



March 7, 2016

Via Fax to 406-896-5292

Jamie Connell
State Director
Bureau of Land Management
Montana State Office
5001 Southgate Drive
Billings MT 59101

Dear Ms. Connell:

The Center for Biological Diversity (the “Center”) hereby files this Protest of the Bureau of Land Management’s (“BLM”) planned May 4, 2016 oil and gas lease sale and February 4, 2016, updated Environmental Assessment DOI-BLM-MT-C020-2016-0022-EA, pursuant to 43 C.F.R. § 3120.1-3. The Center formally protests the inclusion of each of the following 6 parcels as identified in the February 4 Notice of Competitive Oil and Gas Lease Sale, covering 1028.59 acres in the area managed by the Miles City Field Office:

MT-05-16-01
MT-05-16-02
MT-05-16-03
MT-05-16-04
MT-05-16-05
MT-05-16-06

PROTEST

I. Protesting Party: Contact Information and Interests:

This Protest is filed on behalf of the Center for Biological Diversity and their board and members by:

Michael Saul
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Center for Biological Diversity
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The Center is a non-profit environmental organization with 50,186 member activists, including members who live and recreate in the Miles City planning area in Montana. The Center uses science, policy and law to advocate for the conservation and recovery of species on the brink of extinction and the habitats they need to survive. The Center has and continues to actively advocate for increased protections for species and habitats in the Miles City planning area on lands managed by the BLM. The lands that will be affected by the proposed lease sale include habitat for listed, rare, and imperiled species that the Center has worked to protect including the Sprague's pipit. The Center's board, staff, and members use the lands within the planning area, including the lands and waters that would be affected by actions under the lease sale, for quiet recreation (including hiking and camping), scientific research, aesthetic pursuits, and spiritual renewal.

II. Statement of Reasons as to Why the Proposed Lease Sale Is Unlawful:

BLM's proposed decision to lease the parcels listed above is substantively and procedurally flawed for the reasons discussed in the Center's December 30, 2015 comment letter on the Environmental Assessment ("EA") for the Miles City May 2016 lease sale, which is incorporated by reference. Additional reasons as to why the proposed lease sale is unlawful are provided below.

A. BLM's Failure to Consider Impacts to Sprague's Pipit Violates BLM Regulations Regarding Conservation of Bureau Sensitive Species.

Parcels Affected: 05-16-02, 05-16-03, 05-16-04, and 05-16-06

The Sprague's pipit (*Anthus spragueii*) is a native grassland specialist and is one of only 12 birds endemic to the Great Plains grasslands. The bird breeds in the northern prairie regions of the United States and Canada and winters in parts of the U.S. southwest east to Louisiana and south through northern Mexico.

The Sprague's pipit depends on large patches of open, native grassland. The Northern Plains have lost up to 99% of native grasslands in the Sprague's pipit's breeding grounds. Drainage of wetlands has further resulted in a 50% loss of wetland and wet meadow habitat used by the pipit. In the bird's wintering range, habitat degradation by tree, shrub, and weed encroachment is a particular problem, along with permanent habitat loss to human uses of the land. Climate change is and will continue to exacerbate all of these threats to pipit habitat and will also change natural fire cycles to the detriment of the bird.

Due to this loss of habitat, the Sprague's pipit has experienced a 79% population drop across its range. The population has been declining at an average rate of 4.1% since 1966, when the Breeding Bird Survey (BBS) began monitoring bird population trends.¹

¹ Sauer, J. R., J. E. Hines, and J. Fallon. 2005. The North American Breeding Bird Survey, Results and Analysis 1966 - 2005. Version 6.2.2006. Laurel, MD: USGS Patuxent Wildlife Research Center.

The species was petitioned for listing under the Endangered Species Act (“ESA”) in 2008. On September 14, 2010, the U.S. Fish and Wildlife Service (“Service”) determined that listing Sprague’s pipit as “Endangered” or “Threatened” was warranted but precluded by higher listing priorities. Sprague’s pipits are therefore considered a “candidate” species under the ESA, and are listed as a “Species of Conservation Concern” by the Service’s Division of Migratory Bird Management.

The Sprague’s pipit is particularly sensitive to anthropogenic disturbance. The birds avoid roads, for example. Sprague’s pipits have a strong preference for native grasses over exotic species such as smooth brome (*Bromus inermis*) and crested wheatgrass (*Agropyron cristatum*).² Increased oil and gas exploration and extraction have likely already increased disturbances and habitat loss throughout the pipit’s range.

Many grassland birds are experiencing catastrophic declines. Knopf described the magnitude of avian losses:

During the last 25 years, grassland species have shown steeper, more consistent, and more geographically widespread declines than any other behavioral or ecological guild of North American birds, including Neotropical migrants.³

Similarly, Peterjohn and Sauer proclaimed, “...the potential for species extinctions in grasslands is relatively high; for example, populations of grassland birds are declining more precipitously than other groups of North American bird species.”⁴ The Sprague’s pipit is one of these birds at risk. Wells described the Sprague’s pipit as, “one of the fastest declining songbirds of North America.”⁵

The Sprague’s pipit is particularly vulnerable during the spring and summer months. Nest building generally begins in mid-May, and clutching can start from the second week of May through July.⁶ Fledging occurs from around June 13 through the end of August.⁷ Sprague’s pipits have a low frequency of re-nesting and high rates of nest abandonment.⁸

² Madden, E. M. 1996. Passerine communities and bird-habitat relationships on prescribe-burned, mixed-grass prairie in North Dakota. M.S. thesis, Montana State Univ., Bozeman; Prescott, D. R. C. and G. M. Wagner. 1996. Avian responses to implementation of a complimentary/rotational grazing system by the North American Waterfowl Management Plan in southern Alberta: the Medicine Wheel project. Alberta NAWMP Centre. NAWMP-018. Edmonton, Alberta; Prescott, D. R. C., R. Arbuckle, B. Goddard and A. Murphy. 1993. Methods for monitoring and assessment of avian communities on NAWMP landscapes in Alberta, and 1993 results. Alberta NWMP Centre. NAWMP-007. Edmonton, Alberta;

³ Knopf, F.L. 1994. Avian assemblages on altered grasslands. *Studies in Avian Biology*. 15: 247-257.

⁴ Peterjohn, B.G., and J.R. Sauer. 1999. Population status of North American grassland birds from the North American Breeding Bird Survey, 1966 -1996. *Studies in Avian Biology*. 19:27-44.

⁵ Wells, J.V. 2007. *Birders’ Conservation Handbook: 100 North American Birds at Risk*. Princeton University Press.

⁶ Maher, W. J. 1973. *Birds: I. Population dynamics*. Canadian Committee for the International Biological Programme (Matador Project) Technical Report no. 34. Univ. of Saskatchewan, Saskatoon.

Oil and gas exploration and extraction is likely a severe threat to Sprague's pipit's habitat. The imposition of infrastructure for oil and gas extraction facilitates the spread of weeds and establishes structures and roads that pipits avoid. Specifically, mineral extraction development causes habitat fragmentation that perpetuates and exacerbates degradation. According to a U.S. Forest Service technical report,

The potential effects of petroleum development on wildlife in wildland environments are numerous and varied... The major wildlife groups affected... are ungulates, carnivores, water birds, upland birds and raptors.⁹

Possible environmental disruption that would adversely affect Sprague's pipit includes, but is not limited to: noise pollution, human intrusion, alteration of vegetation and land and introduction of harmful substances. Habitat alteration from oil and gas development, one of the greater threats to Sprague's pipit, is caused by seismic trail clearing, clearing and grading of right of ways, site development, excavation of storage and mud pits, borrow pit excavation, construction of process, treatment and storage facilities, installation of flow lines, erection of power lines, communication systems development, trenching and pipe installation, pipe burial and backfill, effluent accidents and development of ancillary industry (i.e., boomtowns associated with labor forces).¹⁰

Effects from secondary activities may be greater in the long term than those from development itself. It is possible that disrupted ecosystems may never be totally rehabilitated, as human settlement occurring during development and production may persist, and invasive grass species may diminish viable habitat. Moreover, impacts will have been cumulative over many years during the life of an oil field.

Oil and gas facilities can cause direct mortality as well. There are reports from several state governments of avian deaths in extraction pits. These were caused when birds 1) were coated with oil from the pit and their flight was thereby impeded; 2) ingested toxic substances when drinking in the pits; and 3) drowned in the pits.¹¹ Avian species are also susceptible to moderate mortality rates from collisions with overhead power lines associated with increased oil and gas and other human activities.¹² Linnen (2008) examined the effects of oil and gas disturbances, including road establishment, and suggested that Sprague's Pipits tended to occur in lower numbers and at fewer sites near natural gas wells and trails than in interior habitat patches. According to the Service's Sprague's pipit conservation plan,

⁷ *Id.*

⁸ Sutter, G.C., D.J. Sawatzky, D. M. Cooper and R. M. Brigham. 1996. Renesting intervals in Sprague's Pipit, *Anthus spragueii*. *Can. Field-Nat.* 110: 1-4.

⁹ Bromley, M. 1985. Wildlife management implications of petroleum exploration and development in wildland environments. U.S. Forest Service Technical Report INT-191.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

Energy exploration and extraction are expected to continue to be a threat to Sprague's Pipits habitat and populations into the future as demands for resources increase globally (Environment Canada 2008). Sprague's Pipits abundance decreases within 300 m of oil wells (Linnen 2008).

Currently, no regulatory mechanisms exist for many of these activities to ensure that drilling and associated activities avoid nesting habitat. In the United States, much of the Sprague's Pipit's breeding range overlaps major areas of oil production in eastern Montana, western North Dakota and northwestern South Dakota. Areas with a high density of oil production may also decrease migration and wintering habitats available.¹³

The Service further found that “[e]xpanding energy development (wind energy and oil and gas) in grassland regions may result in increased noise levels and subsequently interfere with male song in Sprague's Pipits. The effect of anthropogenic noise on Sprague's Pipit breeding success is unmeasured.”¹⁴

Sprague's pipit are found within the MCFO planning area, with viable habitat within several of the proposed lease parcels.¹⁵ The updated EA states that it is likely that the species occurs on “parcels V8, 6X, 6Y, and H5” (i.e. lease parcels 05-16-02, 05-16-03, 05-16-04, and 05-16-06) due to the presence of suitable habitat; however, it notes that ground-truthing has not occurred to ensure that these are the only parcels where the species may be found. No analysis has been provided as to the actual amount of habitat that would be impacted by the proposed leasing.

Significant new research since the Service's 2010 warranted but precluded finding shows that the unconventional (i.e., fracking) techniques now at play in the Bakken shale and elsewhere cause even greater levels of disruption to Sprague's pipit habitat use and breeding than previously understood.¹⁶

U.S. Geological Survey and other researchers examined oil infrastructure (“Single-bore well pads, developed with hydraulic fracturing and horizontal drilling, were the most common oil-related infrastructure on the landscape at the time of the study”) and conducted bird surveys in the Williston Basin and Bakken formations of North Dakota and eastern Montana.¹⁷ Their analysis of grassland bird densities showed avoidance of infrastructure to various degrees by

¹³ U.S. Fish and Wildlife Service, Sprague's Pipit (*Anthus spragueii*) Conservation Plan at 20 (2010) (citing Linnen, C.G. 2008. Effects of oil and gas development on grassland birds. Unpublished report, prepared for Petroleum Technology Alliance Canada. Saskatoon, Saskatchewan, Canada.)

¹⁴ *Id.*

¹⁵ U.S. Fish and Wildlife Service, 12-Month Finding on a Petition to List Sprague's Pipit as Endangered or Threatened Throughout Its Range, 75 Fed. Reg. 56,028 (Sept. 15, 2015).

¹⁶ See Sarah J. Thompson *et al.*, Avoidance of unconventional oil wells and roads exacerbates habitat loss for grassland birds in the North American great plains, 192 Biological Conservation 82-90 (2015).

¹⁷ *Id.* at 83-85.

different grassland bird species, but confirmed that Sprague's pipit in particular avoided infrastructure by 350 meters.¹⁸

As a result of this extensive avoidance distance, researchers found that "[b]ecause negative effects extend into surrounding habitat, variation in well and road configurations can dramatically alter the amount of habitat that will remain suitable for grassland birds as oil development continues in the region."¹⁹ Their research concluded that "of endemic grassland birds, Sprague's pipit is one of the most sensitive to disturbances associated with oil development, raising further concern about the impact of ongoing oil development in the region."²⁰ Further, they recommended potential strategies and avenues of research for determining whether alternative patterns of development (scattered single-bore wells versus corridors and multi-bore pads) might mitigate this sensitivity.

The updated EA acknowledges none of this, beyond a brief statement that "it is likely that at least portions of these parcels provide suitable habitat for Sprague's pipits,"²¹ and a reference to the MCFO EIS and Biological Assessment. It then proceeds to defer all analysis and consultation to the drilling permit stage:

The BLM has determined that the act of issuing leases within the previously mentioned threatened or endangered habitat will not affect that respective species. However, impacts to those species are possible from subsequent oil and gas development activities permitted at the APD stage. If development were to occur, additional mitigation would be included as conditions of approval on the APD or sundry notice. If oil and gas development is proposed for this parcel (MTM 105431-KK), BLM would consult with the USFWS pursuant to section 7(a)(2) of ESA and the BLM Special Status Species 6840 Manual. An outcome of the consultation process could be that conditions of approval are attached to the permit or the permit could not be approved. In the event oil and gas development takes place within identified Sprague's pipit habitat, BLM would conference with the USFWS at the APD stage pursuant to section 7(a)(4) of ESA..²²

This piecemeal approach to analysis and consultation is squarely foreclosed by the Ninth Circuit's decision in *Conner v. Burford*, 848 F.2d 1441, 1454-57 (9th Cir. 2012), where the court found that it was improper to exclude the potential effects of future lessee activity when reviewing the leasing phase for oil and gas permits on public lands.

Moreover, BLM's attempt to defer analysis of the potential impacts to Sprague's pipit to the APD stage is in direct violation of BLM's regulations regarding Bureau sensitive species as set forth in BLM Manual 6840 - Special Status Species Management.

¹⁸ *Id.* at 86.

¹⁹ *Id.* at 86.

²⁰ *Id.* at 89.

²¹ Updated EA at 24.

²² *Id.* at 40-41.

Pursuant to Manual 6840, “[a]ll Federal candidate species, proposed species, and delisted species in the 5 years following delisting will be conserved as Bureau sensitive species.”²³ The Objective of Manual 6840 is “[t]o initiate proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of and need for listing of these species under the ESA.”²⁴ Manual 6840 further states that it is the BLM’s Policy to promote the “conservation and to minimize the likelihood and need for listing” Bureau sensitive species.²⁵ Piecemeal analyses of individual lease sales does not provide the appropriate perspective for examining and developing the proactive conservation measures necessary to reduce or eliminate threats to Sprague’s pipit from oil and gas leases.

Furthermore, pursuant to Manual 6840 it is the responsibility of State Directors to not only inventory BLM lands to determine the occurrence of BLM special status species, but also to determine “the condition of the populations and their habitats, and how discretionary BLM actions affect those species and their habitats.”²⁶ The leasing of federal lands for oil and gas extraction is a discretionary BLM action that has the potential to adversely affect Sprague’s pipit. Deferring an analysis of the potential effects of selling oil and gas leases to the APD stage is entirely inconsistent with the requirements of Manual 6840. If a lease is sold, the lessee acquires certain contractual rights constraining BLM authority. For example, according to 43 C.F.R. § 3101.1-2, once a lease is issued to its owner, that owner has the “right to use as much of the lease lands as is necessary to explore for, drill for, mine, extract, remove and dispose of the leased resource in the leasehold” subject to specific nondiscretionary statutes and lease stipulations. Therefore, once the lease is sold, it will be too late for BLM to ensure that sufficient protections will be in place to protect this species from the cumulative impacts of extraction-related activities.

Furthermore, pursuant to Manual 6840 Bureau sensitive species are considered BLM special status species, and Section 2 of the Manual provides specific measures that BLM is required to undertake in order to “conserve these species and their habitats.”²⁷ To implement this section, BLM “shall... minimize or eliminate threats” affecting Bureau sensitive species, by determining their current threats and habitat needs, and ensuring that BLM activities “are carried out in a way that is consistent with its objectives for managing those species and their habitats at the appropriate spatial scale.”²⁸ Due to the potential harms from habitat loss and fragmentation, the appropriate spatial scale for determining threats to Sprague’s pipit from oil and gas development is the entire area subject to lease sales, rather than the piecemeal, limited APD-specific review that BLM is attempting to employ.

²³ Manual 6840 at § .01.

²⁴ *Id.* at § .02 (emphasis added).

²⁵ *Id.* at § .06.

²⁶ *Id.* at § .04.

²⁷ *Id.* at § .2 (“All federally designated candidate species, proposed species, and delisted species in the 5 years following their delisting shall be conserved as Bureau sensitive species.”).

²⁸ *Id.* at § .2(C) (emphasis added).

The need for a broader analysis to assess the threats to this species from the lease sale itself is further supported by Manual 6840's requirement that BLM work with partners and stakeholders to "develop species-specific or ecosystem-based conservation strategies," and in the absence of such strategies, to incorporate standard operating procedures and other conservation measures "to mitigate specific threats to Bureau sensitive species during the planning of activities and projects."²⁹ Postponing any analysis of impacts to Sprague's pipit until the later APD stage forecloses the implementation of standard procedures and conservation measures necessary to mitigate threats to the species during exploration or other actions that might take place prior to an APD being filed, since as noted above once a lease is issued, the owner has the "right to use as much of the lease lands as is necessary to explore for, drill for, mine, extract, remove and dispose of the leased resource in the leasehold."³⁰

Moreover, the development of species-specific and ecosystem-based conservation strategies implicitly necessitates a more holistic review of the cumulative impacts of the proposed lease sale, which cannot be accomplished through site-specific APD-stage analysis alone. And, piecemeal analyses of individual lease sales do not provide the appropriate perspective for examining the cumulative effects of hydraulic fracturing and climate change impacts at the regional and landscape scale and for making land management decisions.

Where activities have the potential to adversely impact species of concern, the general practice is to consider those impacts and address them "at the earliest possible time," in order to avoid delay, ensure that impacts are avoided and opportunities for mitigation are not overlooked.³¹ This is likewise true in the context of even more general environmental review, such as under NEPA.³² Furthermore, it is general practice to evaluate the impacts of several related projects with cumulative impacts proposed or reasonably foreseeable in the same geographic region in a single, comprehensive, analysis.³³ Likewise, under the ESA an analysis of the effects of an action must consider actions that are interrelated or interdependent.³⁴ This suggests that BLM should consider the effects of oil and gas extraction activities at the lease sale stage, since those actions are inherent in leasing land for such purposes. It is therefore evident that in order to effectuate the policy of protecting Bureau sensitive species set forth in Manual 6840,³⁵ and

²⁹ *Id.* (emphasis added).

³⁰ 43 C.F.R. § 3101.1-2.

³¹ *See i.e.* 50 C.F.R. §§ 402.14(a), (g)(8).

³² *See* 40 C.F.R. § 1501.2 ("Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts.").

³³ *See Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976) ("when several proposals for . . . actions that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together.").

³⁴ 50 C.F.R. §§ 402.14 and 402.02.

³⁵ *See* BLM Manual 6840 at .06 ("Bureau sensitive species will be managed consistent with species and habitat management objectives in land use and implementation plans to promote their conservation and to minimize the likelihood and need for listing under the ESA.").

consistent with the established practice of early, comprehensive review of potential impacts to sensitive species, BLM must consider impacts to Sprague’s pipit at the lease sale, rather than waiting until the APD stage for project specific review.

In sum, BLM has issued regulations in Manual 6840 that require the agency to undertake actions to protect candidate species, much like they protect proposed and listed species. Delaying an analysis of impacts to Sprague’s pipit until the APD stage risks harm to an at-risk species that could otherwise be avoided. A failure to address the impacts to Sprague’s pipit at the lease sale stage violates BLM’s own regulations set forth in Manual 6840, is entirely inconsistent with established practice and policies regarding species protection, and is therefore arbitrary and capricious agency action under the Administrative Procedures Act.

B. BLM’s Failure to Consult With the Fish and Wildlife Service Violates the Endangered Species Act

Under the Endangered Species Act, BLM must consult with the Fish and Wildlife Service to determine whether the proposed lease sale will jeopardize the continued existence of listed species or destroy or adversely modify their critical habitat.³⁶ As discussed below, neither reliance on consultation for the 2015 MCFO RMP revision nor the EA’s contention that leasing has no effect satisfies this requirement. Consultation is therefore required for the following parcels:

<u>Lease Sale Parcel</u>	<u>EA designation</u>	<u>Species</u>
MT-06-05-02	V8	whooping crane, interior least tern, piping plover Sprague’s pipit, red knot
MT-06-05-03	6X	whooping crane, interior least tern, Sprague’s pipit
MT-06-05-04	6Y	whooping crane, interior least tern, piping plover Sprague’s pipit, red knot
MT-06-05-05	KK	pallid sturgeon, whooping crane, red knot Northern long-eared bat
MT-06-05-06	H5	whooping crane, interior least tern, Sprague’s pipit Northern long-eared bat ³⁷

1. Background

Congress enacted the ESA in 1973 to provide for the conservation of endangered and threatened fish, wildlife, plants and their natural habitats.³⁸ The ESA imposes substantive and procedural

³⁶ 16 U.S.C. § 1536(a)(2).

³⁷ EA 23-24.

³⁸ *Id.* §§ 1531, 1532.

obligations on all federal agencies with regard to listed and proposed species and their critical habitats.³⁹

Under Section 7 of the ESA, federal agencies must “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical.”⁴⁰

The definition of agency “action” is broad and includes “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies” including the granting of permits or sale of leases and “actions directly or indirectly causing modifications to the land, water, or air.”⁴¹ These duties are only fulfilled by an agency’s satisfaction of the consultation requirements that are set forth in the implementing regulations for Section 7 of the ESA, and only after the agency complies with these duties may an action that “may affect” a protected species go forward.⁴²

Pursuant to these requirements, each federal agency must review its action at “the earliest possible time” to determine whether it “may affect” any listed species or its designated critical habitat in the “action area,” and must “use the best scientific and commercial data available” to determine whether these species are likely to be adversely affected by the action.⁴³ The “action area” encompasses all areas that would be “affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.”⁴⁴ The term “may affect” is broadly construed to include “[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character,” and thus is easily triggered.⁴⁵

If the action agency concludes that the proposed action is “not likely to adversely affect” a listed species that occurs in the action area, the FWS must concur in writing with this determination.⁴⁶ If FWS concurs in this determination, then formal consultation is not required.⁴⁷ If the FWS’s concurrence in a “not likely to adversely affect” finding is inconsistent with the best available science, however, any such concurrence must be set aside.⁴⁸

³⁹ See *id.* §§ 1536(a)(1), (a)(2) and (a)(4) and § 1538(a); 50 C.F.R. § 402.

⁴⁰ 16 U.S.C. § 1536(a)(2).

⁴¹ 50 C.F.R. § 402.02.

⁴² *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1055-57 (9th Cir. 1994).

⁴³ 50 C.F.R. §§ 402.14(a), (g)(8); 16 U.S.C. §§ 1536(a)(2), (a)(4).

⁴⁴ 50 C.F.R. § 402.02.

⁴⁵ *Interagency Cooperation – Endangered Species Act of 1973, as Amended*, 51 Fed. Reg. 19,926 (June 3, 1986).

⁴⁶ 50 C.F.R. §§ 402.13(a) and 402.14(b).

⁴⁷ *Id.* § 402.13(a).

⁴⁸ See 5 U.S.C. § 706(2).

If an agency concludes that an action is “likely to adversely affect” listed species or critical habitat, it must enter into formal consultation with the FWS.⁴⁹ The threshold for triggering the formal consultation requirement is “very low;” indeed, “any possible effect ... triggers formal consultation requirements.”⁵⁰

Formal consultation commences with the action agency’s written request for consultation and concludes with the FWS’s issuance of a “biological opinion.”⁵¹ The biological opinion states the FWS’s opinion as to whether the effects of the action are “likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.”⁵²

When conducting formal consultation, the FWS and the action agency must evaluate the “effects of the action,” including all direct and indirect effects of the proposed action, plus the effects of actions that are interrelated or interdependent, added to all existing environmental conditions – that is, the “environmental baseline.”⁵³ “The environmental baseline includes the past and present impacts of all Federal, state, and private actions and other human activities in the action area.”⁵⁴ The effects of the action must be considered together with “cumulative effects,” which are “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.”⁵⁵

If the FWS concludes in a biological opinion that jeopardy is likely to occur, it must prescribe “reasonable and prudent alternatives” to avoid jeopardy.⁵⁶

If the FWS concludes that a project is not likely to jeopardize listed species, it must nevertheless provide an “incidental take statement” (“ITS”) with the biological opinion, specifying the amount or extent of take that is incidental to the action (but which would otherwise be prohibited under Section 9 of the ESA), “reasonable and prudent measures” necessary or appropriate to

⁴⁹ 50 C.F.R. §§ 402.12(k), 402.14(a).

⁵⁰ See 51 Fed. Reg. at 19,926.

⁵¹ 50 C.F.R. § 402.02.

⁵² *Id.* § 402.14(g)(4). To “jeopardize the continued existence of” means “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” *Id.* § 402.02.

⁵³ 50 C.F.R. §§ 402.14 and 402.02. If the activity would not occur “but for” the proposed Federal action, then the activity is interrelated or interdependent and must be considered during consultation on the proposed Federal action.

⁵⁴ *Id.* § 402.02.

⁵⁵ *Id.*

⁵⁶ *Id.* § 402.14(h)(3).

minimize such take, and the “terms and conditions” that must be complied with by the action agency to implement any reasonable and prudent measures.⁵⁷

Furthermore, Section 7(d) of the ESA provides that once a federal agency initiates consultation on an action under the ESA, the agency, as well as any applicant for a federal permit, “shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section.”⁵⁸ The purpose of Section 7(d) is to maintain the environmental status quo pending the completion of consultation. Section 7(d) prohibitions remain in effect throughout the consultation period and until the federal agency has satisfied its obligations under Section 7(a)(2) that the action will not result in jeopardy to listed species or adverse modification of critical habitat.

2. BLM Must Consult With FWS Regarding the Proposed Action

BLM must consult with FWS in order to determine whether the proposed lease sale will jeopardize listed species or destroy or adversely modify their critical habitat. Six ESA listed species, and one candidate species, are clearly present within the action area: pallid sturgeon (endangered), whooping crane (endangered), interior least tern (endangered), piping plover (threatened, critical habitat), red knot (threatened), northern long-eared bat (threatened), and Sprague’s pipit (candidate).⁵⁹

Chapter 5.1 of the EA provides no indication that BLM has consulted with FWS regarding the proposed lease sale, stating only that “Recommendations by the USFWS applied in previous lease sale EAs were also applied to the lease parcels being reviewed. A letter was sent to the USFWS and MFWP during the 15-day scoping and 30-day public comment periods requesting comments on the parcels being reviewed.”⁶⁰ There is no indication, however, that BLM has consulted or intends to consult under ESA Section 7.

The updated EA does refer readers for “further information to BLM’s Biological Assessment, and FWS’s concurrence letter thereto, for the 2015 MCFO RMP Revision.”⁶¹ Reliance on the MCFO BA, however, is plainly insufficient to satisfy BLM’s ESA Section 7 consultation requirement for the proposed lease sale. FWS’s concurrence with the 2015 BA is explicitly conditioned on “the fact that site-specific evaluations will be conducted for individual activities authorized under the Miles City Field Office RMP at the time they are proposed, and consultation or conference would occur with the Service for such activities that may affect listed and proposed threatened and endangered species, as well as candidate species.”

⁵⁷ 16 U.S.C. § 1536(b)(4), 50 C.F.R. § 402.14(i).

⁵⁸ 16 U.S.C. § 1536(d).

⁵⁹ EA at 23.

⁶⁰ EA at 49.

⁶¹ EA at 25.

According to BLM’s own updated EA, the proposed action clearly meets the “may affect” threshold for consultation for the following parcels:

Lease Sale Parcel	EA designation	Species
MT-06-05-02	V8	whooping crane, interior least tern, piping plover Sprague’s pipit, red knot
MT-06-05-03	6X	whooping crane, interior least tern, Sprague’s pipit
MT-06-05-04	6Y	whooping crane, interior least tern, piping plover Sprague’s pipit, red knot
MT-06-05-05	KK	pallid sturgeon, whooping crane, red knot Northern long-eared bat
MT-06-05-06	H5	whooping crane, interior least tern, Sprague’s pipit Northern long-eared bat ⁶²

Under the ESA, its implementing regulations, BLM Manual 6840, and the 2015 MCFO RMP USFWS Biological Opinion, consultation on this proposed leasing activity is required; the 2015 Biological Opinion is expressly conditioned on the fact that “site-specific evaluations will be conducted for individual activities authorized under the Miles City Field Office RMP at the time they are proposed, and consultation or conference would occur with the Service for such activities that may affect listed and proposed threatened and endangered species, as well as candidate species.”⁶³

No such site-specific evaluation or consultation has occurred. Instead, BLM merely asserts:

Habitat within one or a portion of all the lease parcels exists to support USFWS threatened, endangered, or candidate, species including the Whooping Crane, Interior Least Tern, Piping Plover, Northern, long-eared bat, Red Knot, and Sprague’s pipit. The BLM has determined that the act of issuing leases within the previously mentioned threatened or endangered habitat will not affect that respective species. However, impacts to those species are possible from subsequent oil and gas development activities permitted at the APD stage. If development were to occur, additional mitigation would be included as conditions of approval on the APD or sundry notice. If oil and gas development is proposed for this parcel (MTM 105431-KK), BLM would consult with the USFWS pursuant to section 7(a)(2) of ESA and the BLM Special Status Species 6840 Manual. An outcome of the consultation process could be that conditions of approval are attached to the permit or the permit could not be approved. In the event oil and gas development takes place within identified Sprague’s pipit

⁶² EA 23-24.

⁶³ U.S. Fish and Wildlife Service, Miles City Field Office Resource Management Plan and Environmental Impact Statement Biological Assessment Concurrence BO-2 (July 10, 2015).

habitat, BLM would conference with the USFWS at the APD stage pursuant to section 7(a)(4) of ESA.⁶⁴

This piecemeal approach to analysis and consultation is foreclosed by the Ninth Circuit's decision in *Conner v. Burford*, 848 F.2d 1441, 1454-57 (9th Cir. 2012), where the court found that it was improper to exclude the potential effects of future lessee activity when reviewing the leasing phase for oil and gas permits on public lands. Moreover, BLM cannot rely on "Incremental Step Consultation" under BLM Manual 6840 to circumvent this requirement. That policy allows BLM to conduct consultation in "incremental steps," but only if BLM undertakes an initial formal consultation on the entire action, and the resulting biological opinion must include the FWS and/or NMFS views "on the entire action (50 CFR Part 402.14(k))." This requires an analysis of not only the impacts of leasing these parcels, but the interrelated actions associated with exploiting the oil and gas on these parcels. Furthermore, BLM may only proceed with the incremental step analysis "provided that the FWS and/or NMFS finding for the incremental step is not a jeopardy opinion; the BLM continues consultation with respect to the entire action and obtains biological opinions, as required, for each incremental step; the BLM fulfills its obligation to obtain sufficient data upon which to base the final biological opinion on the entire action; the incremental step does not result in the irreversible or irretrievable commitment of resources; and there is reasonable likelihood that the entire action will not result in jeopardizing the continued existence of a listed species or destruction or adverse modification of designated critical habitat." See Manual 6840 at .1F5i(1). BLM has not adhered to these requirements, since they have not initiated formal consultation regarding this lease sale, and have failed to provide sufficient data, nor properly determined with a reasonable likelihood that the "entire action" would not jeopardize listed species or adversely modify critical habitat.

BLM furthermore disregards specific requests by FWS that "[t]he EA should include specific discussions of known occurrences and known or potential habitat for all listed species on each of the proposed parcels."⁶⁵ BLM acknowledges that it made no changes whatsoever to the EA in response to this request, instead simply asserting – incorrectly – that "the act of issuing leases within the previously mentioned threatened or endangered habitat will not affect that respective species."⁶⁶ Yet FWS's concurrence with the 2015 RMP BA is explicitly conditioned on the assumption that site-specific analysis will occur at the time activities are proposed. Under *Conner v. Burford*, that stage is the leasing stage.

BLM similarly disregards FWS's comment that BLM should "identify if lease parcels contain critical habitat for northern long-eared bat and red knot."⁶⁷ In response, BLM added paragraphs acknowledging the presence of critical habitat, but failed to engage in the site-specific analysis

⁶⁴ EA 40-41.

⁶⁵ EA at 58 App. D (summarizing letter from Brent Esmoil, USFWS).

⁶⁶ *Id.*

⁶⁷ *Id.*

required by the RMPO BA concurrence and necessary to determine whether the proposed action may affect listed species or adversely modify their critical habitat under Section 7.⁶⁸

Finally, reliance on the RMPA Biological Assessment in conjunction with lease stipulations is wholly insufficient to support even an implied determination that the proposed action, and its indirect effects, will not adversely affect listed species. For example, for pallid sturgeon, the 2015 RMPA Biological Assessment explicitly acknowledges that RMP-prescribed lease stipulations governing siting may not be sufficient to protect pallid sturgeon from hazards associated with oil and gas development:

Allowed oil and gas activities outside of floodplain and riverine habitats may still pose a hazard if pallid sturgeon were to be exposed to contaminants associated with oil and gas development and production. Exposure could result from releases of harmful contaminants that spread into drainages that flow into the Yellowstone or Missouri river drainages where pallid sturgeon would complete their entire life cycle.⁶⁹

The RMP Biological Assessment goes on to note additional measures in the “RMP Mitigation Measures and Conservation Actions Appendix,” including closed-loop drilling technology, that could “minimize or eliminate these hazards to pallid sturgeon.”⁷⁰ The proposed action, however, includes in its stipulations only a 0.25-mile buffer from the edge of the Missouri and Yellowstone Rivers, and none of the further contaminant-limiting measures contemplated in the 2015 Biological Opinion and RMP Mitigation Measures Appendix.⁷¹ BLM asserts that leasing parcel 05-16-05 (EA Parcel KK) along the Missouri would have no effect on the pallid sturgeon, because “[i]f development were to occur, additional mitigation would be included as conditions of approval on the APD or sundry notice. If oil and gas development is proposed for this parcel (MTM 105431-KK), BLM would consult with the USFWS pursuant to section 7(a)(2) of ESA.”⁷² Yet BLM has failed to make the site-specific investigation required at the leasing stage as to whether development could in fact affect the pallid sturgeon. It has further failed to include in the lease terms the very mitigation measures it previously asserted could minimize hazards to the species, or even to determine clearly whether it retains sufficient authority under lease rights granted to require those measures at the APD or sundry notice stage.

For the reasons listed above, BLM must identify with specificity the presence of listed species within the action area affected by oil and gas development on the proposed leases, and must determine whether or not the proposed action, including interrelated actions and indirect effects (i.e., oil and gas drilling) “may affect” those species and/or their designated critical habitat

⁶⁸ See EA at 24, 40, and 58 App. D.

⁶⁹ RMPA Biological Assessment at BA-33 (RMPA App. Q).

⁷⁰ *Id.* at BA-33.

⁷¹ Compare Biological Assessment at BA-33 with EA at 61 (Stipulation NSO 11-78, Pallid Sturgeon Habitat).

⁷² EA at 40.

through Section 7 consultation. If the proposed action may affect listed species or critical habitat, BLM must initiate formal consultation with FWS to determine whether the action may jeopardize the continued existence of the species or destroy or adversely modify critical habitat.

C. BLM Must Defer the Lease Sale and Halt All New Leasing Until It Properly Considers the Climate Change Effects of New Leasing and Fracking

Climate change is a problem of global proportions resulting from the cumulative greenhouse gas emissions of countless individual sources. A comprehensive look at the impacts of fossil fuel extraction, and especially fracking, across all of the planning areas affected by the leases is necessary. BLM has *never* thoroughly considered the cumulative climate change impacts of *all* potential fossil fuel extraction and fracking across its public lands leasing programs generally. Proceeding with new leasing proposals *ad hoc* in the absence of a comprehensive plan that addresses climate change and fracking is premature and risks irreversible damage before the agency and public have had the opportunity to weigh the full costs of oil and gas and other fossil fuel extraction and consider necessary limits on such activities. Therefore BLM must cease all new leasing at least until the issue is adequately analyzed in a programmatic review of all U.S. fossil fuel leasing.

BLM cannot ignore climate change in its analysis of fossil fuel planning and leasing actions.⁷³ Piecemeal analyses of individual APDs or lease sales do not provide the appropriate perspective for examining the cumulative effects of fracking and resulting greenhouse gas emission at the regional and landscape scale. The PEA itself discusses general effects of climate change on eastern Montana,⁷⁴ but omits any analysis of the cumulative effects of oil and gas leasing on *contributing* to those effects.⁷⁵ At least information, however, is readily available, as evidenced by the PEA's citation to the BLM's own 2010 Climate Change Supplementary Information Report for Montana, North Dakota, and South Dakota ("2015 SIR").⁷⁶ The SIR provides detailed information, including attempts to quantify anticipated greenhouse gas emissions from MCFO leasing through 2028, then estimated at approximately 2 million metric tons per year of CO₂e.⁷⁷ Exclusion of this readily-available information obscures the role of the regional leasing program in contributing to climate change. A full EIS should address the findings of the 2010 SIR, update them to reflect developments in technology, science, and industry trends since 2010. The SIR also enumerates numerous opportunities for technological mitigation of some of the fugitive

⁷³ See 40 C.F.R. §§ 1508.7, 1508.8; *Center for Biological Diversity v. Nat'l Highway Transp. Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008); *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1176 (10th Cir.

2002); *Dine Citizens Against Ruining Our Env't v. U.S. Office of Surface Mining*, 82 F.Supp.3d 1201, 1212-14 (D. Colo. 2015).

⁷⁴ EA at 10-13.

⁷⁵ See EA at 17.

⁷⁶ See EA at 11.

⁷⁷ See SIR at 5-9 to 5-10 and Table 5-6.

emissions associated with oil and gas production and gathering/processing.⁷⁸ It even includes an estimate of potential emission reductions for the MCFO in particular from use of technological mitigation including compressor electrification, zero-emission glycol dehydrators, vapor recovery units for oil storage tanks, and green completions.⁷⁹ The PEA does not even consider any of these mitigation measures, much less incorporate them into an alternative as lease stipulations.

What neither the PEA nor the SIR address, however, is the role of the leasing program as a whole, and fracked oil and gas in particular. Climate change is a problem of global proportions resulting from the cumulative greenhouse gas emissions of countless individual sources, which cannot simply be addressed on a project-by-project basis and for making such land management decisions. Proceeding with new leasing proposals *ad hoc* in the absence of a comprehensive plan that addresses climate change and fracking is premature and risks irreversible damage before the agency and public have had the opportunity to weigh the full costs of oil and gas extraction and consider necessary limits on fracking. A full EIS should analyze and consider, at a minimum, the consequences of alternatives other than simply leasing and no action, including (a) a no-fracking alternative, and (b) an alternative involving adoption of mandatory emission-reduction technologies as lease stipulations.⁸⁰

1. BLM Must Consider Limiting Greenhouse Gas Emissions By Keeping Federal Fossil Fuels In the Ground

Expansion of fossil fuel production will substantially increase the volume of greenhouse gases emitted into the atmosphere and jeopardize the environment and the health and well being of future generations. BLM's mandate to ensure "harmonious and coordinated management of the various resources *without permanent impairment of the productivity of the land and the quality of the environment*" requires BLM to limit the climate change effects of its actions.⁸¹ Keeping all unleased fossil fuels in the ground and banning fracking and other unconventional well stimulation methods would lock away millions of tons of greenhouse gas pollution and limit the destructive effects of these practices.

A ban on new fossil fuel leasing and fracking is necessary to meet the U.S.'s greenhouse gas reduction commitments. On December 12, 2015, 197 nation-state and supra-national organization parties meeting in Paris at the 2015 United Nations Framework Convention on Climate Change Conference of the Parties consented to an agreement (Paris Agreement)

⁷⁸ SIR 6-1 to 6-19.

⁷⁹ See SIR at 6-17 & Table 6-3 (potential emission savings for MCFO from technology of 314,293 mT CO₂e annually).

⁸⁰ See SIR at 6-16 to 6-17.

⁸¹ See 43 U.S.C. §§ 1701(a)(7), 1702(c), 1712(c)(1), 1732(a) (emphasis added); see also *id.* § 1732(b) (directing Secretary to take any action to "prevent unnecessary or undue degradation" of the public lands).

committing its parties to take action so as to avoid dangerous climate change.⁸² As the Paris Agreement opens for signature in April 2016⁸³ and the United States is expected to sign the treaty⁸⁴ as a legally binding instrument through executive agreement,⁸⁵ the Paris Agreement commits the United States to critical goals—both binding and aspirational—that mandate bold action on the United States’ domestic policy to rapidly reduce greenhouse gas emissions.⁸⁶

The United States and other parties to the Paris Agreement recognized “the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge.”⁸⁷ The Paris Agreement articulates the practical steps necessary to obtain its goals: parties including the United States have to “reach global peaking of greenhouse gas emissions *as soon as possible* . . . and to *undertake rapid reductions* thereafter in accordance *with best available science*,”⁸⁸ imperatively commanding that developed countries specifically “should continue taking the lead by undertaking economy-wide absolute emission reduction targets”⁸⁹ and that such actions reflect the “highest possible ambition.”⁹⁰

The Paris Agreement codifies the international consensus that climate change is an “urgent threat” of global concern,⁹¹ and commits all signatories to achieving a set of global goals. Importantly, the Paris Agreement commits all signatories to an articulated target to hold the long-term global average temperature “to *well below 2°C* above pre-industrial levels and to *pursue efforts to limit the temperature increase to 1.5°C* above pre-industrial levels”⁹² (emphasis added).

In light of the severe threats posed by even limited global warming, the Paris Agreement established the international goal of limiting global warming to 1.5°C above pre-industrial levels

⁸² Paris Agreement, Art. 2.

⁸³ Paris Agreement, Art. 20(1).

⁸⁴ For purposes of this Petition, the term “treaty” refers to its international law definition, whereby a treaty is “an international law agreement concluded between states in written form and governed by international law” pursuant to article 2(a) of the Vienna Convention on the Law of Treaties, 1155 U.N.T.S. 331, 8 I.L.M. 679 (Jan. 27, 1980).

⁸⁵ See U.S. Department of State, Background Briefing on the Paris Climate Agreement, (Dec. 12, 2015), <http://www.state.gov/r/pa/prs/ps/2015/12/250592.htm>.

⁸⁶ Although not every provision in the Paris Agreement is legally binding or enforceable, the U.S. and all parties are committed to perform the treaty commitments in good faith under the international legal principle of *pacta sunt servanda* (“agreements must be kept”). Vienna Convention on the Law of Treaties, Art. 26.

⁸⁷ *Id.*, Recitals.

⁸⁸ *Id.*, Art. 4(1).

⁸⁹ *Id.*, Art. 4(4).

⁹⁰ *Id.*, Art. 4(3).

⁹¹ *Id.*, Recitals.

⁹² *Id.*, Art. 2.

in order to “prevent dangerous anthropogenic interference with the climate system,” as set forth in the UNFCCC, a treaty which the United States has ratified and to which it is bound.⁹³ The Paris consensus on a 1.5°C warming goal reflects the findings of the IPCC and numerous scientific studies that indicate that 2°C warming would exceed thresholds for severe, extremely dangerous, and potentially irreversible impacts.⁹⁴ Those impacts include increased global food and water insecurity, the inundation of coastal regions and small island nations by sea level rise and increasing storm surge, complete loss of Arctic summer sea ice, irreversible melting of the Greenland ice sheet, increased extinction risk for at least 20-30% of species on Earth, dieback of the Amazon rainforest, and “rapid and terminal” declines of coral reefs worldwide.⁹⁵ As scientists noted, the impacts associated with 2°C temperature rise have been “revised upwards, sufficiently so that 2°C now more appropriately represents the threshold between ‘dangerous’ and ‘extremely dangerous’ climate change.”⁹⁶ Consequently, a target of 1.5 °C or less temperature rise is now seen as essential to avoid dangerous climate change and has largely supplanted the 2°C target that had been the focus of most climate literature until recently.

Immediate and aggressive greenhouse gas emissions reductions are necessary to keep warming below a 1.5° or 2°C rise above pre-industrial levels. Put simply, there is only a finite amount of CO₂ that can be released into the atmosphere without rendering the goal of meeting the 1.5°C target virtually impossible. A slightly larger amount could be burned before meeting a 2°C

⁹³ See U.N. Framework Convention on Climate Change, Cancun Agreement. Available at <http://cancun.unfccc.int/> (last visited Jan 7, 2015); United Nations Framework Convention on Climate Change, Copenhagen Accord. Available at http://unfccc.int/meetings/copenhagen_dec_2009/items/5262.php (last accessed Jan 7, 2015). The United States Senate ratified the UNFCCC on October 7, 1992. See <https://www.congress.gov/treaty-document/102nd-congress/38>.

⁹⁴ See Paris Agreement, Art. 2(1)(a); U.N. Framework Convention on Climate Change, Subsidiary Body for Scientific and Technical Advice, Report on the structured expert dialogue on the 2013-15 review, No. FCCC/SB/2015/INF.1 at 15-16 (June 2015); IPCC AR5 Synthesis Report at 65 & Box 2.4.

⁹⁵ See Jones, C. et al, Committed Terrestrial Ecosystem Changes due to Climate Change, 2 Nature Geoscience 484, 484–487 (2009); Smith, J. B. et al., Assessing Dangerous Climate Change Through an Update of the Intergovernmental Panel on Climate Change (IPCC) ‘Reasons for Concern’, 106 Proceedings of the National Academy of Sciences of the United States of America 4133, 4133–37 (2009); ; Veron, J. E. N. et al., The Coral Reef Crisis: The Critical Importance of <350 ppm CO₂, 58 Marine Pollution Bulletin 1428, 1428–36, (2009); ; Warren, R. J. et al., Increasing Impacts of Climate Change Upon Ecosystems with Increasing Global Mean Temperature Rise, 106 Climatic Change 141–77 (2011); Hare, W. W. et al., Climate Hotspots: Key Vulnerable Regions, Climate Change and Limits to Warming, 11 Regional Environmental Change 1, 1–13 (2011); ; Frieler, K. M. et al., Limiting Global Warming to 2°C is Unlikely to Save Most Coral Reefs, Nature Climate Change, Published Online (2013) doi: 10.1038/NCLIMATE1674; ; M. Schaeffer et al., Adequacy and Feasibility of the 1.5°C Long-Term Global Limit, Climate Analytics (2013).

⁹⁶ Anderson, K. and A. Bows, Beyond ‘Dangerous’ Climate Change: Emission Scenarios for a New World, 369 Philosophical Transactions, Series A, Mathematical, Physical, and Engineering Sciences 20, 20–44 (2011).

became an impossibility. Globally, fossil fuel reserves, if all were extracted and burned, would release enough CO₂ to exceed this limit several times over.⁹⁷

The question of what amount of fossil fuels can be extracted and burned without negating a realistic chance of meeting a 1.5 or 2°C target is relatively easy to answer, even if the answer is framed in probabilities and ranges. The IPCC Fifth Assessment Report and other expert assessments have established global carbon budgets, or the total amount of remaining carbon that can be burned while maintain some probability of staying below a given temperature target. According to the IPCC, total cumulative anthropogenic emissions of CO₂ must remain below about 1,000 gigatonnes (GtCO₂) from 2011 onward for a 66% probability of limiting warming to 2°C above pre-industrial levels.⁹⁸ Given more than 100 GtCO₂ have been emitted since 2011,⁹⁹ the remaining portion of the budget under this scenario is well below 900 GtCO₂. To have an 80% probability of staying below the 2°C target, the budget from 2000 is 890 GtCO₂, with less than 430 GtCO₂ remaining.¹⁰⁰

To have even a 50% probability of achieving the Paris Agreement goal of limiting warming to 1.5°C above pre-industrial levels equates to a carbon budget of 550-600 GtCO₂ from 2011 onward,¹⁰¹ of which more than 100 GtCO₂ has already been emitted. To achieve a 66% probability of limiting warming to 1.5°C requires adherence to a more stringent carbon budget of only 400 GtCO₂ from 2011 onward,¹⁰² of which less than 300 GtCO₂ remained at the start of 2015. An 80% probability budget for 1.5°C would have far less than 300 GtCO₂ remaining. Given that global CO₂ emissions in 2014 alone totaled 36 GtCO₂,¹⁰³ humanity is rapidly consuming the remaining burnable carbon budget needed to have even a 50/50 chance of meeting the 1.5°C temperature goal.¹⁰⁴

⁹⁷ Marlene Cimons, Keep It In the Ground 6 (Sierra Club *et al.*, Jan. 25, 2016).

⁹⁸ IPCC, 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change; Summary for Policymakers at 27; IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change at 64 & Table 2.2 [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)] at 63-64 & Table 2.2 (“IPCC AR5 Synthesis Report”).

⁹⁹ From 2012-2014, 107 GtCO₂ was emitted (*see* Annual Global Carbon Emissions at <http://co2now.org/Current-CO2/CO2-Now/global-carbon-emissions.html>).

¹⁰⁰ Carbon Tracker Initiative, Unburnable Carbon – Are the world’s financial markets carrying a carbon bubble? available at <http://www.carbontracker.org/wp-content/uploads/2014/09/Unburnable-Carbon-Full-rev2-1.pdf>; Meinshausen, M. *et al.*, Greenhouse gas emission targets for limiting global warming to 2 degrees Celsius, 458 Nature 1158, 1159 (2009)

¹⁰¹ IPCC AR5 Synthesis Report at 64 & Table 2.2.

¹⁰² *Id.*

¹⁰³ *See* Global Carbon Emissions, <http://co2now.org/Current-CO2/CO2-Now/global-carbon-emissions.html>

¹⁰⁴ In addition to limits on the *amount* of fossil fuels that can be utilized, emissions pathways compatible with a 1.5 or 2°C target also have a significant temporal element. Leading studies make clear that to reach a reasonable likelihood of stopping warming at 1.5° or even 2°C, global CO₂ emissions must be phased

According to a recent report by EcoShift Consulting commissioned by the Center and Friends of the Earth, unleased (and thus unburnable) federal fossil fuels represent a significant source of potential greenhouse gas emissions:

- Potential GHG emissions of federal fossil fuels (leased and unleased) if developed would release up to 492 gigatons (Gt) (one gigaton equals 1 billion tons) of carbon dioxide equivalent pollution (CO₂e); representing 46 percent to 50 percent of potential emissions from all remaining U.S. fossil fuels.
- Of that amount, up to 450 Gt CO₂e have not yet been leased to private industry for extraction;
- Releasing those 450 Gt CO₂e (the equivalent annual pollution of more than 118,000 coal-fired power plants) would be greater than any proposed U.S. share of global carbon limits that would keep emissions below scientifically advised levels.

Fracking has also opened up vast reserves that otherwise would not be available, increasing the potential greenhouse gas emissions that can be released into the atmosphere. BLM must consider a ban on this dangerous practice and a ban on new leasing to prevent the worst effects of climate change.

2. BLM Must Consider A Ban on New Oil and Gas Leasing and Fracking in a Programmatic Review and Halt All New Leasing and Fracking

Development of unleased oil and gas resources will fuel climate disruption and undercut the needed transition to a clean energy economy. As BLM has not yet had a chance to consider no leasing and no-fracking alternatives as part of any of its RMP planning processes or a comprehensive review of its federal oil and gas leasing program, BLM should suspend new leasing until it properly considers this alternative in updated RMPs or a programmatic EIS for the entire leasing program. BLM demonstrably has tools available to consider the climate consequences of its leasing programs, and alternatives available to mitigate those consequences, at either a regional or national scale.¹⁰⁵

BLM would be remiss to continue leasing when it has never stepped back and taken a hard look at this problem at the programmatic scale. Before allowing more oil and gas extraction in the planning area, BLM must: (1) comprehensively analyze the total greenhouse gas emissions which result from past, present, and potential future fossil fuel leasing and all other activities

out by mid-century and likely as early as 2040-2045. *See, e.g.* Joeri Rogelj *et al.*, Energy system transformations for limiting end-of-century warming to below 1.5°C, 5 *Nature Climate Change* 519, 522 (2015). United States focused studies indicate that we must phase out fossil fuel CO₂ emissions even earlier—between 2025 and 2040—for a reasonable chance of staying below 2°C. *See, e.g.* Climate Action Tracker, <http://climateactiontracker.org/countries/usa>. Issuing new legal entitlements to explore for and extract federal fossil fuels for decades to come is wholly incompatible with such a transition.

¹⁰⁵ *See, e.g.*, BLM Montana, North Dakota and South Dakota, Climate Change Supplementary Information Report (updated Oct. 2010) (conducting GHG inventory for BLM leasing in Montana, North Dakota and South Dakota); BLM, Proposed Rule: Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 6615 (Feb. 8, 2016) (proposing BLM-wide rule for prevention of methane waste).

across all BLM lands and within the various planning areas at issue here, (2) consider their cumulative significance in the context of global climate change, carbon budgets, and other greenhouse gas pollution sources outside BLM lands and the planning area, and (3) formulate measures that avoid or limit their climate change effects. By continuing leasing and allowing new fracking in the absence of any overall plan addressing climate change BLM is effectively burying its head in the sand.

A programmatic review and moratorium on new leasing would be consistent with the Secretary of Interior's recent order to conduct a comprehensive, programmatic EIS (PEIS) on its coal leasing program, in light of the need to take into account the program's impacts on climate change, among other issues, and "the lack of any recent analysis of the Federal coal program as a whole." *See* Secretary of Interior, Order No. 3338, § 4 (Jan. 15, 2016). Specifically, the Secretary directed that the PEIS "should examine how best to assess the climate impacts of continued Federal coal production and combustion and how to address those impacts in the management of the program to meet both the Nation's energy needs and its climate goals, as well as how best to protect the public lands from climate change impacts." *Id.* § 4(c).

The Secretary also ordered a moratorium on new coal leasing while such a review is being conducted. The Secretary reasoned:

Lease sales and lease modifications result in lease terms of 20 years and for so long thereafter as coal is produced in commercial quantities. Continuing to conduct lease sales or approve lease modifications during this programmatic review risks locking in for decades the future development of large quantities of coal under current rates and terms that the PEIS may ultimately determine to be less than optimal. This risk is why, during the previous two programmatic reviews, the Department halted most lease sales with limited exceptions.... Considering these factors and given the extensive recoverable reserves of Federal coal currently under lease, I have decided that a similar policy is warranted here. A pause on leasing, with limited exceptions, will allow future leasing decisions to benefit from the recommendations that result from the PEIS while minimizing any economic hardship during that review.

Id. § 5.

The Secretary's reasoning is also apt here. A programmatic review assessing the climate change effects of public fossil fuels is long overdue. And there is no shortage of oil and gas that would preclude a moratorium while such a review is conducted, as evidenced by very low natural oil and gas prices. More importantly, BLM should not "risk[] locking in for decades the future development of large quantities of [fossil fuels] under current... terms that a [programmatic review] may ultimately determine to be less than optimal." *Id.* BLM should cancel the sale and halt all new leasing and fracking until a programmatic review is completed.

For the same reasons discussed above, the EA cannot postpone the discussion of air pollution and climate change impacts until site-specific plans are proposed. "Reasonable forecasting" is possible based on development projections in the SIR. This information includes potential areas

of extraction, the type of reserves and their location, and potential drilling techniques – enough information to support a reasonable projection of potential air pollution and greenhouse gas emissions.

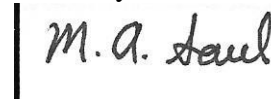
A piecemeal analysis at the APD stage risks sweeping under the rug cumulative impacts of drilling on multiple parcels for lease within the same locale. At the individual APD stage, BLM would have no more information than it does now to analyze the cumulative impacts of developing multiple leased parcels in a given area, except for the development plans for an individual APD. Because BLM must analyze impacts at “the earliest practicable time,” and no benefit would be gained from postponing the analysis, BLM must discuss these cumulative impacts before the lease sale.

III. Conclusion

For all of the reasons stated above, the lease sale, will, if adopted unchanged, result in violations of BLM’s obligations under NEPA, the Endangered Species Act, Federal Land Policy and Management Act, and Mineral Leasing Act. An appropriate response to this protest would be for BLM to defer the lease sale and commence preparation of an EIS.

Please do not hesitate to contact me if you have any questions or to schedule a protest resolution meeting.

Sincerely,

A handwritten signature in black ink that reads "M. A. Saul". The signature is written in a cursive style and is positioned to the right of a vertical line that serves as a separator from the typed name below.

Michael Saul
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