UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

New Mexico State Office

March 2019 Competitive Oil and Gas Lease Sale

Environmental Assessment, DOI-BLM-NM-F010-2019-0001-EA

FINDING OF NO NEW SIGNIFICANT IMPACT

BACKGROUND

The Bureau of Land Management (BLM) prepared an Environmental Assessment (EA)[1] (DOI-BLM-NM-F010-2019-0001-EA) analyzing the effects of leasing 14[2] nominated oil and gas lease parcels (5,859.02 acres) in San Juan and Sandoval Counties, New Mexico, for sale in the March 2019 Farmington Field Office (FFO) Competitive Oil and Gas Lease Sales (hereafter referred to as the "Lease Sale").

Leasing the 14 nominated lease parcels, with stipulations and lease notices derived from the Farmington Resource Management Plan (RMP) (BLM 2003)[3] as amended (BLM 2014 and 2015) is analyzed in the EA under the Proposed Action. Under the Proposed Action, the BLM Authorized Officer has the authority to selectively lease or to defer parcels, based on the analysis of potential impacts presented in the lease sale EA. A No Action Alternative was also analyzed in the EA, wherein no parcels would be offered for lease and current management would continue. Selection of the No Action alternative would not prevent future leasing in these areas consistent with the relevant RMPs. Twenty-four issues were identified during the scoping process (see EA section 1.5.5) and were analyzed and presented as "Issues Analyzed in Brief" (AIB) in the EA section 3.5. Four issues concerning air quality pollutants and emissions, greenhouse gas (GHG) emissions, and water quantity are carried forward as "Issues Analyzed in Detail" (AID) in EA Section 3.6. The EA analyzes GHG emissions and the social cost thereof for informational purposes only, and BLM has not determined to lease individual parcels (or not) based solely based on anticipated GHG emissions or social cost of GHG estimates.

This Finding of No New Significant Impact (FONSI) has been prepared for the Proposed Action.

FINDING OF NO NEW SIGNIFICANT IMPACT

Based on the EA (DOI-BLM-NM-F010-2019-0001-EA), which analyzes potential impacts from the lease sale, and considering the criteria for significance provided by the Council on Environmental Quality

1 See https://eplanning.blm.gov/eplanning-ui/project/115497/570.
2 It should be noted that the original March 2019 EA considered 22 parcels (7,010.82 acres). The company who was the successful bidder of the other eight parcels (parcels 10-17) did not respond when contacted to agree to updates terms and fees. These parcels are no longer being considered for issuance although they were included in the Competitive Sale Notice, see https://eplanning.blm.gov/projects/nepa/115496/165944/202212/March_2019__Final_Sale_Notice.pdf.
3 Full citations for the literature cited in this FONSI are in EA chapter 6.

(CEQ) regulations[4] at 40 Code of Federal Regulations (C.F.R.) § 1501.3, I have determined that leasing the 5,859.02 acres of nominated lease parcels under the Proposed Action does not constitute a major federal action that would have a significant effect on the quality of the human environment. Therefore, an environmental impact statement is not required. Any future proposed development of these leases, should they be sold and issued, would be subject to additional site-specific National Environmental Policy Act of 1969 (NEPA) analysis and documentation.

The Proposed Action, to offer for lease parcels for oil and gas development, and its effects have been evaluated in a manner consistent with the CEQ regulations for determining "significance." Per the 2024 CEQ regulation, 40 C.F.R. § 1501.3(d), a determination of significance as used in NEPA requires consideration of both "context" and "intensity." Context refers to the setting in which the action would occur (national, regional, or local) and its resources and characteristics. Significance varies with the setting of the Proposed Action. The intensity of the effects refers to the severity of the impact.
The intensity of the effects relates to the eight criteria outlined in 40 C.F.R. 1501.3 (d)(2) i-viii. This FONSI is based on the context and intensity of the effects of the Proposed Action.

AFFECTED AREA

Under the Proposed Action, the BLM to offer and subsequently issue leases for fourteen nominated lease parcels involving 5,859.02 acres of BLM-administered federal minerals. The nominated lease parcels consist of BLM and Bureau of Indian Affairs administered surface lands, and private land in San Juan and Sandoval Counties (see EA Table 2.1).

The lease parcels are within an area designated as open to oil and gas leasing under standard terms and conditions and special stipulations in the Farmington RMP (BLM 2003), as amended (BLM 2014 and 2015). Lease stipulations and lease notices are attached to the nominated lease parcels, with the potential impacts of the Proposed Action analyzed accordingly, based on the best available information. EA Table 2.1 provides a list of the nominated lease parcels and the applicable stipulations and notices.

Although the act of leasing the nominated lease parcels does not authorize development of the parcels, by leasing the parcels the BLM grants the lessee with the right to use as much of the leased lands as is necessary to explore and potentially develop the parcels for oil and gas production. Therefore, under the Proposed Action, the BLM analyzes the potential impacts associated with the potential future development of the nominated lease parcels for oil and gas exploration and development. Development of a parcel leased by the BLM is not permitted until the BLM approves a completed Application for Permit to Drill (APD) package (Form 3160-3) submitted by the lessee. APDs are subject to additional environmental review under NEPA and CEQ regulations. *See* 43 C.F.R. § 1500.

In the EA, the future potential development of the lease parcels was projected to result in 11 horizonal and three vertical wells, approximately 88.4 acres of surface disturbance, and total production of an estimated 1,443,000 barrels of oil and 23,389,000 cubic feet of gas. See EA Section 3.2 for methodology for estimating well numbers, potential production volumes, and surface disturbance associated with the future potential development of the nominated lease parcels.

Short-term and long-term effects related to the Proposed Action are disclosed and analyzed in EA Section 3.5 (for the issues analyzed in brief) and Section 3.6 (for issues analyzed in detail). Short-term effects are

4 The BLM is aware of the November 12, 2024, decision in *Marin Audubon Society v. Federal Aviation Administration*, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, the BLM has nonetheless elected to follow those regulations at 40 C.F.R. Parts 1500–1508, in addition to the DOI's procedures/regulations implementing NEPA at 43 C.F.R. Part 46, to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 *et seq*.

defined as those that cease after well construction and completion (30–60 days) or cease after interim reclamation (2–5 years). Long-term effects are those associated with the operation of the well (e.g., noise) or otherwise extend beyond the short-term time period (for example, surface disturbance subject to final reclamation). Table 1 summarizes the short and long–term effects associated with the issues analyzed in detail (see EA Section 3.6), and the incremental contribution of the Proposed Action to reasonably foreseeable environmental trends and planned actions.

The lease parcels are located in San Juan and Sandoval Counties, New Mexico. Within this county, as well as the area immediately surrounding the nominated lease parcels, there already exists extensive oil and gas development and production. Oil and gas development and its attendant industry are identifying components of the economic and social fabric of the region.

Table 1. Summary of Duration of Effects and Associated Significance Conclusions

Issue (EA Section)	Short-term Effects and Significance Conclusions	Long-term Effects and Significance Conclusions
Issue 1: How would future potential development of the nominated lease parcels impact air quality (particularly National Ambient Air Quality Standards [NAAQS] and volatile organic compounds [VOCs]) in the analysis area? (Section 3.6.1)	Air quality effects are anticipated to be at their highest level during the 30- to 60-day well drilling/completion phase. The drilling and completion emissions are, therefore, short-term in nature. Emissions associated with development of fourteen wells would range from a <0.001% increase in sulfur dioxide (SO_2) to a 0.8% increase in particulate matter equal to or less than 2.5 microns in diameter ($PM_{2.5}$) in the New Mexico Portion of the San Juan Basin. This represents the maximum increase in pollutant emissions characteristic of the first year of construction and start of operation. For context, reasonably foreseeable development (RFD) of federal wells (131 wells) in the analysis area in a given year would be estimated to result in a 0.01% and 7.46% increase in SO_2 and PM_{10}, respectively. RFD of all wells (170 wells) in the analysis area in a given year would be estimated to result in a 0.02% and 9.69% increase in SO_2 and PM_{10}, respectively. Future potential development of the nominated lease parcels would also result in short-term, localized impacts to air quality at nearby residences due to criteria pollutants, VOC, and hazardous air pollutant (HAP) emissions. Construction activities would be one of the primary sources of particulate matter emissions; however, the use of best management practices can reduce off-site effects from fugitive dust.	Following well construction and completion phases, emissions are anticipated to decline during operations and maintenance as the need for earth-moving and heavy equipment declines. Ongoing operations of well sites would be subject to state and federal permitting requirements, which ensure compliance with air quality emission standards.
Issue 2: How would future potential development of the nominated lease parcels contribute to GHG emissions and climate change? (Section 3.6.2)	All GHG emissions are considered long-term effects due to the long lifespan in the atmosphere and their contribution to long-term climate trends such as desertification, loss of biodiversity, and changes to freshwater availability.	The EA identifies potential adverse effects to climate change through several methods, such as quantifying, as far as practicable, the reasonably foreseeable GHG emissions and social cost of GHG emissions (SC-GHG) as a proxy for assessing climate impacts. Compared with emissions from other existing and estimated foreseeable federal oil and gas development, the

		estimated emissions for the life of the leases in the Proposed Action is 0.024% to 0.077% of federal fossil fuel authorization emissions in the state and between 0.015% and 0.04% of federal fossil fuel authorization emissions in the nation. In summary, potential GHG emissions from the Proposed Action could result in GHG emissions of 2.44 Mt CO2e over the life of the leases. As detailed in the Annual GHG Report (BLM 2022c), which the BLM has incorporated by reference, the BLM also examined other tools to inform its analysis, including the MAGICC model (see Section 7.0 of the Annual GHG Report [BLM 2022c]). This model run suggests that "30-plus years of projected federal emissions would raise average global surface temperatures by approximately 0.0158 °C., or 1% of the lower IPCC carbon budget temperature target." Using these figures, the SC-GHG from the Proposed Action is estimated to range from $340.88 to $959.79 million. These numbers were monetized; however, they do not constitute a complete cost-benefit analysis, nor do the SC-GHG numbers present a direct comparison with other impacts analyzed in the EA. SC-GHG is provided only as a useful measure of the benefits of GHG emissions reductions to inform agency decision-making. As for greenhouse gas (GHG) emissions, the BLM acknowledges that all GHGs contribute incrementally to climate change. The BLM must consider the effects of its onshore oil and gas lease sales on GHG emissions and climate change, and the Mineral Leasing Act provides the Secretary of the Interior with discretion to tailor those sales—including which parcels are offered for sale and the terms of leases—in light of climate effects. See, e.g., Wilderness Soc'y v. Dept. of the Interior, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *91-92 (D.D.C. Mar. 22, 2024). For this sale, the BLM relied on its own specialist report (the Annual GHG Report) and other data to compare the sale's potential emissions with national and global emissions, and to contextualize the GHG emissions by estimating the social cost of the GHGs produced by future development of the lease, displaying the GHG emissions in comparison to commonly understood emissions sources such as motor vehicles, analyzing the real-world effects of climate change based on current scientific literature, and considering the emissions against climate action goals. The BLM further explained that it lacks the data and tools to estimate specific, climate-related effects from the sale. See Section 3.3.2 of EA and Appendix F, as well as the 2022 Annual GHG Report. As of the publication of

		this FONSI, there are no established thresholds, qualitative or quantitative, for NEPA analysis to assess the greenhouse gas emissions or social cost of an action in terms of the action's effect on the climate, incrementally or otherwise. There is also no scientific data in the record, including scientific data submitted during the comment period for this lease sale, that would allow the BLM, in the absence of an agency carbon budget or similar standard, to evaluate the significance of the greenhouse gas emissions from this proposed lease sale. These methodological shortcomings prevent BLM from qualitatively comparing alternatives, and BLM has therefore not exercised its discretion to tailor this lease sale to account for global climate change.
Issue 3: How would future potential development of the nominated lease parcels impact surface and groundwater quantity? (Section 3.6.3)	While much of the water use associated with oil and gas development is expected to occur within a 30- to 60-day construction period, the effect of this use on groundwater aquifers and surface waters is expected to last until recharge occurs. Due to uncertainty about water sources and recharge rates, it is assumed that all water use associated with oil and gas development is likely to be a long-term effect. Additionally, the ability for aquifer recharge may be affected by drought conditions associated with climate change.	Water uses associated with development of the nominated lease parcels would occur during the 30 to 60–day well construction and completion period (e.g., hydraulic fracturing), during the 20-year operation period (e.g., water use associated with dust control, and during the interim and final reclamation. Most water use occurs during the well construction and completion period, and water uses during operation and reclamation phases are negligible in comparison. Due to the uncertainty regarding water sources and recharge rates, it is assumed that all water use associated with oil and gas development is likely to be a long-term effect. Drilling and completion of 14 wells on the nominated lease parcels are estimated to use approximately 54 acre-feet (AF) of groundwater. Water use associated with drilling and completion of each well is expected to occur within a 30 to 60–day period. Assuming that all wells are developed in the same year, groundwater use associated with future potential development of the leases would result in increases of 0.011% to the 2015 analysis area total water use (486,660 AF), 0.11% to the 2015 analysis area total groundwater use (50,008 AF), and 0.47% over the 2015 water use in the mining category for the analysis area (11,658 AF). Assuming a 20-year development scenario for the Proposed Action (consistent with the RFD time frame [Crocker and Glover 2018]), the water use associated with development of the lease parcels would be approximately 2.74 AF for any given year. Projected future potential development of the lease parcels would result in a 0.001% increase of the analysis area total water use (486,660 AF), 0.005% of the

		analysis area total groundwater use (50,008 AF), and a 0.024% increase over 2015 water use in the mining category for the analysis area (11,658 AF). The total estimated water use of 2.74 AF in a single year represents approximately 0.11% of the 2022 oil and gas water use reported to FracFocus (1,326 AF) (BLM 2023b). The demand from future potential development of the nominated lease parcels (54 AF) is negligible when contrasted with the estimated water demand of the RFD (11,685 AF over 20 years, or 580 AF in any given year) in the analysis area 2015 water use (486,660 AF), and the demands of other sectors in the analysis area such as irrigation (384,817 AF in 2015) and mining (11,658 AF in 2015). Long-term water requirements during operation under either scenario would depend on the project details but could include coolant for internal combustion engines and dust suppression on roads or well pads. Produced water associated with development of the lease parcels is estimated at approximately 1,190,000 barrels of water. Produced water would be either recycled, reused, or disposed of in accordance with all applicable federal and state laws and regulations. The BLM encourages the use of recycled water in hydraulic fracturing techniques, which is consistent with the goals of New Mexico's Produced Water Act.

DEGREE OF EFFECTS

The following discussion is organized around the right criteria described at 40 C.F.R. § 1501.3(d)(2)(i)-(viii). ***Both short- and long-term effects.***

Both short- and long-term effects related to the Proposed Action are disclosed and analyzed in EA Section 3.4 (issues analyzed in brief) and EA Section 3.5 (issues analyzed in detail). Short-term effects are defined as those that cease after well construction and completion (30–60 days) or cease after interim reclamation (2–5 years); long-term effects are those associated with operation (e.g., noise) or otherwise extend beyond the short-term time period (for example, surface disturbance subject to interim or final reclamation). Table 1 summarizes short- and long-term effects associated with the issues analyzed in detail (see EA Section 3.5), and the incremental contribution of the Proposed Action to reasonably foreseeable environmental trends and planned actions.

INTENSITY OF EFFECTS

Potentially beneficial and adverse effects related to the Proposed Action are disclosed and analyzed in EA Section 3.5 (for the issues analyzed in brief) and Section 3.6 (for issues analyzed in detail). Table 2

summarizes the issues analyzed in detail (see EA Section 3.6), including the beneficial and adverse effects associated with each issue, and the incremental contribution of the Proposed Action to reasonably foreseeable environmental trends and planned actions. The potential for adverse impacts to the resources examined in AIB-1 through AIB-24 will be minimized with the application of stipulations, consideration of parcel proximity to sensitive resources, and the likelihood for sensitive resources to occur.

EA Section 3.5 also discloses the potential for beneficial impacts, including employment opportunities and revenue streams for federal, state, and local governments (see AIB-20, Economic Activity) and fluid mineral availability (see AIB-11, Fluid Minerals).

Table 2. Summary of Beneficial and Adverse Impacts of Issues Analyzed in Detail

Issue Analyzed in Detail (EA Section)	Impact Summary (both Beneficial and Adverse) and Significance Conclusions
Issue 1: How would future potential development of the nominated lease parcels impact air quality (particularly NAAQS and VOCs) in the analysis area? (Section 3.6.2)	Additional NO_x and VOCs from fourteen wells (a 0.44% and 0.13% increase over existing annual emissions, respectively) would incrementally add to ozone (O_3) levels within the analysis area, which have come close to, but not yet exceeded NAAQS in San Juan County. Given the size of the project relative to other activities in the area, it is not expected that the Proposed Action would lead directly to additional NAAQS exceedances of O_3 in the counties in the analysis area. Future potential development of the nominated lease parcels would also result in localized impacts to air quality at nearby residences due to criteria pollutant, VOC, and HAP emissions. The nominated lease parcels do not contain residences. Future potential development of the nominated lease parcels would result in short-term local area increases of pollutant emissions, including particulate matter (particulate matter 2.5 microns in diameter or smaller [$PM_{2.5}$] and PM_{10}), NO_x, VOCs, and O_3 (as a secondary pollutant), lasting an average of 30 to 60 days. Air quality is dependent on not only the quantity of air pollutants but also environmental conditions (humidity, wind direction and speed, temperature) that influence concentration and dispersion of pollutants. Future potential development of the nominated lease parcels is estimated to result in .51 tons per well per year of HAP emissions from combined construction and operation of the wells during the first year, which would be the maximum annual rate of HAP emissions. The Clean Air Act defines a major source for HAP emissions to be one emitting 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs (BLM 2021a). Because this is prior to implementation of any applicable federally enforceable controls, this represents a conservatively high estimate of potential HAP emissions. Therefore, it is not expected that the Proposed Action would be a major source of HAP emissions. Additionally, total HAP emissions from the Proposed Action would be distributed over time and space. The future potential development of the nominated lease parcels comprises 0.41% of the RFD scenarios (3,400 wells) and, assuming concurrent development, would be 8.2% of annual RFD (170 wells). Reasonably foreseeable trends and planned actions would incrementally contribute to increases in criteria pollutants between 0.02% to 9.69 of existing annual emissions of all well development, federal and non-federal (see Table 3.23). Localized and short-term effects on air quality for nearby residences from emissions of particulate matter, NO_x, VOCs, and HAPs are expected; however, because well development varies (i.e., permit approval, well pad construction, spudding, and completion), the phases of development may not occur in succession but may be spread out in development over time. As such, the incremental addition of criteria pollutants and VOCs over a period of 20 years would not be expected to result in any direct exceedances of the NAAQS or New Mexico Ambient Air Quality Standards for any criteria pollutants in the analysis area. These areas have not been formally declared non-attainment by the U.S. Environmental Protection Agency through the State's recommendation. The BLM will continue to monitor these areas and participate in any O_3 initiative meetings and strategies that the State recommends.
Issue 2: How would future potential development of the nominated lease parcels contribute to GHG emissions and climate change? (Section 3.6.2)	The EA identified potential adverse effects to climate change through several methods, such as quantifying, as far as practicable, the reasonably foreseeable GHG emissions and SC-GHG as a proxy for assessing climate impacts. Compared with emissions from other existing and estimated foreseeable federal oil and gas development, the estimated emissions for the life of the leases in the Proposed Action is between 0.024% to 0.077% of federal fossil fuel authorization emissions in the state

	and between 0.015% and 0.04% of federal fossil fuel authorization emissions in the nation. In summary, potential GHG emissions from the Proposed Action could result in GHG emissions of 2.44 Mt CO_2e over the life of the leases. Using these figures, the SC-GHG from the Proposed Action is estimated to range from $340.88 to $959.76 million These numbers were monetized; however, they do not constitute a complete cost-benefit analysis, nor do the SC-GHG numbers present a direct comparison with other impacts analyzed in the EA. SC-GHG is provided only as a useful measure of the benefits of GHG emissions reductions to inform agency decision-making. As for greenhouse gas (GHG) emissions, the BLM acknowledges that all GHGs contribute incrementally to climate change. The BLM must consider the effects of its onshore oil and gas lease sales on GHG emissions and climate change, and the Mineral Leasing Act provides the Secretary of the Interior with discretion to tailor those sales—including which parcels are offered for sale and the terms of leases—in light of climate effects. See, e.g., Wilderness Soc'y v. Dept. of the Interior, No. 22-cv-1871 (CRC), 2024 U.S. Dist. LEXIS 51011, at *91-92 (D.D.C. Mar. 22, 2024). For this sale, the BLM relied on its own specialist report (the Annual GHG Report) and other data to compare the sale's potential emissions with national and global emissions, and to contextualize the GHG emissions by estimating the social cost of the GHGs produced by future development of the lease, displaying the GHG emissions in comparison to commonly understood emissions sources such as motor vehicles, analyzing the real-world effects of climate change based on current scientific literature, and considering the emissions against climate action goals. The BLM further explained that it lacks the data and tools to estimate specific, climate-related effects from the sale. See Section 3.3.2 of EA and Appendix F, as well as the 2022 Annual GHG Report. As of the publication of this FONSI, there are no established thresholds, qualitative or quantitative, for NEPA analysis to assess the greenhouse gas emissions or social cost of an action in terms of the action's effect on the climate, incrementally or otherwise. There is also no scientific data in the record, including scientific data submitted during the comment period for this lease sale, that would allow the BLM, in the absence of an agency carbon budget or similar standard, to evaluate the significance of the greenhouse gas emissions from this proposed lease sale. These methodological shortcomings prevent BLM from qualitatively comparing alternatives, and BLM has therefore not exercised its discretion to tailor this lease sale to account for global climate change.
Issue 3: How would future potential development of the nominated lease parcels impact surface and groundwater quantity? (Section 3.6.3)	Future potential development of the fourteen wells in the nominated lease parcels is estimated to use approximately 54 AF of groundwater. Assuming a 20-year development scenario (consistent with the RFD time frame), the water use associated with development of the lease parcels would be approximately 2.74 AF for any given year, which represents a 0.001% increase of the four-county analysis area total water use (486,660 AF), 0.005% of the MGFAA analysis area total groundwater use (50,008 AF), and a 0.024% increase over 2015 water use in the mining category for the MGFAA analysis area (11,658 AF). The largest water use category within the analysis area is Irrigation, comprising 79% of all water use within the four-county analysis area. Development of the RFD, which comprises all reasonably foreseeable future actions, would require 11,685 AF over 20 years, or 580 AF in any given year of water in any given year if all wells were drilled. This is about 0.12% of the four-county analysis area 2015 total water withdrawals (486,660 AF, which already includes past and present water use). Annual water use associated with future potential development of the Proposed Action would comprise 0.47% of the total RFD. If more water-intensive stimulation methods (e.g., slickwater fracturing) are implemented, if laterals become longer, or if more wells than estimated are drilled, aggregate water use could increase from the estimates provided in the 2023 BLM Water Support Document for Oil and Gas Development in New Mexico (BLM 2023c). Alternatively, water use estimates could be lower if produced water is reused or recycled for use in hydraulic fracturing or if methods such as nitrogen completions (less common than slickwater completions in the PDO) are implemented.

The following discussion is organized around the eight criteria described in 40 C.F.R. § 1501.3(d)(2) i-viii. The following discussion focuses only on those issues for which analysis was determined to be necessary in the March 2019 Competitive Oil and Gas Lease Sale EA.

1. ***Effects on public health and safety***

In the EA, public health and safety–related effects are described and analyzed in AIB-1 (groundwater quality), AIB-2 (surface water quality), AIB-3 (induced seismicity) and AIB-20 (economic activity). Public health and safety-related effects are analyzed in AIB-19 (human health and safety), AIB-21 (quality of life), AIB-22 (environmental justice), Issue 1 (air quality), and Issue 2 (GHGs and climate change). Development and construction may contribute to public health and safety-related risks including occasional fire starts; spills of hazardous materials, hydrocarbons, produced water, or hydraulic fracturing fluid and corresponding potential contamination of air, soil, or water; exposure to naturally occurring radioactive material in drill cuttings or produced water; traffic congestion and collisions from commercial vehicles and heavy use; infrequent industrial accidents; presence of hydrogen sulfide; or increased levels of fugitive dust particulate matter equal to or less than 10 microns in diameter (PM10) and particulate matter equal to or less than 2.5 microns in diameter (PM2.5); and other criteria pollutants, VOCs, and HAPs.

EA Section 3.6.1 (Issue 1, Air Quality) explains that the Proposed Action would not result in an exceedance of any air quality-related standard that may impact public health and safety. Additionally, Section 3.5 discloses that the Proposed Action would not result in significant impacts on other resources, including water quality (see AIB-1, Groundwater Quality and AIB-2, Surface Water Quality) and induced seismicity (see AIB-3).

Leasing the nominated lease parcels would not result in significant public health and safety-related effects when comparing the aforementioned issues. Leasing for oil and gas, and subsequent exploration and development, is a regular and ongoing activity in the region. The estimated future potential development of the nominated lease parcels (14 wells) is 0.03% of the total past, present, and reasonably foreseeable future oil and gas development in the New Mexico portion of the San Juan Basin (41,619 wells). In addition, the regulatory program associated with these issues successfully addresses the adverse effects of primary concern, and the BLM's authority under standard lease terms and conditions allows the BLM to attach conditions of approval (which typically reduce or eliminate adverse effects on resources) to activities authorized at the time of lease development.

2. Effects on unique characteristics of the geographic area.

In the EA, unique characteristics of the geographic area are described and analyzed for various resources in Section 3.5, including AIB-2 (Surface Water Quality), AIB-4 (Sensitive Soils), AIB-5 (Vegetation), AIB-7 (Threatened and Endangered Species), AIB-8 (Sensitive Species), AIB-9 (Migratory Birds), AIB-10 (Paleontological Resources), AIB-13 (General Wildlife and Big Game), AIB-16 (Visual Resources), AIB-17 (Cultural resources), and AIB-18 (Native American Resources). There are no prime farmlands or wild and scenic rivers within or near to the nominated lease sale parcels (see EA Table 1.2).

Impacts to surface waters (including wetlands) and playas have been addressed in the EA (see AIB-2, Surface Waters) and protective stipulations have been applied to parcels containing mapped surface water features or playas. Parks, recreation areas, and other wildlife use areas have been addressed in the EA (see AIB-9, Migratory Birds, AIB-13, General Wildlife and Big Game, AIB-16, Visual Resources, and AIB-24, Night Skies at Chaco Canyon National Historical Park).

Impacts to historic and cultural resources and Native American concerns have been addressed in the EA (see AIB 17, Cultural Resources, and AIB-18, Native American Concerns) and through consultation with the State Historic Preservation Office and Tribes (see EA Sections 4.1 and 4.2). See Criteria 5 below for information on effects to NRHP resources and NHPA compliance.

Based on lease stipulations and notices attached to the nominated lease parcels (see Table 2.1 and Appendix B of the EA), current land uses in the area, and the requirement for a site-specific analysis at the time of proposed lease development, the Proposed Action would not cause significant impacts on the unique characteristics of the geographic area. In addition, the BLM's authority under standard lease terms and conditions allows the BLM to attach COAs (which typically reduce or eliminate adverse effects on resources) to activities authorized at the time of lease development. Well developments that could potentially impact nitrogen deposition at CCNHP will be subject to a refined analysis at the proposed lease development stage to ensure cumulative deposition remains below the level of concern (see EA Section 3.6.1).

3. Effects that would violate relevant federal, state, tribal, or local law protecting the environment.

None of the effects associated with the Proposed Action would violate any federal, state, tribal, or local law protecting the environment. This lease sale is consistent with applicable laws, land management plans, and policies. The public was given the opportunity to participate in the environmental analysis process during an external public scoping period from October 5–19, 2018. In addition, a protest period was held from February 11 to February 20, 2019, upon publication of the Lease Sale Notice.

In 2024, prior to lease issuance, the BLM updated the NEPA analysis and provided a 30-day public comment period from October 22 to November 21, 2024. See EA section 1.5 for more information.

In compliance with NEPA and the National Historic Preservation Act (NHPA), the BLM FFO is consulting with and conducting ongoing government-to-government consultation with tribes (see AIB-18, Native American Concerns and EA sections 4.2 and 4.3).

4. Effects on the human environment which are highly uncertain.

The degree to which the possible effects of the Proposed Action on the human environment are thought to be highly uncertain is low. The BLM has been permitting and managing oil and gas development in the FFO planning areas since their inception and, accordingly, has extensive experience implementing oil and gas development and assessing and disclosing correlated environmental effects on the human environment. Moreover, oil and gas exploration and development have been, and continue to be, studied and are regulated for health and safety through multiple agencies, including federal, state, and local governments. Therefore, there are no predicted effects on the human environment owing to the Proposed Action that are considered to be highly uncertain. In addition, the projected potential effects on the quality of the human environment owing to oil and gas leasing and development have been analyzed and disclosed in the in the overarching Farmington RMP (BLM 2003), as amended (BLM 2014 and 2015), as well as in this Lease Sale EA.

5. Effects to resources listed or eligible for listing in the National Register of Historic Places.

The Proposed Action would comply with Section 106 of the NHPA (for details, see AIB-17, Cultural Resources). The March 2019 records review was completed for 22[5] parcels totaling 7,010 acres. The APE for physical effects is the physical footprint of the parcel boundaries + 0.25 mile buffer. The APE for audible and visual effects is the physical footprint of the parcels plus a 1.25-mile buffer, to account for any potential development that may occur within the parcels or within 1.25 miles of the parcels at the APD stage. The review found that of the parcels still under consideration (14), approximately 9,004 acres

[5] Note that only 14 of the parcels remain under consideration.

(11%) of 79,507 total acres of the parcels' APE have been previously surveyed for cultural resources. The records search identified 370 previously recorded historic properties. Seventy-eight (21%) of these were located within the physical APE of the lease parcels and 292 (79%) were located within a 1-mile buffer of the physical APE. Of the 370 historic properties located within the lease parcels' APE, 140 (38%) sites have been determined eligible for listing to the National Register of Historic Places; 74 (20%) have been determined not eligible, 156 (42%) are undetermined or lack data. The probability of identifying previously unrecorded historic properties in this area is high. In addition to the recorded historic properties there are 25 known Navajo Nation TCPs; potentially eligible for the National Register of Historic Places, if evaluated. At this time, the BLM FFO determined that there would be *no adverse effect* on historic properties as a result of the undertaking (see EA Section 4.3).

The New Mexico BLM used the 36 C.F.R. § 800 for this undertaking; see also EA Section 4.3. The nominated lease parcels would be subject to additional cultural resource analysis through NEPA and Section 106 of the NHPA. The Proposed Action is not anticipated to create a high degree of impacts to sites/objects listed in the NRHP or to cause significant adverse loss or destruction of significant scientific, cultural, or historical resources because any adverse effects identified at the proposed lease development stage would be mitigated, minimized, or avoided.

Impacts on Native American concerns have been addressed in the EA (see AIB-18, Native American Concerns) and through tribal consultation (see EA Section 4.2). The nominated lease parcels have been assigned lease stipulation WO-NHPA, lease notice NM-11-LN, and RP-6, which require SHPO and tribal consultation and compliance with Section 106 of the NHPA prior to the approval of lease development.

6. Effects on endangered or threatened species and their habitats.

The Proposed Action would comply with the ESA (see AIB-7, Threatened and Endangered Species and EA Section 4.1). The analysis in the EA indicates that potential habitat is present within the nominated lease parcels for one federally listed endangered species. Future potential development of the nominated lease parcels is not anticipated to create adverse impacts for the following reasons: 1) stipulations and lease notices facilitate the reduction or avoidance of effects (see Table 2.1 and Appendix B of the EA), 2) site-specific analysis at the lease development stage provides an additional opportunity to evaluate effects and develop measures to reduce or avoid effects, and 3) the standard lease terms and conditions that apply to all nominated lease parcels provide the BLM with the authority to require reasonable measures that reduce or avoid effects.

BLM FFO biologists have reviewed the proposed leasing and determined the Proposed Action would comply with threatened and endangered species management guidelines outlined in the 2002 Biological Assessment for the 2003 Farmington RMP (BLM 2002), in accordance with the requirements of the FLPMA and NEPA. The BLM would conduct evaluations at the lease development stage for any future actions within the lease parcels and would further evaluate potential for occurrence and impacts to federally listed threatened and endangered species. Standard terms and conditions would apply to the parcels. Lease stipulation WO-ESA would also be attached to the nominated lease parcels for the protection of threatened, endangered, or other special status species (see Appendix B of the EA). In addition, lease notice (F-41-LN), to notify leaseholders of the potential requirement for biological surveys prior to surface-disturbing activities is attached to some of the parcels. The BLM would initiate Section 7 consultation with the USFWS in compliance with the Endangered Species Act for species not previously analyzed in the BA if during site selection federally listed species are found to have a potential to be present or impacted during lease development. Potential impacts on special status species are addressed in the EA (see Section 3.4; AIB-7, Threatened and Endangered Species).

7. Effects on communities with environmental justice concerns.

Effects to communities with environmental justice concerns are described and analyzed in AIB-22 (Environmental Justice). The BLM determined that there are both low-income and minority EJ communities of concern present in the analysis area. Although the BLM cannot predict where oil and gas reserves may exist on each lease parcel, there may be instances where oil and gas exploration activities disproportionately and adversely affect EJ communities of concern because of proximity and other factors, and for variable amounts of time. EA Table 3.12 provides a summary of the resource analyses presented in Sections 3.5 and 3.6 of the EA that would have potential to affect EJ communities of concern. Based on the analysis presented in Table 3.12, there is potential for disproportionate impacts to EJ communities of concern resulting from impacts to air quality, greenhouse gases and climate change, water use and quantity, quality of life, and human health and safety.

In general, impacts would be greater for the residents near the future potential development (1.25 miles or less). Most of the nominated lease parcels contain residences, and lands surrounding the nominated lease parcels are characterized as rural and sparsely populated with existing oil and gas development. The closest residences to the nominated lease parcels range from within the parcel to 1.1 miles from the parcel boundaries (see EA Table 3.11).

When evaluating placement of wells at the lease development stage, standard design features, BMPs, and project-specific COAs would be applied to reduce effects that could be adverse and disproportionate to communities of concern. Future potential development would also be subject to relevant rules and regulations regarding air quality, water quality, and public health and safety.

8. Effects on the rights of Tribal Nations.

Impacts to Native American concerns have been addressed in the EA (see AIB-18, Native American Concerns) and through tribal consultation (see EA Section 4.2). The FFO initiated government-to-government consultation for the March 2019 Competitive Oil and Gas Lease Sale under NEPA and NHPA on October 12, 2018, with letters mailed to the entities listed in EA Table 4.1. For more information on the NHPA, see EA section 4.3. The nominated lease parcels have been assigned lease stipulation WO-NHPA, and lease notice NM-11-LN, which require SHPO and tribal consultation and compliance with Section 106 of the NHPA prior to the approval of lease development.

CONCLUSION

Therefore, on the basis of the information contained in the EA (DOI-BLM-NM-F010-2019-0001-EA) and all other information available to me at this time, it is my determination that:

- The degree of the effects of the Proposed Action do not rise to the level of significance requiring preparation of an EIS (see criteria 1–8 explained in detail above).
- The Proposed Action conforms with the Farmington RMP (BLM 2003), as amended (BLM 2014 and 2015).

MICHAEL GIBSON

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Michael Gibson

Deputy State Director, Minerals