



United States Department of the Interior

NATIONAL PARK SERVICE
Zion National Park
Springdale, UT 84767



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March 7, 2017

Memorandum

To: Brian Tritle, Manager, St. George Field Office, Bureau of Land Management

From: Superintendent, Zion National Park

Subject: Comments by Zion National Park on Environmental Assessment for June 2017 Oil and Gas Lease Sale (DOI-BLM-UT-C030-2017-0010-EA)

Zion National Park has reviewed the Environmental Assessment (EA) for the June 2017 lease sale for three tracts totaling 4,730.14 acres on lands managed by the St. George Field Office in Washington County, Utah. Two of the parcels, UT-0517-042 and UT-0517-043, span the Kolob Terrace Road which is the primary means of access to the central portions of the park. These parcels are 1.5 miles distant from the park boundary at their closest approach and 5 miles distant at their west boundary.

Zion National Park was established over 100 years ago. Then, as now, it provides visitors with the opportunity to experience nature by viewing magnificent scenery, seeking solitude, viewing wildlife, and by partaking in remarkable recreational activities. Resources within Zion National Park are protected under the NPS Organic Act of 1916. The Organic Act established the fundamental purpose of units of the National Park System, which is "*...to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*" (54 USC § 100101(a)).

We appreciate the opportunity to provide input to this process. We commented on these tracts during the scoping period in September 2016 when they were included on the BLM Utah preliminary oil and gas lease sale list. We concur with the planning assumptions in the EA that the potential for oil and gas development on these parcels is relatively low. However we continue to have concerns regarding the leasing and the potential for subsequent exploration and development of oil or gas operations on these parcels in regard to protection of park resources and visitor experience.

Prior to leasing in these areas, we would like to evaluate and discuss with BLM whether the 1999 Resource Management Plan (RMP) decisions (e.g., areas open to leasing) and associated mitigations are still adequate in 2017. Our objective is to collaboratively ensure that the oil and gas decisions in the 1999 RMP are still relevant and adequate to protect park resources and values should development occur, and if not, how any shortcomings may be remedied prior to decisions whether leasing is appropriate in areas near the park. We comment further on these RMP concerns and multi-agency collaboration at the conclusion of this memorandum.

Mitigations that will be included as stipulations to the proposed leases (EA, Appendix A), were identified in the 1999 RMP. We understand that additional mitigations may also be implemented post-leasing as Best Management Practices, Design Features or Conditions of Approval (COAs) through this leasing EA or any subsequent application for a permit to drill (APD). However our experience is that additional mitigations can be difficult to apply once a lease is issued. Potential impacts to NPS resources and values of most concern include:

- Impacts to scenery and scenic resources to nearby areas of the park along the Kolob Terrace Road;
- Impacts to Air Quality and Air Quality Related Values (AQRVs) in Zion National Park, a designated Class I area under the Clean Air Act;
- Impacts to Dark Night Skies;
- Impacts to visitor experience and associated economic impacts for the region; and
- Impacts to Soundscapes.

Visual Quality

The drive up the Kolob Terrace Road is one of the most spectacular in Utah. The eroded landscape of brilliantly colored Moenkopi badlands in the area, including these lease tracts provides a grand entry for visitors on their way into the park's wilderness and backcountry areas. We are concerned that access roads, drilling pads, drill rigs and production facilities would detract from this scenic view, visitor auto touring and backcountry experience.

The EA provides information on the BLM Visual Resource Management (VRM) class status and objectives related to the parcels only, without considering visual resources in surrounding areas, including wilderness areas within Zion National Park, which could be adversely impacted by possible oil and gas operations. With much of the nearby park-land at higher elevations than the proposed lease parcels, a full *viewshed analysis* is needed in order to adequately determine and mitigate, as needed, potential viewshed impacts to surrounding areas.

We ask that where surface occupancy might be allowed if the parcels are leased, mitigations including careful facility site selection, topographic screening, reduction or elimination of night lighting, and painting to blend with the surrounding terrain be among the Best Management Practices (BMP's) required to mitigate scenic and visual impacts. Stipulation UT-S-107 to protect fragile soils will support these goals, though it is not intended to protect scenic resources. A stipulation similar to NSO-04 for Backcountry Scenic Byway Scenery would be more effective, though we recognize that Kolob Terrace Road is not currently designated as such. However, given the visual resources associated with BLM and NPS lands surrounding these parcels a similar lease stipulation is warranted.

Visitor Experience

The parcels proposed for leasing straddle the Kolob Terrace Road. The Kolob Terrace Road is used heavily by park visitors for auto touring and sightseeing, and to access park wilderness for day-use hiking, overnight backpacking, canyoneering and a primitive campground. For example, 27,760 backcountry permits for access to the park wilderness from the Kolob Terrace Road trailheads are issued, serving about 170,000 visitors annually. With only a short distance separating the two lease parcels from the park and its Congressionally-designated wilderness, and considering the criteria under the NPS Organic Act for the protection of park resources and values, the EA falls short in analyzing impacts to, and mitigations for, park resources and visitor experience values.

Air Quality and Air Quality Related Values (AQRVs)

As noted in the EA, Zion National Park is a designated Class I area under the Clean Air Act, which affords an additional measure of protection for air quality and AQRVs within the park. Not only is the

park's status as a Class I area relevant for considering and protecting air resources and values, but we know from service-wide visitor survey data (1988-2011) that clean air and clear vistas are important to the public and relevant to visitor experience. These surveys found that park visitors highly value clean air and scenic views, with 90% of respondents stating that scenic views are *very important* to *extremely important*. The respondents also felt that clean air and scenic views are among the top five most important attributes worthy of protection in national parks. As such, we appreciate that BLM carried air quality forward as an impact topic. The EA did not include a quantitative air quality modeling analysis. We would like to discuss with BLM appropriate air quality mitigation and stipulations to be put in place to protect air quality into the future should development occur as a consequence of any leasing action. These should be developed collaboratively in advance of any development of these leases and/or any further leasing considerations for areas around the park. We provide the following comments on the EA air quality analysis:

- Chapter 3, Table 1: The 8-hour ozone standard referenced in this table is the old 2008 standard. In 2015, the EPA revised this 8-hour standard, lowering it from 0.075 ppm to 0.070 ppm. Please revise the table accordingly.
- Chapter 3, Table 2: The information in this table is outdated and incorrect. Please see the NPS conditions and trends website for revisions (available at: <http://nctest/air/data/products/parks/index.cfm>). Specifically, we provide condition estimates for nitrogen and sulfur deposition on this website. Additionally, we consider ozone levels a significant concern for impacts to vegetation (W126 metric).
- Chapter 4, Section 4.2.1.1, page 29: We would like to discuss potential dust suppression stipulations or other mitigation measures (e.g., BMPs/COAs) with the BLM, as dust emissions associated with development can impact visibility. We note that the 25% dust suppression assumption seems quite low given the highly erodible soils in the proposed leasing parcels and should be improved.
- Chapter 4, Section 4.2.1.1, page 30: This page references Stipulation UT-S-01 regarding NOx emissions from field engines. We concur with such a stipulation, as we believe NOx mitigations are necessary to protect AQRVs such as visibility and resources sensitive to nitrogen deposition. We also believe that a stipulation is the most effective mechanism to ensure cumulative air resource protection in sensitive areas (i.e., near a Class I area) should development occur as a result of leasing. However, we note that the stipulation is not incorporated in the umbrella RMP, nor is it appended as a stipulation to the parcels listed in Appendix A of the EA. If it was intended that this stipulation be appended to these leases, please updated Appendix A appropriately. If it was not intended to be incorporated as a stipulation, we would like to discuss this issue with the BLM to ensure that air resources in Zion NP are protected into the future. We would also like to tie modification criteria for this stipulation to park air resource impacts, which would be identified through subsequent analyses.

Night Sky Protection

Many visitors to the park and surrounding lands seek out and enjoy viewing the dark night skies of the area. Light pollution from industrial lighting and/or flaring at oil and gas facilities can adversely impact visitor enjoyment of night skies some distance from the drilling/production site. These impacts can be effectively managed but should be assessed in the EA. We are concerned that night lighting for drilling operations would degrade the dark night sky, particularly if the level of development expands beyond the EA's limited development scenario and/or if gas flaring is used. For this reason we recommend the following BMP's be added:

- Light only where needed.
- Light only when needed (consider sensors or timers)

- Shield lights and direct them downwards (full cutoff fixtures preferred).
- Point lights away from sensitive areas.
- Use the minimum amount of light necessary.
- Use amber color when color rendering is not critical.
- When color rendering is critical, limit the temperature to no greater than 3500°K.
- Avoid nighttime flaring of gas.
- If nighttime flaring of gas is required, use a visual screen of enclosed combustion chamber (combustor) to minimize the sky glow, glare, and adverse visual effects on the night sky viewing areas.

Soundscape

The potential for noise impacts from road/pad construction, drilling, heavy equipment and vehicles is likely and these can be heard at considerable distances, especially in the relative quiet of the natural environmental as exists around the proposed parcels and the national park, standing out above the ambient sound levels in what is now a mostly natural setting. The EA does not consider or analyze the potential adverse impacts of the proposed action nor potential oil and gas operations upon the natural soundscapes of the area including the national park. With the parcels proposed for leasing located close to designated wilderness areas within Zion National Park, a baseline soundscape inventory and impact analysis should be included in the EA, as well as avoidance and mitigation Best Management Practices (BMPs) to protect those soundscapes. Depending on the findings and noise modeling, a No Surface Occupancy (NSO) stipulation for areas located within a prescribed distance from of the national park boundary might be considered. BLM has conducted noise modeling relative to mineral leasing NEPA in other situations including recently nearby Bryce Canyon National Park (see Supplemental Draft EIS, Alton Coal Lease by Application Project, Kane County, UT)

Other Resource Concerns

Soils: Soils and rock-types on the proposed lease parcels are highly erosive and should be considered and analyzed as an impact topic in the EA. Lease Stipulation UT-S-107 Controlled Surface Use – Fragile Soils would limit surface use on severely erodible soils on slopes equal to or greater than 25 percent. However with the highly erodible nature of on-site soils, the topography, and the proximity of North Creek downslope of, or within, the lease parcels, we recommend that NSO slope requirements be further reduced and fully assessed in the EA.

Water quality: The application of stipulations UT-S-125 for protection of riparian areas is applicable, but may not be adequate in and of itself for protection of water resources. Given the topography of the potential lease parcels, the highly erosive nature of the soils, and the proximity of North Creek downslope, oil and gas activities could cause erosion, run-off, or spills that pose significant adverse impacts to the water quality of North Creek and ultimately to the Virgin River. These potential effects and any proposed mitigations/protections should be disclosed and fully assessed in the NEPA analysis.

Virgin spinedace: The Virgin spinedace is a protected fish that is managed under a multi-agency conservation agreement in lieu of potential listing under the Endangered Species Act. The local, State and federal agencies have invested heavily in propagation, habitat and water rights acquisition, habitat management and other efforts to protect and enhance this species. Populations of the species currently exist in the Virgin River and North Creek, among other tributaries. Given the potential impacts of the proposed action to soils and water quality noted above, potential impacts to the Virgin spinedace and spinedace habitat should be assessed in the NEPA analysis.

The Kolob Terrace Road in the vicinity of these tracts is a relatively light duty road with sections in poor condition. The additional heavy truck traffic would result in further deterioration of the road surface and contribute to increased traffic, road noise and impact to visitors.

The Existing St. George Resource Management Plan (SGFO RMP)

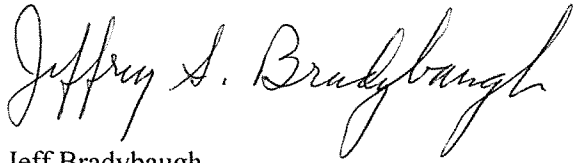
The 1999 St. George Field Office RMP did not address Reasonable Foreseeable Development Scenarios associated with oil and gas leasing. Further, the reasonable development scenario as presented in the EA, is inadequate to assess the potential for further leasing and development in the area. Given the sensitivity of the resources and issues discussed above and below, this scenario requires further analysis in terms of the lease parcels being considered and adjacent areas. For example, recent advances in oil and gas extraction technologies, including the frequent use of hydraulic fracking may extend the potential for extraction in this area. Whereas fracking was a relatively uncommon technology in 1999 when the SGFO RMP was completed, hydraulic fracking is now commonly used, with various impacts to be assessed. However, the potential use of hydraulic fracking and other technology, and their effects on potential extraction on the two parcels or adjacent future leasing is not adequately addressed in the EA. As such a Master Leasing Plan, per BLM Instruction Memorandum (IM) No. 2010-117, could be the appropriate mechanism for determining suitability for oil and gas resource management in the area, considering community, county, state and park concerns.

Development of oil or gas operations may not be the most appropriate or best use of public lands at the gateway to Zion National Park. At the time of the development of the St. George Field Office RMP in 1999, 2,449,664 people visited Zion National Park, and the 2000 population of Washington County was 90,354. In 2016, Zion was visited by 4,295,127 visitors, and the 2015 population of Washington County was 155,602. This increase in visitation and use has increased the value of this open space to visitors and residents. In a 2016 report documenting the economic impact of parks to local economies it was found that in 2015, non-local visitors to Zion National Park contributed more than \$270 million to the local economy and more than 2700 jobs were created. The BLM analysis does not consider the economic impacts of Oil and Gas Development on lease tracts UT-0517-042 and UT0517-043 in regard to local communities and to recreational use in the area. The EA needs to examine the relative importance of recreation and tourism on the local economy and analyze the potential petroleum development impacts to community character, the quality of the visitor experience and the environment upon which tourism is based.

We believe that collaboratively revisiting the RMP decisions *prior* to leasing is consistent with BLM's Leasing Reform Policy found in Instruction Memorandum No. 2010-117, which was completed nearly eleven years after the approved St. George RMP and ROD was signed. Citing the Land Use Planning Handbook, IM 2010-117 states that field offices "*will examine resource management decisions to determine whether the RMPs adequately protect important resource values in light of changing circumstances, updated policies, and new information (H-1601-1, section V, A, B).*" This policy also recognizes that "*in some cases, leasing of oil and gas resources may not be consistent with protection of other important resources and values, including units of the National Park System*" and that "*[u]nder applicable laws and policies, there is no presumed preference for oil and gas development over other uses.*"

To clarify, we are requesting that these parcels be deferred from leasing consideration in order to work in cooperation with BLM, local communities, and state and county governments to address the most appropriate management of mineral resources and applicable requirements in order to protect visitor experience and important resources and community values on BLM SGFO lands surrounding Zion National Park.

Thank you for allowing the extension of the public comment period and for your careful analysis of National Park Service concerns going forward in this process. We welcome the opportunity to continue to work with you on this matter.

A handwritten signature in black ink that reads "Jeffrey S. Bradybaugh". The signature is written in a cursive style with a large, prominent initial "J".

Jeff Bradybaugh

cc: IMR Regional Director
NPS Utah State Coordinator
IMR Energy and Minerals Coordinator
BLM SGFO Minerals Specialist