**Wyoming Outdoor Council ▪ National Audubon Society ▪ The Wilderness Society ▪ Wyoming Wilderness Association**

**Delivered via USPS express mail**

August 22, 2020

Travis Bargsten
BLM Wyoming State Office
5353 Yellowstone Road
Cheyenne, Wyoming 82009

**Re: Protest of the BLM's September 22-25, 2020 Competitive Oil-and-Gas Lease Sale for Wyoming**

Dear Travis,

The Bureau of Land Management's September 2020 lease sale for the State of Wyoming threatens wildlife habitat that is relied upon by a variety of species, most notably greater sage-grouse and mule deer. On behalf of the Wyoming Outdoor Council, National Audubon Society, The Wilderness Society, and Wyoming Wilderness Association, we accordingly submit this protest of the sale under 43 C.F.R. § 3120.1-3.[1] Under the preferred alternative for this lease sale, the BLM would offer 155 parcels, covering approximately 181,930.195 acres. According to the applicable Notice of Competitive Lease Sale, the sale "will start with offering of the parcels from the postponed June 2020 sale notice, followed by the Septembers 2020 Sale parcels."[2]

The June 2020 sale was postponed indefinitely by the BLM, as indicated on the landing page for BLM Wyoming oil and gas lease sales. Though that page reads "June 2020 oil and gas lease sale - postponed. We will post updated information about this sale once it becomes available," the fact that the June parcels will be offered during the September sale is not disclosed on the landing page, nor in the NEPA documents page for the June sale on eplanning, nor in the Environmental Assessment (EA) for the September sale. The landing page still describes the June sale as "(POSTPONED)" though it does not clarify why the June sale was postponed or indicate, in any of the NEPA documents or relevant information notices, that the parcels will be offered in the September sale.

Problematically, the BLM has not responded to public protests of the June sale and apparently intends to offer the June parcels in September without reaching a decision on the relevant

[1] The environmental assessment prepared for this lease sale is numbered DOI-BLM-WY-0000-2020-0009-EA.
[2] Notice of Competititive Oil and Gas Lease Sale, September 22-25, 2020 at 1, available online at https://eplanning.blm.gov/public_projects/1502549/200346402/20022367/250028571/203Q%20Final%20Book.pdf

protests. We hope that the BLM plans to address protests of the June parcels in its consideration of the September protests. Additionally, the BLM has not responded to public comment on the September sale. Our comments on that sale, which remain relevant and are reiterated here, are a matter of public record and incorporated by reference herein.

The BLM proposes to offer 135 parcels covering approximately 169,750.75 acres from the June sale during the September sale. Combining the June parcels with the new parcels from the September sale, BLM intends to offer a total of 290 parcels covering 351,680.945 acres during the September sale. Because the BLM has not responded to our protest of the June parcels, and because that protest remains relevant to the parcels offered in this lease sale, we have attached and fully incorporate Wyoming Outdoor Council et al's protest of BLM Wyoming's June 2020 lease sale by reference herein as Exhibit 1.

As detailed in that protest, of the parcels from the June sale thirty-two parcels are located wholly or partially within Greater sage-grouse Priority Habitat Management Areas (PHMA or "core" sage-grouse habitat) and 125 parcels are located wholly or partially in sage-grouse General Habitat Management Areas (GHMA). DOI-BLM-WY-0000-2020-0008-EA at 74 [hereinafter "June EA"]. The EA for the September sale does not disclose the number of parcels or the acreage offered in PHMA and/or GHMA for Greater sage-grouse in its discussion of impacts to wildlife resources. DOI-BLM-WY-0000-2020-0009-EA at 4-21 [hereinafter "EA"]. Rather, it states that

> Approximately 40% of the lands in the proposed leases are located within Priority Habitat Management Areas (PHMAs). Almost all of the remainder are located in General Habitat Management Areas (GHMAs), with only eight parcels (4,466.680 acres) located in non-Greater sage-grouse habitats.

*Id.*

Based on this description, approximately 67,900.3 acres will be offered in PHMA and about 97,383.77 acres in GHMA from the September parcels. From the June parcels, acreage offered in PHMA is approximately 21,561.91 acres, and acreage to be offered in GHMA is approximately 148,800.65 acres. Thus, the September sale will offer a total of approximately 89,462.21 acres within PHMA and 246,184.42 acres in GHMA. All told, the September sale will offer about 335,646.63 acres of public land for oil and gas development within designated Greater sage-grouse habitat.

## I. ISSUES OF CONCERN

We have a number of concerns with the proposed action including the potential for significant direct, indirect, and cumulative impacts to sage-grouse and other sagebrush-obligate species. In addition, the proposed lease parcels raise serious concerns regarding impacts to big game migration corridors, including vital habitats like high use areas of corridors and stopovers, and to big game crucial winter range, particularly given significant new science on ungulate avoidance behavior that this EA fails to take into account. Furthermore, we have significant concerns regarding the insufficient analysis of climate impacts from this lease sale. Finally, the

proposed lease sale is fundamentally contrary to the multiple use–sustained yield principles embodied in the Federal Land Policy and Management Act (FLPMA). We also ask that the BLM delay this lease sale in light of the COVID-19 pandemic and the significant burden it places on public process, given Wyoming residents' limited access to broadband, discussed below.

## II. LEASE PARCELS PROTESTED

For the reasons discussed below, we protest the BLM's decision to offer parcels WY-2020-090547 through WY-2020-09-0553 from the September sale. Additionally, we protest parcels WY-2020-06-0390 through WY-2020-06-0514 from June. *See* Exhibit 1. Although these parcels were protested during the protest period for the postponed June sale by a number of parties, they are not listed as protested parcels on the website for the National Fluids Lease Sale System at the time of this writing.[3]

## III. INTERESTS OF THE PARTIES

The Wilderness Society, Wyoming Outdoor Council, Wyoming Wilderness Association, and National Audubon Society have a long-standing interest in the BLM's management of public lands in Wyoming, and engage frequently in the decision-making processes for land-use planning and project proposals that could potentially affect our public lands and minerals, including the oil-and-gas leasing process. Our members and staff enjoy many recreational, scientific, and other opportunities on BLM-managed public lands, including hiking, biking, nature-viewing, photography, and quiet contemplation in the solitude offered by wild places. Our missions are to work for the protection and enjoyment of the public lands for and by our members and the public.

The National Audubon Society protects birds and the places they need, today and tomorrow. A nonprofit conservation organization since 1905, Audubon works throughout the Americas using science, advocacy, education, and on-the-ground conservation. Audubon Rockies is a regional office of National Audubon Society, working in Wyoming.

The mission of The Wilderness Society is to protect wilderness and inspire Americans to care for our wild places.

Founded in 1967, the Wyoming Outdoor Council (WOC) is the state's oldest and largest independent conservation organization. Its mission is to protect Wyoming's environment and quality of life for present and future generations.

The Wyoming Wilderness Association is a non-profit organization created in 1979 by a group of wilderness advocates and outdoors people who envisioned the Wyoming Wilderness Act. Our mission is to defend Wyoming's magnificent wild landscapes from the pressures of development, mismanagement, and commodification. We represent the values and interest of nearly 2,000 Wyoming members.

[3] *See* https://nflss.blm.gov/protest/protestedparcel/

Although our organizations generally support the judicious leasing and responsible development of the public's oil-and-gas resources when done in the right place and after full disclosure of the environmental impacts that will result from development, we have concluded that with respect to this proposal, none of those basic guiding tenets have been achieved.

## IV. AUTHORIZATION TO FILE THIS PROTEST

As an attorney for the Wyoming Outdoor Council, I am authorized to file this protest on behalf of the Wyoming Outdoor Council and its members and supporters. I have also been given the authority to file this protest on behalf of The Wilderness Society, Wyoming Wilderness Association, and National Audubon Society.

## V. STATEMENT OF REASONS

### A. Because the BLM's Environmental Assessment Failed to Satisfy the Requirements of the National Environmental Policy Act, the Agency May Not go Forward with its September 2020 Lease Sale.

#### 1. The BLM has Failed to take the Necessary "Hard Look" at the Lease Sale's Potential Impacts to Sage-Grouse.

The BLM has not taken a hard look at the environmental impacts of this lease sale to sage grouse, in violation of NEPA. Under NEPA, the BLM must evaluate the "reasonably foreseeable" site-specific impacts of oil-and-gas leasing prior to making an "irretrievable commitment of resources." 40 C.F.R. § 1502.22; 42 U.S.C. § 4332(2)(c)(v); New Mexico ex rel. Richardson, 565 F.3d at 708; see also Sierra Club v. Hodel, 848 F.2d 1068, 1093 (10th Cir. 1988) (holding that agencies are to perform a hard-look NEPA analysis "before committing themselves irretrievably to a given course of action so that the action can be shaped to account for environmental values"); Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc., 435 U.S. 519, 553 (1978) (holding that NEPA "places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action"). Courts have held that the BLM makes such an irretrievable commitment of resources when it issues an oil-and-gas lease without reserving the right to later prohibit all development. New Mexico ex rel. Richardson, 565 F.3d at 708; Pennaco Energy, Inc. v. U.S. Dep't of the Interior, 377 F.3d 1147, 1160 (10th Cir. 2004); Conner v. Burford, 848 F.2d 1441, 1550 (9th Cir. 1988).

Here, the BLM is making an "irretrievable commitment of resources" by offering leases without reserving the right to prevent all future development. The site-specific impacts to sage grouse are "reasonably foreseeable" and must be analyzed now, rather than waiting until a leaseholder submits an application for a permit to drill (APD).

However, in the EA for this lease sale, BLM has not sufficiently evaluated reasonably foreseeable impacts to sage grouse. In light of the recent federal order in *Western Watersheds v. Zinke* enjoining the 2019 sage grouse plan revisions, this lease sale must comply with the now reinstated, more stringent 2015 sage grouse plans. *See* Mem. Order and Decision, *Western*

*Watersheds Project v. Schneider*, 2019 U.S. Dist. LEXIS 181043 (D. Idaho Oct. 16, 2019) (attached as Exhibit 2).

BLM claims in the EA that this lease sale conforms to the 2015 plans. Yet the EA makes no attempt whatsoever to analyze potential impacts to sage grouse under the 2015 plans' standards. For instance, the EA makes no mention of the 2015 plans' prioritization requirement, the net conservation gain standard, compensatory mitigation and other key components of the 2015 plans. These measures establish the "adequate regulatory mechanisms" that were critical in informing Fish and Wildlife's decision not to list the sage-grouse under the ESA. As the EA makes no effort to evaluate potential impacts to sage grouse from this lease sale under the 2015 RMP, it clearly cannot satisfy NEPA's hard look mandate. In addition to violating NEPA, this lease sale's lack of accordance with the 2015 plans violates FLPMA. That issue is addressed separately below.

**2. The BLM Failed to Consider the Cumulative Impacts of Leasing on Sage-grouse.**

Additionally, the BLM has failed to consider the cumulative impacts of leasing to sage grouse. BLM's responsibility to fully evaluate cumulative impacts was clarified in recent case law

> NEPA requires that the environmental consequences should be considered together when several projects that may have cumulative environmental impacts are pending concurrently. Kleppe, 427 U.S. at 410. NEPA also requires that agencies do more than merely catalogue relevant projects in the area. Great Basin Mine Watch v. Hankins, 456 F.3d 955, 971 (9th Cir. 2006). An agency instead must give sufficiently detailed analysis about these projects and the differences between them. Id. The agency must provide sufficient detail in its analysis such that the analysis will assist the "decisionmaker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts." Churchill Cty. v. Norton, 276 F.3d 1060, 1080 (9th Cir. 2001) (quoting City of Carmel-by-the-Sea v. U.S. Dept' of Transp., 123 F.3d 1142, 1160 (9th Cir. 1997)).

*WildEarth Guardians v. Zinke,* 368 F. Supp. 3d 41 (D.D.C. 2019) at 23 (attached as Exhibit 3).

The BLM must sufficiently analyze projects in Wyoming and neighboring states and "set forth in sufficient detail" a description of past lease sales and projects and the previous impacts to sage grouse resulting from them. *See e.g.* Lands Council v. Powell, 395 F.3d 1019, 1028 (9th Cir. 2005), (faulting an agency for failing to catalogue other agency projects in its environmental assessments). Similarly, the Ninth Circuit in Klamath-Siskiyou held that BLM failed to comply with NEPA where it discussed other projects, but offered "no quantified assessment of their combined environmental impacts." 387 F.3d at 994.

Here, the BLM has merely tiered to the relevant RMP amendments including the 2015 rules, without the robust evaluation of cumulative impacts that NEPA requires. Recent case law makes clear that tiering alone is insufficient. In the aforementioned *WildEarth* case, the court held that

> BLM's tiering argument also fails because the RMPs predate the lease sales by more than two years ... The cumulative impact regulations require a catalogue of past, present, and reasonably foreseeable projects at the time of the least sale, not two years ago. BLM has

> the benefit of two years' worth of information that it did not have at the RPM stage about what constitutes past, present, and reasonably foreseeable projects. BLM's tiering argument might carry some weight if one of the RMP alternatives proved to be the exact scenario that developed over the last two years. It would fail even then, however, as it fails to account for actions outside the planning area for that specific RMP. *See* Klamath-Siskiyou, 387 F.3d at 994.

*Id.* at 26.

Here too, tiering to the relevant RMPs is insufficient because the BLM has not catalogued nor evaluated the past, present, and reasonably foreseeable projects *at the time of the lease sale*, nor has the agency accounted for actions outside the planning area. Tiering to the 2015 Plans without conducting further cumulative impacts analysis cannot satisfy NEPA's mandate.

### 3. The BLM has not taken a Hard Look at the Lease Sale's impacts on Big Game Migration Corridors and Crucial Winter Range

The BLM has not taken a hard look at potential impacts to big game migration corridors and crucial winter range in its review of this lease sale. As the EA notes, seventeen parcels are proposed within a State of Wyoming-designated migration corridor. EA at 3-34. These parcels total 11,231 acres within the Baggs corridor, 8,890 acres within the Sublette corridor, and 1,382 acres within the Platte Valley corridor. Additionally, this lease sale proposes to offer 23 parcels in mule deer crucial winter range (CWR) including 10,711 acres within CWR for the Baggs herd unit (HU), 10,455 in CWR for the Basin HU, 1,562 acres within CWR for the Platte Valley HU, 401 acres in CWR for the Southwest Bighorn HU and 2,609 acres in CWR for the Sublette HU totaling about 43,640 acres of mule deer crucial winter range.

#### a. The BLM must fully consider impacts to migration corridors

The BLM must fully consider potential impacts to mule deer migration corridors in order to comply with NEPA's hard look requirement, and has not done so in this EA. In this lease sale BLM proposes to lease extensively within State of Wyoming-designated mule deer migration corridors, offering parcels in all three designated corridors, including parcels that overlap vitally important high use areas and stopovers within herd units that have already faced dramatic population declines due to human disturbance. Not only is this a violation of NEPA, it also violates FLPMA, which requires the BLM to adhere to state law to the extent possible. In violating the letter and the spirit of the Wyoming Mule Deer and Antelope Migration Corridor Protection Executive Order (Order 2020-1)(attached as Exhibit 4), this lease sale also violates FLPMA.

As the EO states, "migration corridors are essential to the maintenance of viable mule deer and antelope populations." *Id.* at 1. The order formally designates the Sublette Mule Deer, Baggs Mule Deer, and Platte Valley Mule Deer Corridors. *Id.* at 2. The order defines High Use Areas as the "segment or portion of a mule deer and antelope migration corridor used by 20% or greater of the [GPS] collared animals," and defines Stopover Areas as "the area used the majority of time by GPS-collared animals to forage and rest during spring and fall migration." *Id.* at 5. High

use areas and stopovers are the most important portions of "vital" habitat and are integral to corridor functionality.

Wyoming's migration EO makes clear that "whenever possible, development, infrastructure, and use should occur outside of designated corridors" and outlines management considerations for specific areas within corridors. For high use areas "surface disturbance and human presence shall be limited to levels that maintain the corridor functionality and do not cause migrating mule deer or antelope to avoid or leave the high-use portion of the designated corridor during migration periods" and for stopovers within high use areas "surface disturbance should be avoided" and "permitted human activities during migration periods should be limited or avoided."

Yet despite this strong state policy directive to maintain corridor functionality and protect the most important and vulnerable habitat within migration corridors, the BLM has decided to lease parcels in all three corridors, including parcels in stopovers within high use areas. Four parcels in the imperiled Red Desert to Hoback corridor (parcels 89-92) are particularly egregious. *See* Exhibit 5 – Map of Parcels in Red Desert to Hoback MDC stopovers. These parcels overlap stopovers within high use areas. Parcels number 90 and 91 are almost entirely within high use areas and offer little to no opportunity to site development outside of corridors in compliance with the EO.

Furthermore, the proposed leases contain no stipulations to ensure cooperation with Wyoming state agencies at the APD stage. They merely include the unenforceable lease notice that commenters have regularly explained the deficiencies of. The BLM should defer leases in corridors, particularly any leases in high use areas and stopovers, and must attach legally binding stipulations to any lease in corridors explicitly incorporating the EO to ensure the public that the BLM will work with Wyoming state agencies to carry out the purposes of the EO. Until the BLM does so, it undermines Wyoming's state strategy and unacceptably threatens our herds.

### b. The BLM must fully consider impacts to crucial winter range

The BLM must fully consider impacts to mule deer crucial winter range in the EA for this lease sale, and has not done so here. Once again, the BLM appears to rely on stipulations designed to protect sage grouse in order to protect crucial winter range for ungulates. The BLM explains

> Surface-disturbing and disruptive activities are typically prohibited during the timeframe of November 15-April 30 in CW/YR and where intersecting with sage-grouse nesting and early brood-rearing habitats protected under the approved RMPs would typically be delayed until after June 30. These time periods would generally cover both spring and fall migration seasons. For those parcels where activity would not be restricted during migration, on a site-specific basis, the need for such can be assessed and applied as appropriate, in coordination with the WGFD."

EA at 4-23.

This approach is not adequate. The BLM assures the public it "will work with project proponents, landowners, and the WGFD to site projects in locations containing the least sensitive habitats to minimize impacts; such actions could reduce the loss of higher quality habitat for

wildlife that use or inhabit these areas, and will assist in allowing for contiguous, uninterrupted habitat." EA at 4-23. This assurance is insufficient.

Mitigation measures must be developed to a reasonable degree and supported by evidence. Here, BLM has merely listed potential measures with no analysis of their potential efficacy and no supporting evidence. Courts have held that mere listing of mitigation measures is inadequate. *See, e.g.* HCPC I, Case No. 3:11-cv-00023-PK, slip copy at 26-27 (USFS's wetland/springs mitigation was insufficiently developed to justify a CE, to support a FONSI "proposed mitigation measures must be 'developed to a reasonable degree' and supported by analytical data."), citing Bosworth, 510 F.3d at 1029 (citing Nat'l Parks&Conservation Ass'n, 241 F.3d 722, 734 (9th Cir. 2001); Okanogan Highlands Alliance v. Williams, 236 F.3d 468, 473-75 (9th Cir. 2000). While "a mitigation plan need not be legally enforceable, funded or even in final form to comply with NEPA's procedural requirements'[,] a 'perfunctory description' or 'mere listing' of mitigating measures is inadequate to satisfy NEPA's requirements.'" Id. (citing Neighbors of Cuddy Mtn. v. USFS, 137 F.3d 1372, 1380 (9th Cir. 1998); Idaho Sporting Cong. v. Thomas, 137 F.3d 1146, 1151 (9th Cir. 1998).

In addition to inadequate mitigation, BLM's approach to leasing in crucial winter range presents several other problems. First, the timing limitation stipulations attached to mule deer crucial winter range are based on WGFD's admittedly inadequate and out of date Recommendations for Development of Oil and Gas Resources within Crucial and Important Habitat" (2010), which BLM explicitly cites in the EA. *Id.* Responding to a decade of new science, WGFD now recognizes that the TLS recommended in 2010 to protect crucial winter range are not effective to protect that vital designated habitat. Yet, because BLM has not analyzed their own proposed mitigation measures and considered their ability to maintain corridor functionality based on the available evidence, the agency has not reassessed its approach to leasing in CWR. Second, sage grouse stipulations may, but do not necessarily, overlap mule deer crucial winter range such that parcels outside of sage grouse habitat receive no benefit whatsoever from those protections, and furthermore those stipulations are not designed for mule deer nor are they based on the best available mule deer science. Finally, though BLM assures the public that the need for additional restrictions on parcels not protected during migrations "can be assessed and applied as appropriate" there is no stipulation with which to hold the BLM accountable to this promise, no mitigation strategy outlined in the EA, and no discussion of potential impacts beyond a cursory assurance that "no new significant impacts are expected and existing conditions are expected to continue." *Id.*

It is not clear how the BLM can make that claim given the lack of an impacts analysis. BLM cannot continue to punt analysis and mitigation to the APD stage and ignore its responsibilities at the lease sale stage. BLM must take a hard look at potential impacts. This includes evaluating potential impacts using the best available science which indicates, for instance, that ungulate avoidance of anthropogenic disturbance increases over time, a relevant scientific finding that indicates impacts will be greater than those expected in the underlying RMPs. *See* Samantha Dwinnell et. al "Where to forage when afraid: Does perceived risk impair use of the foodscape?" Ecological Applications 29(7), June 2019 ("Disturbance from energy development causes not only direct habitat loss but has a multiplicative effect through avoidance behavior resulting in indirect habitat loss 4.6-times greater than direct habitat loss from roads, well pads, and other

infrastructure."). *See also* Sawyer H, Beckmann JP, Seidler RG, Berger J. Long-term effects of energy development on winter distribution and residency of pronghorn in the Greater Yellowstone Ecosystem. Conservation Science and Practice (2019) (Our 15-year study showed that pronghorn avoidance and displacement from well pads increased through time and revealed a significant decline in winter residency rates concurrent with large-scale natural gas development in the GYE… The predicted distance from nearest well pad in our dis-placement analysis increased from 908 m in 2005 to1,708 m in 2017 and presumably led to indirect habitat losses much larger than habitat lost directly to infrastructure.) The BLM must consider significant new information including these studies in its analysis, rigorously evaluate potential impacts from leasing in crucial winter range, propose mitigation accordingly, and if those impacts are beyond those anticipated in the underlying RMPs, conduct and EIS.

The tiering concerns raised in our sage grouse comments apply here as well. The underlying RMPs predate the lease sale significantly. The cumulative impacts analysis required by NEPA must catalogue past, present, and reasonably foreseeable projects at the time of the lease sale. This requires a deeper analysis than merely tiering to the underlying RMPs. As in the *Montana Wildlife Federation* case cited above, the BLM has the benefit of years of information since the relevant RMPs were published and must account for that information here. Otherwise the public has no way to understand the extent of leasing and development in crucial winter range and the potential impacts resulting from it.

## B. The BLM Failed to Comply with the Federal Land Policy and Management Act in Approving the Lease Sale.

### 1. The Lease Sale Violates FLPMA Because it is Not Consistent with the 2015 Sage-grouse Plan's Prioritization Mandate.

#### a. The EA is not consistent with the Wyoming BLM Approved Resource Management Plan Amendments (September 2015), as required by FLPMA, because it relies on guidance from the vacated Instruction Memorandum 2018-026 .

This lease sale violates FLPMA because it relies on the vacated IM 2018-026, and because the lease sales themselves apply the same faulty logic from the IM. Per FLPMA, BLM cannot take actions that are inconsistent with the governing land use plans – in this case the 2015 grouse plan amendments, which the Fish & Wildlife Service noted as having "mandatory requirements" to protect habitat.

Recent case law highlights BLM's failure to adhere to governing land use plans, and is applicable here. On May 22, 2020 a federal district court in Montana ruled in favor of sage-grouse protection in a case brought by Montana Wildlife Federation, Montana Audubon, National Audubon Society, National Wildlife Federation and The Wilderness Society. In a victory for the plaintiffs, the court vacated BLM's Instruction Memorandum 2018-026, which states that "[i]n effect, the BLM does not need to lease and develop outside of [sage-grouse] habitat management areas before considering any leasing and development within [sage-grouse]

habitat." The court vacated IM 2018-026, and vacated and remanded three contested lease sales in Montana and Wyoming, on the grounds that both the IM and the lease sales themselves violate FLPMA because they are inconsistent with the 2015 plans (which remain in effect as a result of litigation enjoining the 2019 plans). Mem. Order and Decision, *Montana Wildlife Federation et.al. v. Bernhardt et.al.* CV-18-69-GF-BMM (D. Montana May 22, 2020)(Attached as Exhibit 6).

The court stated it "sees no reason to leave the 2018 IM in place. BLM's errors undercut the very reason that the 2015 Plans created a priority requirement in the first place and prevent BLM from fulfilling that requirement's goals." *Id.* At 30. The court found that "BLM's reinterpretation of the prioritization requirement in the 2018 IM conflicts with both its own application of the prioritization requirement before issuance of the National Directives and FWS's understanding of the requirement in rejecting the request to list the sage-grouse under the ESA." *Id.* At 23. In addition, the court found the new guidance violated FLPMA "because it misconstrues the 2015 Plans and renders the prioritization requirement into a mere procedural hurdle" instead of the meaningful provision that was clearly intended to accomplish 2 goals: limiting surface disturbance and encouraging development outside grouse habitat.

In particular, The 2018 IM interpreted prioritization to only apply in instances of an backlog in expressions of interest (EOI), in which case the BLM would prioritize processing leases outside habitat, but did not require consideration of the many factors set out in the 2016 IM, which directed actual prioritization of leasing outside habitat and consideration of development potential regardless of EOIs. Further, BLM's new guidance did not include any reference to encouraging development outside grouse habitat – an explicit goal of the 2015 plans.

Predictably, the September sale follows the same pattern as the recently vacated lease sales. BLM has made no attempt whatsoever to prioritize development outside of sage-grouse habitat. Almost the entirety of this lease sale is within designated sage-grouse habitat, and 40 percent of parcels overlap PHMA. Coupled with the June parcels, the September sale will offer about 67,900.3 acres in PHMA. As in the *Montana Wildlife Federation* case, the BLM improperly relied on IM 2018-026 and the faulty approach therein permeates the lease sale itself. Here too, BLM's decision not to prioritize leasing outside of grouse habitat violates FLPMA, both because of the agency's reliance on the now vacated IM, and because the lease sale itself fails to adhere to the prioritization requirement embedded in the 2015 plans.

**b. This lease sale itself violates FLPMA because it, explicitly and in effect, follows the same rationale as the vacated IM 2018-26**

As discussed above, this lease sale itself violates FLPMA because, as in the above cited case, it "either explicitly, or in effect, follow[s] the same rationale as the 2018 IM." *Montana Wildlife Federation* at 26. Bizarrely, the EA for this lease sale makes no mention of the 2018 IM, and cites the now in effect 2016 IM as a reference, yet makes no effort to conduct the detailed analysis required by the 2016 IM. Instead, as in the challenged lease sales, "the errors here occurred at the beginning of the oil and gas lease sale process, infecting everything that followed." *Id.* at 31. The court in that case made clear that "proper implementation of the 2015 Plans' priority requirement means that BLM may not include parcels included in the lease sales."

*Id.* Here, BLM intends to lease nearly all parcels in this sale in sage-grouse habitat and over 40 percent in PHMA, flying in the face of the 2015 plans priority requirement. Thus, this lease sale violates FLPMA's requirement to apply the prioritization requirement in a manner consistent with the 2015 plans, regardless of whether the BLM applied the 2018 IM here.

In recognition of the legal issues with extensive leasing in core sage grouse habitat, the BLM has deferred leases in other Western states. Every relevant state except Wyoming has removed leases in sage-grouse habitat from their upcoming quarterly lease sales – Colorado, Utah, Nevada, and Montana are not moving forward with parcels in grouse habitat in their June and September sales. There is significant risk that, if Wyoming continues to lease in sage grouse habitat without proactive prioritization measures in place, the leases will be invalidated in court and ultimately will need to be refunded. Wyoming BLM could rectify this issue by issuing and adhering to guidance on prioritization, as the BLM has done in Montana and the Dakotas.

In response to the court ruling in *Montana Wildlife Federation*, the Montana and Dakotas State Office of the BLM released guidance on August 5, 2020 for prioritizing leasing outside of grouse habitat. *See* Instruction Memorandum No. MT-2020-018, BLM Montana/Dakotas State Office (August 5, 2020) (attached as Exhibit 7). The instruction memorandum establishes a ranking system to evaluate potential lease sale parcels and addressed protections and mitigation is leases proceed in sage-grouse habitat. Importantly, this instruction memorandum acknowledges that availability for leasing and prioritization are two distinct steps, outlines prioritization protocols for seven kinds of lands, requires that impacts first be avoided by locating the action outside of the applicable lek-buffer distances for both PHMA and GHMA, and specifically references compensatory mitigation. The guidance also reiterates that the BLM has the authority not to lease nominated parcels, and ensures the agency considers the importance of intact lands and development potential when prioritizing leasing outside sage-grouse habitat so that other resources are not ignored. Quoting the Interior Board of Land Appeals, the IM notes that

> BLM's exercise of discretion in deciding not to lease lands described in an oil and gas lease sale must be supported by a rational basis. A rational basis may include deciding not to lease lands when the public interest favors other resource considerations, such as wildlife, endangered species preservation, recreational use, and aesthetic or scenic values.

*Id. at 2.*

The BLM should take similar steps in Wyoming and issue guidance on prioritization consistent with the order in *Montana Wildlife Federation*, both to conserve the Greater sage-grouse in accordance with the 2015 plans and to avoid the invalidation of future lease sales.

### 2. The BLM's Approval of the Lease Sale was Not Consistent with FLPMA's Multiple-use Mandate

In pursuing an "energy dominance" agenda, the BLM has neglected to consider other possible values before approving this lease sale—in violation of FLPMA's multiple-use mandate. Exec. Order 13783 (March 28, 2017); Exec. Order 13868 (April 10, 2019).

Under FLPMA, the BLM must manage the public lands on the basis of "multiple-use and sustained yield." 43 U.S.C. §§ 1712(c)(1); 1732(a). "Multiple-use" is understood to require the BLM to strike a balance between competing uses, "including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and … natural scenic, scientific and historical values." S. Utah Wilderness Alliance, 542 U.S. at 58. The BLM need not allow all competing uses on a single parcel of land. Rocky Mountain Oil and Gas Ass'n v. Watt, 696 F.2d 734, 738 (10th Cir. 1982). However, the BLM must consider all possible uses of a given parcel, including conservation to protect environmental values. New Mexico ex rel. Richardson, 565 F.3d at 710. Courts have repeatedly held that multiple-use does not require development, but instead requires considering development as one possible use among many. *Id* (citing Rocky Mountain Oil and Gas Ass'n, 696 F.2d at 738 n.4; Public Lands Council v. Babbitt, 167 F.3d 1287, 1299).

In carrying out a national "energy dominance" policy, the BLM is violating FLPMA's multiple-use mandate by elevating energy development above other uses and precluding consideration of alternative uses of public lands. The BLM may not manage for oil-and-gas development primarily; it must "strike a balance among the many competing uses to which the land can be put." S. Utah Wilderness Alliance, 542 U.S. at 58. Other courts have agreed that, under FLPMA, oil and gas cannot be the sole basis for public-lands management. See, e.g., WildEarth Guardians, 368 F. Supp. 3d at 41 (holding that the agency's energy-dominance policy contravenes FLPMA); Colo. Envtl. Coal. v. Salazar, 875 F. Supp. 2d 1233 (D. Colo. 2012) (rejecting an oil-and-gas leasing plan that failed to adequately consider other uses of public lands).

To fulfill its multiple-use mandate, the BLM must fully consider—and, where reasonable, manage for—alternatives to oil-and-gas development, particularly in parcels with low potential for oil-and-gas yield. See, e.g., Wilderness Workshop v. BLM, 342 F. Supp. 3d 1145, 1166 (D. Colo. 2018) (holding that the BLM failed to adequately consider other values by deciding to lease every possible low-yield parcel). The BLM, in prioritizing using low potential parcels for oil-and-gas leasing in spite of their high ecological value, has failed strike the balance that FLPMA requires. *See* Wilderness Workshop, 342 F.Supp.3d at 1161; WildEarth Guardians, 368 F.Supp.3d at 73.

The BLM implies that it is fulfilling its multiple-use mandate by providing certain stipulations for these parcels. EA at 4-3. However, the BLM cannot comply with the multiple-use mandate by prioritizing oil-and-gas leasing and then carving out accommodations for other uses; such prioritization remains incompatible with multiple-use principles. New Mexico ex rel. Richardson, 565 F.3d at 710.

The administration's "energy dominance" policy does not supplant the BLM's statutory mandate to judiciously manage for a breadth of competing values. Multiple-use does not require the BLM to maximize oil-and-gas leasing; it does not require the BLM issue oil-and-gas leases at all. Rather, FLPMA requires the BLM to manage for "a combination of balance and diverse resource uses." 43 U.S.C. § 1702(c). By embracing an "energy dominance" policy, this lease sale fails to strike that balance, violating FLPMA's multiple-use mandate.

**C. BLM Must Fully Analyze the Impacts of Climate Change in this Lease Sale**

1. **BLM's Lack of Response to Our Previously Submitted Climate Change Comments are Inadequate and in Violation of NEPA**

In the comments we submitted on the September 2020 Wyoming Oil and Gas lease sale EA on June 11, 2020 we provided the BLM with detailed comments on climate change issues that needed to be considered and means to reduce climate change impacts that BLM should adopt. As stated in the EA, "The BLM will address all timely public comments on the EA through responses that will be published to the BLM's e-Planning website for this sale on or around the time the Sale Notice is published." EA at 1-1. However, BLM has not responded to our comments, not have they responded to our previous comments on the June 2020 lease sale. Therefore, we again ask the BLM to reconsider them.

2. **Climate Change Poses an Existential Threat to our Planet and Humanity, with Public Lands Playing a Key Role**

    a. **There is scientific consensus regarding the trajectory of human-caused climate change.**

A large and growing body of scientific research demonstrates, with ever increasing confidence, that climate change is occurring and is caused by emissions of greenhouse gases (GHGs) from human activities, primarily the use of fossil fuels. The Intergovernmental Panel on Climate Change (IPCC), has affirmed that:

> Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen. . . . Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems.[4]

In 2009, the Environmental Protection Agency (EPA) issued a finding that the changes in our climate caused by elevated concentrations of GHGs in the atmosphere are reasonably anticipated to endanger the public health and welfare of current and future generations. *See* Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009). The D.C. Circuit Court of Appeals upheld this decision as supported by the vast body of scientific evidence on the subject. *See Coal. for Responsible Regulation, Inc. v. EPA.*, 684 F.3d 102, 120–22 (D.C. Cir. 2012).

Most climatologists agree that, while the warming to date is already causing environmental problems, another 0.4 degree Fahrenheit rise in temperature, representing a global average atmospheric concentration of carbon dioxide ($CO_2$) of 450 parts per million (ppm), could set in

[4] *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014 SYNTHESIS REPORT SUMMARY FOR POLICYMAKERS 2, (2014), https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.

motion unprecedented changes in global climate and a significant increase in the severity of natural disasters—and could represent the point of no return. [5]

The 2018 IPCC Special Report on Global Warming of 1.5°C found that human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, and that warming is likely to reach 1.5°C between 2030 and 2052 at the current rate.[6] This landmark report warns that the 2°C maximum temperature threshold is no longer accurate, and that warming of 1.5°C beyond preindustrial levels will cause grave social and economic damage.
Additionally, in 2018, the U.S. Global Change Research Program published the Fourth National Climate Assessment (NCA4), finding "that the evidence of human-caused climate change is overwhelming and continues to strengthen, that the impacts of climate change are intensifying across the country, and that climate-related threats to Americans' physical, social, and economic well-being are rising."[7]

The National Oceanic and Atmospheric Administration (NOAA) released the 2018 National Climate Report, a major scientific report by 13 Federal agencies saying that climate change could shrink the US economy by 10 percent if significant steps are not taken to address emissions.[8] The assessment predicts devastating impacts to the economy, public health, and the environment including falling agricultural yields, longer fire seasons, disrupted export and supply chains, threats to water supplies, flooding, and outbreaks of disease, among other adverse impacts.

These reports emphasize the need to take immediate action to mitigate climate change impacts. Despite new data from the most reliable scientific sources, the Trump Administration's energy dominance policy continues to prioritize fossil fuel production and expanded drilling on Federal lands. BLM must consider these reports in a climate change analysis and make decisions relative to potential land use allocations and oil and gas leasing and development in Wyoming accordingly.

The BLM recognizes many of these studies and their findings about the significance of climate change and the human-caused nature of it due to GHG emissions. Wyoming September 2020 Oil and Gas Lease Sale Environmental Assessment (EA) at 3-13. Yet it then goes on to say that uncertainty has made these predictions difficult to assess. *Id.* at 3-14. *See also id.* at 4-12 (also making uncertainty arguments). Still, the significant warming that has occurred is documented. *Id.* at 3-14 and 3-17. Among other things, the Fourth National Climate Assessment found that "recent record-setting years [relative to temperature increases] may be "common" in the next few decades (high confidence)." *Id.* at 3-17.

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[5] *See* Doug Moss & Roddy Scheer, *Have We Passed the Point of No Return on Climate Change?*, SCIENTIFIC AMERICAN, (April 13, 2015), http://www.scientificamerican.com/article/have-we-passed-the-point-of-no-return-on-climate-change/.
[6] *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, GLOBAL WARMING OF 1.5°C SUMMARY FOR POLICYMAKERS 6 (2018), https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15_SPM_version_stand_alone_LR.pdf.
[7] U.S. GLOBAL CHANGE RESEARCH PROGRAM, FOURTH NATIONAL CLIMATE ASSESSMENT: VOLUME II IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES 36 (2018), https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf [hereinafter NCA4].
[8] *See* NOAA NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION, STATE OF THE CLIMATE: GLOBAL CLIMATE REPORT FOR ANNUAL 2018 (2019), https://www.ncdc.noaa.gov/sotc/global/201813.

### b. The impacts of climate change are already being felt and will intensify in the future.

In Wyoming, temperatures in the western part of the state are expected to increase 0.25 to 0.4 degrees Fahrenheit per decade with even greater increases in surrounding areas that include Wyoming, and precipitation across Wyoming is expected to decrease 0.1 to 0.6 inches per decade with the largest decrease in southwest Wyoming (eastern portions of the state are expected to get warmer and wetter). EA at 3-15.

A number of impacts are predicted "where the proposed action and its alternatives are to take place" (the EPA's Mountain West and Great Plains Regions). EA at 4-13. Impacts could include:

- Warmer temperatures with less snowfall,
- Greater temperature increases in the winter than the summer, at night versus the day, more in the mountains that lower elevations,
- Earlier snowmelt affecting stream flows weeks earlier than historically, affecting farmers, ranchers, and recreationists,
- More frequent, more severe, and possibly longer lasting droughts,
- Shifting of crop and livestock production further north; increased irrigation needs; drier conditions reducing the health and susceptibility to fire of lodgepole and ponderosa pine forests; and expansion of grasslands into previously forested areas,
- Ecosystem effects on species such as mountain lion, black bear and bald eagles,
- Increased particulate matter in the air,
- Shifts in vegetative communities that could threaten plant and wildlife species,
- Changed timing and quantity of snowmelt affecting wildlife and agriculture,
- Shifts in the ranges of species and timing of seasons and animal migrations (which have already occurred),
- Fire, insect epidemic, disease pathogen, and invasive weed increases (which have already occurred but will continue) and changes in precipitation increasing fire risk,
- Insect damage increases leading to the death of millions of acres of forest, and
- Effects on energy infrastructure.

*Id.* at 3-13 to 14.[9]

In an area that is already seeing substantial effects of climate change in temperature and precipitation, it is vital for BLM to consider impacts of the agency action to the community and climate.

Marginalized communities and indigenous people often feel the impacts of climate change disproportionately. For instance, indigenous peoples tend to live in more natural environments and have a symbiotic relationship with nature. "This gives them an extraordinarily intimate knowledge of local weather and plant and animal life. Traditional wisdom on matters such as when to plant crops or where to hunt for food has been accumulated over many generations, but now that the

[9] *See also* NCA4, *supra* note 8, at 943–1143.

climate is shifting, some of those understandings are proving to be no longer valid."[10] Climate change not only threatens their livelihood, but their culture, their language and their way of life. Marginalized communities tend to live in places most vulnerable to the impacts of climate change. According to John Magrath, Programme Researcher at Oxfam:

> Minorities tend to live in the more marginal areas, exposed areas, that seem to be seeing more climate changes and are more susceptible to climate impacts because they have got less, and get less, from governments . . . . It is a characteristic of all the studies that I have seen, that the ethnic communities are the people who suffer most from climate impacts and are the most vulnerable.[11]

Marginalized communities are more likely to live in neighborhoods with less tree cover to help reduce heat and more concrete to trap it. They also have less access to air conditioning. A 2013 study found that African Americans in Los Angeles have a heat wave mortality rate that is two times higher than the city average.[12] A recent study found that formerly redlined neighborhoods are on average 5°F hotter than non-redlined neighborhoods.[13] Climate change will make extreme weather events like heat waves, more frequent and more severe, disproportionately effecting minorities and indigenous peoples. Climate change is also acutely impacting Federal public lands and resources.

**c. Climate change is caused primarily by GHG emissions from fossil fuel use, with public lands playing a key role.**

The contribution of Federal lands mineral production to the climate change problem is significant. The U.S. Federal Government is one of the largest energy asset managers in the world – responsible for over 2.4 billion acres of subsurface mineral rights, including resources like coal, crude oil, and natural gas. The Federal government does not regularly track climate emissions associated with fossil energy development on public lands, nor has it ever set reduction goals for these emissions. 2018 and 2020 reports by The Wilderness Society (*See* reports attached as Exhibits 8 and 9) provide an in-depth look at the significant lifecycle emissions resulting from the development of fossil fuels on U.S. public lands. These reports found that in 2017, Federal lands supplied 42 percent of all coal, 22 percent of all crude oil, and 15 percent of all-natural gas produced in the United States. Over the last decade, the lifecycle emissions associated with these publicly owned fossil fuel resources amounted to approximately 20 percent of all U.S. GHG emissions.

To put this in perspective, if Federal public lands were a country, they would be the fifth largest emitter of GHGs in the world. The Wilderness Society researchers found that development of oil and gas leases sold at auction between January 2017 and January 2020, could result in lifecycle

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[10] Rachel Baird, *The Impact of Climate Change on Minorities and Indigenous Peoples*, MINORITY RIGHTS GROUP INTERNATIONAL 4 (2018), https://minorityrights.org/wp-content/uploads/old-site-downloads/download-524-The-Impact-of-Climate-Change-on-Minorities-and-Indigenous-Peoples.pdf.

[11] *Id.* at 2.

[12] Alana Hansen et al., *Vulnerability to extreme heat and climate change: is ethnicity a factor*? 6 GLOBAL HEALTH ACTION 21,364 (2013), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3728476/.

[13] Jeremy Hoffman et al., *The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 US Urban Areas* (2020), https://www.mdpi.com/2225-1154/8/1/12/htm.

emissions between 1 billion and 5.95 billion metric tons (MT) carbon dioxide-equivalent (CO2e).[14] Of these potential emissions, onshore leasing during this period accounts for roughly 62 percent of total estimated emissions (3.68 billion MT CO2e) while offshore leasing accounts for 38 percent (2.27 billion MT $CO_2e$).[15] In order to stay under the 2°C limit supported by leading scientists, emissions associated with Federal lands energy development need to be reduced from 1.52 billion MT CO2e per year to between 1.16 billion and 1.13 billion MT $CO_2e$ per year by 2025.[16] The analysis concludes that $CO_2e$ emissions from Federal lands is on pace to exceed these targets by roughly 300 million tons or 25 percent. The Federal government has failed to provide adequate policies to address emissions stemming from public lands. BLM must seriously consider how its management of energy development on our public lands is a critical component of any national emissions reduction strategy.

Government reports confirm these findings. A 2018 U.S. Geological Survey (USGS) report, *Federal Lands Greenhouse Gas Emissions and Sequestration in the United States: Estimates for 2005-14*, found that GHG emissions from Federal energy production on public lands are a significant source of total U.S. emissions.[17] Nationwide emissions from fossil fuels produced on Federal lands in 28 States and two offshore areas in 2014 were 1,279.0 million metric tons (MMT) $CO_2e$ for carbon dioxide ($CO_2$), 47.6 MMT $CO_{2e}e$ for methane ($CH_4$), and 5.5 MMT $CO_2e$ for nitrous oxide ($N_2O$).[18] The 2018 USGS analysis found that:

> [n]ationwide emissions from [fossil] fuels extracted from Federal lands in 2014 were 1,279.0 MMT $CO_2$ Eq. [million metric tons of carbon dioxide equivalent] for $CO_2$ [carbon dioxide], 47.6 MMT $CO_2$ Eq. for $CH_4$ [methane], and 5.5 MMT $CO_2$ Eq. for $N_2O$ [nitrous oxide]. . . . On average, Federal lands fuels emissions . . . accounted for 23.7 percent of national $CO_2$ emissions, 7.3 percent for $CH_4$, and 1.5 percent for $N_2O$ [over the ten years included in this estimate].[19]

In short, the best available scientific information demonstrates that we cannot continue to lease, develop, and burn fossil fuels at current rates and must move rapidly to a net zero carbon budget from public lands.[20] Despite this information, the Trump Administration has offered up 24.5 million acres of publicly owned land and minerals to oil and gas companies as of March 2020.

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[14] THE WILDERNESS SOCIETY, THE CLIMATE REPORT 2020: GREENHOUSE GAS EMISSIONS FROM PUBLIC LANDS 6 (2020), https://www.wilderness.org/sites/default/files/media/file/TWS_The%20Climate%20Report%202020_Greenhouse%20Gas%20Emissions%20from%20Public%20Lands.pdf

[15] *Id*. at 6.

[16] THE WILDERNESS SOCIETY, IN THE DARK; THE HIDDEN CLIMATE IMPACTS OF ENERGY DEVELOPMENT ON PUBLIC LANDS 3 (2018), https://www.wilderness.org/sites/default/files/media/file/In the Dark Report_FINAL_Feb_2018.pdf.

[17] *See* MATTHEW D. MERRILL, ET AL., FEDERAL LANDS GREENHOUSE EMISSIONS AND SEQUESTRATION IN THE UNITED STATES—ESTIMATES FOR 2005–14, U.S. GEOLOGICAL SURVEY SCIENTIFIC INVESTIGATIONS REPORT 1 (2018), https://doi.org/10.3133/sir20185131. [hereinafter USGS Study]

[18] *Id.* at 1.

[19] *Id.* at 6.

[20] DUSTIN MULVANEY, ET AL. OVER-LEASED: HOW PRODUCTION HORIZONS OF ALREADY LEASED FEDERAL FOSSIL FUELS OUTLAST GLOBAL CARBON BUDGETS 5 (2016), https://1bps6437gg8c169i0y1drtgz-wpengine.netdna-ssl.com/wp-content/uploads/wpallimport/files/archive/Over_Leased_Report_EcoShift.pdf. [hereinafter Over-Leased].

This is greater than the size of Indiana. Off our coasts, the Administration has offered 359,537,572 acres of publicly owned waters to oil and gas companies. Our last remaining wild places are under tremendous threat from pressures for oil, gas, and mineral extraction on public lands. Americans depend on these unique wild lands for their way of life. Energy companies already have more leases than they can use — of the 25.5 million acres currently under lease to oil and gas companies, nearly half are sitting idle.[21]

Comparing production horizons to dates at which carbon budgets would be exceeded if current emission levels continue demonstrates the critical need for the Federal government to immediately acknowledge the climate impacts of development on public lands. For example:

- Federal crude oil already leased will continue producing for 34 years beyond the 1.5°C threshold and 19 years beyond the 2°C threshold;
- Federal natural gas already leased will continue producing 23 years beyond the 1.5°C threshold and 8 years beyond the 2°C threshold;
- Federal coal already leased will continue producing 20 years beyond the 1.5°C threshold and 5 years beyond the 2°C threshold.[22]

Choosing not to lease oil and gas parcels could be a very significant part of U.S. efforts to address climate change – the EA must acknowledge this. If new leasing ceases and existing non-producing leases are not renewed, 12 percent of oil production could be avoided in 2025 and 65 percent could be avoided by 2040, while 6 percent of natural gas production could be avoided in 2025 and 59 percent could be avoided by 2040.[23] This avoided production would significantly reduce future U.S. emissions. Cessation of new and renewed leases for Federal fossil fuel extraction could reduce $CO_2$ emissions by about 100 Mt per year by 2030.[24] Alternatively, any new leasing must ensure that anticipated GHG emissions are fully mitigated to ensure net zero carbon emissions from public lands, as discussed further below.

While net-zero emissions should be achieved by 2030 to avoid the most catastrophic impacts of climate change, they absolutely must be achieved by 2050, with at least a 45 percent reduction in emissions by 2030. As described in the IPCC's 2018 Special Report, "Limiting warming to 1.5°C implies reaching net zero $CO_2$ emissions globally around 2050 and concurrent deep reductions in emissions of non-$CO_2$ forcers, particularly methane."[25] "In model pathways with no or limited

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[21] BLM Oil and Gas Statistics webpage, Table 2 and Table 6. https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics

[22] DUSTIN MULVANEY, ET AL. OVER-LEASED: HOW PRODUCTION HORIZONS OF ALREADY LEASED FEDERAL FOSSIL FUELS OUTLAST GLOBAL CARBON BUDGETS 5 (2016), https://1bps6437gg8c169i0y1drtgz-wpengine.netdna-ssl.com/wp-content/uploads/wpallimport/files/archive/Over_Leased_Report_EcoShift.pdf. [hereinafter Over-Leased]

[23] PETER ERICKSON & MICHAEL LAZARUS, *HOW WOULD PHASING OUT U.S. FEDERAL LEASES FOR FOSSIL FUEL EXTRACTION AFFECT CO2 EMISSIONS AND 2°C GOALS?,* STOCKHOLM ENVIRONMENTAL INSTITUTE 16 (2016), https://mediamanager.sei.org/documents/Publications/Climate/SEI-WP-2016-02-US-fossilfuel-leases.pdf.

[24] Over-Leased, *supra* note 21, at 6.

[25] Rogelj, J., D. Shindell, K. Jiang, S. Fifita, P. Forster, V. Ginzburg, C. Handa, H. Kheshgi, S. Kobayashi, E. Kriegler, L. Mundaca, R. Séférian, and M.V.Vilariño, 2018: Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to

overshoot of 1.5°C, global net anthropogenic $CO_2$ emissions decline by about 45percent from 2010 levels by 2030 (40–60 percent interquartile range), reaching net-zero around 2050 (2045–2055 interquartile range).“[26] Despite the crucial need to rapidly decrease and eliminate GHG emissions from public lands, the Trump Administration has worked to dismantle policies designed to reduce emissions.

Under the Obama Administration BLM adopted two important oil and gas rules that also had climate change implications: the 2016 Methane (or Waste) Rule and the 2015 Fracking Rule. *See* Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008 (Nov. 18, 2016); Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16,128 *Mar. 26, 2015). The Methane Rule put in place strong new regulations to reduce venting, flaring, and leaking of natural gas (methane), an extremely potent greenhouse gas. The fracking Rule sought to deal with the environmental harms caused by the oil and gas production technique called hydraulic fracturing (“fracking”), which has greatly increased natural gas production and associated air and water pollution. Pursuant to a March 2017 Executive Order (EO 13783) and related Interior Department Secretarial Order (SO 3349), the Trump Administration has rescinded both rules. *See* Waste Prevention, Production Subject to Royalties, and Resource Conservation; Rescission or Revision of Certain Requirements, 83 Fed. Reg. 49,184 (Sept. 28, 2018); *see also* Oil and Gas: Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule, 82 Fed. Reg. 61,924 (Dec. 29, 2017). Both rescissions are being challenged in court. *State of California v. Bernhardt*, Case No. 4:18 cv 05712 YGR (N.D. Calif.) (Methane Rule); *Sierra Club v. Bernhardt*, Case No. 4:18 cv 00521 HSG (N. D. Calif.) (Fracking Rule).

Particularly in the absence of these necessary federal policies, BLM is obligated to provide adequate direction in the EA to prevent and mitigate wasted natural gas and other air pollution associated with reasonably foreseeable oil and gas leasing and development, as described throughout this protest.

BLM’s environmental analysis must also consider that undeveloped Federal lands act as a critical carbon sink. The USGS found that in 2014, Federal lands of the conterminous United States stored an estimated 83,600 MMT $CO_2$e., in soils (63 percent), live vegetation (26 percent), and dead organic matter (10 percent).[27] In addition, the USGS estimated that Federal lands “sequestered an average of 195 MMT $CO_2$e./yr. between 2005 and 2014, offsetting approximately 15 percent of the $CO_2$ emissions resulting from the extraction of fossil fuels on Federal lands and their end-use combustion.”[28] BLM must account for potential loss of carbon storage in its leasing decisions, including analysis of how the decisions and resulting fossil fuel development will increase negative climate impacts. The Agency’s analysis should include consideration of the time lag between leasing and reclamation and the significance of the loss of carbon sinks on GHG emissions and climate change during that time period.

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eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press. *Executive Summary*

[26] *Id.*

[27] USGS Study, *supra* note 18, at 12-13.

[28] *Id.* at 1.

Utah State University (USU) studied the impacts of climate change on the multiple uses that BLM is charged with managing and made recommendations for how the agency should be addressing this issue in its land management planning and other decisions. Attached as Exhibit 10. The study reviewed 225 papers published between 2009 and 2018, and found that active uses on BLM lands, such as energy development, threaten passive uses such as conservation and ecosystem services. Under FLPMA, BLM is required to manage the public lands on the basis of multiple use and sustained yield. Yet, in reviewing 44 BLM RMPs, the study found that there was little consideration of climate change impacts to ecosystems and land uses and that adaptive responses to climate change were not considered. BLM must plan for climate change to fulfill its conservation mandate, especially the need for prioritizing different uses, but BLM's planning remains inadequate. Passive uses are under-prioritized by BLM in favor of active uses. Energy extraction contributes the most to anthropogenic climate change of all the land uses BLM manages. Consequently, the study concluded the most direct way the BLM can reduce its contribution to climate change is by reducing permits for energy extraction. The widespread lack of consideration of climate change in BLM management plans negatively impacts BLM's multiple use mandate. More effective incorporation of science is needed for effective natural resources management in the face of a climate-change affected future. BLM should consider the USU report as it analyzes and addresses climate impacts associated with the Wyoming, September 2020 lease sale.

A recent New York University School of Law report examines the business schemes and practices utilized by private oil and gas companies when leasing public lands. The report, attached as Exhibit 11, found that "[w]hile private companies routinely account for option value, timing their purchasing and development decisions to be privately optimal, BLM fails to account for option value in its land use planning and lease sale processes."[29] Option value is the informational value gained by delaying decisions characterized by uncertainty and irreversibility. Private energy companies routinely account for option value, while BLM's current oil and gas leasing process does not. Failing to account for the informational value of waiting puts the American people at economic and financial disadvantages. The consideration of option value before offering leases would result in more consideration of climate risks and would reduce economic costs, including legal cost due to the irreversible nature of leases.[30]

From a purely economic standpoint, it may be more financially responsible to defer leasing.[31] Furthermore, BLM should consider the value to the public of waiting to learn more about the risks and costs of climate change. The irreversible consequences and associated costs of opening up this land for drilling needs to be weighed against the potential benefits. BLM must consider option value in leasing decisions in order to reduce the risk of irreparable damage.

The report also proposes recommendations for how BLM can modernize its leasing and planning processes to account for option value, and ensure the public is fairly compensated for its forgone option value. BLM can do this using existing legal authority. Recommendations include offering only high-potential lands, if any, in lease sales, increasing minimum bids, and exploring other means of accounting for environmental and social considerations (such as valuing carbon sink

[29] New York University School of Law; Institute for Policy Integrity, *Look Before You Lease; Reducing Fossil Fuel Dominance on Public Lands by Accounting for Option Value* 4 (2020).
[30] *Id*. at 24.
[31] *Id*. at 23.

attributes). BLM must factor in option value to both the land use planning and lease sale phases in order to deliver a fair return to the American public.

### 3. BLM Must Fully Analyze the Impacts of Climate Change of this Lease Sale Under NEPA

As highlighted throughout this protest, NEPA is our "basic national charter for the protection of the environment." 40 C.F.R. § 1500.1(a). It achieves its purpose through "action forcing" procedures. *Id.* §§ 1500.1(a), 1502.1. The courts have termed this crucial evaluation as a "hard look." *Ocean Advocates v. U.S. Army Corps of Engineers,* 402 F.3d 846, 864 (9th Cir. 2005). NEPA's fundamental purpose is to ensure "important effects will not be overlooked or underestimated." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). NEPA requires BLM to consider national policy in its decision-making process. 40 C.F.R. §§ 1500.6, 1502.16(c), 1506.2(d).[32] This includes the consideration of best available information and data, as well as disclosure of any inconsistencies with Federal policies and plans. *Id.* §§ 1502.22, 1502.24.

It is well established that Federal agencies must analyze climate change when conducting a NEPA analysis, including in this lease sale EA. *See, e.g.*, *Wilderness Workshop v. Bureau of Land Mgmt.,* 342 F. Supp. 3d 1145, 1156 (D. Colo. 2018) (holding BLM failed to take a hard look at the severity and impacts of GHG pollution, specifically the indirect impacts of oil and gas combustion, in an RMP revision); *W. Org. of Res. Councils v. Bureau of Land Mgmt.,* 2018 U.S. Dist. LEXIS 49635 at 53-54 (D. Mont., Mar. 26, 2018) (holding BLM needed to consider climate change impacts relative to the amount of coal available for leasing, consider the downstream combustion of coal, oil, and gas open to development, and consider a 20-year global warming potential rather than 100-year).

NEPA requires a more searching analysis than merely disclosing the amount of GHG pollution. BLM must examine the "ecological[,] . . . economic, [and] social" impacts of those emissions, including an assessment of their "significance." 40 C.F.R. §§ 1508.8(b), 1502.16(a)–(b). BLM must also consider unquantified effects, recognize the worldwide and long-range character of climate change impacts, and incorporate this analysis of ecological information into its environmental analysis. 42 U.S.C. §§ 4332(B), (F), (H).

"Because speculation is implicit in NEPA, we must reject any attempt by agencies to shirk their responsibilities under NEPA labeling any and all discussion of future environmental effects as crystal ball inquiry." *Northern Plains Res. Council, Inc. v. Surface Transportation Bd.,* 668 F.3d 1067, 1078–79 (9th Cir. 2011) (quotations and alternations omitted) (rejecting agency's argument that coalbed methane drilling was "too speculative" to analyze). An analysis of the environmental impacts of GHG emissions must occur at this leasing stage, even if a site-specific analysis is not required, and BLM must quantify the drilling related GHG emissions in the aggregate and consider downstream emissions. *Wilderness Workshop,* 342 F. Supp. 3d at 1156; *W. Org. Res. Councils,*

[32] NEPA regulations direct Federal agencies to "discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned)," 40 C.F.R. § 1506.2(d), and require agencies to address "[p]ossible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned." 40 C.F.R. § 1502.16(c).

2018 U.S. Dist. LEXIS 49635.

The Tenth Circuit Court of Appeals recently held that the preparation of a Reasonably Foreseeable Development Scenario (RFDS) makes it reasonably foreseeable that the number of wells identified "*would be drilled*," and, therefore, NEPA requires BLM to consider the relevant impacts. *Diné Citizens Against Ruining Our Env't v. Bernhardt*, 923 F.3d 831, 853 (10th Cir. 2019) (emphasis added). While the EA includes an RFDS, BLM fails to complete the necessary analysis under NEPA.

BLM must at a minimum conduct NEPA analysis for this lease sale that include the following components:

- Fully analyze climate change impacts and mitigation opportunities. This analysis must include methane emissions, social cost of carbon, and loss of carbon sequestration, among other things.
- Quantify reasonably foreseeable GHG emissions – including end-use of fossil fuel extraction (downstream emissions) – and associated direct, indirect, and cumulative climate impacts associated with those emissions.
- Develop alternatives that allow the public and the decisionmaker to compare the anticipated levels of GHG emissions, including alternatives that close all lands to leasing or only make limited lands available for leasing, as well as other alternatives that ensure a net zero carbon budget.
- Analyze options to avoid, minimize, and mitigate GHG emissions and energy development in the leasing area (e.g. prioritize minimal development, but for where development does occur, do not open low-potential lands to leasing and assess the option value of delaying leasing).
- Establish a requirement for a lease notice to be attached to proposed leases to preserve BLM's ability to impose mitigation or offsets for climate change impacts at the application for permit to drill (APD) stage, or to delay/disapprove development.

An agency must "consider every significant aspect of the environmental impact of a proposed action." *Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 107 (1983) (quotations and citation omitted). This includes the disclosure of direct, indirect, and cumulative impacts of its actions, including climate change impacts and emissions. 40 C.F.R. §§ 1502.16(a)–(b), 1508.25(c). The BLM must consider "[e]nergy requirements and conservation potential of various alternatives and mitigation measures" and means to mitigate adverse environmental impacts. *Id.* §§ 1502.16(e), (h).

The need to evaluate such impacts is bolstered by the fact that "[t]he harms associated with climate change are serious and well recognized," and environmental changes caused by climate change "have already inflicted significant harms" to many resources around the globe. *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007); *see also id.* at 525 (recognizing "the enormity of the potential consequences associated with manmade climate change"). Among other things, the agency's NEPA analysis must disclose "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity[,]" including the "energy requirements and conservation potential of various alternatives and mitigation measures."

42 U.S.C. § 4332(2)(C)(iv); 40 C.F.R. § 1502.16(e). Failing to perform such analysis undermines the agency's decision-making process and the assumptions made.

The BLM recognizes the significant environmental harms that climate change can cause in the EA prepared for the Wyoming September 2020 oil and gas lease sale. "Climate is both a driving force and limiting factor for ecological, biological, and hydrological processes, and has great potential to influence resource management." EA at 3-13. "Over the last century there are no alternative explanations supported by the evidence that are either credible or that can contribute more than marginally to the observed patterns. There is no convincing evidence that natural variability can account for the amount of and the pattern of global warming observed over the industrial era."" *Id.* at 3-14 (quoting the U.S. Global Change Research Program Fourth National Climate Assessment). A chart is provided that shows examples of the massive impacts expected due to temperature changes impacting water, ecosystems, food, coasts, and health. *Id.* at 3-17 (e.g., there will be increased morbidity and mortality due to heat waves, floods and droughts).

**a. Case law confirms BLM's obligation under NEPA to fully analyze climate impacts.**

Federal courts have repeatedly confirmed that the BLM must consider climate change in its NEPA analysis of oil and gas lease sales. For instance, in *WildEarth Guardians* the court found that in issuing 282 leases in Wyoming 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." *WildEarth Guardians,* 368 F. Supp. 3d at 63. On that basis the court remanded the EAs and FONSIs to BLM for further analysis and enjoined BLM from issuing any APDs on the leases. *Id.* at 79–80. The court stated,

> In summary, the challenged EAs failed to take a hard look at the climate change impacts of oil and gas drilling because the EAs (1) failed to quantify and forecast drilling related GHG emissions; (2) failed to adequately consider GHG emissions from the downstream use of oil and gas produced on the leased parcels; and (3) failed to compare those GHG emissions to state, regional, and national GHG emissions forecasts, and other foreseeable regional and national BLM projects.

*Id.* at 76–77. "By asserting that these crucial environmental analyses are overly speculative at the leasing stage and more appropriate for later site-specific assessments, BLM risks relegating the analyses to the 'tyranny of small decisions.'" *Id.* at 77 (citation omitted).[33] These obligations hold true at the RMP stage as well. *See, e.g.*, *Wilderness Workshop v. BLM,* 342 F. Supp. 3d 1145, 1155–56 (D. Colo. 2018) (holding that BLM violated NEPA by not considering downstream indirect effects of emissions resulting from combustion of oil and gas and failed to analyze alternatives that would have made low-potential lands unavailable for leasing).

Federal courts have echoed these requirements in the coal leasing context – at both the leasing and RMP stages. *See, e.g.*, *W. Org. of Res. Councils v. BLM,* 2018 U.S. Dist LEXIS 49635, 29, 40, 53–

[33] *See also, San Juan Citizens Alliance v. BLM,* 326 F. Supp. 3d 1227, 1244, 1249 (D.N.M. 2018) (invalidating lease sale where BLM failed to analyze downstream combustion and associated indirect impacts and admonishing the agency not to utilize outdated scientific tools and analyses).

54 (D. Mont. Mar. 26, 2018) (BLM failed to analyze downstream combustion impacts associated with lands made available for coal leasing in the RMP or to consider options that modified or foreclosed the amount of acreage available); *High Country Conservation Advocates v. U.S. Forest Service,* 52 F. Supp. 3d 1174, 1189–92, 1196–98 (D. Colo. 2014) (Forest Service failed to adequately analyze climate impacts of coal mine expansion, including subsequent combustion of the coal, or to utilize available tools such as the Social Cost of Carbon to quantify costs).

As will be discussed in more detail in Section VI below, the BLM must also abide by the recent decision in *WildEarth Guardians v. Bureau of Land Mgmt.,* 2020 U.S. Dist. LEXIS 77409 (D. Mont. May 1, 2020), where the court invalidated 287 leases (covering 145,063 acres) in Montana because the analysis in the EAs failed to consider cumulative climate change impacts.

The BLM must fully consider this case law as it prepares the NEPA analysis for this lease sale.

**b. BLM Must fully analyze the direct, indirect and cumulative impacts of greenhouse gas emissions.**

NEPA requires full analysis of the direct, indirect, and cumulative climate impacts of reasonably foreseeable GHG emissions associated with the lease sale. In analyzing these impacts BLM must consider the full scope of development activities that are reasonably foreseeable under a BLM oil and gas lease: exploration, development, and end use.

Failure to fully analyze and disclose to the public the impacts of the leasing decision on GHG emissions and climate change violates NEPA. Lease issuance is the "point of no return" (*i.e.*, the point at which time BLM makes an irrevocable commitment of resources) for purposes of NEPA analysis. *WildEarth Guardians*, 368 F. Supp. 3d at 66. BLM itself identifies lease issuance as the point of irretrievable commitment of resources:

> The BLM has a statutory responsibility under NEPA to analyze and document the direct, indirect and cumulative impacts of past, present and reasonably foreseeable future actions resulting from Federally authorized fluid minerals activities. By law, these impacts must be analyzed before the agency makes an irreversible commitment. In the fluid minerals program, this commitment occurs at the point of lease issuance.[34]

It is at this point that BLM must analyze *all* direct, indirect, and cumulative impacts of its leasing decision. *See, e.g.*, *WildEarth Guardians*, 368 F. Supp. 3d at 65–66; *see also* 40 C.F.R. §§ 1508.7, 1508.8.

The BLM must ensure in its NEPA analysis for this lease sale that it considers the amount of GHG emissions likely to be generated as a result of well drilling on the leases that are sold, as well as the impacts of those emissions. In doing its assessment of direct, indirect, and cumulative impacts, BLM must communicate the "actual environmental effects resulting from . . . emissions" of GHGs, not just quantify them. *Ctr. for Biological Diversity v. Nat'l Highway Transp. Safety Admin.,* 538 F.3d 1172, 1216 (9th Cir 2008). This in turn requires BLM to consider the global warming

[34] Bureau of Land Management., *H-1624-1 – Planning for Fluid Mineral Resources* § I.B.2, at I–2 (Feb. 20, 2018) (emphasis added), *available at* https://www.blm.gov/sites/blm.gov/files/H-1624-1%20rel%201-1791.pdf.

potential (GWP) of the GHG emissions, and set an appropriate metric for analyzing GWP (a 20-year horizon recognizing a GWP of 36). *See W. Org. Res. Councils v. BLM,* 2018 U.S. Dist. LEXIS 49635 (D. Mont. Mar. 26, 2018) (stating, "BLM violated NEPA where it failed to justify its use of GWPs based on a 100-year time horizon rather than the 20-year time horizon of the RMPs. BLM also violated NEPA where it failed to acknowledge evolving science in this area . . ." that would justify lower a lower GWP). The GWP accounts for the intensity of the GHG's heat trapping effect and its longevity in the atmosphere. BLM made no attempt in the EA to analyze the climate impacts associated with predicted emissions and circumvents acknowledging evolving science that would contribute to this analysis.

The indirect impacts of oil and gas leasing on GHG emissions (i.e., downstream emissions) must be considered in BLM's NEPA analysis. *See, e.g., San Juan Citizens Alliance*, 326 F. Supp. 3d at 1240–50 (BLM's reasoning for not analyzing indirect GHG emissions was "contrary to the reasoning in several persuasive cases that have determined that combustion emissions are an indirect effect"); *W. Org. of Res. Councils*, U.S. Dist. LEXIS 49635, 40.

BLM is obligated under NEPA to analyze the cumulative impacts on the climate of the past, present, and reasonably foreseeable oil and gas development in the project area. NEPA requires a detailed analysis of cumulative effects, which are "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. §§ 1508.7, 1508.25(c). Analysis of cumulative impacts protects against "the tyranny of small decisions," *Kern v. BLM,* 284 F.3d 1062, 1078 (9th Cir. 2002), by confronting the possibility that agency action may contribute to cumulatively significant effects even where impacts appear insignificant in isolation. 40 C.F.R. §§ 1508.7. BLM must consider the reasonably foreseeable incremental and total contribution of GHG emissions from oil and gas development in the planning area when added to other relevant past, present and reasonably foreseeable BLM-managed fossil-fuel extraction emissions as well as GHG emissions from non-Federal sources.

The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Ctr. For Biological Diversity*, 538 F. 3d 1172 at 1217 (9th Cir. 2008). Case law demonstrates the need to consider a range of impacts much broader than the proposed action alone. *Id.* Likewise, in *Mid States Coalition for Progress v. Surface Transp. Bd.*, the Eighth Circuit held that NEPA requires an agency to disclose and analyze the impacts of future combustion of mined coal when deciding whether to approve a railroad line providing access to coal. 345 F.3d 520, 549–50 (8th Cir. 2003).

As the D.C. District Court recently found:

> Without access to a data-driven comparison of GHG emissions from the leased parcels to regional and national GHG emissions, the public and agency decisionmakers had no *context* for the EAs' conclusions that GHG emissions from the leased parcels would represent only an "incremental" contribution to climate change. Likewise, they could not *conceptualize* the extent to which the lease sales would contribute to the local, regional, and global climate change discussed qualitatively in the EAs and tiered EISs.

WildEarth Guardians, 368 F. Supp. 3d at 77. (emphasis added).

To satisfy NEPA's hard look requirement, the cumulative impacts assessment must do two things. First, BLM must catalogue the past, present, and reasonably foreseeable projects in the area that might impact the environment. *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809–10 (9th Cir. 1999). Second, BLM must analyze these impacts in light of the proposed action. *Id.* If BLM determines that certain actions are not relevant to the cumulative impacts analysis, it must "demonstrat[e] the scientific basis for this assertion." *Sierra Club v. Bosworth*, 199 F. Supp. 2d 971, 983 (N.D. Cal. 2002).

A failure to include a cumulative impact analysis of additional leasing that is already planned in the region renders a NEPA analysis insufficient. *See*, *e.g.*, *Kern*, 284 F.3d at 1078 (holding that an EA for a timber sale must analyze the reasonably foreseeable future timber sales within the area). The analysis here must include an analysis of the extent of past oil and gas leasing and development in the area, how this past leasing and development may have contributed to significant environmental impacts, and whether additional leasing and development may have an "additive and significant relationship to those effects." *See* Council on Environmental Quality, Guidance on the Consideration of Past Actions in Cumulative Effects Analysis at 1 (June 24, 2005); *see also Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005).

BLM must ensure it fully considers not only the GHG emissions from wells drilled on the leases sold at this lease sale—and the climate change impacts of those GHG emissions—but also the impacts of other Federal lease sales in the state, the region, and the nation, as well as impacts from GHG emissions from non-Federal sources. BLM must consider GHG emissions in the aggregate along with other foreseeable emissions. This is necessary to meet the cumulative impacts analysis requirements of NEPA.

The analysis of climate change impacts and issues in the EA is based on projected direct, indirect (downstream) and cumulative GHG emissions levels. "Outside of coal development, oil and gas development is the single largest contributor to total air pollution emissions in Wyoming compared to other management activities." EA at 3-22. The Center for Climate Strategies has prepared a report that forecasts emissions levels through 2020 for all Federal and non-Federal emissions generating activities in Wyoming. *Id.* Gross GHG emissions levels are increasing in Wyoming. *Id.* The per capita emission rate in Wyoming is more than four times greater than the national average of 25 MMT $CO_2e$/yr., which is at least partly due to the fossil fuels industry. *Id.* at 3-23. "The natural gas industry is the major contributor to both GHG emissions and emissions growth . . . ." *Id.* Thus, it is clear that BLM must fully consider the direct, indirect, and cumulative environmental impacts of climate change, and this need cannot be met by just determining the likely amounts of GHG pollution. Yet that is all BLM has done.

BLM estimates in the EA that direct GHG emissions from the proposed action (165 leases offered for sale) would be 30,957 mt/yr. of $CO_2e$. EA at 4-9 (Table). This represents 0.5 percent of the direct emissions predicted by the RFDs for the Lander, Bighorn Basin, Buffalo, and Greater Sage-Grouse RMPs (5,734,000 mt/yr. $CO_2e$). *Id.* at 4-9. Yet BLM claims it cannot make an assessment of the "relationship between specific project-scale GHG emissions and specific effects on climate change because climate change operates on a global scale." *Id.* The impacts of the proposed action would be too small to estimate for the discreet and relatively small area represented in the proposed

action. *Id.* at 4-10. This does not meet the requirement to consider the ecological, aesthetic, historic, cultural, economic, social, and health impacts of this leasing decision. 40 C.F.R. § 1508.8(b). Relying just on the GHG amounts that could be emitted is not an environmental impact analysis, it is just a cataloguing of one outcome.

The projected indirect (downstream) GHG emissions from the proposed action (165 leases offered for sale) would be 421,544 mt/yr. of $CO_2$e. EA at 4-11 (Table). This represents 0.52 percent of the total annual expected GHG emissions resulting from the RFDs from the Lander, Bighorn Basin, Buffalo, and Greater Sage-Grouse RMPs (80,473,714 mt/yr. $CO_2$e). Again, relying just on these indirect GHG emissions amounts does not meet the requirements of NEPA for a full analysis of all reasonably foreseeable impacts.

The cumulative direct $CO_2$e emissions from oil and gas operations in Wyoming are 1,780,031 mt $CO_2$e/yr. EA at 4-28 (Table). This is approximately 31 percent of the total cumulative BLM-Wyoming planning projections (5,734,000 mt $CO_2$e/yr.), although BLM only expects 46 percent of the expected emissions from authorized Federal leases to actually occur. *Id.* at 4-28. In these analyses BLM has determined that "all Wyoming Federal oil and gas lease sales currently undergoing review are considered reasonably foreseeable and based on the data in the table this would appear to be the 2019 and 2020 lease sales. *Id.* The five-year average direct $CO_2$e emissions in the Rocky Mountain and Northern Great Plains Regions is 18,157,437 mt $CO_2$e/yr. *Id.* at 4-30 (Table). This does not include Wyoming. The proposed action (165 leases) would make up 0.19 percent of this amount. *Id.* Nationally, based on EPA information, the total projected direct $CO_2$e cumulative emissions from existing and reasonably foreseeable Federal oil and gas operations in Wyoming is 1.63 percent of the national 2018 total (109 MMT $CO_2$e). *Id.* at 4-31. Combined existing and reasonably foreseeable cumulative indirect $CO_2$e emissions from Federal oil and gas leases in Wyoming (24,981,813 mt CO2e/yr.) represents 31 percent of the total potential indirect $CO_2$e emissions projected for the reasonably foreseeable lease sales (80,473,714 mt CO2e/yr.). *Id.* at 4-32. And again, BLM anticipates that only 46 percent of the emissions from existing and reasonably foreseeable leases will occur since that is the percentage of producing leases. *Id.* The proposed action (165 leases) (490,102 mt $CO_2$e/yr.) represents approximately 0.61 percent of the total indirect $CO_2$e projected under BLM-Wyoming RMPs. *Id.* The total 5-year annual average indirect $CO_2$e emissions for Federal oil and gas operations in the Rocky Mountain and Northern Great Plains Regions will be 74,135,202 mt $CO_2$e/yr. *Id.* at 4-33. This does not include Wyoming. The proposed action represents 0.66 percent of this 5-year average. *Id.* National cumulative indirect GHG emissions according to EPA were 5,031,800,000 mt $CO_2$e in 2018. *Id.* Wyoming's cumulative indirect emissions estimate (24,981,813 mt $CO_2$e/yr.) represents 0.5 percent of the EPA estimate. *Id.* While this long recitation of cumulative GHG emissions is impressive, it again does not meet the requirements of NEPA to consider the environmental *impacts or effects* of the proposed leasing on climate change. And the analysis does not meet the climate change cumulative impacts analysis requirements that were decided in WildEarth Guardians v. BLM, as will be discussed below. As the court stated, while quantifying GHG emissions was necessary for BLM to comply with NEPA, "none of it speaks to whether BLM considered *cumulative* climate impacts." 2020 U.S. Dist. LEXIS 77409 at * 27 to *28 (emphasis in original).

### c. BLM must consider the ecological, economic, and social impacts of GHG emissions utilizing best available science and information.

As mentioned above, the impacts analysis must consider ecological, aesthetic, historic, cultural, economic, and social issues whether the impacts are direct, indirect, or cumulative. 40 C.F.R. § 1508.8(b). Under NEPA, the climate analysis must ensure scientific integrity. *Id.* § 1502.24. To meet these requirements there are several protocols and analyses available that should be reflected in the NEPA analysis.

#### i. BLM Should Employ the Social Cost of Carbon and Social Cost of Methane Protocols.

The Social Cost of Carbon (SCC) is a leading tool for quantifying the climate impacts of proposed Federal actions.[35] It is an estimate, in dollars, of the long-term damage caused by a one ton increase in $CO_2$ emissions in a given year; or viewed another way, the benefits of reducing $CO_2$ emissions by that amount in a given year. The SCC is intended to be a comprehensive estimate of climate change damages that includes, among other costs, the changes in net agricultural productivity, risks to human health, and property damages from increased flood risks. Courts have recognized its applicability to NEPA analyses. *High Country Conservation Advocates,* 52 F. Supp. 3d at 1190–93 (determining that the U.S. Forest Service's decision to not employ SCC was arbitrary and capricious and violated NEPA). As described below, BLM declines to employ the SCC in the EA. By ignoring the SCC, BLM is essentially zeroing out the potential costs of development that could occur under the proposed action.

The Social Cost of Methane (SCM) analysis is another available tool that BLM could use in its NEPA analysis to analyze and disclose the significance of impacts of its decisions as required by 40 C.F.R. §§ 1508.8(b), 1502.16(a)-(b).[36] Both tools should be utilized here.

#### ii. BLM Should Utilize Carbon Budgets.

A carbon budget sets a cap on the remaining GHG that can be emitted while keeping global average temperature rise below certain climatic thresholds (2°C or 1.5°C). BLM should consider a carbon budget in this lease sale EA and disclose what portion of the remaining budget the lease sale's cumulative emissions will consume. Like SCC, a carbon budget "disclose[s] the actual environmental effects" of the project in a way that "brings those effects to bear on [the agency's] decisions." *See Baltimore Gas & Electric Co.*, 462 U.S. 87 at 96. BLM should utilize a carbon budget so that the climate change NEPA analysis is based on the best available science, as required by the NEPA regulations. 40 C.F.R. § 1502.24.

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[35] Interagency Working Group on Social Cost of Carbon, *United States Government, Technical Support Document: - Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866* at 2 (Aug. 2016 revision). Although President Trump directed the Office of Information and Regulatory Affairs to withdraw this metric in Executive Order 13,783 (82 Fed. Reg. 16,093 (Mar. 28, 2017)), it remains the best available tool for complying with the legal requirement to analyze the effects of GHG emissions.

[36] Interagency Working Group on Social Cost of Greenhouse Gases (IWG), *Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide* 2-3 (2016), *available* at: https://www.epa.gov/sites/production/files/2016-12/documents/addendum_to_sc-ghg_tsd_august_2016.pdf.

To ensure the scientific integrity of this NEPA analysis BLM should use peer-reviewed SCC, SCM, and carbon budgeting analyses. *See* 43 C.F.R. § 1502.24 ("Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.").

The BLM has declined to conduct either an SCC or SCM analysis in this EA or utilize a carbon budget. BLM claims the SCC would provide information that is "both inaccurate and not useful to the decision maker." EA at 4-34. The BLM views the SCC as only providing a picture of costs of climate change and does not consider benefits. *Id.* It claims that presenting the amounts of GHG emissions is sufficient. *Id.* at 4-35. All that is needed is a qualitative assessment. BLM then goes on to reference a study that shows in the Northern Great Plains Region (including Wyoming) temperatures will warm over the next two to three decades, there will be less snowpack, and there will be high variability in annual water availability with small decreases in average streamflow. *Id.* And "emissions from oil and gas operations administered by BLM-Wyoming could contribute to these modeled projections of impact." *Id.* Given this recognition of likely impacts due to oil and gas development, including this lease sale, there is no reasonable basis for BLM to not employ the SCC protocol so as to get a better picture of the likely environmental impacts of climate change due to this lease sale, especially since, as noted, it remains the best analytical method available. Using the SCC is necessary if BLM wants to avoid "zeroing out" the potential costs of oil and gas development relative to climate change, which the courts do not allow. If the BLM wants to also present benefits that are likely to occur due to oil and gas leasing and development, it can certainly also do that.

The BLM recognizes that the IPCC has identified a target worldwide carbon budget that would likely limit global temperature rise to 2° C above preindustrial levels. EA at 3-13. The budget would be one trillion tons of carbon. *Id.* Yet the BLM declines to employ a carbon budget as part of this lease sale analysis because it claims we could overshoot the carbon budget and "BLM is limited, particularly at the time it is preparing a fossil fuels leasing action . . . , in choosing to constrain supplies of fossil fuels from public lands, since the public's choices in selecting energy sources has continued to support demand for those resources." *Id.* at 4-36. Yet the public just as surely is demanding actions to combat climate change, and a carbon budget is an important means to accomplish this that should be pursued in this EA. The BLM then goes on to describe how the amount of CO2 in the atmosphere determines temperature levels and states "[e]ventually stabilizing the global temperature requires $CO_2$ emissions to approach zero." Id. Clearly if this is the case the BLM should seek to employ a carbon budget as part of this lease sale analysis, especially since "all GHG emissions contribute incrementally to potential changes in global climate." *Id.* BLM's claim that it has "limited decision authority" to measurably change cumulative changes from climate change rings hollow; at a minimum it can *contribute* to reducing these impacts by reducing local emissions, and a carbon budget would help it do so. *Id.* at 4-36 to -37. And again, the carbon budget could help the BLM achieve a net zero carbon emissions level, which BLM recognizes is needed to stabilize global temperature.

### d. Climate change impacts must be integrated into the environmental baseline and across alternatives.

Existing and reasonably foreseeable climate change impacts must be integrated into the environmental baseline and across alternatives, including the no action alternative, in order to facilitate the requisite hard look at impacts that NEPA requires. Agencies are required under NEPA to "describe the environment of the area(s) to be affected or created by the alternatives under consideration," which creates the "baseline" for the impacts analysis and comparison of alternatives. 40 C.F.R. § 1502.15. As the Ninth Circuit Court of Appeals held, "without establishing the baseline conditions . . . there is simply no way to determine what effect the proposed [action] will have on the environment and, consequently, no way to comply with NEPA." *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988). Excluding climate change effects from the environmental baseline would ignore the reality that the impacts of proposed actions must be evaluated based on the already deteriorating, climate-impacted state of the resources, ecosystems, human communities, and structures that will be affected.

It is important for BLM to consider the "context" of climate change problems. This includes "society as whole (human, national), the affected region, the affected interests, and the locality." 40 C.F.R. § 1508.27(a). "Both short- and long-term effects are relevant." *Id.; see also* 42 U.S.C. § 4332(F) (requiring agencies to "recognize the worldwide and long-range character of environmental problems"). The world as a whole must be considered in a NEPA climate change analysis. *See Montana Envtl. Info. Ctr.,* 274 F. Supp. 3d at 1101–02 (for greenhouse gases, an agency may not "limit its context analysis to the local and regional level"); *accord Barnes v. U.S. Dep't of Transp.,* 655 F.3d 1124, 1139 (9th Cir. 2011) (noting "the effect of greenhouse gases on climate is a *global* problem" (emphasis in original)). Thus, in setting the "context" for this lease sale EA analysis, BLM must consider the local environment where the lease parcels are located, as well as regional, national, and global climate impacts.

### e. BLM must fully consider measures to mitigate climate impacts.

NEPA and associated CEQ regulations require BLM to analyze potential impacts and consider ways to avoid, minimize and mitigate these impacts, in accordance with the mitigation hierarchy. 40 C.F.R. §§ 1508.8, 1502.14, 1502.16, 1508.20. Specifically, agencies must "include appropriate mitigation measures not already included in the proposed action or alternatives." *Id.* §§ 1502.14(f), 1502.16(h). In its environmental analysis to support this lease sale, BLM must consider "[e]nergy requirements and conservation potential of various alternatives and mitigation measures" and means to mitigate adverse environmental impacts. 40 C.F.R. §§ 1502.16(e), (h).

BLM must first seek to avoid impacts, with second priority to minimize impacts (e.g., through project modifications, permit conditions, interim and final reclamation, etc.), and, generally, only if those approaches are insufficient to fully mitigate the impacts, will BLM seek to require compensation for some or all of the remaining impacts (i.e., residual effects). Tools such as regional mitigation strategies, compensatory mitigation funds, and conservation agreements allow land managers, in partnership with developers and stakeholders, to prioritize areas for different uses based on the full range of trust resources present and determine whether avoidance,

minimization, or compensation of development impacts is appropriate in specific contexts and locations. This decisional hierarchy protects the other uses of public land – including hunting, fishing, and outdoor recreation – and gives industry better information to plan their investments and a more predictable and efficient permitting process.

Simply stating that climate change is real and the proposed action would contribute to its effects is inadequate; BLM must utilize that analysis to evaluate and ultimately adopt decisions that lessen or eliminate those impacts, such as closing areas to leasing, not leasing in areas with low or no development potential, requiring emissions mitigation technologies for future leases, and/or requiring inclusion of lease notices and stipulations for future leases to preserve the agency's ability to address climate impacts at the time of development.

In developing mitigation measures for this lease sale, the BLM needs to fully consider the impacts from climate change that are being seen locally, on a statewide basis, a national basis, and worldwide. Locally these include things like impacts to forage that livestock graze and impacts to the habitat of wildlife species that occur on BLM lands. Increased wildfire frequency and severity is a significant issue, as are invasive species problems. Globally and nationally things like increasing sea levels need to be considered. BLM can at least put in place measures to mitigate local impacts in this lease sale EA because BLM has widespread authority over these local lands.

BLM must seek to avoid impacts; then minimize impacts (e.g., through project modifications, permit conditions, interim and final reclamation, etc.). This protects the other uses of public land – including hunting, fishing, and outdoor recreation – and gives industry better information to plan their investments and a more predictable and efficient permitting process. In accordance with NEPA, FLPMA, the Administrative Procedure Act, other laws and case-law, BLM's decisions regarding mitigation must not be arbitrary or capricious.

Mitigation measures can be used to support a finding of no significant impact (FONSI). *See, e.g., Spiller v. White,* 352 F.3d 235, 239 (5th Cir. 2003) (approving the use of mitigated FONSIs). But to do this, the *efficacy* of the mitigation measures must be fully analyzed and be *enforceable*. If the BLM issues a FONSI for this lease sale, it must ensure the mitigation measures relative to climate change outlined in it will be enforced.

BLM's presentation of mitigation measures that might be applied to the leases in this lease sale does not meet these requirements. BLM presents several mitigation measures, but they are discretionary, not mandatory. "Analysis and approval of future development on the lease parcels *may* include" best management practices (BMP), conditions of approval (COA), and applicant committed measures or be added to a state of Wyoming air quality permit. EA at 4-15 (emphasis added). "Mitigation measures *may* include, *but are not limited to*" eleven specified measures Id. (emphasis added). BLM also "encourages" adoption of "proven cost-effective technologies and practices that improve operation efficiency and reduce natural gas emissions to reduce the ultimate impact from the emissions." *Id.* Green completions are required throughout Wyoming now. *Id.* The BLM also mentions the Carbon Storage Project and the DOI Carbon Footprint Project. *Id.* at 4-16. The BLM should attempt to employ as much of these efforts as possible, especially it should seek "a baseline and reduction goal" for GHG emissions and energy use, as the Carbon Footprint Project is seeking to do. *Id.*

These measures do not meet the requirement to present "[m]eans to mitigate adverse environmental impacts", which were not fully covered in the alternatives section of this EA. 40 C.F.R. § 1502.16(h). They do not show that BLM has abided by the mitigation hierarchy because the measures are optional not mandatory. *Id.* § 1508.20. Moreover, if the mitigation measures "are not limited to" those listed in the EA, there is a need for BLM to consider additional more stringent mitigation measures, including those we have presented above. And since the mitigation measures are not mandatory, BLM cannot rely on a finding of no significant impact (FONSI) to approve this lease sale.

As discussed, BLM recognizes the wide-ranging environmental impacts of climate change. Yet the BLM has failed to consider those impacts specifically in this EA, instead relying only a presentation of GHG emissions amounts. This failure then infects the mitigation measures section of the EA making it invalid and in need of updating.

**f. BLM must analyze option value, carbon sequestration, and climate impacts on multiple uses.**

In this NEPA analysis BLM can and should apply the principles of option, or informational, value, which permit the agency to look at the benefits of delaying irreversible decisions.[37] A recent New York University School of Law report examines the business schemes and practices utilized by private oil and gas companies when leasing public lands. The report, attached as Exhibit 11, found that "[w]hile private companies routinely account for option value, timing their purchasing and development decisions to be privately optimal, BLM fails to account for option value in its land use planning and lease sale processes.[38] Failing to account for the informational value of waiting puts the American people at economic and financial disadvantages. The consideration of option before offering any leases would result in more consideration of climate risks and would reduce economic costs.[39]

The report also proposes recommendations for how BLM can modernize its leasing and planning processes to account for option value, and ensure the public is fairly compensated, all within the scope of the agency's existing legal authority. Recommendations include offering only high-potential lands, if any, in lease sales, increasing minimum bids, and exploring other means of accounting for environmental and social considerations (such as valuing carbon sink attributes). Option value considerations are of notable importance in the ongoing planning effort given the extreme drop in oil prices in recent months.

It is well-established that issuance of an oil and gas lease is an irreversible commitment of resources. As the U.S. Court of Appeals for the D.C. Circuit held in the context of considering the

[37] *See* Jayni Foley Hein, *Harmonizing Preservation and Production,* INSTITUTE FOR POLICY INTEGRITY at 13 (June 2015) ("Option value derives from the ability to delay decisions until later, when more information is available. . . . In the leasing context, the value associated with the option to delay can be large, especially when there is a high degree of uncertainty about resource price, extraction costs, and/or the social and environmental costs of drilling.") *available at* https://policyintegrity.org/files/publications/DOI_LeasingReport.pdf.
[38] New York University School of Law; Institute for Policy Integrity, *Look Before You Lease; Reducing Fossil Fuel Dominance on Public Lands by Accounting for Option Value* 4 (2020).
[39] *Id*. at 24.

informational value of delaying leasing on the Outer Continental Shelf, "[t]here is therefore a tangible present economic benefit to delaying the decision to drill for fossil fuels to preserve the opportunity to see what new technologies develop and what new information comes to light." *Ctr. for Sustainable Econ. v. Jewell*, 779 F.3d 588, 610 (D.C. Cir. 2015). This RMP must evaluate the economic benefits that could arise from delaying leasing and/or exploration and development by making much of the planning area closed to oil and gas leasing. Potential economic benefits include improvements in technology, additional benefits that could come from managing these lands for other uses, including special designations, and additional information on the impacts of climate change and ways to avoid or mitigate resulting changes to the affected environment.

BLM has the ability and obligation to undertake an analysis of the benefits of delaying leasing, which can be both qualitative and quantitative, considering both economic and environmental needs. In *Wilderness Workshop*, plaintiffs proposed a land use planning alternative where low and medium potential lands would be closed for leasing. BLM declined to consider the alternative, claiming it had already considered and discarded a "no leasing" alternative. *See* 342 F. Supp. at 1167. The court ruled against the agency and found: "[t]his alternative would be 'significantly distinguishable' because it would allow BLM to consider other uses for that land." *Id*. Considering such an alternative would permit BLM to consider the option value of delaying leasing on low potential land and better consider climate change impacts.

In this NEPA analysis BLM should consider at least one alternative where option values would be preserved, delaying or deferring leasing. The BLM should attach stipulations to the leases that permit consideration of option value when development is proposed.

The BLM should also consider the values of its lands for sequestering carbon dioxide, and thus reducing climate change impacts, in this NEPA analysis. Native grasslands, rangelands, and soils can be important means to sequester carbon, thus removing it from the atmosphere.[40] Development of these areas would release carbon stored in biomass as well as foregoing future carbon storage opportunity. Taken together, this is just as much part of the emissions analysis as lifecycle emissions from the fuels themselves. This issue, therefore, must be considered in the NEPA analysis for this lease sale. Facilitating or promoting carbon sequestration is an important mitigation measure that could be adopted for this lease sale and must be fully analyzed and included in one or more alternatives.

BLM must also fully analyze the impacts of climate change on other multiple uses, including ways to mitigate those impacts. As discussed above, the USU study, attached as Exhibit 10, discussed the impact of climate change on BLM's multiple use mission and made recommendations for how to address this issue. BLM fails to account for climate change as needed to fulfill its conservation mandate, especially the need for prioritizing different uses. More effective incorporation of science is needed for effective natural resources management in the face of a climate-change-affected future. Passive uses are under-prioritized by BLM in favor of active uses. Energy extraction contributes the most to anthropogenic climate change of all the land uses BLM manages. BLM must use the best available information, including but not limited to the USU study, to fully analyze

[40] *See* MATTHEW D. MERRILL, ET AL., FEDERAL LANDS GREENHOUSE EMISSIONS AND SEQUESTRATION IN THE UNITED STATES—ESTIMATES FOR 2005–14, U.S. GEOLOGICAL SURVEY SCIENTIFIC INVESTIGATIONS REPORT 1 (2018), https://doi.org/10.3133/sir20185131.

the impacts of past, present, and reasonably foreseeable GHG emissions and associated climate impacts on multiple uses.

Mitigation measures should be considered in the context of BLM's multiple use mission and the need to protect those resources, such as cultural sites and recreation areas. The impacts of climate change to those resources needs to be recognized and means to protect them provided. This should be fully apparent in the alternatives considered in the EA for this lease sale, as well as the baseline (affected environment) that is considered.

The BLM has not done an option values analysis as part of this EA. Dealing with uncertainty is one of the primary reasons that an options values analysis should be utilized for this lease sale. Yet in the EA the BLM erects uncertainty as an excuse to not make a full assessment of climate change impacts. It says that although it has presented quantitative estimates of direct and indirect (end use) GHG emissions "associated with potential for oil and gas development on the leases" uncertainty regarding various issues limit the climate change analysis that can be done in the EA. EA at 4-12 to -13. Yet as noted in the Options Value Report, "[o]ption value derives from the ability to delay decisions until later, when more information is available. . . . In the leasing context, the value associated with the option to delay can be large, especially when there is a high degree of uncertainty about resource price, extraction costs, and/or the social and environmental costs of drilling." Clearly if the uncertainties regarding climate change impacts due to this leasing exercise are so great, this is the time to not engage in this leasing, leaving it for a time when environmental impacts can be adequately addressed. BLM needs to add an options values analysis to this EA.

The BLM has also not adequately considered its multiple use mandate in the EA relative to climate change impacts. While things like climate impacts to wildlife and increased fire frequency are mentioned, there is no effort to actually reduce impacts to multiple use values due to climate change. For example, BLM should provide additional mitigation measures to reduce $CO_2$ and $CH_4$ emissions so at to better protect cultural and historical resources and many other multiple uses, recognizing these benefits in the EA. The options value analysis would also help BLM meet its multiple use mandate.

The value of carbon sequestration on the public lands is barely mentioned in the EA, although the USGS Study that fully considered carbon sequestration on the public lands is described. EA at 3-22 and -25. The BLM should provide for ways to maximize carbon sequestration as part of this leasing analysis, or at least ensure that development does not destroy stored carbon reservoirs.

**g. BLM must analyze an adequate range of alternatives.**

Under NEPA the BLM must consider an adequate range of alternatives for this lease sale, including alternatives that mitigate climate change impacts. Yet, BLM often only considers two alternatives in its leasing analyses: leasing no parcels (the no action alternative) or leasing all (or nearly all) parcels that have been nominated. That is the case here where under BLM's modified alternative 155 out of the 165 parcels considered in the proposed action would be offered for sale, and there would be a no action alternative. This "all or nothing approach" violates NEPA, which requires Federal agencies to "study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of

available resources." 42 U.S.C. 4332(2)(E); *see also* 40 C.F.R. § 1508.9(b) (an EA must include a discussion "of alternatives as required by section 102(2)(E)"). Although "an agency's obligation to consider alternatives under an EA is a lesser one than under an EIS," NEPA "requires that alternatives be given full and meaningful consideration" in both instances. *Native Ecosystems Council v. U.S. Forest Service*, 428 F.3d 1233, 1245–46 (9th Cir. 2005). "The existence of a viable but unexamined alternative renders an EA inadequate." *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (quotations and citations omitted). When determining whether an agency has considered an appropriate range of alternatives, courts look to the substance of the alternatives. *Native Ecosystems Council*, 428 F.3d at 1246. In particular, the agency must consider reasonable alternatives that facilitate informed decision-making and a "hard and careful look at [] impacts." *Western Watersheds Project*, 719 F.3d at 1051.

As the Tenth Circuit Court of Appeals has held, "[w]ithout substantive, comparative environmental impact information regarding other possible courses of action, the ability of [a NEPA analysis] to inform agency deliberation and facilitate public involvement would be greatly degraded." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 708 (10th Cir. 2009). "The existence of a viable but unexamined alternative renders an EA inadequate." *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (quotations and citations omitted).

To comply with NEPA, BLM must consider a full range of alternatives for this lease sale that includes a range of options for reducing climate change impacts and GHG emissions. These would include, for example, no leasing, requiring mandatory offsets for GHG emissions, methane controls and other leasing stipulations, protections for carbon sinks, and consideration of option value alternatives.

In this lease sale the BLM is only considering the "all or nothing" approach. EA at 10-11. This does not meet BLM's obligations under NEPA and needs to be reconsidered. BLM needs to considering deferring parcels in this lease sale to deal with climate change impacts as well as the other issues discussed in this protest.

**h. The underlying Resource Management Plans must support the NEPA analysis and leasing decisions.**

The underlying RMPs must support this lease sale with an up-to-date climate change analysis of oil and gas leasing and development, including but not limited to quantification of reasonably foreseeable GHG emissions and associated climate change impacts, as well as cumulative impact analysis, among other elements. It should also include an up-to-date RFDS to inform an accurate analysis of climate impacts, as well as availability and other plan-level direction on oil and gas leasing and development that fully accounts for climate impacts. *See Wilderness Workshop*, 342 F. Supp. 3d at 1167 (holding that BLM RMP must include full climate analysis and consideration of alternatives that would make low and medium potential lands unavailable for leasing).

Here, the RMPs and associated NEPA analysis only discussed at a general level the climate impacts of oil and gas development, and the analyses do not have an up-to-date RFDS and/or plan direction that accounts for climate change impacts. To rectify these deficiencies, BLM should prepare RMP amendments and corresponding new or supplemental EISs prior to leasing. *See* 40

C.F.R. § 1502.9(c)(i)-(ii) (supplemental EIS required where substantial changes have occurred and/or significant new circumstances or information exist).

The BLM bases much of its assessment of climate change impacts and issues in the EA on the reasonably foreseeable development (RFD) projections that are presented in the Lander, Buffalo, and Bighorn Basin RMPs and the Greater Sage Grouse Approved RMP Amendment. EA at 3-18 to -19. But the EISs for these RMPs were last approved or amended, including the "updated" RFDs, no more recently that 2015. *Id.* at 3-18. That is not recently enough to be acceptable for use in this NEPA analysis. In *WildEarth Guardians v. BLM,* 2020 U.S. Dist. LEXIS 77409 *28 (D. Mont., May 1, 2020) the BLM's climate change cumulative impacts analysis failed partly because "the RMPs predate the lease sales by more than two years." "The cumulative impact regulations require a catalogue of past, present, and reasonably foreseeable projects at the time of the lease sale, not two years ago." *Id.* The BLM now has the benefit of approximately five more years of information than it did when the RFDs at issue here were developed, and thus tiering to these RMPs is inappropriate. *Id.* at *28 and *29. The analyses in the RMPs do not account for actions outside the planning area, which makes tiering invalid. *Id.*

Based on information presented in the EA, the BLM should be able to project how many wells will likely be drilled on the proposed leases and how many will be in producing status, contributing to global warming. EA at 3-19 to 3-20. The level of production on existing leases is known, as is the number of wells that are currently being drilled each year. Based on this information we should expect that 62 of the 155 proposed leases will be in producing status (40 percent of the Federal leases in the state are in producing status). And if there are 13,296 Federal oil and gas leases in effect in Wyoming with 650 wells being drilled annually statewide between 2010 and 2019, we would expect nearly 8 wells would be drilled annually on the 155 leases proposed in this lease sale. The BLM's climate change analysis should be based on projections such as this, but that is not the case, only projected GHG emissions levels are used in the analysis.

**4. BLM Must Fully Account for Climate Impacts under the Administrative Procedure Act**

BLM must ensure the climate analysis for this lease sale complies with the Administrative Procedure Act (APA). The APA provides that agency action can be set aside when it is deemed "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

The BLM operates under many requirements that demand full consideration of climate change issues and mitigation. For instance, the BLM can require "reasonable measures" on an oil and gas lease "to minimize adverse impacts to other resource values." 43 C.F.R. § 3101.1-2. Lessees must "conduct operations in a manner that minimizes adverse impacts to land, air, and water, to cultural, biological, visual, and other resources, and to other lands uses or users." BLM Form 3100-11 (BLM's standard lease form). The BLM must "take any action necessary to prevent unnecessary or undue degradation" of the public lands. 43 U.S.C. § 1732(b). The BLM must comply with its multiple use mandate, including considering the present and future needs of the American people, providing for the long-term needs of future generations, and ensuring the "harmonious and coordinated management of the various resources without permanent impairment of the

productivity of the land and the quality of the environment" considering the relative values of the resources. *Id.* § 1702(c). It is national policy that BLM should manage the public lands in a manner that will protect them, including air and atmospheric values. *Id.* § 1701(a)(8). Environmental protection measures are required on oil and gas leases by the Mineral Leasing Act. 30 U.S.C. § 226(g).

Under APA, 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, 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." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 43 (1983). The APA's standard of reasoned decision-making requires agencies to consider both the advantages and disadvantages—in other words, both the costs and benefits—of their decisions. *Michigan v. EPA,* 135 S. Ct. 2699, 2707 (2015). In this lease sale the climate change analysis must demonstrate full consideration of all relevant factors in a reasoned way to avoid being deemed arbitrary and capricious.

### 5. BLM Must Fully Account for, Reduce, and Mitigate the Impacts of Climate Change in its Leasing Decisions

In the context of the existential crisis posed by climate change, the significant GHG emissions originating from Federal public lands, and the serious detrimental impacts of climate change on multiple uses, BLM must fully account for the climate impacts associated with this lease sale, reduce the impacts as much as possible, and fully mitigate any remaining impacts to ensure net zero climate emissions. BLM has ample authority to do so and indeed must do so to satisfy its statutory obligations under FLPMA and the MLA.

First, under FLPMA, BLM is required to manage public lands on the basis of multiple use and sustained yield. 43 U.S.C. 1732. This in turn requires consideration of "the present and future needs of the American people," providing for "the long-term needs of future generations," and ensuring the "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment [considering] the relative values of the resources." *Id.* § 1702(c). As the Supreme Court has explained,

> "Multiple use management" is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, "including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values."

*Norton v. S. Utah Wilderness Alliance*, 542 U.S. 55, 58 (2004) (quoting 43 U.S.C. § 1702(c)).

In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that development of public lands is not required, but must instead be weighed against other possible uses, including conservation to protect environmental values. *See, e.g., New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009) ("BLM's obligation to

manage for multiple use does not mean that development *must* be allowed . . . . Development is a *possible* use, which BLM must weigh against other possible uses—including conservation to protect environmental values, which are best assessed through the NEPA process." (emphasis in original)); *Wilderness Workshop v. BLM*, 342 F. Supp. 3d 1145, 1166 (D. Colo. 2018) ("the principle of multiple use does not require BLM to prioritize development over other uses" (internal quotations and citations omitted)). Just as BLM can deny a project outright in order to protect the environmental uses of public lands, it can also condition a project's approval on the commitment to mitigation measures that lessen environmental impacts. *See, e.g., Pub. Lands Council v. Babbitt*, 167 F.3d 1287, 1300–01 (10th Cir. 1999) ("FLPMA unambiguously authorizes the Secretary to specify terms and conditions in livestock grazing permits in accordance with land use plans"); *Grynberg Petro*, 152 IBLA 300, 307–08 (2000) (describing how appellants challenging conditions of approval bear the burden of establishing that they are "unreasonable or not supported by the data").

The multiple use framework's emphasis both on environmental resources and the need to balance between present and future generations are highly relevant to consideration of climate change-related impacts. Climate change will inevitably affect future generations more than present ones and threatens to deplete a variety of resources – both renewable and non-renewable. In addition, climate change is affecting and will continue to affect every other resource value included in the multiple use framework, whether environmental, recreational, or economic in nature, due to the many changes it is causing to the ecosystems of public lands and increased threats from natural disasters. *See, e.g.*, Exhibit 8 (Utah State University Report). In this context, satisfying FLPMA's multiple use and sustained yield mandate requires BLM to fully account for the climate impacts, reduce the impacts as much as possible, and fully mitigate any remaining impacts to ensure net zero climate emissions, as a condition of approval on any leasing or development decisions.

Second, climate mitigation is also necessary to satisfy BLM's obligation to prevent unnecessary or undue degradation (UUD) under FLPMA. 43 U.S.C. § 1732(b) (requiring BLM "[i]n managing the public lands . . . [to] take any action necessary to prevent unnecessary or undue degradation of the lands"); *see also Rocky Mountain Oil & Gas Ass'n v. Watt*, 696 F.2d 734, 739 (10th Cir. 1982) ("[i]n general, the BLM is to prevent unnecessary or undue degradation of the public lands."). In other contexts, BLM has defined its obligation to avoid UUD as requiring mitigation for adverse impacts. *E.g.*, 43 C.F.R. §§ 3809.5 & 3809.420(a)(4) (in the hard rock mining context, UUD means conditions, activities or practices that are not "reasonably incident" to the mining operation or that fail to comply with other laws or standards of performance, which include "mitigation measures specified by BLM to protect public lands"). The IBLA and courts have likewise recognized that BLM has authority to incorporate mitigation measures into project authorizations to prevent UUD. *See, e.g.*, *Theodore Roosevelt Conservation P'ship v. Salazar*, 661 F.3d 66, 76, 78 (D.C. Cir. 2011) (citing with approval *Biodiversity Conservation Alliance*, 174 IBLA 1, 5–6 (March 3, 2008), which held that an environmental impact may rise to the level of UUD if it results in "something more than the usual effects anticipated from development, subject to *appropriate mitigation*" (emphasis added)); *Biodiversity Conservation Alliance v. BLM*, No. 09-CV-08-J, 2010 U.S. Dist. LEXIS 62431, at *1, *27 (D. Wyo. June 10, 2010) (infill drilling project would not result in UUD where BLM required enforceable mitigation of project impacts).

Given the catastrophic impacts of climate change on public lands, multiple uses, and future generations, avoiding UUD necessarily requires BLM to ensure net zero carbon emissions from any leasing or development decisions. Given the global nature of climate change, it is *never* necessary to have a net incremental increase in GHG emissions because any emissions can be fully mitigated and offset. In other words, a net zero carbon budget can readily be accomplished, whether that is by not leasing, delaying leasing or development to account for option value, and/or imposing mandatory measures to mitigate and offset any GHG emissions as stipulations and/or conditions of approval. As mentioned previously, while net zero emissions should be achieved by 2030 to avoid the most catastrophic impacts of climate change, they absolutely must be achieved by 2050, with a 45 percent reduction in emissions by 2030.

FLPMA's broad policy directives support this approach. For instance, FLPMA calls on BLM to manage public lands "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air *and atmospheric*, water resource, and archaeological values." 43 U.S.C. § 1701(a)(8) (emphasis added). It also directs BLM to receive "fair market value" for the use of public lands. *Id.* § 1701(a)(9). "Fair market value" is not defined in FLPMA, but BLM's economic valuation handbook and previous working groups convened by the Department of the Interior indicate that "economic, environmental, and social considerations [should be considered] in determining the value of federal lands – including option value."[41] Because Because climate change, and thus all emissions of GHGs, create costs to be borne by society at large and by the BLM in adapting its lands to the changing climate, the "fair market value" of oil and gas extraction activities should take carbon costs into consideration and be addressed through compensatory mitigation.

Third, the MLA provides BLM with authority to require a net zero carbon budget, including through its broad discretion to determine which, and how much, public land to lease for mineral extraction. *See, e.g., W. Energy All. v. Salazar*, 709 F.3d 1040, 1044 (10th Cir. 2013); *W. Energy All. v. Jewell*, No. CV 16-0912 WJ/KBM, 2017 WL 3600741, at *3 (D.N.M. Jan. 13, 2017), rev'd sub nom. W. Energy All. v. Zinke, 877 F.3d 1157 (10th Cir. 2017). To address climate impacts, BLM may reduce the amount of land made available for leasing and/or require full mitigation of GHG emissions and associated climate impacts via lease stipulations and conditions of approval designed "to minimize adverse impacts to other resource values." *See* 30 U.S.C. § 226(g); 43 C.F.R. §§ 3101.1-2 & 3101.1–3; *see also* BLM Form 3100-11 at 3 (BLM's standard lease form requires lessees to "conduct operations in a manner that minimizes adverse impacts to land, air, and water, to cultural, biological, visual, and other resources, and to other lands uses or users"). Additionally, leasing under the MLA must generally be done in the "public interest," which necessarily requires consideration and mitigation of climate change. Indeed, BLM may, under the MLA, reject a bid for an oil and gas lease if accepting the offer is "unwise in the public interest." 30 U.S.C. § 192.

BLM has not complied with these obligations, and the lease sale cannot proceed absent full consideration and adoption of measures that would ensure net zero GHG emissions. BLM may not

[41] *See* New York University School of Law; Institute for Policy Integrity, *Look Before You Lease; Reducing Fossil Fuel Dominance on Public Lands by Accounting for Option Value* at 4 (2020); *citing* Jayni Foley Hein, *Federal Lands and Fossil Fuels: Maximizing Social Welfare in Federal Energy Leasing*, 42 HARV. ENVT'L L. REV. 1 at 39-40 (2018).

rely on Instruction Memorandum 2019-018 – which purports to disallow mandatory offsite compensatory mitigation – to avoid these obligations. IM 2019-018 fails to distinguish between localized impacts and the global impacts of climate change or recognize that climate impacts are unlikely to be full mitigated solely through onsite mitigation. Instead, it purports to forbid GHG offsets that would allow BLM to satisfy its obligations under FLPMA and the MLA to fully account for and mitigate climate change impacts. Reliance on the IM is arbitrary, capricious, and not in accordance with law.

### 6. BLM Must Fully Consider and Prevent Methane Waste

#### a. BLM failed to satisfy its obligation to prevent the waste of methane.

The release of methane from oil and gas operations due to its venting, flaring, or leaking—also referred to as waste—is a significant issue relative to climate change because methane is a far more potent GHG than carbon dioxide. Methane is 86 times more potent than carbon dioxide as a GHG.[42] Between 2009 and 2015, 462 billion cubic feet (Bcf) of natural gas from Federal leases was vented or flared – enough to serve 6.2 million households for a year.[43] In 2008 "the economically recoverable volume represented about $23 million in lost Federal royalties and 16.5 million metric tons of carbon dioxide equivalent (CO2e) emissions."[44] The agency found that in 2013, 98 Bcf of natural gas was vented and flared from Federal and Indian leases. This volume had a sales value of $392 million and would have generated royalty revenues in excess of $49 million. Of the 98 Bcf of gas, it is estimated that 22 Bcf was vented and 76 Bcf was flared.[45]

Under the Mineral Leasing Act (MLA) the BLM is under an obligation to prevent waste. The MLA directs the Department of the Interior (DOI) to require "all reasonable precautions to prevent waste of oil or gas developed in the land" when leasing land for oil and gas development. 30 U.S.C. § 225, and mandates that "[e]ach lease shall contain provisions for the prevention of undue waste." *Id.* § 187. The MLA also requires BLM to consider not just private oil and gas interests, but also the "interests of the United States" and the "public welfare" when leasing and regulating publicly owned oil and gas resources. *Id.* § 187. As described above, FLPMA's mandates to prevent unnecessary or undue degradation and to manage for multiple use and sustained yield and in a manner that protects environmental, air, and atmospheric values, likewise require BLM to regulate and limit natural gas waste and its significant contributions to climate change and associated degradation of public lands resources. 43 U.S.C. §§ 1701(a)(8), 1702(c), 1732(b).

The MLA's use of "all" to modify the term "reasonable precautions" shows that Congress intended BLM to aggressively control waste. The agency may not forego reasonable and effective measures limiting venting, flaring, and leaks for the sake of administrative convenience or to enhance the bottom lines of operators. *See Halliburton, Inc. v. Admin. Review Bd.*, 771 F.3d 254, 266 (5th Cir.

[42] Gayathri Vaidyanathan, *How Bad of a Greenhouse Gas is Methane?*, SCIENTIFIC AMERICAN (Dec. 22, 2015), https://www.scientificamerican.com/article/how-bad-of-a-greenhouse-gas-is-methane/.
[43] Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008 (Nov. 18, 2016).
[44] U.S. Bureau of Land Management, *Regulatory Impact Analysis for: Revisions to 43 CFR 3100 (Onshore Oil and Gas Leasing) and 43 CFR 3600 (Onshore Oil and Gas Operations) Additions of 43 CFR 3178 (Royalty-Free Use of Lease Production) and 43 CFR 3179 (Waste Prevention and Resource Conservation)*, at 2 (Nov. 10, 2016).
[45] *Id.* at 3.

2014) (ruling that statutory term "all relief necessary" authorized broad remedies against defendant because "we think Congress meant what it said. All means all" (internal quotation omitted)); *Cty. of Oakland v. Fed. Housing Fin. Agency*, 716 F.3d 935, 940 (6th Cir. 2013) ("a straightforward reading of the statute leads to the unremarkable conclusion that when Congress said, 'all taxation,' it meant all taxation" (emphasis in original)).

The obligation to "use all reasonable precautions to prevent waste" applies to lease sale decisions regardless of any national waste rules the BLM may operate under. In 2016 the BLM adopted strong new waste regulations. Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008 (Nov. 18, 2016). The rule would have reduced venting of natural gas by 35 percent and flaring of gas by 49 percent and required companies to limit the waste (leaking) of this methane due to infrastructure failures, with significant air quality and climate change benefits. The rule was projected to reduce volatile organic compound (VOC) emissions by 250,000–267,000 tons per year (tpy) and methane emissions by 175,000–180,000 tpy (using the social cost of methane, estimated to be worth $189–247 million per year). *Id.* at 83,069.

Under the direction of this administration, however, the BLM abandoned (rescinded) the 2016 rule and adopted a new much weaker regulation in 2018. Waste Prevention, Production Subject to Royalties, and Resource Conservation; Rescission or Revision of Certain Requirements, 83 Fed. Reg. 49,184 (Sept. 28, 2018). The new rule seeks to remove five key policies of the 2016 rule (including leak detection and repair requirements) and modify and/or replace three other significant provisions (including gas capture related to flaring requirements). The new rule would retreat to the outdated provisions in Notice to Lessees 4A (NTL-4A)[46] and would rely on inadequate state waste rule provisions which do not even exist in some cases. The 2018 rule is being challenged in court. *State of California v. Bernhardt,* Case No. 18-cv-05712-YGR (N.D. Cal.) (filed Sept. 18, 2018). Regardless of the status of these national rules, the BLM still has an obligation to "prevent" waste that could occur as a result of this lease sale. This includes substantive waste prevention requirements, as well as a thorough NEPA analysis of methane (waste) climate change impacts, and consideration of mitigation measures to reduce waste.

Nor may BLM rely on inadequate state regulations as a proxy for fulfilling its independent obligation to prevent methane waste. While the agency's 2018 rule purports to rely on a patchwork of state regulation, this approach leads to the absurd result that waste of Federal public minerals differs by state and abrogates the agency's affirmative obligation under the MLA to prevent that waste and protect the public interest in the development of public minerals. That obligation may not be delegated to the states. *See Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation v. Bd. of Oil & Gas Conservation of Mont.,* 792 F.2d 782, 795 (9th Cir. 1986); *Lomax Expl. Co.*, 105 IBLA 1, 7 (1988).

[46] NTL-4A requires the BLM to address venting and flaring on a case-by-case basis resulting in a tremendous administrative burden. Since NTL-4A was issued, technologies and practices for oil and gas production as well as technologies for controlling emissions have advanced considerably and "NTL-4A neither reflects today's best practices and advanced technologies, nor is particularly effective in requiring their use to avoid waste." 81 Fed. Reg. 6,616, 6,628 (Feb. 8, 2016).

The BLM must exercise its authority to minimize waste of publicly owned natural gas from all leases issued in this sale and should do so by incorporating waste minimization stipulations as lease notices in the lease terms. Specifically, BLM should consider or incorporate lease notices or stipulation provisions to address issues that were covered under the 2016 final rule but left unaddressed in the 2018 rule. Lease notices should:

- Require the submission of a waste minimization plan along with every APD;
- Mandate operators meet monthly gas capture percentage targets as outlined in the 2016 rule;
- Establish restrictions on flaring;
- Prohibit venting during liquids unloading operations;
- Require operators to report volumes of gas vented, flared and leaked;
- Require the capture of emissions associated with well drilling, completion and testing operations;
- Establish waste minimization requirements for pneumatic controllers and diaphragm pumps;
- Establish a comprehensive leak detection and repair (LDAR) inspection and reporting protocol for all well production facilities similar to that of the 2016 final rule.

In addition, BLM should require green completion techniques for every well, require operators to install vapor recovery units at new facilities, implement emission controls for storage vessels and glycol dehydrators that would reduce emissions by 95 percent, ensure at least 70 percent of gas compression at compressor stations and well heads would be powered by electricity, and require all pneumatic controllers at gas gathering and boosting stations, well sites, and gas processing plants to meet the EPA new source performance standards (NSPS) requirements. The inclusion of these emission control requirements would result in real and significant emission reductions and constitute reasonable and feasible mitigation measures that must be fully considered and adopted.

The BLM has required waste prevention measures aside from the requirements of the 2016 Rule in several Field Offices, including North Dakota, Price, Utah, and Royal Gorge, Colorado. BLM should provide in this lease sale for similar proactive measures to analyze and incentivize methane capture. These measures should be imposed as stipulations attached to the leases and as mandatory conditions of approval attached to drilling permits approved for existing leases.

While implementing methane waste prevention technologies or practices may result in reduced profitability for a single low producing well, the costs associated with that business decision are spread among all the company's assets, and additional gas capture across a field can easily offset those marginal losses. BLM must consider these issues when evaluating waste and pollution in its lease sale decision. Furthermore, BLM must evaluate the economics of drilling projects by accounting for the benefits of methane reductions to public health, the climate, and the environment, as well as the costs to these same resources from impacts caused by methane emissions that could be prevented.

In short, the BLM must meet its obligation to reduce waste and increase Federal revenues by ensuring lease terms include waste minimization requirements, and it has numerous reasonable and feasible tools for doing so.

Industry has reduced methane emissions by adopting provisions in EPA's Natural Gas Energy Star program. EA at 4-16. There are 45 voluntary technologies and practices that can be used. *Id.* EPA reported that 89 percent of the methane reductions came from the oil and gas production sector. *Id.* The BLM should ensure that the technologies that are mentioned—such as installing vapor recovery units—are adopted before development can proceed on these leases, but it has not done so. BLM will only "work with industry to "promote" these BMPs, but only "where such mitigation is consistent with agency authorities and policies and is supported by BLM's NEPA analysis." *Id.* This EA should provide the NEPA analysis that ensures these BMPs are employed, but this has not been done.

In short, the BLM must meet its obligation to reduce waste and increase Federal revenues by ensuring lease terms include waste minimization requirements, and it has numerous reasonable and feasible tools for doing so.

The BLM needs to fully consider its obligation to prevent waste of methane at the leasing stage under the requirements in the MLA. 30 U.S.C. §§ 187 and 225. These requirements apply in addition to any national waste prevention rules that BLM may operate under. The procedures we outlined above should be required.

**b. BLM failed to adequately analyze methane emissions under NEPA or the APA.**

As discussed in the preceding sections, BLM is obligated under NEPA and the APA to fully analyze and quantify lifecycle methane emissions, associated climate impacts, and mitigation measures. In doing so, BLM must consider the global warming potential (GWP) of methane emissions, and set an appropriate metric for analyzing GWP (a 20-year horizon).[47] In addition to an adequate GWP horizon, BLM must utilize best available calculation tools for lifecycle analyses of fossil fuel extraction, operations, transport and end-user emissions. The EPA developed a companion protocol to the SCC for methane, called the Social Cost of Methane (SCM). The 2010 SCM has been estimated to be between $370 and $2,400 per ton of methane in 2007 dollars.[48] The significantly higher social cost estimates for an additional ton of methane relative to carbon dioxide is due to the significantly larger radiative forcing generated by methane which has a global warming potential of between 28 and 87 times that of carbon dioxide. The BLM should use the SCM methodology to analyze methane emissions that are likely to occur due to this sale.

[47] *See W. Org. Res. Councils v. BLM,* 2018 U.S. Dist. LEXIS 49635 (D. Mont. Mar. 26, 2018) (stating, "BLM violated NEPA where it failed to justify its use of GWPs based on a 100-year time horizon rather than the 20-year time horizon of the RMPs. BLM also violated NEPA where it failed to acknowledge evolving science in this area" that would justify lower a lower GWP). The need to consider a 20 year GWP horizon for methane is true despite the BLM's claims in the EA that a 100-year horizon is appropriate, even though it also recognizes the average atmospheric lifetime of methane is 12 years. EA at 4-29.

[48] Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide* (2016), https://archive.epa.gov/epa/sites/production/files/2016-12/documents/addendum_to_sc-ghg_tsd_august_2016.pdf.

BLM also must ensure that its analysis accurately estimates the amount of methane emitted by oil and gas operations. A recent study showed that the federal government has underestimated the amount of methane emitted by oil and gas operations by nearly sixty percent.[49] Considering methane leaks, "the volume represents enough natural gas to fuel 10 million homes – lost gas worth an estimated $2 billion." Three research findings came about as a result of this five-year study: (1) methane emissions are significant across the whole supply chain; production of oil and gas accounts for the largest share, (2) inventories systematically underestimate overall emissions, and (3) emissions from unpredictable, widespread sources are responsible for much, but not all, of the discrepancy.[50]

And as discussed in detail in the NEPA section, BLM also must fully consider the methane waste control measures described above, including as mitigation measures in one or more alternatives. In addition, the BLM must fully consider state regulations that may (or may not) help prevent methane emissions. BLM cannot rely on these regulations to satisfy its obligation to prevent methane waste. However, where state regulations exist, BLM must ensure that BLM's stipulations and other lease measures enforce them to reduce methane emissions as much as possible.

As with SCC, the SCM protocol was not utilized here which needs to be corrected. And as we have mentioned, BLM also needs to consider a 20-year GWP horizon for methane in addition to the 100-year horizon it employed. BLM also needs to provide for direct mitigation of methane (waste) emissions and not just rely on the outdated NTL-4A measures that are mentioned in the EA. As BLM know, it is required to "prevent" the waste of methane in its leasing operations. 30 U.S.C. § 225. And according to the SIR report referenced in the EA, emissions estimates for the release of methane are highest for Federal lands in Wyoming (28 percent). EA at 3-25. So clearly strong mitigation measures are needed. This is especially true because fugitive $CH_4$ emissions are a "major source of global $CH_4$ emissions." *Id.* at 4-5.

Finally, the BLM must ensure the RMP(s) applicable to this lease sale are up to date relative to providing for methane waste prevention. The RMPs must make provision for stipulations to prevent methane waste in order to demonstrate adequate measures are in place to ensure waste reduction. If the RMP has not adequately addressed methane waste prevention it cannot serve as the basis for this NEPA analysis and lease sale without amendment.

As we have discussed, since the RMPs that are employed here to support the climate change analysis, including relative to methane, are more than two years old (they are more like five years old), they are no longer appropriate to support a cumulative impacts analysis, as the court held in *WildEarth Guardians v. BLM.*

### 7. BLM Must Comply with the Decision in *WildEarth Guardians v. U.S. Bureau of Land Management.*

As we mentioned, BLM must ensure that it complies with the recent decision in *WildEarth Guardians v. U.S. Bureau of Land Mgmt.,* 2020 U.S. Dist. LEXIS 77409 (D. Mont., May 1, 2020).

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[49] *See* Environmental Defense Fund, *Measuring Methane: A Groundbreaking Effort to Quantify Methane Emissions from the Oil and Gas Industry* (2019), *available at* https://www.eenews.net/assets/2019/03/25/document_cw_01.pdf.
[50] *Id.* at 5.

In that case the court vacated two lease sales (encompassing 287 leases covering 145,063 acres) and the FONSIs supporting the underlying EAs because the BLM failed to consider four issues (impacts to groundwater, consideration of alternatives to protect groundwater, climate change impacts, and issuing the FONSIs in an arbitrary and capricious manner)(the relevant order is attached as Exhibit 12.)

Relative to climate change the court found the EAs did not support the lease sales because BLM failed to do the needed analysis of cumulative impacts. *WildEarth Guardians* at *24 to *34. BLM relied on its quantification of GHG emissions to support its claims it met the cumulative impact analysis requirements, but while "[t]his information was thorough and necessary for BLM to comply with NEPA, [ ] none of it speaks to whether BLM considered *cumulative* climate impacts." *Id.* at *27 to *28 (emphasis in original). Moreover, BLM claimed that it met NEPA's cumulative impacts requirement by tiering the EAs to the relevant RMPs. *Id.* at It at * 28. But the BLM failed to consider lease sales outside of Montana in Wyoming, and this argument also failed because "the RMPs predate the lease sales by more than two years" and did not account for actions outside the planning area for the specific RMP. *Id.* *28 and *29. Moreover, "BLM cannot, as it claims, satisfy NEPA's cumulative impacts analysis simply because it put the emissions from a single lease sale into context with state and national greenhouse-gas emissions." *Id.* at *29. BLM contended that "the global nature of climate change prevents it from assessing "the specific effects of GHG emissions from any particular lease sale either on any particular region or on the planet as whole"" but this argument was rejected for three reasons, including that

- Even if BLM could not ascertain exactly how the projects contribute to climate change impacts in the project area "it knows that less greenhouse-gas emissions equals less climate change," and
- "The cumulative impacts analysis was designed precisely to determine whether "a small amount here, a small amount there, and still more at another point could add up to something with a much greater impact"" and "[t]hus, if BLM ever hopes to determine the true impacts of its projects on climate change, it can do so only by looking at projects in combination with each other, not simply in the context of state and nation-wide emissions."

*Id.* at * 30 to *31 (administrative record and case citations omitted).

Based on the decision in *WildEarth Guardians*, it is clear that BLM's climate change cumulative impacts analysis cannot be based on just a quantification of GHG emissions, cannot tier to RMPs that are more than two years old, the BLM must consider projects outside the planning area, the agency cannot contextualize GHG emissions from this lease sale with state and national GHG emissions, and even if climate change analysis is difficult, BLM must recognize that fewer GHG emissions will mean less climate change and it must consider projects in combination with each other, "not simply in the context of state and nation-wide emissions."

The cumulative impacts analysis in the EA for this lease sale fails in these regards. Examples include tiering the EA to RMPs that are more than two years old. The RMPs were amended in 2015. EA at 3-18. GHG emissions levels at the state, national, and global level are the sole basis for the climate change analysis in the EA. BLM relies on uncertainty arguments to try to avoid

making the detailed analysis required by *WildEarth Guardians*. EA at 4-12 to -13. But it cannot do that pursuant to this decision. BLM claims that its contributions to climate change will be minor to non-existent. *See, e.g., id.* at 4-37. Again, the claims in the EA do not meet the requirements outlined in *WildEarth Guardians*, and this needs to be corrected.

**D. The BLM Should Not Proceed with Leasing Because Meaningful Public Participation is Not Possible at this time and Market Conditions are Poor for Leasing**

BLM is proposing to lease 155 parcels covering 181,930 acres of public lands in the Wyoming September 2020 oil and gas lease sale. At this point the BLM should not be proceeding with lease sales, including the September 2020 Wyoming lease sale. In addition, BLM should not permit unsold parcels from the September lease sale to remain available for noncompetitive leasing.

**1. Meaningful public participation in lease sales is not possible at this time.**

We are in the midst of a national emergency around COVID-19 which makes it exceptionally difficult for people to participate in comment processes. Proceeding with lease sales at this time would violate the public participation requirements of the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA). As BLM has recently been reminded, "[p]ublic involvement in oil and gas leasing is required under FLPMA and NEPA" and "the public involvement requirements of FLPMA and NEPA cannot be set aside in the name of expediting oil and gas lease sales." *Western Watersheds Project v. Zinke,* Case No. 1:18-cv-00187-REB (D. Idaho, Sept. 21, 2018). In particular, FLPMA requires that BLM give "the public adequate notice and an opportunity to comment upon the formulation of standards and criteria for, and to participate in, the preparation and execution of plans and programs for, and the management of, the public lands." 43 U.S.C. § 1739(e). NEPA requires that "environmental information is available to public officials and citizens before decisions are made and before actions are taken" and reiterates that "public scrutiny is essential to implementing NEPA." 40 C.F.R. § 1500.1(b). Further, NEPA obligates the BLM to "[m]ake diligent efforts to involve the public in preparing and implementing the NEPA procedures." *Id.* § 1506.6(a).

Moving forward with comment and protest periods and decisions that will grant leases for ten years when the public is unable to properly participate violates the requirements of NEPA and FLPMA. BLM's public rooms are closed (making it difficult to conduct research or deliver lease sale comments), and state and local orders are encouraging or requiring people to stay at home and limiting travel. Notably, Wyoming's connectivity rating ranks 46$^{th}$ in the nation for broadband internet access, compounding the challenges with participating in the lease sale process. Broadband internet is particularly problematic in rural areas of the state, exacerbating the challenges of participation in areas likely to be affected by leasing. Further, many of the parcels in this lease sale are on split estates, so there are owners and residents of these lands who will be particularly interested in and affected by the proposed sales. Moving forward with lease sales that will require companies to enter on to private land for exploration and development activities is especially irresponsible at this time.

Members of Congress, attorneys general, and state and local governments have submitted requests that the Federal government pause or extend public comment periods for rulemaking efforts and

other processes during the novel coronavirus pandemic.[51] Administrative actions and public comment periods for other Federal agency actions are being suspended or extended for "to be determined" amounts of time due to the national emergency.[52] BLM should heed these many indications that it is not responsible to move forward with lease sales at this time.

In addition, the Mineral Leasing Act (MLA) requires BLM to give notice of proposed leasing and that "[s]uch notice shall be posted in the appropriate local office of the leasing and land management agencies." 30 U.S.C. § 226(f). Clearly, BLM cannot comply with this requirement right now.

**2. Market conditions indicate BLM should not proceed with leasing.**

When leasing public lands and minerals, BLM is managing resources for the public and should be ensuring a fair return on this transaction. *See, e.g.,* 43 U.S.C. § 1701(a)(9) (national policy is for the U.S. to "receive fair market value of the use of public lands"); 30 U.S.C. § 187 (the MLA requires "protection of the interests of the United States" and "safeguarding of the public welfare" when leasing is done). BLM is not receiving and cannot receive a fair return for leasing at this time. Prices and demand have continued to fall, so there is every reason to believe that even fewer lease parcels will be purchased and those purchased will not garner reasonable prices.

The information we have indicates that 139 of the parcels in the Wyoming September 2020 lease sale (90 percent, covering 151,692 acres) are on lands with low potential for oil and gas development. This reinforces the likelihood that parcels will not be leased and also calls into question BLM's compliance with the MLA. The MLA directs BLM to hold periodic oil and gas lease sales for "lands . . . which are known or believed to contain oil or gas deposits . . . ." 30 U.S.C. § 226(a). The DOI has, through the Interior Board of Land Appeals, recognized this mandate. *See Vessels Coal Gas, Inc.,* 175 IBLA 8, 25 (2008) ("It is well-settled under the MLA that competitive leasing is to be based upon reasonable assurance of an existing mineral deposit."). *See also Wilderness Workshop v. Bureau of Land Management,* 342 F. Supp. 3d 1145, 1166-67 (D. Colo. 2018) (recognizing that development potential must inform the range of alternatives for decisions related to oil and gas leasing). Lease sales are intended to foster responsible oil and gas development, which lessees must carry out with "reasonable diligence." 30 U.S.C. § 187; *see also*

[51] *See, e.g.,* letter from fourteen House of Representatives Committee Chairs to Office of Management and Budget, Acting Director Russell Vought, submitted April 1, 2020: https://www.eenews.net/assets/2020/04/02/document_gw_08.pdf. Letter from Senators Wyden, Merkley, and Udall to Secretary Bernhardt requesting a pause on comment periods, April 3, 2020: https://www.wyden.senate.gov/imo/media/doc/040320%20Letter%on%20DOI%20comment%20periods.pdf. Letter from state attorney generals to Office of Management and Budget, Acting Director Russell Vought, submitted March 31, 2020: https://portal.ct.gov/-/media/AG/Press_Releases/2019/COVID-19-Rule-Delay-Letter---Final.pdf?la=en. Letter from various state and local government organizations requesting a pause on public comment and rulemaking processes, submitted March 20, 2020: https://www.nga.org/letters-nga/state-and-local-government-organizations-seek-pause-on-public-comments-on-rulemaking-processes.

[52] For example, DOI's Interior Board of Land Appeals extended all filing deadlines by 60 days in response to COVID-19; the Daniel Boone National Forest Supervisor suspended the public objection period for its planning effort in light of COVID-19; and the U.S. Forest Service extended a public comment period for the Nantahala and Pisgah forest plan revision with the length of time to be determined (available at: https://www.fs.usda.gov/detail/nfsnc/home/?cid=stelrdb5397660).

BLM Form 3100-11 § 4 ("Lessee must exercise reasonable diligence in developing and producing . . . leased resources.").

Deferring leasing would also be fiscally responsible because leases in low potential areas generate minimal to no revenue but can carry significant cost in terms of resource use conflicts. Leases in low potential areas are most likely to be sold at or near the minimum bid of $2.00/acre., or non-competitively, and they are least likely to actually produce oil or gas and generate royalties."[53] Besides being wasteful and contrary to the MLA's purpose, the ongoing leasing of lands with little or no potential of oil and gas development creates another related problem: it facilitates, and perhaps even encourages, below-market speculative leasing by industry actors who do not actually intend to develop the public lands they lease. This problem creates more administrative waste, and also fails to uphold the MLA's core purpose by leading to many parcels being available for non-competitive lease sales—sales that do not enjoy the benefits of market forces, and which rarely result in productive development, depriving the public of bonus bids and royalties. The speculative nature of non-competitive leasing—and the administrative waste it creates—is evident from a common outcome in non-competitive leasing: termination of the lease for non-payment of rent. A review of non-competitive leases shows that BLM frequently terminates these leases because the lessee stops paying rent.[54]

It is well within BLM's authority to defer nominated parcels from lease sales. Neither the MLA, FLPMA, or any other statutory mandate requires that BLM must offer public lands and minerals for oil and gas leasing that are nominated for such use, even if those lands are allocated as available for leasing under the governing land use plan. The 10th Circuit Court of Appeals confirmed this discretion in *New Mexico ex rel. Richardson* when it stated, "[i]f the agency wishes to allow oil and gas leasing in the plan area it must undertake additional analysis . . . but retains the option of ceasing such proceedings entirely." *New Mexico ex rel. Richardson*, 565 F.3d at 698 (10th Cir. 2009).

BLM should not be proceeding with leasing that is unlikely to fulfill the purpose of the MLA and should not continue with the Wyoming September 2020 lease sale. Further, BLM should not permit leases to be available for non-competitive leasing, which will probably include lease parcels from the September lease sale.

## VI. CONCLUSION

[53] Center for Western Priorities, "*A Fair Share"* ("Oil companies can obtain an acre of public land for less than the price of a Big Mac. The minimum bid required to obtain public lands at oil and gas auctions stands at $ 2.00 per acre, an amount that has not been increased in decades. In 2014, oil companies obtained nearly 100,000 acres in Western states for only $ 2.00 per acre . . . . Oil companies are sitting on nearly 22 million acres of American lands without producing oil and gas from them. It only costs $ 1.50 per year to keep public lands idle, which provides little incentive to generate oil and gas or avoid land speculation).

[54] This research is documented in the Center for American Progress's recent report, *Backroom Deals: The Hidden World of Noncompetitive Oil and Gas* Leasing, along with other concerns regarding speculative leasing raised in these comments. Available at: https://www.americanprogress.org/issues/green/reports/2019/05/23/470140/backroom-deals/.

For the foregoing reasons, we protest the sale of all parcels offered in BLM Wyoming's September 2020 oil and gas lease sale, including those parcels from the June sale. This lease sale offers hundreds of thousands of acres of public lands in Wyoming for oil and gas development despite low oil and gas potential on many of these lands and a global market downturn that circumvents a fair return for the taxpayer. It does so at a time where public participation is severely hindered by a global pandemic. Many of the parcels are located in sensitive wildlife habitat in violation of federal law and recent court orders, and the risks of development in these habitats has not been thoroughly evaluated. Further, the environmental analysis does not thoroughly consider the climate impacts of this lease sale in violation of recent case law, nor does it require appropriate mitigation for these impacts. We ask that the BLM defer the sale of these parcels until these issues are remedied.

Sincerely,

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Exhibits:

1. WOC et al Protest of the BLM Wyoming June 2020 Oil and Gas Lease Sale

2. *Watersheds Project v. Schneider*, 2019 U.S. Dist. LEXIS 181043 (D. Idaho Oct. 16, 2019)

3. *WildEarth Guardians v. Zinke,* 368 F. Supp. 3d 41 (D.D.C. 2019)

4. Wyoming Mule Deer and Antelope Migration Corridor Protection Executive Order (Order 2020-1).

5. Map of leases in the Red Desert to Hoback MDC

6. Mem. Order and Decision, *Montana Wildlife Federation et.al. v. Bernhardt et.al.* CV-18-69-GF-BMM (D. Montana May 22, 2020).

7. Instruction Memorandum No. MT-2020-018, BLM Montana/Dakotas State Office (August 5, 2020)

8. THE WILDERNESS SOCIETY, MEASURING THE CLIMATE IMPACT OF TRUMP'S CARELESS LEASING OF PUBLIC LANDS (2018)

9. THE WILDERNESS SOCIETY, IN THE DARK; THE HIDDEN CLIMATE IMPACTS OF ENERGY DEVELOPMENT ON PUBLIC LANDS (2018), https://www.wilderness.org/sites/default/files/media/file/In the Dark Report_FINAL_Feb_2018.pdf.

10. Brice et. al, "Impacts of climate change on the management of multiple uses of BLM lands in the Intermountain West (USA)," Climate Adaptation Science Program, Utah State University (August 30, 2019).

11. New York University School of Law; Institute for Policy Integrity, *Look Before You Lease; Reducing Fossil Fuel Dominance on Public Lands by Accounting for Option Value* 4 (2020).

12. Mem. Order and Decision*, WildEarth Guardians v. U.S. Bureau of Land Mgmt.,* 2020 U.S. Dist. LEXIS 77409 (D. Mont., May 1, 2020)