

September 25, 2020

ELECTRONIC SUBMISSION

Ms. Jillian Aragon, BLM Project Manager
Bureau of Land Management
6251 College Blvd, Suite A
Farmington, NM 87402

Mr. Robert Begay, BIA Project Manager
Bureau of Indian Affairs
Navajo Regional Office
P.O. Box 1060
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Re: Comment Submission—Draft Farmington Mancos-Gallup RMP Amendment and EIS

Dear Ms. Aragon and Mr. Begay,

We appreciate the opportunity to comment on the Draft Farmington/Mancos–Gallup Resource Management Plan Amendment (RMPA) and associated Environmental Impact Statement (EIS). We are staff and students in the Natural Resource Use & Management clinic at the University of Arizona James E. Rogers College of Law; however, we write in our individual capacities and do not speak on behalf of the University or any affiliated entities. We have a keen interest in matters pertaining to the use, management, and conservation of natural resources in the western United States, including the myriad attendant challenges.

This Draft EIS is part of the environmental analysis required under the National Environmental Policy Act (NEPA) before BLM finalizes its proposed amendment of its 2003 RMP—a draft of which considers management decisions relating to oil and gas development, lands and realty, as well as wilderness and vegetation issues—corresponding to an area of roughly 4.2 million acres within the Greater Chaco region.¹ The Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) have requested comments that identify inaccuracies, identify new information or impacts, alternatives, or mitigation measures, and make suggestions for improving the resource management plan. Our comments are responsive to this request and address the sufficiency of the environmental analysis as well as the overall need to update the RMP in a way that accounts for new developments in technology, changes to public resource values, and the market dynamics influencing resource demand.

Additional No Fracking Development Alternative

A. We urge BLM/BIA to consider an additional alternative with no future fracking development.

Under Reasonable Foreseeable Development (RFD), the Draft RMPA/EIS analysis indicates that 3,200 new wells for hydraulic fracturing (“fracking”) would be developed in the next twenty years.² We thus note at the outset that while the various alternatives consider different management approaches and

¹ While refer to the broad extent of the Greater Chaco as depicted in the map [here](#), by courtesy from Archaeology Southwest, we acknowledge—as have others that—“[t]he true extent of the Chaco World [can never be fully known](#).”

² US DOI, BLM & BIA, Farmington Mancos-Gallup Draft Resource Management Plan Amendment and Environmental Impact Statement 3-50 (2020) [hereinafter RMPA/EIS].

goals under RFD, no alternative considers a no-future-fracking scenario.³ We ask BLM/BIA to consider just that alternative scenario, one in which no future fracking-facilitated oil and gas development would occur. We further highlight the urgency of and necessity of comparing this additional alternative to the currently proposed alternatives (i.e., no action and alternatives A–D). This additional alternative should form part of a reasonable range of alternatives considered, as required by NEPA, yet still comports with the BLM’s multiple-use mandate by allowing existing oil and gas operations to continue.

Water Rights and Availability for Neighboring Communities

B. We urge BLM to adopt a mandatory requirement for the use of alternative water sources under the slickwater scenario for all alternative management plans.

We are concerned about growing groundwater demand and decreasing groundwater supply in the planning area. The Resource Management Plan Amendment (RMPA) and Environmental Impact Statement (EIS), or RMPA/EIS, states that “[g]roundwater is expected to continue to be the *primary source* of municipal, industrial, Tribal, and agricultural water in the planning area” and that “groundwater is currently the *only* source of water for many of the Navajo Nation Chapters in the planning area.”⁴ Additionally, the RMP/EIS recognizes that climate change will reduce groundwater recharge in the planning area because of projected climate patterns like increased evaporation and diminished snowpack.⁵

Also, fracking requires water and similarly primarily relies upon groundwater. *Id.* Under Reasonable Foreseeable Development (RFD), the RMP/EIS predicts that 3,200 new wells for hydraulic fracking will be developed in the next twenty years.⁶ The RMP/EIS quantifies the maximum reasonable estimate of water use for new wells (i) under a nitrogen scenario equal to 11,615 acre feet (af) and (ii) under a slickwater scenario equal to 125,000 af over the next 20 years.⁷ Also, under each alternative management approach, the water demand of RFD over the next twenty years ranges from 4,400-7,500 af under the nitrogen scenario and 47,500-81,700 af under the slickwater scenario.⁸ The slickwater scenario requires noticeably more water, but the RMP/EIS notes that industries can use saline or non-potable water with slickwater fracking techniques.⁹ The RMP/EIS considers this a benefit of the slickwater scenario because of the possibility that this scenario will decrease the demand on potable water supplies.¹⁰ Specifically, industries could use produced water and reuse flowback water instead of potable groundwater as a source of water.¹¹

However, we are concerned that despite the possibility for industries to use produced water and reuse flowback water instead of potable groundwater, there is no quantifiable, mandatory, and transparent requirement under the various alternatives for industries using slickwater fracking techniques to use alternative water sources versus groundwater. Specifically, the no-action alternative contains no requirement for the use of produced water and reuse of flowback water, and thus would certainly contribute to decreases in potable water supplies.¹² Yet even under BLM Alternative A, BLM would require the use of produced water and flowback water only *when feasible*.¹³ The RMP/EIS states that a BLM authorized officer would make this determination but does not specify the procedures that this officer would follow to

³ *Id.* at ES-3.

⁴ *Id.* at 3-46 (emphases added).

⁵ *Id.*

⁶ *Id.* at 3-50.

⁷ *Id.* at 3-46, -47.

⁸ *Id.* at 3-50

⁹ *Id.* at 3-47.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.* at 3-49.

¹³ *Id.* at 3-54

make the feasibility determination. Thus, this process lacks transparency.¹⁴ Further under BLM Alternative B1, B2, C, and D, BLM would only *encourage but not require* the use of produced water or reuse of flowback water.¹⁵ Thus, this requirement is not mandatory for entities engaging in fracking. Consequently, like the non-action management approach, BLM Alternatives B, C, and D would likely deplete potable water supplies.¹⁶

Again, we are very concerned that a slickwater scenario is even considered without any quantifiable-mandatory-transparent requirements to use alternative water sources (water supplies other than potable groundwater). With such a noticeable increase in the maximum reasonable estimate of water use under the slickwater versus nitrogen scenario, it is not enough that “operators are increasingly expected to use non-potable saline groundwater, produced water, or flowback water for hydraulic fracturing” as a means to limit the demand on potable groundwater in the planning area.¹⁷ The RMP/EIS notes that “as technology changes, other sources of water *could* become available for use” including “foam fracturing.”¹⁸ Again, this future *possibility* and reliance on *developing* technologies is *not* reliable enough to support the use of slickwater fracking techniques by industries in the planning area.

We *urge* BLM to consider adding a quantifiable-mandatory-transparent requirement for the adoption of these alternative water sources. Similarly, we urge BLM to quantify a maximum reasonable estimate of water under the slickwater scenario with the added mandatory requirement for use of alternative water sources.

C. We find discrepancies in BIA’s analysis that Navajo Nation’s use of water will “continue to be unimpaired” when compared to the permitted ROW operations under BIA alternatives.

The RMP/EIS states that under all BIA alternatives “the Navajo Nation’s rights respecting the use of water would continue to be unimpaired.”¹⁹ However, we see discrepancies between this statement and the allowances given to fluid mineral right of way (ROW) operators versus the lack of safeguards for communities’ groundwater supplies. Specifically under BIA alternatives A, B, and C, ROW operators can drill outside of 0.25 miles of any residential or community structures. We are concerned that the distance between potential drilling (of both vertical and horizontal wells) under these alternative management plans is not sufficient to protect the communities’ groundwater supplies.²⁰ Thus, we do not understand how “the Navajo Nation’s rights respecting the use of water would continue to be *unimpaired*.”²¹ It seems that the Navajo Nation’s rights to the use of water would *certainly* be impaired by ROW operators.

Clean Water Act and Water Quality Impacts

The Clean Water Act mandates that companies not discharge pollutants into waters of the United States.²² This summer, EPA released a Final Rule that included new definitions on what should be considered waters of the United States.²³ Under the new rule, and within the context of this RMPA/EIS,

¹⁴ *Id.*

¹⁵ *Id.* at 3-55:57.

¹⁶ *Id.*

¹⁷ *Id.* at 3-49.

¹⁸ *Id.* at 3-47 (emphasis added).

¹⁹ *Id.* at 3-57

²⁰ *Id.* at 3-58.

²¹ *Id.* at 3-57.

²² 33 U.S.C. § 1251 *et seq.* [hereinafter CWA].

²³ The Navigable Waters Protection Rule: Definition of “Waters of the United States,” 85 Fed. Reg. 22,250 (April 21, 2020).

only perennial and intermittent tributaries are covered.²⁴ The new rule further clarifies that groundwater is not covered by the CWA.²⁵ This means that only surface water which flows throughout the year or which flows seasonally (and not only in direct response to precipitation) is covered by the CWA.²⁶

The RMPA/EIS implicates several major waterways that are protected by the CWA in light of the new “Waters of the U.S.” (WOTUS) rule.²⁷ In this modified regime, unlike the San Juan, Animas, and La Plata Rivers which are covered by the Clean Water Act,²⁸ Chaco Wash—whose 904,700-acre watershed lies within the RMPA/EIS planning area—is not similarly protected because it is considered an “ephemeral” stream.²⁹ The RMPA/EIS must consider the adequacy of protective measures and testing in light of fracking-related water quality concerns and the present inapplicability of CWA to Chaco Wash and its large watershed.

BLM Alternative C provides the best—but still far too conservative—protections for all waters in the planning area.³⁰ That part of the Alternative calls for a “No Surface Occupancy” (NSO) stipulation within 1,000 feet of all domestic water wells and community water sources and would protect impaired streams through NSO and “Controlled Surface Occupancy” (CSU) stipulations.³¹ This would protect the surface water from contamination, to some degree, from excess sediment and ecological disturbances. While Alternative C has some protective measures for dealing with soil disturbances, it nonetheless fails to adequately address the potential for degradation by way of pollution and compromised water quality.

BIA Alternative A is the only alternative which addresses the applicability of CWA and its legal implications within the RMPA/EIS planning area.³² This alternative would mandate compliance with the CWA. This would restrict the drilling of wells within one-quarter mile of any residential community structure.³³ This alternative also allows the Navajo Nation to maintain control over the quality of surface water on their lands.³⁴ This plan addresses some of our water quality concerns, but it does not adequately address our concerns about the risk of fracking-related contamination of both surface water and groundwater.

Fracking fluid, while mostly water, contains 1 to 2% potentially hazardous chemical additives, by volume.³⁵ Because a single well may require five million gallons of fracking fluid or more,³⁶ this constitutes a substantial volume of chemicals—mostly of biocides, surfactants, and anticorrosive agents.³⁷ Of note, some of these chemicals are not disclosed and many others have not undergone sufficient safety testing.³⁸ For example, a Yale University public health study reviewed evidence of cancer risk for 1,117 water

²⁴ *Id.* at 22,251.

²⁵ *Id.*

²⁶ *Id.* at 22,258.

²⁷ RMPA/EIS, *supra* n.2, at 3-42, tbl. 3-16.

²⁸ *Id.*

²⁹ *Id.* at 3-42; see 85 Fed. Reg. at 22,258 (April 21, 2020).

³⁰ RMPA/EIS, *supra* n.2, at 3-56.

³¹ *Id.*

³² *Id.* at 3-57.

³³ *Id.* at 3-58.

³⁴ *Id.*

³⁵ Lisa Gardiner, *Is Fracking Dangerous?*, UCAR CENTER FOR SCIENCE EDUCATION (Sept.18, 2017), <http://insideenergy.org/2017/09/18/ie-questions-is-fracking-dangerous/>.

³⁶ Ruth Milka, *It takes FIVE MILLION Gallons*, NATION OF CHANGE (Feb. 1, 2018), <https://www.nationofchange.org/2018/02/01/takes-five-million-gallons-freshwater-frack-single-gas-well/>.

³⁷ Elise G. Elliott, *Unconventional oil and gas development and risk of childhood leukemia: Assessing the evidence*, SICENCE OF THE TOTAL ENVIRONMENT, Vol. 576, at 138–47 (Jan. 15, 2017), <http://dx.doi.org/10.1016/j.scitotenv.2016.10.072>.

³⁸ Lauren Vogel, *Fracking tied to cancer-causing chemicals*, CMAJ (Jan.16, 2017), <https://doi.org/10.1503/cmaj.109-5358>.

contaminants and 143 air pollutants commonly associated with fracking.³⁹ The researchers found that more than 80% of these substances lacked sufficient data to classify whether they were carcinogenic.⁴⁰ Of the substances for which there was sufficient data, 49 water and 20 air pollutants were identified as *known*, *probable*, or *possible* human carcinogens.⁴¹ These results are problematic, not least because of the substantial risk of overflow or leakage during the disposal and storage process, particularly if stored in an open-air ditch as opposed to a tank—scenarios the research considers.⁴² This wastewater, or flowback, also brings to the surface naturally-occurring hazardous compounds, including heavy metals, bromides, and radionuclides which can contaminate water supplies, injure people, and kill livestock.⁴³

Discounting this substantial risk, the draft RMPA/EIS largely ignores the potential for chemical pollution of water sources. The only water quality impact the RMPA/EIS addresses in any detail is increased sediment and flow disturbances; the documents thus effectively ignore the risk of oil and gas-related chemical spills.⁴⁴ While the RMP/EIS does acknowledge that this type of degradation has occurred before, it promptly dismisses this danger. Further down the same page acknowledging the risk,⁴⁵ the RMPA/EIS summarily states that these risks are already being managed through “proposed” requirements for lessees.⁴⁶ The RMP/EIS thus does not provide information about whether or not these propositions have been accepted by potential fracking companies. Instead, the RMPA/EIS improperly places the onus on the state, local, and/or tribal government to ensure that proper—i.e., safe—fracking techniques are used.⁴⁷ The RMPA/EIS inadequately concludes that there is a trend of increased protection and that it is likely to continue.⁴⁸ Our concern is that such reliance on non-specific and generalized “continuing trends” is not enough to protect a vital resource. We request transparent and complete data on possible water pollution related to oil and gas development techniques and chemicals, and specific information addressing how the BLM and BIA plan to limit the potential for adverse impacts.

As noted above, some surface waters within the planning area fall under the definition of “waters of the United States” (WOTUS), as laid out in EPA’s recent decision.⁴⁹ BLM and BIA thus have a responsibility to protect these surface waterways from any potential contamination or pollution due to fracking. The BIA has an especially strong responsibility to do so in light of its unique trust relationship to the Navajo Nation in light of well-established, extant treaty rights, and also to various Pueblos, themselves descendants of the Ancestral Puebloans and who thus maintain deep cultural ties to the Greater Chaco area—. These are “waters of the *United States*”—pursuant to the Clean Water Act—not waters of the singular states themselves. And while those waters that not protected by CWA, such as Chaco Wash, will be somewhat protected under BLM’s Alternatives A and C, such protections are insufficient to meaningfully address the dangers of fracking and thus properly assuage public concern regarding the complete mitigation of fracking-related dangers.

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² Elliot, *supra* n.37.

⁴³ *Id.*

⁴⁴ RMPA/EIS, *supra* n.2 at 3-47:48,

⁴⁵ *Id.* at 3-48 (“There were a total of 106 spills in the New Mexico portion of the San Juan Basin in 2018.”) (“Since the advent of hydraulic fracturing, more than 1 million hydraulic fracturing treatments have been conducted. Requirements of [national and state regulations] make contamination of groundwater resources highly unlikely, and there have not been any documented past instances of groundwater contamination attributed to well drilling.”).

⁴⁶ *Id.*

⁴⁷ *Id.* (“[S]tate regulatory agencies have gradually increased their levels of oversight and standards”).

⁴⁸ *Id.*

⁴⁹ 85 Fed. Reg. at 22,258 (April 21, 2020); RMPA/EIS, *supra* n.2, at 3-42, tbl. 3-16.

We thus urge the BLM and BIA to properly analyze the safety of all water covered under the CWA, including the entirety of the San Juan River, to alleviate concerns over potential pollution. We also urge BLM and BIA to mandate standard safety requirements for lessees, not simply “propose” them. Finally, BLM and BIA should combine these additional analyses into their current RMPA/EIS, so that the public will not have to go digging through multiple documents to know what the potential impacts to water quality will be.

Wildlife and Endangered Species Issues

D. We are concerned about the incidental taking of Raptor species protected by the Migratory Birds Treaty Act, the Bald and Golden Eagle Protection Act and the Endangered Species Act.

We are concerned that, pursuant to the Endangered Species Act, the construction of oil and gas wells in Chaco Canyon could result in a “taking” of raptors, their eggs, and their nests. This is concerning not only because of raptor’s ecological importance—the integrity of which is not necessarily vouchsafed through “incidental take” permits—but also because the *purposeful* taking of them is prohibited not only by the Endangered Species Act, the Migratory Birds Treaty Act and the Bald and Golden Eagle Protection Act.⁵⁰ Raptor populations are particularly vulnerable because of their slow reproductive rates and very particular habitat requirements for nesting and foraging.⁵¹ They are also particularly sensitive to human activity and have a tendency to abandon nest sites once they have been disturbed,⁵² which creates the potential for harm. Even if their habitat is not directly impaired, the increased human activity in the area could lead to many human disturbances of nesting sites.

E. Habitat fragmentation caused by oil and gas drilling and resulting impacts on wildlife in the San Juan Basin could be detrimental to Navajo cultural and subsistence practices.

In her address to the U.S. House of Representatives Subcommittee on Water, Oceans and Wildlife, Gloria Tom, the Director of the Navajo Nation Department of Fish and Wildlife stated:

Proper preservation and enhancement of species are critical to tribal culture, sustenance, and exercise of treaty rights. Treaty-reserved rights to fish, hunt, and gather are of central spiritual, cultural, subsistence, and economic importance to Tribal nations. In fact, they are central to our identity.⁵³

We echo Director Tom’s concern, noting in particular that the proposed oil and gas development in the Greater Chaco area⁵⁴ would have substantially negative impacts on wildlife in the San Juan River Basin, especially large game animals like elk and mule deer. This would harm both Navajo cultural and subsistence practices as well as commercial and private hunting operations in the state of New Mexico.

Specifically, the proposed drilling is likely to have negative impacts on the elk and mule deer populations currently inhabiting the land in and around Greater Chaco area and the San Juan Basin as

⁵⁰ N.M. DEP’T OF GAME & FISH, *Oil and Gas Development Guidelines: Conserving New Mexico’s Wildlife Habitats and Wildlife* 10 (Aug. 2007), <http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/Oil-and-gas-development-guidelines.pdf>.

⁵¹ *Id.*

⁵² *Id.*

⁵³ Written Testimony of Gloria Tom, Director, Navajo Ntn. Dpm’t of Fish & Wildlife, House Cmt. on Water, Oceans, and Wildlife (Oct. 17, 2019), <https://naturalresources.house.gov/imo/media/doc/Tom%20Testimony%20WOW%20Leg%20Hrg%2010.17.19.pdf>

⁵⁴ See supra n.1.

important winter habitat.⁵⁵ Such impact would likely occur as a result of habitat fragmentation and loss of migration routes. Habitat fragmentation is a natural result of oil and gas operations because of the roads, pipelines, powerlines, well pads, pump stations and other industrial developments that come with oil and gas operations. In other locations where oil pads have been developed in areas used by elk as habitat, researchers have noted quarter-mile loss of habitat around each oil pad as a result of the elk's avoidance of humans.⁵⁶ We draw further attention to a study of mule deer in Pinedale, Wyoming that found the population declined by 46% after four years of oil and gas development in mule deer habitat.⁵⁷ Accordingly, we are concerned that the construction of oil and gas well pads as well as subsequent upstream operations in the Greater Chaco area as proposed in the RMPA/EIS would have a detrimental effect on the local Elk and Mule Deer populations.

We would further highlight that elk and mule deer are two of the most commonly hunted big game animals in northwest New Mexico. We ask you to consider the importance of big game hunting to both New Mexico's economy and the members of the Navajo Nation for whom hunting is a vital aspect of their culture and who rely on big game hunting for their own subsistence. Respecting tribal culture and practices is of the utmost importance not only for the basic decency of securing their subsistence, but also because the land at issue is sacred tribal land. And as Director Tom noted in her Congressional testimony, treaty-reserved rights also apply to these critical and interdependent cultural, subsistence, and economic factors; the common-denominator is the health of land and the people who call it home.

Additionally, the negative impact on the elk and mule deer populations would likely extend beyond the sacred lands of Chaco Canyon and into the rest of the Navajo Nation's lands in northwestern New Mexico. A study commissioned by New Mexico Game and Fish Commission in 2013 found that approximately \$342 million was spent on hunting-related activities in the state. The same study estimated that hunting related jobs generated roughly \$267 million in state-wide labor income. Taken together, this means that hunting contributed an estimated \$453 million to New Mexico's economy.⁵⁸ Big game hunting is thus a critical economic asset for a rural state like New Mexico, especially in such remote areas of the state as the San Juan River Basin. We ask that you consider the positive ecological and economic impacts healthy elk and mule deer populations have on the San Juan River Basin, New Mexico's economy in general, and the health, wellbeing, and treaty rights of the Navajo Nation and its members. Simply put, our concern is that the proposed drilling will negatively impact the health of the native elk and mule deer populations as well as the continued persistence of vital elements of Navajo culture and traditions as highlighted, for example, by Director Tom.

Impacts to Cultural and Sacred Sites

F. We are concerned about impacts of oil and gas exploration on cultural and historic sites in and around Chaco Canyon National Historic Park.

Oil and gas exploration has a substantial impact on the land, thus threatening the distinct characteristics of Chaco Canyon National Historic Park, a UNESCO World Heritage Site. BLM and BIA have both suggested drilling mitigation plans ranging from no mitigation to *substantial* mitigation. Among

⁵⁵ N.M. DEP'T OF GAME & FISH, *supra* n.50 at 15.

⁵⁶ *Id.*

⁵⁷ H. Sawyer, et al. WESTERN ECOSYSTEMS TECHNOLOGY, INC., *Annual Report Sublette Mule Deer Study (Phase II): Long-term Monitoring Plan to Assess Potential Impacts of Energy Development on Mule Deer in the Pinedale Anticline Project Area* (2005), http://www.west-inc.com/reports/PAPA_2005_report_med.pdf.

⁵⁸ SOUTHWICK ASSOC., *The Economic Contributions of Fishing, Hunting, and Trapping in New Mexico in 2013: A Statewide and County-level Analysis*, Rpt. Prepared for N.M. DEPT' OF FISH & WILDLIFE, at ii (July 31, 2019), <http://www.wildlife.state.nm.us/download/publications/press-release/NMDGF-Economics-of-Fishing-Hunting-and-Trapping-Final.pdf>.

the currently available alternatives, we encourage BIA and BLM to implement Alternative B so that cultural sites unique to northern New Mexico are best preserved under current legal and operational constraints. Prioritizing preservation of cultural resources in Chaco Canyon is of paramount importance important because (1) Congress set aside the Navajo Reservation for the permanent homeland⁵⁹ for the Diné (Navajo) and (2) Chaco Canyon is a site sacred site for the Navajo and many Pueblos, unique to New Mexico and the rest of the world. Chaco Canyon—and Greater Chaco, more generally, is a fragile, historic site, of extreme cultural importance to the Navajo and surrounding oil and gas operations should be kept as far away from cultural sites as possible as such cultural sites are irreplaceable. Damage or loss of cultural sites in and near Chaco Canyon would be a humanitarian tragedy. Oil and gas access corridors and extraction sites create disturbances on the immediate nearby land, damaging the quality of that land through noise, vibration, dust, and visual disturbances. The Navajo Nation has proposed a five-mile radius around Chaco Canyon where oil and gas exploration is prevented. BLM has asked for comment on such a radius.

Consistent with the preservation goals of BLM and BIA Alternative B, a 5-mile radius would ensure that no sacred, cultural, or natural resources in and around Chaco Canyon itself would be damaged. A five-mile radius would allow Navajo to continue to use certain Chacoan cultural and sacred sites without fear of damage or disturbance of their cultural practices. Oil and gas exploration can still occur around the perimeter of the Historic Park while preserving the uniqueness of the site. Further, Alternative B supplements this five-mile radius proposal by ensuring that oil and gas operations remain an appropriate distance from cultural sites that are outside the park boundary and the corresponding radius. Cultural and historic sites exist beyond the boundaries of the park and proposed five miles radius. Thus, the combination of a moratorium on oil and gas exploration within a five-mile radius of the Chaco Canyon site and mitigation strategies as contemplated by Alternative B would ensure Chaco Canyon is best preserved for those to whom the area is sacred, and that the land that is not polluted by noise, light, dust, smell, and eyesores which would defile such sacredness. After all, not only was the Chaco Canyon epicenter of the Ancestral Puebloan world—i.e., Greater Chaco—of thus of clear cultural importance to many Pueblos, it is also constitutes sacred Navajo land which was set reserved, by treaty with the United States, as their permanent home and abiding place.

Chaco Canyon is important not only to Navajo culture, but to all of humankind and its collective origins. The Agencies must respect the needs of the tribe communicated to them. We ask that the tribe's requests are implemented and interests respected at all times throughout the project.

Clean Air Impacts and Contribution to Climate Change

G. We are concerned about the effects of increasing greenhouse gasses in the San Juan Basin.

Shale gas production causes the release of volatile organic compounds and toxic air pollutants, with impacts to air quality of the surrounding area. In addition, the release of methane into the ambient air is a major concern. Though a less commonly emitted gas than carbon dioxide, methane is the main component of natural gas and a potent greenhouse gas that traps far more heat, with a global warming potential 28 times that of carbon dioxide.⁶⁰ Methane is already a concern in the planning area with high levels detected in the northern portion. The testing performed at fracking sites may not reveal exceedances of the National Ambient Air Quality Standards for criteria pollutants, but methane is not a criteria pollutant under the Clean Air Act. Moreover, there is still no consensus as to how much methane is leaking into the air due to shale

⁵⁹ *Winters v. United States*, 207 U.S. 564, 576 (1908).

⁶⁰ GREENHOUSE GAS PROTOCOL, *Table of Global Warming Potential Values* (n.d.), https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf (data adapted from IPCC Fifth Assessment Report, 2014).

drilling and fracking.⁶¹ The amount of methane added to the atmosphere in the past decade corresponds to studies that show fracking operations leak, vent, or flare 2-6% of the gas produced.⁶² It has been estimated that North Texas' Barnett Shale region has leaked 544,000 tons of methane a year using a conservative leakage rate of 1.5%.⁶³ That's equivalent to 46 million tons of carbon dioxide. A 2015 study found that methane levels were unchanged for years, but increased sharply after 2006, growing by 25 million tons a year.⁶⁴ Using satellites and other measures, the study concluded that extraction and use of fossil fuels were responsible for 12-19 million tons of this additional methane and the rest was likely biological sources.⁶⁵ While the San Juan Basin may have seen levels drop in recent years, global levels are at record highs.⁶⁶ Although more research is needed in this area, it is unlikely a coincidence that the sharp rise in global methane levels comes at the same time as shale oil and gas operations dramatically increased.

This steady rise in atmospheric methane contributes directly to the changing climate patterns. The expected long-term local impacts of the changing climate include increased frequency of wildfires, increased evaporation, changes in vegetation patterns, increased erosion, diminished snowpack, and ultimately reduced groundwater recharge. As the demand for potable groundwater in the San Juan Basin has been increased and groundwater elevations in the aquifers underlying the region have fallen, we fear permitting methane levels to regress in the San Juan Basin will only intensify this growing problem.

Ensuring Meaningful Public Participation by Affected Communities

H. We urge BLM to pause all actions and limits related to oil drilling until the BLM has a meaningful mandatory public hearing for the Native American stakeholders.

We join the All Pueblos Council of Governors⁶⁷ to request a pause to all actions and limits related to the suggested management plan for oil drilling until the coronavirus pandemic ends. Alternatively, we would like to request an extension to the public comment period to allow more time for the New Mexico Pueblos participation in the EIS for the Chaco Canyon. Using virtual meetings is not optimal for the native communities. New Mexico Pueblos need a meaningful consultation to offer the tribe an opportunity to provide input because it is the BLM legal obligation.⁶⁸ Public participation is an essential part of the EIS process. Stakeholders' verbal and written comments must be taken into account during the drafting of the document. Native Americans in the Chaco area are clearly important stakeholders that are and will be impacted by the oil and gas drilling because they are *close to those sites sacred* and culturally significant to their culture (i.e. Chaco Culture National Historical Park). Although it is understandable that during the COVID pandemic, we have to adapt and make the necessary changes to maintain a functioning government, one that is able to address and analyze the impacts of the BLM projects. However, virtual consultations are not a proper sole pathway to accomplish consultation as we do not believe it fulfills the requirements outlined in the United Nations Declaration on the Rights of Indigenous Peoples.⁶⁹ Public comments are a

⁶¹ Stephen Leahy, NAT'L GEOGRAPHIC, *Fracking boom tied to methane spike in Earth's atmosphere* (Aug. 15, 2019), <https://www.nationalgeographic.com/environment/2019/08/fracking-boom-tied-to-methane-spike-in-earths-atmosphere/#close>.

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ Quirin Schiermeier, NATURE, News, *Global methane levels soar to record high* (Jul. 14, 2020), <https://www.nature.com/articles/d41586-020-02116-8>.

⁶⁷ Cf. ALL PUEBLOS COUNCIL OF GOVERNORS, *Our Values* (n.d.), <https://www.apcg.org/values/>.

⁶⁸ Anna V. Smith, HIGH COUNTRY NEWS, *Consultations with the U.S. during the pandemic* (May 27, 2020), <https://tinyurl.com/y7gy3a2p>.

⁶⁹ See generally UNITED NATIONS, DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES, A/RES/61/295 (Oct. 2, 2007), <https://undocs.org/A/RES/61/295>.

mechanism by which the EIS allows participation in decision making and empowers stakeholders who were formerly excluded or otherwise marginalized like Native Nations or low-income communities.

From the four different alternatives proposed, the BLM and the BIA prefer option C to meet both of their separate agency goals: to balance community needs and development while enhancing land health, and to allow an action to occur in harmony with the traditional, historical, socioeconomic, and cultural lifeways of the planning area. Native stakeholders should be afforded the opportunity to analyze and comment on how the different options will affect them socially and economically. Native communities have ancestral knowledge about their land, and they could provide critical information about managing land and providing mitigation options. Holding virtual public participation meetings that cuts their opportunities for sharing their knowledge imposes an environmental injustice and takes power away from the Native American community's governance.

Public participation is a mechanism to avoid, or at least reduce the likelihood of overt conflict by ensuring a broad range of interests and values and promoting increased transparency.⁷⁰ Holding virtual meetings for native communities may limit their opportunity to be part of the decision-making, to the detriment of this particular interest group.⁷¹ Tribal groups and opponents of the project report technical issues during zoom meetings, such as lack of internet, bad connections, and being muted or disconnected by moderators.⁷² Furthermore, the BLM should consider that the flow of information about meeting dates was limited by members' lack of necessary resources (i.e., access to WiFi⁷³), creating added barriers for elderly tribal members to participate. Additionally, due to the national COVID guidelines, non-essential tribal government sectors have been closed or partially closed. This has displaced workers and forced them to work remotely with limited internet access, ultimately creating a problem for them to prepare a full response⁷⁴ to oppose the plan. Finally, the high incidence of COVID infection rates⁷⁵ in New Mexico adds extra stress to the community, affecting their ability to participate in a public process. We reiterate that the Chaco Pueblos of New Mexico request more time to comment on the social and economic consequences to them and their way of life in this beautiful UNESCO World Heritage site in the northwest corner of the state.⁷⁶

⁷⁰ Francisco Loyaza, *Strategic environmental assessment in policy and sector reform: a conceptual model and operational guidance*, THE WORLD BANK, Rpt. No., 57811 (Nov. 14, 2010), <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/197551468340871432/strategic-environmental-assessment-in-policy-and-sector-reform-conceptual-model-and-operational-guidance>.

⁷¹ S.K. Fairfax. *A disaster in the environmental movement. The national environmental policy act has wasted environmentalists' resources on processing papers*. SCIENCE, Vol. 199, 743–48 (1978).

⁷² Grandoni Dino and Paulina Firozi, Analysis, *The Energy 202:Public hearings on Zoom have Native Americans worried they won't be heard on oil projects*, WASHINGTON POST–POWER POST (May 18, 2020), <https://www.washingtonpost.com/news/powerpost/paloma/the-energy-202/2020/05/18/the-energy-202-public-hearings-on-zoom-have-native-americans-worried-they-won-t-be-heard-on-oil-projects/5ec15672602ff11bb1183c87> and Susan Montoya Bryan, ASSOCIATED PRESS, *Activists criticize federal agencies over virtual meeting access for New Mexico drilling plan*, Reprinted in THE SALT LAKE TRIBUNE (May 15, 2020), <https://tinyurl.com/yym7tghc>.

⁷³ Kendra Chamberlain, *BIA: Navajo Members can 'Work Around' Connectivity Issues to Participate in Online Forum on Oil and Gas Development*, NM POLITICAL RPT. (Aug. 27, 2020), <https://nmpoliticalreport.com/2020/08/27/bia-navajo-members-can-work-around-connectivity-issues-to-participate-in-online-forum-on-oil-and-gas-development/>.

⁷⁴ Comment of Ben Chavarria, RMPA/EIS Public Hearing (May 15, 2020), audio recording, via Zoon, available at <https://tinyurl.com/y5g5ts7e>.

⁷⁵ See, e.g., Gary Tuchman, CNN, *COVID-19: Navajo Nation Lost More to Virus than 13 States* (Apr. 20, 2020; 04:52 PM MDT), available at <https://www.krqe.com/health/coronavirus-new-mexico/a-closer-look-at-icu-handling-covid-19-patients-in-navajo-nation/>.

⁷⁶ Susan Montoya Bryan, AP WIRE, *Pueblos, lawmakers ask for pause on New Mexico drilling plan* (Aug 28, 2020), <https://apnews.com/article/29936c9c262291f77d39152414e87d99>.

Conclusion

In summary, we encourage the adoption of an updated RMP, but urge BLM and BIA to ensure that many outstanding concerns are addressed before the EIS is finalized and the RMP is adopted. In general, the concerns raised in this comment regard potential, likely, and/or actual impacts of subsurface mineral resource development in the Greater Chaco area to:

- water supply, use, and availability for neighboring communities;
- wildlife and endangered species;
- indigenous land, culture, lifeways, and sacred sites;
- clean air and cumulative climate change effects; and, importantly,
- meaningful public participation, especially during a pandemic that disproportionately impacts these communities.

Sincerely,

/ s /

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