

Appendix H. COMMENT RESPONSES – VERNAL FIELD OFFICE

SUBMISSION I.D.: Vernal – Public Land Solutions (PLS)

COMMENT 1: The BLM should fully evaluate the impacts of this competitive lease sale on the region’s recreation economy and recreation sites, and protect recreation sites.

RESPONSE: The comment letter stated it included Vernal’s EA, but no Vernal EA specific parcels, recreation facilities, recreation sites, or economies were mentioned in the EA. Therefore, no specific response is possible. At this time any recreational economic impacts are expected to be negligible for Uintah, Carbon, and Duchesne Counties based on data obtained from Utah Department of Workforce Services¹ which shows that from 2004 to present the leisure and hospitality services share of total employment has remained a stable percent of the total employment for those counties, despite the fluctuations experienced by the mining industry (which includes oil and gas activity). In contrast, recreation is a primary employer in Daggett and Grand County, regardless of mining which makes up a small to negligible portion of the economy in those two counties.

SUBMISSION I.D.: Vernal – Western Energy Alliance

COMMENT 1: In anticipation of the signing of the Proposed RMP Amendments for Sage Grouse, stipulations and lease notices should not be applied to certain lease sale parcels to prevent un-necessary delay in developing those parcels once they have been leased.

RESPONSE: It is BLM policy that the existing RMP guidance and decisions remain in effect until a new amendment or revision to the current RMP is completed and approved. In addition, as noted in BLM Handbook 1624, “all circumstances for granting a waiver, exception, or modification [to a stipulation] must be documented in the plan or plan amendment” (Planning for Fluid Mineral Resources Chapter IV, C.3). The parcels have been reviewed in accordance with Instruction Memorandum 2018-026, which specifies that the BLM should allow for leasing with appropriate stipulations. Stipulations and notices have been applied as set forth in the Vernal Resource Management Plan (2008) and the Approved Resource Management Plan Amendment (2015) and is further directed by guidance in Title III Sec 202(d) of the Federal Land Policy and Management Act which states:

“(d) Any classification of public lands or any land use plan in effect on the date of enactment of this Act is subject to review in the land use planning process conducted

¹ <https://jobs.utah.gov/wi/data/library/employment/emptrends.html>

under this section, and all public lands, regardless of classification, are subject to inclusion in any land use plan developed pursuant to this section".

SUBMISSION I.D.: Vernal– National Wildlife Federation - The BLM National Environmental Handbook (H-1790-1) states that substantive comments do one or more of the following:

- Question, with reasonable basis the accuracy of information in the EIA or EA
- Question, with reasonable basis, the adequacy of methodology for, or assumptions used for the environmental analysis
- Present new information relevant to the analysis
- Present reasonable alternatives other than those analyzed in the EIS or EA
- Cause changes or revisions in one or more of the alternatives.

National Wildlife Federation's comment letter is too broad and non-specific to be considered substantive. The BLM is under no obligation to sort through a comment letter for multiple documents and try to determine which comments would apply to which document. No responses to the comments in this letter are being provided, however responses to similar comments from other comments are provided below.

SUBMISSION I.D.: Vernal – SUWA

COMMENT 1: The BLM failed to take a hard look at impacts to air quality.

RESPONSE: The BLM took a hard look at air quality in that the EA includes estimates of emissions that could result if a lessee decides to drill for oil and gas and construct ground disturbing infrastructure. See EA sections 3.3.1, 3.3.4, 4.2.1, 4.2.4, 4.3.2, and 4.3.5. These estimates were derived from BLM's knowledge of existing oil and gas operations. This includes identifying hazardous air pollutants common to oil and gas development, identification of impacted air sheds protected by the Prevention of Significant Deterioration (PSD) program, the sensitive air sheds closest to the lease sale, and generating an anticipated emissions scenario even though specific impacts that could come from development are currently unknown. Climate change and greenhouse gas emissions have also been considered in the EA. The leasing action states that "It is not possible to disclose actual air quality impacts from future development by modeling due to the variation in emission control technologies as well as construction, drilling, and production technologies applicable to oil versus gas production and utilized by various operators" (EA section 4.2.1), as well as environmental factors like wind, rain, snow, and inversions, The BLM also provided hypothetical or average estimates for criteria emissions and low, typical, and high estimates for greenhouse gas emissions based on published guidelines and the BLM's experience with permitting oil and gas wells, and stated that the expected emissions may range from zero to an indeterminate range based on realized production rates, control technology, and physical characteristics of any oil produced.

COMMENT 2: BLM Failed to analyze a range of reasonable alternatives.

RESPONSE: Pursuant the National Environmental Policy Act and the CEQ, the range of alternatives is defined by the purpose and need of the project. The parcels in this lease sale were nominated by the public. The March Competitive Lease Sale analyzed the “Proposed Action Alternative” (Lease of all Nominated Parcels in Conformance with the RMP) and “No Action Alternative, as well as six alternatives that were considered but dismissed due to inconsistency with the RMP, because they would require a RMP Plan Amendment to move forward, or because they are functionally the same as one of the two alternatives provided

Other alternatives suggested by SUWA include:

- An alternative in which BLM would defer from leasing or adjust lease parcel boundaries to avoid lands that any of the archaeological site type location models prepared for the Class I and Site Location Model for the Bureau of Land Management Vernal Field Office Area predict have high probability for the presence of cultural sites. This alternative is functionally the same as the No Action alternative in which all parcels would be deferred. Since each parcel is an independent, though similar, action the BLM at the end of the EA process could choose either the proposed action or the no action alternative on a parcel specific basis, including the use of any cultural resource information such as the cultural resource site potential model (predictive model) located within the Vernal Field Office Class I – Existing Information Inventory (Class – I). While the Class I and the predictive model were incorporated into the cultural resource analysis as part of BLM’s reasonable and good faith identification effort, the reader should be aware that an area indicated as having a high potential for cultural resources by the predictive model, it does not necessarily mean that the area will also have a high density of cultural resources. Should this lease sale be purchased and should any oil and gas development projects occur, the BLM retains authority and has a mandate to follow the Section 106 Process, which includes an additional cultural resource identification process, which will include an additional literature review of all cultural resource information in the area (i.e. known sites, surveys and potentially the use of the predictive model), and a Class III – Intensive Pedestrian Survey. Should the leases sell, the cultural resources will be protected by the National Historic Preservation Act and through the lease stipulations. Please note that a literature review was conducted for the 94 parcels, and the impacts to cultural resources were disclosed in the EA.
- An air quality alternative as proposed by Megan Williams in her comments prepared on behalf of SUWA for the December 2017 competitive lease sale, which included parcels in the same areas offered now for leasing, including some parcels immediately adjacent to the parcels being offered now in the March 2019 lease sale. See Williams December 2017 Comments at 35-36; see also SUWA et al Comments December 2017 Competitive Oil and Gas Lease Sale, DOI-BLM-UT-G010-2017-0028-EA at 3-4 (July 23, 2017) (providing additional explanation regarding this

air quality alternative and how it satisfies BLM's stated objective – which is the same objective here) (attached). : Leasing is an administrative action that does not authorize development to occur, so no emissions would occur as a result of this EA. The BLM is not required to speculate on the level of development that will occur nor analyze a worst-case scenario as a basis for requiring additional mitigation prior to any development being proposed. However, the BLM has created a development scenario for analysis purposes so the decision may be informed as to the nature of future potential emissions. However, the development scenario does not guarantee that wells will be drilled at all, let alone at the reasonably foreseeable or maximum development rates identified in Appendix D. If the parcels are leased and developed, a site specific analysis of air quality impacts will be completed for the proposed development and will address compliance with the CAA. Enforcement of ambient air quality standards is the responsibility of the regulatory authorities responsible for the airshed--the State of Utah DEQ and the EPA. .

COMMENT 3: BLM failed to analyze cumulative impacts of past, present, and reasonably foreseeable future oil and gas lease sales. BLM never determined the geographic scope or timing of the cumulative effects analysis nor did the agency consider the past present, and reasonably foreseeable future actions. Between the December 2017, December 2018 and March 2019 lease sale, the BLM has offered approximately 227 parcels consisting of nearly 303,000 acres of public lands without analyzing the cumulative effects of that leasing decision.

RESPONSE: The 2008 RMP is the primary source of cumulative impacts within the planning area (see the Final EIS section 4.23) as amended by the Greater Sage Grouse Approved RMP 2015, and as supplemented by the ARMS Report 2014, the Colorado Plateau Rapid Ecological Assessment, and Cumulative Impact Analysis Special Status Species dated 2-13-2018. These various documents analyze or include data on the impacts from oil and gas leasing and development to the Vernal planning area, and found that approximately 860,651 acres would be open to leasing, 779,730 acres will be open to moderately constrained leasing (CSU and TL), 86,789 acres will be open to majorly constrained leasing (NSO), and 187,917 acres will be closed to leasing (Vernal RMP 2008 – note these total numbers were modified by the Utah Sage Grouse Plan Amendment). Resources of specific concern and their impact analysis from oil and gas leasing and development can be found in the following:

- Greater sage-grouse – Chapter 4 Environmental Consequences Utah GRSG RMPA 2015 and this EA section 4.3.7.
- Graham's and White River beardtongue – Section 4.23.14 of the proposed RMP August 2008, and the Cumulative Impact Analysis dated 2-13-2018 Special Status Species Document as developed by this office for special status species within the planning area, , and this EA sections 4..3.9 and 4.3.10.
- Air quality, including the recent nonattainment designation for ozone – ARMS Impact Report 2014, and this EA section 4.3.2.

- Climate change and greenhouse gas emissions – ARMS Impact Report 2014, the Colorado Plateau Rapid Ecoregional Assessment 2010, and this EA section 4.3.2 and 4.3.5.
- Lands with wilderness characteristics – Sections 4.10.2.5, 4.23.8 and 4.23.15 Vernal PRMP 2008 and this EA section 4.3.6.
- Cultural and archaeological resources Sections 4.3 and 4.23.2 Vernal PRMP 2008, and this EA section 4.3.4.
- Areas of Critical Environmental Concern – Section 4.23.15 Vernal PRMP 2008 and this EA section 4.3.3.
- Water quantity and quality, including impacts related to hydraulic fracturing - Section 4.23.13 Vernal PRMP 2008. Please note that it was determined that no impact to water quality or quantity would result from leasing beyond those previously described in the Vernal PRMP FEIS Section 4.15.2.4 and 4.23.13, so no cumulative effects are anticipated. See the following sections of the EA for a description of BLM’s consideration of the impacts of hydraulic fracturing: Appendix F section 1.b, Appendix E Geology, Appendix E Water: Groundwater Quality, and Appendix E Attachment 1 Hydraulic Fracturing White Paper.
- Recreation, including along the White River – Sections 4.23.15 Wild and Scenic Rivers and 4.12.2.4 and 4.23.10 Recreation Vernal PRMP 2008 and this EA section 4.3.8
- Visual resources – Sections 4.19.2.5 and 4.23.17 Vernal PRMP 2008 and this EA section 4.3.11

Please note that each resource’s cumulative impact analysis in section 4.3 defines the cumulative impact geographic and temporal boundaries for that resource, and the past, present, and reasonably foreseeable actions for the chosen area.

See also section 4.1.2 of the Vernal PRMP, which explains the assumptions and methodology for minerals development that was used to determine the impacts to the resources of concern and the Mineral Potential Report Appendix A, which projected oil and gas activity over 15 years by development area regardless of surface or mineral ownership. Please note that a cumulative effect analysis specific to this proposed action is included in section 4.3 of the EA including past, present, and reasonably foreseeable actions as well as geographic scope and timing.

COMMENT 4: BLM leasing decisions are cumulative actions and similar actions with cumulatively significant impacts that must be analyzed in a single NEPA document.

RESPONSE: Each individual parcel are similar actions, not connected actions, because they are independently nominated, and issuance or deferral of one parcel does not affect whether the BLM may issue or defer another parcel. As the NEPA Policy Handbook H-1790-1, states that “you may include similar proposed actions as an aspect of a broader proposal, analyzed in a single document....when a single document will improve the quality of analysis and efficiency of the NEPA process”. Please note, this is only a consideration and is at the discretion of the Authorized Officer (NEPA Handbook Section 6.5.2).The cumulative actions for the entire field office have been analyzed

under NEPA through the proposed RMP, the Final RMP 2008, and the Sage Grouse RMP amendment 2015. Additional data is available in the Colorado Plateau Eco Regional Assessment, the Air Resource Management Strategy Model Report 2015, and the Cumulative Impact Analysis dated 2-13-2018 for Special Status Species, and has been incorporated into this EA cumulative impact sections as appropriate. This EA developed a Reasonable Foreseeable Development Scenario and applied the available data as appropriate, therefore the cumulative actions have been addressed.

COMMENT 5: The BLM must consider its past leasing decisions to determine whether and EIS is required. BLM must analyze the context and intensity of the proposed action.

RESPONSE: As per 40 CFR 1506.6(b), if a proposed action will have a significant environmental impact, BLM must prepare and EIS. If it is unclear whether the action would have a significant effect, BLM may prepare an environmental assessment. See 40 CFR 1508.9(a). In this case, the future impacts of possible development is unclear because this is only a leasing action. The RMP/EIS contained the cumulative look at leasing (past, present, and reasonably foreseeable. A FONSI statement, if applicable for this EA, would document the reasons why implementation of the selected alternative would not result in significant environmental impacts (effects) beyond those already addressed in the EIS prepared for the current land use plan: Vernal Field Office RMP (October 2008). The FONSI includes documentation of the BLM's consideration of context and intensity.

COMMENT 6: The BLM failed to take a hard look at greenhouse gas emissions and climate change. The BLM obscured the impact of GHG because it focusses on a 100-year horizon instead of the 20-year horizon. The BLM calculated only CO₂, and not all GHGs. The BLM didn't account for full lifecycle emissions including leaks. The BLM claims it cannot quantify GHGs at the leasing stage.

RESPONSE: The BLM took a hard look at greenhouse gas emissions and climate change in that the EA includes estimates of emissions that could result if a lessee decides to drill for oil and gas and construct ground disturbing infrastructure as well as disclosure of climate change predictions for the region. These estimates were derived from published guidelines on estimating GHG emissions, existing data sources, and BLM's knowledge of oil and gas operations. See sections 4.2.4 and 4.3.5 of the EA. The BLM provided estimates for low, typical, and high greenhouse gas emissions per year, and states that the expected emissions may range from zero to an indeterminate range based on realized production rates, control technology, and physical characteristics of any oil produced". In addition, the BLM incorporated the data from the Colorado Plateau Rapid Eco-Regional Assessment which projected climate change in the region due to development. The project's incremental contribution to cumulative climate change is its GHG emissions as disclosed. The calculations in Section 4.2.4 of total Greenhouse Gas Warming Potential (GWP) included direct and indirect emissions of methane. It is reasonable for the BLM to use the 100-year GWP instead of the 20-year GWP this is the primary measure of the relative impact of different GHGs used in the EPA's Greenhouse Gas Reporting Program because in the United States. The EA

erroneously described the downstream emissions as CO₂. They are actually emissions expressed in CO₂e (CO₂ equivalents – a metric to express the impact of each different greenhouse gas in terms of the amount of CO₂ making it possible to express greenhouse gases as a single number), and were generated using the EPA’s equivalencies factors for a barrel of oil and mcf of natural gas. This has been corrected in the EA. Calculating GHG emissions with this method provides a slightly more conservative estimate than calculating combustion emissions of each individual gas. This has been clarified in the EA. The BLM’s emission numbers did account for “leaks”, but in the data sources behind the analysis (the Monument Butte emissions inventory and the ARMS emissions inventory) leaks are called “fugitives”. The EA language has been clarified to explain that actual assessments of future development cannot be made due to variations in techniques and equipment, however quantitative estimates of full life cycle direct and indirect emissions were made and included in the EA.

COMMENT 7: BLM must analyze both upstream and downstream GHG emissions prior to leasing the proposed March 2019 parcels.

RESPONSE: Impacts to air quality including the appropriate GHG emissions have been included in section 4.2.4.2 of the EA. In that section, the BLM did provide estimates for emissions from lease development as well as downstream combustion.

COMMENT 8: BLM must analyze the environmental justice impacts of ozone pollution in the Vernal Field Office that will result from the March 2019 Lease sale to members of the Ute Tribe residing in the Uintah and Ouray Reservation.

RESPONSE: As noted in the I.D. Team checklist, the leasing of the nominated parcels would not cause any disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, or Native American Tribes because the minerals are federal, the surface is private or BLM, and the airshed is common to everyone regardless of race or population. Ouray is not the only community within the nonattainment area. The non-attainment area encompasses the majority of the populations within Duchesne and Uintah Counties, and therefore additional emissions from development would not disproportionately adversely affect minority or poverty populations.

COMMENT 9: BLM’s Treatment of Cultural Resources Violated NHPA and NEPA: BLM must comply with NHPA and “make a reasonable and good faith effort to identify cultural resources affected by the undertaking” and comply with NEPA and “insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken”.

RESPONSE: The BLM completed a literature and data review for the proposed action which identified the extent of surveys (24%) and the known historic properties (247 sites) that fall within the project areas, and prepared a cultural resources report to document a reasonable and good faith effort to identify historic properties and any effects this undertaking may have on historic properties, as required by Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C 306108). This document was

created following the Advisory Council on Historic Preservation guidelines titled Meeting the “Reasonable and Good Faith” Identification Standards in Section 106 Review. The Environmental Assessment (EA) for this Proposed Action provides a summary of the cultural resources information provided in Summary Report of Cultural Resources Inspection (BLM, 2017a) to Section 106 consulting parties. Also, the March lease sale Environmental Assessment was subject to a public comment period (November 15th until December 17th, 2018 (32 days)). No surface use would occur as a result of this leasing document. However, if the leases are issued and development is proposed, site specific conditions of approval for surface use would be developed through NEPA to minimize or eliminate impacts. All applications for permit to drill are subject to a regular monitoring schedule. Prior to any ground disturbing activities associated with future undertakings that may result from the leasing of these parcels, Class III – Intensive Pedestrian Surveys will be conducted. Historic properties associated with the Fremont archaeological culture or any other cultural group identified during these surveys will be protected in accordance with existing federal laws and regulations.

Per BLM Handbook H-3120-1 – Competitive Leases, all parcels included in this lease sale will have the protection offered by the BLM Cultural Resource Protection Stipulation (UT-LN-68). Lease stipulations are legal requirements that go above and beyond standard lease requirements. Meeting lease stipulation requirements is a critical component of having any future proposed development approved by the BLM. The stipulation reads as follows:

This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act, American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

This stipulation gives BLM legal authority to require modification to or disapprove any future activities related to development of these lease parcels if conflicts with cultural resources cannot be resolved. In other words, BLM retains control over future development and has the discretion and authority to prevent adverse effects. There are no exceptions, modifications, or waivers for this stipulation.

Finally, consulting parties have been identified and were provided opportunities to review and comment on the findings of the Class I survey. Their response and conclusion of Section 106 consultation with the Utah State Historic Preservation Office is pending.

COMMENT 10: BLM failed to take a hard look at impacts to cultural resources pursuant to NEPA.

RESPONSE: The BLM took a hard look at cultural and historic resources in the BLM reviewed existing literature, survey data, and models to determine the extent of known or predicted resources in the project area, and extrapolated the probable effects based on BLM's knowledge of existing oil and gas operations. See sections 4.2.3 and 4.3.4. The issuance of leases does convey an expectation that drilling and development would occur. For the proposed action an intensive literature and data review were conducted for the 94 parcels. A total of 32,247 acres of previous cultural survey was conducted, or approximately 24% of the total acreage. The literature search identified approximately 247 sites within the parcels of which 61 are recommended eligible or listed on the National Register of Historic Places (NRHP). The literature search also disclosed 151 ineligible sites within the proposed lease parcels. Eligible sites include a variety of both historic and prehistoric resources.

The BLM prepared a cultural resources report to document a reasonable and good faith effort to identify historic properties and any effects this undertaking may have on historic properties, as required by Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C 306108). Consultation was conducted according to the regulations. Based on our Analysis and Data Review the BLM determined that reasonably foreseeable development could occur within all parcels with a no adverse effect to historic properties. NHPA Section 106 consultation is ongoing. Prior to issuing any decision on the lease sale, the BLM will have completed its obligations in regards to compliance with the NHPA. The Environmental Assessment (EA) for this Proposed Action provides a summary of the cultural resources information provided in Summary Report of Cultural Resources Inspection (BLM, 2017a) to Section 106 consulting parties. This information has been provided to the public and citizens as part of the public review period for this EA. No surface use would occur as a result of this leasing document. However, if the leases are issued and development is proposed, site specific conditions of approval for surface use would be developed through NEPA to minimize or eliminate impacts. All applications for permit to drill are subject to a regular monitoring schedule. Prior to any ground disturbing activities associated with future undertakings that may result from the leasing of these parcels, Class III – Intensive Pedestrian Surveys will be conducted. Historic properties associated with the Fremont archaeological culture or any other cultural group identified during these surveys will be protected in accordance with existing federal laws and regulations. Per BLM Handbook H-3120-1 – Competitive Leases, all parcels included in this lease sale will have the protection offered by the BLM Cultural Resource Protection Stipulation (UT-LN-68). Lease stipulations are legal requirements that go above and beyond standard lease requirements. Meeting lease stipulation requirements is a critical component of having any future proposed development approved by the BLM. The stipulation reads as follows:

This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act, American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may

affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

This stipulation gives BLM legal authority to require modification to or disapprove any future activities related to development of these lease parcels if conflicts with cultural resources cannot be resolved. In other words, BLM retains control over future development and has the discretion and authority to prevent adverse effects. There are no exceptions, modifications, or waivers for this stipulation.

COMMENT 11: The proposed lease sale violates FLPMA's requirement for consistency with approved resource management plans. The March 2019 Lease Sale EA, neither provides meaningful analysis of the potential impacts to sage-grouse seasonal habitats, populations and metapopulations, nor does it comply with the BLM's mandatory requirement under the ARMPA to "prioritize leasing and development" outside of sage-grouse habitats. In particular, BLM's ostensible "prioritization process," in Appendix G of the EA, consists of a completely unexplained table of factors, without either any assessment or weighing of those factors nor consideration of any alternative other than leasing of all proposed parcels. BLM also fails to consider any alternative that would withhold high-value and/or potentially high-value seasonal habitats from leasing and resulting disturbance.

RESPONSE: It is not clear from the comment letter what impact analysis is missing. The EA section 4.2.6 includes quantification of potential disturbance to habitats, and a description of effects from oil and gas development to sage grouse. For the proposed alternative, disturbance from potential development to sage grouse habitat has been calculated for each parcel based on the disturbance assumptions discussed in Appendix F. The disturbance assumptions estimate that 1,907 acres of disturbance is reasonably foreseeable within the 94 parcels containing GRSG habitat. Because these parcels are 40% non-habitat and 60% GRSG habitat, it is unlikely that all 1,907 acres of assumed disturbance would be within GRSG habitat.

SUWA misconstrues the prioritization requirement. Washington Office Instructional Memorandum (IM) 2018-026 states:

"The GRSG Plans established an objective to prioritize oil and gas leasing and development outside of GRSG habitat management areas, but to allow for leasing with appropriate stipulations on all BLM mineral estate designated in the GRSG Plans as "open" for leasing".

In effect, the BLM does not need to consider whether "other lands outside of sage-grouse habitat might be more suitable for new leasing than extensive areas of PHMA." The IM further clarifies that the "the BLM will continue to work with parties who file expressions of interest and potential lessees to voluntarily prioritize leasing in less-sensitive areas. Consistent with the GRSG Plans, however, parcels may be leased within GRSG habitat management areas without first leasing parcels in non-habitat areas. BLM

offices may also take into consideration other prioritization considerations, but only in-so-far as they are consistent with the governing land use plan. An example would be to prioritize outside of areas where a GRSG adaptive management trigger has been tripped. Other prioritization considerations may include office workload capacity, first-in/first-out, priority for unit obligation wells, processing the easiest applications first, operator drilling plans, operator proposals for units, potential drainage cases, and other resource values that must be considered.

The BLM accepts parcel nominations each year, and the resulting number of parcels nominated varies from Field Office to Field Office. A list of nominated parcels is sent by the State Office to the respective Field Office to assess the degree of appropriate pre-lease sale analysis pursuant to NEPA and other applicable law. It is then up to the respective Field Office to determine how many lease parcels its staff have the capability to process within the given periods.

The sage-grouse implementation coordinator in the VFO evaluated the parcels according to IM 2018-026 and determined that the parcels could be carried forward in the parcel list sent to the VFO. The VFO staff had sufficient resources to process and analyze the parcels and conduct analysis within the given time frame. Appendix G documents the factors considered by the staff when analyzing the parcels as required by Instruction Memorandum 2018-026 which replaced Instruction Memorandum 2016-143. The factors considered include: proximity to existing leases, proximity to existing development, presence of other disturbance or land use, existence of an oil and gas unit, parcel potential for oil or gas development, and the existence of previous EIS or Master Leasing Plan analysis. If the VFO parcel list had been larger or if there were inadequate staff resources, then the VFO, in coordination with the State Office, could have reduced the parcel list to a manageable size by excluding parcels in greater sage-grouse habitat based on some type of prioritization sequence of the evaluation factors listed in Appendix G.

However, for the March 2018 Lease Sale, there was no need to apply prioritization sequence criteria because the VFO staff were able to conduct the necessary analyses of the parcels."

This alternative of deferring high value habitats from leasing is functionally the same as the No Action alternative in which all parcels would be deferred. Since each parcel is an independent, though similar, action the BLM at the end of the EA process could choose either the proposed action or the no action alternative on a parcel specific basis.

COMMENT 12: BLM failed to take a hard look at impacts to Graham's and White River Penstemon. The BLM must consult with Fish and Wildlife Service. The lease notices do not give BLM authority to prohibit surface occupancy. The lease notices do not acknowledge invalidation of the Conservation Agreement by the District Court of Colorado, so the BLM should defer leasing until a modified Agreement is prepared or the species is listed. The EA fails to take a hard look at the four objectives of the Conservation Agreement or meet the Agreement's management strategy, specifically the disturbance caps and the avoidance buffers. The EA does not address identified threats to the species

including oil and gas development, road construction and maintenance, invasive weeds, off road vehicles, habitat fragmentation, and climate change.

RESPONSE: The BLM took a hard look on penstemon in that the parcels that fall within habitat were identified, and potential impacts from future development were disclosed based on BLM's knowledge of oil and gas operations in the area. Sections 4.2.8, 4.2.9, 4.3.9, and 4.3.10 and the specialist report. The issuance of leases does convey an expectation that drilling and development would occur. Per GIS review of the project area, these special status species do appear in some of the project area. Due to the nature of a lease sale, a specific impact to the species is unknown. The reviewer did note that stipulations and notices for these species would be attached to lease parcels and if a plan of development were received, a site-specific analysis would be completed. Secondly, the cumulative impacts to threatened, endangered, or candidate plant species have been incorporated by reference from sections 4.17.2, 4.23.14, and 4.23.16 in the VFO RMP.

The BLM conferenced with FWS on the Graham and White River penstemons for the parcels in the March 2019 oil/gas lease sale in the December 2018 lease sale consultation and coordination (BLM, November 20, 2018). The BLM determined that a proposed lease sale of the parcels containing or potentially containing the two penstemons would not likely jeopardize Graham's beardtongue or White River beardtongue or adversely modify their proposed critical habitats. The BLM received the letter back with a stamp and signature of concurrence from FWS dated November 28, 2018.

The lease sale does not identify the exact location in the parcels of future disturbance from exploration or development. That will happen when the Application for Permit to Drill is filed with the BLM. When BLM is aware of the proposed disturbance locations, we can require specific protection or avoidance measures through the Conditions of Approval. In the meantime, we have informed the lessee that there will be restrictions on the parcels for these species. See EA, section 4.2.9 – "The application of appropriate general and species-specific lease notices and stipulations would be adequate for the leasing stage to disclose potential restrictions against future authorizations." and – "Specific mitigation and disturbance caps would be applicable to parcels within the Conservation Areas established by the Conservation Agreement and Strategy for Graham's Beardtongue [*Penstemon grahamii*] and White River Beardtongue [*P. scariosus* var. *albifluvis*] SWCA 2014)."

The BLM was not a defendant in the District Court case and the final judgement did not require or suggest that BLM defer parcels with Graham's beardtongue or White River beardtongue or proposed critical habitat from oil and gas lease sales. It also did not prescribe specific protection or conservation measures for the species.

The FWS is currently evaluating the two beardtongues to decide if they warrant listing. That decision will not be made until later in 2019. In the meantime, FWS supports BLM continuing to manage these species under the existing Conservation Agreement until it

is amended to add or remove acres to the conservation areas, based on new information, and to extend the life of the agreement.

The BLM follows the disturbance caps from the Conservation agreement, but is unable to calculate the additional surface disturbance in the parcels located in the conservation unit until an APD with specific locations of proposed disturbance is received. The BLM will have to add additional restrictions to the APD through NEPA at that time to ensure that the new surface disturbance does not exceed the caps. Lease notice UT-LN-90 includes protection measures (#4) regarding the 300 foot boundaries.

Regarding the threats, see EA Section 4.2.9 – “Potential loss or damage to individual plants or populations could occur. In addition, direct dispersed and indirect impacts may occur, including: the loss of suitable habitat for the species and its pollinators; increased competition for space, light, and nutrients with invasive and noxious weed species introduced and spread due to the Proposed Action; accidental spray or drift of herbicides used during invasive plant control; altered physiology (*i.e.*, photosynthesis, respiration, and transpiration) and reproductive success due to increased fugitive dust resulting from the surface disturbance and project related traffic. The application of appropriate general and species-specific lease notices and stipulations would be adequate for the leasing stage to disclose potential restrictions against future authorizations.” The BLM does retain the authority to impose reasonable measures on or deny any permit that does not acceptably avoid or minimize impacts – the lease itself conveys only the right and responsibility to submit a permit to the agency, and propose use of the leased land subject to the lease terms and stipulations.

COMMENT 13: SUWA incorporates the comments from Megan Williams from the December 2017 Lease Sale Comment Period and the December 2018 Lease Sale Protest Period.

RESPONSE: The BLM reviewed the December 2017 comments from Megan Williams. Those comments are substantially the same as her comments for the December 2018 Lease Sale Protest. Therefore, they will not be revisited in this document. Instead, the BLM refers the reader to the December 2017 sale’s website (<https://go.usa.gov/xN9Gu>) for both the comments and the responses.

The December 2018 Lease Sale Protest will contain the official responses to Megan William’s protest comments, however since the results of the protest are scheduled to come out after this EA is posted for its protest period, her comments are summarized and responded to in the Megan Williams section of this document.

COMMENT 14: BLM did not account for the difference in emissions between oil and gas wells, or the difference in emissions for wells that are further from existing infrastructure vs those that are near to existing infrastructure, or the emission effects that other resource requirements may have, or the difference in emissions that result from horizontal vs directional vs vertical drilling.

RESPONSE: Leasing does not result in emissions. However, potential future development may. Most of the wells in the Basin produce a mixture of gas, oil,

condensate, and water. It is impossible to determine at the leasing stage where any wells will be proposed, what equipment will be used in their development, what infrastructure they will need if they are capable of production, or even how the formations will perform (what percentage of oil, gas, condensate, or water will be produced), the BLM used numbers for an “average” well. For this lease sale, the BLM did acknowledge in the EA that emissions vary according to technique, equipment, product, and other operating differences (see Section 4.2.1) and used annual oil and annual gas emission estimates where available (see Table 4-3). In the case of the GHG estimates, data from all involved counties was considered and documented in the specialist report, but only the numbers for the highest producing counties were carried forward into the EA.

COMMENT 15: BLM cut and paste their analysis and alternatives from the December 2018 lease sale document.

RESPONSE: The majority of the parcels contained in the March 2019 Lease Sale document were originally part of the December 2018 lease sale, and as a result were fully and individually analyzed in that document. However, an Idaho Court recently issued an injunction requiring BLM to provide a 30-day public review period for any parcels that encompass Greater Sage-Grouse Habitat Management Areas.” See *W. Watersheds Proj. v. Zinke*, 1:18-cv-00187-REB, Doc. 74 (Sept. 21, 2018). Parcels fitting that criteria and their analysis were pulled out of the December 2018 lease sale, and moved into the March 2019 sale to comply with that ruling. This resulted in the noted cut and paste error, which has since been corrected.

COMMENT 16: SUWA incorporates the information on the dismissal of the wilderness alternatives in their December 2018 lease sale protest. BLM’s rationale for rejecting its other suggested alternatives, “no-surface occupancy,” phased development leasing,” and “mitigation leasing” was arbitrary and capricious because they would accomplish the purpose and need of the lease sale

RESPONSE: In its protest of the December 2018 Lease Sale, SUWA asserts that its “leasing outside of wilderness-caliber lands,” is not subsumed in Vernal EA’s no leasing alternative. This is due to a misunderstanding of the nature of subsumed alternatives.

The proposed action of a leasing EA differs from a typical EA in that it is basically comprised of a number of separate proposed actions; each parcel can be leased independently of all other parcels. Also, any lands in any individual parcel can be broken out and removed from offering.

As such, the proposed action (offer all parcels) and no action (offer no parcels) adequately address the potentially infinite number of alternatives that could be contrived from combining and removing parcels or parts of parcels. It is not necessary to analyze a separate alternative of “leasing outside of wilderness-caliber lands,”

because if the BLM determines it shouldn't lease inside wilderness-caliber areas it can simply decline to offer the relevant parcels, and/or to carve out the wilderness-caliber areas from the parcels. This determination would be reflected in the FONSI that would support the decision and in the decision itself. The inherent individual utility of each parcel in a lease sale proposal precludes the need for multiple action alternatives.

The BLM did not consider the "no-surface occupancy," phased development leasing," and "mitigation leasing" in detail because all three alternatives would require stipulations to be added to the parcels that are currently not allowed under the governing RMPs. As stated in the Memorandum Decision and Order Denying Plaintiff's Motion for Review of Agency Action and Dismissing Certain Claims as Moot in *SUWA v. BLM*, Case No. 2:15-cv-00194-JNP-EJF: "FLPMA (Federal Land Policy Management Act) prohibits BLM from taking actions inconsistent with the provisions of RMPs (Memorandum, page. 6). Applying stipulations such as "No Surface Occupancy", and "controlled surface use" (which would encompass "phased development"9) when the RMP does not explicitly state that such stipulations could be applied to the area encompassed by the parcels would be a violation of FLPMA.

COMMENT 17: SUWA incorporates the entirety of their December 2018 lease sale protest.

RESPONSE: The BLM has reviewed the December 2018 protest, and the only comments that were applicable but not substantially the same as the comments in their March 2019 lease sale is their concerns regarding the dismissal of their proposed alternatives.

First, in the protest letter SUWA seems to confuse a "no leasing" alternative with a "defer leasing" alternative. SUWA argues that the 1980 Environmental Assessment Record is not applicable, however that document contained the Vernal Field Office's consideration of a true "no leasing" alternative, in which no lands would be offered for lease. By contrast, the No Action alternative in the March 2019 EA is a "defer leasing" alternative where the nominated parcels would not be offered for lease *at this time pending additional information or a plan amendment*. Because the Vernal RMP makes the determination that these lands are available for leasing subject to a range of constraints, the BLM cannot refuse to lease the lands without a plan amendment. Therefore, if SUWA is proposing a "no leasing" alternative for parcels with wilderness characteristics, the BLM must dismiss that alternative from this EA because it would not be in conformance with the land use plan, and this EA is not a plan amendment per the purpose and need which is to respond to leasing nominations, not make planning level leasing decisions. This has been clarified in the EA.

Second, the BLM assumed that SUWA wished to propose a "defer leasing" alternative for parcels with wilderness characteristics. This alternative was considered in the EA but dismissed because it did not improve the EA's range of alternatives. Since each parcel is an independent, though similar, action the BLM at the end of the EA process could choose to either lease or defer any parcel in the EA's decision record – the BLM is not limited to selecting only the Proposed Action or only the No Action Alternatives because

of the independent utility of each parcel. Therefore, the BLM concluded that SUWA's alternative is functionally the same as both the Proposed Action and the No Action alternatives and does not improve the EA's range of alternatives. This has been clarified in the EA.

COMMENT 18: BLM has not acknowledged the cumulative effect of state and private leasing of minerals.

RESPONSE: The RMP did consider the effects of private and state leases as demonstrated by 4.6.1.1.7.3 of the EIS.

COMMENT 19: BLM made a comparison between the gas well emissions and the equivalent single passenger cars and private homes for Uintah County, but did not make similar comparisons for other counties, and did not calculate the total for the number of wells estimated in the EA. GHG emissions equal to 184,471 passenger vehicles driven for one year and 93,138 homes is significant contrasted with the overall population of Uintah County which is 35,000.

RESPONSE: The BLM did express GHG emissions from an average well in Uintah County in terms of passenger vehicles and homes to give context to the numbers for the general public. However, comparing the emission equivalents of a single well to the actual number of houses or residents and saying it is significant because it outnumbers the residents is misleading to the public because it ignores the fact that there are already 6,056 producing wells in Uintah County with similar emissions. The numbers for Uintah County were chosen over the other counties since it had the highest predicted downstream GHG emissions of the four counties involved in the Vernal leasing EA, and because 90% of the EA's RFD wells would occur in Uintah County. The numbers for a single well were given as an example because this EA does not authorize actual development, so there is no guarantee that any of the wells anticipated in the development scenario would be developed.

COMMENT 20: BLM claims they cannot make accurate assessment of GHG emissions at the leasing stage but admitted in an email that detailed analysis can be done but BLM has declined to do so to avoid setting a precedent. BLM violates NEPA when it hides this information from the public to avoid setting a precedent.

RESPONSE: SUWA incorrectly asserts that "BLM admitted that an agency can produce even more detailed analysis at the lease sale state related to air quality and GHG impacts, but has declined to do so to avoid setting a precedent for lease sales". This quote from an email was taken out of context. The email discussion was regarding the information needed for a social cost of carbon estimate, not GHG emission estimates. The BLM did include GHG emission estimates in the EA and they are as accurate as possible given that there is no specific development plan, so the exact equipment needed, drilling timeframe, drilling technique, production amount, and other details are unknown at this preliminary stage. The cited email was the opinion of one BLM staff person taken from a discussion between several staff regarding the ability and need to do social cost of carbon calculations. However, the BLM concluded in the March 2019

EA that social cost of carbon estimates can be produced, but were not necessary for the March 2019 EA for the reasons described in the final paragraph of section 4.2.4.

COMMENT 21: BLM has failed to provide an analysis of the severity or significance of GHG emissions beyond reporting the numbers. One widely used approach is the Social Cost of Carbon method.

RESPONSE: The social cost of carbon protocol does not measure the actual incremental impacts of a project on the environment and does not include all damages or benefits from carbon emissions. NEPA does not require a cost-benefit analysis (40 CFR Part 1502.23) and one has not been conducted. Without a complete monetary cost-benefit analysis, which would include the social benefits of energy production to society as a whole and other potential positive effects, inclusion of a global social cost of carbon analysis would be unbalanced, potentially inaccurate, and not useful. Additionally, social cost of carbon estimates are just one approach that an agency can take to examine climate consequences from GHG emissions associated with the proposed leasing action. The fact that climate impacts associated with GHG emissions were not quantified in terms of monetary costs does not mean that climate impacts were ignored in this EA. Climate impacts are summarized and incorporated by reference from the Colorado Plateau Rapid Eco-Regional Assessment. Estimated GHG emissions from the leasing action incrementally contribute to these climate impacts. In addition, GHG emissions comparisons are presented in the EA as the equivalent number of cars and homes to further relate emissions to the public's everyday life. This approach presents the data and information in a manner that follows many of the guidelines for effective climate change communication developed by the National Academy of Sciences (National Research Council 2010)² by making the information more readily understood and relatable to the decision-maker and the general public.

COMMENT 22: BLM must analyze the climate effect of methane leakage in Utah, which is high for the Uintah Basin.

RESPONSE: The BLM prepared the EA considering emission inventories that accounted for fugitive emissions, including methane among others. The BLM's cumulative effects for GHG and climate change have been expanded to cumulatively quantify GHG emissions. Climate change effects were already included by reference to the Colorado Plateau Rapid Eco-Regional Assessment data.

SUBMISSION I.D.: Vernal– Megan Williams

NOTE: Some of the comments contained in the December 2018 letter were exactly the same as the comments previously provided by Ms. Williams in her December 2017 letter. Unique comments or comments where the responses have changed due to new circumstances are numbered and addressed below. For the duplicated comments, the BLM reviewed both the comments and the BLM's previous responses, which are contained in the December 2017 Lease Sale's EA at Appendix G which can be found on

² <https://www.nap.edu/catalog/12784/informing-an-effective-response-to-climate-change>

the Documents tab of the following website: <https://go.usa.gov/xN9Gu>. The BLM has identified no changed circumstances that would affect the responses previously published, therefore those comments are not reiterated here, but the reader is referred instead to the noted section of the previous publication. Duplicated comments are as follows:

- Alternative regarding air quality impacts and compliance with the CAA: *See* December 2017 lease sale Appendix G Megan Williams Comment Response numbers 1 and 2.
- Comment requesting detailed air quality dispersion modeling for impacts on NAAQS, air quality degradation, and visibility: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 3.
- Comment regarding reasonably foreseeable development scenarios for oil and gas and tar sands and oil shale: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 4.
- Comment regarding RMP goals and objectives and monitoring and mitigation requirements: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 5.
- Comment regarding NAAQS pollutant levels and project contribution to exceedances: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 6.
- Comment on the importance of VOC controls: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 8.
- Comment requesting offsetting development emissions: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 10.
- Comment regarding recent monitored NO₂ concentrations compared to reported background 1-hour average concentrations: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 11.
- Comment regarding recent monitored PM_{2/5} concentrations compared to reported background 24-hour average concentrations: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 12.
- Comment regarding visibility impacts in Class I areas: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 13.
- Comment regarding the reasonably foreseeable development compared to the maximum development scenario and limitation of development: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 14.
- Comment regarding inventory assumptions and potential underestimation of emissions or missed sources and limitation of emissions: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 15.
- Comment regarding VOC emission estimate and potential underestimation of emissions due to operator error: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 16.

- Comment regarding lease stipulations and notices which rely on control efficiency but the effectiveness of the control is not considered: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 17.
- Comment on the cumulative AP impacts to the exposed population particularly when new wells are proposed in proximity to existing uncontrolled or less controlled wells: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 18.
- Comment on the ARMS prediction of ozone and PM2.5 impacts and potential underestimation of impacts: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 20.
- Comment on the significance of the incremental impacts of the project to ozone and PM2.5 when added to the existing and proposed sources: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 21.
- Comment on the increment consumption and the lack of a PSD (Prevention of Significant Deterioration) determination: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 22.
- Comment on mitigation measures for reducing impacts from methane: *See* December 2017 lease sale Appendix G Megan Williams Comment Response numbers 22, 23, and 24.
- Comment requesting an emission mitigation alternative: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 26.
- Comment requesting implementation of the ARMS ozone-related mitigation measures: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 28.
- Comment regarding tier IV engines: *See* December 2017 lease sale Appendix G Megan Williams Comment Response numbers 29 and 30.
- Comment regarding leak detection and repair: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 25.
- Comment regarding ozone episode response measures: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 35.
- Comment regarding emission offsets by a 1.2 to 1 ratio: *See* December 2017 lease sale Appendix G Megan Williams Comment Response number 36.

COMMENT 1: The BLM must include a comprehensive analysis of cumulative effects, including effects of the proposed actions along with all past, present and reasonably foreseeable future actions on the affected environment.

RESPONSE: *See* SUWA comment 3 above.

COMMENT 2: In its analysis of impacts from the proposed leasing, BLM should consider that significant impacts can occur at the 24-hour PM_{2.5} concentrations as low as 30µg/m³. The BLM has a duty, independent of the Clean Air Act (CAA), to protect health and the environment regardless of EPA's current standard.

RESPONSE: In section 4.2 of the EA the BLM analyzed air pollutant concentrations with respect to established health standards and reported anticipated concentrations from

oil and gas development. For criteria air pollutants, health standards are established by the EPA and known as the National Ambient Air Quality Standards. The CAA requires periodic review of the science upon which the standards are based and the standards themselves. State regulatory agencies may also establish air pollutant standards. As a rigorous scientific assessment is undertaken when developing State and National standards, it would be arbitrary for the BLM to set a significance threshold below the NAAQS in its NEPA analysis. Additionally, the BLM has reported anticipated pollutant concentrations in the EA regardless of concentration standards.

COMMENT 3: The BLM relies on the Monument Butte Oil and Gas Development Project Final EIS Alternative A modeling analysis for the leasing EA. The Monument Butte analysis only assessed construction and development impacts from PM emissions (i.e., there is no assessment of NO_x impacts from construction and development activities.)

RESPONSE: The commenter incorrectly states that the Monument Butte EIS, which is incorporated by reference in section 4.2 of the leasing EA, only analyzed construction and development impacts from PM emissions. In the Monument Butte EIS, criteria pollutants evaluated were PM₁₀, PM_{2.5}, NO₂, SO₂, CO, and VOC – see Final EIS Table 4.2.1.1.1-1 and Appendix B Table 4-1 which quantifies the emissions for these pollutants for Development (which includes construction, drilling, and completion), Production (well operation), and Infrastructure. Impacts for the phase (Development, Production, or Infrastructure) that had the highest emissions were then presented in the EIS as representative of the maximum impact expected. Emissions of PM were highest during construction and development, while the highest emission phase for the other pollutants occurs during the operations and infrastructure phase of the project, i.e. impacts from NO_x emissions are lower during the construction and development phase than during the operations phase.

COMMENT 4: The modeling results from the Monument Butte EIS are based on certain operating scenarios and assumptions and BLM must ensure that the modeling parameters reflect similar operating conditions to what would occur under the leasing alternatives in the EA.

RESPONSE: Specific development plans are not available for the lease parcels, so exact development methods and resulting emissions cannot be predicted. Instead, the Monument Butte EIS is used to provide the decision maker and public an estimate of emissions based on numbers from the most recent past project in the basin. The emissions estimates in the EA are for informational purposes only, and are not intended to represent emissions for future development activities, or create emission caps. All parcels that are developed are under notice that additional air analysis may be needed at the site specific stage, which sufficiently addresses this issue.

COMMENT 5: With the large number of lease parcels in the ozone nonattainment area the EA must contain enforceable VOC and NO_x mitigation measures to ensure the proposed lease development will not contribute to adverse ozone impacts. The BLM should also mitigate PM, HAPs, Ozone, and Climate Change (GHG).

RESPONSE: No emissions come from leasing, which is an administrative action. It is reasonable to assume that indirect emissions will occur as lease parcels are developed. However, at this time there are no plans of development and specific emissions sources, durations, amounts, or locations are unknown. The need for specific mitigation measures will be better identified at the project stage when details are known about emission sources, durations, amounts, and locations. In addition, projects with emissions in non-attainment areas above de minimus levels are already required to show mitigation or offsets as part of Clean Air Act general conformity requirements. The stipulations and lease notices attached to each parcel and current state and federal laws and regulations are sufficient to provide for minimization of impacts from future development that may result from the leasing action. See also December 2017 lease sale Appendix G Megan Williams Comment Response numbers 11-13, 16, 18, 30, 31, and 32.

COMMENT 6: The BLM should complete an analysis of all increment consuming and increment expanding sources in the area. At a minimum, the BLM should report on how much increment has already been consumed in the affected area so that it can make a reasonable assessment of whether the proposed action will contribute to more deterioration of air quality than is allowed under the CAA.

RESPONSE: A PSD increment consumption review is for permitting purposes in attainment areas. Leasing has no direct emissions and is not subject to permitting requirements. The State of Utah DEQ and EPA are responsible for PSD review in the Uinta Basin. The BLM does not evaluate PSD increment consumption for regulatory purposes, only for informational and disclosure purposes. New development has not been proposed as part of the lease sale. A reasonably foreseeable development scenario was prepared for this EA to disclose the nature of any future development impacts. The scenario does not guarantee that development will be proposed or approved. The BLM believes its current air quality analysis represents the potential impacts of the Proposed Action, including reasonably foreseeable development. Should the parcels be leased and developed in the future, a site-specific analysis will be completed as part of the required NEPA review and that will address the increase in emissions including the regulatory requirements at the time development is proposed, as well as mitigation measures which may be required to ensure compliance with ambient air quality standards and the CAA.

COMMENT 7: There are no estimates of the potential downstream GHG emissions from the transmission and storage of the oil and gas produced. BLM should include estimates of emissions from these downstream emissions in the EA.

RESPONSE: Downstream GHG emissions are in section 4.2.4.2 of the EA. Emissions from transmission and storage of produced oil and gas is included as part of the annual emissions for the operation of a single well.

COMMENT 8: In the EA, BLM presents a low global warming potential (GWP) for methane of 28. The BLM must revise the EA to reflect updated data on the GWP and must consider the 20-

year GWP for methane since shorter timeframes more accurately reflect the climate-forcing impacts of methane emissions.

RESPONSE: According to the IPCC, GWPs typically have an uncertainty of ± 35 percent. GWPs have been developed for several GHGs over different time horizons including 20 year, 100 year, and 500 year. The choice of emission metric and time horizon depends on type of application and policy context; hence, no single metric is optimal for all policy goals. The 100-year GWP (GWP100) was adopted by the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol and is now used widely as the default metric. In addition, the EPA uses the 100 year time horizon in its Inventory of U.S. Greenhouse Gas Emissions and Sinks report, GHG Reporting Rule requirements under 40 CFR Part 98 Subpart A, and uses the GWPs and time horizon consistent with the IPCC Fifth Assessment Report in its science communications. In this EA, the BLM uses GWPs and time horizon consistent with EPA to reflect the current state of science for GHG emission calculations associated with the proposed action. The BLM also uses GWPs without carbon feedback (28 for methane) to be consistent with the EPA and UNFCCC. See SUWA comment 6.

COMMENT 9: BLM must include adequate plans to protect air quality in the area as part of this EA. Include additional mitigation to reduce NOx pollution (tier 4 engines, phased drilling, engines with lower NOx emission rate), mitigation to reduce particulate matter pollution (minimize traffic, dust control measures, tier 2 or better engines), and mitigation to address HAPs, Ozone, and climate change (flaring, compressors, LDAR).

RESPONSE: See Megan Williams comment 5.

COMMENT 10: Since parcels in this lease sale are inside the ozone nonattainment area, an Adaptive Management Strategy / Ozone Action Plan should apply to development of these parcels until implementation plan requirements are established for attaining and maintaining the NAAQS.

RESPONSE: The BLM is not required to adopt adaptive management or ozone/episode action plans due to a nonattainment designation, and the BLM has chosen to not adopt such a plan as part of this lease sale. If the Uinta Basin does not achieve a clean data determination by the attainment date and the airshed is reclassified as moderate nonattainment, state and federal implementation plans will be developed. Implementation plans at that time would require reasonably available control technology (RACT) and reasonably available control measures (RACM) which will likely include mandatory actions during ozone episodes. The BLM is currently participating in the Uinta Basin Ozone Working Group (UBOWG), which is a collaborative forum to facilitate attainment of the ozone standard in the Uinta Basin. The BLM encourages operators to follow best management practices including emission reduction measures identified by UBOWG and voluntary seasonal ozone controls identified by Utah Division of Environmental Quality. The stipulations and lease notices attached to each parcel as well as current state and federal laws and regulations are sufficient to provide for

minimization of impacts from future development that may result from the proposed leasing action.