



August 24, 2020

Protest submitted via ePlanning and email

U.S. Bureau of Land Management  
Colorado State Office  
Attn. State Director Jamie Connell  
2850 Youngfield St.  
Lakewood, CO 80215  
blm\_co\_leasesale@blm.gov

**Re: Protest of Colorado BLM's September 24, 2020 Competitive Oil and Gas Lease Sale**

Dear State Director Connell:

Pursuant to 43 C.F.R. § 3120.1-3, WildEarth Guardians and the Center for Biological Diversity (hereinafter "Conservation Groups") submit the following protest of the U.S. Bureau of Land Management ("BLM's") decision to offer 59 parcels totaling 71,975.290 acres of federal lands in the State of Colorado through its September 24, 2020 competitive oil and gas lease sale.<sup>1</sup> BLM's decision is predicated on a preliminary environmental assessment ("EA") and finding of no significant impact ("FONSI")<sup>2</sup> for parcels in Las Animas and Weld Counties and an EA and FONSI<sup>3</sup> for parcels in Jackson and Rio Blanco Counties.

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<sup>1</sup> The notice of the lease sale is available at:

[https://eplanning.blm.gov/public\\_projects/1504793/200365015/20022316/250028520/Sale\\_Notice\\_Sept\\_2020.pdf](https://eplanning.blm.gov/public_projects/1504793/200365015/20022316/250028520/Sale_Notice_Sept_2020.pdf).

<sup>2</sup> The preliminary EA, DOI-BLM-CO-F020-2020-0024-EA, for the Las Animas and Weld County parcels is available at:

[https://eplanning.blm.gov/public\\_projects/1504577/200363971/20022313/250028517/RGFO\\_EA\\_Protest\\_Sept2020.pdf](https://eplanning.blm.gov/public_projects/1504577/200363971/20022313/250028517/RGFO_EA_Protest_Sept2020.pdf) (hereinafter "RGFO EA"). The FONSI is available at:

[https://eplanning.blm.gov/public\\_projects/1504577/200363971/20022312/250028516/RGFO\\_FONSI\\_Protest\\_Sept2020.pdf](https://eplanning.blm.gov/public_projects/1504577/200363971/20022312/250028516/RGFO_FONSI_Protest_Sept2020.pdf).

<sup>3</sup> The EA, DOI-BLM-CO-050-2020-0015-EA, for the Jackson and Rio Blanco County parcels is available at:

[https://eplanning.blm.gov/public\\_projects/1505491/200368300/20022315/250028519/WRFO\\_KFO\\_EA\\_Protest\\_Sept2020.pdf](https://eplanning.blm.gov/public_projects/1505491/200368300/20022315/250028519/WRFO_KFO_EA_Protest_Sept2020.pdf) (hereinafter "White River/Kremmling EA"). The FONSI is available at

[https://eplanning.blm.gov/public\\_projects/1505491/200368300/20022314/250028518/WRFO\\_KFO\\_FONSI\\_Protest\\_Sept2020.pdf](https://eplanning.blm.gov/public_projects/1505491/200368300/20022314/250028518/WRFO_KFO_FONSI_Protest_Sept2020.pdf).

This protest is filed on behalf of the organizations listed above and our members. The mailing address to which correspondence regarding this protest should be directed is as follows:

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The Conservation Groups protest the inclusion of parcels: COC 79878 through COC 79936.

Since the submission of our comments on the RGFO EA and White River/Kremmling EA, we understand that on July 16, 2020 the Council of Environmental Quality (“CEQ”) issued a final rule (“Final Rule”) rewriting the entirety of its 1978 National Environmental Policy Act (“NEPA”) implementing regulations.<sup>4</sup> However, the Final Rule does not become effective until September 14, 2020, and as such, BLM must continue to apply CEQ’s NEPA implementing regulations as currently codified, without regard to the Final Rule. To the extent BLM relies on or applies the Final Rule for the purpose of administering this oil and gas lease sale, BLM’s reliance on and/or application of the Final Rule is unlawful for the following reasons:

- CEQ and Mary Neumayr, Chair of the CEQ, acted arbitrarily, capriciously, and contrary to NEPA, in violation of the APA, 5 U.S.C. § 706(2), by failing to prepare an EA or Environmental Impact Statement (“EIS”) on the Final Rule, and by failing to evaluate alternatives to, and the full direct, indirect, and cumulative impacts of, the Final Rule;
- CEQ and Mary Neumayr acted arbitrarily, capriciously, and contrary to law by failing to analyze how the Final Rule and its implementation would affect the directive of Executive Order 12898 and CEQ’s longstanding policy and practice of fully analyzing the environmental justice impacts of its actions;
- CEQ and Mary Neumayr violated NEPA and the APA by issuing regulations that are inconsistent with the statutory purpose and language of NEPA; and
- CEQ and Mary Neumayr acted in excess of statutory authority by issuing the Final Rule.

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<sup>4</sup> Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act; Final Rule, 85 Fed. Reg. 43,304 (July 16, 2020) (to be codified at 40 C.F.R. Part 1500).

## **INTERESTS OF THE PROTESTING PARTIES**

WildEarth Guardians is a nonprofit environmental advocacy organization dedicated to protecting the wildlife, wild places, wild rivers, and health of the American West. Guardians members live, work, and recreate on or near many of the proposed lease parcels. On behalf of our members, Guardians works to ensure the BLM fully protects public lands and resources as it conveys the right for the oil and gas industry to develop publicly-owned minerals. Specifically, Guardians works to ensure BLM meaningfully and genuinely takes into account all of the implications of its oil and gas leasing decisions, including impacts to public health, air quality, water quality and quantity, and our climate from the release of more greenhouse gas emissions known to contribute to global warming.

The Center for Biological Diversity (“Center”) is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has over one million members and activists, including those living in Colorado who have visited these public lands for recreational, scientific, educational, and other pursuits and intend to continue to do so in the future, and are particularly interested in protecting the many native, imperiled, and sensitive species and their habitats that may be affected by the proposed oil and gas leasing.

As discussed in more depth below, BLM’s federal fossil fuel program is currently unsustainable for a livable world given the impacts of fossil fuel extraction on communities, climate, air quality, water resources, and wildlife. Thus, we request that BLM stop approving any additional oil and gas leasing across the West, including all of the parcels in this lease sale. Should BLM choose to continue leasing, we request, at a minimum, that it refrain from offering all the parcels up for lease for the September 2020 sale unless and until it completes its requirements under the Federal Land Policy and Management Act of 1976 (“FLPMA”), 43 U.S.C. §§ 1701–1787; the National Environmental Policy Act of 1976 (“NEPA”), 42 U.S.C. §§ 4321–4370h; NEPA regulations promulgated thereunder by the White House Council on Environmental Quality (“CEQ”), 40 C.F.R. § 1500, *et seq.*, and the Mineral Leasing Act, 30 U.S.C. §§ 181–287.

## **STATEMENT OF REASONS**

### **I. BLM Fails to Ensure the Lease Sale Complies with NEPA and FLPMA.**

NEPA is our “basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a). The law requires federal agencies to fully consider the environmental implications of their actions, taking into account “high quality” information, “accurate scientific analysis,” “expert agency comments,” and “public scrutiny,” prior to making decisions. *Id.* § 1500.1(b). This consideration is meant to “foster excellent action,” resulting in decisions that are well informed and that “protect, restore, and enhance the environment.” *Id.* § 1500.1(c).

NEPA regulations explain that:

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

*Id.*

To fulfill the goals of NEPA, federal agencies are required to analyze the “effects,” or impacts, of their actions to the human environment prior to undertaking their actions. *Id.* § 1502.16(d); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (holding that NEPA imposes “action forcing procedures . . . requir[ing] that agencies take a *hard look* at environmental consequences”). To this end, the agency must analyze the “direct,” “indirect,” and “cumulative” effects of its actions, and assess their significance. *Id.* §§ 1502.16(a), (b), and (d). Direct effects include all impacts that are “caused by the action and occur at the same time and place.” *Id.* § 1508.8(a). Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” *Id.* § 1508.8(b). Cumulative effects include the impacts of all past, present, and reasonably foreseeable actions, regardless of what entity or entities undertake the actions. *Id.* § 1508.7.

Generally, an agency may prepare an EA to analyze the effects of its actions and assess the significance of impacts. *See id.* § 1508.9; *see also* 43 C.F.R. § 46.300. Where impacts are not significant, an agency may issue a Finding of No Significant Impact (“FONSI”) and implement its action. *See* 40 C.F.R. § 1508.13; *see also* 43 C.F.R. § 46.325(2). But, where effects are significant, an agency must prepare an Environmental Impact Statement (“EIS”). *See* 40 C.F.R. § 1502.3.

Federal agencies determine whether direct, indirect, or cumulative impacts are significant by accounting for both the “context” and “intensity” of those impacts. *Id.* § 1508.27. Context “means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality” and “varies with the setting of the proposed action.” *Id.* § 1508.27(a). Intensity “refers to the severity of the impact” and is evaluated according to several additional elements, including: the unique characteristics of the geographic area such as ecologically critical areas; the degree to which the effects are likely to be highly controversial; the degree to which the possible effects are highly uncertain or involve unique or unknown risks; and whether the action has cumulatively significant impacts. *Id.* §§ 1508.27(b)(3), (4), (5), (7).

Within an EA or EIS, the scope of the analysis must include “[c]umulative actions” and “[s]imilar actions.” *Id.* §§ 1508.25(a)(2) and (3). Cumulative actions include action that, “when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.” *Id.* § 1508.25(a)(2). Similar actions include actions that, “when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together.” *Id.*

§ 1508.25(a)(3). Key indicators of similarities between actions include “common timing or geography.” *Id.*

In addition to NEPA, BLM must comply with FLPMA. FLPMA requires that the Secretary of Interior 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). To achieve this, “[t]he Secretary [of the Interior] shall, with public involvement and consistent with the terms and conditions of this Act, develop, maintain, and, when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands.” *Id.* § 1712(a).

BLM fulfills this mandate by developing Resource Management Plans (“RMPs”) for each BLM field office. In general, RMPs must be up-to-date. Both BLM regulations and BLM’s Land Use Planning Handbook provide that “[RMP] revisions are necessary if monitoring and evaluation findings, new data, new or revised policy, or changes in circumstances indicate that decisions for an entire plan or a major portion of the plan no longer serve as a useful guide for resource management.” 43 C.F.R. § 1610.5-6; BLM Land Use Planning Handbook, H-1610-1, Section VII.C at 46. Furthermore, amendments are encouraged whenever there is a need to “[c]onsider a proposal or action that does not conform to the plan,” “implement new or revised policy that changes land use plan decisions,” “respond to new, intensified, or changed uses on public land,” or “consider significant new information from resource assessments, monitoring, or scientific studies that change land use plan decisions.” 43 C.F.R. § 1610.5-5; Handbook Section VII.B at 45.

When BLM issues a new RMP or amends a RMP, the agency must also comply with the requirements of NEPA. *See* 43 C.F.R. § 1601.0–6. Thus, the agency is required to issue an EIS with each RMP. *Id.* Although the BLM may tier its project-level analyses to a broader NEPA document, such as an EIS accompanying a RMP, 43 C.F.R. § 46.140, “[n]othing in the tiering regulations suggests that the existence of a programmatic EIS for a forest plan obviates the need for any future project-specific EIS, without regard to the nature of magnitude of a project.” *League of Wilderness Defs.-Blue Mountains Biodiversity Proj. v. Blackwood*, 161 F.3d 1208, 1215 (9th Cir. 1998). Furthermore, “[a] NEPA document that tiers to another broader NEPA document . . . must include a finding that the conditions and environmental effects described in the broader NEPA document are still valid or address any exceptions.” *Id.* Put another way, “[t]o the extent that any relevant analysis in the broader NEPA document is not sufficiently comprehensive or adequate to support further decisions, the tiered NEPA document must explain this and provide any necessary analysis.” *Id.* § 46.140(b).

Finally, BLM is also required to ensure that its on-the-ground actions conform with the existing RMP. 43 U.S.C. § 1732(a); *see also* 43 C.F.R. § 1610.5-3 (“All future resource management authorizations and actions . . . shall conform to the approved plan.”). “The statutory directive that BLM manage ‘in accordance with’ land use plans, and the regulatory requirement that authorizations and actions ‘conform’ to those plans, prevent BLM from taking actions inconsistent with the provisions of a land use plan.” *Norton v. S. Utah Wilderness Alliance*, 542 U.S. 55, 69 (2004).

**A. BLM's Proposal to Lease Parcels in Las Animas and Weld Counties May Result in Significant Impacts and Prejudice Alternatives for the Draft Eastern Colorado RMP and EIS.**

For the Royal Gorge Field Office parcels, the applicable land use plans are the Northeast Resource Area Plan (approved in 1986, amended in 1991) and Royal Gorge Resource Management Plan (approved in 1996, amended in 2009).<sup>5</sup> BLM is currently in the process of updating both of these plans and developing the combined Eastern Colorado RMP.<sup>6</sup> BLM is also developing a final EIS to analyze the impacts of land management posed by the RMP.

NEPA specifically forbids agency action that limits alternatives while a federal agency is revising a programmatic EIS.

While work on a required program environmental impact statement is in progress and the action is not covered by an existing program statement, agencies *shall not* undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:

- (1) Is justified independently of the program;
- (2) Is itself accompanied by an adequate environmental impact statement;  
*and*
- (3) Will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.

40 C.F.R. § 1506.1(c) (emphases added).

Here, none of the requirements of 1506.1(c) are met. Work on the new Eastern Colorado RMP is clearly ongoing with a draft released but no final RMP, EIS, or record of decision, and the proposed action is not covered by an existing EIS. As BLM admits in its 2018 Reasonably Foreseeable Development Scenario (RFDS), the use of horizontal drilling coupled with multi-stage hydraulic fracturing, collectively fracking, has drastically changed the nature of development in the area, not only resulting greater volumes of oil and gas per well (thereby increasing impacts to air quality and other resources) but also allowing development in areas previously thought uneconomical.<sup>7</sup> Indeed, as BLM notes, “a typical horizontal well may

<sup>5</sup> Both RMPs are available on the BLM's ePlanning website at:

<https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=99527>.

<sup>6</sup> The draft RMP and EIS are available on BLM's ePlanning website at:

<https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=53991>. BLM has not finalized the plan.

<sup>7</sup> BLM, 2018 Addendum to the 2012 Reasonable Foreseeable Development Scenario for Oil and Gas, Royal Gorge Field Office, Colorado at 1–4,

[https://eplanning.blm.gov/epl-front-office/projects/lup/39877/160710/196486/RGFO\\_RFD\\_\\_addendum.pdf](https://eplanning.blm.gov/epl-front-office/projects/lup/39877/160710/196486/RGFO_RFD__addendum.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 1).

produce up to 50 times more gas than a typical shallow Niobrara gas or CBM well.”<sup>8</sup> These statements are echoed in BLM’s 2015 Analysis of the Management Situation, which analyzes the need for revision of the Eastern Colorado RMP.<sup>9</sup> In the AMS, BLM notes:

Drilling activity over the last few years in the Denver-Julesburg Basin has increased significantly. New horizontal drilling and hydraulic fracturing techniques developed in other similar geological formations, such as the Barnett in Texas, and the Bakken in North Dakota, are being successfully applied to economically extract oil from the Niobrara formation in the Denver-Julesburg Basin. In addition to producing large volumes of oil and gas from each well, this new technology also makes it practical to drill many wells on one pad, so fewer pads are needed to drill more wells, and drain larger blocks of mineral estate.<sup>10</sup>

Ultimately, the type of oil and gas development in Eastern Colorado, particularly in the Denver-Julesburg Basin, has changed drastically. With this new scale of development comes unanticipated impacts to the environment.<sup>11</sup> For example, fracking has worsened air quality in the area, with the Denver Metro-North Front Range ozone nonattainment area now in serious violation of federal air quality standards.<sup>12</sup> BLM’s “current” RMPs fail to account for this significant, new development.

BLM’s proposal to approve all of the parcels in Las Animas County and parcels 8563 and 8564 in Weld County directly prejudices proposed alternatives under the draft Eastern Colorado RMP. For example, under Alternative B, all of the proposed parcels in Las Animas and the two parcels noted above in Weld Counties are proposed to have a no surface occupancy stipulation.<sup>13</sup>

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<sup>8</sup> *Id.* at 3.

<sup>9</sup> BLM, Analysis of the Management Situation for the Eastern Colorado Management Plan (2015), [https://eplanning.blm.gov/epl-front-office/projects/lup/39877/59426/64617/AMS\\_for\\_Eastern\\_CO\\_RMP.4.pdf](https://eplanning.blm.gov/epl-front-office/projects/lup/39877/59426/64617/AMS_for_Eastern_CO_RMP.4.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 2).

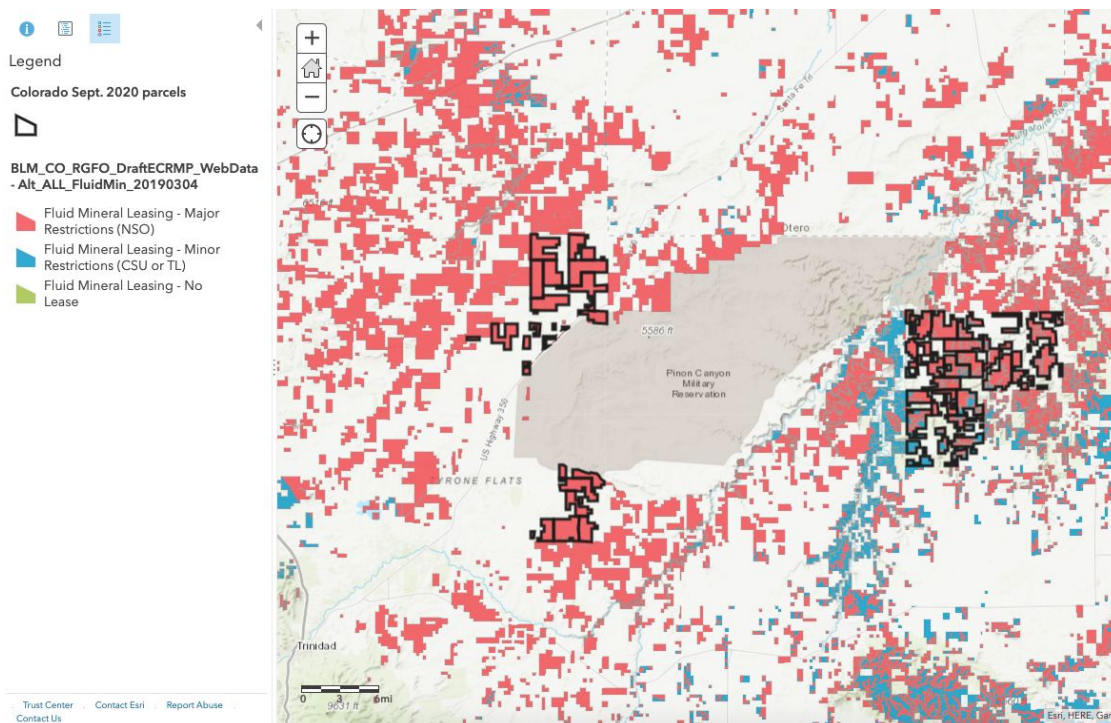
<sup>10</sup> *Id.* at 168–69.

<sup>11</sup> Concerned Health Prof’ls of NY & Physicians for Soc. Responsibility, *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)* 1, 18 (6th ed. 2019) (hereinafter “Fracking Compendium”) (“As fracking operations in the United States have increased in frequency, size, and intensity, and as the transport of extracted materials has expanded, a significant body of evidence has emerged to demonstrate that these activities are dangerous to people and their communities in ways that are difficult—and may prove impossible—to mitigate. Risks include adverse impacts on water, air, agriculture, public health and safety, property values, climate stability, and economic vitality, as well as earthquakes.”) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 3).

<sup>12</sup> Coop. Inst. for Research in Env’tl. Sci. at the Univ. of Colo. Boulder, Oil and Gas Emissions a Major Contributor to Bad Ozone Days, Nov. 3, 2017, <https://cires.colorado.edu/news/oil-and-gas-emissions-major-contributor-bad-ozone-days> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 4).

<sup>13</sup> See map below; see also Draft Eastern CO RMP at K-10.

Under Alternative C, many of the parcels north of the Pinon Canyon Military Reservation in Las Animas County are proposed to have a controlled surface use stipulation.<sup>14</sup>



*The parcels in Las Animas County are outlined in black in the map above. Parcels in red are proposed for no surface occupancy under Alternative A of the draft Eastern Colorado RMP.*

Once the lease sale is held, BLM will no longer be able to consider an alternative that forbids oil and gas development on these parcels even if the agency determines that this is necessary and decides to adopt Alternative A. Interestingly, this is exactly one of the excuses that BLM uses to deny consideration of a “no leasing alternative” for the proposed Eastern Colorado RMP.<sup>15</sup> This is also exactly the situation NEPA seeks to protect against—having an agency commit to a new activity that predetermines its analysis and limits its future alternatives. Unfortunately, by offering these leases, BLM is ignoring its responsibilities under NEPA.

<sup>14</sup> See map below; see also Draft Eastern CO RMP at K-11.

<sup>15</sup> See BLM, *Preliminary Alternatives Report: Eastern Colorado Resource Management Plan 10* (Mar. 2017), [https://eplanning.blm.gov/epl-front-office/projects/lup/39877/98740/119608/ECRMP\\_PrelimAltsReport.pdf](https://eplanning.blm.gov/epl-front-office/projects/lup/39877/98740/119608/ECRMP_PrelimAltsReport.pdf) (“Closing all public lands in the planning area to new leasing of Federal fluid minerals, even where there are no identified resource conflicts, was considered but eliminated from further analysis. . . . [T]he Federal fluid mineral estate in much of the planning area has already been leased, and the majority of the leases are developed.”); see also Draft Eastern Colorado EIS at 2-2 (rejecting an alternative which would close “all public lands to new fluid mineral leasing” in part because “the federal fluid mineral estate in much of the planning area has already been leasing and the majority of leases are developed”) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 5).



In sum, in order for BLM to comply with FLPMA and NEPA, BLM must either postpone the lease sale until the Eastern Colorado RMP-EIS is complete or complete a stand-alone EIS for the September 2020 lease sale parcels.

BLM's Response to Comments misses the point and misunderstands its obligations under the law, when developing a new RMP. In the RGFO EA, BLM responded to our comments, stating "The current RMP is in full force and effect until a new RMP is assigned." But this response ignores our comments that a BLM decision to lease any of the proposed parcels in Las Animas or Weld Counties in this sale will prejudice and limit the available planning decisions for the development of the ECRMP. And, this is improper as discussed above.

### **B. BLM Must Prepare an EIS to Assess Potentially Significant Impacts from All of the Lease Sale Parcels.**

Because the September 2020 lease sale poses potentially significant impacts not analyzed by an existing NEPA document, BLM must prepare an EIS before leasing the proposed parcels.

A federal agency must prepare an EIS when a major federal action "significantly affects the quality of the human environment." 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.4. A federal action "affects" the environment when it "will or *may* have an effect" on the environment. 40 C.F.R. § 1508.3 (emphasis added); *see also Airport Neighbors All. v. U.S.*, 90 F.3d 426, 429 (10th Cir. 1996). The significance of a proposed action is gauged based on both context and intensity. 40 C.F.R. § 1508.27. Context "means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality." *Id.* § 1508.27(a). Intensity "refers to the severity of impact," and is determined by weighing ten factors, including "[1] [t]he degree to which the proposed action affects public health or safety," "[2] [u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas," "[3] [t]he degree to which the effects on the quality of the human environment are likely to be highly controversial," "[4] [t]he degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks[,] and "[5] [w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts." *Id.* § 1508.27(b)(2)–(5), (7). For this latter factor, "[s]ignificance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts." *Id.*

The first intensity factor under NEPA is "the degree to which the proposed action affects public health and safety." As detailed in Section E and demonstrated by the attached exhibits, there is no doubt that the proposed action, which would allow for the use of fracking, will impact public health and safety.<sup>16</sup> Unfortunately, because the underlying Northeast Resource Area Plan

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<sup>16</sup> *See* Fracking Compendium, *supra*, at 18; , Env't America, *Fracking by the Numbers: Key Impacts of Dirty Drilling at the State and National Level* 8–10 (2013) (hereinafter "*Fracking by the Numbers*") ("In Colorado, approximately 340 of the leaks or spills reported by drilling operators engaged in all types of oil and gas drilling

and Royal Gorge Resource Management Plan and Environmental Impact Statement (collective “NE RMP-EIS”)<sup>17</sup> is severely out of date and does not include any analysis of the impacts of fracking, BLM cannot rely on these documents to conclude that no significant impacts will occur.

Moreover, both the RGFO EA and the White River/Kremmling EA fail to include a discussion of the impacts from fracking, including failing to calculate water used for the procedure, air pollution produced, impacts to public health, and impacts to wildlife. Indeed, BLM solely discusses fracking in response to comments and not in the body of the EAs. To fully assess whether the proposed lease sale poses significant impacts, BLM must analyze, quantify, and disclose the impacts of fracking in an EIS. Unless and until this occurs, both EAs for the September lease sale are deficient and in violation of NEPA.

BLM cannot rely on the analyses in its Reasonably Foreseeable Development Scenario (“RFDS”) to correct this gap either. *See* Royal Gorge EA at 17–18. The RFDS is not a NEPA document, was not subject to public comment, and therefore cannot replace the need for an EIS.

A similar argument applies to the second and third intensity factors, which require, respectively, a look at the degree to which impacts are highly controversial and the degree to which impacts are highly uncertain or involve unique and unknown risks. The situation here is directly comparable to the situation in *Center for Biological Diversity v. U.S. Bureau of Land Management*, where the court held that the BLM’s “unreasonable lack of consideration of how fracking could impact development of the disputed parcels . . . unreasonably distort[ed] BLM’s assessment of at least three of the ‘intensity’ factors in its FONSI,” including the aforementioned factors. 937 F. Supp. 2d at 1157. Specifically, the court reasoned that fracking was highly controversial based on the possibility of significant environmental degradation, public outcry, and potential threats to health and safety. *Id.* at 1157–58. Fracking consistently presents a risk of contamination and oil and gas in Colorado consistently occurs near populated areas, thereby resulting in public outcry and threats to health and safety.<sup>18</sup> Indeed, ozone levels in the Denver

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over a five-year period polluted groundwater.”) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 6); Physicians for Soc. Responsibility, *Health Impacts of Fracking*; *see also* BLM Oil and Gas; *Hydraulic Fracturing on Federal and Indian Lands*, 80 Fed. Reg. 161,128 (Mar. 26, 2015), <https://www.gpo.gov/fdsys/pkg/FR-2015-03-26/pdf/2015-06658.pdf> (noting that a final rule regulating fracking on federal land will “provide significant benefits to all Americans by avoiding potential damages to water quality, the environment, and public health”); *see also*, TEDX, *Scientific Literature Addressing the Health Effects of Unconventional Oil and Gas Development* (2018) (hereinafter “TEDX Health Effects”) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 7).

<sup>17</sup> According to the RGFO EA, the applicable land use plans for the Royal Gorge Field Office parcels are the Northeast Resource Area Plan (approved in 1986, amended in 1991) and Royal Gorge Resource Management Plan (approved in 1996, amended in 2009). EA at 12. BLM is currently in the process of updating both of these plans and developing the combined Eastern Colorado RMP in conjunction with a draft EIS.

<sup>18</sup> *See generally* exhibits cited in note 14, *supra*; *see also*, Clean Air Task Force, *Fossil Fumes: A Public Health Analysis of Toxic Air Pollution from the Oil and Gas Industry* 13 (2016), <http://www.catf.us/resources/publications/files/FossilFumes.pdf> (“Based on EPA’s projection of 2017 emissions, six counties in Colorado will face elevated cancer risk due to toxic emissions from oil and gas operations—Garfield,

area are far above public health standards largely as a result of oil and gas development driven by the fracking boom. Ozone levels on the Western Slope are similarly situated.<sup>19</sup> BLM cannot ignore this obvious, and highly controversial, impact of fracking.

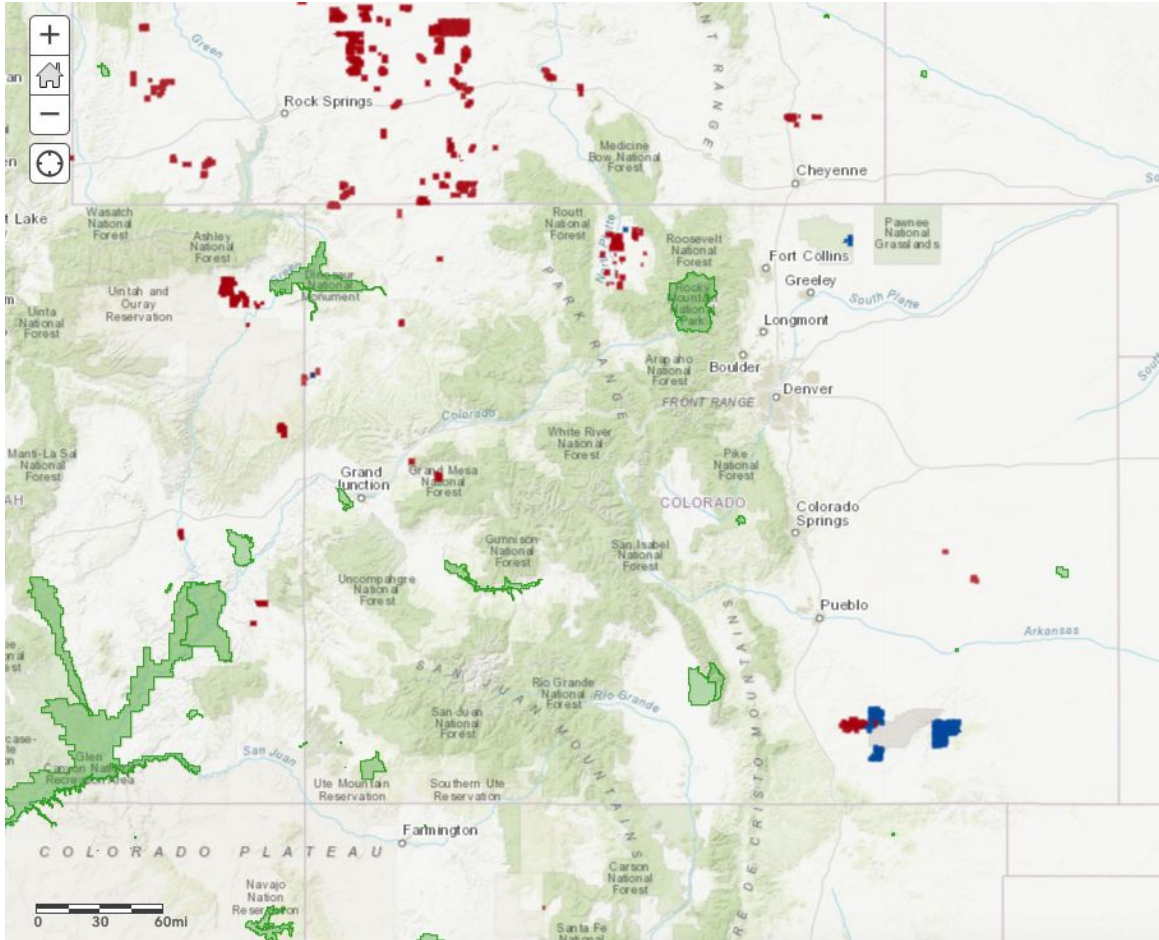
Finally, because the September 2020 lease parcels are very near many of the Colorado, Utah, and Wyoming BLM's 2020 parcels, and countless existing oil and gas wells, the fifth intensity factor, cumulative impacts, is also implicated by the lease sale, further underscoring the need for an EIS. According to NEPA regulations, "[s]ignificance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts." 40 C.F.R. § 1508.27(b)(7). This latter sentence is particularly important here. The September 2020 lease sale is not occurring in a vacuum. Indeed, both the September 2020 parcels in the White River/Kremmling and Royal Gorge Field Offices are within a few miles of many of the March 2020 parcels in Colorado and the June 2020 parcels in Wyoming. All of these states regularly hold state lease sale auctions as well.<sup>20</sup> BLM must catalogue these sales and study the cumulative impacts of these similar actions occurring within the same area. *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 77, 83 (D.D.C. 2019); *WildEarth Guardians v. U.S. Bureau of Land Mgmt.*, No. CV-18-73-GF-BMM, 2020 WL 2104760, at \*11 (D. Mont. May 1, 2020).

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La Plata, Phillips, Rio Blanco, Weld, and Yuma.") (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 8).

<sup>19</sup> , Jason Plautz, In the Rural West: More Oil, More Gas, More Ozone, Mother Jones, Aug. 23, 2018, <https://www.motherjones.com/politics/2018/08/in-the-rural-west-more-oil-more-gas-more-ozone/> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 9). Indeed, Colorado BLM has predicted, through its air modelling studies, ozone exceedances at its Rangely monitor under every development scenario. CARMMS 2.0 at 167.

<sup>20</sup> *See, e.g.*, Colorado State Land Board, Oil & Gas Auction Information and Results, <https://docs.google.com/document/d/1A8yfmfXmcMtx802wRxktdSuzkFeCrF5tE9XT8ms3Qa0/edit> (last visited June 12, 2020) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 10).



*BLM's 2020 parcels are in red. The September 2020 parcels are in blue.*

Despite this, BLM's cumulative impacts analysis of past, present, and future oil and gas development is limited. In the RGFO EA, BLM plainly piecemeals its analysis, stating on multiple occasions that "Every parcel is unique and cumulative impacts will need to be thoroughly addressed in the APD stage." *See, e.g.*, RGFO EA at 22 (impacts to raptors), 25 (impacts to pronghorn), 27 (impacts to migratory birds)' NW District EA at 8–24 (deferring any analysis of impacts to resource issues such as water, wildlife, impacts from fracking, environmental justice and others, until the APD stage). BLM also fails to analyze the impacts from any other BLM leases occurring in the same region. Consequently, the information before the agency is not sufficient to support BLM's conclusion that no significant impacts will occur.

In its response to our comments on both EAs, BLM concludes that an EIS is not warranted because the EA did not identify any potentially significant impacts from the proposed lease sale; however, it is BLM's decision to neglect and defer the analysis of such things as fracking, public controversy, and the cumulative impacts of historical and future oil and gas development that allow BLM to reach this conclusion. And, as we discuss below, BLM fails to adequately justify its decision to defer its analysis of certain potential impacts to the application permit to drill stage. This, too, leads BLM to falsely conclude that the proposed lease sale would not potentially cause any significant impacts.

### C. BLM Cannot Defer Its Site-Specific Analyses for All Parcels to the Application Permit to Drill Stage.

BLM is required to complete a site-specific NEPA analysis before proceeding with the proposed lease sale. Yet, in a number of places throughout the EA, BLM defers a full analysis to the APD stage. *See, e.g.*, RGFO EA at 25 (impacts to wildlife), 28 (impacts to big game), 30 (impacts to migratory birds); White River/Kremmling EA at 36 (deferring any quantification of direct, indirect, and cumulative greenhouse gas emissions to the APD stage).

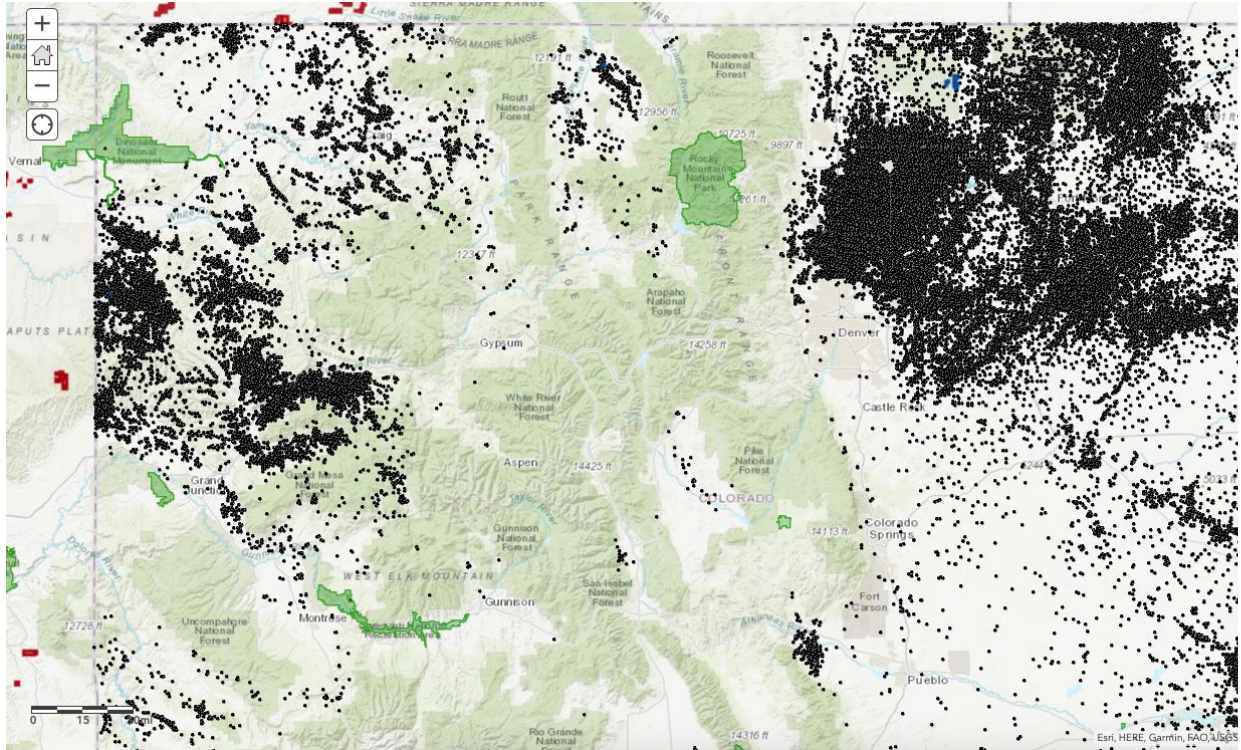
BLM has previously relied on *Park County Resource Council v. U.S. Department of Agriculture*, 817 F.2d 609 (10th Cir. 1987), to support its contention that site-specific NEPA analysis is not required until the APD stage. In *Park County*, the court provided that “with appropriate lease stipulations aimed at protecting the environment, lease issuance itself, essentially a paper transaction, does not usually require prior preparation of an EIS.” 817 F.2d at 621 (emphasis added). *Park County*, however, does not stand for the proposition—as BLM has implied—that there is a categorical rule exempting BLM from ever performing site-specific analysis at the lease sale stage. Indeed, the Ninth Circuit has consistently held that the sale of oil and gas leases is an irretrievable commitment of resources for which an EIS must be prepared. *See, e.g.*, *Conner v. Burford*, 848 F.2d 1441 (9th Cir. 1988); *Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1227 (9th Cir. 1988).

Further, *Park County* cannot be understood in a vacuum. As the Tenth Circuit recently explained:

[T]here is no bright line rule that site-specific analysis may wait until the APD stage. Instead, the inquiry is necessarily contextual. Looking to the standards set out by regulation and by statute, assessment of all ‘reasonably foreseeable’ impacts must occur at the earliest practicable point, and must take place before an ‘irretrievable commitment of resources’ is made. Each of these inquiries is tied to the existing environmental circumstances, not to the formalities of agency procedures. Thus, applying them necessarily requires a fact-specific inquiry.

*New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 717–18 (10th Cir. 2009) (internal citations omitted). Thus, “[t]he operative inquiry [is] simply whether all foreseeable impacts of leasing [are] taken into account before leasing [can] proceed.” *Id.* at 717.

Here, unlike in *Park County*, the impacts of leasing these parcels are reasonably foreseeable. As shown by the map below, there are a significant number of active oil and gas wells near the proposed parcels. Thus, as in *Richardson*, BLM is required to complete an EIS assessing the reasonably foreseeable effects of oil and gas development at the leasing stage before it irretrievably commits these lands to development.



*The September 2020 parcels are buried beneath active and plugged wells as of February 2019.*

Moreover, there is no doubt that oil and gas leasing is an irretrievable commitment of resources. As BLM’s own regulations state, oil and gas leases confer “the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resource in a leasehold.” 40 C.F.R. § 3101.1-2. The 10th Circuit has affirmed this. *Sierra Club v. Hodel*, 848 F.2d 1068, 1093 (10th Cir. 1988) (agencies are to perform 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”). And, the D.C. District Court’s decision *WildEarth Guardians v. Zinke* recently reaffirmed this contention by relying on 30 years of supporting case law. 368 F. Supp. 3d 41, 66 (D.D.C. 2019) (citing *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983)).

Because BLM fails to perform a site-specific analysis at the lease stage, BLM’s authority is thereafter to be limited to imposing mitigation measures consistent with the terms of the lease as opposed to preventing impacts. In other words, BLM is not able to impose conditions inconsistent with the lease terms and it cannot deny the developer the right to drill altogether. This approach is fundamentally incongruous with NEPA’s mandate. The Ninth Circuit has noted: “In a way, reliance on mitigation measures presupposes approval. It assumes that – regardless of what effects construction may have on resources – there are mitigation measures that might counteract the effect without first understanding the extent of the problem. This is inconsistent with what NEPA requires.” *Northern Plains Resource Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1084–85 (9th Cir. 2011).

Finally, the need to conduct NEPA analysis at the lease sale stage is further underscored by the fact that the BLM more often than not fails to analyze and assess impacts at the drilling stage. In fact, in the Royal Gorge Field Office, the agency frequently categorically excludes drilling permits from any NEPA analysis, meaning no site-specific analysis of environmental impacts even occurs. For example, in 2017, the Royal Gorge Field Office approved 35 new wells through the expansion of existing well pads. *See* BLM, DOI-BLM-CO-F020-2017-0019-CX through -0021-CX; DOI-BLM-CO-F020-2017-0023-CX; DOI-BLM-CO-F020-2017-0025-CX; DOI-BLM-CO-F020-2017-0042-CX through -0044-CX; DOI-BLM-CO-F020-2017-0087-CX.<sup>21</sup> In addition, the White River Field Office approved 16 new wells through a CX in April 2020.<sup>22</sup>

As these categorical exclusions indicate, unless the BLM actually commits, through the imposition of stipulations, to conduct additional NEPA analysis at the drilling stage, BLM sometimes fails to complete additional analysis. This means any commitment to address the impacts of the development of the proposed leases through subsequent NEPA is, at best, hollow, and at worst, a deliberate attempt to avoid accountability to addressing potentially significant environmental impacts under NEPA.

In both its EAs and its response to our comments on the EAs, BLM points to various uncertainties regarding the nature and siting of subsequent oil and gas development to support its decision not to analyze site specific impacts. Royal Gorge EA at 17, 19; White River/Kremmling EA at 32; RGFO EA App'x F at 126; White River/Kremmling EA Attachment F at 10-11. But, these uncertainties need not be fully resolved before BLM completes its analysis. Impacts must merely be reasonably foreseeable. "Reasonable forecasting and speculation is . . . implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'" *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1196 (D. Colo. 2014) (quoting *Scientists' Inst. for Pub. Info. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973)). BLM must analyze site-specific impacts before it irretrievably commits resources to oil and gas development.

#### **D. BLM Fails to Analyze a Range of Reasonable Alternatives.**

Because the BLM essentially analyzes only two alternatives, one no action and two full leasing alternatives, RGFO EA at 15, White River/Kremmling EA at 22, BLM fails to analyze a range of reasonable alternatives.

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<sup>21</sup> For an example of the limited analysis contained in these CXs, see BLM, Section 390 Categorical Exclusions for Oil and Gas Development, DOI-BLM-CO-F020-2017-0087 CX, <https://eplanning.blm.gov/epl-front-office/projects/nepa/81178/115369/140898/DOI-BLM-CO-F020-2017-0087-CX.pdf>.

<sup>22</sup> BLM, Section 390 Categorical Exclusion For Oil And Gas Development, Surprise 0680 S9 Well Pad, DOI-BLM-CO-N050-2020-0014-CX (2020), [https://eplanning.blm.gov/public\\_projects/nepa/1504699/20016167/250021619/doiblmcoN05020200014cx\\_v3\\_signed.pdf](https://eplanning.blm.gov/public_projects/nepa/1504699/20016167/250021619/doiblmcoN05020200014cx_v3_signed.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 11).

NEPA requires agencies to “present the environmental impacts of the proposal and the alternatives *in comparative form, thus sharply defining* the issues and providing a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14 (emphasis added). This includes considering alternatives which decrease the amount of lands dedicated to fossil fuel development. *See Western Org. of Resource Councils v. U.S. Bureau of Land Mgmt.*, CV 16-21-GF-BMM, 2018 WL 1456624, at \*9 (D. Mont. Mar. 23, 2018) (holding that “BLM’s failure to consider any alternative that would decrease the amount of extractable coal available for leasing rendered inadequate the Buffalo EIS and Miles City EIS in violation of NEPA”). “The EA, while typically a more concise analysis than an EIS, must still evaluate the need for the proposal, alternatives as required by NEPA section 102(2)(E), and the environmental impacts of the proposed action and alternatives.” *See High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F.Supp. 3d 1174 (D. Colo. 2014); *see also* 42 U.S.C. § 4332(E) (requiring agencies to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources”).

For example, here, BLM failed to consider deferring any of the “very low” development potential parcels in Las Animas County even though such an alternative is well within its multiple use mandate. Any information regarding the financial solvency of the lease nominators, the estimated cost of BLM staff time to prepare lease sale documents, and a deeper assessment of the development potential of the parcels would be relevant to include in an analysis of the suggested alternative. Because BLM fails to include any such information in the draft Royal Gorge EA, it fails to analyze a range of reasonable alternatives.

In response to this, BLM argues that the range of alternatives is sufficient given the information available at the leasing stage. But, this fails to address the specific alternative we proposed in our comments on the EA which would eliminate all parcels within “very low” development areas. BLM must discuss whether it actually considered this alternative, and if so, whether or not it makes sense for the lease sale. *WildEarth Guardians v. U.S. Bureau of Land Mgmt.*, No. CV-18-73-GF-BMM, 2020 WL 2104760, at \*7 (May 1, 2020).

#### **E. BLM Fails to Take a “Hard Look” at the Impacts of Hydraulic Fracturing.**

The need for BLM to postpone the September 2020 lease sale pending a more complete NEPA analysis is further underscored by the fact that BLM has yet to take a “hard look” at the impacts of fracking.

NEPA imposes “action forcing procedures . . . requir[ing] that agencies take a hard look at environmental consequences.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (citations omitted). “Taking a hard look includes considering all foreseeable direct and indirect impacts . . . [and] involve a discussion of adverse impacts that does not improperly minimize negative side effects.” *League of Wilderness Defs.-Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 689 F.3d 1060, 1075 (9th Cir. 2012) (citing *N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006)) (internal quotations omitted).



Multiple courts have held that if BLM plans to allow a new oil and gas extraction technique, the agency must analyze the impacts of this technique in either a programmatic or project-specific NEPA document. *See Pennaco Energy, Inc. v. U.S. Dep't of the Interior*, 377 F.3d 1147, 1151, 1153 (10th Cir. 2004) (holding that when a new fossil fuel extraction technology becomes commercially viable, and creates “changed circumstances” such that production of energy with the new technology is “significantly different” than production using previously considered technology, an agency permitting activities utilizing the new technology must take new environmental impacts into account as part of the NEPA process); *see also Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 937 F. Supp. 2d 1140, 1157 (N.D. Cal. 2013) (invalidating a BLM lease sale because “the scale of fracking in shale-area drilling today involves risks and concerns that were not addressed by the PRMP/FEIS’ general analysis of oil and drilling development in the area”); *ForestWatch v. U.S. Bureau of Land Mgmt.*, 2016 WL 5172009, Case No. CV-15-4378-MWF (JEMx) (C.D. Cal. Sept. 6, 2016) (accord); *Dine Citizens Against Ruining Our Environment v. Bernhardt*, 923 F.3d 831, 851 (2019) (holding that BLM needed to—but did not—consider the cumulative impacts to water resources associated with the 3,960 reasonably foreseeably horizontal Mancos Shale wells.”).

With the use of fracking comes a myriad of potentially significant environmental impacts.<sup>23</sup> Fracking has not only opened up vast areas of minerals that were previously uneconomical to extract—thereby expanding the total land area impacted by development—the process of fracking also causes different and more intense impacts to our public health, air, water, land, and wildlife. *Diné Citizens Against Ruining Our Env't v. Jewell*, No. CIV 15-0209 JB/SCY, 2015 WL 4997207, at \*11 (D.N.M. Aug. 14, 2015), *aff'd*, 839 F.3d 1276 (10th Cir. 2016) (finding that “directional drilling causes roughly double the surface impacts of vertical drilling on a well-for-well basis” and that “[i]t can take five to ten times more water to frack a directionally drilled well than a vertical well.”).

Here, BLM’s existing NEPA analyses for the underlying RMPs<sup>24</sup> completely omit any analysis of the impacts of fracking. This is not surprising considering the fact that widespread use of fracking as an extraction technique did not occur until the early 2000s.<sup>25</sup> But, today, 67% of the U.S.’s natural gas comes from wells that use fracking, and 50% of the U.S.’s oil comes from wells that use fracking. *Id.* Industry estimates that more than 90% of the new wells drilled

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<sup>23</sup> *See generally* Fracking Compendium, Fracking By the Numbers, & TEDX Health Effects, *supra*.

<sup>24</sup> For Royal Gorge parcels, neither the Northeast Resource Area Plan (approved in 1986, amended in 1991) nor the Royal Gorge Resource Management Plan (approved in 1996, amended in 2009), discuss the impacts of fracking. *See generally* NE ARP and RGRMP at:

<https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=99527>. Although the White River RMPA for Oil and Gas Development does acknowledge that impacts from fracking may occur, it fails to quantify increases in impacts from the extraction technique and ultimately defers detailed analysis to the APD stage. *See, e.g.*, White River O&G RMPA at 4-120. The Kremmling RMP also defers any detailed analysis to the APD stage. *See, e.g.*, Kremmling RMP at 4-99.

<sup>25</sup> U.S. Energy Info. Admin., *Hydraulically Fractured Horizontal Wells Account For Most New Oil And Gas Wells*, Jan. 30, 2018, <https://www.eia.gov/todayinenergy/detail.php?id=34732> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 12).

today use fracking.<sup>26</sup> While the BLM’s omission of a discussion of the impacts from fracking in the RMPs/FEISs is not surprising, it is certainly an omission that the BLM must address before approving additional leasing. *See Pennaco Energy, Inc.*, 377 F.3d at 1151, 1153; *Ctr. for Biological Diversity*, 937 F. Supp. 2d at 1157.

Yet, BLM has confirmed the impacts of fracking in multiple non-NEPA documents. In its AMS for the Eastern Colorado RMP, BLM notes that “[r]apidly advancing technology . . . plays a factor in what resources can be economically developed,” and that “[n]ew horizontal drilling and hydraulic fracturing techniques developed in other similar geological formations, such as the Barnett in Texas, and the Bakken in North Dakota, are being successfully applied to economically extract oil from the Niobrara formation in the Denver-Julesburg Basin.”<sup>27</sup> *Id.* at 168. The agency also notes that “the vast majority of [APDs] recently reviewed by the RGFO [Royal Gorge Field Office] have been for horizontal wells sited on multi-well pads and targeting oil in the Niobrara formation in the Denver-Julesburg Basin in Weld County.”<sup>28</sup> In its 2018 RFDS for Royal Gorge, BLM admits that the use of horizontal drilling coupled with multi-stage hydraulic fracturing, collectively fracking, has drastically changed the nature of development in the area, not only resulting greater volumes of oil and gas per well (thereby increasing impacts to air quality as well) but also allowing development in areas previously thought uneconomical.<sup>29</sup> Put simply, the vast majority of oil and gas wells in the RGFO use horizontal drilling and fracking, a process which results in new and greater impacts to natural resources, and BLM has no comprehensive NEPA document which studies these impacts.

Unfortunately, BLM’s EAs for the RGFO and White River/Kremmling September 2020 parcels and BLM’s associated response to comments fail to remedy this omission. Although BLM admits in the EA that fracking will occur on the proposed parcels, BLM fails to fully analyze the impacts that will occur. For the Royal Gorge, any analysis of the impacts is nonexistent. For the White River/Kremmling, BLM includes information on the process of fracking and some general impacts,<sup>30</sup> but fails to analyze impacts to all potential resource issues related to public health and water quantity. BLM’s analysis did not include an assessment of the impacts from fracking on the use and loss of freshwater,<sup>31</sup> roads and air quality<sup>32</sup> from fracking

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<sup>26</sup> Western Energy All., *What is Fracking?*, <https://www.westernenergyalliance.org/why-western-oil-natural-gas/what-fracking> (last visited Mar. 16, 2020).

<sup>27</sup> AMS, *supra*, at 168.

<sup>28</sup> *Id.* at 169.

<sup>29</sup> 2018 RFDS, *supra*, at 1–4.

<sup>30</sup> Although BLM analyzed some general impacts of fracking in the White River/Kremmling EA, BLM did not explain the basis on which it determined those impacts were insignificant.

<sup>31</sup> Indeed, the decision in *San Juan Citizens Alliance* required this at the lease sale stage. *San Juan Citizens All. v. United States Bureau of Land Mgmt.*, 326 F. Supp. 3d 1227, 1254 (D.N.M. 2018) (holding “the record indicates that sufficient information is available at th[e] lease sale] stage to make estimates of potential water usage for the different methods of hydraulic fracturing, and thus BLM must use that information in deciding whether the action results in a significant impact.”).

<sup>32</sup> According to the 2019 Fracking Compendium, “[v]olatile organic compounds (VOCs) from drilling and fracking operations, together with nitrogen oxides, are responsible for 17 percent of locally produced ozone in Colorado’s

tanker truck traffic, impacts to air quality from fracking flowback and diesel engines, and impacts to human health from the wide array of chemicals used. It is particularly concerning that BLM fails to consider the indirect impacts from fracking including the disposal of produced water contaminated with fracking chemicals even though Colorado has indicated in reports that produced water is dumped into surface waters.<sup>33</sup> In addition to the omissions discussed above, BLM also continues to defer its analysis of impacts associated with fracking until the application for permit to drill phase, which, as we discussed above, is improper given the reasonably foreseeable impacts of fracking and the data available to BLM to evaluate these potential impacts.

Similarly, although BLM provides some specifics on water quality, impacts to water quality do not solely occur at the fracking stage. The entire construction and production process provides numerous contamination pathways through drilling, water storage pits, spills of produced water, and other incidents.<sup>34</sup> Because of the use of fracking, oil and gas operations have been able to expand to areas previously thought uneconomical. Moreover, EPA found that the “hydraulic fracturing water cycle . . . can impact drinking water sources under some circumstances.”<sup>35</sup> Specifically,

the presence of other wells near hydraulic fracturing operations can increase the potential for hydraulic fracturing fluids or other subsurface fluids to move to drinking water resources. There have been cases in which hydraulic fracturing at one well has affected a nearby oil and gas well or its fracture network, resulting in unexpected pressure increases at the nearby well, damage to the nearby well, or spills at the surface of the nearby well. These well communication events, or “frac hits,” have been reported in New Mexico, Oklahoma, and other locations.<sup>36</sup>

Indeed, contrary to BLM’s assertion that water contamination is uncommon, contamination occurs frequently and in varying oil and formations:<sup>37</sup>

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heavily drilled Front Range. (See footnote 160). Colorado has exceeded federal ozone limits for the past decade, a period that corresponds to a boom in oil and gas drilling (See footnote 158.) Air pollution near drilling and fracking operations is high enough in some Colorado communities to raise cancer risks, according to a 2018 study. (See footnote 145.)” Fracking Compendium, *supra*, at 25.

<sup>33</sup> Colorado Oil & Gas Comm’n, Sampling and Analysis of Naturally Occurring Radioactive Material in Oil and Gas Produced Water 1, 114 (2019) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 14).

<sup>34</sup> Fracking Compendium, *supra*, at 78–113 (documenting studies on increased spill rates in Colorado, methane contamination in 42 wells in Colorado from well failures, benzene contamination from 77 spills in Weld County alone, and more than 350 instances of groundwater contamination from spills).

<sup>35</sup> EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States ES-3 (2016) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 15).

<sup>36</sup> *Id.* at ES-32.

<sup>37</sup> Fracking Compendium, *supra*, at 70–79.

- In February 2019, the U.S. Justice Department reached a settlement with Antero Resources Corporation over claims that it violated the Clean Water Act at 32 different drilling and fracking-related sites in West Virginia. The violations involved unauthorized dumping of fracking waste into local waterways.
- In November 2018, three scientists found that contaminated drinking water in Pavillion, Wyoming was likely caused by gas leaking from faulty gas wells as well as by leaks from 40 unlined pits that, for many years, served as dumps for drilling wastewater. The scientists presented their findings to the community in advance of publishing a peer-reviewed scientific journal article. Statistical analyses show a correlation between what was disposed of in the pits and contaminants appearing in nearby drinking water wells. One of the former EPA scientists told community members that the Wind River Formation drinking water aquifer will likely never be cleaned up. A preliminary report from the EPA in 2011 about groundwater contamination in Pavillion was never finalized.
- In August 2018, a Yale University team collected drinking water samples from 66 households in Belmont County that were located at varying distances away from well pads and analyzed them for the presence of fracking-related chemical contaminants. They also interviewed residents about their health symptoms. The primary goal of this exploratory study was to determine whether residential proximity to fracked wells was related to detection and concentrations of health-relevant drinking water contaminants. A second objective was to evaluate possible relationships between proximity to wells and health complaints in the community. The team found that all homes had at least one volatile organic compound or other organic compound above detectable levels and that prevalence of contaminants in drinking water, including toluene, bromoform, and dichlorobromomethane, was higher in homes closer to the wells.
- In January 2018, the Pennsylvania Department of Environmental Protection determined that fracking wastewater that had leaked from a storage pit contaminated groundwater and rendered a natural spring used for drinking water in Greene County undrinkable.

Data also suggests that there is a greater risk for structural integrity issues, e.g. casing failures, between unconventional and conventional oil and gas wells.<sup>38</sup>

In addition and despite BLM's response to our comments, BLM must estimate water usage from the lease sale as required by law. In *San Juan Citizens Alliance v. United States Bureau of Land Management*, 326 F. Supp. 3d 1227, 1252–54 (D.N.M. 2018), a challenge to oil and gas leases in a national forest, a federal district court held that “given several other cases in which water usage was quantified prior to the application for permit to drill stage, the Court is not persuaded by BLM’s unsupported conclusion that it did not have enough information to calculate water usage.” Following this, the New Mexico BLM has been including in its leasing

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<sup>38</sup> Anthony R. Ingraffea et al., Assessment and Risk Analysis of Casing and Cement Impairment in Oil and Gas Wells in Pennsylvania, 2000-2012, PNAS 1, 2 (2013) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 16).

EAs a breakdown of the average water use per horizontal well in the Pecos District (31.2 acre feet).<sup>39</sup> Moreover, the New Mexico BLM relied on a recent report by Andrew Kondash et al. describing the increasing water footprint of hydraulic fracturing<sup>40</sup> along with information from FracFocus to calculate this number. This approach can be applied here. BLM can use information from FracFocus from the many wells across the state to estimate water resources as required by law. BLM errs in its response to our comments, when it claims estimating water usage from leasing these parcels for oil and gas development would be impossible at the leasing stage.

Finally, BLM's failure to analyze the impacts from fracking in the underlying RGFO and Eastern Colorado RMPs and FEISs not only violates NEPA but also violates FLPMA. As noted above, FLPMA requires that BLM amend an RMP whenever there is a need to "[c]onsider a proposal or action that does not conform to the plan," "respond to new, intensified, or changed uses on public land," or "consider significant new information from resource assessments, monitoring, or scientific studies that change land use plan decisions." 43 C.F.R. § 1610.5-6; BLM Land Use Planning Handbook, H-1610-1, Section VII.B at 45. At a minimum, the use of multi-stage fracking coupled with horizontal drilling constitutes a "new, intensified, or changed use[]" on public land." Indeed, BLM essentially admits that this is the case in its Eastern Colorado AMS. Accordingly, BLM cannot move forward with leasing the parcels in this area until it either completes an amendment or update to the relevant RMPs-EISs or includes a full analysis of the impacts of fracking and horizontal drilling in a project-specific EIS. Importantly, and as we discussed above, BLM must postpone this lease sale to protect the development of the ECRMP from decisions that prejudice the outcome of that plan. BLM's response to our comments on the RGFO EA fails to adequately address this issue.

#### **F. BLM Fails to Take a Hard Look at the Direct, Indirect, and Cumulative Impacts that Will Result from Greenhouse Gas Emissions from the Proposed Action.**

BLM also fails to fully analyze the direct, indirect, and cumulative greenhouse gas emissions that will result from the proposed actions, impacts from these emissions, and otherwise consider relevant, recent climate science.

Within the context of climate change, NEPA requires BLM to quantify and discuss the significance of the direct, indirect, and cumulative greenhouse gases generated by its proposed action. 40 C.F.R. §§ 1502.16 (outlining what's required in an impacts analysis), 1508.7 (defining cumulative impacts), 1508.8 (defining direct and indirect impacts); *Western Org. of Res. Councils v. U.S. Bureau of Land Mgmt.*, CV 16-21-GF-BMM, 2018 WL 1475470, (D. Mont.

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<sup>39</sup> BLM, Pecos District Office, September 2019 Competitive Oil and Gas Lease Sale, Draft Environmental Assessment, DOI-BLM-NM-P000-2019-0003 at 83 (2019), [https://eplanning.blm.gov/epl-front-office/projects/nepa/120849/172557/209696/PDO\\_Sept\\_2019\\_Lease\\_Sale\\_EA\\_09May2019\\_508.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/120849/172557/209696/PDO_Sept_2019_Lease_Sale_EA_09May2019_508.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 17).

<sup>40</sup> Kondash, A. J., et al., The Intensification of the Water Footprint of Hydraulic Fracturing. *Science*. (2018), <https://advances.sciencemag.org/content/advances/4/8/eaar5982.full.pdf> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 18).

Mar. 26, 2018) (requiring consideration of climate change at the RMP stage); *Sierra Club v. Fed. Energy Regulatory Comm'n*, 867 F.3d 1357, 1374 (D.C. Cir. 2017) (requiring quantification of indirect, downstream greenhouse gas emissions from combustion of natural gas carried by a pipeline); *Center for Biological Diversity v. National Highway Traffic. Admin.*, 538 F.3d 1172, 1215 (9th Cir. 2008) (requiring assessment of the cumulative impacts of climate change); *San Juan Citizens All. v. United States Bureau of Land Mgmt.*, 326 F. Supp. 3d 1227, 1244 (D.N.M. 2018) (requiring an analysis of climate impacts at the oil and gas leasing stage); *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41 (D.D.C. 2019) (requiring a robust analysis of the direct and indirect climate impacts from nine lease sales as well as a quantitative, regional cumulative impacts analysis of reasonably foreseeable BLM lease sales in the region); *WildEarth Guardians v. U.S. Bureau of Land Mgmt.*, No. CV-18-73-GF-BMM, 2020 WL 2104760, at \*1 (D. Mont. May 1, 2020) (requiring an assessment of the cumulative impacts on climate from oil and gas leasing, including an assessment of the lease sales “in combination with each other, not simply in the context of state and nation-wide emissions”).

***i. BLM’s Comparison of the Impacts Between the No Action Alternative and the Preferred Alternative is Arbitrary.***

To start, BLM’s assessment of the impacts between the no action alternative and the preferred alternative for both EAs is fatally flawed because it relies on the “perfect substitution” argument struck down by the court in *WildEarth Guardians v. United States Bureau of Land Management*, 870 F.3d 1222, 1234 (10th Cir. 2017). *See* Royal Gorge EA at 43, NW District EA at 39.

Here, BLM concludes in both EAs that:

Potential greenhouse gas emissions (GHG) and climate change impacts for all alternatives would also be similar, as the future potential GHG emissions difference for new oil and gas production that could occur for the subject lease parcels and the No Action Alternative would likely be small when compared to broader scope GHG emissions inventories (U.S., Global). This conclusion is based on BLM-Colorado’s use of BOEM’s Market Simulation Model (MarketSim) and Greenhouse Gas Lifecycle Model to estimate the energy sources (and resulting GHG emissions) that would be anticipated in the absence of Colorado Federal oil and gas production for years 2019 through 2025 for new Federal oil and gas developed years 2019-2025 for the two CARMMS 2.0 high and low new oil and gas development scenarios.

RGFO EA at 39–40, White River/Kremmling EA at 34.

But, there are a number of flaws with this conclusion. First, it is questionable whether the offshore oil and gas program as managed by BOEM is even comparable to the onshore oil and gas program. Second, as others have noted, BOEM’s model fails to account for the basic economic principles of supply and demand and instead assumes that much of the proposed oil

and gas resources will be substituted by other sources.<sup>41</sup> Studies have found that ending new oil leasing on U.S. federal lands and waters, and avoiding renewal of existing leases for resources that are not yet producing, would result in large GHG and climate benefits.<sup>42</sup> The Tenth Circuit in *WildEarth Guardians v. United States Bureau of Land Management* agreed with this conclusion, noting “Even if we could conclude that the agency had enough data before it to choose between the preferred and no action alternatives, we would still conclude this perfect substitution assumption arbitrary and capricious because the assumption itself is irrational (i.e., contrary to basic supply and demand principles).” 870 F.3d 1222, 1236 (10th Cir. 2017). Finally, the Institute for Policy Integrity has also criticized the model’s failure to account for downstream greenhouse gas emissions.<sup>43</sup> Unfortunately, BLM chose not to address these concerns in its response to our comments on both EAs.

**ii. BLM Fails to Fully Assess the Direct and Indirect Greenhouse Gas Emissions That Will Result from the Lease Sale.**

Here, none of the proposed leases have NSO stipulations for the entire parcel, and BLM undoubtedly has the tool to assess emissions from existing development. Thus, the leases are an irretrievable commitment of resources, and the direct, indirect, and cumulative greenhouse gas emissions from the lease sale are reasonably foreseeable, and BLM is required to estimate these through a site-specific NEPA analysis at the lease sale stage. *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 717–18 (10th Cir. 2009); *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 65 (D.D.C. 2019). Unfortunately, BLM fails to complete a comprehensive analysis of the direct and indirect greenhouse gas emissions and impacts from these emissions that will result from the lease sale.

To start, although we appreciate that BLM finally estimates per parcel direct and indirect greenhouse gas emissions after years of claiming it was impossible, *see* RGFO EA at 41, WR/K EA at 42, a number of errors remain. First, we request that BLM disclose how it reached its direct GHG emissions rate. If BLM relied on the EPA’s inventory, we request that the agency

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<sup>41</sup> See Institute for Policy Integrity, Subject: Comments on the 2017-2022 Outer Continental Shelf (OCS) Oil and Gas Leasing Proposed Program, BOEM–2016–0003 (2016), [https://policyintegrity.org/documents/NYU\\_Policy\\_Integrity\\_BOEM\\_Comments\\_June\\_16\\_2016\\_with\\_appendix.docx.pdf](https://policyintegrity.org/documents/NYU_Policy_Integrity_BOEM_Comments_June_16_2016_with_appendix.docx.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 19).

<sup>42</sup> Peter Erickson, P. & Michael Lazarus, *How Would Phasing Out US Federal Leases for Fossil Fuel Extraction Affect CO2 Emissions and 2°C Goals?*, Stockholm Environment Institute (2016) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 20); Erickson, P. and M. Lazarus, *Impact of the Keystone XL Pipeline on Global Oil Markets and Greenhouse Gas Emissions*, 4 *Nature Climate Change* 778 (2016) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 21); Metcalf, G, *The Impact of Removing Tax Preferences for U.S. Oil and Gas Production*, Council on Foreign Relations, August 2016 (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 22); Erickson, P., *Rebuttal: Oil Subsidies—More Material for Climate Change Than You Might Think*, November 2, 2017, <https://www.cfr.org/blog/rebuttal-oil-subsidies-more-material-climate-change-you-might-think> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 23).

<sup>43</sup> Institute for Policy Integrity, *supra*.

address the multiple studies that have found that this inventory significantly underestimates emissions.<sup>44</sup> We also request that BLM explain why it does not use the more recent emissions information available in the 2018 USGS Emissions Report (Exhibit 28, *infra*). Second, we also suggest that BLM include additional information in its direct and indirect greenhouse gas emissions analysis to disclose whether it considered greenhouse gases beyond CO<sub>2</sub>. For example, just recently the Billings Field Office in Montana calculated estimated downstream GHG emissions using the following table. This format provides clarity for the reader to assess the accuracy of BLM’s calculations as well as understand the impacts from differing greenhouse gases.

Table 11. Estimated Downstream GHG Emissions due to Fossil Fuel Combustion

County	# of wells estimated for March 2018 Leasing EA		Ave oil prod. Rate (BBL/day/well)	Ave. gas prod. Rate (M CF/day/well)	CO <sub>2</sub> Combustion emission factor (g/MM BTU)	CH <sub>4</sub> Combustion emission factor (g/MM BTU)	N <sub>2</sub> O Combustion emission factor (g/MM BTU)	CO <sub>2</sub> Emissions (metric tons)	CH <sub>4</sub> Emissions (metric tons)	N <sub>2</sub> O Emissions (metric tons)	CO <sub>2</sub> eq Million Metric Tons/Year (M M TY)
	oil	gas									
Carbon	1	0	11.3	0	74,000	10	0.6	1770.24	0.24	0.01	0.0018
Carbon	0	1	0	33	53,060	1	0.1	655.09	0.01	0.00	0.0007
Musselshell	1	0	7	0	74,000	10	0.6	1096.61	0.15	0.01	0.0011
Sweetgrass	0	1	0	17	53,060	1	0.1	327.54	0.01	0.00	0.0003
Stillwater	0	1	0	19	53,060	1	0.1	377.17	0.01	0.00	0.0004
											0.0042

References: <http://bogc.dnrc.mt.gov/onlinedata.asp>, <https://www.eia.gov/oiaf/1605/coefficients.html#tbl3>, <https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s03.pdf>

Finally, although we again appreciate that BLM attempts to assess the significance of direct and indirect greenhouse gas emissions when it compares the lease sale to the future emission rates for an entire representative concentration pathway (“RCP”), a modelling scenario estimating emissions for the entire world as analyzed by the Intergovernmental Panel on Climate Change (“IPCC”), Royal Gorge EA at 41, White River/Kremmling EA at 42, this comparison is incredibly unreasonable, and fails to provide any context about the actual impacts from the lease sale. As such, BLMs EAs remain deficient in that they fail to evaluate and compare the September 2020 lease sale to other BLM lease sales or similarly-sized projects to put the lease sale in the appropriate context as the CEQ has directed.<sup>45</sup>

<sup>44</sup> Env’tl. Def. Fund, Major Studies Reveal 60% More Methane Emissions, <https://www.edf.org/climate/methane-studies> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 24); Alvarez et al., Assessment of Methane Emissions from the U.S. Oil and Gas Supply Chain, 361 Science 186, 186 (2018) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 25).

<sup>45</sup> CEQ, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews 1, 11 (2016) (explaining that “a statement that emissions from a proposed Federal action represent only a small fraction of global emissions is essentially a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA. . . . [T]his approach does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large impact. . . . [W]hen considering GHG emissions and the significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios. Agencies should not limit themselves to calculating a proposed action’s emissions as a percentage of section,



**iii. BLM Fails to Analyze Cumulative Greenhouse Gas Emissions That Will Result from the Proposed Action.**

BLM must also properly complete a cumulative impacts analysis of the proposed alternatives, including an assessment of the cumulative greenhouse gas emissions that will result. 40 C.F.R. §§ 1502.14, 1508.7; *Center for Biological Diversity v. National Highway Traffic Admin.*, 538 F.3d 1172, 1215 (9th Cir. 2008); *WildEarth Guardians v. BLM*, \_\_\_ F. Supp. 3d \_\_\_, No. CV-18-73-GF-BMM, 2020 WL 2104760 at \* 12020 WL 2104760 at \*10–11 (D. Mont. May 1, 2020). Specifically, BLM must analyze greenhouse gas emissions from any federal, state, and private oil and gas leasing and development projects as well as any other GHG-emitting projects in the region such as other lease sales, pipelines, etc. BLM must also analyze the cumulative GHG emissions from the federal fossil fuel program as a whole.

CEQ NEPA regulations define “cumulative impacts” as:

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

40 C.F.R. § 1508.7.

BLM is responsible for the management of a significant portion—700 million acres—of federal onshore subsurface minerals.<sup>46</sup> BLM has never studied the full climate impacts of its oil and gas leasing program in a comprehensive document. But, other agencies have quantified emission from federal fossil fuels. The U.S. Geological Survey (“USGS”) concluded in 2018 that “the ultimate downstream GHG emissions from fossil fuel extraction from federal lands and waters by private leaseholders could have accounted for approximately 23% of total U.S. GHG emissions (1,332 MMT of CO<sub>2</sub>e).”<sup>47</sup> USGS also found that emissions from oil and gas development account for approximately 34% of federal GHG emissions (498.76 MMT CO<sub>2</sub>e).<sup>48</sup>

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nationwide, or global emissions[.]” (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 26). Although the Trump Administration has since revoked the CEQ’s August 2016 Climate Guidance and the BLM revoked IM No. 2017-003 on October 24, 2017, BLM is still bound by the CEQ’s NEPA regulations and existing case law to this effect. *See, e.g., Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1374 (D.C. Cir. 2017); *see also* our discussion of the CEQ’s Final Rule above

<sup>46</sup> DOI, BLM, *How We Manage*, <https://www.blm.gov/about/how-we-manage> (last visited June 12, 2020).

<sup>47</sup> Merrill, M.D. et al., U.S. Geological Survey, *Federal Lands Greenhouse Gas Emissions & Sequestration in the United States: Estimates for 2005-14* (2018) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 27).

<sup>48</sup> *Id.* at 7 (adding together oil and gas related emissions provided in Table 1).

A separate report from EcoShift Consulting concluded that emissions from unleased BLM reserves contain up to 450,000 MMT of CO<sub>2</sub>e.<sup>49</sup>

Here, BLM continues to fail to assess cumulative greenhouse gas emissions from reasonably foreseeable lease sales occurring in the region and nation as required by NEPA and the recent court decision in *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 63 (D.D.C. 2019). Instead, BLM solely looks at cumulative emissions in Colorado. This approach ignores emissions from BLM leases occurring just across the border in neighboring states. For example, BLM has sold, is selling, and will be selling thousands of acres of oil and gas leases, including:

- Colorado:
  - BLM sold 5 parcels (1,055.150 acres) at its March 2019 sale, [https://eplanning.blm.gov/epl-front-office/projects/nepa/115103/169660/206230/Sale\\_Results\\_March2019.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/115103/169660/206230/Sale_Results_March2019.pdf).
  - For its June 2019 lease sale, BLM sold 17 parcels (8,176.84 acres), [https://eplanning.blm.gov/epl-front-office/projects/nepa/119117/175852/214216/Sale\\_Results\\_June2019.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/119117/175852/214216/Sale_Results_June2019.pdf).
  - For its September 2019 lease sale, BLM sold 49 parcels (42,148.72 acres), [https://eplanning.blm.gov/epl-front-office/projects/nepa/121040/20004618/250005475/Sale\\_Results\\_Sept2019.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/121040/20004618/250005475/Sale_Results_Sept2019.pdf).
  - For the March 2020 lease sale, BLM sold 9 parcels totaling 10,414.62 acres, [https://eplanning.blm.gov/epl-front-office/projects/nepa/1501731/20015361/250020503/Sale\\_Results\\_March2020.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/1501731/20015361/250020503/Sale_Results_March2020.pdf).
  
- New Mexico, Texas, Oklahoma, & Kansas:
  - At the March 2019 lease sale, BLM sold 36 parcels totaling 10,535.07 acres in New Mexico, [https://eplanning.blm.gov/epl-front-office/projects/nepa/115496/20010153/250013083/Sale\\_Results\\_03282019.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/115496/20010153/250013083/Sale_Results_03282019.pdf).
  - At the June 2019 sale, BLM sold 47 parcels totaling 38,789.97 acres, [https://eplanning.blm.gov/epl-front-office/projects/nepa/119017/175501/213815/June\\_2019\\_New\\_Mexico\\_Oil\\_and\\_Gas\\_Lease\\_Sale\\_Results.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/119017/175501/213815/June_2019_New_Mexico_Oil_and_Gas_Lease_Sale_Results.pdf).
  - At the September 2019 lease sale, BLM sold 15 parcels (3,174.08 acres), [https://eplanning.blm.gov/epl-front-office/projects/nepa/120851/20003079/250003684/September\\_2019\\_Lease\\_Sale\\_Results.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/120851/20003079/250003684/September_2019_Lease_Sale_Results.pdf).
  - At the November 2019 sale, BLM sold 16 parcels totaling 7,619.46 acres, [https://eplanning.blm.gov/epl-front-office/projects/nepa/122445/20008006/250009446/November\\_2019\\_Oil\\_and\\_Gas\\_Lease\\_Sale\\_Results.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/122445/20008006/250009446/November_2019_Oil_and_Gas_Lease_Sale_Results.pdf).
  - And, at its February 2020 lease sale, BLM sold 56 parcels totaling 14,671.54 acres in New Mexico,

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<sup>49</sup> Mulvaney et al., *The Potential Greenhouse Gas Emissions from U.S. Federal Fossil Fuels* 1, 3 (2015), EcoShift Consulting (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 28).

[https://eplanning.blm.gov/epl-front-office/projects/nepa/1500848/20012570/250017136/ResultsList022020\\_Updated.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/1500848/20012570/250017136/ResultsList022020_Updated.pdf).

- Utah:
  - For March 2019, BLM sold 90 parcels totaling 135,123.47 acres, <https://eplanning.blm.gov/epl-front-office/projects/nepa/117403/169445/206045/4UtahSaleResultsSummary.pdf>.
  - For June 2019, BLM sold 8 acres totaling 9,822.52 acres, [https://eplanning.blm.gov/epl-front-office/projects/nepa/119572/174908/212467/3-June2019\\_CompSaleResultsSummary.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/119572/174908/212467/3-June2019_CompSaleResultsSummary.pdf).
  - For September 2019, BLM sold 63 parcels (70,345.40 acres), <https://eplanning.blm.gov/epl-front-office/projects/nepa/121035/20003558/250004196/CompSaleResultsSummary.pdf>.
  - For the December 2019 sale, BLM sold 16 parcels totaling 9,486.94 acres, <https://eplanning.blm.gov/epl-front-office/projects/nepa/123688/20009969/250011670/UtahCompSaleResultsSummary.pdf>.
  - And, for the March 2020 sale, BLM sold 22 parcels totaling 28,491.58 acres, <https://eplanning.blm.gov/epl-front-office/projects/nepa/1501633/20014446/250019533/Mar2020CompSaleResultsSummary.pdf>.
  
- Wyoming:
  - In February 2019, the Wyoming BLM held a special lease sale selling 437 parcels, <https://www.blm.gov/press-release/blm-wyoming-oil-and-gas-lease-sale-garners-nearly-88-million>.
  - In March 2019, Wyoming sold 114 parcels, [https://eplanning.blm.gov/epl-front-office/projects/nepa/117392/169203/205794/Press\\_Release.20190320.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/117392/169203/205794/Press_Release.20190320.pdf).
  - In June 2019, BLM sold 151 parcels comprising 186,013.53 acres, [https://www.energynet.com/library/secure/mime/application/pdf/1735201/Sale\\_Results\\_June2019.pdf?s=cTBQtpAW5travjSRDQvV6w&e=1566622800](https://www.energynet.com/library/secure/mime/application/pdf/1735201/Sale_Results_June2019.pdf?s=cTBQtpAW5travjSRDQvV6w&e=1566622800).
  - In September 2019, BLM sold 175 parcels totaling 264,000 acres, [https://eplanning.blm.gov/epl-front-office/projects/nepa/117392/20004145/250004933/PR\\_09.19LeaseSale\\_Results.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/117392/20004145/250004933/PR_09.19LeaseSale_Results.pdf).
  - In December 2019, BLM sold 123 parcels totaling 123,257.56 acres, [https://www.energynet.com/govt\\_listing.pl?sg=5172](https://www.energynet.com/govt_listing.pl?sg=5172).
  - For March 2020, BLM sold 75 parcels (71,688.5 acres), [https://www.energynet.com/govt\\_listing.pl?sg=5214](https://www.energynet.com/govt_listing.pl?sg=5214).

This argument is further supported by a look at the BLM lease sales in the area. As demonstrated by the map above, the Colorado September 2020 sale is not occurring in a vacuum. Instead, it is surrounded by parcels from the Colorado, Utah, and Wyoming 2019 and 2020 lease sales. Because these sales are reasonably foreseeable and occurring in the region, BLM must analyze the cumulative climate impacts (as well as other impacts) of all of these sales together in a single, programmatic document, regardless of state lines. *WildEarth Guardians v. Zinke*, 368 F.

Supp. 3d 41, 83 (D.D.C. 2019) (“Given the national, cumulative nature of climate change, considering each individual drilling project in a vacuum deprives the agency and the public of the context necessary to evaluate oil and gas drilling on federal land before irretrievably committing to that drilling.”). Climate change is not limited by state borders and the BLM’s analysis must not be either. Unfortunately, BLM’s analysis continues to exclude greenhouse gas emissions from reasonably foreseeable federal lease sales occurring in the region, including directly across the border in Wyoming. Thus, its analysis remains inadequate.

### **G. BLM Fails to Assess the Proposed Action Within the Context of Recent, Significant Climate Science.**

NEPA requires BLM to assess the lease sale within the context of accurate, high quality climate science. 40 C.F.R. §§ 1500.1, 1502.24; *Lands Council v. Powell*, 395 F.3d 1019, 1031 (9th Cir. 2005) (finding that the agency’s reliance on outdated data prevented it from completing an accurate cumulative impacts analysis); *San Juan Citizens All. v. United States Bureau of Land Mgmt.*, 326 F. Supp. 3d 1227, 1249 (D.N.M. 2018) (holding that BLM could not rely on outdated climate data on remand). Additionally, “[e]ach time new, site specific data becomes available, and a new project is proposed, the BLM must take a hard look at it, determine its significance, and explain its decision regarding the data’s significance.” *S. Utah Wilderness All. v. United States Dep’t of the Interior*, No. 2:13-CV-01060-EJF, 2016 WL 6909036, at \*6 (D. Utah Oct. 3, 2016); see also *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 558 (9th Cir. 2000) (“When new information comes to light the agency must consider it, evaluate it, and make a reasoned determination whether it is of such significance as to require [supplemental environmental review.]”).

Climate change has been intensively studied and acknowledged at the global, national, and regional scales. Climate change is being fueled by the human-caused release of greenhouse gas emissions, in particular carbon dioxide and methane. Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are recognized as the key greenhouse gases contributing to climate change. In 2009, the EPA found that these “six greenhouse gases taken in combination endanger both the public health and the public welfare of current and future generations.”<sup>50</sup> The D.C. Circuit has 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).

The Intergovernmental Panel on Climate Change (“IPCC”) is a Nobel Prize-winning scientific body within the United Nations that reviews and assesses the most recent scientific, technical, and socio-economic information relevant to our understanding of climate change. In one of its reports to policymakers in 2014, the IPCC provided an incredibly comprehensive

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<sup>50</sup> EPA, *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).

summary of our understanding of human-caused climate change.<sup>51</sup> Among other things, the IPCC stated:

- 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.<sup>52</sup>
- 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, and sea level has risen.<sup>53</sup>
- Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane, and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are extremely likely to have been the dominant cause of the observed warming since the mid-20<sup>th</sup> century.<sup>54</sup>
- In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. Impacts are due to observed climate change, irrespective of its cause, indicating the sensitivity of natural and human systems to changing climate.<sup>55</sup>
- Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks.<sup>56</sup>
- Surface temperature is projected to rise over the 21st century under all assessed emission scenarios. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent

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<sup>51</sup> IPCC AR5, *Synthesis Report, Summary for Policymakers* (2014), [http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5\\_SYR\\_FINAL\\_SPM.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 29).

<sup>52</sup> *Id.* at 2.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.* at 4.

<sup>55</sup> *Id.* at 6.

<sup>56</sup> *Id.* at 8.

in many regions. The ocean will continue to warm and acidify, and global mean sea level will continue to rise.<sup>57</sup>

- Climate change will amplify existing risks and create new risks for natural and human systems. Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development.<sup>58</sup>
- Many aspects of climate change and associated impacts will continue for centuries, even if anthropogenic emissions of greenhouse gases are stopped. The risks of abrupt or irreversible changes increase as the magnitude of the warming increases.<sup>59</sup>
- There are multiple mitigation pathways that are likely to limit warming to below 2°C relative to pre-industrial levels. *These pathways would require substantial emissions reductions over the next few decades and near zero emissions of CO<sub>2</sub> and other long-lived greenhouse gases by the end of the century.* Implementing such reductions poses substantial technological, economic, social and institutional challenges, which increase with delays in additional mitigation and if key technologies are not available. Limiting warming to lower or higher levels involves similar challenges but on different timescales.<sup>60</sup>

In fall of 2018, the IPCC issued a special report on the difference between the impacts of global warming of 1.5°C above pre-industrial levels and that of 2°C above pre-industrial levels.<sup>61</sup> The IPCC also included recommendations on the system transitions needed to limit warming to 1.5°C, including a need to reduce reliance on fossil fuels by 50 to 90% depending on the temperature goal. Specifically, the IPCC found:

- Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate.<sup>62</sup>
- Warming from anthropogenic emissions from the pre-industrial period to the present will persist for centuries to millennia and will continue to cause further long-term

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<sup>57</sup> *Id.* at 10.

<sup>58</sup> *Id.* at 13.

<sup>59</sup> *Id.* at 16.

<sup>60</sup> *Id.* at 20 (emphasis added).

<sup>61</sup> IPCC Special Report 15, *Global Warming of 1.5°: Summary for Policy Makers* (2018), [http://report.ipcc.ch/sr15/pdf/sr15\\_spm\\_final.pdf](http://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 30).

<sup>62</sup> *Id.* at 6.

changes in the climate system, such as sea level rise, with associated impacts but these emissions alone are unlikely to cause global warming of 1.5°C.<sup>63</sup>

- Climate models project robust differences in regional climate characteristics between present-day and global warming of 1.5°C, and between 1.5°C and 2°C. These differences include increases in: mean temperature in most land and ocean regions, hot extremes in most inhabited regions, heavy precipitation in several regions, and the probability of drought and precipitation deficits in some regions.<sup>64</sup>
- Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C.<sup>65</sup>
- Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (high confidence). These systems transitions are *unprecedented in terms of scale*, but not necessarily in terms of speed, and *imply deep emissions reductions in all sectors*, a wide portfolio of mitigation options and a significant upscaling of investments in those options (medium confidence).<sup>66</sup>
- CO2 emissions from industry in pathways limiting global warming to 1.5°C with no or limited overshoot are projected to be about 65-90% (interquartile range) lower in 2050 relative to 2010, as compared to 50-80% for global warming of 2°C (medium confidence).<sup>67</sup>
- Mitigation consistent with 1.5°C pathways creates risks for sustainable development in regions with high dependency on fossil fuels for revenue and employment generation (high confidence). Policies that promote diversification of the economy and the energy sector can address the associated challenges (high confidence).<sup>68</sup>

According to the Third National Climate Assessment,<sup>69</sup> the Southwest Region—which includes Colorado, New Mexico, Utah, Arizona, Nevada, and California—is experiencing and will experience the following impacts:

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<sup>63</sup> *Id.* at 7.

<sup>64</sup> *Id.* at 9.

<sup>65</sup> *Id.* at 11.

<sup>66</sup> *Id.* at 17 (emphasis added).

<sup>67</sup> *Id.*

<sup>68</sup> *Id.* at 23.

<sup>69</sup> Jerry M. Melillo, *et al.*, *Climate Change Impacts in the United States: The Third National Climate Assessment* (2014), <https://nca2014.globalchange.gov/downloads> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 31).

- Snowpack and streamflow amounts are projected to decline in parts of the Southwest, decreasing surface water supply reliability for cities, agriculture, and ecosystems.<sup>70</sup>
- The Southwest produces more than half of the nation’s high-value specialty crops, which are irrigation-dependent and particularly vulnerable to extremes of moisture, cold, and heat. Reduced yields from increasing temperatures and increasing competition for scarce water supplies will displace jobs in some rural communities.<sup>71</sup>
- Increased warming, drought, and insect outbreaks, all caused by or linked to climate change, have increased wildfires and impacts to people and ecosystems in the Southwest. Fire models project more wildfire and increased risks to communities across extensive areas.<sup>72</sup>
- Projected regional temperature increases, combined with the way cities amplify heat, will pose increased threats and costs to public health in southwestern cities, which are home to more than 90% of the region’s population. Disruptions to urban electricity and water supplies will exacerbate these health problems.<sup>73</sup>

The Fourth National Climate Assessment, released in two volumes in 2017<sup>74</sup> and 2018,<sup>75</sup> provides significant updates on the science and impacts of climate change across the U.S. Volume I, released in 2017, focuses on the physical science of climate change. Volume II, released in 2018, focuses on the impacts, risks, and adaptations occurring as a result of climate change. The latter report reaffirms that “the continued warming that is projected to occur without significant reductions in global greenhouse gas emissions is expected to cause substantial net damage to the U.S. economy.”<sup>76</sup> The report also details that without “more immediate and substantial global greenhouse gas reductions,” the most severe consequences of climate change

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<sup>70</sup> *Id.* at 463.

<sup>71</sup> *Id.*

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> U.S. Global Change Research Program, *Climate Science Special Report, Fourth National Climate Assessment, Volume I* (D.J. Wuebbles et al. eds. 2017), <https://science2017.globalchange.gov/> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 32).

<sup>75</sup> U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* (Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart eds., 2018) (hereinafter “NCA4 Vol. II”), [https://nca2018.globalchange.gov/downloads/NCA4\\_2018\\_FullReport.pdf](https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 33).

<sup>76</sup> *Id.* at 46.



will not be avoided in the long-term.<sup>77</sup> In comparison to past reports, the section on the Southwest “further examines interconnections among water, ecosystems, the coast, food, and human health and adds new Key Messages concerning energy and Indigenous peoples.”<sup>78</sup>

NCA4 Volume II examines the current impacts of climate change on the Southwest in detail. It notes that the average annual temperature of the Southwest increased *1.6°F between 1901 to 2016*, magnifying the impacts of drought and wildfire.<sup>79</sup> Hotter temperatures have already contributed to reductions in snowpack, amplifying drought conditions in the Colorado River Basin, the Rio Grande, and other critical watersheds.<sup>80</sup> It is also estimated that the area burned by wildfire across the western United States between 1984 and 2015 was twice what would have burned had climate change not occurred.<sup>81</sup> The report adds, “Native Americans are among the most at risk from climate change, often experiencing the worst effects because of higher exposure, higher sensitivity, and lower adaptive capacity for historical, socioeconomic, and ecological reasons.”<sup>82</sup> Moreover, tribal water supplies are at risk due to reductions in water supply reliability and water contracts in place.<sup>83</sup>

Data collected by the National Oceanic and Atmospheric Association and analysis conducted by the Washington Post, confirm the troubling impacts of climate change in Colorado that exist today, showing sizable portions of the American West, as depicted in the map below, have already warmed more than 2 degrees celsius -- double the global average.<sup>84</sup> This data shows most of the state of Colorado has warmed since 1985, but in particular Colorado is the site of the largest 2C hot spot in the lower 48, along the Colorado-Utah Border.<sup>85</sup>

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<sup>77</sup> *Id.* at 27.

<sup>78</sup> *Id.* at 1110.

<sup>79</sup> *Id.* at 1108.

<sup>80</sup> *Id.* at 1104, 1111.

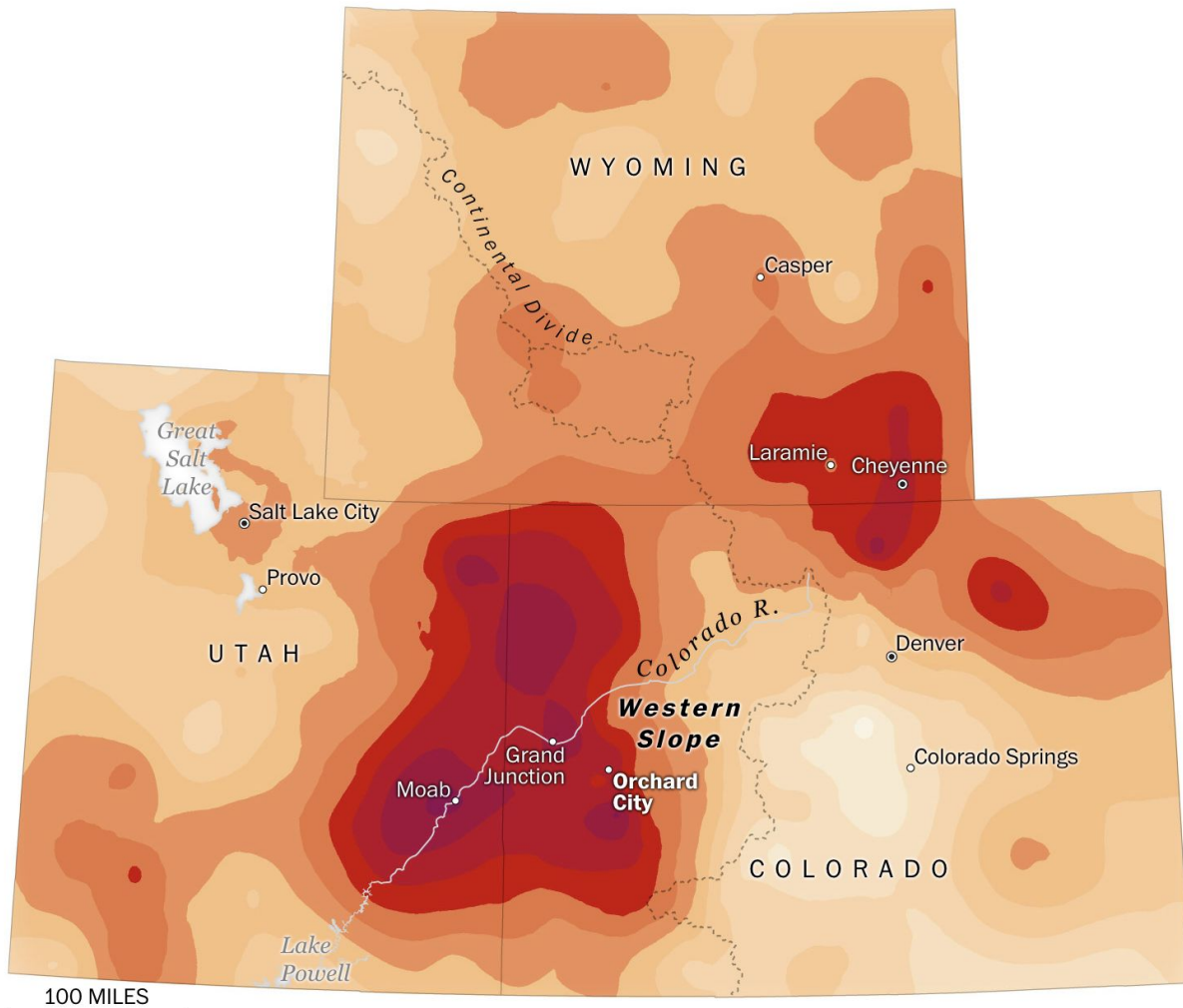
<sup>81</sup> *Id.*

<sup>82</sup> *Id.* at 1109.

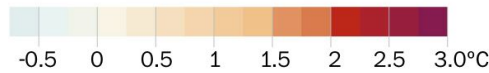
<sup>83</sup> *Id.* at 1110.

<sup>84</sup> Eilperin, J., “This giant climate hot spot is robbing the West of its water,” Washington Post (August 7, 2020), [https://www.washingtonpost.com/graphics/2020/national/climate-environment/climate-change-colorado-utah-hot-spot/?utm\\_campaign=wp\\_post\\_most&utm\\_medium=email&utm\\_source=newsletter&wpisrc=nl\\_most](https://www.washingtonpost.com/graphics/2020/national/climate-environment/climate-change-colorado-utah-hot-spot/?utm_campaign=wp_post_most&utm_medium=email&utm_source=newsletter&wpisrc=nl_most).

<sup>85</sup> *Id.*



**Temperature change, 1895-2019**



Future projections for the region from NCA4 Volume II are even more alarming. “Under the higher scenario (RCP8.5), climate models project an 8.6°F (4.8°C) increase in Southwest regional annual average temperature by 2100.”<sup>86</sup> Climate change threatens to lead to “aridification (a potentially permanent change to a drier environment) in much of the Southwest, through increased evapotranspiration, lower soil moisture, reduced snow cover, earlier and slower snowmelt, and changes in the timing and efficiency of snowmelt and runoff.”<sup>87</sup> “Any increase in water requirements for energy generation from fossil fuels would coincide with

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

reduced water supply reliability from projected decreases in snowpack, and earlier snowmelt.”<sup>88</sup> In particular, “[t]he water consumption, pollution, and greenhouse gas emissions of hydraulic fracturing (fracking) make that source of fuel even less adaptive under climate change.”<sup>89</sup>

Although BLM includes some of this information in its 2018 Annual Report (incorporated by reference in the EA), even admitting that emissions need to decline within the next ten years in order to meet global emissions goals and that emissions have, in fact, increased instead, BLM fails to actually consider the significance of the proposed action within the context of these dire warnings. Rather, BLM buries its head in the sand and continues leasing oil and gas parcels which will undoubtedly add to the global climate crisis.

***i. BLM Fails to Assess the Proposed Action Within the Context of Declining Carbon Budgets.***

Carbon budgeting is another valuable tool for assessing the significance of GHG emissions in the context of the climate crisis. A “carbon budget” offers a cap on the remaining stock of greenhouse gases that can be emitted while still keeping global average temperature rise below scientifically-based warming thresholds beyond which climate change impacts are highly likely to result in severe and irreparable harm to the biosphere and humanity. Carbon budgeting gets closer to the question of climate impacts, as opposed to comparing incremental project emissions to static annual emissions, because it is adjusted based on current day emission levels and remaining budgets for both the world and the U.S. Here, because BLM fails to assess significance in other ways, BLM must specifically assess whether other methodologies for quantifying climate change, such as carbon budgeting, would contribute to informed decisionmaking. *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 79 n.31 (D.D.C. 2019). Simply providing GHG emissions in the abstract, or comparing lease sale emissions to regional and national totals, fails to inform the decision-maker and the public of the *significance* of the *impacts*.

The science of carbon budgeting is not new. Starting in 2014, the IPCC calculated world carbon budgets and concluded that the only way to meet these budgets was to ratchet down fossil fuels. Specifically, the IPCC, in its 2014 AR5 Synthesis Report, found that carbon emissions from burning *existing* fossil fuel reserves—the known belowground stock of extractable fossil fuels—would considerably exceed both 2°C and 1.5°C of warming.<sup>90</sup> “Estimated total fossil carbon reserves exceed this remaining [world carbon budget] by a factor of 4 to 7.”<sup>91</sup> In raw magnitude, global coal, oil and gas resources considered currently economically recoverable

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<sup>88</sup> *Id.* at 1124.

<sup>89</sup> *Id.*

<sup>90</sup> IPCC 2014 AR5 Synthesis Report, *supra*, at 63.

<sup>91</sup> *Id.*

contain potential greenhouse gas emissions of 4,196 GtCO<sub>2</sub>,<sup>92</sup> with the IPCC indicating they are as high as 7,120 GtCO<sub>2</sub>.<sup>93</sup>

These findings are echoed by other research. To constrain warming within the 2°C guardrail, a 2015 study published in *Nature* found that “a third of oil reserves, half of gas reserves and over 80 percent of current coal reserves should remain unused from 2010-2050.”<sup>94</sup> And, in a 2016 analysis, Oil Change International found that burning the oil, gas, and coal in the world’s *currently operating* fields and mines would fully exhaust and exceed carbon budgets calibrated to constrain warming below 1.5°C or 2°C.<sup>95</sup> Moreover, Oil Change International found that burning the reserves in currently operating oil and gas fields, excluding coal mines, would alone lead to warming beyond 1.5°C.<sup>96</sup> Put simply, regardless of what IPCC carbon budget calculations are used, *most* of the existing oil and gas fields and coal mines will need to be closed before their reserves are fully extracted in order to limit warming to 1.5°C and that some existing fields and mines will need to be closed to limit warming to 2°C.<sup>97</sup>

More recently, the IPCC’s 2018 *Global Warming of 1.5°C* special report provided a revised carbon budget for a 66 percent probability of limiting warming to 1.5°C, estimated at 420 GtCO<sub>2</sub> and 570 GtCO<sub>2</sub> depending on the temperature dataset used, from January 2018 onwards.<sup>98</sup> The IPCC also found that compared with the average global emissions rate of 36 GtCO<sub>2</sub> per year for 2012-2014, the global emissions rate had increased to 42 GtCO<sub>2</sub> per year.<sup>99</sup> At this rate, the global carbon budget would be expended in just 10 to 14 years, underscoring the urgent need for transformative global action to transition from fossil fuel use to clean energy.<sup>100</sup> In fact, according to the U.S. Global Change Research Program, we may have *already* burned through the world’s entire carbon budget needed to limit average warming to 1.5°C.<sup>101</sup>

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<sup>92</sup> Michael Raupach, *et al.*, *Sharing a Quota on Cumulative Carbon Emissions*, 4 *Nature Climate Change* 873, 875 (2014) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 34).

<sup>93</sup> IPCC, AR5, *Climate Change 2014: Mitigation of Climate Change* at Table 7.2, [https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc\\_wg3\\_ar5\\_full.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_full.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 35).

<sup>94</sup> Christopher McGlade & Paul Ekins, *The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2°C*, 517 *Nature* 187 (2015) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 36).

<sup>95</sup> Greg Muttitt, *et al.*, Oil Change International, *The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production* 6 (2016) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 37).

<sup>96</sup> *Id.*

<sup>97</sup> *Id.* at 5, 7.

<sup>98</sup> IPCC, *Global Warming of 1.5°C, Summary for Policymakers*, *supra*, at SPM-16.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> NCA4 Vol. I, at 396-97.

In effect, we're burning through our carbon budget at a rapid pace and thereby limiting the flexibility future generations may require or desire as they intensify our world's transition away from fossil fuels. BLM must acknowledge that the 393 wells, as well as the remainder of the 3,200 wells projected in the RFDS, will continue generating GHG emissions long after the world's carbon budget has been exhausted. The agency must further assess the implications and impacts of its decisions to knowingly permit expansion of fossil fuel development and GHG emissions directly incompatible with meeting global carbon reduction targets.

To put these global carbon budgets in the specific context of domestic U.S. emissions and the U.S.' obligation to reduce emissions, the U.S. is the world's largest historic emitter of greenhouse gas pollution, responsible for 26 percent of cumulative global CO<sub>2</sub> emissions since 1870, and is currently the world's second highest emitter on an annual and per capita basis.<sup>102</sup> To conform to a 1.5°C target, the estimated U.S. carbon budget is 25 GtCO<sub>2</sub>eq to 57 GtCO<sub>2</sub>eq on average,<sup>103</sup> depending on the sharing principles used to apportion the global budget across countries.<sup>104</sup> The estimated U.S. carbon budget consistent with limiting temperature rise to 2°C ranges from 34 GtCO<sub>2</sub> to 123 GtCO<sub>2</sub>,<sup>105</sup> again depending on the sharing principles used. Under any scenario, the remaining U.S. carbon budget compatible with the Paris climate targets is extremely small.

Federal fossil fuels are a significant contributor to global emissions and could significantly reduce in the U.S.'s remaining carbon budget. Between 2003 and 2014, approximately 25% of all United States and 3-4% of global fossil fuel GHGs are attributable to

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<sup>102</sup> Global Carbon Project, Global Carbon Budget 2019, [https://www.globalcarbonproject.org/carbonbudget/19/files/GCP\\_CarbonBudget\\_2019.pdf](https://www.globalcarbonproject.org/carbonbudget/19/files/GCP_CarbonBudget_2019.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 38).

<sup>103</sup> Robiou du Pont, Yann et al., *EQUITABLE MITIGATION TO ACHIEVE THE PARIS AGREEMENT GOALS*, 7 *NATURE CLIMATE CHANGE* 38, Supplemental Tables 1 and 2 (2017) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 39). Quantities measured in GtCO<sub>2</sub>eq include the mass emissions from CO<sub>2</sub> as well as the other well-mixed greenhouse gases (CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and SF<sub>6</sub>) converted into CO<sub>2</sub>-equivalent values, while quantities measured in GtCO<sub>2</sub> refer to mass emissions of just CO<sub>2</sub> itself.

<sup>104</sup> Robiou du Pont et al. (2017) averaged across IPCC sharing principles to estimate the U.S. carbon budget from 2010 to 2100 for a 50 percent chance of returning global average temperature rise to 1.5°C by 2100, consistent with the Paris Agreement's "well below 2°C" target, and based on a cost-optimal model. The study estimated the U.S. carbon budget consistent with a 1.5°C target at 25 GtCO<sub>2</sub>eq by averaging across four equity principles: capability (83 GtCO<sub>2</sub>eq), equal per capita (118 GtCO<sub>2</sub>eq), greenhouse development rights (-69 GtCO<sub>2</sub>eq), and equal cumulative per capita (-32 GtCO<sub>2</sub>eq). The study estimated the U.S. budget at 57 GtCO<sub>2</sub>eq when averaging across five sharing principles, adding the constant emissions ratio (186 GtCO<sub>2</sub>eq) to the four above-mentioned principles. However, the constant emissions ratio, which maintains current emissions ratios, is not considered to be an equitable sharing principle because it is a grandfathering approach that "privileges today's high-emitting countries when allocating future emission entitlements."

<sup>105</sup> Robiou du Pont et al. (2017) estimated the U.S. carbon budget for a 66 percent probability of keeping warming below 2°C at 60 GtCO<sub>2</sub>eq based on four equity principles (capability, equal per capita, greenhouse development rights, equal cumulative per capita), and at 104 GtCO<sub>2</sub>eq based on five principles (adding in constant emissions ratio, but see footnote above).

federal minerals leased and developed by the Department of the Interior.<sup>106</sup> The United States Geological Survey reaffirmed this in its 2018 report which found that federal fossil fuel production currently contributes to 23% of all U.S. greenhouse gas emissions.<sup>107</sup> According to a 2015 report, leased federal fossil fuels could unleash between 30 to 43 Gt of CO<sub>2</sub>e—an amount equivalent to the U.S. carbon budget under some sharing scenarios.<sup>108</sup> Unleased federal fossil fuels could emit 319 to 450 Gt of CO<sub>2</sub>e—easily obliterating the U.S.’s entire carbon budget.<sup>109</sup> Either way, any expansion of oil and gas development on federal public lands is entirely incompatible with progress toward addressing the climate crisis.

But, rather than ratcheting down oil and gas, the U.S. is on a path to rapidly expand it with the federal government playing a key role. Oil Change International recently found that use of existing fossil fuel reserves would again push the world far beyond warming or 1.5°C and 2°C and that the U.S. is on track to release a carbon bomb of emissions from oil and gas development in the next 30 years.<sup>110</sup> The report specifically found that:

- Between now and 2030, the United States is on track to account for 60 percent of world growth in oil and gas production, expanding extraction at least four times more than any other country. This is the time period over which climate scientists say global carbon dioxide (CO<sub>2</sub>) emissions should be roughly halved to stay in line with the 1.5°C target in the Paris Agreement.<sup>111</sup>
- Between 2018 and 2050, the United States is set to unleash the world’s largest burst of CO<sub>2</sub> emissions from new oil and gas development (Figure ES-2). U.S. drilling into new oil and gas reserves – primarily shale – could unlock 120 billion metric tons of CO<sub>2</sub> emissions, which is equivalent to the lifetime CO<sub>2</sub> emissions of nearly 1,000 coal-fired power plants.<sup>112</sup>
- If not curtailed, U.S. oil and gas expansion will impede the rest of the world’s ability to manage a climate-safe, equitable decline of oil and gas production. We find that, under an illustrative 1.5°C pathway for oil and gas taken from the Intergovernmental Panel on Climate Change (IPCC), U.S. production would exhaust nearly 50 percent

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<sup>106</sup> Energy Information Administration (“EIA”), *Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2014* (July 2015), <https://www.eia.gov/analysis/requests/federallands/pdf/eia-federallandsales.pdf> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 40).

<sup>107</sup> Merrill, M.D., et al., *supra*, at 1.

<sup>108</sup> EcoShift, *The Potential Greenhouse Gas Emission from U.S. Federal Fossil Fuels*, *supra*, at 1, 3.

<sup>109</sup> *Id.*

<sup>110</sup> Kelly Trout & Lorne Stockman, Oil Change International, *Drilling Toward Disaster: Why U.S Oil & Gas Expansion is Incompatible with Climate Limits*, 1, 6 (Jan. 2019), <http://priceofoil.org/content/uploads/2019/01/Drilling-Towards-Disaster-Web-v3.pdf> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 41).

<sup>111</sup> *Id.* at 6.

<sup>112</sup> *Id.*

of the world's total allowance for oil and gas by 2030 and exhaust more than 90 percent by 2050.<sup>113</sup>

Simply, BLM's push to unleash more greenhouse gas emissions from oil and gas development is extremely irresponsible and is significantly contributing to the world's climate crisis. BLM must, at a minimum, assess the significance of the proposed lease parcels within the context of carbon emissions that stand to be released from already leased federal fossil fuels and seriously consider not leasing the proposed parcels in order to do its part to reduce emissions.

#### **H. BLM Fails to Analyze the Costs of Reasonably Foreseeable Carbon Emissions Using Well-Accepted, Credible, GAO-Endorsed, Interagency Methods for Assessing Carbon Costs.**

Because BLM fails to properly assess significance in other ways (e.g. through a comparison of alternatives reducing development), BLM's failure in the EA to use the social cost of carbon violates NEPA's hard look mandate. 40 C.F.R. §§ 1500.1(b), 1502.24; *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 79, n.31 (D.D.C. 2019) ("BLM may not forgo using the social cost of carbon simply because courts have thus far been reluctant to mandate it. Given that the Department of Energy and other agencies consider the social cost of carbon reliable enough to support rulemakings, see *Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 677 (7th Cir. 2016), the protocol may one day soon be a necessary component of NEPA analyses.").

NEPA does not, of course, require agencies to monetize adverse impacts in all cases. See 40 C.F.R. § 1502.23. NEPA does, however, require BLM to take a hard look at the "ecological ..., aesthetic, historic, cultural, economic, social, [and] health," effects of its actions, "whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8. Monetization of costs may be required where available "alternative mode[s] of [NEPA] evaluation [are] insufficiently detailed to aid the decision-makers in deciding whether to proceed, or to provide the information the public needs to evaluate the project effectively," *Columbia Basin Land Prot. Ass'n v. Schlesinger*, 643 F.2d 585, 594 (9th Cir. 1981), or the agency presents a misleading analysis assessing the economic benefits of the project without a counterbalanced discussion of economic costs, *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F.Supp. 3d 1174, 1193 (D. Colo. 2014).

The social cost of carbon protocol is a valid, well-accepted, credible, and interagency-endorsed method of calculating the costs of greenhouse gas emissions and understanding the potential significance of such emissions. Through the protocol, agencies "estimate the economic damages associated with a small increase in carbon dioxide (CO<sub>2</sub>) emissions, conventionally one metric ton, in a given year [which] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO<sub>2</sub> reduction)."<sup>114</sup> The

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<sup>113</sup> *Id.*

<sup>114</sup> U.S. Environmental Protection Agency ("EPA"), "Fact Sheet: Social Cost of Carbon" (Nov. 2013) at 1, formerly available online at <https://www.epa.gov/climatechange/social-cost-carbon> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 42).

protocol was developed by an interagency working group (“IWG”) consisting of several federal agencies.<sup>115</sup>

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010.<sup>116</sup> These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies.<sup>117</sup> This report and the social cost of carbon estimates were again revised in 2015.<sup>118</sup> Again, this report and social cost of carbon estimates were revised in 2016.<sup>119</sup>

Most recently, as an addendum to previous Technical Support Documents regarding the social cost of carbon, the Department of the Interior joined numerous other agencies in preparing estimates of the social cost of methane and other greenhouse gases.<sup>120</sup>

Depending on the discount rate and the year during which the carbon emissions are produced, the Interagency Working Group estimates the cost of carbon emissions, and therefore the benefits of reducing carbon emissions, to range from \$10 to \$212 per metric ton of carbon

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<sup>115</sup> Although Executive Order 13,783 disbanded the Interagency Working Group, the entity which developed the social cost of carbon protocol, and withdrew the technical support documents discussed below, the protocol is still “generally accepted in the scientific community.” 40 C.F.R. § 1052.22(b)(4); Katharine Ricke et. al, *Country-Level Social Cost of Carbon*, *Nature Climate Change*, Vol. 8, 895 (2018), <https://www.nature.com/articles/s41558-018-0282-y> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 43). Indeed, the Trump Administration still uses the SCC protocol despite drastically reducing the damages caused by carbon emissions. See Brad Plumer, *Trump Put a Low Cost of Carbon Emissions. Here’s Why It Matters*, *New York Times*, Aug. 23, 2018, <https://www.nytimes.com/2018/08/23/climate/social-cost-carbon.html> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 44).

<sup>116</sup> See Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (Feb. 2010), [https://www.epa.gov/sites/production/files/2016-12/documents/scc\\_tsd\\_2010.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/scc_tsd_2010.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 44.5).

<sup>117</sup> See Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (May 2013), <https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 45).

<sup>118</sup> See Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (July 2015) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 46).

<sup>119</sup> See Interagency Working Group on Social Cost of Greenhouse Gases, “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866” (Aug. 2016), [https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc\\_tsd\\_final\\_clean\\_8\\_26\\_16.pdf](https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 47).

<sup>120</sup> See 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” (Aug. 2016) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 48).



dioxide. *See* Chart Below. In one of its more recent updates to the Social Cost of Carbon Technical Support Document, the White House’s central estimate was reported to be \$36 per metric ton.<sup>121</sup>

In July 2014, the U.S. Government Accountability Office (“GAO”) confirmed that the Interagency Working Group’s estimates were based on sound procedures and methodology.<sup>122</sup>

Year	5% Average	<b>3% Average</b>	2.5% Average	High Impact (95 <sup>th</sup> Pct at 3%)
2010	10	<b>31</b>	50	86
2015	11	<b>36</b>	56	105
2020	12	<b>42</b>	62	123
2025	14	<b>46</b>	68	138
2030	16	<b>50</b>	73	152
2035	18	<b>55</b>	78	168
2040	21	<b>60</b>	84	183
2045	23	<b>64</b>	89	197
2050	26	<b>69</b>	95	212

*Most recent social cost of carbon estimates presented by Interagency Working Group on Social Cost of Carbon. The 95th percentile value is meant to represent “higher-than-expected” impacts from climate change.*

Although often utilized in the context of agency rulemakings, the protocol has been recommended for use and has been used in project-level decisions. For instance, the EPA recommended that an EIS prepared by the U.S. Department of State for the proposed Keystone XL oil pipeline include “an estimate of the ‘social cost of carbon’ associated with potential increases of GHG emissions.”<sup>123</sup>

More importantly, BLM’s Billings Field Office, has also utilized the social cost of carbon protocol in the context of oil and gas approvals. For example, the Billings Field Office estimated “the annual SCC [social cost of carbon] associated with potential development on lease sale parcels.”<sup>124</sup> In conducting its analysis, the BLM used a “3 percent average discount rate and year

<sup>121</sup> *Id.* at 4.

<sup>122</sup> *See* GAO, “Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates,” GAO-14-663 (July 2014), <http://www.gao.gov/assets/670/665016.pdf> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 49).

<sup>123</sup> EPA, Comments on Supplemental Draft EIS for the Keystone XL Oil Pipeline (June 6, 2011) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 50).

<sup>124</sup> BLM, “Environmental Assessment for October 21, 2014 Oil and Gas Lease Sale,” DOI-BLM-MT-0010-2014-0011-EA (May 19, 2014) at 76, [https://blm\\_prod.opengov.ibmcloud.com/sites/blm.gov/files/MT-DAKS%20Billings%20Oct%202014%20EA%20P%20rotest.pdf](https://blm_prod.opengov.ibmcloud.com/sites/blm.gov/files/MT-DAKS%20Billings%20Oct%202014%20EA%20P%20rotest.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 51).

2020 values,” presuming social costs of carbon to be \$46 per metric ton.<sup>125</sup> Based on its estimate of greenhouse gas emissions, the agency estimated total carbon costs to be “\$38,499 (in 2011 dollars).”<sup>126</sup> In Idaho, the BLM also utilized the social cost of carbon protocol to analyze and assess the costs of oil and gas leasing. Using a 3% average discount rate and year 2020 values, the agency estimated the cost of carbon to be \$51 per ton of annual CO<sub>2</sub>e increase.<sup>127</sup> Based on this estimate, the agency estimated that the total carbon cost of developing 25 wells on five lease parcels to be \$3,689,442 annually.<sup>128</sup>

To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts of climate change. As the EPA has noted, the protocol “does not currently include all important [climate change] damages.”<sup>129</sup> As explained:

The models used to develop [social cost of carbon] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research.

*Id.* In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published in 2015 found that current estimates for the social cost of carbon should be increased six times for a mid-range value of \$220 per ton.<sup>130</sup> And a report from 2017, estimated carbon costs to be \$50 per metric ton, a value that experts have found to be the “best estimate of the social cost of greenhouse gases.”<sup>131</sup> In spite of uncertainty and likely underestimation of carbon costs, nevertheless, “the SCC is a useful measure to assess the benefits of CO<sub>2</sub> reductions,” and thus a useful measure to assess the costs of CO<sub>2</sub> increases.<sup>132</sup>

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<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

<sup>127</sup> See BLM, “Little Willow Creek Protective Oil and Gas Leasing,” EA No. DOI-BLM-ID-B010-2014-0036-EA 81 (February 10, 2015), [https://eplanning.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA\\_UPDATED\\_02272015.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 52).

<sup>128</sup> *Id.* at 83.

<sup>129</sup> EPA Factsheet on SCC, *supra*, at 1.

<sup>130</sup> See Moore, C.F. and Diaz, D.B., “Temperature impacts on economic growth warrant stringent mitigation policy,” *Nature Climate Change* 2 (Jan. 12, 2015) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 53).

<sup>131</sup> See Revesz, R. *et al.* “Best cost estimate of greenhouse gases,” 357 *Science* 655, 655 (Aug. 18, 2017) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 54).

<sup>132</sup> EPA Factsheet on SCC, *supra*.

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decision making, is emphasized by a 2014 White House report, which warned that delaying carbon reductions would yield significant economic costs.<sup>133</sup> As the report states:

[D]elaying action to limit the effects of climate change is costly. Because CO<sub>2</sub> accumulates in the atmosphere, delaying action increases CO<sub>2</sub> concentrations. Thus, if a policy delay leads to higher ultimate CO<sub>2</sub> concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO<sub>2</sub> concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO<sub>2</sub> concentration to a given level, then that delay means that the policy, when implemented, must be more stringent and thus more costly in subsequent years. In either case, delay is costly.<sup>134</sup>

The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA and is specifically supported in federal case law. Courts have ordered agencies to assess the social cost of carbon pollution, even before a federal protocol for such analysis was adopted. In 2008, the U.S. Court of Appeals for the Ninth Circuit ordered the National Highway Traffic Safety Administration to include a monetized benefit for carbon emissions reductions in an Environmental Assessment prepared under NEPA. *Center for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1203 (9th Cir. 2008). The Highway Traffic Safety Administration had proposed a rule setting corporate average fuel economy standards for light trucks. A number of states and public interest groups challenged the rule for, among other things, failing to monetize the benefits that would accrue from a decision that led to lower carbon dioxide emissions. The Administration had monetized the employment and sales impacts of the proposed action. *Id.* at 1199. The agency argued, however, that valuing the costs of carbon emissions was too uncertain. *Id.* at 1200. The court found this argument to be arbitrary and capricious. *Id.* The court noted that while estimates of the value of carbon emissions reductions occupied a wide range of values, the correct value was certainly not zero. *Id.* It further noted that other benefits, while also uncertain, were monetized by the agency. *Id.* at 1202.

In 2014, a federal court reached a similar conclusion for a federally-approved coal lease. That court began its analysis by recognizing that a monetary cost-benefit analysis is not universally required by NEPA. *See High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F.Supp. 3d 1174, 1193 (D. Colo. 2014) (citing 40 C.F.R. § 1502.23). However, when an agency prepares a cost-benefit analysis, “it cannot be misleading.” *Id.* at 1182 (citations omitted). In that case, the NEPA analysis included a quantification of benefits of the project, but, the quantification of the social cost of carbon, although included in earlier analyses, was

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<sup>133</sup> See Executive Office of the President of the United States, “The Cost of Delaying Action to Stem Climate Change,” (July 2014) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 55).

<sup>134</sup> *Id.* at 1.

omitted in the final NEPA analysis. *Id.* at 1196. The agencies then relied on the stated benefits of the project to justify project approval. This, the court explained, was arbitrary and capricious. *Id.* Such approval was based on a NEPA analysis with misleading economic assumptions, an approach long disallowed by courts throughout the country. *Id.* Furthermore, the court reasoned that even if the agency had decided that the social cost of carbon was irrelevant, the agency must still provide “*justifiable reasons* for not using (or assigning minimal weight to) the social cost of carbon protocol . . . .” *Id.* at 1193 (emphasis added). In August 2017, a federal district court in Montana cited to the *High Country* decision and reaffirmed its reasoning, rejecting a NEPA analysis for a coal mine expansion that touted the economic benefits of the expansion without assessing the carbon costs that would result from the development. *See Mont. Env'tl. Info. Ctr. v. U.S. Office of Surface Mining*, No. CV 15-106-M-DWM (D. Mont. Aug. 14, 2017).

A 2015 op-ed in the New York Times from Michael Greenstone, the former chief economist for the President’s Council of Economic Advisers, confirms that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction.<sup>135</sup> In 2017, the Proceedings of the National Academy of Sciences of the United States of America (“PNAS”), acknowledged in a peer-reviewed article from February of this year that the social cost of carbon analysis is “[t]he most important single economic concept in the economics of climate change,” and that “federal regulations with estimated benefits of over \$1 trillion have used the SCC.”<sup>136</sup>

Here, the Royal Gorge EA and the underlying RMP includes information regarding the economic benefits of the lease sale. For example, BLM discloses the economic value of the oil and gas industry in Eastern Colorado in detail. RGFO EA at 14, WR/K EA at 10 (“Oil and gas lease sales and royalties continue as economic drivers in the U.S., supporting good-paying energy sector jobs. Experience has shown over the life of a lease—including bonus bids, rental payments and royalties collected once in production—millions of dollars benefiting American taxpayers will be generated. In FY 2018, the BLM generated nearly \$3 billion in federal royalties, rental payments, and bonus bids paid by companies who extract and sell oil and gas.”); *see also* RGFO at 45–44. BLM also notes that the no action alternative would reduce royalties. RGFO EA at 17.

The relevant RMPs for the White River/Kremmling parcels also include extensive discussions about the monetary benefits of oil and gas leasing. *See White River RMP/EIS*<sup>137</sup> at

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<sup>135</sup> *See* Greenstone, M., “There’s a Formula for Deciding When to Extract Fossil Fuels,” New York Times (Dec. 1, 2015), available at <https://www.nytimes.com/2015/12/02/upshot/theres-a-formula-for-deciding-when-to-extract-fossil-fuels.html> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 56).

<sup>136</sup> William D. Nordhaus, Revisiting the Social Cost of Carbon, PNAS, Feb. 14, 2017, <http://www.pnas.org/content/114/7/1518.full.pdf> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 57).

<sup>137</sup> The FEIS for the White River RMP Oil and Gas Amendment is not available online but from the BLM’s response to protests on the document, it is clear that the agency did not include an analysis of the social cost of carbon while including the economic benefits of production. *See Director’s Protest Resolution Report, White River (Colorado)*

4-59 (“The federal revenue from energy development has been and will continue to be very important to the Area. Amounts paid in 1994 for federal oil and gas royalties include \$1,122,59 to Garfield County, \$2,266,863 to Moffat County, and \$3,740,311 to Rio Blanco County.”); Kremmling RMP/EIS, 3-236 to 3-255. BLM must, at a minimum, address why the protocol is not useful in light of this misleading information.

In sum, the social cost of carbon provides a useful, valid, and meaningful tool for assessing the climate consequences of the proposed leasing, and the BLM must discuss it in its forthcoming draft EA.

## **II. BLM’s Proposal to Lease Parcels During an Economic Crisis Violates the Mineral Leasing Act.**

BLM’s proposed leasing runs afoul of the Mineral Leasing Act in two key regards. First, it appears that all of the Las Animas lease parcels contain lands that have very low development potential. RGFO EA at 18. Second, it does not appear that BLM has examined whether any lessee has the intent to diligently develop many of the proposed parcels in light of the current economic crisis.

On the first matter, the Mineral Leasing Act allows leasing only where there are lands that are “known or believed to contain oil or gas deposits.” 30 U.S.C. § 226(a). Here, a large part of the September 2020 parcels is proposed for lease in areas with very low development potential. RGFO EA at 18. BLM has a duty to confirm where lands proposed for leasing are known or believed to contain oil and gas deposits. BLM has recently confirmed that leasing in areas with low development potential and little to no industry interest warrants removing parcels from proposed sales. For example, in Colorado, the agency removed 20 parcels totaling 27,529 acres in Grand County from a proposed lease sale, citing “low energy potential and reduced industry interest in the geographic area[.]”<sup>138</sup> BLM cannot blindly offer to lease public lands for oil and gas development without undertaking some steps to confirm that there exists reasonable development potential. Here again, BLM failed to address this comment in its response to comments on the EAs. We maintain that BLM must remove the parcels with low development potential from the lease sale or, at least, must explain the basis for its decision, in this case, not to remove parcels with low development potential, as BLM did in the June 2017 oil and gas lease sale.

On the second matter, BLM also has a duty to determine whether operators have an intent to diligently develop the mineral leases. The agency confirmed this in a recent decision denying the issuance of an oil and gas lease to a lessee, explaining:

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*Oil and Gas Proposed Resource Management Plan Amendment and Final Environmental Impact Statement* at 19 (Aug. 2015), [https://www.blm.gov/sites/blm.gov/files/White\\_River\\_RMPA\\_Oil\\_and\\_Gas\\_Protest\\_Report\\_%28August\\_17%2C\\_2015%29.pdf](https://www.blm.gov/sites/blm.gov/files/White_River_RMPA_Oil_and_Gas_Protest_Report_%28August_17%2C_2015%29.pdf).

<sup>138</sup> BLM, “BLM modifies parcel list for June 2017 oil and gas lease sale” (April 17, 2017) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 59).

A fundamental requirement of every oil and gas lease, as stated in Section 4 on page 3 of Form 3100-1, is the requirement that the “Lessee must exercise reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources.” This diligent development requirement has its basis in the Mineral Leasing Act of 1920, as amended. See 30 U.S.C. § 187. Thus, an expressed intent by a person offering to purchase a lease to not develop and produce the oil and gas resources on the leasehold would directly conflict with the diligent development requirement and require that the offer be rejected.<sup>139</sup>

This decision makes clear that the BLM is obligated to ensure that interest in these parcels is legitimate as it did in the case of Ms. Tempest-Williams. *Id.* Indeed, BLM would be foolish not to ensure their investment given that the oil and gas industry has been declining since before the pandemic and is now entering a long term decline.<sup>140</sup> BLM clearly has the power to do so, given that the agency has cancelled oil and gas lease sales in all of the Western states for the months of May and June.<sup>141</sup> Thus, we request that BLM cancel this sale as well.

### **III. BLM Should Use Its Discretion Not to Lease the Proposed Parcels.**

BLM has broad discretion and should remove the parcels from nomination. The agency’s chosen path of opening this vast swath of Colorado up to oil and gas development would threaten our climate, clean air, clean water, wildlife, and communities. Quite simply, developing this area for oil and gas represents an unnecessary and avoidable risk that would threaten Colorado’s other important multiple use resources.

BLM has broad discretion – and often the responsibility, though too often ignored – not to lease public lands for minerals development to safeguard other multiple use, environmental, and human health resources and values. *See, e.g., Udall v. Tallman*, 380 U.S. 1 (1965); *Rocky Mountain Oil & Gas Ass’n v. U.S. Forest Serv.* 157 F.Supp.2d 1142 (D. Mont. 2000). BLM’s authority to open these parcels to oil and gas development is derived from the Mineral Leasing Act of 1920, 30 U.S.C. § 181 *et seq.* Nowhere does the Mineral Leasing Act (“MLA”) mandate that any particular lands be offered for lease. Rather, the Act states generally that “[a]ll lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits *may* be leased by the Secretary.” 30 U.S.C. § 226(a) (emphasis added). The Ninth

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<sup>139</sup> BLM, Oil and Gas Noncompetitive Lease Offers Rejected (Oct. 18, 2016) (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 60).

<sup>140</sup> Center for International Env’tl. Law, Pandemic Crisis, Systemic Decline: Why Exploiting the COVID-19 Crisis Will Not Save the Oil, Gas, and Plastic Industries (2020), <https://www.ciel.org/wp-content/uploads/2020/04/Pandemic-Crisis-Systemic-Decline-April-2020.pdf> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 61).

<sup>141</sup> Trump Administration Delays Big Wyoming Oil and Gas Lease Sale, Reuters, June 12, 2020, <https://af.reuters.com/article/commoditiesNews/idAFL1N2DP1DF> (previously attached to our June 12, 2020 comments on the RGFO EA and White River/Kremmling EA as Exhibit 61.5).

Circuit has held that the “permissive word ‘may’ in § 226(a) allows the Secretary to lease such lands, but does not require him to do so. . . . [T]he Secretary has discretion to refuse to issue any lease at all on a given tract.” *Burglin v. Morton*, 527 F.2d 486, 488 (9th Cir. 1975). The Supreme Court reached the same conclusion in *Udall v. Tallman*, 380 U.S. 1, 4 (1965), in which the Court declared that the Mineral Leasing Act “left the Secretary discretion to refuse to issue any lease at all on a given tract.” See also *Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1230 (9th Cir. 1988) (providing that refusal to issue leases constitutes a “legitimate exercise of the discretion granted to the Interior Secretary”); *McDonald v. Clark*, 771 F.2d 460, 463 (10th Cir. 1985) (“While the statute gives the Secretary the authority to lease government lands under oil and gas leases, this power is discretionary rather than mandatory.”); *McTiernan v. Franklin*, 508 F. 2d 885, 887 (10th Cir. 1975) (under § 226(a), the government “may refuse to issue any lease at all on a given tract”); *Pease v. Udall*, 332 F.2d 62, 63 (9th Cir. 1964) (finding that the MLA “has consistently been construed as leaving to the Secretary, within his discretion, a determination as to what lands are to be leased thereunder”); *Pacific Legal Foundation v. Watt*, 529 F.Supp. 982, 991 n.14 (D. Mont. 1982) (under § 226(a) “the Secretary has discretion either to issue or refuse to issue oil and gas leases”).

Indeed, BLM’s discretion over oil and gas leasing is so great that courts have held that the agency may decide not to allow leasing even after the lands have been offered for lease and a qualified applicant selected. In *McDonald*, the Tenth Circuit Court of Appeals provided: “The fact that land has been offered for lease does not bind the Secretary to actually lease the land, nor is the Secretary bound to lease the land when a qualified applicant has been selected.” 771 F.2d at 463. The Court continued, saying “the Secretary may withdraw land from leasing at any time before the actual issuance of the lease, even if the offer was filed long before the determination not to lease was made.” *Id.* (citing *Arnold v. Morton*, 529 F.2d 1101, 1106 (9th Cir. 1976); *Schraier v. Hickel*, 419 F.2d 663, 665-67 (D.C. Cir. 1969)).

Moreover, nothing in the Federal Onshore Oil and Gas Leasing Reform Act (“FOOGLRA”) requires BLM to open lands at the behest of the oil and gas industry. The MLA, as amended by FOOGLRA in 1987, 30 U.S.C. § 181 *et seq.*, simply requires BLM to *consider* oil and gas leasing on land consistent with the RMP. As identified above, just because land is identified for leasing does not mean that it must be leased. If review of a potential lease proposed for sale reveals problems, or that other resources and values should be protected, the agency can decide not to lease, period, and in fact, may be duty-bound, pursuant to laws such as FLPMA, not to lease to ensure that other resources and values are protected. For example, in *Marathon Oil Co.*, 139 IBLA 347 (1997), BLM removed parcels from a competitive lease sale for environmental reasons, even after they had been offered for sale pursuant to industry nomination. In that case, the IBLA held that “BLM enjoys considerable discretion to depart from its RMP in any specific case, and it may well be able to justify excluding these parcels from leasing for environmental purposes.” *Id.* at 356.

The MLA and FOOGLRA do not in any way restrict the factors that BLM may consider when exercising its considerable discretion under § 226(a). Therefore, even if the BLM bases its decision entirely on the public’s overwhelming opposition to oil and gas development in this area, it has the authority to do so. Indeed, it would be irresponsible for BLM to propose these

lease parcels for sale without first performing the necessary due diligence and environmental review to determine, on a site-specific basis, whether these lands should be conserved as is.

Based on this expansive authority and discretion, as well as the reasons outlined above, we request that BLM reconsider its decision to lease the September 2020 parcels.



## **V. Conclusion**

In sum, because of the deficiencies discussed above, Guardians and the Center respectfully request that BLM withdraw all of the parcels proposed for the September 2020 sale unless and until the BLM corrects the issues identified above.

Sincerely,



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