiff establishes injury in fact, "to establish causation . . . the plaintiff need only trace the risk of harm to the agency's alleged failure to follow [NEPA] procedures." *Rio Hondo*, 102 F.3d at 451-52.

Petitioners meet this test. By failing to adequately analyze and disclose emissions from the Leases, or consider alternatives that would reduce those emissions, BLM violated NEPA's procedural mandate and increased the likelihood of harmful air emissions in areas adjacent to the Leases that are used by Petitioners' members.

3. Petitioners' injuries are redressable by a favorable decision.

A favorable decision would redress Petitioners' injuries. *Lujan*, 504 U.S. at 561. "Under [NEPA], an injury results not from the agency's decision, but from the agency's *uninformed* decisionmaking." *Rio Hondo*, 102 F.3d at 452. Because the injury in NEPA

cases (*i.e.*, the increased environmental risk to concrete interests) is caused by an agency's *uninformed* decision, a judicial order requiring the agency to comply with NEPA ensures that the agency's decision is fully informed, redressing plaintiff's injury. *Sierra Club v. U.S. Dep't of Energy*, 287 F.3d 1256, 1265-66 (10th Cir. 2002). NEPA plaintiffs do not need to show that an agency would alter its ultimate decision once it adequately considers a project's impacts. *Lujan*, 504 U.S. at 572 n.7. Petitioners need only demonstrate that an adequate analysis could lead BLM to reject the Leases or modify them in ways that would reduce the air quality impacts. A favorable decision here would invalidate BLM's Lease approvals and ensure the agency fully analyzes and discloses the environmental impacts of the Leases, including the impacts on air quality and public health. Doing so could lead the agency to reject the Leases in favor of the No Action alternative advocated by Petitioners or to take steps to avoid and reduce air emissions.

B. Petitioners' procedural injuries arising from BLM's inadequate analysis of the Leases' air quality impacts also support Petitioners' standing to assert other NEPA arguments.

Petitioners' recreational and aesthetic injuries caused by the BLM's failure to adequately address the Leases' emissions of conventional air pollutants also support Petitioners' standing to assert other deficiencies in BLM's NEPA analysis. *Ctr. for Biological Diversity v. U.S. Dep't of Interior* ("*CBD*"), 563 F.3d 466, 479 (D.C. Cir.

2009). The injury relied on to establish standing need not be substantively connected to the merits of a plaintiff's argument. *Duke Power Co. v. Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 78-79 (1978). Consistent with the requirement that a plaintiff have standing for each form of relief sought, *DaimlerChrysler*, 547 U.S. at 353, here correction of any of the deficiencies in the EIS may lead BLM to deny the Leases, remedying Petitioners' conventional pollutant injuries. Thus, Petitioners have standing for their entire NEPA claim.

In *CBD* petitioners challenged the Department of Interior's approval of an offshore oil leasing program asserting *inter alia* that Interior violated NEPA by failing to adequately consider the climate change effects of the leasing and by relying on insufficient biological baseline data. To support standing, petitioners relied on their particularized interest in viewing Arctic animals that would be harmed by the leasing. 563 F.3d 466, 479 (D.C. Cir. 2009). The court held that direct, non-climate-based harm from the program to Arctic animals (and plaintiffs' interest in viewing those animals) provided petitioners with standing to argue that the agency improperly considered the climate impacts of the leasing program. *Id.* Specifically, petitioners showed interest in viewing animals in the affected area and that "Interior's adoption of an irrationally based Leasing Program could cause a substantial increase in the risk to their enjoyment of the animals affected by the offshore drilling, and that our setting aside and remanding of the

Leasing Program would redress their harm." *Id.* Thus, for standing purposes, the claimed NEPA deficiency need not dovetail with the standing injury. Indeed, in *CBD*, the court held that petitioners had failed to show that the challenged program's contribution to climate change was itself an injury sufficient to provide standing, but this failure did not interfere with petitioners' standing to assert NEPA climate claims on the basis of non-climate injuries. *Id.*

The Supreme Court has similarly rejected the notion that the injury relied on to establish standing must have a substantive connection to the merits of a plaintiff's claim in *Duke Power*, 438 U.S. at 79. There, plaintiffs challenged the constitutionality of a federal statute that would facilitate the construction of a nuclear plant near their homes. *Id.* at 67. Petitioners alleged aesthetic harms based on potential discharges from the proposed plant to two area lakes. *Id.* at 73. The government asserted that because the claimed environmental injuries were "not directly related to the constitutional attack," "such injuries . . . cannot supply a predicate for standing" to raise those constitutional claims. *Id.* The Court disagreed. A litigant need not "demonstrate something more than injury in fact and a substantial likelihood that the judicial relief requested will prevent or redress the claimed injury." *Id.* at 79.

The D.C. Circuit's decision in *Sierra Club v. Adams* further affirms a plaintiff may assert flaws in a NEPA analysis that are not directly connected to the injury underlying

the plaintiff's standing. 578 F.2d 389, 391-93 (D.C. Cir. 1978). In *Adams*, plaintiff American environmental groups challenged an EIS prepared by the Department of Transportation in conjunction with a highway project in Panama. *Id.* at 391. Plaintiffs asserted standing based on the likelihood that the project would spread foot-and-mouth disease in the United States. *Id.* The agency conceded that plaintiffs had standing to challenge the EIS's discussion of this issue, but argued that plaintiffs lacked standing to argue that the EIS failed to adequately consider the impact to two local tribes, the Cuna and Choco Indians. *Id.* Indeed, plaintiffs appear not to have argued that they would be affected by any impacts to the tribes. The Circuit Court nonetheless held that by showing an injury caused by the project approval, plaintiffs had standing to assert all purported deficiencies in the NEPA analysis. *Id.* at 393.

The Supreme Court has explained how this principle is consistent with the requirement that a plaintiff must demonstrate standing for each claim he seeks to press and that "a plaintiff must demonstrate standing separately for each form of relief sought." *DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 352, 353 n.5 (2006) (citing *Allen v. Wright*, 468 U.S. 737, 752 (1984) and quoting *Friends of the Earth v. Laidlaw*, 528 U.S. 167, 185 (2000)). In *DaimlerChrysler*, plaintiffs had standing to challenge certain municipal taxes, but the Court held that plaintiffs lacked standing to separately challenge various state taxes. *Id.* at 353. A litigant cannot, "by virtue of his standing to challenge

one government action, challenge other governmental actions that did not injure him." *Id.* at 353 n.5. The Court distinguished the case before it from *Adams*, instead citing *Adams* for the proposition that "once a litigant has standing to request invalidation of a particular agency action, it may do so by identifying all grounds on which the agency may have 'failed to comply with its statutory mandate.'" *Id.* (quoting *Sierra Club v. Adams*, 578 F.2d 389, 392 (D.C. Cir. 1978)).

In a case from this circuit that is directly on point, in 2011 a U.S. District Court in Colorado expressly rejected the argument that a NEPA plaintiff must establish an independent basis for standing to challenge the agency's climate analysis where its standing to challenge defects unrelated to climate change was not in question. *WildEarth Guardians v. U.S. Forest Serv.*, 828 F. Supp. 2d 1223, 1235 (D. Colo. 2011). The plaintiffs in that case challenged a Forest Service EIS and alleged that approval of a coal lease would (1) exacerbate climate change by venting methane into the atmosphere; and (2) harm WildEarth Guardians' members' recreational and aesthetic interest by authorizing the construction of roads, well pads, and other surface activities on public lands where its members recreate. *Id.* at 1234. Federal defendants did not challenge standing, and industry intervenors asserted only that plaintiffs lacked standing to raise climate issues. *Id.* at 1235. The District Court explicitly rejected intervenor's argument that the plaintiffs needed to establish an independent basis for standing to challenge the

agency's climate analysis. As the court explained, intervenor "appears to contend that because these decisions also implicate climate change, and part of WildEarth's *argument* concerns the adequacy of the analysis of climate change issues," that WildEarth Guardians had to "specifically allege a personalized injury resulting from climate change, rather than from the project itself." *Id.* (emphasis added). The court rejected this contention, finding that under NEPA standing is not so "narrowly construed." *Id.*

Consistent with these authorities, Petitioners have standing to challenge the adequacy of BLM's NEPA compliance because the approved action will cause local air pollution that injures Petitioners' members, and because an order compelling BLM to reconsider its analysis—for any reason—may lead BLM to deny or modify the Leases and avoid injuring Petitioners. Here, as in *CBD*, *Adams*, and *WildEarth Guardians* and unlike in *DaimlerChrysler*, all of the deficiencies Petitioners identify pertain to a single government action: BLM's approval of the Leases. Petitioners similarly seek only a single form of relief: invalidation of BLM's approval of the Leases. The Supreme Court's statements in *DaimlerChrysler,* and decades of persuasive authority from the D.C. Circuit, establish that Petitioners need not show any more.

C. Alternatively, Petitioners' also have standing arising from the Leases' climate impacts.

As explained above, because Petitioners have standing to challenge BLM's air pollution analysis, Petitioners have standing to press any NEPA argument that would

invalidate the EIS. *DaimlerChrysler*, 547 U.S. at 353 n.5. But even assuming *arguendo* that Petitioners must demonstrate an independent basis for standing to challenge BLM's inadequate analysis of the Leases' effects on climate change, Petitioners still satisfy the 3-part standing test.

1. Petitioners will suffer injury in fact.

Many of Petitioners' members are already suffering tangible effects of climate change. They have watched high mountain lakes dry out, cherished forests decimated by bark beetle infestation, and seen coastline erode into the sea; others have had homes and personal property badly damaged by coastal storms. Nichols Decl. ¶¶ 40-42; Wilbert Decl. ¶¶ 6-12; Mainland Decl. ¶ 6; Auriemma Decl. ¶¶ 5-6; Devlin Decl. ¶ 5; DiClemente Decl. ¶ 5.

Petitioners' members have been and will continue to be harmed by the adverse impacts of climate change, to which the Leases will significantly contribute. These injuries include:

- Aesthetic and recreational harms already suffered by members who use and enjoy public and private lands in the western U.S. that are suffering snowpack loss, diminished recreational opportunities, drying lakes and streams, glacial retreat, intense forest fires, coastal erosion, and deforestation as a result of pests. For example, Sierra Club member Connie Wilbert has witnessed

"stunning" tree loss due to pests in the Routt and Medicine Bow National Forests, and witnessed shrinking glaciers and lower water levels in mountain lakes and streams in the Wind River Mountains in Wyoming. Wilbert Decl. ¶¶ 6-12. Sierra Club member Ed Mainland takes annual trips to the Sierra and Cascade ranges and frequently travels along the California coast, where he has observed increasingly severe climate impacts including forest fires and eroding coastlines. Mainland Decl. ¶¶ 5-6. Sierra Club members and avid birders Nancy Devlin and Margaret DiClemente have noticed markedly fewer northern birds in Corpus Christi, Texas over the past several years, in particular American Robins, and now count themselves lucky to see one or two a winter. Devlin Decl. ¶ 8; DiClemente Decl. ¶ 8. WildEarth Guardians and Sierra Club member Jeremy Nichols has witnessed insects take over once vibrant swaths of forests in the Mt. Zirkel Wilderness Area in Colorado, Platte River canyon in Wyoming, Sierra Madre in southern Wyoming and Black Hills National Forest in South Dakota and Wyoming. Nichols Decl. ¶ 40. These impacts diminish his aesthetic and recreational interests in hiking and camping on these lands to such an extent that he now avoids many of those areas. *Id.* Dr. MacCracken specifically identifies each of these types of harm as being caused by climate change. MacCracken Decl. ¶¶ 14, 52, 54, 55, 56, 58, 60.

- Harm to economic interests already suffered by members who have had personal property damaged or destroyed by storm surges along the coasts or incurred higher insurance costs as result of increased risk of storm surges and rising seas. Devlin Decl. ¶ 6; DiClemente Decl. ¶ 6; Auriemma Decl. ¶¶ 5-6; Mainland Decl. ¶ 5. For example, Ed Mainland lives in a lagoon community in California and has already had to pay hundreds of dollars annually to obtain insurance not previously required as a result of sea level rise. Mainland Decl. ¶ 5. Sierra Club member Greg Auriemma suffered approximately $20,000 in property damage as a result of Superstorm Sandy, including damage to his furnace, hot water, air conditioning system, main electrical panel, and dock. Auriemma Decl. ¶ 6. Nancy Devlin and Margaret DiClemente lost their deck and rebuilt at a higher level as a result of Hurricane Ike. Devlin Decl. ¶ 6; DiClemente Decl. ¶ 6. Dr. MacCracken specifically identifies these types of impacts as being caused by climate change. MacCracken Decl. ¶¶ 14, 51, 56, 60.

- Harm to economic, recreational, and aesthetic interests of members who use public lands in coastal areas being eroded by sea level rise and who own

coastal real estate in areas such as California, Florida, New Jersey, and Texas that are at an increased risk of damage from rising seas and increased storm surges. Mainland Decl. ¶¶ 5, 7; Phillips Decl. ¶ 4; Auriemma Decl. ¶¶ 5-6; Angelo Decl. ¶ 4; Fedder Decl. ¶ 7; Devlin Decl. ¶ 5; DiClemente Decl. ¶ 5. For example, Sierra Club member Joel Fedder's home is just feet from the Florida coastline and rising seas and increasingly severe weather threaten his property. Fedder Decl. ¶¶ 7-8. Sierra Club member Percy Angelo lives in an area designated by Florida as a Coastal High Hazard Area at increased risk of harm during tropical storms; rising seas threaten her property. Angelo Decl. ¶ 4. The imminent risk of rising seas and increased storm surges in these areas is well supported by climate science (MacCracken Decl. ¶¶ 51, 56, 60) and, for property owners, present the type of imminent harm that the Supreme Court has previously found sufficient for injury in fact. *See Massachusetts v. EPA*, 549 U.S. 497, 523 (2007) ("Petitioners maintain that the seas are rising and will continue to rise, and have alleged that such a rise will lead to a loss of [the state's] territory. . . . Our cases require nothing more.").

The attached declaration of climate scientist Dr. MacCraken confirms that the injuries Petitioners members complain of are attributable to global climate change. MacCracken Decl. ¶¶ 14, 51, 52, 54, 55, 56, 58, 60. Dr. MacCracken's career includes

extensive work with the Inter-governmental Panel on Climate Change ("IPCC"), among many other notable achievements, and his sworn declaration is based on his expert knowledge of climate science and the impacts of climate change. *Id.* ¶¶ 1-13. Dr. MacCracken further explains that the burning of coal is a primary cause of climate change and that the roughly 3.3 billion metric tons of CO_2 emissions (AR 775) that will occur as a result of the Leases will make the climate harms already felt by Petitioners' declarants worse. *Id*. ¶¶ 14, 28, 39, 40, 47, 51-64.

Petitioners have therefore shown "1) that in making its decision without following the NEPA's procedures, the agency created an increased risk of actual, threatened or imminent environmental harm," and that "2) that this increased risk of environmental harm injures [their] concrete interest." *Sierra Club*, 287 F.3d at 1265. Both the Tenth Circuit and Supreme Court recognize that "[i]n the context of a NEPA claim, the harm itself need not be immediate, as 'the federal project complained of may not affect the concrete interest for several years.'" *Sierra Club*, 287 F.3d at 1265 (*quoting Rio Hondo*, 102 F.3d at 449 n.4); *Lujan v. Defenders of Wildlife*, 504 U.S. at 572 n.7. BLM is tasked with administering the federal government's coal leasing program, and the Leases could not go forward without BLM's approval. The Leases have the potential to harm the environment by resulting in more than 3 billion tons of CO_2 emissions, which BLM acknowledges "contribute" to climate change and its attendant impacts. AR 765-75. In

not properly analyzing and disclosing the climate impacts of the Leases and the massive amount of carbon pollution that will result, BLM has created an increased risk of climate harm that affects the concrete recreational, aesthetic, and economic interests of Petitioners' members in their personal property and in the public lands directly affected by climate change. These interests are "concrete and particularized," and "not 'conjectural' or 'hypothetical.'" *Lujan*, 504 U.S. at 560.

2. Petitioners' increased risk of climate injury is fairly traceable to BLM's failure to comply with NEPA.

The "increased risk" of aggravation of plaintiffs' climate injuries "is fairly traceable to" BLM's uninformed decision to lease more than 2 billion tons of federal coal. *Rio Hondo*, 102 F.3d at 451. Combustion of this coal would release 3.3 billion tons of CO_2, the amount of greenhouse gas emitted by the entire U.S. electricity sector in 1.4 years. MacCracken Decl. ¶ 40. This "contribution" to global greenhouse gas emissions will aggravate the risk to Petitioners. *Massachusetts v. EPA*, 549 U.S. 497, 525 (2007). As noted, the Tenth Circuit has held that in NEPA litigation the injury is the "increased risk of environmental harm to concrete interests" and that to establish causation, a plaintiff need only show that its "increased risk" is fairly traceable to the agency's failure to comply with NEPA procedures. *Rio Hondo*, 102 F.3d at 451. In reaching this conclusion, the Tenth Circuit expressly rejected the D.C. Circuit's "substantial probability" causation standard articulated in *Florida Audubon v. Bentsen*, 94 F.3d 658

(D.C. Cir. 1996), explaining, "[t]o require that a plaintiff establish that the agency action will result in the very impacts an [EIS] is meant to examine is contrary to the spirit and purpose" of NEPA. *Id.* at 452. Petitioners' members have already been harmed by climate change, and these Leases will lead to an enormous release of CO_2 when this coal is burned. These emissions are the main cause of increasing greenhouse gas concentrations, and they will have short and long-term climate impacts that will expose Petitioners' members to longer lasting and more damaging impacts from climate change. MacCracken Decl. ¶ 14, 60. By approving the Leases without fully analyzing the climate impacts of its authorization, BLM's uninformed decision exposes Petitioners' members to a greater risk of environmental harm for the reasons explained below.

First, the record shows that the Leases will lead to the release of a staggering 3.3 billion metric tons of CO_2 when the 2 billion tons of coal are burned to produce electricity. AR 775. During years of overlapping production, the mines intend to generate a combined 230 million tons of coal from the Leases, AR 775, equivalent to nearly a quarter of all coal produced in the U.S. in 2010. Power Decl. ¶ 27. BLM admits that this coal will be mined and then burned in coal-fired power plants, AR 764, which will release CO_2 into the atmosphere. AR 765. BLM further acknowledges that that fossil fuel production is the major driver of anthropogenic greenhouse gas emissions, that these emissions are contributing to climate change, that climate change is already

impacting having an impact on the U.S., and that climate change will cause these impacts to get worse into the future. AR 765-70.

Second, the declarations of Petitioners' members and Dr. Michael MacCracken demonstrate that BLM's decision to authorize the Leases increases the risk of climate harm to the concrete interests of Petitioners' members. Dr. MacCracken concludes that the climate is changing in ways that are already directly affecting the U.S., including coastal impacts from sea level rise, increased storm surges, retreat of snow cover and melting glaciers, and shifts in flora and fauna. MacCracken Decl. ¶ 60. Dr. MacCracken further explains that the additional CO_2 emissions as a result from the Wright Area leases "will amplify climate change and would further aggravate conditions *in the specific geographic areas where these individuals* [Petitioners' declarants] live, recreate, and enjoy the outdoors." MacCracken Decl. ¶ 60 (emphasis added). He identifies the type and specific geographic location of harms already felt by Petitioners' members as being caused by climate change, and concludes that the Leases would "add significantly" to U.S. and global emissions of greenhouse gases, "making addressing the problem of global climate change more and more difficult." MacCracken Decl. ¶¶ 60, 63. *Massachusetts v. EPA* established that "contribution" to injury of a plaintiff's concrete interests is sufficient to satisfy traceability, rejecting "the erroneous assumption that a

small incremental step, because it is incremental, can never be attacked in a federal judicial forum." 549 U.S. 497, 524 (2007).

While some courts have rejected asserted causal links between a plaintiff's claimed climate injuries and the challenged federal action, those cases are easily distinguishable because of both the huge quantity of greenhouse gases at issue here and Petitioners' expert evidence demonstrating that such massive emissions will increase the risk of climate-related injuries that Petitioners' members are already suffering. The Ninth Circuit, for example, recently found causation lacking where the plaintiffs' causal chain "consists of a series of links strung together by conclusory, generalized statements of 'contribution,' without any plausible scientific or other evidentiary basis that the refineries' emissions are the source of their injuries." *Wash. Envtl. Council v. Bellon*, 12-35323, Slip Op. at 8, 2013 WL 5646060 (9th Cir. Oct. 17, 2013).[5] The court also pointed to unchallenged expert testimony that the effect of the limited quantity of greenhouse gas

[5] The *WEC* court also distinguished *Massachusetts v. EPA* based on the "special solicitude" afforded a sovereign state and evidence that the motor vehicle emissions at issue constituted over 6% of world-wide carbon emissions. Slip Op. at 10. While the *Massachusetts* Court certainly allowed the state "special solicitude" (549 U.S. at 520), the Court then applied the familiar three-part standing test based on the state's status *as a property owner*, concluding that "petitioners' submissions as they pertain to Massachusetts satisfied the most demanding standards of the adversarial process." *Id.* at 521-22. Chief Justice Roberts emphasized this point in his dissent, noting, "[t]he Court asserts that Massachusetts is entitled to 'special solicitude' due to its 'quasi-sovereign interests,' but then applies our Article III standing test to the asserted injury of the Commonwealth's loss of coastal property." *Id.* at 539 (Roberts, C.J., dissenting).

emissions at issue in that case "on global climate change is 'scientifically indiscernible.'" *Id.* at 9. Here, Dr. McCracken's declaration shows that the 3.3 billion metric tons of CO_2 emissions that will result from the Leases will meaningfully contribute to global climate change and will further aggravate the types of injuries Petitioners' members are already suffering, thus establishing the necessary causal link.[6] The district court's decision in *WildEarth Guardians v. Salazar*, 880 F. Supp. 2d 77 (D.D.C. 2012) is distinguishable for the same reason. Unlike in those cases, Petitioners have demonstrated in this case their members' direct use of lands that will be affected by rising seas and other impacts of climate change.

BLM mistakenly contends that the Leases will not increase greenhouse gas emissions because BLM assumes that any coal made available by the Leases will merely displace other coal that would otherwise be burned, rather than increase total coal consumption. AR 776. This contention is both legally irrelevant to the standing inquiry and factually incorrect. *Massachusetts*' standing inquiry merely noted that "U.S. motor-vehicle emissions make a meaningful contribution to greenhouse gas concentrations and hence, according to petitioners, to global warming;" the Court looked at these as a whole,

[6] The 3.3 billion metric tons of CO_2 that will be emitted here amounts to 183 million metric tons per year for the duration of the leases. This is more than 30 times greater than the emissions at issue in *WEC*, and several hundred times greater than the emissions at issue in *Amigos Bravos v. U.S. Bureau of Land Mgmt.*, 816 F. Supp. 2d 1118, 1136 (D.N.M. 2011).

without parceling out the marginal reduction in emissions EPA could potentially achieve by regulation. 549 U.S. at 525. Similarly, this court need not look beyond the greenhouse gas emissions directly at issue. Alternatively, if the court does look at aggregate effects, the court must reject BLM's factual conclusion.

The declaration of economist Dr. Thomas M. Power submitted herewith demonstrates that a decision to forgo the Leases would result in massive reductions in the amount of coal mined, coal burned, and CO_2 emitted from the electric sector. Power Decl. ¶¶ 29-33. The Leases represent a massive expansion in U.S. coal supply: nearly a quarter of the nation's annual coal supply (based on 2010 levels and estimated production rates), and more than 2 billion tons overall. *Id.* ¶ 27. This massive increase in supply predictably alters demand and consumption of coal. *Id.* ¶¶ 21-26. This effect is particularly pronounced because PRB coal is both cheaper than and has lower sulfur emissions than alternative supplies of coal, such as Appalachia or the Illinois Basin (the next largest coal producing regions). *Id.* ¶¶ 17-20. The Eighth Circuit has held, without need for expert analysis, that provision of a cheaper supply of low-sulfur Powder River Basin coal would "most assuredly affect the nation's long-term demand for coal." *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549 (8th Cir. 2003).

Although the *Mid States'* common-sense assessment applies here, Dr. Power has provided additional quantitative forecasts of the nationwide response to BLM's Leases.

Based on his empirical study of coal markets, Dr. Power concludes that a decision to forgo the Wright Area leases (*i.e.*, the No Action alternative Petitioners advocate) would lead to a relative coal price increase of $8 per ton in the U.S. coal market. *Id.* ¶¶ 29, 33. Coal consumers would then reduce their consumption rather than merely procure alternative supplies. *Id.* ¶ 33. Specifically, approximately two-thirds of the supply gap would be filled by electric generators reducing their use of coal because of the increased cost. *Id.* ¶ 30. Thus, a decision not to mine the Leases would cause 153 million fewer tons of coal to be burned each year by power plants in the U.S. *Id.* ¶ 30. Based on BLM's emissions factor of 1.659 tons of CO_2 emitted / ton of coal burned, AR 775, this represents a 253 million ton per year reduction in CO_2 emissions. Power Decl. ¶ 30. Even if one assumes that all 153 million tons of coal per year are replaced by natural gas (the burning of which emits far less CO_2 than coal but far more than renewable energy sources such as wind and solar), the net reduction in CO_2 emissions would still be significant. *Id.* ¶ 31.

This market analysis, supported by admissible declaration testimony of an expert economist, reveals that if BLM were to reject the Leases by selecting the No Action alternative, the result would be less coal mined, less coal burned, and fewer greenhouse gas emissions from the U.S. electricity sector. *Id.* ¶¶ 13, 31-33.

3. Petitioner's climate injuries are redressable by a favorable decision.

Petitioners also demonstrate that it is likely, as opposed to merely speculative, that their injuries will be redressed by a favorable decision. *Lujan*, 504 U.S. at 561; *Rio Hondo*, 102 F.3d at 452. Because they are seeking to enforce procedural rights, Petitioners do not need to show that the agency would have selected the No Action alternative had it adequately considered the full impacts of its decision. *See Lujan*, 504 U.S. at 572 n.7 (noting that a procedural rights plaintiff satisfies the redressability prong of standing if there is "some possibility that the requests relief will prompt the injury causing party to reconsider the decision that allegedly harmed the litigant."). As articulated by the Tenth Circuit, in a NEPA case "[t]he alleged injury is the potential environmental impact of an uninformed decision," and that injury is redressable "by a court order requiring the [agency] to undertake a NEPA . . . analysis in order to better inform itself of the consequences of its decision." *Sierra Club v. U.S. Dep't of Energy*, 287 F.3d at 1265-66.

Redressability "is easily satisfied in NEPA cases because the federal court can enjoin implementation of the [decision] that is based on a deficient NEPA analysis until the agency can better inform itself of the consequences of its actions." *Wyoming v. U.S. Dep't of Agric.*, 570 F. Supp. 2d 1309, 1328-29 (D.Wyo. 2008) *rev'd* on other grounds, 661 F.3d 1209 (10th Cir. 2011). A favorable decision here would require BLM to fully

analyze the climate impacts of its decision to proceed with the Leases. This relief would ensure that the agency was fully informed as to the climate impacts of its decisions and would thus redress Petitioners' climate injury. Nothing more is required under controlling Tenth Circuit precedent.

II. BLM'S COAL LEASE AUTHORIZATIONS VIOLATED NEPA.

A. NEPA's requirements.

NEPA was enacted to ensure that Federal projects do not proceed until the Federal agency analyzes all environmental effects associated with those projects. *See* 42 U.S.C. § 4332(2)(C); *see also Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (NEPA achieves its purpose through "action forcing procedures. . . requir[ing] that agencies take a *hard look* at environmental consequences.") (citations omitted) (emphasis added). NEPA's hard look should provide an analysis of environmental impacts that is useful to both decisionmakers and the public. *Baltimore Gas and Elec. Co. v. Natural Res. Def. Council, Inc*., 462 U.S. 87, 97 (1983) (describing NEPA's "twin aims" as informing the agency and the public). "By focusing both agency and public attention on the environmental effects of proposed actions, NEPA facilitates informed decisionmaking by agencies." *New Mexico* ex rel. *Richardson v. BLM*, 565 F.3d 683, 703 (10th Cir. 2009); *see also Robertson*, 490 U.S. at 356 (explaining NEPA analysis

"generate[s] information and discussion on those consequences of greatest concern to the public and of greatest relevance to the agency's decision.") (citation omitted).

All NEPA analyses must analyze alternatives to the proposed action as well as the direct, indirect, and cumulative impacts associated with the action. *See* 42 U.S.C. § 4332(2), 40 C.F.R. §§ 1508.7, 1508.8. NEPA regulations define "direct effects" as those "which are caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a).

As part of BLM's hard look at the environmental impacts of the Leases, the agency must also include an examination of "indirect effects and their significance." 40 C.F.R. § 1502.16(b). Indirect impacts "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). NEPA obligates BLM to look beyond the direct impacts to climate from coal mining and address *impacts* of CO_2 emissions from coal combustion on climate change. *See Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1177 (10th Cir. 2002) ("Indirect impacts are defined as being caused by the action and are later in time or farther removed in distance but still reasonably foreseeable.")

Grand Canyon Trust v. F.A.A., 290 F.3d 339, 342 (D.C. Cir. 2002) recognized that an "agency's [environmental analysis] must give a realistic evaluation of the total impacts

and cannot isolate a proposed project, viewing it in a vacuum." Council on Environmental Quality ("CEQ") regulations define "cumulative impacts" as:

> [T]he 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. § 1508.7 (emphasis added); *see also Airport Neighbors Alliance, Inc. v. United States*, 90 F.3d 426, 430 (10th Cir. 1996) (expressing the test for cumulative impacts as when impacts are "so interdependent that it would be unwise or irrational to complete one without the others") (citations omitted). Thus, even if the environmental impacts of an individual lease would be minimal, these impacts may be significant when added to environmental impacts from existing and future leases. *Grand Canyon Trust* described the elements of a sufficient cumulative impacts analysis:

> A meaningful cumulative impacts analysis must identify (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, present, and proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate.

Grand Canyon Trust, 290 F.3d at 345 (citations omitted).

B. BLM failed to take a hard look at local air quality impacts.

Surface coal mining activities generate various air pollutants, including ozone precursors, PM_{10}, $PM_{2.5}$, and NO_2. BLM failed to take a hard look at the impacts of these pollutants from the Leases on the already deteriorated air quality in the Wyoming PRB. BLM's authorization of the Leases without addressing air quality impacts from these pollutants is precisely the kind of uninformed decisionmaking that NEPA forbids.

1. BLM failed to take a hard look at the direct and cumulative air quality impacts of ozone that results from coal mining.

Ground-level ozone[7] is a dangerous pollutant that has a "causal relationship[] with a range of respiratory morbidity effects, including lung function decrements, increased respiratory symptoms, airway inflammation, increased airway responsiveness, and respiratory-related hospitalizations and emergency department visits." 73 Fed. Reg. 16,436, 16,443-46 (Mar. 27, 2008). Furthermore, EPA has stated that the latest scientific evidence regarding ozone effects "is highly suggestive that [ozone] directly or indirectly contributes to non-accidental and cardiorespiratory-related mortality," including "premature mortality." *Id*. EPA has concluded that individuals with asthma are at particular risk from the adverse effects of ozone. *Id*. Pursuant to the Clean Air Act, EPA

[7] Ozone is formed when the ozone precursors nitrogen oxide ("NO_x") and volatile organic compounds ("VOC") react with sunlight. AR 356. Overburden removal and coal blasting events, tailpipe emissions from coal mining equipment, and emissions from trains used to haul coal from mines produce these ozone precursors. *Id*.

established a National Ambient Air Quality Standard ("NAAQS") for ozone at 0.075 parts per million ("ppm") over an eight-hour period. 73 Fed. Reg. 16,436. In its FEIS, BLM recognizes these health effects from inhalation of ground-level ozone. AR 388.

BLM failed to take the requisite hard look at the direct and cumulative air quality impacts of increased ozone as a result of the Leases. Although BLM acknowledged that ozone is an issue of concern by including ozone as one of the air quality standards applicable to BLM's analysis of leasing impacts, AR 357, the FEIS provides no analysis of the direct impacts to air quality from ozone concentrations *that will result from Lease development*. BLM simply provided a table of ozone levels from 2001 through 2008 and did no more. AR 387.

A general disclosure of health impacts from ozone exposure does not provide any information regarding how, or whether, coal mining on BLM's leases will increase the occurrence of these health impacts in and around the project area. If these health impacts are "caused by the action" that BLM is proposing, then it must disclose these effects "and their significance" in the FEIS. 40 C.F.R. §§ 1508.8, 1502.16. The requirement that an EIS discuss the affected environment is distinct from the requirement that an EIS analyze the environmental consequences of a proposed action. *Compare* 40 C.F.R. § 1502.15 (requiring discussion of the affected environment), *with* 40 C.F.R. § 1502.16 (requiring analysis of environmental consequences). Moreover, the NEPA regulations explicitly

reject use of the "affected environment" discussion to fulfill NEPA's hard look requirement. 40 C.F.R. § 1502.15 ("Verbose descriptions of the affected environment are themselves no measure of the adequacy of the environmental impact statement"). Accordingly, although BLM's FEIS for the Leases has fulfilled NEPA's requirement for a discussion of the affected environment, this discussion does not fulfill NEPA's requirement that the FEIS analyze the environmental consequences of ozone resulting from the Leases. Because the FEIS lacks a detailed statement of the environmental impacts of ozone, BLM has not "fully consider[ed] and balanc[ed] the environmental factors" relevant to its leasing decisions. *Defenders of Wildlife v. Salazar*, 698 F. Supp. 2d 141, 149 (D.D.C. 2010) *aff'd*, 651 F.3d 112 (D.C. Cir. 2011).

In its response to FEIS comments regarding the agency's failure to analyze ozone impacts, BLM did not deny that the FEIS lacks an ozone impacts analysis, stating only that "[o]zone is included in the EIS discussion regarding NO_x emissions since NO_x is one of the main components involved in the formation of ground level ozone." AR 1372, 1386; *see also* AR 390-91, 393-94 (discussion of NO_x modeling for the Leases). However, BLM did not address ozone in the NO_x section, and an analysis of NO_x emissions is not equivalent to an analysis of ozone impacts.

In fact, the record contains evidence that measurement of NO_x levels alone is not an accurate predictor of ozone levels. A review of regional ozone modeling conducted

by the Western Regional Air Partnership ("WRAP") determined that "[o]zone produced per molecule of NO_x emissions varies considerably" based on the VOC to NO_x ratios. BLM 33218. In rural areas such as the PRB, WRAP estimated a range of 10 to 100 ozone molecules can be produced per molecule of NO_x. *Id*. This evidence shows that BLM cannot assume a one-to-one correlation between NO_x levels and ozone levels, and data on NO_x levels alone does not provide information relevant to what ozone levels will be when the Leases are developed.[8] Thus, BLM's estimates for NO_x concentrations for the Leases do not constitute an analysis of the direct impacts of *ozone* to air quality from coal mining.

BLM also failed to take a hard look at the cumulative impacts of ozone emissions from the Leases "when added to other past, present, and reasonably foreseeable future actions" as required by the NEPA regulations. 40 C.F.R. § 1508.7. There is no mention of ozone in the "Cumulative Environmental Consequences" section of the FEIS that deals with air quality. *See* AR 680 (disclosing that "the criteria pollutants modeled were particulate (PM_{10} and $PM_{2.5}$), NO_2, and SO_2."). Such an omission is unlawful given BLM's identification of ozone as a pollutant of concern from lease development, AR 354, NEPA's requirement to consider cumulative impacts, and this Circuit's finding that

[8] In *WildEarth Guardians*, the court implicitly believed that BLM's analysis of NO_x emissions from mining activities was the equivalent of an ozone analysis. *WildEarth Guardians*, 880 F. Supp. 2d. at 88. For the reasons given here, this belief is in error.

interrelated impacts must be considered. *Airport Neighbors Alliance, Inc. v. United States*, 90 F.3d 426, 430 (10th Cir. 1996).

WildEarth Guardians v. Salazar, 880 F. Supp. 2d 77 (D.D.C. 2012), a case brought by Petitioners here with a similar fact pattern, does not provide guidance on the adequacy of a cumulative ozone impacts analysis because the court did not differentiate between analysis of direct and cumulative impacts to air quality from ozone emissions, and did not address Plaintiffs' claim that BLM failed to analyze cumulative impacts of ozone from the West Antelope II leases in combination with ozone emissions from BLM's other coal leases in the PRB. 880 F. Supp. 2d. at 88. The requirement that BLM consider the "direct effects" of ozone emissions is distinct from the requirement that BLM consider the cumulative impacts of ozone emissions.[9] Here, BLM failed to take a hard look at both the direct and cumulative impacts to air quality from ozone emissions, choosing instead to remain knowingly uninformed about the effects of its decision on air quality. BLM's failure violated NEPA.

2. BLM failed to take a hard look at direct effects of 24-hour PM_{10} emissions from coal mining on air quality.

Particulate matter less than 10 microns in diameter, or PM_{10}, is a criteria pollutant under the Clean Air Act. *See* 71 Fed. Reg. 61,144 (Oct. 17, 2006). The NAAQS

[9] NEPA regulations define "direct effects" as those "which are caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8.

promulgated by EPA pursuant to the Clean Air Act limits 24-hour PM_{10} concentrations to no more than 150 µg/m^3. *Id*. at 61,202. According to EPA, health effects associated with *short-term* exposure to PM_{10} include "aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions), increased respiratory symptoms in children, and premature mortality." *Id*. at 61,178. BLM notes that PM_{10} concentrations in the air "can appear as black soot, dust clouds, or gray hazes." AR 364. The FEIS includes PM_{10} as one of the air quality standards applicable to BLM's analysis of leasing impacts, AR 357, and notes that coal crushing, storage, and handling facilities are the primary PM_{10} emission sources in the PRB. AR 356.

BLM failed to take a hard look at the direct impacts of lease development on the 24-hour PM_{10} NAAQS as required by NEPA. Because development of the Leases will result in PM_{10} emissions and because the Clean Air Act limits short-term exposure levels of this pollutant, BLM is required to consider the impact of these emissions on air quality. However, the Air Quality section of the FEIS does not consider whether PM_{10} emission levels from *future* mining activities on the Leases would approach or exceed the 24-hour standard or the extent to which these emissions would degrade short-term air quality.

BLM cannot reasonably assume that the Leases will not result in exceedances of the 24-hour PM_{10} NAAQS simply because there has only been one valid[10] exceedance at the Black Thunder Mine.[11] AR 362. Indeed, such an assumption appears unreasonable given BLM's disclosure that mining activities on the Leases are likely to increase PM_{10} emissions because of lease characteristics different from current conditions at the mines:

> The acquisition and mining of the LBA tracts by the applicant mines could result in an increase in fugitive emissions per ton of coal mined above current levels due to the increased volume of overburden that would have to be removed to recover the coal.

AR 365. Moreover, BLM admits that it does not know whether development of the Leases will comply with the 24-hour PM_{10} NAAQS because the agency has not performed the requisite analysis of direct impacts:

> Current mining and emission mitigation methods . . . would be expected to continue for a longer period of time than is shown in the mines' currently approved air quality permits . . . If the Black Thunder [and North Antelope Rochelle] mines acquire the LBA tracts, they will have to amend their current air quality permits to include the new leases before mining activities can proceed into the new lease areas. New air quality modeling would need to be conducted in

[10] Exceedances of the standard caused by "exceptional events" such as extremely high winds are not considered when determining whether the region is in compliance with the standard. If a monitored exceedance does not qualify as an exceptional event, then a "valid" exceedance of the standard has occurred. AR 362.

[11] Although there has been only a single valid exceedance of the 24-hour PM_{10} NAAQS at the Black Thunder Mine, EPA still expressed concern about PM_{10} levels from the Leases, requesting that BLM put measures in place to ensure compliance with the 24-hour PM_{10} standard once activity begins on the Leases. AR 2887 (EPA comments on the Wright Draft EIS).

> support of that permit application demonstrating on-going compliance with all applicable ambient standards.

AR 366. BLM appears to rely completely on the WDEQ air permitting process, performed well after BLM has made the decision to authorize the Leases, to do the analysis of direct impacts to air quality that BLM is required to do under NEPA before making its decision. By punting consideration of air quality impacts to the mining stage, BLM has undermined NEPA's purpose that the agency "take a hard look at [the] environmental consequences" of its proposed action before approving the action. *Robertson*, 490 U.S. at 350.

BLM cannot comply with its obligation under NEPA to take a hard look at the direct effects of 24-hour PM_{10} levels on PRB air quality by relying on state air quality permitting requirements that may impose some unspecified limits at some undetermined time and are intended only to ensure compliance with NAAQS pursuant to the Clean Air Act. By equating Clean Air Act compliance with a sufficient NEPA analysis, BLM violates NEPA's requirement to disclose all of the project's impacts on air quality. The NAAQS are intended to establish compliance standards for the Clean Air Act, not to serve as a benchmark for NEPA impact assessments. *See, e.g., Calvert Cliffs' Coordinating Comm., Inc. v. U. S. Atomic Energy Comm'n*, 449 F.2d. 1109, 1123 (D.C. Cir. 1971) (stating that an agency cannot abdicate its responsibilities under NEPA "to other agencies' certifications" because doing so "neglects the mandated balancing

analysis."); *Edwardsen v. U.S. Dep't of the Interior*, 268 F.3d 781, 789 (9th Cir. 2001) ("[T]he fact that [an] area will remain in compliance with the NAAQS is not particularly meaningful . . . A more relevant measure would be the degree to which [the Federal action] contributes to the degradation of air quality.").

Moreover, even under current air quality permits monitored PM_{10} levels are exceeding the NAAQS. AR 2291. These monitoring data demonstrate that state air quality permitting requirements do not always prevent exceedances or violations of the NAAQS. Given that exceedances of the 24-hour PM_{10} standard are already occurring under existing air permits, there is no support for BLM's position that future air permits will ensure compliance with the NAAQS for PM_{10}.

Finally, BLM's cumulative impacts analysis unequivocally demonstrates that development of additional coal leases will result in exceedances of the NAAQS for 24-hour PM_{10} levels. For both the 2020 lower and upper coal development scenarios, BLM estimates that the 24-hour PM_{10} levels will be 624 $\mu g/m^3$, *over four times* the NAAQS for 24-hour PM_{10} levels. AR 682. Even if the cumulative modeling results overestimate 24-hour PM_{10} levels as BLM asserts, AR 683, the monitoring data also show that exceedances of the 24-hour PM_{10} standard are occurring around the mines in the area of the Leases, and BLM expects particulate matter levels to increase when the Leases are developed, AR 365. Accordingly, there is no support for BLM's claim that state air

quality permitting requirements will assure future compliance with the 24-hour PM_{10} NAAQS. BLM's arbitrary conclusion that state air permitting will take care of any potentially significant increases in short-term PM_{10} emissions from Lease activities, and the agency's complete failure to analyze the direct impacts of short-term PM_{10} emissions to air quality, violate NEPA.

The court's determination in *WildEarth Guardians*, 880 F. Supp. 2d at 88-90, that BLM's PM_{10} analysis in the West Antelope II FEIS was reasonable and thus complied with NEPA does not provide useful guidance here because that holding addressed only the adequacy of BLM's cumulative impacts analysis. All of the court's citations to the record with respect to PM_{10} deal with BLM's cumulative impacts analysis of PM_{10} levels. Here, Petitioners claim that BLM failed to take a hard look at the *direct* impacts of 24-hour PM_{10} levels from development of the Leases and, as a result, have not provided "the detailed statement of the environmental impacts" from PM_{10} emissions caused by mining on the Leases as required by NEPA. *Defenders of Wildlife*, 698 F. Supp. 2d at 149.

3. BLM failed to take a hard look at direct effects of 24-hour and annual $PM_{2.5}$ emissions from coal mining.

Particulate matter less than 2.5 microns in diameter, or $PM_{2.5}$, is a criteria pollutant under the Clean Air Act. *See* 71 Fed. Reg. 61,144 (Oct. 17, 2006). The NAAQS limits annual $PM_{2.5}$ concentrations to no more than 15 $\mu g/m^3$. *Id*. The NAAQS limits 24-hour $PM_{2.5}$ concentrations to no more than 35 $\mu g/m^3$. *Id*. According to EPA, health effects

associated with short-term exposure to $PM_{2.5}$ include "aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions and emergency department visits), changes in lung function and increased respiratory symptoms, as well as new evidence for more subtle indicators of cardiovascular health." *Id*. at 61,152. The FEIS includes $PM_{2.5}$ as one of the air quality standards applicable to BLM's analysis of leasing impacts.[12] AR 357.

BLM's discussion of fine particulate emissions in the FEIS does not consider whether either the annual or 24-hour $PM_{2.5}$ emission levels from *future* mining activities on the Leases would approach or exceed these standards or the extent to which these emissions would degrade short-term air quality. In Table 3-8, BLM lists the current background concentrations for annual and 24-hour $PM_{2.5}$ levels indicating that current levels for both measurements are below the respective NAAQS. AR 357. Although the information on Table 3-8 show that current $PM_{2.5}$ concentrations in the leasing areas are not exceeding either the annual or 24-hour NAAQS, this information is directly contradicted by the cumulative effects analysis in the subsequent chapter showing that *current* background $PM_{2.5}$ concentrations are already exceeding the 24-hour NAAQS. AR 682 (showing a base year value of 87.6 $\mu g/m^3$ for 24-hour $PM_{2.5}$ levels, nearly five times the base year value disclosed in the previous chapter at AR 357). This discrepancy

[12] Gasoline and diesel tailpipe emissions are sources of fine particulate matter in the PRB. AR 356.

in baseline conditions illustrates the cursory and arbitrary nature of BLM's consideration of $PM_{2.5}$.

More importantly, BLM's cumulative impacts analysis unequivocally demonstrates that development of additional coal leases will result in exceedances of the NAAQS for *both* the annual and 24-hour $PM_{2.5}$ NAAQS. For both the 2015 lower and upper coal development scenarios, BLM estimates that the annual $PM_{2.5}$ levels will be 16.3 $\mu g/m^3$, over twice the NAAQS for annual $PM_{2.5}$ levels. AR 682. Under both scenarios, the 24-hour PM2.5 NAAQS is estimated at 218.4 $\mu g/m^3$, over *four times* the NAAQS for 24-hour $PM_{2.5}$ levels. *Id*. These data show that coal mines and coal-related activities are and will continue to be significant contributors to annual and 24-hour $PM_{2.5}$ concentrations in the PRB. BLM's complete failure to analyze and disclose the direct and cumulative impacts of annual and short-term PM_{10} emissions to air quality violates NEPA.

4. BLM failed to take a hard look at direct and cumulative effects of short-term NO_2 emissions on air quality.

Nitrogen dioxide ("NO_2") is a criteria pollutant under the CAA.[13] According to EPA, "[e]pidemiologic evidence exists for positive associations of short-term ambient NO_2 concentrations below the current NAAQS with increased numbers of emergency

[13] The NO_2 annual standard is 53 parts per billion ("ppb"). On February 9, 2010 EPA promulgated a one-hour NO_2 standard of 100 ppb to protect respiratory health. 75 Fed. Reg. 6,474-6,537 (Feb. 9, 2010). This NAAQS became effective on April 12, 2010.

department visits and hospital admissions for respiratory causes, especially asthma." *See* 74 Fed. Reg. 34,404, 34,413 (July 15, 2009). The FEIS includes NO_2 as one of the air quality standards applicable to BLM's analysis of leasing impacts, AR 357, and noted that overburden blasting at coal mines is the primary source of NO_2 emissions in the PRB. AR 356. Trains used to haul coal are also sources of NO_2 emissions. *Id*. In its FEIS, BLM recognized a range of health impacts caused by NO_2 inhalation, AR 385, and acknowledged that "there is concern about the potential health risk associated with short-term exposure to NO_2 from blasting emissions." AR 388.

Although BLM recognized the health risks associated with short-term exposure to NO_2, BLM failed to analyze the degree to which the Leases would affect NO_2 concentrations on an hourly basis. The one-hour NO_2 standard became final prior to BLM issuing the FEIS for the Leases, and thus BLM had adequate opportunity to supplement its analysis of impacts from annual NO_2 levels with an analysis of short-term NO_2 impacts based on the new one-hour standard. BLM asserts that voluntary mitigation measures will address any potentially significant short-term NO_2 impacts; however, the agency provided no air quality analysis in its FEIS to support this assertion. *See* AR 394-95. There is no assessment of the effectiveness of any mitigation measures, voluntary or otherwise, to address short-term NO_2 impacts in the context of the NAAQS. EPA raised concern with BLM's cursory mention of mitigation measures for short-term NO_2 impacts.

See AR 2888 (expressing concern about short-term NO_2 impacts from "cast blasts coupled with a very high emission rate of over 4,5000 tpy."). Because BLM failed to take a hard look at short-term NO_2 impacts from Lease activities, the agency's leasing decision violated NEPA.

The court's determination in *WildEarth Guardians*, 880 F. Supp. 2d at 90-91, that BLM's NO_2 analysis in the West Antelope II FEIS was reasonable and thus complied with NEPA does not provide useful guidance here because that holding was based on a factor not applicable here. There, the court held that plaintiffs had waived their right to pursue the NO_2 issue in the litigation because they only raised it for the first time during the administrative appeal of the West Antelope leasing decision rather than "prior to the signing of the ROD." *Id*. at 90. Here, Petitioners raised BLM's failure to analyze one-hour NO_2 impacts in their comments on the FEIS. BLM 30720. Thus, Petitioners have properly preserved this issue.

C. BLM failed to take a hard look at climate impacts.

BLM's failure to adequately consider and disclose the climate impacts of its Leasing authorizations violates NEPA's "hard look" requirement. Although BLM estimated CO_2 emissions from mining the Leases and subsequently burning the coal mined from the Leases, the agency stopped short of analyzing the *impacts to climate* from the release of billions of tons of CO_2 emissions that result from leasing the four

tracts at issue here. Instead, the agency attempted to excuse its lack of meaningful climate analysis on the unsupported notion that the agency's leasing authorizations would have no climate impacts because coal from the Leases would be replaced by non-PRB sources if BLM selected the No Action alternative. AR 776. NEPA does not excuse analysis of environmental impacts on these bases.

Substantial scientific evidence in the record, acknowledged by BLM, demonstrates climate change is already occurring, and is already impacting public lands managed by the Department of the Interior. AR 679; BLM 30735-39; *see generally* BLM 13675 (BLM reference document describing effects of climate change within the U.S.). BLM accepts that these impacts are primarily attributable to the release of greenhouse gases ("GHGs") from fossil fuel consumption, distribution, and production. BLM 28709; BLM 13697. "Most of the observed increase in globally-averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations." AR 767 (quoting the "IPCC").

1. BLM failed to take a hard look at the direct, indirect, and cumulative impacts to climate caused by CO_2 emissions from coal mining and combustion.

Although BLM estimated the *amount* of CO_2 emissions from coal mining activities and coal combustion, BLM failed to analyze the *impacts* of these estimated emission levels on climate change. NEPA requires consideration of "indirect effects,"

which are "reasonably foreseeable" even though they may be "removed in distance" from the proposed project. 40 C.F.R. § 1508.8(b). BLM calculates that coal from the Leases will add more than 3.387 billion tons of CO_2 to the atmosphere when the coal is burned in coal-fired power plants. AR 775. When the coal from all 12 Federal PRB leases is burned, it could add more than 10 billion tons of CO_2 into the atmosphere over the next decade. BLM 30749. As BLM indicated in its RODs, it can be assumed that the release of CO_2 associated with the Leases will contribute to the harmful effects of climate change. BLM 25665. In spite of this acknowledgement, and the eventual addition of more than 10 billion tons of CO_2 into the atmosphere, BLM made no attempt to analyze how direct, indirect, and cumulative CO_2 emissions resulting from BLM's leasing decisions will influence climate. In the FEIS, BLM outlined some of the general impacts of climate change to the American West including changes in stream flow and snowfall patters, increases in invasive species and pest populations, and increased fire frequency and severity. AR 767-69. BLM did not analyze the contribution of GHG emissions from the Leases or the combined contribution of GHG emissions from the eight other Federal coal leases in maintaining and/or exacerbating these impacts.

Estimates of CO_2 emissions alone, without an analysis of the resulting impacts on global CO_2 concentration and climate, do not comply with NEPA's hard look requirement. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538

F.3d 1172, 1216 (9th Cir. 2008) (finding quantification of CO_2 emissions alone violated NEPA where the agency "[did] not discuss the *actual* environmental effects resulting from those emissions") (emphasis in original)). "The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Id.* at 1217. Here BLM failed to analyze how the direct, indirect, and cumulative CO_2 emissions associated with the Leases will impact climate change, and instead attempted to satisfy the duty by providing an amount of CO_2 to be released without assessing the impacts of the releases. Such "perfunctory references do not constitute analysis useful to a decisionmaker in deciding whether, or how, to alter [a project] to lessen cumulative environmental impacts." *Natural Res. Def. Council, Inc. v. Hodel*, 865 F.2d 288, 299 (D.C. Cir. 1988). Accordingly, BLM's failure to take a hard look at the direct, indirect, and cumulative effects of its Lease authorizations on climate violated NEPA. *See Ctr. for Biological Diversity*, 538 F.3d at 1217 ("[T]he fact that climate change is largely a global phenomenon that includes actions that are outside of the agency's control does not release the agency from the duty of assessing the effects of *its* actions on global warming within the context of other actions that also affect global warming.").

2. BLM's assertion that climate impacts will not change under the No Action alternative is not supported by the record.

In its FEIS, BLM implies that it did not have to analyze climate impacts because, in its opinion, it is unlikely that selection of the No Action alternative would decrease CO_2 emissions attributable to coal mining and coal-burning power plants, "because there are multiple other sources of coal that . . . could supply the demand for coal." AR 776. BLM assumes that if the Leases were not authorized, other mines outside the PRB would ramp up production to completely replace the Wright Area coal in the U.S. coal market, resulting in the same amount of coal being mined and burned, and resulting in the same level of CO_2 emissions.

As a factual matter, BLM presented no information or analysis to support its assertion that the amount of coal produced from the Leases can simply be "replaced" by other coal sources outside the PRB. Black Thunder and North Antelope Rochelle are the two largest coal mines in the U.S. BLM 25747, BLM 31463. In 2009, the Black Thunder Mine produced over 81 million tons of coal and the North Antelope Rochelle Mine produced over 98 million tons. BLM 25747, 31463. No other mines in the U.S., let alone the PRB, produce as much coal as the Black Thunder and North Antelope Rochelle Mines, and BLM provides no explanation as to how the coal from these mines might be replaced.

Further, BLM ignores the economic reality that a significant decrease in low-cost coal supply resulting from a decision not to authorize the Leases, would raise the cost of coal from other sources. AR 643. In looking at economic market reactions to such supply and demand issues, agencies may not simply ignore effects based on economic principles. In *Mid State Coalition for Progress v. Surface Transp. Bd.*, plaintiffs argued that building infrastructure to take low-cost, low-sulfur PRB coal to power plants would lead to a nationwide increase in coal consumption and a corresponding increase in emissions of harmful air pollutants. 345 F.3d 520, 549 (8th Cir. 2003). The Surface Transportation Board disavowed any obligation to consider increased emissions because, it claimed, any changes in domestic coal consumption would occur regardless of the project because existing rail lines could provide the necessary route between mines and power plants. *Id.* The Eighth Circuit rejected this argument:

> [T]he proposition that the demand for coal will be unaffected by an increase in availability and a decrease in price . . . is illogical at best. The increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas.

Id.

By failing to adequately consider basic economic principles of supply and demand BLM erred in its analysis of a critical issue, misled the public by dramatically understating a significant impact of the agency's decision, and violated NEPA.

3. BLM failed to analyze a reasonable range of alternatives to address GHG emissions and climate change.

The requirement to consider reasonable alternatives to a proposed action is the heart of NEPA's procedural mandate. *Colo. Envtl. Coal.*, 185 F.3d at 1174. BLM violated NEPA by failing to consider environmental impacts in its alternatives development. Rather, BLM's preferred alternative only increased the acreage and tons of recoverable coal. AR 212. The result is that the two action alternatives were controlled by competitive interests, not environmental concerns. *Id.* BLM's failure to weigh any environmental alternatives is insufficient in light of the rule of reason governing alternative analyses. *Colo. Envtl. Coal.*, 185 F.3d at 1174 (holding the rule of reason requires "sufficient discussion of the relevant issues and opposing viewpoints to enable [an agency] to take a hard look at the environmental impacts [of a project]."); *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1277 (10th Cir. 2004) (noting NEPA is designed "to ensure that the agency gathered information sufficient to permit a reasoned choice of alternatives as far as *environmental aspects* are concerned.") (emphasis added).

To address climate impacts, Petitioners proposed alternatives that would reduce, eliminate, or offset GHG emissions when developing the Leases. *See, e.g.*, BLM 30210 (proposing an alternative requiring use of carbon capture and sequestration technology as well as an alternative requiring the purchase of carbon offsets); BLM 30211 (proposing an alternative requiring more energy efficient trucks). BLM is required to consider these

alternatives. 40 C.F.R. §§ 1500.2(e), 1502.14, 1503.4(a); *see also Seacoast Anti-Pollution League v. Nuclear Reg. Comm'n*, 598 F.2d 1221, 1230 (1st Cir. 1979) (finding agencies "must also look into other significant alternatives that are called to its attention . . . by the public during the comment period"). BLM's failure to fully consider a reasonable range of alternatives violates NEPA. *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985) ("The existence of a viable but unexamined alternative renders an [EIS] inadequate").

BLM's rationale for its limited alternatives analysis is that the agency is not the permitting authority for coal combustion. AR 1376 ("Measures to reduce GHG releases are best applied at the place where the coal is consumed."). The record rejects this reasoning as BLM has authority to implement an alternative that would limit GHG emissions and still allow lease development. *See, e.g.*, BLM 25677 (authorizing "special stipulations . . . to avoid environmental damage or mitigate potential conflicts affiliated with cultural resources"). "BLM is the lead agency responsible for leasing Federal coal lands . . . [and] must fulfill the requirements of NEPA." BLM 25667. Because BLM possesses the authority to impose lease stipulations, BLM's failure to consider an alternative raised during the public comment period that would reduce GHG emissions through the imposition of lease stipulations violates NEPA.

By limiting analysis to alternatives that only varied in terms of lease size and shape, BLM's alternatives analysis fell short of NEPA's requirements. 40 C.F.R. § 1502.14 (requiring alternatives be presented so as to "sharply defin[e] the issues and provid[e] a clear basis for choice"). While there is no "magic" number of alternatives that must be considered, analysis must "contain sufficient discussion of the relevant issues and opposing viewpoints to enable the [agency] to take a hard look at the environmental impacts of the proposed [action] and its alternatives." *Colo. Envtl. Coal.*, 185 F.3d at 1174; *see also Oceana, Inc. v. Evans*, 384 F. Supp. 2d 203, 240 (D.D.C. 2005) (holding that the alternatives analysis "may not limit [an agency] to only one end of the spectrum of possibilities"). A spectrum of alternatives which includes GHG reduction measures satisfies NEPA's hard look requirement. BLM's failure to consider any such an alternative, including those presented during the public comment period, violates the obligation to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R § 1502.14(a).

III. BLM VIOLATED FLPMA

Under the Federal Land Policy and Management Act ("FLPMA"), BLM has the authority to regulate "the use, occupancy, and development of the public lands." 43 U.S.C. § 1732(b) FLPMA requires BLM to manage public lands "under principles of multiple use and sustained yield, in accordance with the land use plans" developed by

BLM. 43 U.S.C. § 1732(a). Any land use authorization by BLM shall "[r]equire compliance with air and water quality standards established pursuant to applicable Federal or State law."[14] 43 C.F.R. § 2920.7(b)(3). BLM's applicable land use plan—the Buffalo Resource Management Plan ("RMP")—explicitly provides for such compliance.[15] BLM is required to follow the directives in the RMP. *See* 43 C.F.R § 1610.5-3 (a) (all "resource management authorizations and actions" must conform to the applicable land use plan); 43 U.S.C. § 1732(a) (mandating that the Secretary "shall manage the public lands . . . in accordance with the land use plans"); *Norton v. S. Utah Wilderness Alliance*, 542 U.S. 55, 69 (2004) (BLM cannot take actions that are "inconsistent with the provisions of a land use plan.").

Although the relevant RMP requires BLM to comply with applicable air quality standards and minimize emissions that could result in Clean Air Act violations, the agency has failed its legal obligations under FLPMA in two critical ways. First, BLM has not done the requisite analysis to determine whether its leasing authorizations will comply with the ozone NAAQS. As discussed in Part II.A.1 above, BLM deliberately

[14] The Clean Air Act is designed to clean up areas of unhealthy air and to prevent degradation of clean air. *See* 42 U.S.C. §§ 7401, 7470. While EPA and the states set air quality standards, BLM shares responsibility for achieving and maintaining these standards.

[15] The Buffalo RMP states that BLM will "minimize emissions that could result in acid rain, violations of air quality standards, or reduced visibility," and that the Agency will ensure that its decisions are "conditioned to avoid violating Wyoming and national air quality standards." AR 6491.

ignored the evidence in the record and provided no analysis of impacts to air quality from increased ozone caused by the Leases. Without analyzing ozone caused by the Leases and assessing whether emissions levels will comply with the ozone NAAQS, BLM cannot support its conclusion that the Leases will comply with air quality standards.

Second, BLM cannot authorize the Leases knowing that PM_{10} and $PM_{2.5}$ emissions from mining the leases will result in exceedances of the 24-hour NAAQS for both of these air pollutants. As discussed in Parts II.A.2 and 3 above, modeling results and monitoring data for PM_{10} and $PM_{2.5}$ show that the cumulative impacts of the Leases would lead to additional exceedances of both standards. BLM has not met FLPMA's requirement that the agency follow the RMP directives mandating compliance with air quality standards simply by relying on future state air permits. To ensure compliance with PM_{10} and $PM_{2.5}$ standards, BLM must either impose pollution controls on the Leases or limit lease size to reduce these emissions. BLM did neither. Consequently, the agency's authorization of the Leases violated FLPMA.

In *WildEarth Guardians*, 880 F. Supp. 2d at 94, the court held that a requirement in the lease that the Lessee comply with all air quality standards fulfilled BLM's FLPMA duty. However, adding language to a lease requiring a non-governmental party to comply with Federal law does not satisfy FLPMA's substantive requirement that BLM's actions, as the entity authorizing the Leases, must be consistent with directives in the

RMP. Because the Buffalo RMP requires BLM to minimize emissions that could lead to air quality violations, and the record demonstrates that the Leases will contribute to violations of the 24-hour PM_{10} and $PM_{2.5}$ standards, BLM has the legal obligation to impose concrete emission-reduction measures on the Leases so that its leasing decisions are consistent with the requirements of the RMP. Accordingly, BLM violated FLPMA when it authorized the Leases without ensuring that mining activities would comply with Federal air quality standards for ozone, PM_{10}, and $PM_{2.5}$.

CONCLUSION

For the reasons stated above, Petitioners respectfully request that this Court (1) declare that BLM has violated NEPA and FLPMA, and (2) vacate BLM's authorization, sale, and issuance of the North and South Hilight, and North and South Porcupine Leases until BLM has complied with NEPA and FLPMA.

Respectfully submitted on this 24th day of October 2013.

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation set forth in the Order Granting Plaintiff's Unopposed Motion for Extension of Time and Revision of Briefing Schedule, hereafter, ("Scheduling Order"), Docket No. 12-cv-00085-ABJ, Doc. 143, Sept. 23, 2013, the brief contains 13,897 words.

This brief also complies with the typeface requirements of the Scheduling Order. The brief has been prepared in a proportionally-spaced typeface using Microsoft Word 2010 in Times New Roman, 13-point.

/s/ Steve Jones
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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing PETITIONERS' OPENING BRIEF was served on all counsel of record through the Court's ECF system on this 24th day of October, 2013.

/s/ Steve Jones
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