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Counselor Chapter Government P.O. Box 93 Counselor, Navajo Nation 87018 (Navajo Nation Subdivision) June 2019 New Mexico Lease Sale Protest Comments 5/1/2019

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Protested Parcels: 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51 or All Proposed FFO and RPFO lease parcels for June 2019 Lease Sale

I. Chapter Interest and Standing

Counselor Chapter (the "Chapter") has an interest in the leasing of any parcels that are within the Navajo Eastern Agency boundary, Navajo Nation, Traditional Navajo Territories, or of any location which can cause imbalances which may effect any of the previously listed Navajo areas. This comes from traditional Navajo conceptions of relationships (K'é and K'é bikeyah) which is evident from Navajo Fundamental Law (Diné Bi Beenahaz'áanii) codified in Navajo Nation Code (1 N.N.C. §201 - §206). Additionally, Navajo Nation Code Title 26 which defines chapter members as "For purposes of services and benefits, all tribal members, young and old, who either reside within or are registered in the chapter. An individual may not be a member of more than one chapter"¹. A chapter Resident is defined as "one who dwells permanently or continuously within the boundaries of a chapter"². The definition of Governmental Purposes "activities carried out by the chapter for the general health, safety and welfare of the chapter membership"³

The Chapter passed resolution COUN-2016-11 which is "against all pending and future federal fluid mineral BLM leases within Navajo Eastern Agency areas (or other lease sales which could directly or indirectly impact Eastern Agency Areas) until a reasonable revenue sharing mechanism is developed, the new Farmington Field Office Resource Management Plan Amendment is developed, and a full understanding of potential environmental and health impacts of horizontal hydraulic fracturing is developed".

Importantly a chapter's Land Use Planning area may focus upon lands within its own Chapter boundaries, it does not preclude the Chapter from providing its "services and benefits" from Chapter members who reside outside of the Chapter's land use planning boundaries, and in fact is required under Title 26 to provide those benefits and services. Thus, it is important that a chapter recognize and work on issues affecting chapter membership located in another chapter's boundaries. Especially in such a case as this lease sale which has effects not only upon those non-resident chapter members but also on the chapter's own residents.

¹: 26 N.N.C. § 2.10.b

²: 26 N.N.C. § 2.13

³: 26 N.N.C. § 2.22

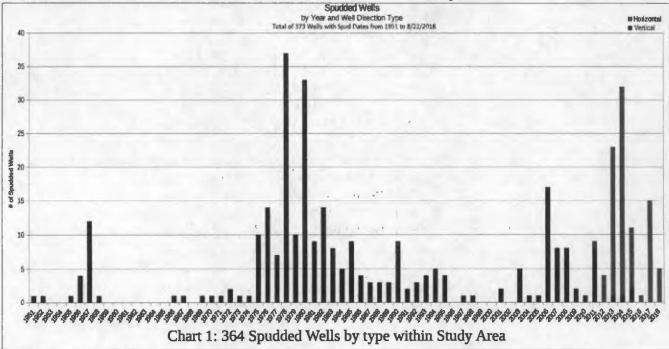
II. Analyze Significance under NEPA

1) Overview of Significance

The Chapter is particularly concerned that there are a multitude of issues which rise to the level of "Significant" in terms of NEPA. The term "Significantly" is defined at 40 CFR §1508.27. Within the defining language a variety of elements are put forward, including the term "intensity". The Chapter for years has raised issues, in writing and verbally, which are significant both as a matter of intensity and by other means. This action might not be a site specific action, but its impact upon Navajo communities have been described in detail in previous comments. Further discussion of these issues will be shown below.

2) Intensity of Development by Production in Counselor

Counselor Chapter's area's⁴ first horizontally drilled well began production in March of 2012 (API:30-043-21117⁵). Other horizontal wells in the Counselor area came into production since⁶. This has marked a dramatic change in the magnitude and composition of oil/gas production from the area. It also has affected different mineral owners in different ways.



NMOCD data indicates that the quantity of wells that have been spudded within the Counselor since 2011/2012 has been quite large, not consistently seen since the early 80s. However, unlike the late 70s / early 80s these wells are almost all completely horizontal wells.

⁵https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/WellDetails.aspx?api=30-043-21117

⁶Refer to Chart 1 for spudded wells by month and type within the Counselor area. Data source is NMOCD.

⁴For purposes of this dpcument the Counselor Chapter area is defined as the following townships: 21N5W, 21N6W, 21N7W 22N7W, 22N6W, 23N7W S/2, and 23N6W S/2. At times in the comments, Counselor Chapter and Counselor Chapter Area could be used interchangeably.

The utilization of horizontally drilled wells which are hydraulically fractured requires increased footage of laterals to be perforated. Within the study area, 298 wells with perforation data on their NMOCD information page were analyzed for total perforation length. Of these wells 226 are classified as vertical and 72 are considered Horizontal by NMOCD. The vertical wells had an average perforation length of about 163 feet while horizontal wells have an average perforated length of 5,991 feet. This is an almost 37 fold increase in average perforation length. The total amount of vertical well lateral footage perforated within the Counselor area is 36,723 feet. The total amount of horizontal well lateral footage perforated within the Counselor area is 431,379 feet. One average perforated length horizontal well has the same amount of perforated lateral as nearly 37 averagely perforated vertical wells. This is an immense difference⁷. The BLM has already admitted that this activity does cause differences in impacts:

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Over time, improvements in hydraulic fracturing techniques have further increased the production potential of individual wells. Those same improvements may also lead to incrementally higher emissions of VOCs during the relatively brief completion phase of new wells. Additionally, modern fracturing techniques may indirectly increase the quantity of roadbed dust temporarily suspended in the atmosphere simply due to an increase (relative to older fracturing techniques) in vehicular traffic involved in transporting mobile equipment and supplies. However, once the hydraulic fracturing is complete, these effects largely disappear.⁸

Considering that horizontal wells which are hydraulically fractured have longer lateral being hydraulically fractured, it would stand to reason that the intensity of the impacts from these wells would be greater than their vertical counterparts. The current 2003 RMP did not consider horizontal drilling in its analysis:

"Horizontal drilling is possible but not currently applied in the San Juan Basin due to poor cost to benefit ratio. If horizontal drilling should prove economically and technically feasible in the future, the next advancement in horizontal well technology could be drilling multi-laterals or hydraulic fracturing horizontal wells. Multilateral could be one, two or branched laterals in a single formation or single laterals in different formations. Hydraulic fracturing could be a single fracture axial with the horizontal well or multiple fractures perpendicular to the horizontal well. These techniques are currently complex and costly, and therefore typically inappropriate for most onshore U.S. reservoirs. Comprehensive engineering and geologic research will be required in the near future in order for these techniques to become viable within the 20 year time frame anticipated by this RFD (8.3)"⁹.

Thus the Chapter is concerned that this difference in impact has not been properly analyzed and mitigated (even if the BLM insists it is "largely" short term). Interestingly, the BLM does not consider impact to be completely short term, what are the long term effects? Considering the scale of difference in regards to perforated lateral lengths is considerable (a magnitude in difference) these

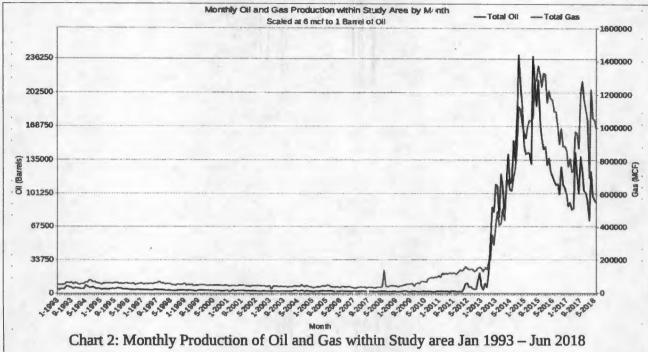
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⁷These presented averages and totals are for the Counselor Area. Data was pulled from individual NMOCD well webpages.

⁸https://eplanning.blm.gov/epl-front-

office/projects/nepa/90068/126746/154500/20171205_FINAL_EA_Farmington_Oil_and_Gas_Lease_Sale_Mar ch_2018_v2b.pdf Page 51

⁹https://geoinfo.nmt.edu/publications/openfile/details.cfml?Volume=463 Page 113



"small" and "temporary" differential impacts are likely being multiplied many times due to the large scale in differences between vertical and horizontal wells. This increase in scale also includes production.

Chart 2 shows total monthly production for oil and gas production within the Counselor area from 1993 thru Jun 2018. During the time frame before the first horizontal well became productive (January 1993 thru February 2012) a total of about 6,822,294 barrels oil and 7,865,862 mcf of oil were produced. This was an average of about 29,662 barrels oil/month within the Counselor area. An average of about 34,199 mcf gas/month was produced within the Counselor area before producing horizontal wells. The current era of production (March 2012 thru June 2018) the Counselor area has produced 12,915,214 barrels of oil and 58,445,214 mcf of gas. This equates to 169,937 barrels of oil/month and 769,016 mcf gas/month.

The increase in scale of production within the Counselor area is significantly higher. The horizontal era is seeing production rates of nearly 5.72 times total oil production per month and 22.5 times total gas production. This massive increase in production (and of intensity since it is being produced much more quickly) is being driven by horizontal wells within the Counselor area. Vertical wells from January 1993 thru June 2018 produced 836,738 barrels of oil and 21,230,894 mcf of gas. Horizontal wells (March 2012 thru June 2018) produced 7,711,418 barrels of oil and 50,129,534 mcf of gas.

Additionally, many of the horizontal wells have multiple wells per pad. While this may reduce total surface acreage impacted, it does concentrate and intensify the oil/gas development. Thus, where a typical well would have been 660' from a residential structure with its significant lower production

rates versus having 2 or more horizontal wells only 660' from a structure with a great deal of increased production.

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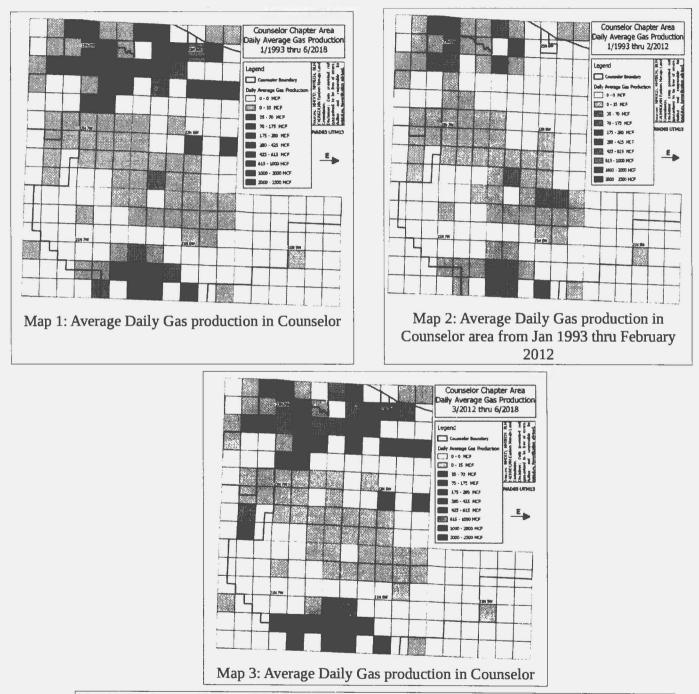
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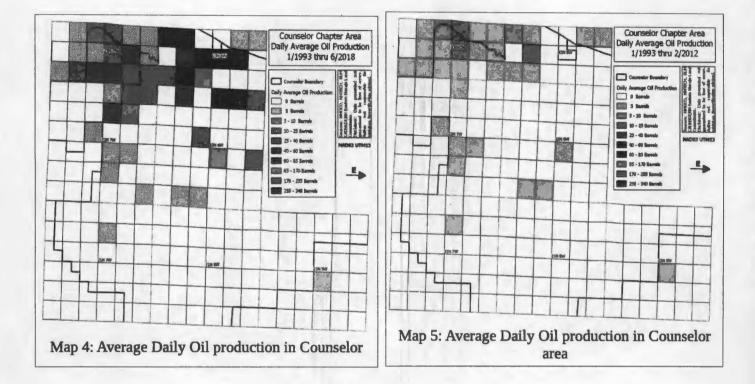
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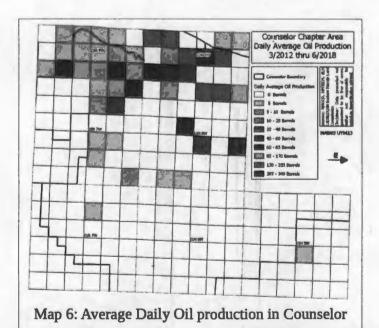
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After the introduction of horizontal drilling within the Counselor area (March 2012) gas production has increased significantly. The area now sees daily gas production rates that are substantially higher than rates that had been seen before. This intensification of production has moved southwards towards populated tribal trust parcels (northern parts of 226N6W and 22N7W). Leasing of additional parcels will likely continue the increases in production in the area and continue to change the geographic pattern of gas production.

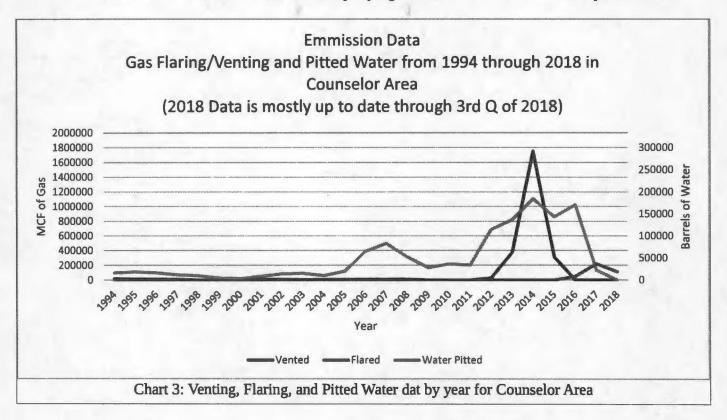


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Oil production within the Counselor area has substantially intensified and has increased the areas where it is produced. Horizontal drilling has been the driver of this change. Looking at these patterns of production should indicate to the BLM that horizontal drilling is a substantially different form of technology implementation which has had major effects upon the communities it has been implemented in. It should be noted the geographic pattern and its intensity is much further south then envisioned by the 2001 RFD and has only begin to be analyzed by the newest rounds of RFDs for the Farmington RMPA. 4) Venting, Flaring, and Pitted Water increases in Counselor

Counselor had experienced substantially higher amounts of venting and flaring then it had ever experienced before. This was primarily driven by horizontal drilling in the Counselor area and a lack of accompanying infrastructure to handle such production.



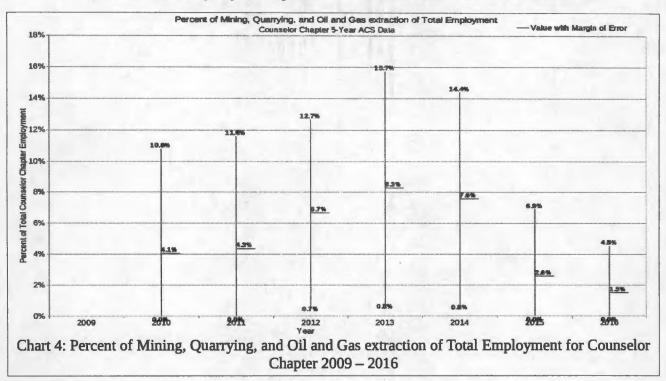
Future development in other areas that have not been traditionally major producers of oil/gas would likely show a similar development evolution where production is far ahead of carrying infrastructure. Meanwhile, the community is exposed to higher toxin levels due to pollution purposefully generated by oil/gas wells.

Having a RMP which has been developed for this intense type of development and for areas which do not have the accompanying infrastructure is a necessity for ensuring human lives and health are protected and resources are not wasted. Unfortunately, it appears that the BLM is not interested in not repeating its mistakes that it has made, and continues to make, regarding insufficient planning.

The Chapter has serious concerns regarding health impacts from hydraulically fractured horizontal wells. It has read multiple disturbing studies and now coupled with venting and flaring data, the Chapter feel that there is adequate reason to believe that the BLM has not had the proper measures in place to mitigate impacts to local communities (particularly in Counselor).

5) Economic Impacts of Production in Counselor

Within the Counselor area from January 1993 thru June 2018 a oil production had an estimated value of \$559,898,250 and gas had an estimated value of \$254,308,295¹⁰. This total value produced roughly follows the production patterns of the Counselor area. From March 2012 thru June 2018 total estimated oil production value is \$527,374,110 and total estimated gas production value is 184,609,684. As with overall production the majority of the production value has stemmed from horizontal wells.

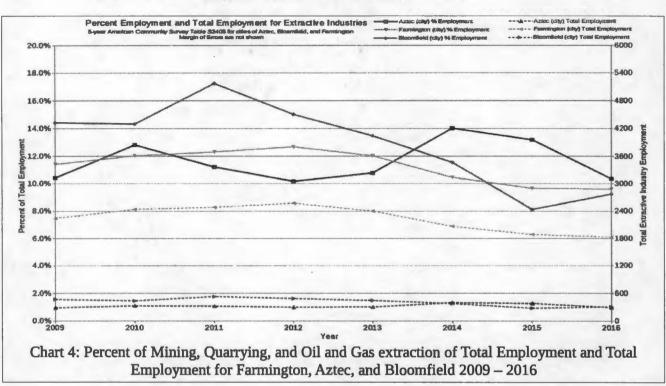


During this time Counselor Chapter does not appear to have had major employment benefits. Although a great deal of value has been generated by this are the residents of the community do not to appear to have seen this value translated into increased local prosperity overall.

Although the margins of error are relatively large, the data has smaller margins of error in 2015 and 2016. It appears that overall Counselor has not seen employment rates in oil/gas that are on par with San Juan County and the Farmington, Aztec, and Bloomfield (FAB) area. Employment for San Juan county and FAB have seen declines in overall employment (by percentage and total) over the past few years, but Counselor by percentage is substantially less. Although Counselor is within Sandoval county, it exists in the Northwest portion of the county. It also uses FAB area as its main shopping and economic zone¹¹, and lastly unlike most of Sandoval county Counselor area is a major

¹⁰The value are inflation adjusted to August 2018 using BLS CPI. Additionally, production values were calculated monthly using monthly average commodity prices created primarily from the NM pricesheet (NM Tech) and EIA.

¹¹Hasbídító Food and Energy Report 2012

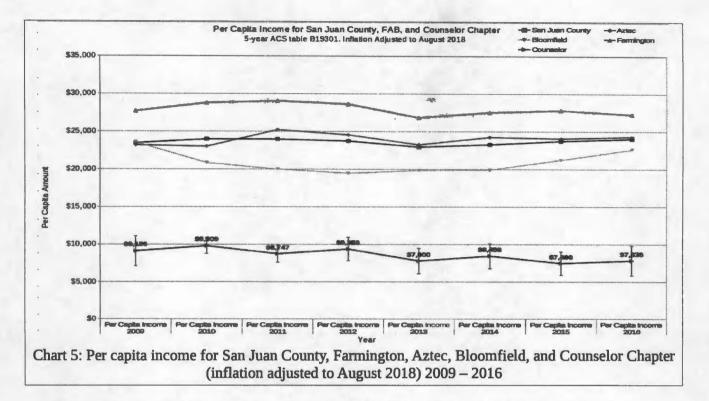


producer of oil/gas. Thus, Counselor for purposes of oil/gas employment should be compared to San Juan County as opposed to Sandoval county.

Additionally, there has been royalties which are being generated by the various wells. No monies are coming back to the local Navajo governments from the oil/gas development within the Counselor area. The federal royalties generated are divided between the State and Treasury department. State royalties go back to the state. Allottee revenues go to the allotment interest holders. From publicly available documents it appears on average that about 38% of allotment interest holders have an address in the Cuba, Counselor, or Nageezi area. Although this does not indicate what percentage of the allotment royalties are returning to the community (or surrounding region) it gives rough idea on the approximate amount. Total production for various mineral owner types from January 1993 thru June 2018 are as follows

| | Estimated Oil Value | Estimated Gas Value | Total Estimated Value | % of Total Value |
|---------------------------------------|---------------------|------------------------|--------------------------|------------------|
| Estimated Federal Production Value | \$383,355,876 | \$189,425,898 | \$572,781,775 | 70.4% |
| Estimated Navajo Production Value | \$46,551,182 | \$26,863,274 | \$73,414,456 | 9.0% |
| Estimated Private Production Value | \$1,664,606 | \$1,110,468 | \$2,775,075 | 0.3% |
| Estimated State Production Value | \$128,326,585 | \$36,908,652 | \$165,235,238 | 20.3% |

To understand how much this is affecting the economics of Counselor Chapter, per capita income can be used. Counselor Chapter (when adjusted for inflation to Aug 2018) has had declines in its per capita.



6) Scientific Controversy regarding the GreaterChaco Region

The Chapter is aware that the RPFO (and BLM) believe that the Greater Chaco region does not extend out into areas which include the proposed lease parcels. However, the Chapter believes that all the parcels are within the Greater Chaco Region. The Chaco Joint Management plan shows 6 road areas with influence. All of the parcels sit within the east road system. Unfortunately, it appears the BLM does not agree with the Chaco Joint Management plan or with the various Tribes which indicated that parcels in the December 2018 lease sale are part of the Greater Chaco Region. The parcels in the December 2018 lease sale and the proposed parcels for the June 2019 lease sale are very close in proximity to each (except June 2019 proposed parcel #25). BLM RPFO has stated the following:

"The review of existing records and many years of experience in the townships containing the 946 proposed lease sale parcels has turned up no evidence that the proposed lease parcels lie within 947 the Greater Chaco Region. The absence of archaeological evidence of use of the RPFO parcels by Ancestral Puebloans, and the absence of Chaco-era sites within 6½ miles of the proposed lease parcels indicates that the RPFO parcels fall outside the Greater Chaco Region"¹².

The BLM RPFO also wrote the following:

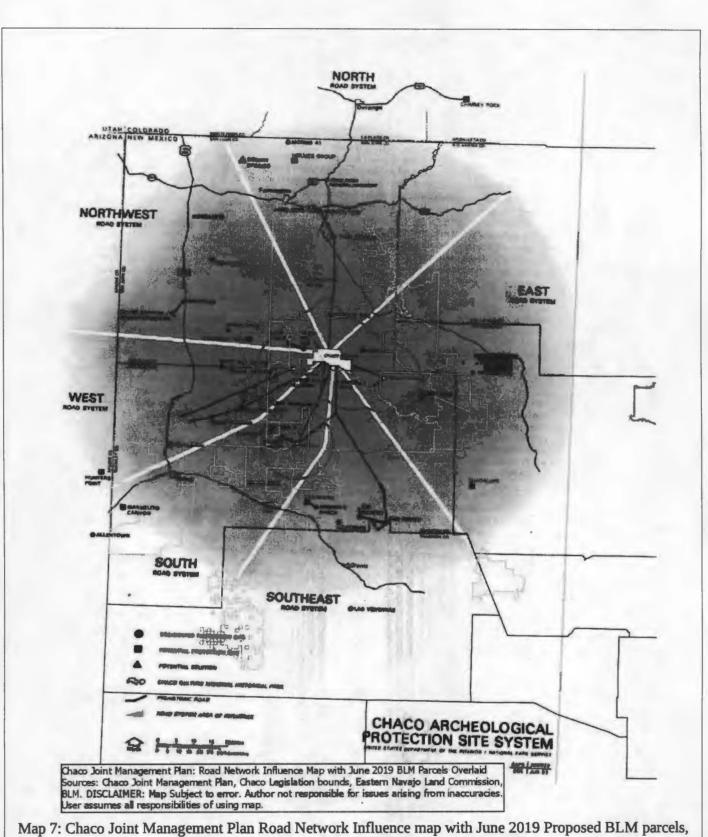
¹² DOI-BLM-NM-A010-2018-0042-EA: Final RPFO EA: Lines 948-950

Written comments opposing the lease sale because of cultural concerns about the "Greater Chaco Region" were received from Acoma Pueblo, Isleta Pueblo, Laguna Pueblo, Sandia Pueblo, and San Felipe Pueblo, as well as the All Pueblo Council of Governors, and the Ojo Encino Navajo Chapter. Similar opposition was received from Santa Ana Pueblo, who oppose the lease sale based on "landscape and cultural setting of once occupied territory by Puebloan Ancestors." However, other than the general concern about the "Greater Chaco Region" or the "landscape and cultural setting of once occupied territory by Puebloan Ancestors," no specific traditional cultural concerns within the parcels were raised by the tribes consulted.¹³

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The BLM RPFO has acknowledged that there is a significant difference in opinion amongst experts regarding the extent of the Greater Chaco Region. This scientific controversy has an even greater significance since the DOI secretary deferred the March 2018 lease sale to conduct a cultural survey of the region. Thus, it is important to understand that various entities do not fully understand the extent of the Chacoan culture and its various descendants (such as the Navajo and Pueblos). Since the secretary has already previously noted that better understanding the cultural environment of the region is significant enough to defer a lease sale until further study is completed, it would seem that the BLM should continue to take similar measures where similar circumstances are at play.

¹³ DOI-BLM-NM-A010-2018-0042-EA: Final RPFO EA: Lines 937-944



Chaco legislation boundary, and Easter Navajo Agency Chapters.

1) <u>Potential impacts on the Decision Space of the RMPA and previous delay of RPFO</u> parcels due to RMP adoption

Currently the FFO is conducting a RMPA in regards to Mancos/Gallup shale development. This RMPA will update the RMP for the unique impacts from unconventional drilling (horizontally drilled hydraulically fractured wells). Additionally, the RPFO is still in the process of adopting a new RMP¹⁴. The BLM has currently decided that it can still lease parcels while trying to conduct planning to mitigate impacts from unconventional development (significant impacts as illustrated within this document). This is a reversal from the previous decision by the RPFO. Part of the reason the RPFO has reversed it position is because of IM 2018-034. The Chapter has expressed its dismay n the application of this Memorandum to this lease sale. The Chapter has also raised concerns that it will also negatively impact proper Tribal consultation. Currently, an injunction is enforce regarding this memorandum in areas affecting sage grouse. Based on the contents of the injunction ruling, it should raise additional concerns about the application of the memorandum during this lease sale. As a reminder, IM 2018-034 does not and cannot overide NEPA and FLPMA. Due to the nature, scale, and speed of the lease sales offering parcels within areas affecting Navajos, it is stretching the very limited resources of the Chapter to be able to properly research and respond to the leases in a timeframe that is meaningful for the BLM. This expedited process is affecting the quality of input that the Chapter can feasibly provide the BLM. This has been discussed verbally with the BLM previously by the Chapter. Interestingly the injunctive ruling regarding IM 2018-034 states the following:

This risk is compounded by the overlapping comment and protest periods, combined with accelerated oil and gas lease parcel reviews generally, all of which are left in the wake of IM 2018-034. See, e.g., Ex. 1 to Stellberg Decl. (illustrative table setting forth schedules for September 2018 and December 2018 oil and gas lease sales in BLM's western states, including public comment opportunities and protest deadlines). Plus, the burden of such constraints upon public participation and compressed protest periods falls most heavily upon members of the public, as those who have nominated potential lease parcels and BLM have had far more time to evaluate and consider the details of such parcels. Hence, there are cognizable and significant legal consequences that can be argued to result from IM 2018-034.¹⁵

In addition, the decision later states:

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In turn, for a subset of lease sales, IM 2018-034 relegates any sort of contemporaneous public input to the much later-in-time (and, WWP would contend, the "too late in time") adversarial protest (with its 10-day deadline, rather than IM 2010-117's previous 30-day deadline) and appeals process, neutralizing and diminishing the substantive and practical value of such input...¹⁶

The Chapter has expressed these concerns before the US District Court of Idaho expressed such sentiments. Responsible officials need to consider the gravity of this situation and its negative affect upon tribal consultation processes as well.

¹⁴https://www.nm.blm.gov/oilGas/leasing/leaseSales/2014/january2014/Jan%202014%20OG%20Lease%20Sale%2 <u>0EA_Public%20Review_Rio%20Puerco.pdf</u>: Table 2.0 (Pages 12-27)

 ¹⁵Western Watersheds Project v. Zinke, 2018 WL 4550396, Case No. 1:18-cv-00187-REB (Doc. 74): Page 25
 ¹⁶Id: Page 39

8) Effect on Infrastructure and Health/Environment

Lastly, the massive increases in production that took place in Counselor area has led to continued strain upon the area's infrastructure. Continued leasing (particularly without EIS level mitigations) will continue to strain the infrastructure such as roads. This is because proper EIS level planning will not have been completed before the lease sale. The BLM is very much aware of the different type of impact and increased intensity of unconventional development in the Counselor area. Having proper EIS level planning will allow for thorough planning and ensure that parcels being offered can be offered for lease sale. Additionally, all mitigations can be applied before lease sale, thus mitigation strategies will not be limited by leasing actions. Also, the massive increase in production in the Counselor area has certainly increased dust in the area from increased traffic and it is more than likely that there has been increased emissions and noise pollution.

9) <u>Significance Conclusion</u>

The degree of significance presented should compel the BLM to engage in an EIS for the purposes of this lease sale. The Chapter must request that the BLM at minimum to defer all parcels in the RPFO and FFO to ensure that proper level EIS documents and appropriate cultural resource studies can be tiered to for purposes of this lease sale (along with proper amounts of Tribal Consultation).

III. Need for Further Tribal Consultation

For a myriad of reasons, the Chapter Government must request that the BLM defer all parcels proposed for the June 2019 lease sale for further tribal consultation. These lands are significant areas that are important to the Navajo populations for economic, cultural, and resource purposes. The complexities and importance of these areas require detailed conversations with Navajo Local communities, Chapter Governments, and the National Navajo Government.

Additionally, without the ability to tier this proposed action to an updated EIS level plan that contains updated Tribal consultation elements, of which this Tribal consultative environment has vastly changed just within the last 4 years, these parcels will require additional time well beyond the June 2019 timeline to be thoroughly consulted.

I. Counselor Chapter Land Use Plan Implications

1) K'e Bikéyah (Related to Fundamental Law)

At the December 28, 2017 TriChapter meeting [representatives from Counselor, Ojo Encino, and Torreon/Starlake Chapters were present], there was a discussion on the meaning of "k'é bikeyah". The knowledge base of the discussion stems from Diné common knowledge that stems from teachings handed down from Diné knowledge keepers (i.e. Medicine Men, elders, etc.) The following narratives briefly describes the attempt to define the heading of this section:

One Chapter official said this about the land: "If we get rid of all the colors [referring the checkerboarded and multi-colored map of the TriChapter area], the land is for all. We are free to go to wherever [we wish]. We [Diné people], don't say 'We own the land'. Before maps there were no designated boundaries only landmarks. These major and minor landmarks being sacred mountains and sacred places. But we were free to travel beyond."

A local citizen stated: "Before the lands were mapped into ownership tracts the landscape is one body. And from time immemorial the people were living in extended clan groups that move and intermarried in the TriChapter region. All the lands were connected. The land is put there for us and as the clans grew, there clans were then recognized to historically use certain areas of land. These land areas were marked using various cultural patrimony (such as, but not limited to, buried grinding stones, sweat lodges, certain types of textiles, and rock cairns)."

In an extended conversation, the following precipitated is translated from the Diné language: "The regional Diné culture of the TriChapter areas is, at times, unique compared to other Diné regions and communities. Our songs, stories, language and methods of ceremony differ in distinct ways from people even as close seventy miles away. Even within the TriChapter region, the clans each have differing histories at how they arrived within the region. In terms of land ownership, the people don't own anything but control the footprints they are standing on. The land itself is a holy being and provides nourishment to the people and the people give nourishment to the earth-mother".

In summation, "K'é" is descriptive of a group of distinct and unique people that differ from other groups of Diné even as close as seventy miles away. "Bikeyah" is difficult to define because the Diné cannot own a holy deity. But, the TriChapter region Diné marked their historical land use areas utilized various cultural patrimony. The Diné in TriChapter region are a unified people through kinship, marriage and culture.

Significantly, this shows Sub-Cultural variation which is an important Way-of-Life Social Factor for NEPA analysis. Although the FFO is currently considering an ethnographic study of the broader region, this sub-cultural variation has not been accounted for by current EIS level plans or other lower level planning. It is likely this variation has not been shown through standard cultural resource surveys. Thus, this sub-cultural variation will require extensive understanding to ensure that impacts from proposed actions are understood and to fully understand potential mitigation mechanisms that can be implemented which are properly contextualized for the area. Thus, any irreversible action that could potentially limit mitigating mechanisms or other determinations/alternatives of future sub-cultural variation studies in the area should be avoided.

2) <u>Day Mesa, Heart Shape Rock, Pig Stands Mesa, Baby Canyon Need Inclusion for</u> <u>Impact Analysis</u>

1) Day Mesa

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Day Mesa is located at within Counselor. It has been designated by Counselor Chapter 2002 Land Use Plan Policy 1e as a protected area.

1) Heart Rock Peak

Heart Rock Peak is located within Counselor. It has been designated by Counselor Chapter 2002 Land Use Plan Policy 1e as a protected area.

1) Pig Stands Mesa

Pig Stands Mesa is the mesa located north of Heart Rock Peak. It has been designated by Counselor Chapter 2002 Land Use Plan Policy 1e as a protected area.

1) Baby Canyon

It has been designated by Counselor Chapter 2002 Land Use Plan Policy 1e as a protected area. There will be likely effects to this protected area by any future development of the leases

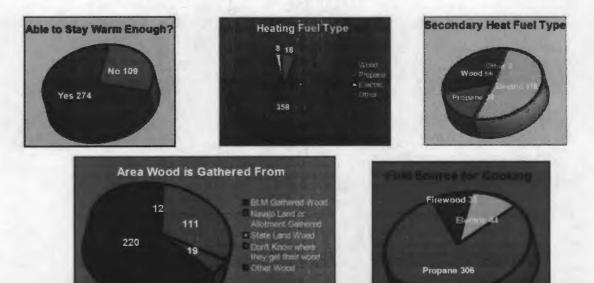
VI. Heating Fuel (Firewood)

The Chapter considers firewood to be a subsistence resource of the Navajo people.

The reason for this designation is based on Census data and from locally derived survey data for the Trichapter region.

Canque Data

| Census Data | | | | | | | |
|----------------------------|--|------------------------|-----------|--|--|--|--|
| 2016 Syr ACS: Table 025040 | Housing Units Using Freevood as Heating Fuel | Total Housing Units | Percent - | | | | |
| Counselor Chapter | 216 | 238 | 90.8% | | | | |
| Huerfano Chapter | 377 | 720 | 52.4% | | | | |
| Nageezi Chapter | 208 | 253 | 82.2% | | | | |
| Ojo Encino Chapter | 105 | 150 | 70.0% | | | | |
| Torreon/Starlake Chapter | 280 | 348 | 80.5% | | | | |
| Navajo Nation | 28,342 | 44,691 | 63.4% | | | | |
| Sandoval County | 2,535 | 48,534 | 5.2% | | | | |
| San Juan County | 5,857 | 41,036 | 14.3% | | | | |
| New Mexico | 52,087 | 762,551 | 6.8% | | | | |
| United States | 2,415,634 | 117,716,237 | 2.1% | | | | |



Hasbídító Trichapter Food and Energy Survey August 2013

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The Census data and locally collected Trichapter Survey data both indicate that there is a differential pattern of vegetative resource usage by the populations within the Navajo Nation. Thus, additional analysis is required to understand this usage and potential impacts from any direct or indirect effects of the proposed federal actions.

VI. Disproportionate Economic Impacts and Different Economic Environment

The economic environment of the Navajo Chapters (and of the Eastern Agency in general) is vastly different then the surrounding counties. Using standard economic analysis hides this economic reality faced by Navajo communities

1) Employment in Oil and Gas Extractive Industry

Census data indicates the residents of the Navajo chapters of Counselor, Huerfano, Nageezi, Ojo Encino, and Torreon/Starlake are paid significantly less for Oil/Gas employment then San Juan or Sandoval county averages¹⁷. It also appears from census data that the percent of the population in these jurisdictions are employed at rates far lower then San Juan county¹⁸. These employment rates are in general higher than Sandoval county; however, Sandoval county base employment rate for oil/gas and mining is very low. Additionally, almost all oil/gas activity occurring in Sandoval county is in Navajo or Jicarilla areas¹⁹.

This data seems to indicate that employment economic benefits are accruing to residents in non-Navajo jurisdictions while many of the Navajo areas have comparable levels of Oil/Gas development in San Juan county, and relatively high levels of oil/gas development compared to Sandoval county. This disparity may have many reasons (statistical error, education, or other systemic structural issues). However, from best available data this appears to be a reality for the Navajo communities, and appears to confirm observational evidence brought forward by residents of various Navajo communities.

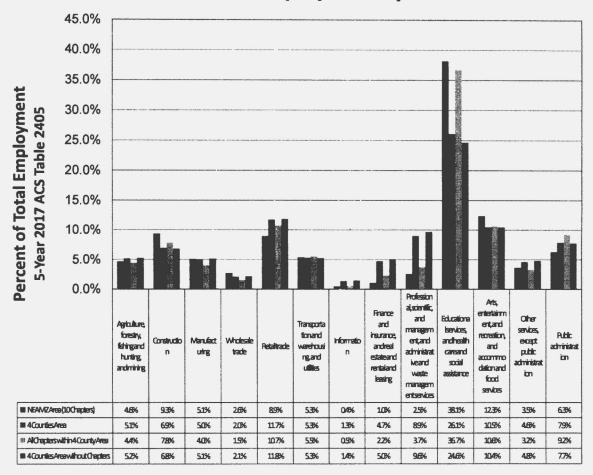
Thus, while Navajo communities will have to endure negative impacts from oil/gas development, they will not necessarily see the benefits of such development while other communities will.

The employment structure for the proposed NEAMZ area and for all Chapters that are bordered by the 4 county area (McKinley, Rio Arriba, Sandoval, and San Juan) is different than the structure for the populations of those chapters on the stateside.

¹⁷Appendix 1: Pay Rates

¹⁸Appendix 2: Employment Rates

¹⁹Appendix 3: Sandoval County Political Map



Percent of Employment by Sector and Area

The above table looks at the structure of employment by industry and geography. Data is presented for the 10 chapters that are present within the FFO RMPA planning area (also referred to as NEAMZ). While a large portion of these chapters are within the planning area the data is for the entire chapter (not just the planning area portion of the chapter). Next, the combined data for the 4-county area is shown (it includes all of the 4 counties both within and outside of the planning area). Following this is the data for all Navajo chapters within the 4-county area. Lastly, the 4 county area data is shown with the Navajo Chapter data (for the four-county area) removed.

Additional major economic structural differences is unemployment and labor participation rates. The unemployment rate is also substantially higher in Navajo chapters than in the surrounding counties. The 2017 5-year ACS DP03 table shows that unemployment for the the 10-chapter initial NEAMZ area is at 27.7%. The four-county area in general has an unemployment rate of 10.0% while all the Navajo chapters within the 4-county area has an unemployment rate of 20.0%. The unemployment for the 4-county area with all chapters removed is at 8.5%.

The labor participation rate (LPR) is also much lower within chapter communities as well. In 2017 the 5-year ACS DP03The LPR for the 10-chapter area is 49.3%, the four-county area is 56.7%, all chapters within the four county area is 46.6%, and the four counties with the chapter removed is 58.6%. The difference in LPR between Navajo chapters and the surrounding counties is over 20% difference (12% absolute difference).

It is also important to understand that income is also lower for Navajo chapters as compared to their surrounding county counterparts. Total average income for all chapters in the 4-county area is \$23,552. The four-county area has an average income of 31,912 but the 4-county area average income increases to \$33,031 when chapters are not included. The difference in income is nearly \$9,500 between chapter residents and residents of the surrounding counties. All economic sectors show a similar pattern regarding lower incomes for chapters.

| | 4 County Area | All Chapters within 4 County Area | 4 County Area without Chapters |
|--|---------------|-----------------------------------|--|
| In the reaction of the second state of the second s | | | The second s |
| Total: | \$31,912 | \$23,552 | \$33,031 |
| Agriculture, forestry, fishing and hunting, and mining: | \$56,989 | \$29,830 | \$60,028 |
| Construction | \$33,964 | \$28,577 | \$34,790 |
| Manufacturing | \$48,681 | \$24,862 | \$48,939 |
| Wholesale trade | \$38,367 | \$28,081 | \$39,348 |
| Retail trade | \$21,814 | \$17,300 | \$22,381 |
| Transportation and warehousing, and utilities: | \$47,588 | \$31,660 | \$49,834 |
| Information | \$38,246 | \$12,673 | \$39,472 |
| Finance and insurance, and real estate and rental and leasing: | \$35,235 | \$24,270 | \$35,885 |
| Professional, scientific, and management, and administrative and waste management services: | \$44,400 | \$33,004 | \$44,980 |
| Educational services, and health care and social assistance: | \$32,010 | \$23,606 | \$33,683 |
| Arts, entertainment, and recreation, and accommodations and food services | \$14,837 | \$15,719 | \$14,717 |
| Other services except public administration | \$20,257 | \$18,608 | \$20,405 |
| Public administration | \$42,199 | \$33,919 | \$43,515 |

Substantially higher unemployment, substantially lower labor participation rates, significant differences in sector employment, and substantially lower average incomes show how chapter areas are substantially different in terms of labor structure as compared to the surrounding counties.

ii) Leakage Rates

The economic leakage rate for the Navajo Nation as a whole has been and continues to be high. The US Commission on Civil Rights issued a report in the 1970s that indicated the leakage rate for the Navajo Nation was 67%²⁰. The Navajo Nation Division of Economic Development 2009-2010 Comprehensive Economic Development Strategy indicates the economic leakage rate is slightly lower at 64%²¹. However, it is likely this rate varies based on area.

²¹ The Navajo Nation 2009-2010 Comprehensive Economic Development Strategy. Navajo Nation Division of Economic Development. Page 23. Accessed athttp://navajobusiness.com/pdf/CEDS/CED_NN_Final_09_10.pdf

²⁰ McCabe and Hester. The Navajo Nation: An American Colony. A report of the United States Commission on Civil Rights. 1975. Page 26. Accessed at https://eric.ed.gov/?id=ED111561.

Based on proximity to border towns and the degree of economic development by chapter will determine the leakage rate at the chapter level. On nation economic areas in eastern Navajo include Shiprock and Crownpoint. Additional economic opportunities exist throughout eastern areas of the Navajo Nation (such as a few gas stations, trading posts, smaller flea markets, and other informal economic elements). However, for many chapters it is likely that the economic leakage rates are much higher than 64%. For example, in the trichapter area only two c-stores exists, one of which sells gas (Torreon/Starlake). It is important to note that both of these businesses exist on private land, thus are subject to regulations and taxation of the State/County. Although the c-store in Counselor is owned by the Navajo Nation. Thus, these stores represent formal economic entities which keep the leakage rates lower. However, looking at the food/energy surveys for the trichapter area indicate that very little of overall food shopping takes place at these stores. Thus, it is likely that leakage rates for the trichapter area is much higher than 64%.

2) Revenue Generation

In a study of federal oil/gas production within Eastern Agency areas of the Navajo Nation. The study was aimed at estimating the amount of wealth generated by federal oil/gas wells within Eastern Agency and estimate the amount of federal royalties (as defined by FLPMA) generated within eastern agency (upon federal leases). The total amount generated per year in 2013 and 2014 was roughly \$150,000,000 generating roughly \$19,000,000 in federal royalties. These royalties are nearly evenly split between the Treasury Department and Santa Fe. However, much of these funds never directly or indirectly come back to the Navajo communities being impacted by federal oil/gas development. This has to do with legal structural issues.

The importance of this issue is to recognize that unlike other New Mexico communities which potentially can benefit from federal royalties, Navajo communities do not likely benefit as much or to a substantially lesser degree. It should be noted, federal payments to the Navajo Nation due to treaty obligations of the United States with the Navajo Nation are not justification for the extraction of wealth from communities without bringing back monies to help mitigate impacts (which is the intention of revenue sharing under FLPMA). Additionally, in the Chapter's past discussions with counties, the counties do not feel that they are being adequately funded for services at this time by the state. Thus, the potential trickle down effect of Santa Fe giving monies to the counties and perhaps the counties providing increased services within chapter boundaries (such as grading) is not likely happening.

It is important for the BLM to fully recognize that the Navajo Nation is a sovereign Nation. Unfortunately, due to the checkerboard situation, federal trust lands are not currently taxed by the Navajo Nation. Thus, production taking place on those lands within Navajo country do not necessarily benefit the communities in which the production takes place. As was shown, employment benefits have seemingly accrued to non-chapter communities. Due to major economic structural differences, economic growth/development have not accrued to the chapter communities either. Thus, the next potential benefit for chapter communities (that benefits the broader community and not small segments) would be taxes. However, the BLM does not fully analyze this situation regarding the Chapters.

New Mexico is nearly at the bottom for providing oil/gas tax revenues to its local communities distributing only 14% of its oil tax and only 3% of its gas tax revenues to local governments ²². The amount of local revenues (from taxes and state distributions) in New Mexico from the typical unconventional oil well was about \$94,623 in 2016 (at \$60.00/barrel it would be approximately \$123,000 Jan 2018) over ten years. Tax revenues from oil/gas production is a key element in mitigating negative impacts to communities from oil/gas production. It is the underlying purpose of FLPMA revenue sharing (although it is generally determined by the state how it decides to distribute those revenues). In 2014 the typical unconventional oil well was estimated to generate \$1.3 million in revenues over 10 years, with approximately \$1 million of the revenue generated in the first 2 years²³. Assuming similar production curves and a current price of about \$60.00 this amount would be about \$918,000.

However, it is important to understand that Navajo Nation is sovereign and the State of New Mexico is also a different sovereign (and a different type of sovereign). Thus, much of the production that takes place on Federal, State, and private lands do not benefit the Navajo Chapters or Navajo Nation via taxes or distributions. The only production that takes place within Navajo Nation in much of eastern agency is on allotment lands, which is a complicated situation in regards to taxation and regulation.

One form of distribution the state does directly to the Navajo Nation is the tribal infrastructure fund (TIF). However, this fund has not provided a large amounts of monies to Navajo compared to revenues generated by chapters in the San Juan Basin. The following are TIF awards over the last five years comparing amounts granted to Navajos versus the total amount distributed²⁴:

| NM Tribal Infrastructure Fund Distributions | | | | | | | | |
|---|---------------------------|-----------------|--------------|--------------|----------|--|--|--|
| Year | Total Distribution | 10 Chapter Area | 10 Chapter % | All Chapters | Navajo % | | | |
| 2018 | \$8,831,925 | \$0 | 0.0% | \$3,980,078 | 45.1% | | | |
| 2017 | \$5,415,503 | \$0 | 0.0% | \$470,000 | 8.7% | | | |
| 2016 | \$12,158,068 | \$160,000 | 1.3% | \$3,395,912 | 27.9% | | | |
| 2015 | \$14,235,640 | \$0 | 0.0% | \$6,208,394 | 43.6% | | | |
| 2014 | \$14,235,640 | \$300,000 | 2.1% | \$2,275,000 | 16.0% | | | |

It becomes evident that the most effected chapters are not receiving TIF monies. Over the last 5 years the 10 chapter area has received less than 1% (0.80%) of total TIF funds; however, these areas have generated substantially more than this in oil/gas revenues from state and federal royalties and lease sales. It should be noted that in only the first 3 quarters of 2018 that Indian gaming revenues (via Indian gaming compacts)

²² https://headwaterseconomics.org/dataviz/oil-gas-local-governments-production-tax-revenue/

²³ How New Mexico Returns "Unconventional" Oil Revenue to Local Governments. Headwaters Economics. January 2014. Accessed at <u>https://headwaterseconomics.org/wp-content/uploads/state-energy-policies-nm.pdf</u> Page 2

²⁴ http://www.iad.state.nm.us/tribalinfrastructurefund.html

generated nearly \$54 million dollars in revenues for New Mexico. Nearly 11% of total net winnings from this period were generated by the Navajo Nation, thus the Navajo Nation likely generated close to \$6 million in revenue for New Mexico in the first 3 quarters of 2018. To put this into perspective Navajo Casinos (Nation wide not just New Mexico) distributed \$10 million to all 110 chapters for FY2019²⁵.

This is illustrative of the fact that the extractive industries in the area are also extracting wealth and opportunity for the chapter communities. Excuses that other revenue mechanisms from the state (such as TIF) make up for the lack of direct distributions is insufficient and ill informed. The revenues simply from one source of Indian gaming far more than exceeds distributions from TIF, and likely covers any other additional distribution mechanisms. Additionally, New Mexico has one of the lowest rates of local governmental oil and gas tax revenue distribution, so the stress placed upon counties to maintain services to tribal areas (which are outside of their tax base) is also highly stressed.

VII. <u>Need for completed RMPA and Completed RMP</u>

1) New Technology with more intense impacts

Although hydraulically fractured wells have existed in the San Juan basin since the 1940s, the combination of horizontally drilled laterals (particularly long laterals) combined with hydraulic fracturing within shale formations is relatively new and much more intense. The 2003 FFO RMP did not expect this unique combination of technologies to take hold in the basin. This unique combination of technologies promises to decrease surface impacts, however it appears that they are also substantially more intense then their vertically drilled counterparts. The reason for this seems to stem from the fact that the average vertical well lateral in the NMOCD district #3 is approximately 5,014 feet while the average lateral length for a horizontal well is 7,728 feet. This is a 54% increase in lateral length. Additionally, a longer length of the lateral is within the productive formation with longer lengths of the lateral being fractured.

It seems that mitigations, planning, and setbacks established for vertical wells would be insufficient for the much more productive (and intense) horizontal wells that exist within areas such as Counselor and Nageezi.

Additionally, the ability to horizontally drill laterals presents new opportunities for potential mitigation such as No Lateral Zones in various formations to better protect water resources or to better protect against seismic events.

Since this new technological combination is being utilized and data suggest significant differences in intensity, it behooves the BLM to defer the leasing of parcels to ensure that proper EIS level planning has been completed (in both the RPFO and FFO) in order to not narrow the range of alternatives and provide the best protections for the communities and general public.

2) Restricting Potential Alternatives

²⁵ https://www.indianz.com/IndianGaming/2018/05/22/navajo-nation-casinos-generate-another-1.asp

Currently, the FFO is undergoing a RMPA. All proposed FFO lease Parcels are within the amendment planning area. Leasing of any of these parcels will limit potential mitigation strategies derived by the RMPA and will limit alternatives. Thus, the Chapter must insist that all FFO parcels are deferred from the March 2019 lease sale to ensure proper EIS level analysis can take place to protect Navajo populations.

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3) <u>RPFO RMP is not Adopted</u>

The new RMP for the RPFO has not been adopted. The previous RMP does not likely cover the issues being brought forward by Chapter governments and likely does not cover issues related to unconventional oil/gas wells. All parcels within the RPFO should be deferred until proper EIS level planning which can mitigate unconventional well impacts can be tiered to.

VIII. <u>UNDRIP</u>

N

The United Nations General Assembly passed resolution 61/295: United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) on September 13, 2007. Although the United States was one of only four governments in the General Assembly not to vote for the resolution originally, this changed with President Obama's support starting in December of 2010.

Additionally, the issues arising in North Dakota with the Standing Rock Sioux regarding the construction of the Dakota Access Pipeline has raised concerns by the United Nations Permanent Forum on Indigenous Issues. In a letter, the forum requested that the United States Government abide by the stipulations of UNDRIP.

This letter is located at: https://www.un.org/development/desa/indigenouspeoples/news/2016/08/statement-onprotests/

The chapters recognize that the UNDRIP is considered by the US government as "not legally binding or a statement of current international law ", but the Chapter also recognizes that the US government considers UNDRIP as having "both moral and political force". Thus, the Chapter will raise issues related to UNDRIP directly as to help the federal government morally.

Upon review of UNDRIP, the Chapter feels that there is currently no free and prior consent given by peoples in regards to Eastern Agency parcels (which includes all RPFO and FFO parcels, although parcel 25 is far removed it is within Navajo aboriginal lands and in the lands granted by the US Government to Navajo people for settlement via EO 709 and EO 744) for their development. Via resolution, the chapter governments that the Eastern Agency parcels lie within are against all lease sales until the FFO RMPA is completed. The Eastern Navajo Agency Council is composed of officials from all 31 eastern Agency lease sale until the FFO RMPA is completed. Thus, via governmental resolutions at the Navajo local, Agency, and National level governments there is unity in that leasing should not occur until various needs are met.

IX. Roads

Of additional concern are the immense impacts suffered within Counselor and surrounding communities by the increased traffic from the increases in oil/gas development. Although the Chapter has informed the BLM of the impacts upon the dirt roads within Counselor it does not appear that much in the way in improvements have occurred.

The large amounts of oil/gas traffic continues to degrade the roads. Additionally, the traffic causes the school buses to run late dropping students off at school and dropping them off at home. Also, the extra dust caused by the oil/gas traffic gets into the school buses and this is not good for the students to breathe.

As stated before, a vast amount of wealth has been generated within the Counselor area, yet the community does not seem to be benefiting. Additionally, impacts to the roads cost Counselor and area residents extra money in terms of vehicle repairs. It also costs these residents time as well. These continue to be unmitigated impacts to the community which is differential in nature due to the unique cultural, economic, and historical situation and context of Counselor and the broader Navajo checkerboard. The BLM and federal government in general has not accounted for these differences which has led to immense impacts for residents.

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IX. Rio Puerco Field Office 1986 Resource Management Plan

RPFO Current/Active RMP Cover Page

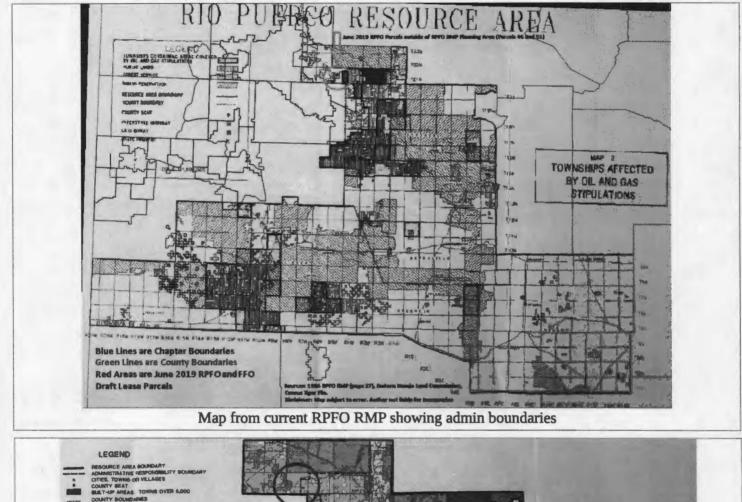
The planning process for the currently active and utilized Rio Puerco Field Office Resource Management plan was announced in the Federal Register on March 23, 1983²⁶. The plan was signed in January of 1986²⁷. In the RPFO RMP six oil and gas stipulations were

²⁶ RPFO 1986 RMP: Page 12

27 Id.: Page 4

developed (plus a New Mexico one). These stipulations are discussed in table 8 of the RPFO RMP (pages 29-31).

Of particular interest are the maps showing the administrative boundary for the RPFO in its currently active RMP.



Map from current RPFO RMP showing admin boundaries (Fold Out)

RIO PUERCO

RESOURCE AREA

LAND STATUS

INTERSTATE

RPFO RMP Images²⁸

The RPFO must defer all parcels due to the need for an updated RMP to adopt new strategies, mitigations, and policies for the area which has seen changes in its needs and for the new reality of hydraulically fractured horizontally drilled wells being used at mass scale. As a gentle reminder, the RPFO RMP is over 3 decades old and needs updating (for example the RPFO administrative boundaries have changed). Parcels 46 and 51 are not even within the planning area of the current RPFO RMP.

In a related matter, the FFO must do the same since they must amend their current 2003 RMP to adapt measures and policies for the new realities of hydraulically fractured horizontally drilled wells being used at mass scale.

X. Other Issues

- 1) The RPFO EA erroneously states that chapter poverty rates in the shown table vary from a low of 38% to a high of 68%. The actual low amount is 50% not 38%. Page 52 RPFO
- If the Groundwater for well development is taken locally it would represent a very large proportion of usage for the Ojo Encino buffer area (as opposed to comparing it at the county level). Page 53 RPFO
- 3) The BLM must begin to consider impacts of oil and gas development upon lifeforms which live in the underground environment. These lifeforms tend to be cellular but are part of the living environment, as such the Chapter considers it as part of the cultural sphere of the area. Additionally, these organisms can effect GHG and other various emissions from wells. The BLM must remove all parcels from leasing until further analysis can be done regrading underground lifeform impacts.
- 4) Rio Puerco Watershed Impacts not analyzed sufficiently
- 5) 43 CFR §3203.10 (a)(e) for EOI Process Is Not Valid for Oil/Gas Resources
- 6) The Chapter is very concerned and alarmed by the Ojo Encino buffer area study showing GHG and other emissions which very much disportionately effect Navajos living in the area which includes Counselor, Ojo Encino, and Torreon/Starlake.

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|----------|--|
| RPFO | Comment |
| Final EA | |
| Page # | |
| 12 | Parcels 46 and 51 are outside the planning area boundary of the RPFO's active RMP |
| | and RMPA. These parcels must be withdrawn since they are not within a currently |
| | active RPFO plan. |
| 12 | BLM correctly acknowledges Counselor Chapter's policies relate to natural resource |
| | development both within and surrounding Counselor Chapter. However, the BLM |
| | completely ignores Ojo Encino Chapters integration of the San Juan Badlands |
| | ERMA in its draft RMP with its economic development plan. Why does the BLM |
| | deny Ojo Encino Chapter's policy connection to lands surrounding its boundaries? |

Although the following table is concentrated on the RPFO Final EA, the comments are also related to the BLM FFO Final EA as well.

²⁸ https://ia601704.us.archive.org/19/items/riopuercoresourcunit_0/riopuercoresourcunit_0.pdf

| | As discussed by Ois Engine Charter the Can Juan Dadlands EDMA has been |
|----------|---|
| 15 (AIB- | As discussed by Ojo Encino Chapter, the San Juan Badlands ERMA has been |
| 5) | incorporated into the Ojo Encino Economic Strategy Plan, negative impacts to this |
| | recreation area is of great concern to the Chapter. |
| 15 (AIB- | There is more than H2S issues to contend with in regards to human health. Increased |
| 6) | levels above ambient of VOCs have been recorded in various hotspots due to oil/gas |
| | production within Counselor Chapter and increased levels of PM 2.5 and PM 10 |
| | above ambient due to oil/gas within Counselor Chapter. Additionally, there are other |
| | impacts from increases in various HAPS and CAPS from oil/gas production, |
| | cumulative increases in industrial and vehicular accidents and cumulative increases |
| | in stress borne by local populations. These cumulative increases should be analyzed |
| | in regards to human health even if some of the CAPS and other figures are below |
| | NAAQS or NMAAQS since every incremental increase (even at levels below |
| | National and NM standards) can cause increases in negative health outcomes. |
| 16 (AIB- | The Chapter is relieved that the BLM RPFO has finally indicated its agreement that |
| 8) | the proposed June 2019 lease parcels are part of the Greater Chaco region by stating |
| | that 6 sites within the proposed parcels are Anasazi sites. As Navajo and Pueblos |
| | groups (including the Chapter) have stated, these parcels are part of the Greater |
| | Chaco region and requires additional analysis as the secretary had wisely requested |
| | in a previous lease sale. Thus, all lease sale parcels (FFO and RPFO) should be |
| | deferred for further cultural analysis. |
| 17 (AIB- | The BLM RPFO has a special and unique responsibility to take watershed analysis |
| 11) | seriously in areas that could effect the Rio Puerco Watershed. All of the proposed |
| | RPFO June 2019 lease parcels will effect (directly or indirectly) the Rio Puerco |
| | Watershed. Unfortunately, it appears the BLM RPFO consistently ignores its |
| | responsibilities mandated by congress which established the Rio Puerco |
| | Management Committee via Public Law 104-333. Considering congress considers |
| | the protection of the Rio Puerco watershed to be of great importance, why does the |
| | BLM RPFO only consider it in brief? All parcels should be deferred to allow for a |
| | more detailed analysis of potential Rio Puerco Watershed impacts, and to identify |
| | needed mitigation measures which are not currently available in the 1986 RMP or |
| | 1992 RMPA since both overly matured yet active documents were conceived and |
| 18 (AIB- | approved long before the RPMC was created. |
| 16 (AIB- | The BLM RPFO has projected the amounts of wells to be developed for the lease sale, why can't it use these projections to do a socioeconomic impact analysis, |
| 13) | particularly for local and EJ communities? Additionally, this area of the "San Juan |
| | Basin" differs significantly in terms of oil/gas industry impacts. |
| 22 | BLM RPFO RFD 2010 citation does not appear in the reference section |
| 25 | 456 acres of new surface disturbance would represent a nearly 64% increase in |
| | surface disturbance for the RPFO (if the current figure of 260 acres as denoted on |
| | page 24 is correct). This is a significant decision for the RPFO which will |
| | dramatically increase surface impacts. |
| 25 | Why are there only two alternatives analyzed, is it because it is the minimum |
| | required for a "proper" NEPA analysis? The BLM and public could benefit from |
| | some different alternatives. The Chapter has no suggestions for other alternatives |
| | since it has determined from data that all parcels should be deferred (No action |
| | alternative). |
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| 26 | Why does the BLM RPFO not include the San Juan Badlands ERMA as a RFFA as part of its analysis? |
|------------|---|
| 30 (T 3.2) | The EPA 1 year primary PM2.5 NAAQS is 12.0 μ g/m ³ not 60 μ g/m ³ . The FFO EA Table 3.3 has similar mistakes. |
| 35 (T 3.6) | Table 3.6 still hides total emissions impacts by using a larger 4 county area. All RPFO parcels are within Sandoval county and at a minimum should indicate Sandoval county emissions, this was provided by the Chapter in its EA comments. It is also shown on the FFO Final EA table 3.4. Additionally, all parcels are located within a very concentrated area and even better more locally specific analysis would focus on the immediate surrounding communities as well. The Chapter also provided some of this analysis too. BLM RPFO must defer all parcels to do better locally specific analysis, and stop trying to hide impact by averaging them out over substantially larger regions. |
| 45 | BLM RPFO acknowledges that the projected development from this lease sale will lead to large amounts of GHG emissions. However, it indicates that it can do nothing to stem climate change. Climate change due to anthropogenic influences is incremental, thus every time additional GHG emissions are added the effects are more likely to occur and are more likely to become more acute. So why does the BLM wash its hands of any ability to help mitigate climate change which it acknowledges is real and is anthropogenically driven? Additionally, the EJ communities surrounding these parcels are disproportionately affected by climate change as projected by the BLM RPFO in the EA. Indigenous communities rely on the land for economic and spiritual sustenance. Changes in climate will effect the distribution of medicinal and culturally important plants, modifications to rainfall timings and intensity will disturb traditional dry-farming practices, and, as previously noted, Navajo communities almost completely rely on fuelwood for heating as a subsistence resource. To not analyze in depth the effects of climate change in general and particularly upon EJ communities is irresponsible and is incomplete planning by the BLM RPFO. Even if the amount of GHG emissions from this lease sale is projected to be tiny compared to global emissions, which once again a way in which the BLM hides true impacts of the lease by using extremely large geographic regions, its impact still is cumulative and should be analyzed. Additionally, how much additionally CO2e emissions increase will be coming from the immediate local area due to the proposed lease sale? The FFO also must do similar analysis. |
| 47 | What effects to the geology and landscape would come from removing nearly 5.2 million barrels of water? This equates to removing over 29 million cubic feet of water , additionally another 5.25 million cubic feet of oil will be removed. Nearly 120 million cubic feet of gas will be removed, but this gas is likely compressed so its volume would not be the same. A minimum of almost 35 million+ cubic feet of materials will be removed from the lease area, how will this affect the landscape? There are locations used for sun watching and the tracking of other celestial bodies across the San Juan Basin and Greater Chaco Region. Deformations in the landscape, even slight deformations, can render these culturally important locations unusable. Has the BLM RPFO or BLM in general analyzed the impacts of deformations to the surface landscape by the |

| | massive removal of underground resources and how these deformations impact celestial body watching locations? There appears to be no analysis regarding this although the BLM does acknowledge the importance of the night sky for indigenous populations. Additionally, how likely does this massive removal of water lead to increased injection well activity within Ojo Encino and surrounding Chapters? Lastly, simply injecting a volume of water back into the ground at some other point will not counter the effects of landscape deformation. Landscape deformation, even minor deformation is a major cultural concern generally speaking, but are of specific cultural concern as a means of watching the celestial bodies. Changes substantially greater than what is likely needed to affect such sites has been observed in the Permian basin, the BLM FFO and RPFO need to understand this across the San Juan Basin for cultural resource protection. The Chapter must insist that all parcels are deferred for further analysis regarding impacts to the landscape under NHPA. |
|------------|---|
| | Please see for an example the following study press release: |
| | https://blog.smu.edu/research/2018/03/20/radar-images-show-large-swath-of- |
| | texas-oil-patch-is-heaving-and-sinking-at-alarming-rates/ |
| 50 | The Chapter would like to remind the BLM (FFO and RPFO) that Chacoans also |
| | included Navajo ancestors as well. It would be culturally appropriate of the BLM |
| | and federal agencies to refer to the Chacoans in a manner which does not exclude Navajos. |
| 50 | The BLM RPFO analysis found 6 Anasazi sites within the proposed RPFO lease |
| | parcels, as noted in previous comments the Chapter and Pueblos had indicated that |
| | these parcels are within the Greater Chaco Region. Now the BLM RPFO has finally |
| | recognized this fact by revealing this information. Just because a greathouse |
| | (federally recognized or not) is not within immediate vicinity of the parcels does not |
| | preclude the area from the Greater Chaco Region/Landscape. Thus, the BLM RPFO |
| | needs to recognize that these parcels are within this Greater Chaco |
| | Region/Landscape by its own omission and defer all parcels for more in depth |
| 50 | cultural analysis as previously directed by the secretary. There are horizontal well sites that are audible at over a mile in Counselor. |
| 51 | Sentence states only 6 vertical wells for the entire lease sale but projections show 36 |
| | vertical and 2 horizontal wells. |
| 55 | Table 7.1 does not show or mention Huerfano chapter because that chapter is not |
| | within vicinity of RPFO parcels (although it is closer to FFO parcles and thus is |
| | appropriately listed in table 3.7.1 in the FFO Final EA)). Thus, the statement in the |
| | EA on page 55 "As seen in the above table, nearby Navajo Nation Chapters range |
| | from 98 to 100% minority and 92% to 99% Native American. Poverty rates for these |
| | Chapters ranges from 38% to 68%." is incorrect since the chapters listed on table 7.1 |
| | the lowest poverty rate Chapter is Torreon/Starlake at 50%. |
| 56 (T 7.2) | What is the .023% increase in NAAQS and VOC emissions in subject EJ |
| | communities. What does this mean? What is the total geographic space under |
| | analysis? This number would seem to be way to low if the adjacent EJ communities |
| | specifically are considered, unless the BLM is hiding the true number again by using geographic spaces that are so large as to hide the locally specific impacts to the EJ |
| | Beographic spaces that are so large as to mue the locally specific impacts to the EJ |

| | communities. However, it becomes apparent that this analysis was not locally specific or relevant for the EJ communities within Vicintiy of either set of parcels |
|-----|---|
| | for the June 2019 lease sale since the FFO Final EA also mentions the exact same |
| | figure in table 3.7.2. The analysis needs to be locally specific and relvent for the |
| | impacted EJ communities, not just clump all EJ communities together into one |
| 67 | analysis so that they can be hidden by larger geographic regions. |
| 57 | How can the BLM just say "No" in regards to impacts to EJ communities after the |
| | numbers it projected for wells to be developed and products extracted? Perhaps a deeper analysis needs to be done. |
| 57 | Chapter is glad to see the BLM RPFO has admitted to disproportionate impacts |
| | upon EJ communities due to this lease sale. However, the BLM must follow through |
| | with this and do more extensive analysis on these impacts or provide an EIS level |
| | study regarding these disproportionate impacts. Thus, the Chapter requests that all |
| | parcels are deferred for further tribal consultation. |
| 58 | The Chapter also wants the RPFO to adopt a revised RMP as well before any future |
| | leasing. Thus all FFO and RPFO parcels must be deferred for completion of the FFO |
| | RMPA and RPFO RMP. |
| 132 | The BLM FFO or RPFO does not analyze affects to the geomicrobiology (only |
| | noted the comment). Fuller analysis is needed for cultural and resource analysis |
| | purposes. The PLM PDEO and EEO refused to take a hard look at locally specific impacts |
| | The BLM RPFO and FFO refused to take a hard look at locally specific impacts from the proposed lease sale based on projected development levels. It only used |
| | county or multi-county areas in its analysis. |
| 39 | Table 3.7 no longer discusses total emissions from all leased parcels and proposed |
| | wells, why not? |
| 35 | Table 3.6 Still refuses to look at locally specific or even county specific Criteria |
| | Pollutants and thus hiding true proposed impacts for Sandoval county. |
| 11 | What specific authority(s) is the BLM using to collect and execute EOIs since |
| | federal regulations for such a process is only applicable to geothermal leasing. The |
| | BLM admits that the geothermal regulation is" not applicable on pages 130-131 |
| | T = T = 1 |
| | "The applicable federal regulations for oil and leasing is 43 CFR 3120 not 43 CFR |
| 15 | 3203". |
| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource |
| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. |
| 15 | 3203".AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. How is this considered any type of analysis or even mitigation for a resource which |
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| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. How is this considered any type of analysis or even mitigation for a resource which is highly important for Navajo populations which almost solely rely on this resource for heating? It is apparent that the BLM RPFO has lost its ability to produce locally |
| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. How is this considered any type of analysis or even mitigation for a resource which is highly important for Navajo populations which almost solely rely on this resource for heating? It is apparent that the BLM RPFO has lost its ability to produce locally relevant and specific analysis or perhaps other, less local governmental agencies are doing the analysis for them. Either way, AIB-4 is woefully insufficient for an important subsistence resource analysis. |
| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. How is this considered any type of analysis or even mitigation for a resource which is highly important for Navajo populations which almost solely rely on this resource for heating? It is apparent that the BLM RPFO has lost its ability to produce locally relevant and specific analysis or perhaps other, less local governmental agencies are doing the analysis for them. Either way, AIB-4 is woefully insufficient for an important subsistence resource analysis. The BLM is consistently hiding real locally specific impacts by hiding the impact |
| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. How is this considered any type of analysis or even mitigation for a resource which is highly important for Navajo populations which almost solely rely on this resource for heating? It is apparent that the BLM RPFO has lost its ability to produce locally relevant and specific analysis or perhaps other, less local governmental agencies are doing the analysis for them. Either way, AIB-4 is woefully insufficient for an important subsistence resource analysis. The BLM is consistently hiding real locally specific impacts by hiding the impact numbers within larger regions. Thus making the analysis irrelevant to local |
| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. How is this considered any type of analysis or even mitigation for a resource which is highly important for Navajo populations which almost solely rely on this resource for heating? It is apparent that the BLM RPFO has lost its ability to produce locally relevant and specific analysis or perhaps other, less local governmental agencies are doing the analysis for them. Either way, AIB-4 is woefully insufficient for an important subsistence resource analysis. The BLM is consistently hiding real locally specific impacts by hiding the impact numbers within larger regions. Thus making the analysis irrelevant to local communities and masking the true significance of the postulated impacts in the |
| 15 | 3203". AIB-4 does not even briefly analyze a substantially important subsistence resource for Navajo populations in the area. The question itself is half the size of the analysis. How is this considered any type of analysis or even mitigation for a resource which is highly important for Navajo populations which almost solely rely on this resource for heating? It is apparent that the BLM RPFO has lost its ability to produce locally relevant and specific analysis or perhaps other, less local governmental agencies are doing the analysis for them. Either way, AIB-4 is woefully insufficient for an important subsistence resource analysis. The BLM is consistently hiding real locally specific impacts by hiding the impact numbers within larger regions. Thus making the analysis irrelevant to local |

| data to show that these differences do not just impact the "downhole environment" |
|--|
| but also the above ground environment. Within Counselor, the massive increases in |
| resources extracted requires increases in transportation, pipelines, spills/accidents, |
| etc. is significantly different. This is yet another example of the BLM and |
| particularly the BLM RPFO being disconnected from the localities for which it is |
| planning. Any person who live next to a vertical well being developed versus a |
| horizontal well can tell the significant difference, and the chapter has shown this |
| with BLM, EPA, and NMOCD data. It seems difficult to get the BLM to accept |
| reality. |
| Perhaps the BLM is being consistent with IM 2018-034 Updating Oil and Gas |
| Leasing Reform but it's not being consistent with NEPA or NHPA because it is |
| trying so hard to be consistent with IM 2018-034. |

XI. Concluding Remarks

The Chapter must insist that all RPFO and FFO June 2019 parcels are deferred from the lease sale. There is a complicated array of issues including proper RMPA and RMP development (for both the FFO and RPFO), lack of a currently sufficient EIS level plan to tier this proposed action to, major tribal trust issues, major impact issues to the Chapter and surrounding communities, and cultural resource impacts that have been unanalyzed. This complicated array of issues will take a great deal of consultation to untangle this multitude of issues and to determine what mitigations can be implemented for protection of tribal trust assets, allottee assets, protection of the environment, protection of the local economy, and general protection of the local communities. Thus for now, the Chapter must insist on deferment of all parcels for further tribal consultation.

With Thanks,

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-S- 5-1-2019 Samuel Sage. Date Counselor Chapter CSC

Appendix 1 Pay Rates

| | B24031: | NDUSTRY (| BY MEDIAN EARNI Universe: Civil | NGS IN THE ian employe | PAST 12 MONTH d population 16 ye | S (INFLATIO | N-ADJUSTED DOL with earnings. 2012 | LARS) FOR 2-2016 Ameri | THE CIVILIAN EN can Community Su | PLOYED P wey 5-Year | OPULATION 16 YE Estimates | ARS AND O | VER | |
|---------------------|-----------------|--|--|---------------------------|--|----------------------------|--|--|-------------------------------------|---------------------------|---|--|--|---|
| | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | |
| | Ag/ForestMining | MininglOG | Ag/ForestMining | Mining/OG | AgForestMining | Mining/OG | AgForestMining | Mining/QG | Ag/ForestMining | Mining/OG | Ag/ForestMining | Mining/OG | Ag/Forest/Mining | Mining/OG |
| Counselor | \$11,875 | | \$14,375 | \$34,000 | \$14,643 | \$33,750 | \$13,523 | \$33,500 | \$28,333 | \$33,333 | \$27,500 | 1 | 1 | • |
| Huerfano | \$13,605 | \$6,635 | \$67,708 | * | \$23,750 | \$21,250 | \$43,750 | \$46,563 | \$27,000 | \$24,688 | \$22,500 | \$40,313 | \$24,464 | \$40,208 |
| Nageezi | \$16,406 | | \$50,417 | 1 | \$20,625 | \$21,250 | \$19,375 | \$21,667 | \$20,313 | \$37,500 | \$7,083 | \$21,250 | \$18,750 | \$21,250 |
| Oio Encino | • | | + | 1 | | • | t | * | | 1 | * | 1 | | * |
| Torreon/Stariake | • | • | ŧ | t | \$16,667 | \$50,156 | \$6,250 | * | \$7,031 | | \$7,344 | * | \$6,875 | • |
| New Mexico | \$37,118 | \$50,022 | \$37,417 | \$50,856 | \$37,961 | \$52,678 | \$38,850 | \$53,906 | \$38,338 | \$54,400 | \$39,798 | \$56,149 | \$42,309 | \$60,275 |
| Sandoval County | \$45,888 | \$48,542 | \$38,500 | \$62,721 | \$36,429 | \$51,563 | \$30,000 | \$39,375 | \$30,033 | \$38,421 | \$31,463 | \$37,986 | \$36,509 | \$47,993 |
| San Juan County | \$51,410 | \$54,366 | \$52,249 | \$54,791 | \$50,968 | \$54,034 | \$53,621 | \$57,123 | \$51,974 | \$55,478 | \$54,639 | \$57,309 | \$60,407 | \$62,184 |
| | | | | | | % Differen | ce from San Juan C | iouniv | | | /w.ees.0000000000000000000000000000000000 | | | |
| Counselor | -76.9% | | -72.5% | -37.9% | -71.3% | warming 1995 | Conservation and a second seco | y | 45.5% | -39.97 | 49.7% | | | |
| Huerfano | -73.5% | | | | 53.4% | Charles in the states of | | | Wind Schlere and is the S | all an experies | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | -59.5% | 35.3% |
| Nageezi | -58.1% | | -3.5% | | -59.5% | 1 | | | 5. Luidomerer Mrs 53 | | X | Queres | and the second second second second | States States |
| Oio Encino | | | | | | | | | | | | | | |
| Torreon/Starlake | | | | | -57.3% | -7.2% | -88.3% | | -86.5% | | -86.6% | | -88.6% | |
| Average Of Chapt | -72.8% | -87.8% | -15.5% | 37.9% | | | | and the second second | | | .70.5% | 46.3% | -72.4% | -50.6% |
| 7 Yr Awg Dill AFM | -59.4% | - +5 - 000 + 5 - 1 + 0 + 1 + 5 + | | ******* | | | | | | | | •••••••••••••••••••••••••••••••••••••• | | |
| 7 Yr Awg Dill MQG | -49.6% | | | ***** | | | | | | | | | | |
| | | | | | | % Difference | ce from Sandoval C | ounty | | | | 1 | | |
| Counselor | -74.1% | | -62.7% | -45.8% | -59.8% | C.1000.000000700.002 | in man and in the commence | hillion Inversion | -5.7% | -13.29 | -12.6% | | | |
| Huerfano | -70,4% | | and the second second second second second | | -34,8% | | | | | -35.79 | Zamen and a second second second second | Annon management | -33.0% | -162% |
| Nageezi | -64.2% | | 31.0% | | 43.4% | - 200 A. M. M. C. S. S. T. | Construction and a second s | | No. 17 X March 20 Address and a | | | A | NO. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | |
| Oio Encino | | | | | | | | | | | _ •••••••••••••••••••••••••••••••••••• | | | |
| Torreon/Stariake | | | | kanamadanani simi | -54.2% | -2.7% | -79.2% | 1.1999-000 (1.1999-04 ⁻⁰ 1.099-04) (199 | -76.6% | | -76.7% | | -81.2% | 1930 - 197 1930 - 197 |
| Average Of Chapt | -62.6% | -83 | 14.7% | 45.8% | | | | -13.9% | | | | | | 000000000000000000000000000000000000000 |
| 7 Yr Avg Dilf AFM | -38.3% | in a collemand of | | | and the second | | | | 1 | | | | | |
| 7 Yr Avg Dill MOG | -36.7% | and a star and a star and a star and a | | | | | | | | 5.000.000.000.000.000.000 | | | | |
| mannes Reserved and | **** | | ***** | | **** | **** | \$0.0000.0000.0000.0000.0000.0000 | | | | ***** | \$0.6A ~~ | quaran manana ana ana ana ana ana ana ana an | 0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0- |

Appendix 2 Employment Rates

| | | 2015 | | | | 2016 | | |
|--|--|---|---|--|------------------|---|--|--|
| | Total Employment | Ag/Forest/Mining | Ag/Forest | Mining+O/G | Total Employment | Ag/Forest/Mining | Ag/Forest | Mining+O/G |
| Counselor | 116 | 6 | 3 | | | | · | |
| Huerfano | 802 | 48 | 19 | | 845 | 53 | 18 | 3 |
| Nageezi | 201 | 21 | 8 | 13 | 179 | 18 | 5 | 1 |
| Dio Encino | 123 | 3 | 2 | 1 | 125 | 2 | 1 | |
| Torreon/Starlake | 403 | 21 | 12 | 9 | 426 | 20 | 13 | |
| New Mexico | 876035 | 39103 | 17511 | 21592 | 876210 | 36893 | 15919 | 2097 |
| Sandoval County | 58433 | 878 | 709 | | | 780 | 591 | 18 |
| San Juan County | 51561 | 5713 | 635 | 5078 | 49984 | 5488 | 611 | 487 |
| | •••••••••••••••••••••••••••••••••••••• | 2015 | | <u> </u> | | 2016 | <u> </u> | |
| | Total Employment | | Aq/Forest | Minina+O/G* | Total Employment | | Aa/Forest | Mining+O/G |
| Counselor | | 5.2% | 2.6% | 2.6% | | 3.8% | 2.3% | 2.3% |
| Huertano | | 6.0% | 2.4% | 3.6% | | 6.3% | 2.1% | 4.1% |
| Nageezi | | 10.4% | 4.0% | 6.5% | | 10.1% | 2.8% | 7.3% |
| Ojo Encino | | 2.4% | 1.6% | 0.8% | | 1.6% | 0.8% | 0.8% |
| Torreon/Starlake | | 5.2% | 3.0% | 2.2% | | 4.7% | 3.1% | 1.6% |
| New Mexico | | 4.5% | 2.0% | 2.5% | | 4.2% | 1.8% | 2.4% |
| Sandoval County | | 1.5% | 1.2% | 0.3% | | 1.3% | 1.0% | 0.3% |
| San Juan County | | 11.1% | 1.2% | 9.8% | | 11.0% | 1.2% | 9.8% |
| and <u>Nageez</u> iarea | as. Thus the slightly | higher percentages n | 1 | mining activitie | | | | |
| Counselor | | -5.91% | | | | -7.22% | 1.03% | -7.509 |
| Huerfano | | -5.10% | | | | -4.71% | | |
| | | -0.63% | | | | -0.92% | | |
| Nacaoni - | | | | | | | | |
| Nageezi | · · · · · · · · · · · · · · · · · · · | | | | | | | |
| Ojo Encino | | -8.64% | 0.39% | -9.04% | | -9.38% | -0.42% | -8.96% |
| | | | 0.39% 1.75% | -9.04% -7.62% | | | -0.42% 1.83% | -8.969 -8.119 |
| Ojo Encino | | -8. 5 4% -5.87% | 0.39% 1.75% 1.48% | -9.04% -7.62% - 6.71% | | -9.38% -6.28% | -0.42% 1.83% | -8.969 -8.119 |
| Qio Encino Torreon/Starlake | | -8.64% -5.87% -5.23% | 0.39% 1.75% 1.48% Difference I | -9.04% -7.62% -6.71% | I County | -9.38% -6.28% -5.70% | -0.42% 1.83% 0.98% | -8.969 -8.119 -6.549 |
| Qio Encino Torreon/Starlake Counselor | | -8.64% -5.87% -5.23% 3.67% | 0.39% 1.75% 1.48% Difference I 1.37% | -9.04% -7.62% -6.71% rom Sandova 2.30% | I County | -9.38% -6.28% -5.70% 2.44% | -0.42% 1.83% 0.98% | -8.969 -8.119 -6.549 |
| Ojo Encino Torreor/Starlake Counselor Huerfano | | -8.64% -5.87% -5.23% 3.67% 4.48% | 0.39% 1.75% 1.48% Difference 1.37% 1.16% | -9.04% -7.62% -6.71% From Sandova 2.30% 3.33% | I County | -9.38% -6.28% -5.70% 2.44% 4.96% | 0.42% 1.83% 0.98% 1.26% 1.13% | -8.96 -8.119 -6.54 1.95 3.84 |
| Dio Encino Torreon/Starlake Counselor Huerfano Nageezi | | -8.64% -5.87% -5.23% 3.67% 4.48% 8.95% | 0.39% 1.75% 1.48% Difference 1 1.37% 1.16% 2.77% | -9.04% -7.62% -6.71% -rom Sandova 2.30% 3.33% 6.18% | I County | -9.38% -6.28% -5.70% 2.44% 4.96% 8.74% | 0.42% 1.83% 0.98% 1.26% 1.13% 1.80% | -8.969 -8.119 -6.549 1.959 3.849 6.969 |
| Ojo Encino Torreor/Starlake Counselor Huerfano | | -8.64% -5.87% -5.23% 3.67% 4.48% | 0.39% 1.75% 1.48% Difference I 1.37% 1.16% 2.77% 0.41% | -9.04% -7.62% -6.71% -rom Sandova 2.30% 3.33% 6.18% 0.52% | I County | -9.38% -6.28% -5.70% 2.44% 4.96% | 0.42% 1.83% 0.98% 1.26% 1.13% 1.80% -0.20% | -8.969 -8.119 -6.549 1.959 3.849 6.969 0.499 |

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Appendix 3: Horizontal Well vs Vertical Well Comparisons for NMOCD District 3

| | Avg Depth | Counselor Ch | | Aum Materior | Avg Days Pre | Total Count | Total Remove |
|---|---|---|---|---|---|--------------------|-------------------|
| | | Avg Oil | Avg Ges | Avg Water | | | |
| /ert Oil Well | 5,616 | | 179,515 | 3,443 | 8,073 | 47 | 1 |
| /ert Gas Well | 1,714 | | 181,831 | 143,307 | 6,304 | 80 | 1 |
| Ioriz Oli Well | 11,138 | | 623,925 | | 1,248 | 79 | 3 |
| Horizontal Factor | 1.98 | 4.32 | 3.48 | 9.00 | 0.15 | | |
| | | | | | | | |
| ntensity Difference: C | | * | | | | | |
| Time Factor | 6.47 | | | | | | |
| Oil Factor | 4.32 | | | 2 | | an | |
| Gas Factor | 3.48 | | | | | | |
| Nater Factor | 9.00 | | | | | | |
| | | Nageezi Cha | Dier | I | L | | |
| 52-0-000 + 65-0000 PD + 6-670-970-920-920-920-920-970-970-970-970-970-970-970-970-970-97 | Avg Depth | Avg Oil | Avg Gas | Avg Water | Avg Days Pre | Total Count | Total Remove |
| Vert Oil Well | 5,535 | | 98,309 | | | 90 | 0 |
| Vert Gas Well | | | | 109.623 | | 89 | 8 |
| | 1,608 | | 149,107 | | | | 0 |
| Horiz Oil Well | 11,539 | | 358,632 | 35,022 | 1,044 | 84 | 5 |
| Horiz Gas Well | 10,881 | | 617,516 | 30,952 | 1,137 | 12 | 0 |
| Horiz Factor Oil | 2.08 | 5.28 | 3.65 | 3.61 | 0.14 | | |
| Horiz Fector Ges | 6.77 | 61.07 | 4.14 | 0.28 | 0.27 | | |
| ntensity Difference: N | | | Intensity Diffs | rence: Nagee | zi Gas | | |
| Time Factor | 7.09 | ÷ | Time Factor | 3.65 | | ······ | |
| | | | | 61.07 | | | ***** |
| Oil Factor | 5.28 | | Oil Factor | | ļ | | |
| Gas Factor | 3.65 | | Gas Factor | 4.14 | | | |
| Water Factor | 3.61 | | Water Factor | 0.28 | | | |
| | | Huerfano Chi | Inter | | L | | |
| | Avg Depth | Avg Oil | Avg Gas | Avg Water | Avg Days Pre | Total Count | Total Remove |
| Vert Oil Well | 5.353 | | 228,225 | 52,908 | 7.816 | 247 | |
| | | | | | | | |
| vert Gas Well | 3,875 | | 1,061,817 | 40,044 | 7,803 | 2440 | 5 |
| Horiz Oil Well | 9,946 | | 495,549 | | 1,690 | 18 | 1 |
| Horiz Ges Well | 5,919 | | 438,598 | | 2,736 | 29 | 1 |
| Horiz Factor Oll | 1.86 | 1.07 | 2.17 | 0.87 | 0.22 | | |
| Horiz Factor Gas | 1.63 | 0.62 | 0.41 | 1.29 | 0.36 | | |
| Intensity Difference: H | | | | arence: Huerfa | no Ces | | |
| Time Factor | 4.51 | | Time Factor | 2.85 | | | |
| Oil Factor | | | Oil Factor | 0.52 | | | |
| | 1.07 | | | | | | |
| Gas Factor Water Factor | 2.17 | | Gas Factor Water Factor | 0.41 | | | |
| | | | | | | | |
| District 3 Horizontal | | | | | | | |
| | Avg Depth | Avg Oll | Avg Gas | Avg Water | Avg Days Pre | | Total Remove |
| Vert Oil Well | 5,729 | | 277,204 | | | 41 | 1 |
| Vert Gas Well | 4,980 | | | | | 456 | 0 |
| Horiz Oil Well | 11,108 | 100.757 | 537,314 | 27,911 | 1,190 | 136 | |
| | | | | | | | |
| Horiz Gas Well | 6,793 | 5,186 | | | 4,131 | 244 | 2 |
| Horiz Gas Well | | 5,186 | 1,557,299 | 51,664 | | 244 | 2 |
| Horiz Gas Well Horiz Factor Oli | 6,793 | 5,186 2.60 | 1,557,299 | 51,664 0,12 | 0.16 | | 2 |
| Horiz Gas Well Horiz Factor Oll Horiz Factor Gas | 8,703 194 193 | 5,186 2.60 | 1,557,299 1.94 0.87 | 51,684 0.12 1.80 | 0.16 0.48 | 244 | 2 |
| Horiz Gas Well Horiz Factor Oil Horiz Factor Gas Intensity Difference: D | 6,793 1,94 1,34 1,34 | 5,186 2.60 1.04 | 1,557,299 1.94 0.87 | 51,664 0.12 1.80 rence: Dist 3 | 0.16 0.48 Gas | 244 | 2 |
| Horiz Gas Well Horiz Factor Oli Horiz Factor Gas Intensity Difference: D Time Factor | 6,793 1.94 1.36 Hist 3 Oil 6.21 | 5,186 2.60 1.04 | 1,557,299 1.94 0.87 Intensity Diffe Time Factor | 51,664 0.12 1.80 arence: Dist 3 2.10 | 0.16 0.48 Gas | 244 | 2 |
| Horiz Gas Well Horiz Factor Oil Horiz Factor Gas Intensity Difference: D Time Factor Oil Factor | 6,793 1.94 1.36 hist 3 Oil 6.21 2.60 | 5,196 2.60 1.04 | 1,557,299 1.94 0.87 Intensity Diffe Time Factor Oll Factor | 51,664 0,12 1,80 arence: Dist 3 2,10 1.04 | 0.16 0.48 Gas | 244 | 2 |
| Horiz Gas Well Horiz Factor Oil Horiz Factor Gas Intensity Difference: D Time Factor Oil Factor Gas Factor | 6,793 1,94 1,34 1,34 1,34 6,21 2,60 1,94 | 5,186 2.60 1.04 | 1,557,299 1.94 0.87 Intensity Diffs Time Factor Oil Factor Gas Factor | 51,664 0.12 1.80 arence: Dist 3 2.10 1.04 0.87 | 0.16 0.48 Cas | 244 | 2 |
| Horiz Gas Well Horiz Factor Oil Horiz Factor Gas Intensity Difference: D Time Factor Oil Factor Gas Factor | 6,793 1,94 1,34 1,34 1,34 1,34 1,24 0,12 | 5,186 2.60 1.04 | 1,557,299 1.94 0.87 Intensity Diffe Time Factor Oil Factor Gas Factor Water Factor | 51,664 0.12 1.80 arence: Dist 3 2.10 1.04 0.87 1.80 | 0.16 0.48 Cas | 244 | 2 |
| Horiz Gas Well Horiz Factor Oil Horiz Factor Gas Intensity Difference: D Time Factor Oil Factor Gas Factor | 6,793 1,94 1,34 1,34 1,34 1,34 1,24 0,12 | 5,186 2.60 1.04 | 1,557,299 1.94 0.87 Intensity Diffe Time Factor Oil Factor Gas Factor Water Factor | 51,664 0.12 1.80 arence: Dist 3 2.10 1.04 0.87 1.80 | 0.16 0.48 Gas | | 2 Total Remove |
| Horiz Gas Well Horiz Factor Oll Horiz Factor Gas Intensity Difference: D Time Factor Oll Factor Gas Factor Water Factor | 6,793 1,94 1,36 1,36 6,21 2,60 1,94 0,12 Aztec and 2 Axtec and 2 Axtec and 2 | 5,186 2.60 1.04 | 1,557,299 1.94 0.87 Intensity Diffe Time Factor Oil Factor Gas Factor Water Factor E,N,W (No Sor Avg Gas | 51,664 0.12 1.80 arence: Dist 3 2.10 1.04 0.87 1.80 uth) Avg Water | 0.16 0.48 Gas Avg Days Pre | Total Count | Total Remove |
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| Chapter | Resolution # or Date |
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| Becenti Chapter | |
| Counselor Chapter | COUN-2016-11 |
| Dikon Chapter | DIL# 12-70-16 |
| Hardrock Chapter | 12/17/2016 |
| Huerfano Chapter | HUE-015-17 |
| Lake Valley Chapter | LVC-NOV13-006 |
| Nageezi Chapter | NC 17-013 |
| Oljato Chapter | OLJ11-09-16 |
| Pueblo Pintado Chapter | PPC-11-2016-037 |
| Oak Springs Chapter | OSC 1-08-17 #18 |
| Teesto Chapter | TEE-NOV-12-17 |
| Torreon/Starlake Chapter | TSL 11/2016-092 |
| Whitehorse Lake Chapter | 11/16/2016 |
| Whiterock Chapter | WRC-017-009 |

Resolution COUN-2016-11 was also passed by the Eastern Navajo Agency Council (composed of representatives from 31 Eastern Agency Chapters)

| EA: | STERN NAVAJO AGENCY CO THE RAVAJO NATION P.O. Box 448 | OUNCIL | | |
|--------------------------------|---|---|---|--|
| E Provinsi E Company | Crownpoint, New Mexico 87: Phone: (505) 786-2090 | 313 | ı | As part of the Resource Manager during public scoping: lisus 1 Of ant On Diversionent |
| | Fax: (505) 786-2097 | | | "How should be BLM enorage for a source gas activity to the processing west? BLM FT |
| Russel Begave, President | | Janathon Noz, Vice President | | * How woodd the BLAS manage Raid corners |
| Brown Chanens Prosident | Johnny Johanson Vice-President | Rasc se Vactor Beccentary (Parasanac | | otenserous, to Fables the southingle-size particle devolopment and the use of hydroxidia fract BLAC #7 |
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| Resolution of the I | Lastern Navajo Agency Council | of the Navajo Nation | | Laber Remarce Interfs. "How weaks the HLM encounterly errors ou |
| RESOLUTION IN OPPOSITIC | IN TO FURTHER APPROVALS | OF FEDERAL FLUID MINERAL | | the manager potenties we path at an end of patholy ? * I have would the 11, we as insertion for insertion |
| LEASES. FEDERAL OIL/GA | S RELATED PROJECTS, AND | RELATED ENVIRONMENTAL | | * How would the BLM protect to be interest "How would the BLM meres carriest water |
| ANALYSIS APPROVALS BY | BUREAU OF LAND MANAGER | MENT WITHIN OR IMPACTING | | from oil and gas development, cochaling to |
| NAVAJO NATION EASTERN A | GENCY AREAS AND COMMUNIT | TERS. | | * How vasuid the RE.M address back positive and toothil action, including non-market v |

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- WHEREAS
 - CADE, The Fastern Navajo Agency Council ("ENAC") is a governmental entity comprised of officials from all Eastern Navajo Agency Chapters; and
 - Monies generated from royalties, sales, and bonuses of federal fluid mineral leases that are within Momes generated from royalties, sales, and bonuses of federal fluid mineral loases that are within Eastern Agency area boundaries are not shared with the Navajo Nation and Eastern Agency (Chapters: A study commissioned by the Ojo Encino Chapter estimated in 2013 and 2014 that federal oil/gas royalty revenues generated from within Eastern Agency areas were an estimated \$19,356,813 and \$18,857,466 respectively. These foderal royalty monies were divided between the U.S. Department of the Treasary and the state of New Mexico as provided by the Federal Land Policy and Management Act (FLPMA) Section 317(a); and
 - FLPMA provides the following language regarding Mineral Revenue sharing: add owney, and to any of ush Stam to ar the January 1, 1976, to be one by meh Stam and to kadritions at the reptatement of the Stam register of the Stam register of the State State and the state of the reptatement of the State register of the State Stat FLIMA Socion 317(ns. Atoms) Rovemes
 - Currently, most Eastern Agency chapters have a lack of resources for planning, public facilities, and 3 nublic services; and
 - It also appears that many Applications for Permission to Drill (APDs) and Environmental Analyses (EAs) related to federal oil/gas development within, or impacting Eastern Agency areas/communities, historically and currently lack sufficient direct tribal consultation and Environmental Justice analysis; and
 - The Bureau of Land Management Parmington Field Office is currently in the midst of amending its Resource Management Plan which began public acoping on February 25, 2014. This amendment process is orgoning und is looking more thoroughly at development within Eastern Agency areas and the effects of Horizontal Hydraetic Fracturing; and .

- ment Plan Amendment the following are issues identified for analysis
 - PO Solphing Report Networks 2014. Sacraw 2.2.1 In basing, including two at planning directory and relations, and relations in while relations in surrects to obser result on given the predicted locates in long standardig? No Socraw Result. leasing to address in paces on oder researces green the change in projected od and

area are appropriate for cognital? PD Sciences Report Normather 2014, Securon 2.2.1

| Laber Researce Interch | |
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| " I form versely the H1.M exces | nately assess current or quelity conditions and according appropriate mitigation measures to an air raskity from propried flaid mineral development? |
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| | BLM FPO Sources Reserv November 2014: Section 2.3.2 |

NOW THEREFORE BE IT RESOLVED THAT.

- THERFORE BE IT RESOLVED THAT, The ENACU sagainst all preading and future federal fluid mineral BLM leases within Navajo Esseem Agency areas (or other lease sales which could directly or indirectly impact Eastern Agency Areas) until a reasonable revenue sharing mechanism is developed, the new Parmington Field Office Resource Management Plan Amenthment is developed, and a till understanding of potential environmental and health unpacts of horizontal hydraulic fracturing is developed; and
- The BLM shall develop germane and community specific environmental justice analyses and engage in direct tribal consultation with affected tribal communities/chapters. Additionally, the BLM must take a hard look at older leases that will require renewal to ensure that they meet the modern standards of analysis such as environmental justice and tribal consultation requirements; and
- The ENAC is against the approval of additional and pending foderal oil/gas related projects, supporting infristructure (unless required for emergency or health/safesy purposes), and their corresponding Environmental Analysis within Eastern Agency areas (or other similar projects outside of Eastern Agency Areas which could directly or indirectly impact the Eastern Agency Areas) until a reasonable revenue sharing mechanism is developed, the new Farmington Field Office Resource Management Plan Amendments is developed, and a full understanding of potential environmental and health impacts of horizontal fracturing is developed; and
- The FNAC wishes to see an equitable distribution of federal royalty revenues, sales, and bonuecs generated within Eastern Agency boundaries (which includes federally managed lands and minerala) to partially mitigate adverse impacts from federal oilgas development within Navajo Eastern Agency areas. These funds shall be both shared directly to impacted chapters and a portion also divided amongst all Eastern Agency chapters to help develop planning, public facilities, and public services; and Ψ.

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THE NAVAJO NATION

RUSSELL BEGAYE PRESIDENT JONATHAN NEZ VICE PRESIDENT

February 6. 2017

Farmington Field Office Bureau of Land Management 6251 College Blvd., Suite A Farmington, NM 87402

Concerns regarding Chaco Canyos Cultural Historic Park Re:

The Navajo Nation is concerned that increased drilling in the Eastern Navajo area is beginning to encroach on Chaco Cultural National Historic Park, to which the Navajo Nation and Navajo people have critical cultural and historical ties. In addition, I am concerned that the increased surface activity from drilling is interrupting the daily lives of Navajo people who live in the Navajo Nation Chapters such as Counselor, Nageezi, Torreon and Ojo Encino.

Due to the impacts on Chaco and the Navajo people, the Nation asks for the Bureau of Land Management to place a moratorium on fracking-related activities such as multi-stage hydraulic fracturing and horizontal drilling and lease sales and permit approvals in the Mancos Shale/Gallup formation in the greater Chaco area until such as time as the amendment to the resource management plan is completed and an environmental impact statement is finalized.

Sincerely.

THE NAVAJO NATION

Russell Begaye, President

Jonathan M. Nez, Vice President

POST OFFICE BOX 7440 / WINDOW ROCK, AZ \$6515 / PH: (928) \$71-7000 / FAX: (928) \$71 4925

Also please see the following documents:

Ojo Encino Resolution OJOE 07-13-18/007 Resolution requesting the BLM FFO and RPFO to defer all parcels for the December, 2018 Lease Sale for further Tribal Consultation

All Pueblos Governor's Council Resolution APCG 2017-12 CALLING FOR A MORATORIUM ON ALL PERMITTING AND LEASING FOR OIL AND GAS DEVELOPMENT IN AREAS THAT WOULD IMPACT TRADITIONAL CULTURAL PROPERTIES AND SACRED SITES IN GREATER CHACO REGION

National Congree of American Indians Resolution MKE-17-008 To Support Moratorium on Leasing and Permitting in Greater Chaco Region.

New Mexico State Legislature House Memorial 70 A MEMORIAL REAFFIRMING NEW MEXICO'S COMMITMENT TO PROTECTING AND PRESERVING TRIBAL, CULTURAL AND HISTORICAL SITES AND RESOURCES IN THE GREATER CHACO CANYON LANDSCAPE

In particular in the resolved section:

BE IT FURTHER RESOLVED that the United States department of the interior's bureau of land management and bureau of Indian affairs desist from any leasing or issuance of permits without prior tribal consultation in the greater Chaco landscape, as designated by the bureau of land management, until the resource management plan amendment is complete in accordance with federal law; and

(Page 6)

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Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction) Fifth Edition March 2018 https://www.psr.org/wp-content/uploads/2018/04/fracking-compendium-5.pdf

