

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

WILDEARTH GUARDIANS, and )  
PHYSICIANS FOR SOCIAL RESPONSIBILITY, )

Plaintiffs, )

v. )

Case No. 1:16-cv-01724-RC  
The Honorable Rudolph Contreras

DAVID BERNHARDT, )  
WILLIAM PERRY PENDLEY, and )  
U.S. BUREAU OF LAND MANAGEMENT )

Defendants, )

WESTERN ENERGY ALLIANCE, )  
PETROLEUM ASSOCIATION OF WYOMING, )  
AMERICAN PETROLEUM INSTITUTE, )  
STATE OF WYOMING, and )  
STATE OF UTAH, )

Defendant-Intervenors. )

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**MOTION FOR SUMMARY JUDGMENT AFTER REMAND**

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Pursuant to Federal Rule of Civil Procedure 56 and Local Rule 7, Plaintiffs  
WILDEARTH GUARDIANS and PHYSICIANS FOR SOCIAL RESPONSIBILITY  
(collectively, “Plaintiffs”), hereby submit this motion for summary judgment. In support of this  
motion, Plaintiffs are filing a memorandum of points and authorities, along with supporting  
declarations and a proposed order. As this is a record review case brought under the  
Administrative Procedures Act (APA), 5 U.S.C. § 706, the undisputed facts for purposes of  
summary judgment are the facts contained in the administrative record. *See Zarmach Oil Service,  
Inc., v. U.S. Dept. of the Treasury*, 750 F.Supp.2d 150, 154 (D.D.C., 2010).

Plaintiffs respectfully request that this Court grant summary judgment in their favor, declare BLM's actions arbitrary and capricious and in violation of NEPA, and vacate and set aside BLM's actions pending completion of an EIS. Plaintiffs also request oral argument on this motion.

Respectfully submitted this 6th day of January, 2020,

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**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

**CERTIFICATE OF SERVICE (CM/ECF)**

I hereby certify that on June 30, 2017, I electronically filed the foregoing PLAINTIFFS' MOTION FOR SUMMARY JUDGEMENT AFTER REMAND with the Clerk of the Court via the CM/ECF system, which will send notification of such filing to other participants in this case.

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**MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF PLAINTIFFS’  
MOTION FOR SUMMARY JUDGMENT AFTER REMAND**

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### ABBREVIATIONS AND ACRONYMS

APA	Administrative Procedure Act
BLM	Bureau of Land Management
CO <sub>2</sub>	Carbon dioxide
CO <sub>2e</sub>	Carbon dioxide equivalent
EA	Environmental assessment
EIS	Environmental impact statement
FONSI	Finding of no significant impact
GHG	Greenhouse gas
GtC	Gigatons carbon
GtCO <sub>2</sub>	Gigatons carbon dioxide
IPCC	Intergovernmental Panel on Climate Change
mt	metric tons
NEPA	National Environmental Policy Act
ppm	Parts per million
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
ROD	Record of decision
RFD	Reasonably foreseeable development
EIA	Energy Information Administration

## INTRODUCTION

The climate crisis is potentially the greatest threat that humanity has ever faced. Global warming does not even begin to capture the severity of what we are facing, as unprecedented heat waves, fires, droughts, floods, hurricanes and typhoons, and rising seas are projected to cause massive disruption to human civilization. Famine, disease, and mass migration will affect billions of people if the climate crisis is not taken seriously and rapid action is not taken to address the primary cause of this existential threat: the runaway accumulation of greenhouse gases (GHGs) in the atmosphere, largely driven by the extraction and combustion of fossil fuels, including oil and gas.

The Bureau of Land Management (BLM) plays a key role in facilitating the extraction and ultimate combustion of fossil fuels here in the United States by administering a Federal mineral estate of nearly 700 million acres across the United States—of which over 42 million acres exist in Wyoming. Wyo-Ph-2:33. Fossil fuel extraction on federal lands by private leaseholders resulted in 1.279 billion metric tons of carbon dioxide (CO<sub>2</sub>) emissions in 2014, accounting for approximately 23.7% of *total* U.S. CO<sub>2</sub> emissions. Wyo-Ph-2:7960. As this Court recognized in its prior decision to remand BLM's original, deficient environmental analyses underlying the oil and gas leases challenged in this case, there is no way to meaningfully address GHG pollution and the existential threat posed by the climate crisis without taking a hard look at BLM's role in the leasing and development of federal fossil fuel resources on our public lands. Yet, despite the opportunity and obligation to correct its deficient analyses, BLM has still not taken this hard look, nor provided the analysis of corresponding impacts required by the Court, in violation of the National Environmental Policy Act (NEPA).

This case challenges BLM’s approval and issuance of 473 oil and gas leases, through 11 oil and gas lease sales, covering 463,553 acres of public lands across three western states—Wyoming, Utah, and Colorado—without fully analyzing the direct, indirect, and cumulative impacts of GHG pollution and climate change from these decisions. In 2016, this Court agreed to consider the merits of Plaintiffs’ claims concerning the Wyoming leasing decisions first, with briefing on the Utah and Colorado leasing decisions to follow. Order, ECF No. 24. After briefing and argument, this Court held that “BLM failed to take a hard look at the environmental impacts of leasing because it failed to quantify and forecast aggregate GHG emissions from oil and gas development” on the lease parcels. Memo. Op. at 36, ECF No. 99. The Court remanded the deficient NEPA analyses and required BLM to “strengthen its discussion on the environmental effects of downstream oil and gas use,” and “consider whether quantifying GHG emissions from that use is reasonably possible.” *Id.* at 42. Finally, the Court held BLM’s cumulative impacts assessment to be inadequate, and directed BLM to “consider the cumulative impact of GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation.” *Id.* at 46.

Despite this Court’s clear direction to BLM to give “serious consideration to the Court’s concerns” and not to treat NEPA compliance as a “bureaucratic formality,” *id.* at 59-60, BLM threw together an error-riddled Supplemental Environmental Assessment (Supplemental EA) in mere weeks, after allowing only six business days for public comment—paradigmatic bureaucratic formality.

Plaintiffs in this action, WildEarth Guardians and Physicians for Social Responsibility (collectively, “Guardians”), therefore respectfully request this Court to declare Federal

Defendants' (collectively, "BLM") re-approval of the Wyoming oil and gas leases and Supplemental EA arbitrary and capricious, and vacate the issued leases.

## STATEMENT OF FACTS

### I. The Climate Crisis

Greenhouse gas emissions from human activities—largely the burning of fossil fuels—are driving rapid changes in the Earth's climate system, with widespread and potentially devastating consequences for the environment and human communities around the globe. While the basic drivers and risks of climate change have generally been understood for decades, the past few years have brought a heightened understanding of the scale and the urgency of the problem, and the rapid reduction in GHG emissions needed to avoid catastrophic consequences in the decades ahead.

In 2014, the Intergovernmental Panel on Climate Change (IPCC), the world's preeminent scientific body devoted to solving the climate crisis, confirmed that climate change is a massive problem requiring rapid global action:

Continued emission of [GHGs] will cause further warming and long-lasting changes in all components of the climate system, *increasing the likelihood of severe, pervasive, and irreversible impacts to people and ecosystems. Limiting climate change would require substantial and sustained reductions in [GHG] emissions* which, together with adaptation, can limit climate change risks.

Wyo-Ph-2:3260 (emphasis added).

In December 2015, the United States agreed to the international Paris Agreement to "respon[d] to the urgent threat of climate change on the basis of the best available scientific knowledge." Paris Agreement, pmbl. (Dec. 12, 2015), U.N. Framework Convention on Climate Change, Rep. of the Conf. of the Parties on its Twenty-First Session, Addendum, U.N. Doc. FCCC/CP/2015/10/Add.1 (Jan. 29, 2016). The Paris Agreement's fundamental objective was to "hold[] the increase in the global average temperature to well below 2 °C above pre-industrial

levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels.” *Id.* art. 2, ¶ 1(a). While in November 2019, the Trump Administration submitted notification to the United Nations of its intent to withdraw from the Paris Agreement, such withdrawal cannot take effect for a year after delivery of the notification (November 2020). *Id.* art. 28. Compliance with the Paris Agreement remains the official policy of the U.S. government.

**A. Fourth National Climate Assessment**

In 2017, the U.S. Global Change Research Program (USGCRP), the leading federal authority on climate change, issued its Climate Science Special Report as a key part of the Fourth National Climate Assessment, “designed to be an authoritative assessment of the science of climate change, with a focus on the United States, to serve as the foundation for efforts to assess climate-related risks and inform decision-making about responses.” Wyo-Ph-2:6448. Based on a “large body of scientific, peer-reviewed research, as well as a number of other publicly available sources, including well-established and carefully evaluated observational and modeling datasets,” Wyo-Ph-2:6449, the Special Report conclusively demonstrated that climate change is not an abstract problem for future generations to solve. It is happening now, with CO<sub>2</sub> concentrations in the atmosphere now exceeding 400 parts per million (ppm), a level that has not occurred for approximately 3 million years, when temperatures and sea levels were “significantly higher than today.” Wyo-Ph-2:6452. Global temperatures are “now the warmest in the history of modern civilization,” and it is “extremely likely that human activities, especially emissions of [GHGs], are the dominant cause of the warming observed since the mid-20<sup>th</sup> century.” Wyo-Ph-2:6451.

The Fourth National Climate Assessment reviewed “thousands of studies” which have documented ongoing “changes in surface, atmospheric, and oceanic temperatures; melting



glaciers; diminishing snow cover; shrinking sea ice; rising sea levels; ocean acidification; and increasing atmospheric water vapor.” Wyo-Ph-2:6451. Already, the western United States is experiencing more frequent heat waves and large forest fires, while earlier snowmelt and reduced snowpack are impacting water resources. Wyo-Ph-2:6452.

The Fourth National Climate Assessment also collected available scientific information to provide a much more granular look at projected regional climate impacts, including documenting specific and concerning impacts to Wyoming’s environment, natural resources, and economy:

Climate-driven changes in snowpack, spring snowmelt, and runoff have resulted in more rapid melting of winter snowpack and earlier peak runoff due to rapid springtime warming. These effects have resulted in lower streamflows, especially in late summer. Lower flows, combined with warmer air temperatures, have caused stream temperatures to rise. These conditions are negatively affecting aquatic biodiversity and ecosystem functions of riparian areas (areas along the banks of rivers and streams), with important consequences for local economies that depend upon river-based recreation.

Wyo-Ph-2:7920 (internal citations omitted). With the fraction of total precipitation falling as snow in Wyoming’s mountains expected to decline by as much as “25% to 40% by 2100,” climate change threatens critical water supplies in this semi-arid state. Wyo-Ph-2: 7921. “Flash droughts and high heat events” from climate change are already having “emergent impacts on rural prosperity and mental health.” Wyo-Ph-2:7911.

Given unpredictable feedback loops and tipping points, the assessment identified a “broad consensus that the further and the faster the Earth system is pushed towards warming, the greater the risk of unanticipated changes and impacts, some of which are potentially large and irreversible.” Wyo-Ph-2:6495. While not providing specific policy proposals, the assessment found that limiting global temperature increase to less than 2 °C, a point above which catastrophic and potentially irreversible impacts are expected, would require “substantial

reductions” in CO<sub>2</sub> emissions over the next two decades, with net emissions down to zero or even negative later in the century. Wyo-Ph-2: 6876. Without “major reductions” in GHG emissions, average global temperatures could rise by 9 °F (5 °C) “or more” by the end of this century, with catastrophic consequences. Wyo-Ph-2: 6456. On the other hand, “with significant reductions in emissions, the increase in annual global temperature could be limited to 3.6 °F (2 °C) or less.” Wyo-Ph-2: 6456. The assessment found that the timeline for major emissions reductions is extremely tight, with emissions thresholds for limiting temperatures to 2 °C and 1.5 °C being exceeded in 2033 and 2019, respectively, if based on current emissions rates. Wyo-Ph-2:6880 (tbl. 14.1). Action *now* is therefore critical to avoiding catastrophic climate change: “[c]hoices made today will determine the magnitude of climate change risks beyond the next few decades.” Wyo-Ph-2: 6472.

#### **B. The International Panel on Climate Change 1.5° Report**

In 2018, IPCC issued a Special Report on the impacts of global warming of 1.5 °C above pre-industrial temperatures. This report identified significant differences in climate impacts between 1.5 °C and 2 °C of warming, including heat extremes, heavy precipitation events, and drought, Wyo-Ph-2:7846, as well as levels of species loss and extinction, Wyo-Ph-2:7847. The Special Report acknowledged significant impacts from warming of 1.5 °C, but found that warming of 2 °C would substantially increase “risks to health, livelihoods, food security, water supply, human security, and economic growth” above levels seen at 1.5 °C. Wyo-Ph-2:7848.

A “carbon budget” offers a cap on the remaining stock of GHGs that can be emitted while still keeping global average temperature rise below scientifically-established warming thresholds, beyond which climate change impacts may result in severe and irreparable harm to the biosphere and humanity. Wyo-Ph-2:38; Wyo-Ph-2:6878 to 6880; Wyo-Ph-2:15767.

Importantly, the Special Report noted that for a 66% chance of limiting warming to 1.5 °C, the

remaining global carbon budget is as low as 420 gigatons of CO<sub>2</sub> (GtCO<sub>2</sub>).<sup>1</sup> Wyo-Ph-2:7851.

With current global emissions of approximately 42 gigatons per year, at current rates the world's entire carbon budget for 1.5 °C will be exhausted *within the next decade*. Wyo-Ph-2:7851.<sup>2</sup> The Report further noted that to attain this limit would require drastic and rapid reductions in GHG:

Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (*high confidence*). These systems transitions are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep emissions reductions in all sectors . . . .

Wyo-Ph-2:7854.

In sum, the Special Report provides clear scientific evidence that a rapid transition away from fossil fuel extraction and combustion is critical to avoiding catastrophic climate change.

**C. U.S. Geological Survey Report on Federal Lands Greenhouse Gas Emissions**

In 2018, the U.S. Geological Survey (USGS) published a study calculating the GHG emissions associated with the extraction and combustion of fossil fuels from federal land. The study found that emissions from federal lands are one of the largest sources of GHG emissions in the United States. Specifically, fossil fuels produced from federal lands in 2014 resulted in CO<sub>2</sub> emissions of 1.279 billion metric tons (mt),<sup>3</sup> constituting 23.7% of total CO<sub>2</sub> emissions in the United States. Wyo-Ph-2:7960.

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<sup>1</sup> A gigaton is equivalent to one billion tons. Some reports refer to gigatons of carbon (GtC). *E.g.*, Wyo-Ph-2:38 (BLM); Wyo-Ph-2:6879 (U.S. Global Change Research Program). One GtC is equivalent to 3.67 GtCO<sub>2</sub>.

<sup>2</sup> Using a slightly different analysis that considered additional climate forcing influences, the USGCRP's Fourth National Climate Assessment found in 2017 that the remaining budget for limiting 1.5 °C was only 30 GtC, or approximately 110 GtCO<sub>2</sub>, and would likely be exhausted by 2019. Wyo-Ph-2:6879 to 6880.

<sup>3</sup> A metric ton is equivalent to 1.102 standard American tons. Wyo-Ph-2:7958.

The USGS Report further confirmed Wyoming’s outsized presence in driving climate change, with federal lands within the state contributing approximately 727.7 million mt in 2014, or 57% of total emissions from fossil fuel production on all federal public lands. Wyo-Ph-2:7965, 7968. While the majority of GHG emissions from Wyoming public lands are from Powder River Basin coal production, BLM projects oil and gas production on federal lands within the State to contribute over 86 million mt of CO<sub>2</sub> pollution annually to the climate crisis, Wyo-Ph-2:57, 59,<sup>4</sup> nearly 12% of the total CO<sub>2</sub> emissions from federal lands within the State.<sup>5</sup> Moreover, the nation-wide federal oil and gas program generates more than 460 million mt of CO<sub>2</sub> pollution each year, Wyo-Ph-2:7966,<sup>6</sup> of which Wyoming contributes a significant amount—18%.<sup>7</sup> Wyo-Ph-2:59. Emissions from the federal oil and gas program amount to the emissions from 119 coal-fired power plants.<sup>8</sup> Moreover, existing federal leases contain enough proven oil and gas reserves to release upwards of 20.8 gigatons of carbon dioxide equivalent

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<sup>4</sup> Wyo-Ph-2:57, 59 (5,712,090.4 mt/yr direct emissions + 80,473,714.3 mt/year = 86,185,804.7 mt/yr).

<sup>5</sup> See *supra* note 4; Wyo-Ph-2:59 (86.2 million mt/yr / 727.7 million mt/yr = 11.8%).

<sup>6</sup> Wyo-Ph-2:7966 (199.7 million mt/yr (mobile sources) + 217 million mt/yr (natural gas—stationary) + 41.77 million mt/yr (petroleum—stationary) + 5.48 million mt/yr (extraction emissions—petroleum and natural gas) = 463.95 million mt/yr).

<sup>7</sup> See *supra* notes 4, 6 (86.2 million mt/yr / 463.95 mt/yr = 18.6%).

<sup>8</sup> EPA, Greenhouse Gas Equivalencies Calculator, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator> (last visited January 3, 2020). While EPA’s GHG Equivalencies Calculator is not in the administrative record, it is a public record available on a federal government website of which this court may take judicial notice, and which was available to BLM at the time of its decision to approve the Supplemental EA and affirm the challenged leases. See Fed. R. Evid. 201(b); *Humane Soc’y of U.S. v. Animal & Plant Health Inspection Serv.*, 386 F. Supp. 3d 34, 40 n.2 (D.D.C. 2019) (taking “judicial notice of the official government documents and other sources from the [federal agency’s] government website as ‘sources whose accuracy cannot reasonably be questioned’” (*citing* Fed. R. Evid. 201)).

(CO<sub>2</sub>e) emissions.<sup>9</sup> Wyo-Ph-2:15116. Unleased federal oil and gas reserves contain almost 90 gigatons CO<sub>2</sub>e of additional, potential emissions, roughly equivalent to one-quarter of the world's remaining all-time carbon budget. *Id.*

#### **D. The Federal Fossil Fuel Program**

BLM statistics confirm that oil and gas development on federal public lands is proceeding at a dramatic and unsustainable pace. In 2018, there were approximately 38,147 federal oil and gas leases in effect, covering more than 25.5 million acres of federal public lands. Wyo-Ph-2:8868. There are more than 102,000 producing oil and gas wells on federal public lands. Wyo-Ph-2:8868. In Wyoming alone, there are more than 12,780 leases in effect covering more than 8 million acres of federal lands, on which there are more than 30,000 producing oil and gas wells. Wyo-Ph-2:8869, 8870, 8877. In 2018, 1,120 new drilling permits were issued for oil and gas wells on federal lands in Wyoming, approximately one-third of the 3,388 total permits issued across the country. Wyo-Ph-2:8875.

Moreover, it is now the express policy of BLM and the federal government to “maximize[] the use of American resources,” including oil and gas production on federal public lands.<sup>10</sup> Accordingly, Interior has been rolling back environmental regulations,<sup>11</sup> shortening

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<sup>9</sup> Agencies use “carbon dioxide equivalents” or “CO<sub>2</sub>e” to compare the warming influence of different GHGs. Wyo-Ph-2:43. Converting methane and other non-carbon dioxide GHGs to CO<sub>2</sub>e is common practice in NEPA documents and allows for a unified comparison of carbon dioxide, methane, and other GHGs from federal projects. Wyo-Ph-2:43.

<sup>10</sup> Sec. of Interior R. Zinke, Secretarial Order 3351, Strengthening the Department of the Interior's Energy Portfolio (May 1, 2017), *available at* <https://www.doi.gov/sites/doi.gov/files/press-release/secretarial-order-3351-energy-counselor-508.pdf>.

<sup>11</sup> *See, e.g.*, Waste Prevention, Production Subject to Royalties, and Resource Conservation; Rescission or Revision of Certain Requirements, 83 Fed. Reg. 49,184, 49,184 (Sept. 28, 2018); Exec. Order No. 13777 (Feb. 24, 2017); Exec. Order No. 13783 (Mar. 28, 2017).

internal agency review periods,<sup>12</sup> and limiting public involvement<sup>13</sup> in pursuit of the current administration's "energy dominance" agenda.<sup>14</sup> In keeping with this policy focus and concerted agency effort to expedite oil and gas production on federal lands, BLM has effectively rolled out the red carpet for the oil and gas industry to exploit our federal public lands for private profit—to the ongoing detriment of the public and the climate.

#### **E. Carbon Budgeting**

The Supplemental EA acknowledges that "carbon budgeting" provides a tool useful for scientists and policymakers evaluating the global amount of GHGs that can be emitted consistent with limiting global warming to below certain target temperature thresholds, above which catastrophic and potentially irreversible climate change is likely to result. Wyo-Ph-2:38, 77 to 78. BLM recognizes that the IPCC has identified a "target worldwide 'carbon budget' to estimate the amount of CO<sub>2</sub> the world can emit while still having a likely chance of limiting global temperature rise to 2 °C above pre-industrial levels." Wyo-Ph-2:38. Because there is a "nearly linear relationship between cumulative CO<sub>2</sub> emissions and global mean temperature increases," stabilizing global temperatures "implies that there is a physical upper limit to the cumulative amount of CO<sub>2</sub> that can be added to the atmosphere." Wyo-Ph-2:77. Hence, "[e]ventually stabilizing the global temperature requires CO<sub>2</sub> emissions to approach zero," and for "any desired global mean warming goal, an estimated range of cumulative CO<sub>2</sub> emissions from the current period onward can be calculated." Wyo-Ph-2:77 to 78.

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<sup>12</sup> BLM, Instructional Memorandum 2018-034 (Jan. 31, 2018), *available at* <https://www.blm.gov/policy/im-2018-034>.

<sup>13</sup> BLM, IM 2018-034, *supra*.

<sup>14</sup> Final Report: Review of the Department of the Interior Actions That Potentially Burden Domestic Energy, 82 Fed. Reg. 50532, 50533 (Nov. 1, 2017).

In 2018, the IPCC estimated the total remaining carbon budget to be 420 billion tons CO<sub>2</sub> for a 66% chance of meeting 1.5°C. Wyo-Ph-2:15253. For a 50% chance of limiting warming to 1.5 °C—a coin flip to avoid global catastrophe—the budget is slightly larger: 580 billion tons. With this budget being depleted at approximately 42 billion tons per year, *id.*, BLM acknowledges the “tight timeline of the carbon budget.” Wyo-Ph-2:77. But BLM fails to recognize that current business-as-usual trends—including BLM’s efforts to maximize fossil fuel development on federal land—are likely to push cumulative emissions beyond the scientifically-identified carbon budget needed to avoid catastrophic climate change *within a decade*, well before the end of the producing lifetime of the oil and gas leases challenged herein. *See* Wyo-Ph-2:59 (noting a “common well life assumption” of 40 years in Wyoming). Even more troubling, research from the U.S. Global Change Research Program shows that the world may have *already* exceeded the carbon budget needed to limit global warming to 1.5 °C, putting the world on track for serious consequences even without any additional GHG emissions. Wyo-Ph-2:6879 to 6880. This is not cause for apathy, but a call to action—as each additional ton of GHG emissions pushes the world further towards truly nightmare scenarios.

Evidence in the record shows the sharp disconnect between BLM’s policy of maximizing the development of oil and gas from federal public lands and the global imperative to limit carbon emissions to avoid climate catastrophe. For example, a report from Oil Change International shows that existing *developed* fossil fuel reserves “already contain enough carbon to push the world beyond the goals of the Paris Agreement.” Wyo-Ph-2:15761. Between now and 2030, “the time period over which climate scientists say global [CO<sub>2</sub>] emissions should be roughly halved to stay in line with the 1.5 °C target in the Paris Agreement,” the United States is heading 180 degrees in the wrong direction, “on track to account for 60 percent of world growth

in oil and gas production, expanding extraction at least four times more than any other country.” Wyo-Ph-2:15762. Yet instead of making any efforts to attain or even disclose the necessary significant and rapid reductions in GHG pollution to avoid dangerous climate change, BLM has buried its head in the sand and simply ignored its significant role in driving the ongoing climate crisis.

## **II. BLM’s Initial Inadequate Review of the Challenged Wyoming Leases**

Before the Court are BLM oil and gas leases for 282 separate parcels encompassing approximately 303,995.7 acres in Wyoming. Wyo-Ph-2:57. BLM issued these leases via five oil and gas lease sales held in 2015 and 2016. Wyo-Ph-2:36. BLM originally prepared nine separate environmental assessments (EAs) for the leases. Memo Op. at 60, ECF No. 99.

In March 2019, this Court ruled that the nine EAs and findings of no significant impact (FONSI) violated NEPA and remanded to BLM to supplement its NEPA analysis. *Id.* The Court held that the challenged EAs and FONSI were deficient because “BLM did not take a hard look at drilling-related and downstream GHG emissions from the leased parcels, and it failed to sufficiently compare those emissions to regional and national emissions.” *Id.* at 22. First, the Court held that “NEPA required that BLM reasonably quantify the GHG emissions resulting from oil and gas development on the leased parcels in the aggregate,” *id.* at 32, and that “BLM failed to take a hard look at the environmental impacts of leasing because it failed to quantify and forecast aggregate GHG emissions from oil and gas development.” *Id.* at 36. Second, the Court held that BLM needed to “strengthen its discussions of the environmental effects of downstream oil and gas use,” and consider “whether quantifying GHG emissions from that use is reasonably possible.” *Id.* at 42. Third, the Court held that “BLM’s failure to quantify GHG emissions rendered the EAs’ cumulative impact analyses inadequate,” *id.* at 44, explaining that NEPA required the agency to “quantify the emissions from each leasing decision—past, present,



or reasonably foreseeable—and compare those emissions to regional and national emissions, setting forth with reasonable specificity the cumulative effect of the leasing decision at issue.” *Id.* at 46.

The Court specifically directed that “[t]o the extent other BLM actions in the region—such as other lease sales—are reasonably foreseeable when an EA is issued, BLM must discuss them as well.” *Id.* Likewise, the Court held that to the extent BLM was able to reasonably quantify downstream GHG emissions, the agency “must place those emissions in the context of local and regional oil and gas consumption.” *Id.* Ultimately, the Court concluded that “[a]lthough BLM may determine that each lease sale individually has a de minimis impact on climate change, the agency must also consider the cumulative impact of GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation.” *Id.* As the Court recognized, “[g]iven the national, cumulative nature of climate change, considering each individual drilling project in a vacuum deprives the agency and the public of the context necessary to evaluate oil and gas drilling on federal land before irretrievably committing to that drilling.” *Id.* at 57.

While the Court held that BLM was not necessarily required to utilize the social cost of carbon or a carbon budget to assess the significance of GHG emissions, the Court directed BLM, on remand, to “reassess whether the social cost of carbon or another methodology for quantifying climate change may contribute to informed decisionmaking.” *Id.* at 50 n.31. As the Court noted, NEPA regulations provide that “accurate scientific analysis” is “essential to implementing NEPA,” 40 C.F.R. § 1500.1(b), and require an agency to ensure “scientific integrity” in its assessment. *Id.* § 1502.24.

### III. BLM's Rushed Assessment on Remand

Ostensibly in pursuit of the current administration's "energy dominance" agenda to maximize oil and gas production on federal lands, the agency rushed its analysis on remand, producing a sloppy and inadequate analysis that failed to address the Court's key concerns.

Less than four weeks after the Court's March 19, 2019 Order, BLM issued its draft Supplemental EA for public comment—lightning speed for the agency. Public involvement in agency decision-making is a core purpose of NEPA, and regulations specifically require agencies to allow and encourage public involvement "to the fullest extent possible." 40 C.F.R. § 1500.2(d). Yet BLM provided virtually no public notice of the Supplemental EA, burying the document on its e-planning website and not issuing a press release or otherwise informing the general public of the document's availability.<sup>15</sup> Moreover, after releasing its draft Supplemental EA late on a Friday, BLM provided only a 10-day comment period, which included two weekends, resulting in only six business days for public comment. *See* Notice of Compliance, ECF No. 102, at 2. BLM rejected thousands of individual requests for a longer public comment period. Wyo-Ph-2: 10580 to 11160; Wyo-Ph-2:11161 to 12199; Wyo-Ph-2:12200 to 12906; Wyo-Ph-2: Wyo-Ph-2:12909; Wyo-Ph-2:12910 to 12914. Then just fifteen days after the close of the comment period, BLM finalized the Supplemental EA, signed the FONSI, and issued its Record of Decision (ROD) reaffirming the issuance of the 283 Wyoming leases. Wyo-Ph-2:35; Wyo-Ph-2:97.

In sum, after the Court's remand order, which directed BLM to give "serious consideration to the Court's concerns," Memo. Op. at 59, ECF No. 99, BLM rushed to produce a

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<sup>15</sup> The draft Supplemental EA was emailed to Plaintiffs and filed with Court. Notice of Compliance, ECF Nos. 102, 102-1.

Supplemental EA, provided a public comment period of unprecedented brevity, hastily reviewed and responded to comments, and reaffirmed its prior decisions—all within 7 weeks. Given BLM’s haste in producing the Supplemental EA and reapproving the challenged leases, it is no surprise that BLM’s slapdash analysis failed to seriously consider the climate impacts of the leasing decisions at issue.

As detailed below, BLM’s haste resulted in numerous errors and inconsistencies throughout the Supplemental EA, impairing the ability of the public and decision-makers to gain information from the documents and demonstrating that the agency failed to take this Court’s mandate seriously. The public and decision-makers should be able to rely on BLM’s calculations and explanations and trust that the agency is fully and transparently disclosing the results of its analysis, instead of being required to wade through a morass of inaccurate, inconsistent, and misleading figures to place the GHG emissions from the challenged lease sales in proper, understandable context. NEPA documents must be “written in plain language ... so that decisionmakers and the public can readily understand them.” 40 C.F.R. § 1502.8. Accordingly, they “are unacceptable if they are indecipherable to the public,” as is the case here. *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 996 (9th Cir. 2004); *see also Or. Envtl. Council v. Kunzman*, 817 F.2d 484, 494 (9th Cir. 1987) (NEPA documents “must be organized and written so as to be readily understandable by governmental decisionmakers and by interested non-professional laypersons likely to be affected”).

### **STANDARD OF REVIEW**

Agency compliance with NEPA is judicially reviewed pursuant to the Administrative Procedure Act, and is set aside if agency action is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). “[I]n making the factual inquiry

concerning whether an agency decision was ‘arbitrary or capricious,’ the reviewing court ‘must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.’” *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 378 (1989) (quoting *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971)).

To survive scrutiny under this standard, the agency “must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’” *Motor Vehicle Mfrs. Ass’n v. State Farm*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)). An action is “arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, [or] 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.*; see also *Fund for Animals v. Babbitt*, 903 F. Supp. 96, 105 (D.D.C. 1995).

“Summary judgment is an appropriate procedure for resolving a challenge to a federal agency’s administrative decision when review is based upon the administrative record ... even though the Court does not employ the standard of review set forth in Rule 56, Fed. R. Civ. P.” *Babbitt*, 903 F. Supp. at 105 (citing *Richards v. I.N.S.*, 554 F.2d 1173, 1177 n.228 (D.C. Cir. 1977)).

## STANDING

To establish Article III standing, a party must demonstrate (1) injury, (2) traceability, and (3) redressability. *Defenders of Wildlife v. Gutierrez*, 532 F.3d 913, 923-24 (D.C. Cir. 2008); U.S. Const. art. III, § 2. Standing is established “at the time the action commences.” *Friends of the Earth v. Laidlaw*, 528 U.S. 167, 191 (2000). Through their members Jeremy Nichols and Erik Molvar, Guardians have standing. Nichols Supplemental Decl., ¶¶ 3, 13-31 (Exhibit 1);

Molvar Supplemental Decl., ¶¶ 3, 7-25 (Exhibit 2); Memo. Op. 19-22, ECF No. 99 (holding that Guardians established standing in this litigation).

### ARGUMENT

The Supplemental EA contains fundamental errors that undermine the agency's analysis and conclusions. First, despite acknowledging that recent climate science indicates that “year-to-year emissions” are less important in driving climate change than “cumulative carbon” emissions, BLM's analysis consistently focused on annual emission rates and ignored cumulative emissions. In so doing, BLM entirely failed to consider the *total* direct emissions that will result over the project lifetime and the *total* cumulative emissions from this project in combination with other reasonably foreseeable projects.

Second, BLM arbitrarily underestimated direct and indirect GHG emission rates based on an unreasonable assumption that emission rates are equivalent across leased and unleased lands within the individual planning areas. Calculating a per-acre emission factor by dividing the total emissions estimates by the area *open to leasing*, instead of land *actually leased*, BLM's approach erroneously assumed that average emissions for each acre of land *actually leased* are equivalent to average emissions from each acre of all lands *open to be leased*. Such an assumption is illogical, arbitrary, and resulted in BLM further underestimating GHG emissions and the climate impacts of the challenged leases.

Third, the Supplemental EA failed to conduct the cumulative impacts assessment ordered by this Court, despite BLM's recognizing that Federal minerals, both nationally and in Wyoming, contribute a substantial portion of total national emissions. Hence, BLM's management of Federal lands and minerals is a major contributor to total national emissions, and the United States is the world's second largest emitter of GHG emissions. The agency also recognized that stabilizing the global temperature requires GHG emissions—including those

from Federal fossil fuels—to approach zero. Yet BLM failed to take a hard look at the cumulative impacts of the challenged leases, in conjunction with other regional and national BLM leasing activities, in direct contravention of the Court’s mandate.

Fourth, BLM’s carbon budget analysis was inconsistent, irrational, and arbitrary. While BLM recognized that climate science, U.S. climate policy, and the global community have identified carbon budgets limiting the amount of GHGs that may be emitted in order to avoid severe, pervasive, and irreversible impacts of climate change, the agency entirely failed to disclose what the remaining carbon budget actually is. That is, the agency failed to provide any baseline by which to rationally assess the impact of the effects of its actions on the remaining carbon budget. Further, BLM inconsistently referred to multiple carbon budgets at different points in its analysis without explanation. BLM then irrationally concluded that the cumulative effects of its large-scale leasing decisions would have no consequential effect on the remaining carbon budget, despite acknowledging that the remaining carbon budget is very limited, that “overshoot” is likely, and that GHG emissions must be reduced to zero. And then in its response to comments, the agency disowned its own carbon budget analysis.

Finally, BLM’s FONSI was also arbitrary, repeatedly contradicting BLM’s statements from the Supplemental EA. The FONSI’s conclusion that GHG emissions and climate impacts from the challenged leases were insignificant directly contradicted the Supplemental EA’s statement that the significance of the GHG emissions was unknown. Similarly, the FONSI’s conclusion that there are no highly uncertain impacts directly contradicts the Supplemental EA’s ubiquitous statements about the uncertainty of the impacts of the challenged leases. And in direct contradiction of this Court’s prior ruling, the FONSI refused to assess the significance of the cumulative climate impacts of BLM’s past, present, and foreseeable leasing decisions, but

instead concluded that these leases, viewed in isolation, would have only de minimis and therefore insignificant climate impacts.

**I. BLM failed to take a hard and honest look at direct, indirect, and cumulative impacts.**

NEPA “is our basic national charter for the protection of the environment.” 40 C.F.R. § 1500.1(a). “NEPA’s primary function is ‘information-forcing,’ compelling federal agencies to take a hard and honest look at the environmental consequences of their decisions.” *Am. Rivers v. FERC*, 895 F.3d 32, 49 (D.C. Cir. 2018) (quoting *Sierra Club v. FERC*, 867 F.3d 1357, 1367 (D.C. Cir. 2017)). These “environmental consequences” may be direct, indirect, or cumulative. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8; *Sierra Club*, 827 F.3d at 41. Agencies must determine whether direct, indirect, or cumulative impacts are significant by evaluating the “context” and “intensity” of those impacts. 40 C.F.R. § 1508.27.

A federal action “affects” the environment when it “will or *may* have an effect” on the environment. *Id.* § 1508.3 (emphasis added). “If *any* significant environmental impacts might result from the proposed agency action then an EIS must be prepared *before* the [agency] action is taken.” *Sierra Club v. Peterson*, 717 F.2d 1409, 1415 (D.C. Cir. 1983) (emphasis in original). An environmental effect is “reasonably foreseeable” if it is “sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.” *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir.1992). An agency’s hard look examination “must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.” *Forest Guardians v. U.S. Fish & Wildlife Serv.*, 611 F.3d 692, 712 (10th Cir. 2010) (quoting *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000)).

**A. BLM failed entirely to consider *total emissions*, but instead only disclosed and assessed annual emission rates, which was arbitrary.**

The environmental consequences of climate change are largely driven, BLM admitted, by total, cumulative GHG emissions, rather than annual emissions rates. Wyo-Ph-2: 77. As the Fourth National Climate Assessment concluded, “[t]he magnitude of human-induced climate change depends less on the year-to-year emissions than it does on the net amount of carbon, or cumulative carbon, emitted into the atmosphere.” Wyo-Ph-2:6623. Long-term, “the magnitude of climate change depends primarily on cumulative emissions of GHGs and aerosols and the sensitivity of the climate system to those emissions.” Wyo-Ph-2:6617. Thus, it is the total, cumulative emissions—not annual emissions rates—that will determine whether we are able to avoid catastrophic climate change, as “[c]umulative emissions of CO<sub>2</sub> and future non-CO<sub>2</sub> radiative forcing determine the probability of limiting warming to 1.5 °C.” Wyo-Ph-2:7845.

Courts recognize that assessing the total impacts of a particular project requires analysis of both the rate of impact and the length of time over which the impact will continue. For example, in *South Fork Band Council v. U.S. Dep’t of Interior*, 588 F.3d 718 (9th Cir. 2009), the Ninth Circuit evaluated an EIS prepared for the expansion of an existing gold mine. There, BLM argued that the air quality impacts of transporting mined ore to an off-site processing facility did not need to be considered because ore was already being sent to the processing facility, and the expansion would not cause the transportation or processing rates—or air pollution emissions rate—to change from current conditions under the No-Action Alternative. The court disagreed, holding that even though the rate of shipping and processing may not change, “the mine expansion will create ten additional years of such transportation that is, ten years of environmental impacts that would not be present in the no-action scenario.” *Id.* at 725-26.



Accordingly, because it failed to account for the full scope of impacts over the lifetime of the mine expansion project, the EIS was inadequate.

Similarly, in evaluating the NEPA review for a proposed coal mine expansion, a federal district court focused on the impacts from the *total* amount of additional coal combusted over the project lifetime, even though the *rate* of coal combustion at the power plant served by the mine was not projected to change. *Diné Citizens Against Ruining Our Env't v. OSM (Diné CARE)*, 82 F. Supp. 3d 1201 (D. Colo. 2015), *vacated as moot*, 643 F. App'x 799 (10th Cir. 2016). The court found the distinction between the combustion *rate* and the *total* combustion over the project lifetime to be “particularly relevant with regards to the deleterious impacts of combustion-related mercury deposition” because while “the effects related to ambient air quality concentrations of pollutants are most closely related to the rate of emissions, the primary impacts of mercury are not associated with its ambient concentration in the air but with its deposition from the atmosphere.” *Id.* at 1215. In other words, the critical environmental risks, particularly to wildlife, were not driven by the rate of mercury emissions, but by the cumulative total “amount of mercury deposition.” *Id.* Hence, even though expanding the coal mine was not expected to affect the rate of mercury deposition, the court found that this did “not excuse OSM’s failure to consider the cumulative impact of this additional coal combustion, which would not occur but for OSM’s [the U.S. Office of Surface Mining] approval of the proposed expansion.” *Id.*

Similar to how the cumulative deposition of mercury poisons wildlife, the climate crisis is largely driven by the total, cumulative amount of GHGs emitted to the atmosphere, not by the annual rate of such emissions. Wyo-Ph-2:77; Wyo-Ph-2:6617, 6623; Wyo-Ph-2:7845.

Accordingly, a hard and honest look at the climate impacts from the challenged oil and gas lease sales requires an assessment of the “net amount of carbon, or cumulative carbon” generated from

development of the leases, not simply disclosure of annual emissions rates. Wyo-Ph-2:77; *see S. Fork Band*, 588 F.3d at 725-26; *Diné CARE*, 82 F. Supp. 3d at 1215. Similarly, understanding the environmental consequences of the lease sales—in combination with other past, present, and reasonably foreseeable actions—requires quantification and consideration of the *total* emissions resulting from the lease sales and from other actions cumulatively impacting the climate.

Here, however, despite BLM’s recognition of the critical importance of cumulative, total emissions in driving climate change, Wyo-Ph-2:77, the agency failed to actually consider the *total cumulative emissions* from the challenged leases, alone or in combination with other actions cumulatively impacting the climate. First, BLM projected the annual direct emissions *rates* from development of the leases, but never quantified the *total direct emissions* projected over the lifetime of lease development, despite acknowledging a “common well life assumption” of 40 years in Wyoming. Wyo-Ph-2:59.

Second, while BLM did quantify the total projected *indirect* emissions over a 40-year project lifetime in response to Guardians’ comments, Wyo-Ph-2:59; Wyo-Ph-2:8, BLM never *assessed* this information or its significance. Indeed, the entirety of BLM’s “analysis” of this critical piece of information is found in a single sentence in the Supplemental EA: “this amount [31,889,836 mt] represents 0.65% of EPA’s 2017 annual U.S. oil and gas emission total.” Wyo-Ph-2:59. However, this sentence is factually incorrect because in its effort to minimize the importance of the leases’ emissions,<sup>16</sup> BLM compared them to total emissions from *all* fossil fuel

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<sup>16</sup> The Supplemental EA is replete with demonstrable errors that attempt to minimize the magnitude of BLM’s leases. For example, Table 5 incorrectly stated that the average number of well completions on BLM lands in Wyoming per year over the ten-year period ending in 2018 was 74.46, an *order of magnitude* lower than the correct value of 744.6 wells per year. Wyo-Ph-2:46. Remarkably, BLM refused to correct this error even after Guardians pointed it out and even though the prior page of the EA states the correct value. Wyo-Ph-2:10 (Comment No. 12); Wyo-Ph-2:45 (“[F]rom 2008 to 2018, an average of 745 wells were completed annually statewide”).

sources, including coal.<sup>17</sup> The percentage of the emissions would certainly be higher if compared only to oil and gas emissions. Moreover, simply comparing project emissions to total national or global emissions is, in effect, no analysis at all because, as the Council for Environmental Quality has recognized, such a comparison “does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large impact.”<sup>18</sup>

Third, BLM never quantified the *total gross* GHG emissions (direct plus indirect) over the project lifetime, but instead relied solely on annual emission *rates* for its analysis of total gross emissions. Wyo-Ph-2:59. Even further, BLM erroneously described the *annual* gross emission *rates* as the “total gross (direct plus indirect) emissions.” Wyo-Ph-2:59.<sup>19</sup> Finally, while

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*Cf. Comm. of 100 on Fed. City v. Foxx*, 87 F. Supp. 3d 191, 217-218 (D.D.C. 2015) (“A NEPA evaluation must rely on ‘high quality’ information and accurate scientific analysis.”); *NRDC v. U.S. Forest Serv.*, 421 F.3d 797, 811-13 (9th Cir. 2005) (NEPA analysis using inaccurate information was arbitrary). Nor did the agency acknowledge how applying the correct value might have influenced its decision.

<sup>17</sup> The 4.912 billion mt CO<sub>2</sub>e BLM used does not represent total annual *oil and gas emissions* (as BLM contends), but total emissions from *all fossil fuel sources*. Compare Wyo-Ph-2:59 with Wyo-Ph-2:9280 (31,899,836 mt / 4,912,000,000 = 0.65%).

<sup>18</sup> Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 81 Fed. Reg. 51,866, 51,866 (Aug. 5, 2016) (referencing final guidance document available at: [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa\\_final\\_ghg\\_guidance.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf)) (withdrawn by 82 Fed. Reg. 16576 (Apr. 5, 2017)).

<sup>19</sup> BLM’s error is apparent from the fact that what the agency contended is the “total gross (direct plus indirect) emissions”—853,607 mt—is, impossibly, two orders of magnitude *smaller* than what BLM identifies as the “total projected indirect emissions”—31,899,836 mt. Wyo-Ph-2:59. This is yet another instance where BLM’s demonstrable errors render its analysis “indecipherable” to the reader. *Klamath-Siskiyou Wildlands Ctr.*, 387 F.3d at 996. BLM’s repeated inaccuracies render its analysis arbitrary. *NRDC*, 421 F.3d at 811-13.

BLM acknowledged that total, cumulative carbon emissions are the critical factor determining the climate impacts resulting from the challenged oil and gas lease sales, the agency failed to calculate or assess the total cumulative emissions resulting over the lifetime of project development on the challenged lease sales in combination with other activities resulting in additional GHG emissions. Indeed, BLM did not quantify the total, cumulative, lifetime emissions for *any* other past, present, or reasonably foreseeable future actions that will cumulatively impact the climate in combination with development of the challenged leases. 40 C.F.R. § 1508.7.

BLM's failure to assess total GHG emissions over the lifetime of lease development, either alone or in combination with other cumulative actions at a regional and a national scale, is particularly problematic in the context of the current climate crisis. As BLM recognized, there is a finite amount of CO<sub>2</sub> that the world can emit before certain temperature thresholds, such as 1.5 °C or 2 °C, are exceeded, and catastrophic consequences result. Wyo-Ph-2:38; Wyo-Ph-2:77-78. By only considering annual emissions rates—instead of the total amount of GHG emissions that may result from the challenged leasing decisions—and by failing to consider the reasonably foreseeable total cumulative carbon likely to be emitted as a result of other BLM leasing decisions in the region and nation, BLM “entirely failed to consider an important aspect of the problem,” in violation of NEPA. *Motor Vehicle Mfrs.*, 463 U.S. at 43.

**B. BLM arbitrarily underestimated direct and indirect emission rates through mathematical sleight of hand.**

To estimate direct and indirect GHG emission rates, BLM used a mathematical sleight of hand that resulted in a substantial underestimate of likely emissions. Accordingly, BLM failed to provide useful information to the public and decisionmakers regarding the actual impacts of the challenged leases. *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1076 (9th

Cir. 2011) (“A cumulative impact analysis ‘must be more than perfunctory; it must provide a useful analysis of the cumulative impacts of past, present, and future projects.’”) (quoting *Kern v. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002)).

BLM’s “approach prorate[d] total annual direct emissions across the proposed lease acreage by the total Federal Mineral estate open to oil and gas leasing under the planning area RMP.” Wyo-Ph-2:57; *see also* Wyo-Ph-2:58 (noting per-acre indirect emissions rate estimated in manner “[s]imilar to the calculations made for direct CO<sub>2</sub>e”). In other words, instead of averaging the total emissions projections over the *actually leased area* likely to generate those emissions, BLM instead averaged the total emissions over the much larger area *open to be leased*.<sup>20</sup> Thus, BLM’s approach projected equivalent levels of emissions on leased and unleased lands. But since lands that are not actually leased do not generate GHG emissions from oil and gas development, averaging emissions over such lands is misleading and results in significantly underestimating emissions impacts from new leases. Specifically, there are approximately 8.1 millions of BLM lands in Wyoming leased for oil and gas activity. Wyo-Ph-2:8870. Yet BLM averaged the total emissions over the much larger total acreage *open to leasing* of about 30.5 million acres. Wyo-Ph-2:56, 57.<sup>21</sup>

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<sup>20</sup> Compounding this error, BLM provides wildly inconsistent estimates of direct GHG emissions throughout the Supplemental EA. *Compare* Wyo-Ph-2:95 (tbl. 7.1.2, showing 73,249.5 mt/yr direct emissions), *with* Wyo-Ph-2: 57 (stating in the text that Table 7.1.2 shows 55,728.5 mt/yr direct emissions), *and* Wyo-Ph-2:57 (tbl. 7, showing 56,111.0 mt/yr direct emissions).

<sup>21</sup> Evidencing BLM’s hurried approach, the agency failed to consistently describe the per-acre emissions rate used for its analysis, leaving decisionmakers and the public in the dark as to BLM’s methodology. Table 10 inconsistently describes its calculation of cumulative direct CO<sub>2</sub>e emissions as based upon an average emissions rate of both “0.19” mt/ac and “0.21 mt/ac.” Wyo-Ph-2:67. *See also* Wyo-Ph-2:68, tbl. 11 (indicating average annual emissions rate of 0.19 mt/ac). Further, in response to comments regarding Table 10, BLM inconsistently indicated that emissions rate should be 0.21 mt/ac, based on a total Federal mineral acreage open to leasing of

This maneuver had the effect of significantly diluting the leases’ expected GHG emissions. *Pac. Coast Fed. of Fisherman’s Ass’ns v. NMFS*, 265 F.3d 1028, 1036-37 (9th Cir. 2001) (analysis that “diluted to insignificance” project’s impacts was arbitrary); *Or. Natural Res. Council Fund v. Brong*, 492 F.3d 1120, 1129-30 (9th Cir. 2007) (noting that averaging environmental effects based on a broad scope can lead to misleading results). By averaging emissions across lands that are currently unleased and not projected to be leased over the planning period, BLM underestimated direct and indirect emissions by nearly 75%. This was arbitrary and failed to inform the public and decisionmakers regarding the actual impacts of the challenged leases. *Motor Vehicle Mfrs.*, 463 U.S. at 43.

**C. BLM’s failure to assess reasonably foreseeable future emissions from regional and national BLM actions was arbitrary and capricious.**

NEPA requires cumulative impacts analysis to include consideration of “past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7. Accordingly, in remanding the challenged lease sales to BLM, the Court specifically directed the agency to discuss “other BLM actions in the region—such as other lease sales,” as part of its cumulative impacts analysis, and to consider “cumulative impact of GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation.” Memo. Op. at 46, ECF No. 99. BLM failed to heed the Court’s directive, again violating NEPA.

First, BLM simply ignored the Court’s instruction to analyze cumulative impacts from other reasonably foreseeable BLM lease sales “in the region and nation.” *Id.* at 46. Instead, BLM limited its consideration only to lease sales within Wyoming, failing to acknowledge contemporaneous and planned oil and gas leasing in neighboring states, let alone across the

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6.4 million acres, whereas Table 10 shows only 5.7 million acres open to leasing. *Compare* Wyo-Ph-2:11 *with* Wyo-Ph-2:67.

nation. To be clear, BLM did not discuss or assess a *single* reasonably foreseeable lease sale or other BLM action outside the State of Wyoming. Hence, BLM considered *no* recent or planned lease sales in “the region or nation,” despite lease sales proceeding on a regular quarterly basis. *See e.g.*, Wyo-Ph-2:16525, 16626, 16629, 16636, 16639, 16715, 16719, 16728, 16731, 16732, 16733, 16734, 16735. Nor did BLM explain why such lease sales were not “reasonably foreseeable,” such that the agency would be entitled to ignore them. *Ctr. for Biological Diversity v. Nat’l Hwy. Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008) (“[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.” (internal alterations omitted)). Accordingly, BLM failed to analyze the cumulative impact of development of the challenged leases, “when added to other past, present, and reasonably foreseeable future actions,” including BLM leasing activities in the region and across the nation. 40 C.F.R. § 1508.7.

Moreover, even within Wyoming, BLM only considered Wyoming lease sales “currently undergoing internal review” to be “reasonably foreseeable.” Wyo-Ph-2:65.<sup>22</sup> Beyond these three BLM Wyoming lease sales, BLM provided *no* projections of future GHG emissions from BLM activities in Wyoming, the region, or across the nation, disregarding the Court’s direction on remand to discuss “other BLM actions in the region—such as other lease sales” to the extent they are reasonably foreseeable. Memo. Op. at 46, ECF No. 99. Notably, BLM has developed and had ready access to “*reasonably foreseeable* development scenarios” for each BLM planning unit in

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<sup>22</sup> Moreover, by the time the Supplemental EA was finalized on May 7, 2019, two of the three “reasonably foreseeable” future lease sales identified by BLM had, in fact, already occurred. Wyo-Ph-2:16736; Wyo-Ph-2:16737.

Wyoming and other states. *E.g.*, Wyo-Ph-2:105 to 111 (Newcastle Field Office RFD Report); Wyo-Ph-2:238 to 302 (Rawlins Field Office RFD Report); Wyo-Ph-2:303 to 462 (Casper Field Office RFD Report); Wyo-Ph-2:699 to 833 (Kemmerer Field Office RFD Report); Wyo-Ph-2:2740 to 2839 (Buffalo Field Office RFD Report); Wyo-Ph-2:2989 to 3217 (Rock Springs Field Office RFD Report). These reasonably foreseeable development scenarios provide BLM’s best estimates for future oil and gas development, including number of new wells and oil and gas production volumes, information readily convertible into GHG emissions estimates. *See* Wyo-Ph-2:130 (individual RFDSs to be “based on a reasonable, technical, and scientific estimate of anticipated oil and gas activity based on the best available information and data at the time of the study”). BLM’s refusal to use this available information to fully assess the impacts of past, present, and *reasonably foreseeable* future development was arbitrary. *Diné Citizens Against Ruining Our Env’t v. Bernhardt*, 923 F.3d 831, 853 (10th Cir. 2019) (failure to use reasonably foreseeable development scenarios to assess cumulative impacts arbitrary).

Second, instead of assessing reasonably foreseeable future emissions from BLM actions at a regional and national level, as this Court ordered, BLM estimated “existing” regional emissions based on an unsupported, arbitrary assumption that the five-year average of direct and indirect emissions from 2014 to 2018 represents an accurate portrayal of *current* conditions.

Wyo-Ph-2:69, 72.<sup>23</sup> Yet BLM never provided any assessment of current state-by-state or regional

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<sup>23</sup> On this point too, BLM’s analysis is riddled with errors. BLM incorrectly calculated “the Federal 5-year annual average direct CO<sub>2</sub>e emissions in the Rocky Mountain Region,” and “in the Great Plains Region,” erroneously dividing each of the regional averages by 5. Wyo-Ph-2:69. When this error was pointed out in Guardians’ comments, Wyo-Ph-2:12959, BLM responded that “BLM summed the states’ 5-year averages, and divided it by the total number of states in that region to obtain the average annual emission for the entire region.” Wyo-Ph-2:11. BLM added similar language to the final Supplemental EA. Wyo-Ph-2:68. BLM’s explanation fails to provide information useful for evaluating the impacts of the challenged leases, and moreover, simply makes no sense. By dividing each “region’s annual average” by “the total number of



trends to support that assumption. To the contrary, the limited data provided by BLM actually shows that oil and gas-related emissions are increasing across the West. For example, Table 12 estimated 2014 direct emissions of 17.9 million mt CO<sub>2</sub>e on federal lands across the Rocky Mountain and Northern Great Plains Regions (excluding Wyoming). Wyo-Ph-2:68 to 69.<sup>24</sup> Yet from 2015 to 2018, an average of 39.1 million mt/yr CO<sub>2</sub>e were emitted, more than double the 2014 emissions rate.<sup>25</sup> Wyo-Ph-2:68 to 69. Similarly, Table 13 shows that average indirect CO<sub>2</sub>e emissions on federal lands across the Rocky Mountain and Northern Great Plains Regions (excluding Wyoming), were more than *three times higher* on average from 2015 to 2018 than in 2014—more than 185 million tons per year from 2015 to 2018, compared to less than 60 million tons in 2014.<sup>26</sup> Wyo-Ph-2:73. Thus, BLM arbitrarily relied on an assumption that emissions rates are remaining constant when the only available data shows otherwise.<sup>27</sup> The agency has therefore

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states in each region,” Wyo-Ph-2:68, BLM has calculated a meaningless average of the *individual states* within the region, not, as the agency contended, each “region’s annual average” emissions. Wyo-Ph-2:68. Moreover, BLM did not, in fact, divide the Northern Great Plains region’s total emissions by 3 states (Montana, North Dakota, South Dakota), as the agency stated in its response to comments and the Supplemental EA. Wyo-Ph-2:11; Wyo-Ph-2:68. Instead, the agency incorrectly divided the regional total, 1,018,055.6 mt/yr, also by five, erroneously calculating the average for each state as 203,611.1 mt/yr. Wyo-Ph-2:69. Again, the pervasive errors render the Supplemental EA virtually indecipherable, inaccurate, and incapable of providing information useful to the decisionmaker. *Klamath-Siskiyou Wildlands Ctr.*, 387 F.3d at 996; *NRDC*, 421 F.3d at 811-13; *Motor Vehicle Mfrs.*, 463 U.S. at 43.

<sup>24</sup> 17.9 million mt is calculated from Table 12 by subtracting the 2015-2018 total (156,593,249.9 mt) from the 2014-2018 total (174,523,781.9 mt). Wyo-Ph-2:69.

<sup>25</sup> 39.1 million mt/yr is calculated by dividing the 2015-2018 total (156,593,249.9 mt) by 4 years. Wyo-Ph-2:69.

<sup>26</sup> The 2014 total of 59,634,668 mt is calculated from Table 16 by subtracting the 2015-2018 total (741,041,021.7 mt) from the 2014-2018 total (800,675,689.7 mt). Wyo-Ph-2:73. The 2015-2018 annual average of 185,260,255 mt/yr is calculated by dividing the 2015-2018 total (741,041,021.7 mt) by 4 years. Wyo-Ph-2:73.

<sup>27</sup> BLM also misleadingly compared BLM Wyoming’s *annual* 2018 direct emissions with the *five year total* for the combined Rocky Mountain and Northern Great Plains Region emissions,

“offered an explanation for its decision that runs counter to the evidence before the agency.” *See Motor Vehicle Mfrs.*, 463 U.S. at 43.

Finally, as noted above, it is now the express policy of BLM and the federal government to “maximize[] the use of American resources,” including oil and gas production on federal public lands.<sup>28</sup> Accordingly, Interior has been making active efforts to streamline the oil and gas leasing process, as well as processing of drilling permits. Given this policy focus and concerted agency effort to expedite and maximize oil and gas production on federal lands, it is unreasonable for BLM to assume past emission rates will reflect future trends and offer no projections for future oil and gas activities aside from three BLM Wyoming lease sales already planned or completed at the time of BLM’s decision. *See Sierra Club*, 867 F.3d at 1372 (intended consequences are reasonably foreseeable under NEPA). BLM’s decision to re-approve the challenged lease sales without considering the cumulative climate impacts of development of the challenged leases “when added to other past, present, and reasonably foreseeable future actions”— including BLM lease sales and reasonably foreseeable development scenarios, on a regional and national basis—was arbitrary, violating both NEPA and this Court’s remand order. 40 C.F.R. § 1508.7; Memo. Op. at 46, ECF No. 99.

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comparing apples to oranges and minimizing the significance of the Wyoming emissions. Wyo-Ph-2:69 (Table 12, showing 174,523,781.9 mt CO<sub>2</sub>e as total emissions from 2014-2018 for Rocky Mountain and Northern Great Plains regions combined). BLM made a similarly inapposite comparison between BLM Wyoming’s *annual* 2018 indirect emissions and the *five year total* for the combined Rocky Mountain and Northern Great Plains Region emissions, again diluting and minimizing the Wyoming emissions. Wyo-Ph-2:74; *compare* Wyo-Ph-2:73 (indicating approximately 21.3 million mt/yr Federal indirect CO<sub>2</sub> emissions in Wyoming) *with* Wyo-Ph-2:73 (Table 15, indicating 800.7 million mt total combined indirect emissions from Rocky Mountain and Northern Great Plains regions from 2014-2018).

<sup>28</sup> Sec. Order 3351, *supra* n. 10.

**D. BLM’s carbon budget analysis was inconsistent, irrational, and arbitrary.**

Under NEPA’s hard look requirement, an agency’s analysis of environmental impacts must be “fully informed,” “well-considered,” and based on “[a]ccurate scientific analysis.” *NRDC v. Hodel*, 865 F.2d 288, 294 (D.C. Cir. 1988); 40 C.F.R. §§ 1500.1(b), 1502.24. Agencies must establish adequate baseline conditions; otherwise, “there is simply no way to determine what effect the project will have on the environment and, consequently, no way to comply with NEPA.” *Or. Natural Desert Ass’n v. Rose*, 921 F.3d 1185, 1190 (9th Cir. 2019) (quoting *Great Basin Res. Watch v. BLM*, 844 F.3d 1095, 1101 (9th Cir. 2016)). Every NEPA analysis must draw a “rational connection between the facts found and the choice made.” *Motor Vehicle Mfrs.*, 463 U.S. at 43. Similarly, “[a]n unacknowledged and unexplained inconsistency is the hallmark of arbitrary and capricious decision-making.” *Bauer v. DeVos*, 325 F. Supp. 3d 74, 109 (D.D.C. 2018). In its prior ruling, this Court directed BLM to “reassess whether the social cost of carbon or another methodology for quantifying climate change may contribute to informed decisionmaking.” Memo Op. at 50 n.31, ECF No. 99. Carbon budgeting is one such methodology to understand the significance of the agency’s decisions and resulting impacts on climate change. *See supra* Background Part I.E.

Here, while BLM again refused to use the social cost of carbon, the agency purported to analyze climate impacts using a “global carbon budget.” Wyo-Ph-2:65. BLM’s analysis, however, was inconsistent, irrational, and arbitrary. As an initial matter, BLM was inconsistent about whether the agency even *conducted* a carbon budget analysis. While the Supplemental EA’s analysis of cumulative impacts purported to “include[] consideration of ... the global carbon budget,” mentioned the “tight timeline of the carbon budget,” and couched its conclusions about cumulative impacts in relation to the “potential to affect ... carbon budget

projections,” Wyo-Ph-2: 65, 77, 78, BLM’s response to comments firmly, yet contradictorily, disclaimed having made any “attempt to put the emissions in the context of a global carbon budget, or an analysis of a global carbon budget.” Wyo-Ph-2:12 to 13. BLM’s unexplained inconsistency on the basic elements of its own analysis is the “hallmark of arbitrary and capricious decision-making.” *Bauer*, 325 F. Supp. 3d. at 109.<sup>29</sup>

Just as knowing the amount of funds in a checking account is necessary to determine whether a check will bounce, without identifying how much of the carbon budget currently remains, “there is simply no way to determine what effect the project will have” on the remaining carbon budget. *Rose*, 921 F.3d at 1190. Hence, while the Supplemental EA attempted to use a carbon budget analysis (Wyo-Ph-2:38, 65, 77 to 78), BLM’s failure to disclose the actual remaining carbon budget required to limit global warming to thresholds established by climate science and national climate policy was arbitrary. *See supra* Background Part I.E. Specifically, while the Supplemental EA identified a carbon budget required to limit warming to 2 °C to be “1 trillion tons of carbon,” it also admitted that “varying amounts ... have already been consumed,” but failed to disclose how much of the budget actually remains. Wyo-Ph-2:38.<sup>30</sup> Without

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<sup>29</sup> Moreover, BLM’s sole explanation for supposedly not using a carbon budgeting analysis (which, again, the Supplemental EA did in fact purport to use) was also arbitrary: that “[t]he court did not *require* the BLM to put the emissions in the global context, or use any type of global budget analysis.” Wyo-Ph-2:12 to 13 (response to comment 23) (emphasis added). Hence BLM ignored the Court’s directives to (1) “reassess whether the social cost of carbon *or another methodology for quantifying climate change* may contribute to informed decisionmaking,” and (2) to not forego such analysis “simply because courts have thus far been reluctant to mandate it.” Memo. Op. at 50 n.31, ECF No. 99 (emphasis added). That is exactly what BLM argued in the response to comments—that the agency could refrain from carbon budget analysis simply because the Court did not specifically mandate its use. Wyo-Ph-2:12 to 13.

<sup>30</sup> In fact, one source relied upon by BLM—the U.S. Global Change Research Program’s Fourth National Climate Assessment—projected that the carbon budget for limiting warming to 1.5 °C would be *exhausted* in 2019. Wyo-Ph-2:6879 to 6880; *see also* Wyo-Ph-2:77 to 78 (quoting carbon budget analysis from National Climate Assessment, but omitting remaining budget). That

considering the current status of the carbon budget, the agency was thus arbitrary to conclude, without any basis, that BLM's actions have a "minor potential to affect ... carbon budget projections." Wyo-Ph-2:78.

Compounding this error, the Supplemental EA failed to identify or refer to a consistent carbon budget. Thus, in its discussion of the affected environment, BLM mentioned a carbon budget required for "having a likely chance of limiting global temperature rise to 2°C above pre-industrial levels." Wyo-Ph-2:38. However, in its cumulative effects analysis, the agency also referred, with no explanation or assessment, to the "carbon budget" required for "maintaining warming to 1.5 °C above pre-industrial levels." Wyo-Ph-2:77. BLM again failed to disclose how much of the budget currently remains, beyond admitting a "tight timeline" for emissions reductions and the likelihood of "interim overshoot" necessitating deployment of unidentified and currently non-existent "carbon dioxide removal measures." Wyo-Ph-2:77; *cf. Rose*, 921 F.3d at 1190. BLM's inconsistent use of different carbon budgets—with no explanation—was arbitrary, *Bauer*, 325 F. Supp. 3d. at 109, as was its apparent reliance on unidentified technologies for CO<sub>2</sub> removal. *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1197 (D. Colo. 2014) (rejecting agency reliance on future development of technology to reduce carbon emissions); *see New York v. Nuclear Regulatory Comm'n*, 681 F.3d 471, 478-79 (D.C. Cir. 2012) (agency cannot ignore future impacts based on belief that impacts may be avoided later); *see also* Wyo-Ph-2:3333 (noting "uncertain[ty]" about "availability and scale" of CO<sub>2</sub> removal technologies).<sup>31</sup>

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is, contrary to BLM's suggestions, *all* of the carbon budget may already be consumed and the planet's carbon bank account may be at zero.

<sup>31</sup> Further undermining the agency's carbon budget analysis, the Supplemental EA failed even to provide a correct reference for its principal quotation on the global carbon budget. Specifically, the Supplemental EA attributed its quotation about the "tight timeline of the carbon budget" to

In sum, the evidence in the record demonstrates an urgent need for “substantial and sustained reductions in [GHG] emissions” to avoid “severe, pervasive, and irreversible impacts to people and ecosystem” from the climate crisis. Wyo-Ph-2:3260; *see also supra* Background Part I.A-E. Indeed, the window for avoiding substantial impacts by limiting warming to 1.5 °C is projected to close in the next decade without *rapid and far-reaching changes* in existing energy systems. *See supra* Background Part I.B, I.E.<sup>32</sup> Despite this dire and urgent situation, BLM’s carbon budgeting analysis was repeatedly inconsistent and arbitrarily failed to provide any baseline or support for its key assertions. BLM further failed to provide a rational connection between the facts found regarding the “tight timeline of the carbon budget” and the need for “CO<sub>2</sub> emissions to approach zero,” Wyo-Ph-2:77-78, and the agency’s conclusion that large scale oil-and-gas leasing on over 300,000 acres of public lands that will produce GHGs for many decades has only a “minor potential to affect ... the carbon budget.” Wyo-Ph-2:78; *see Motor Vehicle Mfrs.*, 463 U.S. at 43.

## **II. BLM failed to make a convincing case for its finding of no significant impact.**

NEPA requires federal agencies to prepare an EIS for any “major Federal action[] significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). To determine whether a project’s impacts may be significant, agencies consider the “context” and “intensity.” 40 C.F.R. § 1508.27. The assessment of the intensity focuses on ten enumerated

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limit warming to 1.5 °C to the “EIA [U.S. Energy Information Administration].” Wyo-Ph-2:77. However, the quoted material does not appear in any EIA document contained in the record (or any other document for that matter), in violation of NEPA’s obligation to “make explicit reference by footnote to the scientific and other sources relied upon for its conclusions.” 40 C.F.R. § 1502.24; *see id.* § 1500.1(b) (NEPA’s objective to inform the public with “[a]ccurate scientific analysis”). This is one more instance of BLM’s error-riddled and obscurant NEPA analysis.

<sup>32</sup> Indeed, the window may have already closed. Wyo-Ph-2:6879 to 6880.

factors, including the project's adverse impacts, potential highly uncertain risks, and potential cumulative impacts. *Id.* § 1508.27(b). "Implicating any one of the factors may be sufficient to require development of an EIS." *Nat'l Parks Conservation Ass'n v. Semonite*, 916 F.3d 1075, 1082 (D.C. Cir. 2019). In assessing an agency's decision not to prepare an EIS, a court considers whether the agency "is able to make a convincing case for its finding of no significant impact." *Id.* (quoting *Sierra Club v. U.S. Dep't of Transp.*, 753 F.2d 120, 127 (D.C. Cir. 1985)). If an agency's FONSI contradicts statements in the EA or the record, the agency has failed to make a convincing case that an EIS is unnecessary. *Id.* at 1087; *Humane Soc'y v. Dep't of Commerce*, 432 F. Supp. 2d 4, 21-23 (D.D.C. 2006) (agency FONSI arbitrary for contradicting or omitting impacts identified in EA).

**A. BLM's statement in the FONSI that the leases' GHG emissions are insignificant directly contradicts the Supplemental EA's statement that the significance of the leases' GHG emissions is unknown.**

Here, BLM's FONSI stated unconditionally that GHG emissions from the leases would not have any significant impact: "[N]or are the effects of lease development expected to contribute significantly to existing emission levels at any scale, the rate of climate change, or the magnitude of effects from climate change in either a beneficial or adverse way." Wyo-Ph-2:99. However, in the Supplemental EA, BLM repeatedly stated the opposite: that it had no means of assessing the significance of the GHG emissions from the leases. *See* Wyo-Ph-2:78 ("*There are currently no established significance thresholds for GHG emissions that BLM can reference in NEPA analyses, but all GHG emissions contribute incrementally to potential changes in global climate, through direct and indirect feedback loops, either directly or indirectly, and in the short-term or long-term.*") (emphasis added); Wyo-Ph-2:78 ("Further, the degree to which GHG emissions from the proposed action (alone, and in combination with emissions from other activities) may contribute to changes in the absolute concentration of CO<sub>2</sub> in the global

atmosphere is *unknown*—*as is the significance of that contribution*—because no tools presently exist to measure that relationship.” (emphasis added)); *see also* Wyo-Ph-2:76 (declining to use social cost of carbon on basis that “there are no current criteria or thresholds that determine a level of significance for social cost of carbon monetary values”).

As in *Humane Society*, here BLM’s statement about the insignificance of GHG emission in the FONSI directly “contradicts the EA’s numerous citations” about the agency’s inability to determine the significance of the GHG emissions, and accordingly “the agency’s case for insignificance is far from convincing.” 432 F. Supp. 2d at 21; *see also* *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 106 (D.D.C. 2006) (agency’s significance determination arbitrary where agency provided “no determinate criteria” for determining significance “other than [the agency’s] conclusory say-so”); *Ctr. for Biological Diversity*, 538 F.3d at 1225 (explaining that where “an EA is so procedurally flawed that [the court] cannot determine whether the proposed ... project may have a significant effect, the court should remand for the preparation of a new [NEPA analysis]”). This is particularly the case where there are in fact tools, such as carbon budgeting and the social cost of carbon, that would allow the agency to evaluate the significance of the GHG emissions. *See supra* Background Part I.E, Argument Part I.D.

BLM violated NEPA by blithely concluding based only on its own “conclusory say-so” that the impact of millions of additional tons of GHG emissions added to the atmosphere over decades as a result of BLM’s leasing decisions would be insignificant, when the preeminent scientific experts on climate change have repeatedly warned that “[c]ontinued emission of [GHGs]” increases the likelihood of “severe, pervasive, and irreversible impacts to people and ecosystems” throughout the United States and the world. Wyo-Ph-2:3260; *see also supra* Background Part I.



**B. BLM’s statement in the FONSI that there are no highly uncertain climate impacts also directly contradicts the Supplemental EA’s ubiquitous statements about uncertainty.**

BLM’s FONSI concluded that “the degree of uncertainty and consideration of unknown or unique risks does not rise to the level of significance requiring an EIS.” Wyo-Ph-2:102. However, as in *Humane Society*, 432 F.2d at 20-21, BLM’s conclusions in the FONSI are contradicted by the Supplemental EA that is “replete with references to ... uncertainty.” In its short 52 pages, the Supplemental EA referenced uncertainty 22 times, including references to “inherent uncertainty” about impacts of climate change, Wyo-Ph-2:39; “highly uncertain” projections about lease development, Wyo-Ph-2:44; and, “significant uncertainty” about oil and gas production from leases, Wyo-Ph-2:60; *see also* Wyo-Ph-2:29, 39, 44, 53, 56, 59, 60, 61, 62, 77, 78 (referencing uncertainty). BLM further emphasized uncertainty with respect to the “magnitude of projected future climate change,” uncertainty in the science of climate change, and uncertainty about potential climate “feedbacks” such as the “release of GHGs from permafrost thaw,” which would magnify the impacts of climate change. Wyo-Ph-2:77, 78. BLM’s analysis demonstrated additional uncertainty by referring, without explanation, to two carbon budgets, *see supra* Argument Part I.D, and by citing the Fourth National Climate Assessment, which shows that (despite BLM’s contrary assertions, Wyo-Ph-2:78) the carbon budget for limiting warming to 1.5 °C may already be exhausted, Wyo-Ph-2:6879 to 6880, *cited by* Wyo-Ph-2:77 to 78. Such uncertainty firmly weighs in favor of BLM preparing an EIS, as “[i]f any ‘significant’ environmental impacts might result from the proposed agency action then an EIS must be prepared *before* the action is taken.” *Peterson*, 717 F.2d at 1415 (emphasis in original).

Moreover, as noted, BLM repeatedly stated in the Supplemental EA that both the contribution of the GHG emissions from the leases to global CO<sub>2</sub> concentrations and their

significance are “unknown.” Wyo-Ph-2:78. BLM also relied on uncertainty and lack of “criteria or thresholds that determine a level of significance” to evade using the social cost of carbon to quantitatively assess the magnitude of climate impacts. Wyo-Ph-2:76. Having thus repeatedly cited and relied upon “the action’s uncertain effects and unknown risks” in the Supplemental EA, it was a “*non sequitur*” and, therefore a NEPA violation, for the FONSI to conclude that “the degree of uncertainty ... does not rise to the level of significance requiring an EIS.” *Humane Soc’y*, 432 F. Supp. 2d at 21<sup>33</sup>; Wyo-Ph-2:0102. As in *Sierra Club*, 459 F. Supp. 2d at 106, BLM’s conclusion that the myriad instances of uncertainty and unknown effects are not “significant” was not based on any identified criteria, but only BLM’s “conclusory say-so.” Thus, contrary to the FONSI’s conclusory assertion that an EIS is not necessary, the repeated references to uncertainty in the Supplemental EA that contradict the FONSI demonstrate that BLM’s leasing decisions “would benefit from an EIS.” *Semonite*, 916 F.3d at 1087; *accord Ocean Advocates v. U.S. Army Corps of Eng’rs*, 402 F.3d 846, 870-71 (9th Cir. 2004) (agency’s “lack of knowledge does not excuse the preparation of an EIS; rather, it requires [the agency] to do the necessary work to obtain it” (quoting *Nat’l Parks Conservation Ass’n v. Babbitt*, 241 F.3d 721, 733 (9th Cir. 2001))).

**C. BLM’s FONSI failed entirely to assess whether the proposed leases are related to other actions with cumulatively significant impacts.**

NEPA requires agencies to assess “[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.” 40 C.F.R.

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<sup>33</sup> *Accord Native Fish Soc’y v. NMFS*, 992 F. Supp. 2d 1095, 1109 (D. Or. 2014) (failure to prepare EIS arbitrary where “FONSI ... very nearly ignored ... uncertainty,” even though “[t]here are repeated references in the administrative record to the uncertainty”).

§ 1508.27(b)(7). Agencies may not “gam[e] the system by artificially segmenting significant actions into piecemeal, and individually insignificant, components.” *Am. Rivers*, 895 F.3d at 54. “The analysis in the EA, in other words, cannot treat the identified environmental concern in a vacuum, as an incremental approach attempts.” *Grand Canyon Trust v. FAA*, 290 F.3d 339, 346 (D.C. Cir. 2002). Consistent with these standards, this Court required BLM to “consider the cumulative impact of GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation.” Memo. Op. at 46, ECF No. 99.

Here, in making its significance determination, BLM’s FONSI failed entirely to assess whether GHG emissions from the leases are “related to other actions with individually insignificant but cumulatively significant impacts.” 40 C.F.R. § 1508.27(b)(7); *cf.* Wyo-Ph-2:102-03.<sup>34</sup> Accordingly, instead of assessing the significance of the combined “cumulative” impacts of “GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation,” as this Court specifically ordered, Memo. Op. at 46, ECF No. 99, BLM evaluated the significance of emissions from the leases *in isolation from* other past, present, and reasonably foreseeable GHG emissions: “These calculations<sup>[35]</sup> support the

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<sup>34</sup> Indeed, without taking a hard look at the cumulative impacts of the challenged leases, *see supra* Argument Part I.C, BLM lacked the information and context needed to assess their significance.

<sup>35</sup> Further undermining BLM’s credibility, the FONSI incorrectly described the calculations provided in the Supplemental EA which it purported to rely on. For example, the FONSI represented that BLM Wyoming’s cumulative contribution to global oil and gas-related emissions in 2018 was “less than 0.01%,” Wyo-Ph-2:103; whereas, the Supplemental EA, in fact, indicates that this contribution is “approximately 0.66%.” Wyo-Ph-2:75. The FONSI also stated that “[f]ederal fossil fuel GHG emissions from extraction and combustion in Wyoming” represented “0.13% of total Federal emissions (all Federal fossil fuel sources),” Wyo-Ph-2:103; whereas, the Supplemental EA, in contrast, indicated that Wyoming contributes approximately 57% of total Federal emissions. Wyo-Ph-2:50. Such contradictions between statements in the FONSI and the EA further render BLM’s conclusions regarding the insignificance of the

conclusion that *development of these leases* would represent only a small fraction of the potential emissions at the state, regional, national and global scales, and would be expected to have little to no impact on total GHG levels, the rate of climate change, or the magnitude of effects from climate change.” Wyo-Ph-2:103 (emphasis added); *but see Am. Rivers*, 895 F.3d at 55 (agency violated NEPA by failing to assess significance of cumulative impacts of project *together with* other past and continuing impacts); *Humane Soc’y*, 432 F. Supp. 3d at 22 (agency violated NEPA where “its finding of ‘no cumulatively significant impacts’ [of proposed scientific research on sea lions] is made without reference to non-research-related deaths [i.e., other cumulative effects]”).

The FONSI’s dismissal of any significant cumulative effects from the leasing decisions on the basis that the lease emissions are “individually insignificant” was arbitrary. *Cf.* 40 C.F.R. § 1508.27(b)(7). BLM’s analysis is particularly problematic because, as noted above, the cumulative effects of climate change pose a growing existential threat to the entire planet and GHG emissions from fossil fuels produced on federal lands are one of the largest sources of GHG emission driving this crisis. *See supra* Background Part I.

In sum, while NEPA does not impose substantive limitations on agency action, it requires agencies to own up to the true environmental consequences of their actions. *Am. Rivers*, 895 F.3d at 49 (agencies must take “hard and honest look”). Here, BLM skirted the truth about the climate impacts of its expanding oil-and-gas leasing decisions at every turn, disregarding this Court’s mandate to conduct a “robust” analysis that considers the cumulative impacts of BLM’s past, present, and reasonably foreseeable fossil fuel leasing decisions. Memo. Op. at 46, ECF No. 99.

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cumulative impacts of leasing’s GHG emissions arbitrary. *See Humane Soc’y*, 432 F. Supp. 2d at 21-23.

BLM has failed to make a convincing case that its leasing decisions will not have significant impact. It must now prepare an EIS.

### REMEDY

Vacatur of the challenged leases is the appropriate remedy for BLM's NEPA violations. Under the APA, the reviewing court "shall ... hold unlawful and set aside agency action ... found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). "[V]acating a rule or action promulgated in violation of NEPA is the standard remedy." *Humane Soc'y of U.S. v. Johanns*, 520 F. Supp. 2d 8, 37 (D.D.C. 2007).

As this Court previously admonished:

[T]he Court will not hesitate to unwind any improper grants of authority to drill on the Wyoming, Colorado, or Utah land. The Court accordingly encourages BLM to refrain from investing resources and approving any APDs or otherwise authorizing new oil and gas drilling on the Wyoming, Colorado, or Utah land until it is far more certain that they are supported by adequate NEPA review. Any such investments in resources by BLM, or private oil interests for that matter, may prove foolhardy if BLM's new decisions are subsequently vacated rather than remanded.

Memo. Op. at 8-9, ECF No. 121.

"The decision whether to remand or vacate 'depends on [1] the seriousness of the order's deficiencies (and thus the extent of doubt whether the agency chose correctly) and [2] the disruptive consequences of an interim change that may itself be changed.'" *Milk Train, Inc. v. Veneman*, 310 F.3d 747, 755-56 (D.C. Cir. 2002) (quoting *Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm'n*, 988 F.2d 146, 150-51 (D.C. Cir. 1993)).

Here, these factors weigh in favor of vacatur. In remanding BLM's environmental analysis for the challenged leases, the Court previously recognized the possibility that BLM would be able to substantiate its previous conclusions, but made clear that the agency needed to give "serious consideration to the Court's concerns." Memo Op. at 59, ECF No. 99. However, in rushing to complete a new analysis of climate impacts, BLM failed to provide the "serious

consideration” demanded by the Court. *Id.* Instead, the agency inappropriately treated “remand as an exercise in filling out the proper paperwork *post hoc*.” *Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs*, 282 F. Supp. 3d 91, 109 (D.D.C. 2017). BLM’s rushed analysis is not only riddled with errors, but the agency completely ignored the Court’s specific directive to assess the cumulative impacts of other reasonably foreseeable BLM lease sales in the region and nation. In light of the agency’s disregard of the Court’s remand order and the fundamental errors in its updated analysis, BLM should not be given a third chance to paper over the serious deficiencies underlying its issuance of the leases. *See Pub. Serv. Co. of Colo. v. Andrus*, 825 F. Supp. 1483, 1509-10 (D. Idaho 1993) (issuing injunction where agency “refus[ed] to comply with the law”).

Moreover, while vacating the leases may have certain disruptive consequences for the oil and gas industry, the Court specifically put BLM and industry on notice of the risk that the leases and any additional approvals could be vacated. *See* Memo Op. at 8-9, ECF No. 121; *see also Desert Citizens Against Pollution v. Bisson*, 231 F.3d 1172, 1187-88 (9th Cir. 2000) (disregarding harm to BLM and mining company that “acted at their peril . . . while on notice of the pendency of a suit seeking an injunction against them”). Moreover, the environmental consequences from allowing the leases to remain in place and oil and gas drilling to proceed while BLM attempts to once again correct its deficient analysis are serious and irreparable. As BLM itself acknowledges, an oil or gas lease represents a legal entitlement to develop the oil and gas resources underlying the lease, constituting an “irreversible and irretrievable commitment of natural resources.” Supp. Br. at 2, ECF No. 95 (citing *Peterson*, 717 F.2d at 1411). It is further well established that environmental injury, by its nature, is generally irreparable. *Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 545 (1987). Once oil and gas development begins, the

climate consequences from extraction, transportation, processing, and combustion cannot be undone. GHGs cannot be removed from the atmosphere. Wyo-Ph-2:3333 (noting “uncertain[ty]” about “availability and scale” of CO<sub>2</sub> removal technologies). Accordingly, vacatur of the subject oil and gas leases and any subsequent drilling permits is the only remedy that serves NEPA’s fundamental purpose of requiring agencies to look *before* they leap, and the only one that avoids a “bureaucratic steam roller.” *Davis v. Mineta*, 302 F.3d 1104, 1115 (10th Cir. 2002), *abrogated on other grounds by Diné Citizens Against Ruining Our Env’t v. Jewell*, 839 F.3d 1276, 1282 (10th Cir. 2016)).

Flouting the Court’s admonition for BLM to take its NEPA obligations seriously, BLM’s analysis upon remand inappropriately reduced its obligations under NEPA to a “bureaucratic formality”—not a hard and honest look. Memo. Op. at 59, ECF No. 99. Accordingly, the Court should vacate the issuance of the leases, as well as “any improper grants of authority to drill” issued on the underlying leases. Memo Op. at 8, ECF No. 121, at 8.

### CONCLUSION

For the reasons set forth above, this Court should grant Guardians’ motion for summary judgment and find unlawful, vacate, and set aside BLM’s Supplemental EA, FONSI, and the challenged leases. This Court should further order BLM to prepare an EIS.

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