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**Re: Comments on Sonoran Desert National Monument Livestock Grazing
Draft Resource Management Plan Amendment/Environmental Assessment
DOI-BLM-AZ-P040-2020-0001-EA**

Dear Mr. Kender and BLM Colleagues:

Thank you for the opportunity to comment on the Draft Resource Management Plan Amendment / Environmental Assessment (EA) proposing changes to allowable grazing on the north unit of the Sonoran Desert National Monument (Monument, or SDNM). In essence, Archaeology Southwest advises the U.S. Bureau of Land Management (BLM) that the EA is incomplete and flawed and, accordingly, a revised or supplemental EA must be prepared and reissued. The BLM failure to include substantive, relevant, and available information in the EA, particularly information on cultural resources and impacts to cultural resources from grazing, indicates that the steps required by the National Environmental Policy Act (NEPA) and its implementing regulations have not been and cannot be concluded on the basis of this EA. Additionally, BLM has not afforded Archaeology Southwest and other interested members of the public an adequate or appropriate opportunity to comment on the cultural resource issues raised by the proposed changes to livestock grazing. Accordingly, by copy of this letter, we are advising representatives of two affected and interested tribes and the Arizona State Historic Preservation Officer that the descriptions and analyses of (1) the cultural resources and historic properties, (2) the assessments of eligibility and effect, and (3) the measures to resolve adverse effects and mitigate significant environmental impacts, as contained in the EA, are incomplete and fail to enable meaningful or sufficient public involvement in the Section 106 process prescribed by the National Historic Preservation Act (NHPA). Please correct these errors and take appropriate additional steps to consult with tribes, the public, and cooperating and consulting parties. Such steps are required to provide us with a complete and correct opportunity to assist BLM in its mission “to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.” The EA, as presented in May 2020, unambiguously fails to advance that mission or obtain even basic compliance with NEPA or NHPA.



These comments supplement the April 27, 2020, Archaeology Southwest scoping comments to BLM on the March 26, 2020 Notice of Intent to prepare an Environmental Assessment and amend the Resource Management Plan for the Sonoran Desert National Monument (Proposed Action). Archaeology Southwest is a Tucson-based nonprofit organization dedicated to the preservation, enjoyment, and investigation of heritage places of the American Southwest. Archaeology Southwest’s mission mandates collaborations with tribes, private partners, and federal, local, and state governments to explore and protect the places of the past. This mandate, together with our ethical obligations as cultural resource researchers and stewards, rivets our attention to two core issues in public land and resource management, including grazing on SDNM: cultural resources and tribal and public consultation.

Cultural resources refer to places, objects, and traditions created in the past and valued in the present. Fragile, generally irreplaceable and nonrenewable, and too often subject to damage and abuse, cultural resources are vital bonds among human generations and between humans and landscapes. Although “cultural resources” is not explicitly defined in U.S. Federal statutes or regulations, innumerable laws, policies, and customary practices affirm the high significance of cultural resources as venerable and veritable sources of national identity and of senses of orientation, place, belonging, and distinctiveness for America’s diverse and interdependent constituent communities.¹ The existence of cultural resources—as well as their settings, locations, materials, workmanship, feelings, and associations—have profound significance and day-to-day implications for individuals and communities who derive benefits from cultural resources’ diverse values: aesthetic, economic, educational, energy, historical, inspirational, political, scientific, social, spiritual, etc. Government land management too often neglects legal and practical mandates to consider cultural resources on par and in conjunction with biophysical aspects of the environment. The two are indivisible and merit similar and integrated levels of consideration in planning and implementing government actions.² Close consultation with communities affected by government land management, especially interested tribes, must complement scientific research as an essential basis for management plans and actions.

¹ Definitions for some types of cultural resources are available in the *Electronic Code of Federal Regulations*, notably *historic properties* (at [36 CFR 800](#)); *human remains, cultural items, and cultural patrimony* (at [43 CFR 10](#)); *archaeological resources* ([43 CFR 7](#)). *Sacred sites* is defined in [Executive Order 13007](#). The regulations implementing the *National Environmental Policy Act* ([40 CFR 1500](#)) affirm cultural resources as elements of the human environment that require focal consideration in the adoption and execution of Federal Government decisions.

² The BLM (2004, Manual Section 8110 – Identifying and Evaluating Cultural Resources) defines a cultural resource as “a definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public... and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups.”

Consultation refers to soliciting, discussing, and considering the views of interested members of the public, as well as formal consulting parties as means to accommodate, where feasible, other parties' interests and preferences.³ Early, stepwise consultations during the planning, assessment, and implementation of federal actions that may or will affect cultural resources (and, of course for tribes, their current or former lands) generally boosts the efficiency and effectiveness of those actions. Several generations of community, government, and science leaders have demonstrated why and how to solicit and consider the knowledge and wisdom of the public, especially the tribal representatives most familiar with lands and resources affected by proposed actions. For tribal consultations, BLM officials are obliged to lead government-to-government relations, to recognize federal fiduciary duty for the welfare of tribes and individual American Indians, and to create opportunities for cooperation and engagement.⁴

Additional Pertinent Guidance for Monument Management. The Federal Land Policy and Management Act (FLPMA) requires the BLM to manage the public lands in a manner “that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values.” The 2001 Presidential Proclamation that established SDNM allows multiple land uses, but requires BLM to protect the numerous objects for which the monument was created. Further, the Proclamation directs BLM to eliminate livestock grazing from grazing allotments located south of Interstate 8 and to assess whether livestock grazing on areas north of Interstate 8 are compatible with protection of the objects described in the Proclamation. The purpose of the Proposed Action analyzed in the EA is to “consider the compatibility of livestock grazing with monument objects for which the SDNM was established and amend the 2012 SDNM RMP/ROD” (EA page 6). The Monument Proclamation states that “grazing on Federal lands north of Interstate 8 shall be allowed to continue only to the extent that the Bureau of Land Management determines that grazing is compatible with the paramount purpose of protecting the objects identified in this proclamation.” That Proclamation also states, that the BLM “shall manage the public lands under principles of multiple use and sustained yield ... except that where a tract of such public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law.”

Unwarranted and Unexplained Exclusion of Cultural Resources from the EA. In apparent contravention of the above-referenced, non-discretionary guidance for BLM analysis, planning, and consultation, the EA neglects and excludes specific information regarding the abundance, location,

³ This definition builds on the regulations implementing Section 106 of the National Historic Preservation Act (36 CFR § 800.16(f)). For a more inclusive perspective see G. S. Galanda (2011) The Federal Indian Consultation Right, <http://apps.americanbar.org/buslaw/committees/CL121000pub/newsletter/201101/galanda.pdf>

⁴ See Advisory Council on Historic Preservation Policy Statement on Balancing Cultural and Natural Values on Federal Lands, December 20, 2002, <https://www.achp.gov/digital-library-section-106-landing/achp-policy-statement-balancing-cultural-and-natural-values>.

type, diversity, context, condition, integrity, and significance of cultural resources affected by the Proposed Action. BLM calculates that just six percent of the land within the SDNM has been inventoried for cultural resources.⁵ BLM acknowledges that available data are biased toward prior project-oriented undertakings, and therefore, such data are inadequate for predicting where and how many cultural resources may be present with the SDNM. Indeed, of the Monument lands that have been inventoried for cultural resources, the vast majority were inventoried as part of the Air Force’s relinquishment of 83,554 acres of the Barry Goldwater Bombing Range around the Sand Tank Mountains under the Military Lands Withdrawal Act of 1999 (Public Law 106-65). Those relinquished lands, subsequently incorporated into SDNM, lie *south* of the I-8 corridor. Consequently, the proportion of inventoried lands within the grazing planning area north of I-8 is much lower than the six percent figure cited in the BLM’s 2017 target-shooting Resource Management Plan Amendment (see note 5). The BLM lacks cultural resource inventory data sufficient to assess actual and potential grazing-related impacts in the analysis area north of I-8. Instead of taking the reasonable step of embracing that uncertainty as a mandate for caution and investigation, BLM makes the illogical presumption that absence of cultural resource evidence equates to evidence of cultural resource absence. Such an assumption is especially misguided and unacceptable in the context of management planning for a national monument.

Failure to Include Recent Cultural Resource Inventory Findings. Between October 15, 2017 and February 16, 2018, Archaeology Southwest conducted a Class III cultural resource survey along 135 kilometers of roads in or immediately adjacent to the SDNM, north of the I-8 corridor.⁶ The project covered 2,088 acres of land and documented 40 previously undocumented cultural resource sites and re-documented six previously identified sites. That report is the largest single-project cultural resource study within the BLM’s grazing planning area, effectively doubling the number of documented cultural resource sites in SDNM north of I-8 (as reported in EA Table 6).

Archaeology Southwest shared these findings with BLM Lower Sonoran Field Office (LSFO) staff in April 2018. A report enumerating all findings and recommendations was submitted to LSFO for review in August 2018. LSFO staff provided comments on the draft report to Archaeology Southwest in November 2019. LSFO staff—including the Archaeologist, Monument Manager, and Field Manager—have participated in discussions regarding the project’s cultural resource findings since 2018, but BLM does not include or address these findings in the May 8, 2020 grazing compatibility analysis (see, especially, Table 5 of the Grazing Compatibility Analysis) or the assessment of observed grazing impacts to cultural resources (Table 6 of the Grazing Compatibility Analysis).

⁵ BLM (2017) *Sonoran Desert National Monument Target Shooting, Proposed Resource Management Plan Amendment and Final Environmental Impact Statement.*, pp. 4–13. U.S. Department of the Interior, Bureau of Land Management, Phoenix District Office, Phoenix.

⁶ Wright, Aaron M. (2019) *Meandering the Maricopas: An Archaeological Survey of 135 km of Roads Within the Sonoran Desert National Monument, Maricopa County, Arizona.* Technical Report No. 2018-102. Archaeology Southwest, Tucson.

What the BLM Grazing Compatibility Analysis does consider are naturally and culturally sensitive areas within two miles of livestock waters, areas determined to be most susceptible to impacts from livestock grazing (see Grazing Compatibility Analysis, page 14). The EA offers no logical, empirical, or scientific basis for the two-mile buffer, but the BLM’s Grazing Compatibility Analysis does cite four sources of livestock water: North Tank, Gap Well, Gap Tank, and Conley Tank. At the request of the LSFO Field Archaeologist, Archaeology Southwest documented these four water facilities as historic properties (potentially eligible for consideration because they are over 50 years old and, at the time of documentation, were no longer in operation: Gap Tank, AZ T:14:200(ASM); Gap Well, AZ T:14:203(ASM); Conley Tank, AZ T:15:104(ASM); North Tank, AZ T:15:100(ASM)).

Archaeology Southwest recommended none of these water facilities as eligible for the National Register of Historic Preservation, but did suggest that livestock-related water facilities and other historic sites related to ranching, might collectively merit recognition and management as a cultural landscape.⁷ BLM is obligated, per NEPA and NHPA, to assess the significance, determine the National Register eligibility, and assess potential impacts and effects to Gap Well, Conley Tank, Gap Tank, and North Tank historic sites as part of the documentation and analysis of the Proposed Action. The EA fails to do this, to explain why it has not been done, or to identify when and how it will or may be done in conjunction with permitting of future grazing.

Table 1, below, summarizes data on newly documented and re-documented cultural resource sites within two miles of Gap Tank, Gap Well, Conley Tank, and North Tank. These data, as well as the observations contained in Wright’s 2019 report on the extent and intensity of cultural resource impact and effects from grazing must be included in the BLM analysis of the Proposed Action. Of particular relevance are substantial grazing-related impacts to two cultural resource sites, AZ T:15:29(ASM) and AZ T:15:99(ASM), near North Tank. Numerous cattle paths have cut through these sites and exacerbated erosion. Moreover, cultural resources in the form of historic artifacts at these two sites have been trampled and crushed. Degradation to these sites would likely continue if grazing were to resume, perhaps to the extent that the sites would lose their integrity and eligibility for inclusion in the National Register. Implementation-level adjustments in livestock management, such as limiting the number of authorized animal unit months or short duration grazing as recommended on page 14 of the EA, might slow cultural resource impacts, but would not lessen the significance of these impacts in the long run.

⁷ Wright (2019) *Meandering the Maricopas*, page 229. BLM’s 2012 SDNM Resource Management Plan, pages 2–25, includes the recommendation to “Manage assemblages of sites within the Decision Areas as cultural landscapes.”





Table 1. Documented and Re-Documented Cultural Resource Sites within Two Miles of Livestock Water (from Wright 2019).

		NRHP Eligibility Recommendation	Criteria
<u>Gap Tank</u>			
AZ T:14:199(ASM)	Prehistoric Native American trail with associated artifacts and features, including petroglyphs	Eligible	C, D
AZ T:14:200(ASM)	Historic cattle tank, corral, and related earthworks with unrelated prehistoric Native American features and artifacts	Not Eligible	
AZ T:14:201(ASM)	Prehistoric Native American trail with associated artifacts and features	Eligible	D
AZ T:14:202(ASM)	Prehistoric Native American features and associated artifacts	Eligible	D
<u>Gap Well</u>			
AZ T:14:203(ASM)	Historic ranching-related well, corral, and associated features	Not Eligible	
AZ T:14:204(ASM)	Prehistoric Native American trail with associated artifacts and features	Eligible	D
<u>North Tank</u>			
AZ T:15:29(ASM)	Historic stage station and associated features and artifacts and unrelated historic ranching facilities	Eligible	A, B, D
AZ T:15:99(ASM)	Artifact scatter associated with the historic wagon road, AZ T:15:32(ASM), and/or the nearby historic stage station, AZ T:15:29(ASM)	Eligible	A, D
AZ T:15:100(ASM)	Historic cattle tank, corral, and related earthworks	Not Eligible	
<u>Conley Tank</u>			
None			

Komatke Trail. Page 33 of the EA asserts without qualification that “No physical traces of the Komatke traditional trail corridor have been observed within the SDNM.” This spurious claim is directly contradicted by prior professional studies conducted in close collaboration with interested and knowledgeable tribal representatives. Andrew Darling and Sunday Eiselt mapped the Komatke traditional trail entering the SDNM from its west boundary and extending approximately 500 meters (nearly 1/3 mile) into the Monument.⁸ Archaeology Southwest’s 2017–18 field study identified the trail extending another 800 meters east of where Darling and Eiselt’s study stopped (trail segment is designated as AZ T:14:194[ASM]). Archaeology Southwest also identified AZ T:14:196(ASM), another segment of the Komatke trail farther east and also within SDNM. Based on these findings it is highly probable that additional segments of the Komatke trail are present within the SDNM and within the area proposed for impacts from renewed grazing. The Gila River Indian Community has recently recognized the Komatke trail as a Traditional Cultural Property.⁹

Inattention to Factual and Scientific Bases for Management Decision Making. The EA also disregards general scientific consensus and confirmations of the adverse and irrevocable effects of livestock grazing on cultural resources. Grazing constitutes a significant adverse effect on cultural resources, including cultural resources present in SDNM and within two miles of the livestock water sources BLM proposes to use in conjunction with the Proposed Action. Although BLM is obligated to follow federal laws and consider scientific evidence in determining and assessing the impacts and effects of grazing on cultural resources, it has failed to do so in the EA.

All available scientific research indicates that livestock can and do cause damage to most types of cultural resource sites. Livestock grazing also alters vegetation, soils, and drainage conditions, usually for the worse and always to the detriment of cultural landscapes.¹⁰ BLM-authored studies also confirm that livestock and livestock permit programs have significant adverse effects on

⁸ Darling, J. Andrew (2009) O’odham Trails and the Archaeology of Space. In *Landscapes of Movement: Trails, Paths, and Roads in Anthropological Perspective*, edited by J. E. Snead, C. L. Erickson, and J. A. Darling, pp. 61–83. University of Pennsylvania Press, Philadelphia; Darling, J. Andrew, and B. Sunday Eiselt (2009) Trails Research in the Gila Bend Area. In *Trails, Rock Features, and Homesteading in the Gila Bend Area: A Report on the State Route 85 Gila Bend to Buckeye Archaeological Project*, edited by J. L. Czarzasty, K. Peterson, G. E. Rice, and J. A. Darling, pp. 199–227. Anthropological Field Studies No. 43. Arizona State University, Tempe. Anthropological Research Papers No. 4. Gila River Indian Community, Sacaton, Arizona.

⁹ Darling, J. Andrew (2017) *Traditional Cultural Property Assessment for the State Route 303 Loop (SR303L) Extension (Proposed Hassayampa Freeway to SR 30 Feasibility Study and the SR 30 to I-10 Project)*, Maricopa County, Arizona. Report No. 2015-2. Southwest Heritage Research, LLC, Dallas.

¹⁰ Horne, S., and McFarland, J. (1993) “Issue Paper: Impacts of Livestock Grazing on Cultural Resources.” On file, Los Padres National Forest, 6755 Hollister Avenue Suite 150 Goleta, CA 93117; Lyons, K. (2008) Livestock Impact on Archaeological Heritage in Canyon Del Muerto. University of Leicester, School of Archaeology and Ancient History. Todd, L.C., Burne, P.C., Burger, O., and Rapson, D.J. (2003) Assessing Grazing Impacts on the Upper Greybull: A Conceptual and Methodological Framework. Laboratory of Human Paleoecology, Colorado State University, Ft. Collins, Colorado.

cultural resources in settings roughly similar to SDNM. The Final EIS prepared for the Bodie-Coleville planning units found that livestock use impacts on cultural resources include¹¹:

- Displacement (vertical and horizontal) and breakage of artifacts
- Mixing of depositional associations through trampling
- Destruction or enhanced deterioration of structures and features through rubbing
- Acceleration of natural erosional processes.

The study found that plants valued by Native American traditionalists could be trampled or consumed by livestock, adversely affecting plant availability at some locations.

More recent research on links between grazing and cultural resources assessed cattle grazing effects on 47 cultural resource sites located on diverse grazing allotments on two national forest ranger districts. Fieldwork at each cultural resource site included documentation of artifacts and features and assessment of six interrelated variables: (1) density of cattle excrement; (2) depth and length of cattle trails; (3) depth and extent of cattle wallows (at sites with surface water); (4) condition of associated riparian areas or springs; (5) condition of fences established to exclude livestock from cultural resource sites; (6) types and levels of livestock effects on artifacts and features. Less than nine percent of the sites assessed (4 of 47) showed low or no signs of adverse impacts and effects from grazing. Sites associated with riparian areas and surface water had the greatest and most diverse adverse effects.¹²

No studies available to Archaeology Southwest provide evidence that livestock grazing of any kind conserves, protects or enhances cultural resources. Additional research, including high-resolution baseline studies followed by monitoring of artifacts and features in sites subjected to grazing at various levels of intensity, could contribute more science. Such studies must be required by BLM if any further consideration is given to allowing renewed grazing in SDNM. If BLM continues to plan for livestock grazing then it must also assess the costs and landscape, site, and hydrologic consequences of the management treatments necessary to protect SDNM cultural resources and other values and objects identified in the SDNM Proclamation. In sum, available scientific information and prior management assessments indicate that livestock grazing is not compatible with the primary, preservation-focused purpose of the Monument.

¹¹ BLM (1982) Bodie-Coleville EIS, pages 4–92. Also see Haas, D. (2006) “Summary of Livestock Grazing Impacts on Archaeological Sites Located on BLM-Administered Lands in Colorado, A Study of Cultural Resource Assessments for Grazing Permits from Fiscal Years 1998 to 2003.” Bureau of Land Management, Colorado State Office, Denver.

¹² Anderson, S.R. (2007) Assessing Cattle Grazing Impacts on Archaeological Sites in the Humboldt-Toiyabe National Forest. Paper Submitted in Partial Fulfillment of Requirements for the MA in Anthropology, Northern Arizona University



Conclusions Regarding NEPA Compliance. ASW finds ample evidence for significant environmental impacts from the proposed Action. ASW advises BLM to either select Alternative B, the No Grazing Alternative, for all allotments within the area under analysis, or to revise and re-issue the EA.

Conclusions Regarding NHPA Compliance. Our review finds that BLM has, at least to this point in its analysis of the Proposed Action, neglected its non-discretionary duties, pursuant to 36 CFR 800.2(d)(1), to “seek and consider the views of the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties, the likely interest of the public in the effects on historic properties.” Please confirm the longstanding interests on the part of Archaeology Southwest and the affected tribes in the Monument’s historic properties and other cultural resources. Please advise us, per 36 CFR 800.3(e), of the mandatory “plan for involving the public in the section 106 process.”

We conclude from the above that BLM should promptly release for public inspection and comment a substantially revised EA, supplemental EA, or other information, per NEPA and 36 CFR 800.11(a), to ensure that any BLM “determination, finding, or agreement under the procedures in this subpart is supported by sufficient documentation to enable any reviewing parties to understand its basis. The agency official shall provide such documentation to the extent permitted by law and within available funds.”

Archaeology Southwest appreciates the opportunity to provide these comments. We look forward to continued collaboration with BLM, tribes, and stakeholders to protect cultural resources.

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