



## United States Department of the Interior



NATIONAL PARK SERVICE  
Southeast Utah Group  
Arches and Canyonlands National Parks  
Hovenweep and Natural Bridges National Monuments  
2282 S. West Resource Boulevard  
Moab, Utah 84532-3298

IN REPLY REFER TO:

October 23, 2017

### Memorandum

To: Canyon Country District Manager, Bureau of Land Management

From: Superintendent, Southeast Utah Group, National Park Service

Subject: NPS Comments on BLM Canyon Country District Environmental Assessment for March 2018 Oil and Gas Lease Sale

Thank you for the opportunity to provide comments on the Environmental Assessment (DOI-BLM-UT-Y010-2017-0240-EA) for the planned March 2018 oil and gas lease sale in the Canyon Country District. The parcels that will be offered for lease have the potential to affect resources such as air quality, dark night sky, scenic value, soundscapes and groundwater quality important to all the parks in the Southeast Utah Group (Arches and Canyonlands National Parks, and Hovenweep and Natural Bridges National Monuments).

In addition, we also have concerns specifically related to Hovenweep National Monument because of the number and concentration of parcels located between 3 and 25 miles from the various Hovenweep National Monument units. Based on these concerns, we request that BLM defer parcels within approximately 15 miles of Hovenweep National Monument from this lease sale, specifically parcels 036, 037, 039, 040, 041, 042, 043, 044, 047, 048, 049, 050, and 051.

Visitation to the Southeast Utah Group parks and monuments has increased dramatically in recent years as shown in the following figure, and 2017 continues the upward trend. We understand that visitation to BLM managed lands has increased dramatically as well.

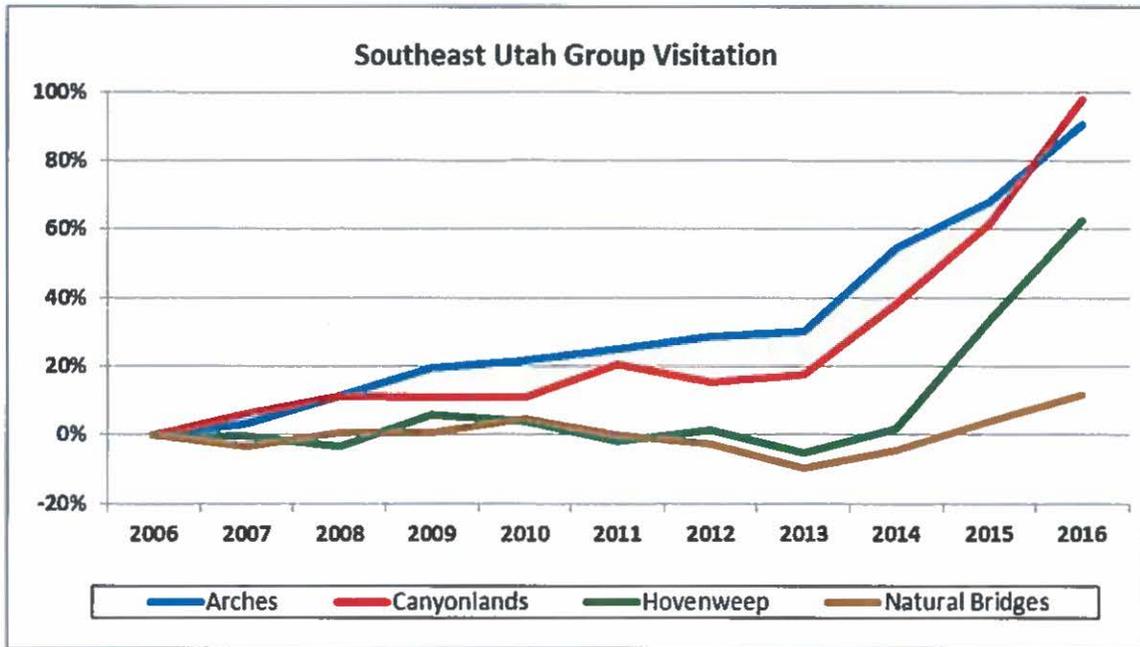
We would be concerned about impacts to resources regardless of visitation; however, the trend of dramatically increasing visitation to the area suggests that increased emphasis be given to associated landscape features such as air quality, scenic views, soundscapes, and dark night skies.

Recreational visitation is increasing (Headwaters Economics 2015<sup>1</sup>; Public Land Solutions 2017<sup>2</sup>) as people come to the region for its scenic beauty and recreation values. The visiting public expects high quality experiences across federal land, and we are concerned that continuing to offer parcels for oil and gas exploration and development in proximity to our parks will be detrimental to the experience of the visiting public.

---

<sup>1</sup> Headwaters Economics. 2015. The Economic Value of Public Lands in Grand County, Utah.

<sup>2</sup> Public Land Solutions. 2017. Economic Development Planning for Cultural Tourism in Bears Ears National Monument, San Juan County, Utah.



In our July 25, 2017 comments regarding scoping for this proposed lease sale, we identified several issues of concern and requested BLM address these in the EA. The issues include:

1. A reduction in air quality and air quality related values (AQRVs), including higher ozone concentrations.
2. An increase in roads and well pads and an increase in dust raised by vehicle traffic on those roads and from land surfaces disturbed by oil and gas activities.
3. Adverse effects on visual resources, particularly on scenic views affected by dust, regional haze, and the visual impact of roads and well pads.
4. Reduction in quality of dark night skies.
5. Reduction in quality of natural soundscapes.
6. Adverse effects on the quantity and quality of groundwater resources.

As indicated in our scoping comments, air quality conditions associated with Arches and Canyonlands National Parks (both of which are Clean Air Act Class I areas) and Hovenweep and Natural Bridges National Monuments could be impacted by development activities enabled by the March 2018 oil and gas lease sale. We appreciate that BLM addressed air quality and AQRVs in the EA; however, we feel our concerns were not fully evaluated. Our July 25, 2017 letter requested that BLM consult with the NPS Air Resources Division and the Utah BLM's air resources technical advisory group regarding appropriate air quality analyses. We understand our recommendation has not yet been acted upon.

The latest full assessment of air quality conditions and trends in proximity to these and other NPS units is

the 2013 report prepared by the NPS Air Resources Division (NPS ARD 2013)<sup>3</sup>. Additional data through 2015 regarding air quality conditions and trends at Arches, Canyonlands, Hovenweep, and Natural Bridges are available at the NPS Air Resources Division website:

<https://www.nature.nps.gov/air/data/products/parks/index.cfm>.

We suggest that information in the 2013 report and recent updates be used by BLM to clarify, update, and expand upon the description of existing conditions on pages 17 through 20 of the EA. For example:

- The statement on page 17 that “*AQRV in both Arches and Canyonlands NP are statistically acceptable and good for most monitored pollutants*” is unclear and we recommend revision. The NPS 2015 condition assessment for Canyonlands shows visibility (an AQRV) and ozone 8-hour and W126 concentrations to be of moderate concern, and nitrogen concentrations in wet deposition to be of significant concern. Although the park is in attainment for federal National Ambient Air Quality Standards, ozone concentrations are very close to the standard. In addition, visibility is impaired by manmade pollutants.
- The statement “*The only pollutant of concern is ammonium concentrations in precipitation*” is incorrect because ozone is also of concern at the park. The statement “*All other AQRV’s that the Canyonlands NP clearly summarize the steady or decreasing level of monitored values*” is unclear and should be revised.
- On page 18, the passage “*Annual Deciview is becoming clearer when averaged over the years, and wet deposition, which are a major factor from boundary condition sources, show no increase or decrease besides ammonium. Ammonium atmospheric deposition should be the only concern and this is a transport issue and seen increasing in the west compared to other National Park trends*” is unclear and should be revised. For 2006–2015, the trend in visibility at Canyonlands remained relatively unchanged (no statistically significant trend) on the 20% clearest days and improved on the 20% haziest days (IMPROVE Monitor ID: CANY1, UT). Trends in the fourth-highest 8-hour ozone concentration and in the W126 ozone exposure metric improved during the period 2006-2015. No trend was observed in wet nitrogen deposition over the same period.
- On page 18, the reference to the current 8-hour NAAQS for ozone is incorrect (it should be 70 ppb not 75 ppb). See <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.
- Page 20 indicates that stipulation UT-S-01 applies to all lease parcels to protect air quality. However, there are additional lease stipulations related to air quality identified in the Moab Master Leasing Plan Record of Decision (Appendix A, Table A-1, page A-3) that we recommend be applied to all parcels in the lease sale. These stipulations include:
  - Drill rig engines must meet Tier II or better standards, as necessary based on air quality conditions or projections, and consistent with the most stringent Environmental Protection Agency emissions standards that are in force at the time of installation or approval.
  - Low bleed or no bleed pneumatic controller.
  - Dehydrator VOC emission controls to 95 percent or greater efficiency
  - Tank VOC emission controls to 95 percent or greater efficiency equivalent to NSPS subpart 0000.

---

<sup>3</sup> National Park Service, Air Resources Division. 2013. Air quality in national parks: trends (2000–2009) and conditions (2005–2009). Natural Resource Report NPS/NRSS/ARD/NRR—2013/683. National Park Service, Denver, Colorado (<http://nature.nps.gov/air/who/npsPerfMeasures.cfm>).

- A Fugitive Dust Control Plan would be required for mineral activities that would disturb a surface area larger than 0.25 acres or that would involve truck traffic on unpaved or untreated surfaces.

We request that BLM include in the EA an evaluation of air quality conditions at the other parks in the Southeast Utah Group and not restrict the discussion to Canyonlands National Park. Our concerns regarding the related issues of proliferation of roads and well pads, and the resultant increase in dust and regional haze caused by increased bare ground and vehicle traffic (traffic related both to oil and gas development and increased recreational/opportunistic travel by the public on roads constructed for oil and gas development), and effect of these on scenic views were not fully evaluated in the EA. We request that BLM conduct further analysis of dust emissions and visibility.

We are disappointed that there is no recognition in the EA of the significant potential for degradation of dark night skies and soundscapes that would result from oil and gas exploration and development on the lease parcels. Our disappointment is magnified because the Southeast Utah Group has communicated frequently with BLM regarding these important issues:

- We provided scoping and EA comment letters dated, respectively, August 1, 2014 and October 20, 2014 to the Canyon Country District regarding our concerns about night sky and soundscapes relative to a February 2015 lease sale.
- In response to our 2014 comments, BLM developed lease notice UT-LN-125, "Light and Sound – Areas Near Units of the National Park System." In a letter dated December 8, 2014 we protested inclusion of several parcels near Hovenweep National Monument in the February 2015 lease sale because UT-LN-125 should have been attached to these parcels.
- We provided a scoping comment letter dated August 28, 2015 to the Moab Field Office regarding our concerns about night sky and soundscapes relative to Fidelity's West Fertilizer 16-pad Oil and Gas Project.
- We provided a scoping comment letter dated October 7, 2015 to the Moab Field Office regarding our concerns about night sky and soundscapes relative to Fidelity's Hatch Point 7-pad Oil and Gas Project.

BLM has not acted on our most recent (July 25, 2017) comments regarding night skies and soundscapes, and has not applied UT-LN-125 to any of the parcels included in the proposed March 2018 lease sale. As in the past, we are providing information below regarding the importance of these resources to the NPS and public.

Certification of Hovenweep (2014) and Natural Bridges (2007) national monuments, and Canyonlands National Park (2015) as International Dark Sky Parks<sup>4</sup> (IDSP), should have resulted in detailed analysis of night sky resources in the EA. Based on the concentration of 18 lease parcels within 3 to 25 miles of Hovenweep National Monument, and several parcels (not including those within the Moab Master Leasing Plan area) within 20 to 30 miles of Arches and Canyonlands National Park, the potential for significant impact to the natural lightscape is high. Therefore, we request that UT-LN-125 be applied to all parcels offered in this lease sale. Furthermore, as described on page one of this letter, we request that parcels within 15 miles of Hovenweep be deferred from the lease sale, in part because of probable detrimental impacts to night sky and soundscape qualities.

---

<sup>4</sup> <http://www.darksky.org/night-sky-conservation/dark-sky-parks>

Identification of night skies as a resource issue to be analyzed in the EA presents BLM with an opportunity to apply an existing relevant lease notice, or to work with the NPS and others in developing new stipulations and lease notices that can be applied in this and future similar projects for protection of this significant and increasingly valued resource. We acknowledge the importance of adequate lighting for worker safety, but advances are being made in the design of lighting systems for oil and gas drilling rigs that do not sacrifice safety for the protection of dark night skies<sup>5</sup>. In addition to lighting design, restrictions on the timing of drilling rig operations may be applied as lease stipulations as a means of further mitigating effects on dark night skies. Some examples include –

- Restrictions on the number of simultaneous drilling operations, considering spatial configuration, proximity, and alignment of separate drilling operations in relation to key night-sky viewing locations and sensitive nocturnal wildlife populations;
- Restrictions on the timing of drilling operations to avoid seasonal periods of optimal night-sky viewing and
- Restrictions on the timing of drilling operations to avoid monthly periods of optimal night-sky viewing (e.g., within one week of the new moon).

In developing such stipulations, we suggest that BLM seek input from those with appropriate technical expertise, potentially including representatives of the NPS Natural Sounds and Night Skies Division (NSNSD)<sup>6</sup>. In considering this issue, BLM may determine that it is necessary to defer parcels from leasing to allow time for acquiring and analyzing additional information relating to night skies – consistent with guidance provided by Section III (Lease Parcel Review and Lease Issuance Process) of BLM Instruction Memorandum 2010-117, Oil and Gas Leasing Reform. Data collected by NSNSD scientists indicate that the sky glow from unmitigated lighting of industrial facilities can be detected up to 35 miles away from the light source under some conditions (Chad Moore, personal communication).

Potential development impacts on soundscape resources were not adequately considered and addressed in the EA. Similar to dark night skies, our August 1, 2014 scoping comments provided significant new information on this resource topic, specifically informing BLM that noise propagation modeling conducted in support of the Moab Master Leasing Plan indicated that noise generated by unmitigated drilling operations may be heard more than six miles away from the source under some conditions. Because the majority of the land in lease parcels 050 and 051 is located within 5 miles of the Square Tower Unit of Hovenweep National Monument (the most heavily visited portion of the Monument, and the location of the Monument's Visitor Center and campground), the noise propagation information provided in the past, combined with our July 25, 2017 scoping letter, should have triggered an evaluation of existing lease stipulations and lease notices in the Resource Management Plans for the Moab and Monticello field offices. The issue should have been analyzed in detail in the EA to determine the need for new stipulations and/or lease notices to mitigate potential noise impacts.

We note that night skies and soundscapes both are absent from the list of resource topics included on BLM's Interdisciplinary Team Checklist (EA Appendix D), and we suggest that adding them to the Checklist may facilitate future consideration of these resources.

We also recommended that BLM consult with the US Geological Survey and the State of Utah regarding potential effects of oil and gas exploration and development on groundwater quantity and quality. We understand this recommendation was not acted upon. These are issues of regional and national consequence and the NPS believes that incremental cumulative additional degradation of water resources

---

<sup>5</sup> [http://mcdonaldobservatory.org/sites/default/files/pdfs/oilfield\\_lighting\\_can\\_coexist.pdf](http://mcdonaldobservatory.org/sites/default/files/pdfs/oilfield_lighting_can_coexist.pdf)

<sup>6</sup> [http://nature.nps.gov/sound\\_night/](http://nature.nps.gov/sound_night/)

puts the nation's resources and the public at risk.

We have reviewed the Gold Book, and Onshore Order Nos. 1, 2, and 7 referenced in the EA, and generally agree that detrimental impacts to water resources should be minimal. However, potential impacts to water resources, especially groundwater quality, cannot be ruled out and we request discussion and clarification of the following topics in the EA:

- Onshore Order No. 1 became effective in October 1983. Onshore Order No. 2 became effective in December 1998. Onshore Order No. 7 became effective in October 1993. Technological advances in drilling methods, including directional and horizontal drilling and hydraulic fracturing have occurred rapidly across the industry in the last 20 plus years. We request BLM provide an evaluation of the adequacy of these Orders to protect groundwater quality given the pace of technological change in the industry.
- It appears that in the past BLM agreed with our concern that existing Onshore Orders may not be adequate to protect groundwater resources. In March 2015 BLM published its final rule Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands in the Federal Register. The rule provided justification for developing new rules regarding hydraulic fracturing, as follows.
  - *“The BLM final rule on hydraulic fracturing serves as a much-needed complement to existing regulations designed to ensure the environmentally responsible development of oil and gas resources on Federal and Indian lands, which were finalized nearly thirty years ago, in light of the increasing use and complexity of hydraulic fracturing coupled with advanced horizontal drilling technology. The BLM began work on this rule in November 2010, when it held its first public forum amid growing public concern about the rapid expansion of complex hydraulic fracturing. Since that time, the BLM has published two proposed rules and held numerous meetings with the public and state officials, as well as many tribal consultations and meetings. The public comment period was open for more than 210 days. During this period, the BLM received comments from more than 1.5 million individuals and groups. The BLM reviewed and analyzed these comments based on thoughtful analysis and robust dialogue, which resulted in a rule that is more protective than the previous proposed rules and current regulations. It also strengthens oversight and provides the public with more information than is currently available, while recognizing state and tribal authorities and not imposing undue delays, costs, and procedures on operators. The final rule fulfills the goals of the initial proposed rules: To ensure that wells are properly constructed to protect water supplies, to make certain that the fluids that flow back to the surface as a result of hydraulic fracturing operations are managed in an environmentally responsible way, and to provide public disclosure of the chemicals used in hydraulic fracturing fluids”.*
  - *“The final rule also: (1) Improves public awareness of where hydraulic fracturing has occurred and the existence of other wells or geologic faults or fractures in the area, as well as communicates what chemicals have been used in the fracturing process; (2) Clarifies and strengthens existing rules related to well construction to ensure integrity and address developments in technology; (3) Aligns requirements with state and tribal authorities with regard to water zones that require protection; and (4) Provides opportunities to coordinate standards and processes with individual states and tribes to reduce costs, increase efficiencies, and promote the development of more stringent standards by state and tribal governments”.*

Unfortunately, on July 25, 2017, BLM published in the Federal Register a proposal to rescind the 2015 rule. The July 2017 Federal Register notice states that the proposed rescission is because the 2015 rule duplicated state and some tribal regulations and imposed burdensome reporting requirements on the oil

and gas industry. However, the July 2017 Federal Register publication did not establish that the need for new regulations regarding hydraulic fracturing has disappeared. Therefore, we request BLM address our concerns in the EA.

Finally, in addition to the groundwater quality and quantity issues, we are concerned about the potential for earthquakes that could result from lubrication of faults, bedding planes, formation contacts, and other subsurface geologic structures by injection of water during hydraulic fracturing or injection of produced water. Prehistoric structures at Hovenweep would be very susceptible to even extremely slight earth tremors initiated by fluid injection. Therefore, we request BLM address this issue in the EA.

If you have any questions regarding these scoping comments, please contact me at 435-719-2101 or [kate\\_cannon@nps.gov](mailto:kate_cannon@nps.gov).

cc: Superintendent, Hovenweep and Natural Bridges National Monuments

