

October 30, 2017

BY ELECTRONIC MAIL

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**Re: March 13, 2018 Oil and Gas Lease Sale EA Comments for the Billings Field Office,
Butte Field Office, North Central Montana District, and North Dakota Field Office**

To Whom It May Concern,

WildEarth Guardians, 350 Montana, the Center for Biological Diversity, Earthworks, the Montana Environmental Information Center, Park County Environmental Council, Preserve the Beartooth Front, and the Western Environmental Law Center (hereinafter “Conservation Groups”) submit the following comments on four Bureau of Land Management (“BLM”) draft environmental assessments (“EAs”) and proposed findings of no significant impact (“FONSI”) in support of its March 13, 2018 competitive oil and gas lease sale for the Billings Field Office, Butte Field Office, and the North Central Montana District Office in Montana and the North Dakota Field Office in North Dakota.¹

¹ The Billings FO EA, DOI-BLM-MT-L002-2017-0002-EA, can be found at: <https://eplanning.blm.gov/epl-front-office/projects/nepa/87544/121821/148682/Billings.2018OilnGasLeaseSaleEA.9.29.17.pdf>. The Butte FO EA, DOI-BLM-MT-L002-2017-0003-EA, can be found at: <https://eplanning.blm.gov/epl-front-office/projects/nepa/87528/121793/148654/Butte2018OilandGasLeaseSaleEA.9.29.17.pdf>. The North Central Montana District EA, DOI-BLM-MT-L002-2017-0004-EA, can be found at: <https://eplanning.blm.gov/epl-front-office/projects/nepa/87551/121836/148697/HiLineOilandGasLeaseSaleEA.9.27.17.pdf> (hereinafter “Hi-Line EA”). The North Dakota Field Office EA, DOI-BLM-MT-C030-2017-0133-EA, can be found at: https://eplanning.blm.gov/epl-front-office/projects/nepa/87486/121809/148670/NDFO_March_2018_Lease_Sale_EA.pdf.

The agency is proposing to lease a total of 110 parcels comprising 63,616 acres in the March sale. 76 parcels (52,297 acres) are located in the Billings FO in Carbon, Golden Valley, Musselshell, Sweet Grass, Stillwater, and Wheatland Counties, Montana. There are 9 parcels (4,307 acres) in the Butte FO in Park County, Montana. There are 24 parcels (6,892 acres) in the North Central Montana District Office located in the Malta, Havre, and Glasgow FOs in Glacier, Liberty, Hill, Chouteau, Blaine, Phillips, and Valley Counties. The one parcel (120 acres) in the North Dakota FO is located in McKenzie County, North Dakota.²

WildEarth Guardians is a nonprofit environmental advocacy organization dedicated to protecting the wildlife, wild places, wild rivers, and health of the American West. On behalf of our members, Guardians has an interest in ensuring the BLM fully protects public lands and resources as it conveys the right for the oil and gas industry to develop publicly-owned minerals. More specifically, Guardians has an interest in ensuring the BLM meaningfully and genuinely takes into account the air, water, and climate implications of its oil and gas leasing decisions and objectively and robustly weighs the costs and benefits of authorizing the release of more pollutants known to cause health impacts and greenhouse gas emissions known to contribute to global warming.

350 Montana is a nonprofit organization based in Montana. 350 Montana works to reduce atmospheric CO₂ concentrations to 350 ppm by implementing strategic actions and advocating policies to end fossil fuel burning with the greatest urgency. 350 Montana envisions a rapid conversion to a 100% renewable global energy system using wind, water, and solar. 350 Montana also works with the global grassroots climate movement to achieve these goals and safeguard Earth's life-support systems.

The **Center for Biological Diversity** 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 1.3 million members and activists, including those living in Montana 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.

Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. Earthworks stands for clean air, water and land, healthy communities, and corporate accountability. Earthworks also works for solutions that protect both the Earth's resources and our communities.

² There are four separate lease sale notices available on the BLM website under the "2018 Lease Sales," "March 2018" tabs at <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/leasing/regional-lease-sales/montana-dakotas>.

The **Montana Environmental Information Center** (“MEIC”) is a nonprofit organization founded in 1973 with approximately 5,000 members and supporters throughout the United States and the State of Montana. MEIC is dedicated to the preservation and enhancement of the natural resources and natural environment of Montana and to the gathering and disseminating of information concerning the protection and preservation of the human environment through education of its members and the general public concerning their rights and obligations under local, state, and federal environmental protection laws and regulations. MEIC is also dedicated to assuring that federal officials comply with and fully uphold the laws of the United States that are designed to protect the environment from pollution. MEIC and its members have intensive, long-standing recreational, aesthetic, scientific, professional, and spiritual interests in the responsible production and use of energy, the reduction of greenhouse gas pollution as a means to ameliorate our climate crisis, and the land, air, water, and communities impacted by fossil fuel development. MEIC members live, work, and recreate in areas affected by this lease sale. MEIC protests this action on its own behalf and on behalf of its members.

Park County Environmental Council is a nonprofit organization based in Livingston, Montana. Park County Environmental Council safeguards and enhances the lands, water and wildlife in Yellowstone’s northern gateway through a powerful community-based advocacy network.

Preserve the Beartooth Front (preservethebeartoothfront.com) is a blog run by David Katz and his family. Preserve the Beartooth strives to inform the community along the Beartooth Front about the threats from increased fracking.

The **Western Environmental Law Center** (“WELC”) uses the power of the law to defend and protect the American West’s treasured landscapes, iconic wildlife and rural communities. WELC combines legal skills with sound conservation biology and environmental science to address major environmental issues in the West in the most strategic and effective manner. WELC works at the national, regional, state, and local levels; and in all three branches of government. WELC integrates national policies and regional perspective with the local knowledge of our 100+ partner groups to implement smart and appropriate place-based actions.

As discussed below, the Conservation Groups request that the BLM refrain from offering all of the parcels up for lease until it completes its requirements under the National Environmental Policy Act (“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.

I. The BLM’s Four Environmental Assessments Violate the National Environmental Policy Act.

The BLM’s four environmental assessments fall short of complying with NEPA for six reasons. First, the BLM improperly segments its NEPA analyses into four different EAs which subsequently defer analysis of impacts to the Application Permit to Drill (“APD”) stage. Second, the BLM fails to analyze a reasonable range of alternatives. Third, the BLM fails to analyze the

impacts from hydraulic fracturing and horizontal drilling in the EAs or underlying Resource Management Plans (“RMPs”) and Final Environmental Impact Statements (“FEISs”). Fourth, the BLM fails to accurately estimate reasonably foreseeable development for the various lease parcels. Fifth, the BLM fails to analyze the direct and cumulative impacts of greenhouse gas emissions from the lease parcels and other concurrent lease sales. Finally, the agency fails to assess the economic significance of any greenhouse gas emissions in terms of carbon costs.

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.* at 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.* at 1500.1(c).

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). 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.* at § 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.

An agency may prepare an environmental assessment (“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 effects are significant, an agency must prepare an Environmental Impact Statement. *See* 40 C.F.R. § 1502.3. Where significant 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).

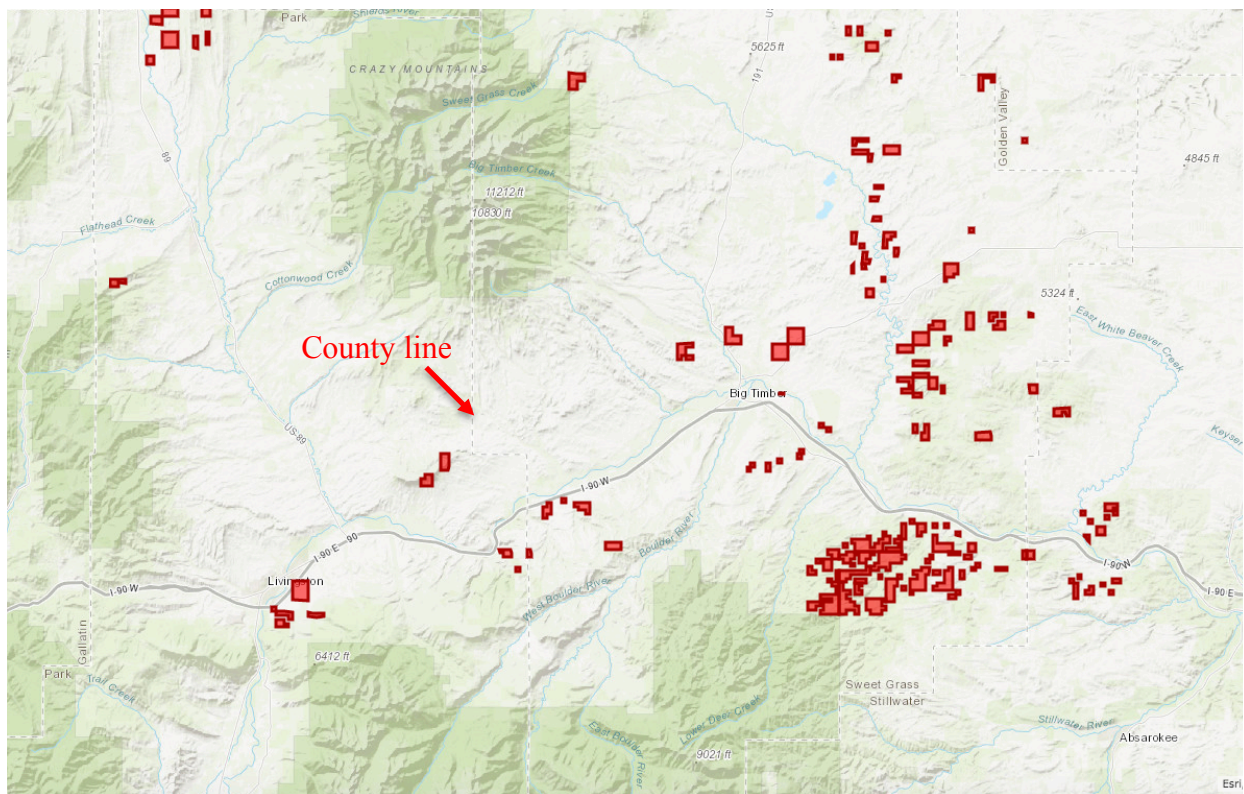
Within an EA or EIS, the scope of the analysis must include “[c]umulative actions” and “[s]imilar actions.” 40 C.F.R. §§ 1508.25(a)(2) and (3). Cumulative actions include action that, “when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the 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.*

A. The BLM Improperly Segments the March 2018 Lease Sale into Four Environmental Assessments.

NEPA provides that to adequately assess the environmental impacts of a proposed action, BLM must assess three types of actions: (1) connected actions, (2) cumulative actions, and (3) similar actions. 40 C.F.R. § 1508.25. Connected actions “are closely related and therefore should

be discussed in the same impact statement.” *Id.* Actions are connected if they: “(i) Automatically trigger other actions which may require environmental impact statements; (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously; (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.” *Id.* Cumulative actions are those actions that “when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.” *Id.* Similar actions are those actions that “when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.” *Id.*

“The purpose of this requirement [40 C.F.R. § 1508.25] is to prevent an agency from dividing a project into multiple actions, each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.” *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9th Cir. 2006) (citation and internal quotation marks omitted). Unfortunately, that is precisely what the BLM is doing here. For example, the Butte and Billings Field Office lease sale parcels are directly adjacent to each other geographically, as shown by the map below. *See also*, BLM, *Map of Oil and Gas Parcels Under Review for March 13, 2018 Competitive Lease Sale*, https://eplanning.blm.gov/epl-front-office/projects/nepa/87486/116883/142560/Oil_and_Gas_Parcels_Under_Review_March_2018_BLM_Montana_Competitive_Lease_Sale.pdf.



Additionally, the BLM admits in its EAs that wells from these parcels could be drilled into the same formation—the Crazy Mountains Basin. *See* Billings FO EA at 15–16; Butte FO EA at 12. Thus, at a minimum, the lease parcels for the Butte and Billings FO’s are cumulative, similar

actions based on the on-the-ground impacts, geographic location, and timing. Case law in the Ninth Circuit supports this conclusion. *See, e.g., Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1215 (9th Cir. 1998) (holding that five potential logging projects in the same watershed were cumulative actions); *Thomas v. Peterson*, 753 F.2d 754, 758 (9th Cir. 1985) (holding that three timber sales and an access road were connected, cumulative actions).

Furthermore, all of the lease parcels, not just those in the Butte and Billings FO, must be analyzed in a single NEPA document to properly assess the cumulative impacts of greenhouse gas emissions. As discussed in more detail in section G, there are multiple federal lease sales occurring over the same time period and in similar locations, and these sales will cause significant greenhouse gases emissions. Thus, the lease sales are cumulative actions subject to a single NEPA analysis as required by CEQ regulations.

B. The BLM Improperly Defers Its Site-Specific NEPA Analyses to the Application Permit to Drill Stage.

On a similar note, throughout the various EAs for the lease sale, the BLM attempts to further segment its analysis by claiming that it will conduct site-specific NEPA analyses at the Application Permit to Drill (“APD”) stage. *See, e.g.,* Billings FO EA at 28 (“Any potential effects on water from the sale of lease parcels would occur at the time the leases are developed at the APD stage.”); Butte FO EA at 33 (“Any potential effects on water from the sale of lease parcels would occur at the time the leases are developed at the APD stage.”); Hi-Line EA at 41 (“Any potential effects on water resources from the sale of lease parcels would occur at the time the leases are developed at the APD stage.”); North Dakota FO EA at 50 (“Any potential impacts on resources from the sale of the lease would occur during lease exploration and development activities, which would be subject to future BLM decision- making and NEPA analysis upon receipt of an APD or Sundry Notice.”).

“NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment.” *U.S. Bureau of Land Mgmt. v. Kern*, 284 F.3d 1062, 1072 (9th Cir. 2002); *see also* 40 C.F.R. § 1500.1(b) (“NEPA procedures must insure that environmental information is available to public officials and citizens *before decisions are made* and before actions are taken.”). This is especially the case if postponing analysis results in a piecemeal look at the impacts. *See* 40 C.F.R. § 1508.27 (“Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.”). Finally, as noted above, NEPA provides that the BLM must assess three types of actions: (1) connected actions, (2) cumulative actions, and (3) similar actions. 40 C.F.R. § 1508.25. Connected actions “are closely related and therefore should be discussed in the same impact statement.” Actions are connected if they, among other things: [a]re interdependent parts of a larger action and depend on the larger action for their justification.” *Id.*

Because drilling cannot occur without the BLM first leasing the minerals, leasing and drilling are interdependent, connected actions. Thus, the BLM must estimate the impacts of drilling these wells at the lease sale stage. Leasing also conveys a right to develop and is thus considered an irretrievable commitment of resources. NEPA requires that agencies prepare an EIS before there is “any irreversible and irretrievable commitment of resources.” *See Conner v.*

Burford, 848 F.2d 1441, 1452 (9th Cir. 1988). This means that once BLM reaches the APD stage, the agency cannot include additional lease stipulations to limit drilling and other cumulative impacts. Thus, further analysis at the APD stage would be too little, too late.

For example, the North Dakota Field Office EA relies on mitigation measures at the APD stage to address impacts to Theodore Roosevelt National Park from the one parcel proposed for lease. *See* North Dakota FO EA at 42–43. The parcel is directly adjacent to a unit of the Park. Because of this, the BLM notes that the North Dakota Industrial Commission will request comments regarding well location, reclamation, noise, traffic, and visual impacts at the APD stage. *Id.* But, comments at the APD stage will not address the full scale of development around the Park. As the National Park Service’s webpage dedicated to impacts on the Park from the Bakken oil boom states, “[v]isitors may encounter signs of oil development near the areas surrounding the park. Booming jobs means booming prices of goods and services, as well as increased pollution from traffic, noise, dust and light.” *See The Bakken Oil Boom*, Nat’l Park Serv., <https://www.nps.gov/thro/learn/nature/bakken-oil.htm>. If the BLM segments its analysis of the impacts on the Park until the APD stage, then no single NEPA document, including the outdated North Dakota FO RMP/FEIS from 1988, will ever address the cumulative impacts to Theodore Roosevelt National Park. Thus, the BLM’s actions are in violation of NEPA.

The need to do a full NEPA at the lease sale stage is further supported by the fact that the BLM frequently approves APDs without further NEPA analysis. For example, on September 27, 2017, the Billings FO approved an APD for an oil well and pipeline through a categorical exclusion. Exhibit 1, *Vanguard EBET2-390 APD, DOI-BLM-MT-A010-2G17-0058-CX*, BLM, https://eplanning.blm.gov/epl-front-office/projects/nepa/90806/122881/149937/DOI-BLM-MT-A010-2017-0058-CX_without_signature_page.pdf. Other BLM Field Offices frequently use categorical exclusions as well, and use of these is very likely to increase under the current administration.³

In sum, unless the BLM actually commits, through the imposition of a lease stipulation or stipulations, to conduct additional NEPA analysis at the drilling stage, it more often than not does not happen. This means that any commitment to address the impacts 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, connected environmental impacts under NEPA.

C. The BLM Fails to Analyze and Assess a Reasonable Range of Alternatives.

The BLM also fails to analyze and assess a reasonably range of alternatives to ensure that leasing and development are not speculative. “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*

³ *See, e.g.*, Dep’t of Interior, *Secretarial Order No. 3354* (July 7, 2016), <https://www.doi.gov/sites/doi.gov/files/uploads/doi-so-3354.pdf>; Office of the White House, *Presidential Executive Order on Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure* (Aug. 15, 2017), <https://www.whitehouse.gov/the-press-office/2017/08/15/presidential-executive-order-establishing-discipline-and-accountability>.

High Country Conservation Advocates v. U.S. Forest Service, 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”).

Here, because BLM admits through its Reasonably Foreseeable Development scenarios for the lease parcels that many of the proposed lease parcels may never see development, it appears the proposed leasing would simply be a major giveaway to the oil and gas industry. As it stands, of the 2,101,573 million acres of federal oil and gas under lease in Montana, only 710,617 acres are in production.⁴ Put another way, only a little more than 34% of all leased federal oil and gas acres in Montana are actually producing oil and gas. This raises serious questions over whether the proposed oil and gas leasing would simply allow industry to hoard more leases to strengthen their balance sheet while generating minimal, if not negative, revenue to the American public. With companies allowed to bid as low \$2.00 per acre for oil and gas leases and to pay only a nominal rental of \$1.50 per acre per year, it would seem that industry is poised to secure leases for rock bottom prices and use these leases to inflate their assets. All the while, taxpayers will have to pay the cost of BLM administration of the leases, any inspections and enforcement, and lose the opportunity for these public lands to be dedicated to higher and better uses.

While we object to the BLM’s proposal to lease, given the situation, we at least request the agency give detailed consideration to alternatives that address the likelihood that industry is only seeking the proposed leases in order to stockpile reserves and not actually produce oil and gas. We request the BLM give detailed consideration to the following alternative actions:

- An alternative that imposes a minimum bonus bid higher than \$2.00 per acre. Under 43 C.F.R. § 3120.1-2(c), BLM is prohibited from accepting a competitive oil and gas leasing bid that is less than \$2.00 per acre. However, there is nothing that prohibits the BLM from establishing a minimum bid that is higher than \$2.00 per acre. Here, we request the agency give detailed consideration to an alternative that requires a minimum bonus bid higher than \$2.00 per acre as a condition of selling the lease parcels. This will ensure that only serious industry interest in the proposed oil and gas leasing parcels and help to prevent companies from stockpiling federal oil and gas leases as a means to increase their assets and enhance their own financial bottomline.
- An alternative that defers offering the proposed lease parcels for sale until at least 50% of all leased federal oil and gas acres in Nevada are put into production. This could happen as a result of leases expiring before being put into production (currently, there are many leases due to expire in the near future, including six parcels in Nevada on March 31, 2017), by industry relinquishing leases that have not produced for many years, or by leases being put into production by companies. This alternative would help to incentivize industry to start producing and generating

⁴ This is according to BLM oil and gas leasing statistics as of the end of FY 2016, available at: <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics>.

With an increase in fracking and drilling comes increased impacts to air, climate, water, and land. For example, according to the EPA, between 2002 and 2006, oil and gas “[p]roduction emissions [for VOCs, NO_x, CO, SO₂, and PM₁₀] in Montana increased by almost 75 percent,” and this trend is likely to continue. See EPA Region 8, *An Assessment of the Environmental Implications of Oil and Gas Production: A Regional Case Study* at 3-6 (2008), <https://archive.epa.gov/sectors/web/pdf/oil-gas-report.pdf>. Fracking has also consumed 450 million gallons of water in Montana from 2015 to 2012. Env’t America, *Fracking by the Numbers: Key Impacts of Dirty Drilling at the State and National Level* 21 (2013), https://environmentamerica.org/sites/environment/files/reports/EA_FrackingNumbers_scrn.pdf.

Unfortunately, the BLM fails to analyze these increased impacts in either the EAs for the lease sales or the RMP/FEISs for the field office. All of the EAs for the four areas of the lease sale tier to broader RMPs and Final EISs. The Billings FO EA tiers to the 2015 Billings Field Office Resource Management Plan Amendment and accompanying FEIS.⁵ The Butte FO EA tiers to the 2009 Butte Approved RMP and accompanying FEIS.⁶ The Hi-Line EA tiers to the 2016 Hi-Line RMP and accompanying FEIS.⁷ The North Dakota FO EA tiers to the 1988 North Dakota RMP and accompanying FEIS.⁸

Out of the four RMPs and FEISs referenced above, only the Hi-Line RMP/FEIS comes close to fully analyzing the impacts of fracking coupled with directional drilling. The Billings RMP/FEIS, summarily dismisses the possibility of fracking in its response to comments. See, e.g., Billings RMP/FEIS, Vol. 3, Ch. 5, at 5-87 (“There is no fracking currently occurring in the Billings Field Office and it is unlikely to occur.”) Although the RMP/EIS still includes a description of the process of fracking, it fails to include an analysis of the impacts of fracking and horizontal drilling. See Billings RMP/FEIS Vol. 1, Ch. 3, at 3-188 to 3-190; see generally Chapter 4: Environmental Impacts. This is in spite of evidence that fracking and horizontal drilling has occurred and will likely continue to be used in Carbon County. For example, in July 2016, the Billings Gazette reported that the Carbon County Commissioners had passed setbacks as a result of plans by Energy Corp. of American to “bring the Bakken to the Beartooths.” Tom Lutey, *Carbon County Requires Distance Between Oil Wells, Homes*, Billings Gazette, July 18, 2016, http://billingsgazette.com/news/local/government-and-politics/carbon-county-requires-distance-between-oil-wells-homes/article_2f383c56-1392-566d-989f-a4bf539ada83.html. The BLM even acknowledges that “forecast drilling activity would be somewhat higher than the levels of the past 20 years [due to new oil and gas plays].” EA at 15. But, the BLM fails to connect the final dots and include an analysis of the impacts of fracking and horizontal drilling in

⁵ The Billings RMPA and accompanying FEIS are available at <https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=108174#>.

⁶ The Butte RMP is available at <https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=102079>.

⁷ The Hi-Line RMP is available at <https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99399>.

⁸ The North Dakota RMP is available at <https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99367>.

the EA. Clearly, shale development is possible in the area, and the BLM's NEPA analyses must address this.

The Butte RMP/FEIS is even more devoid of any discussion of impacts from fracking and horizontal drilling. Wells that use hydraulic fracturing and horizontal drilling to stimulate production have been drilled into the Cody Shale formation in the Park County area. *See* Exhibit 2, Well File for Leviathan (Arthun) 3-6, Bill Barrett Corporation, API-067-21010, available from the Mont. Board of Oil and Gas Online Oil and Gas Info. Sys.; *see also* Linda Halstead-Acharya, *Energy Speculation in Sweet Grass County Stirs Up Big Dreams, Big Questions*, Billings Gazette, Dec. 29, 2008, http://billingsgazette.com/news/state-and-regional/montana/energy-speculation-in-sweet-grass-county-stirs-up-big-dreams/article_485eb01a-0755-5032-8e7f-133d4f91f8ca.html. And, if the price of oil increases, more drilling is likely to occur. But, the Butte RMP/FEIS completely omits any mention of fracking.

Finally, the North Dakota RMP also completely fails to discuss the impacts from fracking and horizontal drilling despite the presence of the Bakken formation. This is not surprising considering that the BLM last updated the RMP in 1988. But, it is also not acceptable under NEPA. The NDFO EA for the one proposed parcel in McKenzie County does nothing to fill this gap. Although the EA includes a description of the process of fracking and horizontal drilling and a summary of relevant state rules, the BLM does not discuss the impacts from fracking and horizontal drilling. *See* North Dakota FO EA at 66–68.

In sum, none of the BLM's four EAs for the lease parcels, and only three of the underlying RMPs/FEISs, come close to fully addressing the impacts of fracking and horizontal drilling despite evidence that such techniques have been used and are likely to be used in the future. As a result, the BLM's FONSI for the lease sale cannot stand, and the BLM must remove all of the lease parcels from consideration.

E. The BLM's Reasonably Foreseeable Development Scenarios for the Billings, Butte, and Hi-Line Parcels Are Not Accurate.

The BLM must also analyze the reasonably foreseeable development of the lease parcels in context with current, on-the-ground information. *See High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174 (D. Colo. 2014) ("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."). While we appreciate BLM's attempts to calculate the reasonably foreseeable development scenario for the proposed lease parcels, the agency's numbers appear grossly underestimated and completely unrealistic.

For example, for the Billings FO parcels, the BLM estimates that out of 76 parcels, only 5.4 wells per year will be developed. *See* Billings FO EA at 16.⁹ BLM's assessment of reasonably foreseeable oil and gas wells is based on an overly simplistic assessment of the

⁹ Both the Butte FO EA and the Hi-Line EA include a similar analysis. *See* Butte FO EA at 12–13; *see* Hi-Line EA at 16–17.

percentage of lease acreage within the total acreage of a “potential” area. This is a bizarre method for assessing reasonably foreseeable wells. Given that the point of leasing is to accommodate industry demands to develop oil and gas wells, it is astonishing that the BLM would project such a small amount of development resulting from the proposed leases. This raises serious questions over whether the BLM should actually be offering most of the lease parcels for sale in the first place.

A more logical approach would be one similar to that taken by the Vernal Field Office in Utah. For example, for the December 2017 sale, the Vernal FO presumed that, at a minimum, one well would be developed on every lease parcel offered for sale. Exhibit 3, Vernal Field Office, *December 2017 Competitive Oil and Gas Lease Sale Final Environmental Assessment*, App’x D (Sept. 1, 2017), <https://eplanning.blm.gov/epl-front-office/projects/nepa/80165/119135/145398/FEA.pdf>. The Vernal FO also considered whether the parcel in question was within 2 miles of a well which had produced oil or gas within the past 6 years. *Id.* This approach addresses the fact that industry has nominated the lease parcels, and therefore, the likelihood of development is higher. This approach also takes into account existing production and ensures that the agency’s development assumptions are current based on nearby wells. Neither of these assumptions are incorporated into the BLM’s approach for this lease sale. Thus, the BLM’s development assumptions are misleading and likely inaccurate, and the EA is insufficient and fails to demonstrate that a FONSI is appropriate.

F. The BLM Fails to Assess the Direct and Indirect Impacts of Air and Greenhouse Gas Emissions that Would Result from Issuing the Proposed Lease Sale Parcels.

The BLM also fails to assess the direct and indirect impacts from air and greenhouse gas emissions that would result from issuing the proposed lease sale parcels. First, the BLM fails to actually calculate site-specific air emissions that will occur from issuing the proposed lease parcels. Second, although the BLM calculates downstream greenhouse gas emissions from combustion of any produced oil and gas, the BLM fails to assess the greenhouse gas emissions that will result from construction and production of the proposed leases. *See, e.g.*, Billings FO EA at 29–30; Butte FO EA at 24–28; Hi-Line EA at 28–31.¹⁰

Estimating greenhouse gas emissions from leasing is entirely possible and has been done by the BLM in the past. For example, in the Royal Gorge Field Office of Colorado, the BLM contracted with URS Group Inc. to prepare an analysis of air emissions from the development of seven oil and gas lease parcels. *See* Exhibit 4, URS Group Inc., “Draft Oil and Gas Air Emissions Inventory Report for Seven Lease Parcels in the BLM Royal Gorge Field Office,” Prepared for BLM, Colorado State Office and Royal Gorge Field Office (July 2013). This report estimated greenhouse gas emissions on a per well basis. *See* Exhibit 1 at 3, 5. This report was later supplanted by the Colorado Air Resource Management Modeling Study, or CARMMS, which estimated reasonably foreseeable emissions of greenhouse gases, criteria pollutants, and hazardous air pollutants associated with oil and gas development throughout Colorado, as well as part of New Mexico, and modeled air quality impacts. *See* Exhibit 5, ENVIRON, “Colorado Air

¹⁰ Interestingly, the North Dakota FO EA includes a table with estimated air emissions from well development and production in addition to downstream GHG emissions. *See* EA at 52.

Resource Management Modeling Study (CARMMS) 2021 Modeling Results for the High, Low and Medium Oil and Gas Development Scenarios,” Prepared for BLM Colorado State Office (January 2015) (updated report available at https://www.blm.gov/sites/blm.gov/files/program_natural%20resources_soil%20air%20water_aico_quick%20link_CARMMS.pdf). As part of the CARMMS report, the BLM estimated annual per well emissions, including greenhouse gas emissions, as follows:

Phase	PM ₁₀	PM _{2.5}	VOC	CO	NO _x	SO ₂	CO ₂	CH ₄	N ₂ O	HAP
Conventional Construction	5.21	0.64	0.05	0.23	0.72	0.02	108.1	0.00	0.00	0.01
CBM Construction	3.37	0.44	0.03	0.12	0.36	0.01	56.58	4.06	0.00	0.00
Conventional Production	1.15	0.15	6.67	1.30	0.73	0.00	251.9	17.14	0.00	0.43
CBM Production	2.25	0.25	13.10	1.13	0.62	0.00	181.6	19.05	0.00	1.31

It is notable that, based on this estimate, total CO₂ emissions associated with construction and production of conventional (rather than “CBM” or coalbed methane) wells, could be as much as 360 tons per year. And, to top it off, this number would very likely increase for an unconventional oil or gas well, as shown by the Kleinfelder Report, which estimates emissions for representative oil and gas wells in the Uinta, Upper Green River, San Juan, Williston, and Denver Basins. *See* Exhibit 6, Kleinfelder, “Air Emissions Inventory Estimates for a Representative Oil and Gas Well in the Western United States,” Report Prepared for Bureau of Land Management (March 25, 2013). Either way, the BLM has the capability to analyze these emissions and cannot forgo this analysis at the lease sale stage.

G. The BLM Fails to Fully Analyze and Assess the Cumulative Impacts from Greenhouse Gas Emissions that Would Result from Issuing the Proposed Lease Parcels.

Similarly, the BLM’s analyses in all four EAs fail to account for greenhouse gas emissions from cumulative and similar actions. The BLM fails to take into account the greenhouse gas emissions resulting from other proposed BLM lease sales in Montana, North Dakota, and surrounding Western states.

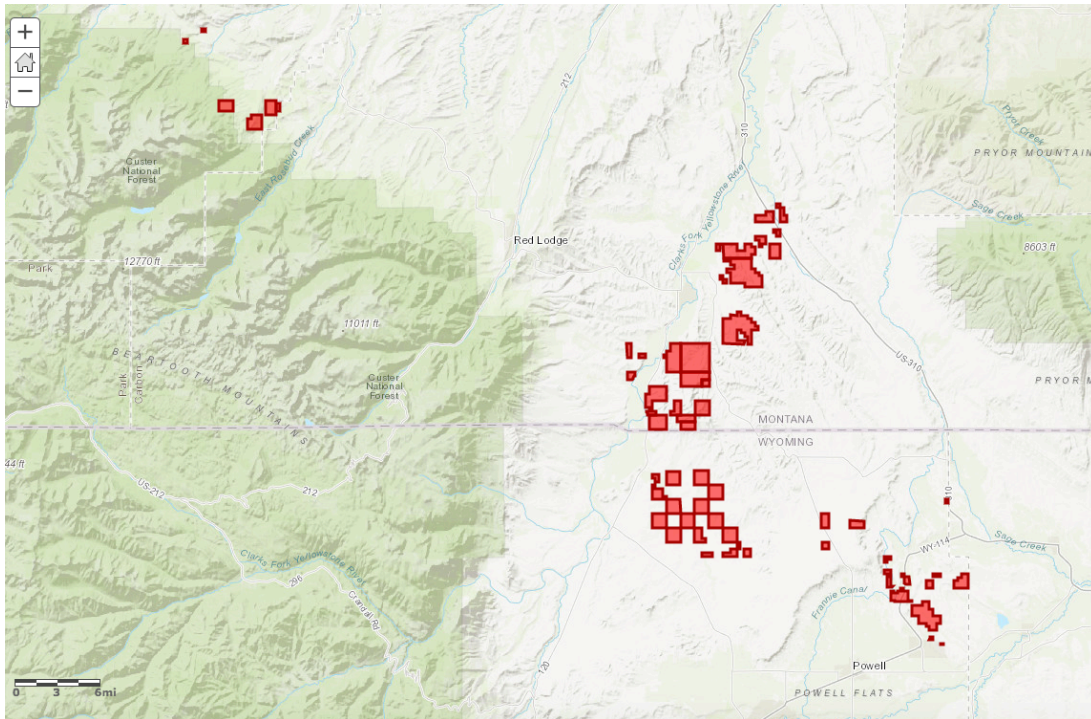
NEPA requires an agency to analyze the impacts of “similar” and “cumulative” actions in the same NEPA document in order to adequately disclose impacts in an EIS or provide sufficient justification for a FONSI in an EA. *See* 40 C.F.R. §§ 1508.25(a)(2) and (3). Indeed, the Ninth Circuit has held that “[a]n EA’s analysis of cumulative impacts ‘must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment.’” *Te-Moak Tribe v. U.S. Dep’t of Interior*, 608 F.3d 592, 603 (2010) (quoting *Lands Council v. Powell*, 395 F.3d 1019, 1027 (9th Cir. 2005)).

Here, the BLM's analysis is entirely devoid of any consideration of greenhouse gas emissions from oil and gas development and lease sales within Montana or North Dakota, as well as throughout the Rocky Mountain west. Yet, it is notable that at the same time and in this same region, the BLM has sold, is selling, and will be selling thousands of acres of oil and gas leases, including:

- In Montana/North Dakota, in June the BLM leased 49 parcels (15,611.47 acres), *see* <https://www.blm.gov/sites/blm.gov/files/MTDAKs%206-13-17%20Comp%20Results.pdf>. In September, the BLM sold 15 parcels totaling 4,438.07 acres in South and North Dakota, *see* https://www.blm.gov/sites/blm.gov/files/MTDAKs%2009_12_17_07_11_17_Comp%20Stats_Combined.pdf. And, in December, the BLM is planning to lease 204 parcels totaling 98,889 acres in southeastern Montana, https://eplanning.blm.gov/epl-front-office/projects/nepa/78400/106417/130086/December_2017_Preliminary_Parcel_Worksheet_-_MCFO.pdf.
- Colorado: On March 9, 2017, the BLM sold 17 parcels covering 16,447.180 acres. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/70207/99188/120209/Sale_Results_March2017.pdf. On June 8, 2017, the BLM sold 70 parcels covering 63,268.120 acres in western Colorado. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/70241/109218/133789/Sale_Results_June2017.pdf. In December of 2017, the BLM is also contemplating the sale of 28 parcels covering 27,283.79 acres in western Colorado. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/72396/96540/116594/GJFO&CRVFO_Initial_Parcel_List_Scoping_Dec2017.pdf.
- Wyoming: In February of 2017, the BLM sold 278 parcels covering 183,155.020 acres in the High Plains and Wind River-Bighorn Basin District Offices. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/96936/117093/SALE_RESULTS_Feb_2017.pdf. In June, the sold 26 parcels covering 31,924.77 acres in the High Desert District Office. *See* <https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/110941/135810/SALERESULTS.pdf>. In September, BLM sold 127 parcels totaling 106,687 acres. *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/121307/148154/SALE_RESULTS_3rd_Qtr_2017.v3.pdf. And this December, the agency is offering 45 parcels (72,843.75). *See* https://eplanning.blm.gov/epl-front-office/projects/nepa/65707/115163/140610/Sale_Notice.pdf.
- **All told, the BLM has leased or is proposing to lease approximately 859 parcels or 620,548.17 acres of publically-owned land in the states listed above in 2017.**

- The BLM is also proposing to lease 208 parcels (191,708.13 acres) in March 2018 in Colorado, Montana, and Wyoming.¹¹

This argument is further supported by a demonstration of how close many of the lease parcels proposed in the differing states are. For example, the March 2018 lease parcels for the Billings FO in Montana and the Cody FO in Wyoming are actually geographically adjacent to each other as shown by the map below.¹²



Finally, the need to take into account “similar” and “cumulative” actions is underscored by the fact that the BLM acknowledges that the proper geographic area for analyzing and assessing the impacts of greenhouse gas emissions is on a national scale. Both the Billings FO EA and Butte FO EA in fact assess downstream greenhouse gas emissions from the proposed leasing in the context of both statewide and national greenhouse gas emissions. *See, e.g.*, Billings FO EA at 30 (“According to the USEPA, this estimated quantity [of downstream GHG

¹¹ For the March 2018 lease sale in Montana, the BLM is proposing to lease 110 parcels comprising 63,616 acres. See “2018 Lease Sales,” “March Sale,” at <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/leasing/regional-lease-sales/montana-dakotas>. For the March 2018 lease sale in Wyoming, the BLM is proposing to lease 89 parcels totaling 125,507 acres https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114241/140062/Press_Release.WRBBBD.2017Jul24.b.pdf. And, for the March 2018 lease sale in Colorado, the BLM is proposing 9 parcels containing 2585.130 acres. https://eplanning.blm.gov/epl-front-office/projects/nepa/80672/108369/132690/TRFO_Initial_Parcel_List_Scoping_March2018.pdf.

¹² The parcels for the March 2018 lease sale in Wyoming in the Cody Field Office are discussed in the High Plains EA available at https://eplanning.blm.gov/epl-front-office/projects/nepa/85072/114136/139365/181Q_WRBBBD_EA_ver.1.pdf.

emissions] represents approximately 0.0001% of total U.S. GHG emissions reported in 2015.”); *see also* Butte FO EA at 27 (“According to the USEPA, this estimated quantity represents approximately 0.00002% of total U.S. GHG emissions reported in 2015.”).

Although this assessment was apparently prepared to try to mislead the public into believing that emissions from the proposed leasing are not significant, it actually emphasizes the need for the BLM to not simply account for emissions from the proposed leasing, but likely for all greenhouse gas emissions associated with BLM-approved oil and gas leasing nationwide. Indeed, the BLM cannot claim that emissions are insignificant in the context of state or national emissions, but then fail to disclose the direct, indirect, and cumulative greenhouse gases that would result from all other “similar” and “cumulative” actions within a statewide or national scope. The BLM’s failure to discuss or acknowledge the lease sales occurring within Montana and in neighboring Rocky Mountain states is a clear violation of NEPA which renders the EAs and subsequent FONSIIs invalid.

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

In addition to the lack of cumulative impacts analysis for GHGs, it is particularly disconcerting that the agency discusses the economic benefits of the proposed leases, Billings FO EA at 80–81, Butte FO EA at 52, Hi-Line EA at 71–72, North Dakota FO at 42, but completely omits a discussion on the social cost of carbon protocol, 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.

The social cost of carbon protocol for assessing climate impacts is a method for “estimat[ing] the economic damages associated with a small increase in carbon dioxide (CO₂) emissions, conventionally one metric ton, in a given year [and] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO₂ reduction).” Exhibit 7, 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>. The protocol was developed by a working group consisting of several federal agencies.

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010. *See* Exhibit 8, 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), available online at https://www.epa.gov/sites/production/files/2016-12/documents/scc_tsd_2010.pdf. These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies. *See* Exhibit 9, 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), available online at <https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf>. This report and the social cost of carbon estimates were again revised in 2015. *See* Exhibit 10, 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). Again, this report and social cost of carbon estimates were revised in 2016. *See* Exhibit 11, 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), available online at https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf.

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. *See* Exhibit 12, 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).

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 dioxide. *See* Chart Below. In one of its more recent update to the Social Cost of Carbon Technical Support Document, the White House’s central estimate was reported to be \$36 per metric ton. Exhibit 11 at 4. 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. *See* Exhibit 13, GAO, “Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates,” GAO-14-663 (July 2014), <http://www.gao.gov/assets/670/665016.pdf>.

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

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.” Exhibit 14, EPA, Comments on Supplemental Draft EIS for the Keystone XL Oil Pipeline (June 6, 2011).

More importantly, the BLM, including the neighboring Billings Field Office, has also utilized the social cost of carbon protocol in the context of oil and gas approvals. In past Environmental Assessments for oil and gas leasing in Montana, the Billings Field Office estimated “the annual SCC [social cost of carbon] associated with potential development on lease sale parcels.” Exhibit 15, 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%20Protest.pdf. In conducting its analysis, the BLM used a “3 percent average discount rate and year 2020 values,” presuming social costs of carbon to be \$46 per metric ton. *Id.* Based on its estimate of greenhouse gas emissions, the agency estimated total carbon costs to be “\$38,499 (in 2011 dollars).” *Id.* 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 CO₂e increase. *See* Exhibit 16, BLM, “Little Willow Creek Protective Oil and Gas Leasing,” EA No. DOI-BLM-ID-B010-2014-0036-EA (February 10, 2015) at 81, https://eplanning.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf. 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. *Id.* at 83.

Economists have also specifically calculated the costs of climate change on the Montana economy. For example, a study completed by Power Consulting, concludes that economic losses to Montana’s tourism industry could result in a loss of 10,922 jobs and \$281 million in earnings if no public policy steps are taken to reduce greenhouse gas emissions. Power Consulting Inc., *Impact of Climate Change on MT Outdoor Economy* vii (2015), <http://montanawildlife.org/wp-content/uploads/2015/12/Impact-of-Climate-Change-on-the-Montana-Outdoor-Economy-Dec-2015-Final-Report.pdf>. A summary of the results from this study are highlighted in the table below.

Table 5.

Projected Economic Losses Due to Climate Change in Components of the Montana Recreation and Tourism Activities		
	Jobs	Labor Earnings (\$millions)
Glacier-Yellowstone NP Visitation	3,331	\$94
Wildlife Watching & Sight-Seeing	2,775	\$61
Hunting	1,560	\$39
Sport Fishing	1,792	\$49
Skiing, Snowboarding, Snowmobiling	1,465	\$37
Total Economic Losses in Recreation and Tourism	10,922	\$281

Sources: See Tables 6 through 10 below.

Source: Power Consulting Inc.

Power Consulting has also completed a similar study on the climate impacts on agriculture in Montana. This study concluded that “the total impact on employment is the loss of about 25,000 jobs and the \$736 million in labor earnings by 2055.” This information is summarized in the table below. Power Consulting Inc., *The Impact of Climate Change on Montana’s Agriculture Economy* 17 (2016), http://montanafarmersunion.com/wp-content/uploads/2016/02/FINAL_Impact_Climate_Change_MT_Ag_Econ_Power_Consulting_2-24-2016.pdf.

Table 3.

Projected Economic Losses Due to Climate Change on Montana Agriculture		
Agricultural Activities	Jobs	Labor Earnings (\$millions)
Cattle Raising	12,167	\$364
Crops	12,457	\$372
Total	24,624	\$736

Source: Power Consulting Inc.

To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts climate change. As the EPA has noted, the protocol “does not currently include all important [climate change] damages.” Exhibit 7 at 1. 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 this month found that current estimates for the social cost of carbon should be increased six times for a mid-range value of \$220 per ton. *See* Exhibit 17, Moore, C.F. and B.D. Delvane, “Temperature impacts on economic growth warrant stringent mitigation policy,”

Nature Climate Change 2 (January 12, 2015). In spite of uncertainty and likely underestimation of carbon costs, nevertheless, “the SCC is a useful measure to assess the benefits of CO₂ reductions,” and thus a useful measure to assess the costs of CO₂ increases. Exhibit 7.

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 recent White House report, which warned that delaying carbon reductions would yield significant economic costs. *See* Exhibit 18, Executive Office of the President of the United States, “The Cost of Delaying Action to Stem Climate Change,” (July 2014). As the report states:

[D]elaying action to limit the effects of climate change is costly. Because CO₂ accumulates in the atmosphere, delaying action increases CO₂ concentrations. Thus, if a policy delay leads to higher ultimate CO₂ concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO₂ concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO₂ concentration to 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.

Id. at 1.

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. National Highway Traffic Safety Administration*, 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.

More recently, a federal court has done likewise 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 Service*, 52 F.Supp. 3d 1174 (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 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).

A federal court recently reaffirmed this reasoning, as well. In August, a district court in Montana cited to the *High Country* decision and concurred with it. *See Mont. Env'tl. Info. Ctr. v. U.S. Office of Surface Mining*, No. CV 15-106-M-DWM (D. Mont. Aug. 14, 2017). The court then rejected 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. *Id.*

A recent 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. *See* Exhibit 19, 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>. Just this year, 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.” Exhibit 20, William D. Nordhaus, Revisiting the Social Cost of Carbon, PNAS, Feb. 14, 2017, <http://www.pnas.org/content/114/7/1518.full.pdf>.

Clearly, the social cost of carbon provides a useful, valid, and meaningful tool for assessing the climate consequences of the proposed leasing, and the BLM’s failure to discuss it while simultaneously discussing the benefits of oil and gas development is arbitrary and capricious. While we do not suggest that a comprehensive cost-benefit analysis is required, the fact that economic benefits are disclosed in the EA (Billings FO EA at 80–81, Butte FO EA at 52, Hi-Line EA at 71–72, North Dakota FO at 42) indicates that costs and benefits are useful for assessing the significance of the proposed leasing. To this end, the BLM must disclose carbon costs in order to fully assess the significance of climate impacts and support any FONSI.

II. The Proposed Leasing in the Billings and Butte FOs and the North Central Montana District Office Appears to Violate the Mineral Leasing Act.

The BLM’s proposed leasing in the two Montana field offices and North Central District Office in Montana runs afoul of the MLA in two key regards. First, it does not appear that most of the lease parcels contain lands that are known or believed to contain oil or gas deposits. Second, it does not appear that there is any intent of any lessee to diligently develop many of the proposed parcels.

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, it unclear whether all of the lease parcels include lands that are known or believed to contain oil and gas deposits. For example, all of the lease parcels analyzed in the Butte FO EA, are located in areas with very low to low development potential. Butte FO EA at 14.

At a minimum, the BLM has a duty to confirm where lands proposed for leasing are known or believed to contain oil and gas deposits. Here, the agency appears to have undertaken no such diligence in confirming whether the oil and gas industry’s supposed interest in the proposed lease parcels is rooted in the existence or believed existence of oil and gas deposits.

On the second matter, the BLM cannot lease lands for oil and gas development if there is no intent to diligently develop. The agency confirmed this in a recent decision denying the issuance of an oil and gas lease to a lessee, explaining:

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.

Exhibit 21, BLM, Oil and Gas Noncompetitive Lease Offers Rejected (Oct. 18, 2016). Here, the BLM appears to explicitly acknowledge that there is no explicit intent to develop any of the proposed lease parcels. The agency itself discloses in the various EAs that it is reasonable to presume that most, if not all, of the parcels, will never be developed. For example, out of 76 parcels proposed for the Billings FO EA, the BLM presumes 54 will be developed. Billings FO EA at 16. For the Butte FO, as noted above, all nine proposed lease parcels are in low to very low development areas and the EA estimates that only 4 wells may be drilled from these parcels. Butte FO EA at 12. And, for the parcels located in the northern Montana, the BLM estimates that 11 wells will be drilled on 24 parcels. Hi-Line EA at 16. These admissions explicitly indicate that a large number of the leases will have no wells developed upon them and no wells developed to access their minerals. Given this, it is completely evident that any lessee would have no intent to diligently develop many of the proposed lease parcels and that the BLM is not legally justified in proceeding to offer them for sale.

The BLM has recently confirmed that leasing in areas with low development potential and little to no industry interest warrants removing parcels from proposed sales. In Colorado, the agency recently 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[.]” Exhibit 22, BLM, “BLM modifies parcel list for June 2017 oil and gas lease sale” (April 17, 2017).

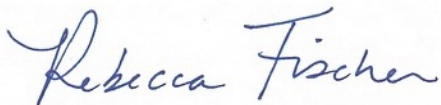
At a minimum, the BLM cannot proceed to lease the proposed lands without conducting some kind of verification that there is intent to develop. Here, the agency appears to have undertaken no such verification. In fact, in response to a Freedom of Information Act request in which WildEarth Guardians requested records pertaining to any instance in which the BLM evaluated the likelihood of development of oil and gas leases in Montana, the agency responded that “there are no records responsive[.]” Exhibit 23, Final Response to FOIA No. BLM-2017-00678 (July 7, 2017). The 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. If the agency does not, then it is failing to verify that potential lessees will exercise diligent development in accordance with the Mineral Leasing Act.

As it stands, there is no basis for concluding that the lands proposed for leasing are known or believed to contain oil and gas deposits, or that there is any intent to diligently develop any of the proposed leases. Accordingly, the BLM is not legally justified under the Mineral Leasing Act in proceeding with the proposed leasing and the December lease sale must be canceled.

III. Conclusion

In sum, the BLM’s four EAs for the March 2018 lease sale fail to comply with the requirements of NEPA by 1) improperly segmenting its NEPA analyses into four different EAs which subsequently defer analysis of impacts to the Application Permit to Drill (“APD”) stage; 2) failing to analyze a reasonably range of alternatives; 3) failing to analyze the impacts from hydraulic fracturing and horizontal drilling; 4) failing to accurately estimate reasonably foreseeable development for the various lease parcels; 5) failing to analyze the direct and cumulative impacts from the air and greenhouse gas emissions that would result from the lease parcels; and 6) failing to assess the economic significance of any greenhouse gas emissions in terms of carbon costs. Furthermore, the BLM’s four EAs also fail to comply with the “due diligence” requirements of the Mineral Leasing Act. As a result, the Conservation Groups request that the BLM defer leasing any of the nominated parcels until it corrects these deficiencies.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca Fischer". The signature is fluid and cursive, with the first name "Rebecca" and last name "Fischer" clearly legible.

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