

**ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION
EA Number - CA-680-04-54**

**Allotment Name(s): Johnson Valley, Superior Valley, Gravel Hills, Buckhorn Canyon
Stoddard Mountain, Shadow Mountain**

**BARSTOW FIELD OFFICE
SEPTEMBER 2004**

CHAPTER 1: INTRODUCTION

Background

In 2000, six grazing leases for ephemeral sheep grazing operations in the Barstow Field Office (BFO) that expired at the end of the 1999 grazing year (2/28/00). Five of these grazing leases (Johnson Valley remained vacant) were renewed under the authority of Public Law 106-113. Grazing leases were for ten-year terms, and contained the same terms and conditions as the expiring grazing lease. Public Law 106-113 required compliance with all applicable laws and regulations, which include the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Following the analysis of environmental impacts these grazing leases may be canceled, suspended or modified, in whole or in part, to meet the requirements of such applicable laws and regulations.

The Washington Office Instruction Memorandum 2003-071 requires that all grazing permits and leases that expired in 1999 and 2000 be “fully processed” by the end of Fiscal Year 2004 (9/30/04). The term “fully processed” permit/lease refers to the completion of an adequate environmental analysis and issuance of a proposed grazing decision in accordance with 43 CFR 4160, and appropriate consultation in accordance with the ESA.

On January 29, 2001 the BLM and the Center for Biological Diversity et. al. enter into a stipulated agreement effective immediately, herein known as the “Settlement Agreement” for the management of livestock grazing under this federal court action. The Settlement Agreement prescribed areas in the Superior Valley, Gravel Hills, Shadow Mountain, Buckhorn Canyon, and Stoddard Mountain to be excluded from sheep grazing. Based on an April 25, 2002 amendment these stipulations are still in affect until the signing of the Record of Decision for the West Mojave Plan Amendment to the CDCA Plan.

The Bureau of Land Management (BLM) is proposing to issue a ten-year term grazing leases on the following allotments: Johnson Valley, Stoddard Mountain, Shadow Mountain, Gravel Hills, Buckhorn Canyon, and Superior Valley in the jurisdiction of the Barstow Field Office (see Map 1). The purpose is to authorize ephemeral livestock (sheep) grazing where it already exists or has existed on the allotments. The six allotments encompasses 771,638 acres of public land and 376,850 acres of private land. The allotments are located in rural San Bernardino County. Elevation range is between 2,300 and 4,300 feet. Vegetation communities are a mix of Creosote Bush Scrub, Mojave Mixed Scrub, and Saltbush Scrub.

Need for the Proposed Action

The proposed action is needed to authorize grazing in accordance with 43 CFR 4100 and is consistent with the provisions of the Taylor Grazing Act, Public Rangelands Improvement Act, and Federal Land Policy and Management Act. Actions may be required to maintain or improve resource conditions including rangeland health. The following plan conformance review summarizes the status of existing permits/leases: All six grazing leases being analyzed in this document have been renewed for a term of ten-years under PL 106-113.

Plan Conformance Lease/permit renewals under the same terms and conditions is subject to: The California Desert Conservation Area Plan (CDCA Plan) 1980 as Amended. The proposed action has been determined to be in conformance with the CDCA Plan as required by regulation (43 CFR §1610.5-3(a)). The proposed action would occur in areas identified for livestock grazing as indicated in the Livestock Grazing Element in the CDCA Plan 1980 (1999), pages 56 to 68. The proposed action is consistent with the land use decisions, and goals and objectives listed in the CDCA Plan.

Relationship to Statutes, Regulations, and Plans

Endangered Species

All of the allotments being analyzed in this document are within the range of the federally listed threatened species, the desert tortoise. Pursuant to Section 7 of the Endangered Species Act (ESA), formal consultation with the Fish and Wildlife Service (FWS) is required on all allotments for which livestock grazing may affect listed species. In a memorandum dated May 17, 1999 the FWS concurred with BLM that ephemeral sheep grazing would continue under the terms and conditions contained in the Biological Opinion (1-8-94-F-16) issued March 15, 1994, until the West Mojave Plan is approved. In addition, the terms and conditions of any grazing permit may also need to be modified to conform to decisions made to achieve recovery plan objectives as determined through subsequent land use plan amendments or revisions. The West Mojave Management Plan Amendment is currently addressing ESA concerns for the six ephemeral sheep allotments proposed for renewal herein that may affect listed species.

All of the allotments also provide habitat for State listed fish, wildlife, and plant species. According to the MOU between BLM and CDFG, BLM agrees: "to notify the Department of all projects involving impacts to, or manipulation of, State-listed rare (threatened) and endangered fish, wildlife and plants and to obtain State recommendations of the project-specific management of such populations."

Cultural Resources

California BLM has explicit responsibility to manage cultural resources on public lands consistent with applicable procedures and agreements.

Background site record and literature review will be conducted as a minimum level of review as part of the permit renewal EA. Present inventory will focus on known or suspected areas of historic ground disturbing activities associated with livestock grazing such as water sources, corrals, supplemental feeding areas, bedding areas, salt block stations, cattle grates and fence lines. The results of this analysis will be used to modify grazing permits. If cultural resources are identified under an existing grazing permit, the stipulations of the grazing permit should be modified to reflect compliance with the Bureau's responsibility to manage cultural resources.

All cultural resources will be subject to review and evaluation for listing in the National Register of Historic Places. Pursuant to the amended California protocol (see Attachment 1) supporting documentation will be submitted to the California Office of Historic Preservation for

review and concurrence to be submitted to the Keeper of the National Register. All cultural resources will be afforded protection consistent with law and policy, including appropriate mitigation measures.

Wilderness

Wilderness areas are found in one of the six allotments under consideration. Grazing activities do not currently occur in wilderness. For the purpose of this analysis, the proposed action contains no impacts that are expected to occur beyond those impacts already occurring under current grazing management.

The proposed action is subject to Section 103.(c) of the California Desert Protection Act (P. L. 104-433, 31 Oct 1994): ‘Livestock. – Within the wilderness areas designated under Section 102, the grazing of livestock, where established prior to the date of enactment of this Act, shall be permitted to continue subject to such reasonable regulations, policies, and practices as the Secretary deems necessary, as long as such regulations, policies, and practices fully conform with and implement the intent of Congress regarding grazing in such areas as such intent is expressed in the Wilderness Act and section 101(f) of Public Law 101-628.’

"Public Law 101-628 (28 Nov 1990, the Arizona Desert Wilderness Act of 1990), at Section 101(f): ‘Livestock. – (1) Grazing of livestock in wilderness areas designated by this title, where established prior to the date of enactment of this Act, shall be administered in accordance with section 4(d)(4) of the Wilderness Act and the guidelines set forth in Appendix A of the Report of the Committee on Interior and Insular Affairs to accompany H. R. 2570 of the One Hundred First Congress (H. Rept. 101-405).’

Report 101-405, at pp.(41-2) states: ‘It is anticipated that the number of livestock permitted to graze in wilderness would remain at the approximate levels at the time an area enters the wilderness system. If land management plans reveal conclusively that increased livestock numbers or animal unit months (AUMs) could be made available with no adverse impacts on wilderness values such as plant communities, primitive recreation, and wildlife populations or habitat, some increases in AUMs may be permissible. This is not to imply, however, that wilderness lends itself to AUM or livestock increases and construction of substantial new facilities that might be appropriate for intensive grazing management in non-wilderness areas.’ And, at p.(42): ‘The construction [of] new improvements or replacement of deteriorated facilities in wilderness is permissible if in accordance with these guidelines and management plans governing the area involved. However, the construction of new improvements should be primarily for the purpose of resource protection and the more effective management of these resources than to accommodate increased numbers of livestock.’ Furthermore, at p.(43): “In summary, subject to the conditions and policies outlined in this report, the general rule of thumb on grazing management in wilderness should be that activities or facilities established prior to the date of an area’s designation as wilderness should be allowed to remain in place and may be replaced when necessary for the permittee to properly administer the grazing program. Thus, if livestock grazing activities and facilities were established in an area at the time Congress determined that the area was suitable for wilderness and placed the specific area in the wilderness system, they should be allowed to continue. With respect to areas designated as

wilderness prior to the date of this Act, these guidelines shall not be considered as a direction to reestablish uses where such uses have been discontinued.’

“For the purposes and context of this EA, it is worth noting that, in using the term ‘established’, Congress would not be expected to envision instances of grazing use ‘establishment’ accomplished by irregular means or methods.”

Water Quality

Activities related to grazing livestock may degrade the quality of water for natural occurring water sources such as springs or seeps. Any changes in grazing management or soil (surface) disturbing actions would be reviewed further for potential impacts to water quality. Best management practices would be employed to mitigate or avoid these potential impacts.

Air Quality

The proposed action would be performed within an area designated by the U.S. Environmental Protection Agency as being in non-attainment of certain Clean Air Act Standards. This designation resulted in the development of plans and strategies to protect air quality. The proposed activity is in conformance with relevant State Implementation Plans (SIPs) and Attainment Plans for protection of air quality in the area. The SIPs and attainment plans for these pollutants either have been approved or are currently under review by the U.S. Environmental Protection Agency (EPA). The project area is within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD) which has overseen the development and implementation of local attainment plans.

Regulations

For livestock grazing purposes, this proposal is subject to BLM regulations at 43 CFR 4100 (grazing regulations).

Plans

West Mojave Plan (Proposed Habitat Conservation Plan/CDCA Plan amendment): BLM, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), county and city governments, various interest groups, the U.S. military, and a number of public lands stakeholders currently are developing this plan. Upon completion, it is intended to amend the CDCA Plan. The West Mojave Plan (WMP) is a local bio-regional planning effort addressing State and federally-listed species, specifically the desert tortoise. BLM issued the West Mojave Plan/Draft Environmental Impact Statement (WMP-DEIS) in May 2003.

Management of habitat for the tortoise and over 100 other sensitive species on public lands is being addressed, including implementation of recovery plan actions developed for the tortoise. Alternatives for the management of livestock grazing on public and interspersed private lands are an integral component of the West Mojave Plan. When approved, grazing leases would be subject to the provisions of BLM’s WMP. The grazing lease authorization terms and conditions

would be intended to maintain and achieve the rangeland health standards and guidelines that would be adopted through the WMP.

CHAPTER 2 PROPOSED ACTION AND ALTERNATIVES

Proposed Action (Current Management)

This alternative was developed after a review of resource issues, conditions, trends and reasonably foreseeable future actions on the six allotments. Monitoring requirements, mitigation measures, and lease terms and conditions developed in the resolution of issues will be incorporated into this alternative to minimize potential impacts to resources while continuing to provide forage for livestock grazing.

The proposed action would continue interim management as prescribed by the grazing stipulation contained in the Settlement Agreement, effective January 29, 2001 resulting from the law suite filed by Center for Biological Diversity (CBD) et al. Interim management shall be in effect until the WMP amendment to the CDCA Plan is approved. When interim management is concluded the management of livestock grazing would consist of authorizing ephemeral sheep grazing on six allotments, administered under six grazing leases located in rural San Bernardino County, managed under the provisions of the grazing element prescribed in the CDCA Plan, as amended, and the terms and conditions of applicable biological opinions for the desert tortoise.

Current management or interim management has been previously analyzed in EA CA-610-01-02. The proposed action would consist of continuing to authorize ephemeral sheep grazing on the East Unit of the Stoddard Mountain, and Johnson Valley Allotments, restrict ephemeral sheep grazing on the Shadow Mountain, and Middle and West Units of the Stoddard Mountain, and continue non-use status on the Buckhorn Canyon, Superior Valley and Gravel Hills Allotments, administered under six grazing leases located in rural San Bernardino County issued for a term of ten years. These grazing leases would be managed under the provisions of the Settlement Agreement (2001), the grazing element prescribed in the CDCA Plan, as amended, and the terms and conditions of applicable biological opinions for the desert tortoise. This authorization would convey all prescriptions, management actions, and terms and conditions related to the management of these six ephemeral sheep allotments under six grazing leases for a term of ten-years. These grazing leases would conform to the terms and conditions contained in the Biological Opinion (BO) (1-8-94-F-16), Ephemeral Sheep Grazing in the California Desert District issued March 15, 1994. This 1994 BO would constitute on-the-ground stipulations for the management of ephemeral sheep grazing in desert tortoise habitat. This BO contains 18 terms and condition applicable to all allotments (see Attachment 2). BLM anticipates that conformance with these terms and conditions will minimize livestock grazing impacts on the desert tortoise and its habitat. In addition to the above cited BO, the current season of use and permitted use, including management actions and stipulations stated in an approved AMP, if applicable, or stipulations directed by existing decision or through an existing agreement would also be included in this grazing lease.

Since the issuance of the 1991 BO, ephemeral sheep grazing has not occurred on the West Stoddard, Gravel Hills, Superior Valley, and Buckhorn Canyon Allotments. Under the proposed

action these allotments would continue to be in-active. The lessees continue to maintain base property, and currently hold grazing leases issued under the authority of PL 106-113.

The approval of the West Mojave Plan (WMP) Amendment to the CDCA Plan is a reasonable, foreseeable action. Under the livestock prescriptions contained in this proposed plan amendment the Gravel Hills and Superior Valley Allotments would be permanently discontinued from ephemeral sheep grazing and the allotments would no longer be recognized as suitable for grazing. The Buckhorn Canyon and West Stoddard Allotment boundaries would be substantially modified and any future ephemeral grazing would not be practical or very limited.

A. Livestock Numbers and Season of Use

Ephemeral sheep grazing leases managed under the BFO do not have specific "livestock numbers" attached to them. Authorizations to graze on a yearly basis are issued by the number of "bands" or flocks of sheep an operator wishes to graze, and the ephemeral production calculated for that grazing year (ephemeral season). Band size varies from 500 to 1000 ewe-lamb pairs and averages 800 ewe-lamb pairs. An AUM is an "animal unit month" and is calculated on the amount of forage a sheep consumes in a month. Lambs are generally not counted as a separate AUM. Cattle set the standard at 1000 pounds of forage per month and sheep are calculated to consume approximately 200 pounds of forage per month. Therefore, there are five sheep per AUM. The season of use in the BFO is normally from 3/15 to 5/31 in years when there is enough ephemeral forage production to sustain grazing. The Table 1 gives an indication of the intensity of use on each allotment in the BFO:

Table 1. Stocking Rates for Ephemeral Sheep Allotments

Barstow Allotments	No. of Years Used, 1991-2004	Range of No. of Bands, 1991-2004	Average No. of Bands/Year of Use	Range of No. of AUMs 1991-2004	Average No. of AUMs per Years of Use
Stoddard Mountain	8	1-4	2	341 - 2,575	1,275
Superior Valley	0	0	0	0	0
Gravel Hills	0	0	0	0	0
Johnson Valley	1	1	1	75	75
Shadow Mountain	4	1-4	2	234 - 958	467
Buckhorn Canyon	0	0	0	0	0

B. Livestock Management

The Buckhorn Canyon Allotment (see Map 2) is an ephemeral allotment of 27,053 acres comprised of 14,689 acres of private land and 12,364 acres of public lands. This allotment has

approximately 960 acres of non-critical desert tortoise habitat and approximately 11,404 acres of critical desert tortoise habitat. Ephemeral sheep grazing has not been authorized on this allotment since 1987. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment.

The Gravel Hills Allotment (see Map 3) is an ephemeral allotment of 230,165 acres comprised of 94,621 acres of private land and 135,544 acres of public lands. This allotment has 135,544 acres of critical desert tortoise habitat. Ephemeral sheep grazing has not been authorized on this allotment since 1988, and the allotment is currently in-active. The 1994 Biological Opinion and extensions disallowed ephemeral sheep grazing in critical desert tortoise habitat.

The Johnson Valley Allotment (see Map 4) is an ephemeral allotment of 118,320 acres comprised of 9,134 acres of private land and 109,186 acres of public lands. This allotment has 118,320 acres of non-critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Ephemeral sheep grazing has not been authorized on this allotment since 1992. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment.

The Shadow Mountain Allotment (see Map 5) is an ephemeral allotment of 121,677 acres comprised of 69,419 acres of private land and 52,258 acres of public lands. This allotment has 17,244 acres of non-critical desert tortoise habitat and 35,013 acres of critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment.

The Stoddard Mountain Allotment (see Map 6) is an ephemeral allotment of 295,242 acres comprised of 121,956 acres of private land and 173,286 acres of public lands. This allotment has 131,797 acres of non-critical desert tortoise habitat and 41,490 acres of critical desert tortoise habitat. The allotment is divided into three grazing units; west, middle, and east. The western unit of Stoddard Mountain Allotment has been closed to ephemeral sheep grazing since 1991 because it is largely critical desert tortoise habitat. Presently, the eastern and middle sections of the allotment are open to grazing but this situation may change with the approval of the Western Mojave Plan (WMP). In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment.

The Superior Valley Allotment is (see Map 7) is an ephemeral allotment of 232,184 acres comprised of 67,116 acres of private land and 165,067 acres of public lands. This allotment has 165,067 acres of critical desert tortoise habitat. Ephemeral sheep grazing has not been authorized on this allotment since 1988, and the allotment is currently in-active. The 1994 Biological Opinion and extensions disallowed ephemeral sheep grazing in critical desert tortoise habitat.

C. Range Improvements

There is no permanent range improvements associated with ephemeral operations authorized in the BFO. Individual sheep operators utilize water trucks, mobile water troughs, and temporary corrals to facilitate their operations.

D. Measures to Maintain or Achieve Standards (Terms and Conditions of Permit)

There are a total of six ephemeral sheep allotments being analyzed in this document. The allotments have not be assessed to determine if they achieve the Secretary of Interior's approved Rangeland Health Standards.

E. Monitoring

The rangeland monitoring of the ephemeral sheep allotments in the BFO would be conducted as it is currently. In years when there is sufficient winter moisture to consider spring grazing in the desert, ephemeral forage production studies are done. In some years composition studies are also conducted.

The ephemeral forage production studies are performed using the Comparative Yield Method (Interagency Technical Reference 1734-4, p116-122). The FWS Biological Opinion (1-8-94-F-16) stipulates that there must be a minimum of 200 pounds per acre (air-dry weight) of ephemeral forage in order for sheep to be authorized for grazing. It is a reasonably, foreseeable future action that the threshold for authorizing sheep would be increased to 230 pounds per acre with the approval of the West Mojave Plan Amendment to the CDCA Plan.

No Grazing Alternative

This alternative would cancel the grazing leases on the Gravel Hills, Superior Valley, Buckhorn Canyon, Stoddard Mountain, Shadow Mountain, and Johnson Valley Allotments. As a result, grazing would discontinue on the Gravel Hills, Superior Valley, Buckhorn Canyon, Stoddard Mountain, Shadow Mountain, and Johnson Valley Allotments. This is to be a permanent cancellation. The BLM would initiate a process in accordance with the 4100 regulations to permanently eliminate grazing on each of the allotments.

Alternative Considered but Dismissed

Under this alternative all of the allotments considered under this analysis would incorporate the livestock management prescriptions stated in the West Mojave Plan DEIS for livestock grazing in those allotments. However, this alternative is dismissed from further analysis in this document because those livestock management prescriptions are being analyzed in a separate EIS which has been substantially completed as a Final EIS. The Final West Mojave Plan/FEIS is anticipated for release in the near future. The BLM has received a draft biological opinion for the plan. Upon integration of FWS terms and conditions with public response on the DEIS, the Final Plan will be released for public review.

When the West Mojave Plan is approved, the livestock management prescriptions contained in the approved plan amendment would be incorporated into the terms and conditions of the grazing leases for the Gravel Hills, Superior Valley, Buckhorn Canyon, Stoddard Mountain, Shadow Mountain, and Johnson Valley Allotments by decision.

CHAPTER 3 ENVIRONMENTAL ANALYSIS

This chapter addresses, by resource, the affected environment, environmental consequences, and consultation sections of the EA for 19 resource elements. These elements include the standard critical elements of the human environment (H-1790-1, appendix 5, BLM NEPA Handbook, as amended) and several other resource elements commonly affected by livestock grazing. If a resource is not present or not affected, a negative declaration statement will be included in the Affected Environment section, and the resource element will not be further addressed in the Chapter.

Required Elements:

1. Air Quality
2. Areas of Critical Environmental Concern (ACEC)
3. Cultural Resources
4. Environmental Justice
5. Farmlands, Prime or Unique
6. Flood plains
7. Invasive, Non-native Species
8. Native American Concerns
9. Recreation
10. Social and Economic
11. Soil
12. Waste, Hazardous or Solid
13. Water Quality, Surface and Ground
14. Wetlands/Riparian Zones
15. Wild and Scenic Rivers
16. Wilderness
17. Wildlife
 - Threatened or Endangered Species
18. Wild Horses and Burros
19. Vegetation
 - Threatened or Endangered Species

AIR QUALITY

A. Affected Environment

The project area for the purpose of this analysis is the six grazing allotments located in rural San Bernardino County.

Air quality throughout the project area, is good much of the time. There are, however, times that the area has not met air quality standards due to pollutants that are either locally generated and/or transported into the county. This has resulted in the current classification of the area as a federal non-attainment areas for ozone and PM₁₀ under the National Ambient Air Quality Standards. The project area is within the Mojave Desert Planning Area. A state implementation plan (SIP) has been prepared for the planning area which identifies sources of emissions and control measures to reduce emissions. The Mojave Desert Air Quality Management District (MDAQMD) has state air quality jurisdiction over San Bernardino County

B. Environmental Consequences

1. Impacts of Proposed Action

Under the proposed action, fugitive dust emissions could occur due to the soil disturbance as a result of the trampling action of the sheep when soil moisture levels are low. Support vehicle use on the access roads will generate small amounts of PM₁₀ emissions throughout the grazing area and could carry soils onto the paved roads which would increase entrainment PM₁₀ emissions. Ruminant animals emit methane gas which is a precursor emission for ozone. The support vehicles emit various precursor emissions for ozone. Actual emissions amounts from this grazing activity are negligible. No significant offsite impacts are anticipated. The proposed project does not exceed the de minimus emission levels and is exempt from conformity determination {(40 CFR Part 93.153 (iii))} which exempts continuing and recurring activities such as grazing lease renewals where activities will be similar in scope and operation to activities currently being conducted. As a result no further conformity analysis or determination is necessary.

2. No Grazing

Under the no grazing alternative, no fugitive dust or ozone precursors would be generated because there would be no active ephemeral sheep grazing operations.

3. Cumulative Impacts

The cumulative effect area for air resources for the proposed action is Southern California and Southern Nevada. The proposed action is well below de minimus levels for the Mojave Desert PM₁₀ planning areas and the Mojave Desert Ozone non-attainment areas within which it is located. The expected emission levels are within the levels in the attainment demonstrations in the SIPs and the cumulative NAAQS 24 hour and one year PM₁₀ emission standards and the one hour ozone emission standards and are not likely to result in or contribute to exceedences of the

National Ambient Air Quality Standards. Likewise, the decreases in emissions from elimination of sheep grazing would be negligible relative to total emissions in the Mojave Desert for PM₁₀ and ozone.

Within the broader regional context of Southern California and Southern Nevada, the expected emission levels would be negligible relative to total emissions in the region for either of these pollutants, and would not contribute substantially to any cumulative impacts for these pollutants. These lease renewals are consistent with standards identified to in the state implementation plans for activities on public lands, as outlined within the Mojave Desert planning area for PM₁₀ and public lands were not identified as a significant regional source of emissions for ozone pollution. Likewise the decreases in emissions from elimination of livestock grazing would have a negligible cumulative effect on air quality in Southern California and Southern Nevada.

C. Consultation

The MDAQMD, and the other interested publics will be consulted concerning this analysis.

D. Maps

N/A

E. References –

BLM, Barstow Field Office. February, 1997. Fugitive Dust/PM10 Emissions Control Strategy for the Mojave Desert Planning Area.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

A. Affected Environment

Mojave Fishhook Cactus ACEC

BLM designated the Mojave Fishhook Cactus ACEC in May, 1984 based on the concentrated occurrence of this sensitive species, Mojave fishhook cactus (*Sclerocactus polyancistrus*). The ACEC is a total of 640 acres of public land, encompassing the east half of Section 32 and the north half of Section 4 in San Bernardino County, California. The Mojave fishhook cactus range has been identified as encompassing a north-to-south oval broader in western Nevada tapering to a thinner swath in western San Bernardino County, California. The ACEC is at the southern end of its range, east of National Trails Highway, due east of Helendale, California. The ACEC is located just within the western boundary of the Middle Unit, Stoddard Mountain Allotment.

Barstow Woolly Sunflower ACEC

BLM designated the Barstow Woolly Sunflower ACEC in 1980 under the CDCA Plan based on the concentrated occurrence of the BLM sensitive species, Barstow woolly sunflower (*Eriophyllum mohavense*). The ACEC encompasses a total of 320 acres of public land, of which 7 acres are currently fenced to protect the species. The ACEC is located within the boundaries of the Gravel Hills Allotment.

Soggy Dry Lake Creosote Rings ACEC

BLM designated the Soggy Dry Lake Creosote Rings ACEC in 1980 under the CDCA Plan to provide management and protection of this Unusual Plant Assemblage (UPA) and completed a management plan for the area in September, 1982. The ACEC protects an example of vegetative reproduction of single-parent creosotes. The ACEC is a total of 278 acres of public land, located within the Johnson Valley OHV Area, of which six acres is currently fenced to protect this UPA. These creosote ring clones have been dated at 12,000 years of age, and may be the oldest living plants on earth.

Upper Johnson Valley Yucca Rings ACEC

BLM designated the Upper Johnson Valley Yucca Rings ACEC in 1980 under the CDCA Plan to provide management and protection of this Unusual Plant Assemblage (UPA) and completed a management plan for the area in September, 1982. The ACEC is a total of 320 acres of public land, of which eight acres is currently fenced to protect this UPA. These yucca ring clones are the largest and oldest Mojave yucca rings known, dated at 2,270 years of age.

B. Environmental Consequences

1. Impacts of Proposed Action

These ACECs were designated to protect important botanical values that are uncommon in the desert. The ACECs are located within ephemeral sheep allotments. Based on how ephemeral sheep grazing operations are conducted in the Mojave Desert it is unlikely that any impacts from that activity have occurred. The Gravel Hills Allotment has not been grazed since 1988 and Johnson Valley Allotment has been grazed once (1992) in the last fifteen years. A

representative portion of these populations have been fenced to ensure protection from grazing and OHV use. The Mojave fishhook cactus ACEC is located on the edge of the Middle Unit of the Stoddard Mountain Allotment. Again, it is very unlikely that sheep grazing activities have occurred in the vicinity of this ACEC since it was designated.

2. No Grazing

No measurable adverse or beneficial impacts would occur to important and relevant natural resource values of ACECs within allotments as a result of the elimination of ephemeral sheep grazing.

3. Cumulative Impacts

Cumulative impacts to ACECs can occur from multiple uses and causes within the boundaries of individual ACECs and from impacts to a single resource value that are regional in nature. All of the ACECs within the project area are managed under specific activity plans that identify goals for the sensitive botanical values within each of the ACECs, promote uses that facilitate the accomplishment of ACEC Plan goals, and set parameters on other uses that may conflict with the accomplishment of ACEC goals. While the Mojave Fishhook Cactus ACEC management plan was being developed, a large die-off of this species occurred at several monitored sites in the southern portion its range. The die-off was the result of species of predatory moths, and the ACEC designation was one measure to protect remaining populations.

These ACEC Plans are currently undergoing evaluation through the West Mojave bioregional plan to review progress that has been made to accomplish some of the goals in these ACEC activity plans. Fencing has been implemented to protect sensitive botanical values in three of the areas. Cumulative impacts from livestock grazing have been analyzed in the previous activity plans in the context of the variety of other activities that are occurring in these sensitive areas and any additional restrictions or strategies necessary to avoid cumulative impacts. Other activities that may overlap ephemeral sheep grazing allotments and ACECs include: general recreation (i. e. picnicking, camping, and rock hounding), off-highway vehicle (OHV) Open Area recreation activities, small mining claims, and OHV activities on designated routes outside of Open Areas.

C. Consultation

Consultation would occur with all interested publics, county governments, and Native American tribes with traditional ties to the lands within the allotments being analyzed.

D. Maps

N/A

E. References –

The Mojave Fishhook Cactus ACEC, Barstow Woolly Sunflower ACEC, Soggy Dry Lake Creosote Rings ACEC, and Upper Johnson Valley Yucca Rings ACEC Management Plans are available at the BFO.

May, Richard W.

1994 *The Ecology of Sclerocactus polyancistrus (Cactaceae) in California and Nevada*, Desert Plants, Vol. 11, No. 1, pp. 6-22, U. of AZ, Bryce Thompson Southwestern Arboretum..

CULTURAL RESOURCES

A. Affected Environment

1. Summary

There are 502 prehistoric and historic sites within the 6 sheep grazing allotments managed by the Barstow Field Office (see Table 2). Of 53 historic sites, 10.6% of the total sites, 7 are comprised of mining debris while the remainder are various can dumps and house hold debris from early homesteading and railroad activity. One historic grave is indicative of early 1900s pioneer activity. CA-SBR7187 is a possible pioneer grave of an approximately 40-year old man, tentatively identified as Thomas J. Flood. Based on clothing remnants, he died in the early 1900s.

The majority of cultural resources (66%) are lithic sites. Of 332 lithic sites, 32 contained variable combinations of lithics, pottery, petroglyphs, ground stone, and rock shelters. Of these 32 lithic sites, 20 contained bedrock mortars or milling slicks, manos, and/or metates and 12 were associated with petroglyphs.

Of the 40 rock features, 4 were cairns while the remainder were linear or circular rock alignments. All of these sites are of either prehistoric or historic origin. The last four categories of sites include 6 rock shelters, 16 ground stone locations, and 54 petroglyph sites.

Stoddard Mountain Middle (113 sites) and Gravel Hills (112 sites) grazing allotments coincide with a large number of cultural resources. Recorded cultural resources within the remaining four allotments range from 3 to 85. The different frequencies of cultural resources may indicate higher and lower areas of potential occurrence; however, it also may be indicative of differential inventory intensities.

Table 2. Cultural Resource Summary for Sheep Allotments in the Barstow Field Office.

Grazing Allotment	Historic	Grave	Lithic	Rock Feature	Rock Shelter	Sherds	Ground Stone	Petro-glyphs	Total Sites
Buckhorn Canyon	2		1						3
Gravel Hills	10		37	3	4		6	52	112
Johnson Valley			20						20
Shadow Mountain	17		51	3			1		72
Stoddard Mt. East	2		27	11	1		3	1	45
Stoddard Mt. Middle	4		88	20			1		113
Stoddard Mt. West	5		44	2			1		52
Superior Valley	13	1	64	1	1		4	1	85
Totals	53	1	332	40	6	0	16	54	502

B. Environmental Consequences

1. Impacts of Proposed Action

Through previous research (ASPPN I-15, 1990; Nielson 1991; Osborn et al. 1987; Roney 1977) and personal experience it has been determined that the areas of highest potential impact will be located around springs, troughs, water courses, and salt licks. These are high-use grazing areas and the former are also areas that tend to have concentrations of cultural sites. Impacts include disturbance to the horizontal distribution of artifacts and obscuring patterns existing in their original deposition, and eventually introduction of new trends in their spatial arrangement. Vertical migration of materials, resulting from grazing, can move artifacts across stratigraphic units and cause the mixing of deposits obscuring the stratigraphic integrity of separate occupational periods. Trodden, artifacts can undergo several types of damage, including breakage, microchipping and abrasion (Nielson 1991:483-484). Collective grazing activity can cause spatial, chronological and functional information to become obscured, causing erroneous temporal, spatial and functional interpretations. The result can be damaged and diminished integrity of a site adversely affecting its potential to meet National Register criteria. These analyses will assess the degree of impact that the grazing has had to cultural properties within the Barstow Field Area and will provide recommendations to mitigate further negative effects to cultural properties potentially eligible to or listed on the National Register of Historic Places.

To address the impacts of grazing on cultural resources within the Barstow Field Area, a sampling strategy has been devised which focuses efforts on congregation areas where it has been shown that the greatest levels of impact occur (e.g., springs, perennial water courses, troughs, and salt licks). Cultural assessments of allotments will be prioritized by 1) the number of eligible properties to be relocated, 2) sites occurring at or near water sources, and 3) sites located at or near salt licks. These investigations will only address public lands, and will occur over the next five years, beginning in 2005. Private, State, and County in-holdings will not be evaluated.

A Class I records search will be conducted for each allotment to ascertain previously recorded site locations. Sites located within bedding and lambing areas and sites previously determined eligible will be visited to evaluate grazing impacts. Trough locations which have not been surveyed will be completely inventoried within a 100 meter diameter area of the trough. Perennial spring locations will also be fully inventoried within a 100 meter diameter of the spring. A sample survey will be conducted along all perennial water courses. A 100 meter corridor on each side of the water course will be evaluated utilizing zig zag transects. Water courses over one mile long will be sampled along a minimum of 50% of the stream course. The water course will be segmented into 1/2 to 3/4 mile sample areas and a 100 meter corridor as described above will be inventoried.

All unrecorded site locations will be recorded. An exception will be instances where numerous sites occur in a sample area which is not receiving noticeable grazing impacts. In these cases a sample of sites will be fully recorded and evaluated. The unrecorded site (URS) locations will be mapped using a GPS and a brief description of each site will be provided in the allotment

report. URS locations will be maintained in the data base for future recordation. A full report of findings for each allotment will be completed and mitigation measures, if needed, recommended.

This approach addresses the potential affects of ephemeral sheep grazing to cultural properties and the strategies to evaluate on the ground effects of six allotment renewals, encompassing 771,638 acres of public land administered by the BLM, Barstow Field Office. Livestock grazing is determined a federal undertaking, as such, the BLM is taxed with determining the potential effects of this action (i.e., renewal of grazing leases) to historic properties that are eligible to or are listed on the National Register of Historic places. Due to the large geographic scope of this project a sampling strategy has been presented here that focuses on areas where sheep congregation occurs and where, subsequently, the greatest impacts to cultural properties are predicted to occur.

In general, mitigation will address grazing congregation areas and the primary and secondary impacts to cultural properties resulting from the intensive use of specific areas (e.g., troughs, springs, etc.). Mitigation measures will vary from location to location, designed for site specific and potentially larger scale habitat wide impacts (e.g., fencing an entire stream corridor where a high density of cultural properties are known to occur). Actions may take the form of trough removal and/or placement to disperse grazing from known cultural properties and can include actions such as the following: - riparian or spring/stream corridor fencing or extensions to incorporate cultural properties within the protected zone; fencing of individual cultural properties if dispersal of grazing from an impacted site is untenable; and placement of salt licks away from known sites and high probability areas. The desired future condition is for a viable grazing program which minimizes impacts by recognizing use patterns and adjusting these trends to address the negative affects to cultural properties potentially eligible to, or listed on, the National Register of Historic Places.

2. No Grazing

Under this alternative, any on-going or future impacts to cultural resources from ephemeral sheep grazing would cease, or would not occur.

3. Cumulative Impacts

Sensitive historic and prehistoric cultural resources within the California Desert District would continue to be impacted by grazing and associated activities. Grazing involves herding, loading, and transport of animals as well as congregation at bedding and watering sites, and travel along existing routes by the herder and lessee. There would be an incremental loss of cultural resources from these activities. Loss of cultural resources would continue due to inadvertent and authorized actions when mitigation measures result in data collection. Overall, grazing would have a negligible cumulative effect on cultural resources on public lands within the California desert.

C. Consultation

Consultation with SHPO is on-going.

D. Maps

N/A

E. References –

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ENVIRONMENTAL JUSTICE

A. Affected Environment

The ephemeral sheep grazing allotments being analyzed are located in rural San Bernardino County. The rural areas of these counties are typically occupied by moderate to low-income households. The lessees that hold the grazing leases for the allotments being analyzed typically have moderate incomes and live outside of San Bernardino County. Seasonal herders that are hired by the lessees generally come from South America and support low-income households in their native country.

B. Environmental Consequences

1. Impacts of Proposed Action

The implementation of the proposed action would have an affect, but not a disproportionate affect on low-income or minority populations living on or near the allotments being analyzed.

The ephemeral grazing of sheep in rural San Bernardino County has been a common practice for over 100 years. Sheep ranching has been typically performed by persons of low to moderate income, and are typically owned by Basque emigrants or their decedents that may or may not be considered a minority. The herders hired by these Basque lessees are considered minorities in America. There are no Native American communities on or near any of the allotments being analyzed.

2. No Grazing

Under the no grazing alternative there would be an affect but not a disproportionate affect with respect to low-income or minority populations. The loss of ephemeral sheep grazing in rural San Bernardino County may result in the loss of seasonal employment to a very small component of low-income, minority populations.

3. Cumulative Impacts

There are no known cumulative impacts to low-income or minority populations as a result of current grazing practices (proposed action). The no grazing alternative may have some cumulative present and future impacts to a very small component of low-income, minority populations.

C. Consultation

All affected Native American tribes with traditional ties to the lands within the allotments being analyzed would be consulted. San Bernardino and Inyo Counties would also be consulted.

D. Maps

N/A

E. References – N/A

FARMLANDS, PRIME OR UNIQUE

A. Affected Environment

The proposed action would have no affect on prime or unique farmlands because no prime or unique farmlands are present in the allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

2. No Grazing

3. Cumulative Impacts

There would be no cumulative impacts from the proposed action, or any alternative.

C. Consultation

D. Maps

N/A

E. References – N/A

FLOOD PLAINS

A. Affected Environment

The proposed action would have no affect on floodplains because no floodplains are present in the allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

2. No Grazing

3. Cumulative Impacts

There would be no cumulative impacts from the proposed action, or any alternative.

C. Consultation

D. Maps

N/A

E. References – N/A

INVASIVE, NON-NATIVE SPECIES

A. Affected Environment

The allotments being analyzed in this document contains varying densities of invasive and non-native species. Red brome (*Bromus madritensis* ssp. *rubens*), schismus (*Schismus arabicus*), filaree (*Erodium cicutarium*), and several mustard species are the four most widespread invasive species present in the allotments. In ephemeral sheep operations that occur in the Mojave Desert these species represent the bulk of forage species used by sheep in the spring. These species compete with native herbaceous species, especially annual species, for available moisture, nutrients, and spatial occupation of available upland habitat. Densities of these species vary widely. Since the three active sheep allotments are within OHV Open Areas, ground disturbance is common. This type of ground disturbance creates ideal habitat for invasive and non-native species. The relative densities of invasive and non-native species is generally much greater than native forbs in these types of settings.

B. Environmental Consequences

1. Impacts of Proposed Action

Under the proposed action, the re-establishment of native herbaceous vegetation is unlikely in these areas of the allotments due to other ground disturbing activities like OHV. Overall, the current densities of non-native invasive species on these allotments are considered moderate to heavy. Annual fluctuations in densities are directly influenced by the amounts of late winter and early spring precipitation, however these species are concentrated in the seed banks also and therefore their populations only increase with flowering non-native plants.

2. No Grazing

Based on other uses in large portions of the allotments, this alternative would have little to no affect on the densities and spread of non-native invasive species.

4. Cumulative Impacts

The spread and establishment of non-native invasive species occurs through a variety of mechanisms. The BLM's multiple use mission typically results in a variety of activities that are authorized to occur on the same lands. Other activities that may overlap grazing allotments include: utility corridors (including electrical towers and natural gas pipelines), general recreation (i. e. hunting, picnicking, camping, and rock hounding), scientific study, and off-highway vehicle (OHV) activities. All of these activities, past, present, and future contribute to the spread and establishment of non-native invasive plant species.

C. Consultation

Consultation would occur with all lessees, interested publics, county governments, and Native American tribes with traditional ties to the lands within the allotments being analyzed.

D. Maps

N/A

E. References – N/A

NATIVE AMERICAN CONCERNS

A. Affected Environment

Six Native American tribes live near, or have interests in, one or more of the six ephemeral sheep grazing allotments within the Barstow Field Office (see Table 3). Prior to Section 106 evaluation of these allotments, consultation with the tribes will be initiated. Comments and concerns regarding cultural and religious values within the allotments that may be affected by ephemeral sheep grazing will be solicited and incorporated into the cultural evaluation.

Table 3. Contacts for Section 106 Consultation.

Name	Tribal Affiliation	Address
Edward Tito Smith	Chemehuevi	1990 Palo Verde Road, P.O. Box 1976, Havasu Lake, CA 92363
Daniel Eddie, Jr.	Colorado River Indian Tribes	Route 1, Box 23B, Parker, AZ 85344
Elda Butler	Fort Mojave	P.O. Box 5990, Mohave Valley, AZ 86440
Chad Smith	Fort Mojave	P.O. Box 5990, Mohave Valley, AZ 86440
Nora Helton	Fort Mojave	500 Merriman Avenue, Needles, CA 92363-2229
Curtis Anderson	Las Vegas Piute	1 Piute Drive, Las Vegas, NV 89106
Georgia Kennedy	Timbisha Shoshone	P.O. Box 206, Death Valley, CA 92328
Shirley Summers	Timbisha Shoshone	P. O. Box 786, Bishop, CA 93515
Ann Brierty	San Manuel	P.O. Box 266, Patton, CA 92369

B. Environmental Consequences

1. Impacts of Proposed Action

Prior to Section 106 evaluation of these allotments, consultation with the tribes will be initiated. Comments and concerns regarding cultural and religious values within the allotments that may be affected by ephemeral sheep grazing will be solicited and incorporated into the cultural evaluation and the site-specific mitigation measures for the proposed action.

2. No Grazing

Under this alternative it would not be necessary to address Native American concerns.

3. Cumulative Impacts

Middle Stoddard Mountain also partially overlaps an OHV Open Area so that Native American values that are located within the overlap of the ephemeral sheep allotment and OHV area could receive substantial impacts from OHV recreation and cattle grazing.

C. Consultation

See Table 3.

D. Maps

N/A

E. References – N/A

RECREATION

A. Affected Environment

The Buckhorn Canyon Grazing Allotment is not within any Special Recreation Management Area (SRMA). Casual use of this area by individuals and family groups is low, even on weekends. The most common recreation uses are motorcycle riding and general touring and exploring of the area. Young people from Silver Lakes for legal and illegal motorcycle and ATV riding frequently use the area.

The Gravel Hills Grazing Allotment is not within any Special Recreation Management Area (SRMA). Casual use of this area by individuals and family groups is from the fall through the spring months very high, especially on weekends. The most common recreation uses are shooting, motorcycle riding, upland game hunting (in season), camping, rockhounding, visiting historic sites, general touring and exploring of the area. The area contains many interesting old mines and other popular historic locations like the old Hamburger Mill. There are numerous popular hunting spots scattered throughout the area.

The Johnson Valley Grazing Allotment lies within the Johnson Stoddard Special Recreation Management Area (SRMA). This SRMA contains the Johnson and Stoddard Valley Off-Highway Vehicle Recreation Areas (OHV Areas) and the Ord Mountain Area that lies between them. The SRMA was established because of the historic high recreation opportunity and use in the OHV Areas. Both Johnson and Stoddard have management plans that identify how the areas will be managed with the emphasis being on off-highway vehicle uses and certainly recreation. The central and southern portions of the Johnson Valley OHV Recreation Area are within the boundary of this grazing allotment.

Johnson and Stoddard Valleys receive over 100,000 off-highway vehicle visits per year. These visitors are involved in a large number of activities including over 50 events that are issued Special Recreation Permits. The permitted events in the Johnson Valley OHV Recreation Area include six car/truck races, thirty-five + motorcycle races, six rock crawling events, and other assorted events from time to time. The number of Special Recreation Permits is fairly stable, except for an increased interest in rock crawling.

Casual use of the OHV areas by individuals and family groups is widespread, particularly on weekends. The OHV areas also receive some use for non-OHV recreation. The most common of these is upland game hunting (in season), rockhounding, and general touring around the areas. There is a great deal of camping that takes place associated with OHV use.

The Shadow Mountains Grazing Allotment contains the El Mirage Special Recreation Management Area (SRMA). El Mirage Off-Highway Vehicle Recreation Area was established on El Mirage Dry Lake and the surrounding area and has a management plan completed for it. The OHV area is entirely fenced and cabled off to restrict movement in and out of the area. Casual use of this area by individuals and family groups is high, especially on weekends. The most common recreation uses are motorcycle riding, visiting old mines, shooting, upland game

hunting (in season), camping, and general touring and exploring of the area. Conflicts between sheep and users of El Mirage would be none.

The Stoddard Mountain Grazing Allotment East Unit lies within the Johnson Stoddard Special Recreation Management Area (SRMA). This SRMA contains the Johnson and Stoddard Valley Off-Highway Vehicle Recreation Areas (OHV Areas) and the Ord Mountain Area that lies between them. The SRMA was established because of the historic high recreation opportunity and use in the OHV Areas and the additional recreation values and uses found in the Ord Mountain area. Both Johnson and Stoddard have management plans that identify how the areas will be managed with the emphasis being on off-highway vehicle uses and certainly recreation. The entire Stoddard Valley OHV Recreation Area is within the boundary of this East Unit.

Johnson and Stoddard Valleys receive over 100,000 off-highway vehicle visits per year. These visitors are involved in a large number of activities including over 50 events that are issued Special Recreation Permits. Most of these permitted events take place in other areas, but Stoddard Valley does host six car/truck races, a few motorcycle races, and other assorted events from time to time. The number of Special Recreation Permits is fairly stable.

Casual use of the OHV areas by individuals and family groups is widespread, particularly on weekends. The OHV areas also receive some use for non-OHV recreation. The most common of these is upland game hunting (in season), rockhounding, and general touring around the areas. There is a great deal of camping that takes place associated with OHV use. Recreational use in the East Unit area outside Stoddard Valley revolves around mostly non-OHV related activities like hunting, hiking, equestrian use, camping, picnicking, and photography. Some visitors use the area to cross from one OHV area to the other and return.

The Superior Valley Grazing Allotment is not within any Special Recreation Management Area (SRMA). Casual use of this area by individuals and family groups is low, even on weekends. The most common recreation uses are shooting, upland game hunting, camping, recreational gold mining (dry washing), rockhounding, motorcycle riding and general touring and exploring of the area. The area used to be very popular for landsailing on Superior Dry Lakes, but two of the three lakes are now part of Fort Irwin, so this use has been somewhat reduced.

B. Environmental Consequences

1. Impacts of Proposed Action

For the Gravel Hills, Superior Valley, Buckhorn Canyon Allotments the potential impacts between sheep grazing and recreational use would be very low to non-existent.

Potential impacts between sheep grazing and recreational use of in the Johnson Valley Off-Highway Vehicle Recreation Area could be high, but there have been no conflicts documented between these two uses. Communication between the BLM and both grazers and permitted event sponsors has eliminated any conflicts.

Potential impacts between sheep grazing and recreational use would be greatest in the Stoddard Valley Off-Highway Vehicle Recreation Area. There have been no conflicts documented between these two uses. Communication between the BLM and both grazers and permitted event sponsors has eliminated any conflicts.

There are localized conflicts between recreationalist and campers related to the presence of sheep dung, especially near current and past bedding and watering sites.

2. No Grazing

Elimination of grazing would have no effect on recreation.

3. Cumulative Impacts

Since ephemeral sheep grazing has not affected overall recreational access, and impacts are often subjective, any cumulative affects from the proposed action on recreation would be nominal.

C. Consultation

Historically discussions have taken place between the event permit holders and BLM regarding possible conflicts in Johnson Valley and Stoddard Valley. There have been no conflicts.

D. Maps

N/A

E. References – N/A

SOCIAL AND ECONOMIC VALUES

A. Affected Environment

The ephemeral sheep allotments being analyzed under the proposed action are located in rural San Bernardino County. All of the allotments are primarily operated by the lessee, who primarily resides in Kern County. They hire herders on a yearly basis from South America. This labor typically consists of two to four persons.

The contribution of these allotments to the goods and services of the area is nominal. The sale of lambs at the stock yard by the lessee benefits the financial needs of the lessee, as any small business would, and allows them to purchase goods and services for their grazing operation and personal household. These operations are generally small and their effects on the general economy of both San Bernardino and Kern Counties is minor.

B. Environmental Consequences

1. Impacts of Proposed Action

Under the proposed action, grazing would continue at current levels. These levels are at their lowest point when compared to historic levels, and are expected to continue to decrease. These grazing operations would continue to have a nominal influence on the local and regional economy of both San Bernardino and Kern Counties.

2. No Grazing

Under this alternative, there would be a nominal negative effect to the economies of both rural San Bernardino and Kern Counties resulting from the loss of the existing sheep operations.

3. Cumulative Impacts

There would be no meaningful, cumulative impacts to the local or regional economies of San Bernardino or Kern Counties from the implementation of either the proposed action, or the no grazing alternative. The past, present, or future contributions of these operations to the local or regional economy would be nominal.

C. Consultation

Consultation would occur with all lessees, interested publics, county governments, and Native American tribes with traditional ties to the lands within the allotments being analyzed.

D. Maps

List any maps included as part of this EA

E. References -

USDI, Office of Hearings and Appeal. 2001. Richard Blincoe and Blinco Farms, Inc. et al v Bureau of Land Management. CA-690-01-01. Administrative Law Judge Sweitzer.

SOILS

A. Affected Environment

Of the six allotments being analyzed in this document, one allotment, Stoddard Mountain Allotment (Middle and East Units) have had an Order III soils survey conducted by the NRCS. The classification of soils on the other five allotments has not yet been mapped and is not available.

The six sheep allotments have not yet been assessed for the achievement of fallback standards, however due to the manner in which sheep are herded throughout the allotments there is a high probability that the soil standard is not being affected by ephemeral sheep grazing.

The Stoddard Allotment (Middle and East Units) is dominated by 11 soils, complexes and associations. 1) Cajon Gravelly Sand: very deep, somewhat excessively drained, with a slight erosion potential; 2) Cajon – Arizo Complex: gravelly sand to gravelly loamy sand, very deep and excessively well drained, with a slight to moderate erosion potential; 3) Cajon – Wasco, Cool, Complex: sand to sandy loam, very deep and somewhat excessively drained to well drained, with a slight to moderate erosion potential; 4) Helendale – Bryman Association: loamy sand, very deep and well drained, with a slight erosion potential; 5) Joshua Loam 2 to 5 %: sandy clay loam to sandy loam, moderately deep and well drained, with a slight erosion potential; 6) Joshua Loam 9 to 15 %: sandy clay loam to gravelly sandy loam, well drained, with a slight erosion potential; 7) Mirage Sandy Loam 2 to 5 %: sandy loam to sandy clay loam, very deep and well drained, with a slight erosion potential; 8) Mirage – Joshua Complex 2 to 5 %: sandy clay loam to gravelly sandy loam moderate to very deep and well drained, with a slight erosion potential; 9) Rock outcrop – Lithic Torriorthents Complex: sandy loam to very gravelly sand, shallow and well drained, with a high erosion potential; 10) Sparkhaul – Rock Outcrop Complex 15 to 50%: gravelly sandy clay loam, shallow and well drained, with a slight to moderate erosion potential; and 11) Yermo – Kimberlina, Cool, Association: cobbly sandy loam to gravelly sandy loam, very deep and well drained, with a slight to moderate erosion potential.

B. Environmental Consequences

1. Impacts of Proposed Action

Under the proposed action, livestock grazing in the three active allotments would continue to have a negative affect on soils associated with congregation areas such as bedding and watering sites through compaction. The vast majority of soils in these active allotments would probably continue to achieve the soils standard.

2. No Grazing

Under the no grazing alternative, soils in areas formally used as congregation areas would begin the very slow de-compaction process.

3. Cumulative Impacts

Under the proposed action, past, present and future ephemeral sheep grazing operations will continue to have a cumulative impact on soils resulting in compaction in congregation areas such as bedding and watering sites.

C. Consultation

Consultation would occur with all lessees, interested publics, county governments, and Native American tribes with traditional ties to the lands within the allotments being analyzed.

D. Maps

N/A

E. References –

National Resource Conservation Service. 1986. Soil Survey of San Bernardino County, California, Mojave River Area.

WASTE, HAZARDOUS OR SOLID

A. Affected Environment

Detailed surveys of hazardous or solid wastes have not been undertaken on these allotments. BLM maintains records of reportable spills on public lands, but these records are not yet entered into a searchable database. Some previous sites and current sites that are awaiting cleanup are known to exist within the allotments. These are primarily associated with historic mining activities, illegal disposals on public lands, occupancy trespass, wire burns, and drug production activities. No sites are specifically associated with livestock operations, although use of motorized vehicles and equipment by the livestock operator may have resulted in low volume, periodic and scattered spills or releases of fuel and petroleum products in the allotment. None have been documented that have exceeded de minimus levels to be considered a release.

B. Environmental Consequences

1. Impacts of Proposed Action

As a result of implementing the proposed action low volume, periodic and scattered spills or releases of fuel and petroleum products in the active allotments would continue. These spills and releases are more likely to occur at bedding and watering sites on public land where facilities and vehicles used in the livestock operations most often congregate. No increases in low volume, periodic and scattered spills or releases of fuel and petroleum products above what has been discussed is anticipated in the allotments being analyzed.

2. No Grazing

Under the no grazing alternative, there would be no low volume, periodic and scattered spills or releases of fuel and petroleum products in the active allotments resulting from the ephemeral sheep operations.

3. Cumulative Impacts

Localized cumulative impacts to ground water may have occurred and may continue to occur at bedding and watering sites on public land from 20 to 80 years of presence. The congregation of facilities at these sites may be a point sources for very low levels of ground water pollution on a very localized scale, depending on the types of fuels used by lessees.

C. Consultation

Consultation would occur with all lessees, interested publics, county governments, and Native American tribes with traditional ties to the lands within the allotments being analyzed.

D. Maps

N/A

E. References – N/A

WATER QUALITY, SURFACE AND GROUND WATER

A. Affected Environment

The proposed action would have no affect on water quality or ground water because ephemeral sheep grazing operations do not used surface or ground water in the allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

2. No Grazing

3. Cumulative Impacts

There would be no cumulative impacts from the proposed action, or any alternative.

C. Consultation

D. Maps

N/A

E. References – N/A

WETLANDS/RIPARIAN ZONES

A. Affected Environment

The proposed action would have no affect on wetlands or riparian zones because none are present on the ephemeral sheep allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

2. No Grazing

3. Cumulative Impacts

There would be no cumulative impacts from the proposed action, or any alternative.

C. Consultation

D. Maps

N/A

E. References – N/A

WILD AND SCENIC RIVERS

A. Affected Environment

The proposed action would have no affect on wild and scenic rivers because none are present on the ephemeral sheep allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

2. No Grazing

3. Cumulative Impacts

There would be no cumulative impacts from the proposed action, or any alternative.

C. Consultation

D. Maps

N/A

E. References – N/A

WILDERNESS

A. Affected Environment

There are no WSAs that overlap any of the affected ephemeral sheep allotments. The Grass Valley Wilderness slightly overlaps the northern boundary of the Gravel Hills Allotment. This overlap consists of approximately 7,660 acres.

The Gravel Hills allotment has not been grazed by sheep since 1988. There are no range improvements located within the overlap.

The Grass Valley Wilderness was designated by the California Desert Protection Act of 1994. To date, no wilderness management plan has been prepared. There is a corridor that runs through the middle of this wilderness area connecting the Twenty Mule Team Road (EF 455) with Cuddeback Road (EF 473). Off road touring is popular in this area.

B. Environmental Consequences

1. Impacts of Proposed Action

The proposed action would have no effect on the Grass Valley Wilderness. Ephemeral sheep grazing has not occurred on this allotment since 1988. Ephemeral sheep grazing has not been authorized since 1991, with the issuance of a Biological Opinion (BO) (1-6-91-F-18) by the USFWS. This BO prohibited ephemeral sheep grazing in Category I desert tortoise habitat. When critical habitat for the desert tortoise was designated in 1994, this prohibition was reiterated and continues into the indefinite future until there is a change in the status of the desert tortoise.

2. No Grazing

Same as proposed action.

3. Cumulative Impacts

The BLM's multiple use mission typically results in a variety of activities that are authorized to occur on the same lands. Other activities that may overlap this grazing allotment/wilderness area include: utility corridors (including electrical towers and natural gas pipelines), general recreation (i. e. hunting, picnicking, camping, and rock hounding), scientific study, and off-highway vehicle (OHV) activities. These activities may indirectly impact wilderness values by degrading vegetation at various intensities, in localized areas, for parking, camping or construction work areas.

C. Consultation

Notice of Proposed Action issued 7/29/04 to wilderness mailing list.

D. Maps

N/A

E. References –

Appendix A (Grazing Guidelines) of the Report of the Committee on Interior and Insular Affairs to accompany H.R. 2570 of the One Hundred First Congress (H. Rept. 101-405).

Arizona Desert Protection Act (P. L. 101-628, 28 November 1990)

BLM/CDD Estimates of Allotment Acreages (need date)

California Desert Conservation Area Plan (BLM, 1980, as amended)

California Desert Protection Act (P. L. 104-433, 31 October 1994)

California Statewide Wilderness Study Area Report (BLM, 1990, Part 4, Volumes 4 & 5).

Federal Land Policy & Management Act (P. L. 94-579, 21 October 1976)

Norton, Secretary of the Interior, et al., v. Southern Utah Wilderness Alliance et al., No. 03-101,542 U. S. ____ (2004), decided June 14, 2004)

Wilderness Act (P. L. 88-577, 3 September 1964)

WILD HORSES AND BURROS

A. Affected Environment

The proposed action would have no affect on wild horses and burros because none are present on the ephemeral sheep allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

2. No Grazing

3. Cumulative Impacts

There would be no cumulative impacts from the proposed action, or any alternative.

C. Consultation

N/A

D. Maps

N/A

E. References – N/A

WILDLIFE

A. Affected Environment

Common Animals:

Common species of animals identified below can be found in most vegetation communities found in the allotments (see Vegetation, Affected Environment). Woodrats (*Neotoma* spp.), kangaroo rats (*Dipodomys* spp.), white-tailed antelope ground squirrels (*Ammospermophilus leucurus*), black tailed hares (*Lepus californicus*), kit foxes (*Vulpes macrotis*), and coyotes (*Canis latrans*) are some of the more common animals found on most of the sheep allotments. Common bird species include mourning doves (*Zenaida macroura*), black-throated sparrows (*Amphispiza bilineata*), common ravens (*Corvus corax*), and horned larks (*Eremophila alpestris*). Some common reptiles include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), gopher snake (*Pituophis melanoleucus*), and the Mojave rattlesnake (*Crotalus scutulatus*).

Sensitive Wildlife Species

Several sensitive species occur within the allotments. Their regulatory status and habitat type are listed in Table 4. Most of these species are avian and include golden eagle (*Aquila chrysaetos*), LeConte’s thrasher (*Toxostoma lecontei*), Bendire’s thrasher (*Toxostoma bendirei*), Burrowing owl (*Athene cunicularia*), Swainson’s hawk (*Buteo swainsoni*), long-eared owl (*Asio otus*). One mammalian species occur in portions of lands proposed of the proposed action. A portion of the Stoddard Mountain (East Unit) allotment includes habitat used by bighorn sheep (*Ovis Canadensis nelsoni*). The Mojave fringe-toed lizard (*Uma scoparia*) occurs in the Shadow Mountain allotment and is the only sensitive reptile that occurs within a sheep allotment.

Table 4. **Sensitive Wildlife Species Within Sheep Allotments**

Species Name	Regulatory Status	Preferred Habitat
Bighorn Sheep (<i>Ovis Canadensis nelsoni</i>)	BLM Sensitive	Steep Mountainous Terrain
Mojave Fringed-toed Lizard (<i>Uma scoparia</i>)	California Species of Special Concern	Wind-blown Sand
Golden Eagle (<i>Aquila chrysaetos</i>)	BLM Sensitive; California Fully Protected	Mountainous Terrain, Cliffs
Priarie Falcon (<i>Falco mexicanus</i>)	California Species of Special Concern	Mountainous Terrain, Cliffs
LeConte’s Thrasher (<i>Toxostoma lecontei</i>)	California Species of Special Concern	Creosote Bush Scrub, stands of cholla, Joshua trees, and thorny shrubs
Burrowing Owl (<i>Athene cunicularia</i>)	California Species of Special Concern	Creosote bush scrub
Gray Vireo (<i>Vireo vicinior</i>)	BLM Sensitive; California Species of Special Concern	arid slopes dominated by short, densely branched, stiff-twigged shrubs

Threatened or Endangered Wildlife Species:

Desert Tortoise

The desert tortoise (*Gopherus agassizii*) was listed as threatened in 1990 by the Fish and Wildlife Service and has been listed as threatened by the California Department of Fish and Game since 1989. The USFWS designated four critical habitat units (CHU) within the planning area in 1994.

All sheep allotments occur within or border critical habitat. The Gravel Hills, Superior Valley, and Stoddard Mountain (West Unit) occur almost entirely within a CHU. The Shadow Mountain, Buckhorn Canyon, Stoddard Mountain (East Unit) and Johnson Valley allotments overlap a portion of a CHU.

The tortoise is widely distributed across the California desert and is known to occur on all allotments. Field surveys of tortoise presence/absence and density have been conducted throughout the California Desert and the results have been reported in the WMP. Tortoise concentration areas have been identified within all allotments with the greatest concentrations reported in the Superior and Stoddard Mountain (West Unit) allotments.

Mohave Ground Squirrel

A discussion of current range, status and potential impacts to the Mojave ground squirrel (*Xerospermophilus mojavensis*) (MGS) has been discussed in detail in Chapter 3 of the WMP. Only a brief summary of that discussion has been provided below.

The MGS is a relatively small squirrel with few close relatives. Almost the entire range of the MGS is included within the West Mojave planning area. The squirrel is listed under CESA as Threatened throughout its range but is not afforded protection under FESA. The MGS is closely associated with perennial shrubs such as winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*), and saltbush (*Atriplex* sp.). With the exception of Stoddard Mountain (East Unit) and Johnson Valley allotments, all other allotments occur within the range of the MGS.

B. Environmental Consequences

1. Impacts of Proposed Action

Common Animals

Most wildlife species are mobile and can avoid being trampled by sheep. Impacts to wildlife are typically indirect. Sheep may impact wildlife indirectly by modifying habitat on which wildlife depend. Sheep can modify habitat by disrupting soils and damaging vegetation. Soils are impacted through hoof shearing and by soil compaction. Vegetation can be removed if trampled or overgrazed. Impacts identified above typically occur near bedding and watering sites where sheep congregate.

Desert Tortoise

Literature regarding direct and indirect impacts of livestock grazing to rangeland and desert tortoise habitat has been critically reviewed in an unpublished document by the U. S. Geological Survey (USGS) (Boarman 2002). The impacts of grazing were evaluated by reviewing

anecdotes, and technical papers. A brief summary of that review, as it applies to sheep grazing in the desert, follows below. The critical review analysis reported a paucity of information available on the effects of grazing on the Mojave ecosystem.

Indirect impacts to tortoise habitat were evaluated by reviewing anecdotes and technical papers. Indirect impacts mentioned in the text include: uprooting vegetation, trampling vegetation, a reduction in annual forbs, an increase in soil compaction and a reduction in soil infiltration.

Little information was reported describing direct impacts to tortoises except that some accounts reported that sheep may step on and crush juvenile tortoises. Also, it has been reported that sheep have crushed tortoise burrows resulting in injured tortoises or a damaged burrow. In-depth research on the direct impacts of livestock grazing on tortoise appears to be lacking.

There are only three sheep allotments that are presently active, Shadow Mountain, Stoddard Mountain (East and Middle Units) and Johnson Valley. Desert tortoises are known to occur in each of these allotments.

Mojave Ground Squirrel

Potential impacts of grazing to MGS habitat is discussed in the WMP. Impacts identified include direct competition for food, trampling of burrows, and changes to vegetative structure. The food preferences of MGS overlap with those plants preferred by livestock. Drought is also thought to exacerbate competition for food. Three active allotments occur in the range of the MGS: Shadow Mountain, Stoddard Mountain (West Unit) and Stoddard Mountain (Middle Unit). The Gravel Hills, Superior Valley and Buckhorn Canyon allotments occur in the range of the MGS but are no longer in use.

Sensitive Wildlife Species

Direct impacts to sensitive species are not anticipated. All sensitive species listed above are mobile and can avoid being stepped on and some of these species are too large to be injured by sheep.

Sheep grazing can impact sensitive species indirectly by modifying habitat. Competition for food would not occur for most sensitive species listed above since their diets do not overlap with domestic sheep. Bighorn sheep may have overlapping food preferences but they can also browse in steep terrain where domestic sheep cannot. Bighorn sheep occur in the southern portion of the Stoddard Mountain allotment (East Unit) on steep terrain. Domestic sheep grazing typically occurs in the northern portions of the allotment on alluvial fans and among OHV activity where bighorn sheep are not likely to be found.

2. No Grazing

Impacts listed above would not occur.

3. Cumulative Impacts

The BLM's multiple use mission typically results in a variety of activities that are authorized to occur on the same lands. Other activities that may overlap grazing allotments include: utility corridors (including electrical towers and natural gas pipelines), general recreation (i. e. hunting, picnicking, camping, and rock hounding), scientific study, and off-highway vehicle (OHV) activities. These activities may indirectly impact wildlife by degrading vegetation at various intensities, in localized areas, for parking, camping or construction work areas.

Boarman (2002) reported that human access to tortoise habitat is the most important threat to tortoise populations. Roads are typically the means for intrusion into tortoise habitat. Vehicle operation within tortoise habitat has the potential to impact tortoise habitat directly by crushing vegetation or by facilitating activities that result in a tortoise injury or mortality.

The three active sheep allotments occur in OHV open areas. In designated open areas, off-trail, cross-country travel is allowed. Cross-country travel may result in vegetation disturbance, soil compaction, injured wildlife, and erosion. Typical off-road activity results in the establishment of favorite trails and numerous single cross-country events which occur over the entire area of the OHV boundary. In comparison, sheep grazing is typically conducted in herds or bands over localized areas. Some overlap of impacts of these two activities is anticipated to occur.

The cumulative impacts of sheep grazing in the West Mojave Bioregion are currently under review in conjunction with analysis of DWMA alternatives for the recovery of the species.

C. Consultation

The BLM has formally consulted with the FWS on two occasions regarding ephemeral sheep grazing in desert tortoise habitat. The BLM is proposing to issue grazing leases under the terms and conditions contained in the Biological Opinion (1-8-94-F-16) issued March 15, 1994.

D. Maps

N/A

E. References

Boarman, W. I. 2002. Threats to desert tortoise populations: A critical review of the literature. Unpublished report prepared for the West Mojave Planning Team, Bureau of Land Management. U. S. Geological Survey, Western Ecological Research Center. San Diego, CA.

Fish and Wildlife Service. 1994. Biological opinion for Ephemeral Sheep Grazing in the California Desert District (1-8-94-F-16). March 15, 1994. Ventura Fish and Wildlife Office, Ventura, California.

VEGETATION

A. Affected Environment

The vegetative communities within the allotments vary with elevation, available water, soils, slope and annual precipitation. Terrestrial natural communities have been mapped using the classification used by the California Natural Diversity Database of the Natural Heritage Division in the California Department of Fish and Game (Robert F. Holland, Ph.D., 1986). The primary plant community occurring within the affected area is Mojave Creosote Bush Scrub which is the characteristic plant community of the Mojave Desert. Other communities include Mixed Mojave Scrub and Desert Grassland. Riparian vegetation is discussed in the Wetland/Riparian Zone Section on page 42. Following is a description of the key plant species or plant communities which may be affected by the proposed action.

The Mojave Creosote Bush Scrub - This community occurs from 75 meters below sea level to 1000 meters above sea level, in well drained soils found on alluvial fans, bajadas and upland slopes. The dominant perennial species in a Creosote Bush Scrub plant community is the creosote bush (*Larrea tridentata*) which is also the most abundant shrub in the California Desert. A Creosote Bush Scrub plant community diversity is characteristically low to medium. Some associated plant species in this community include white bursage (*Ambrosia dumosa*), Ephedra species (*Ephedra* sp.), and desert senna (*Senna armata*). Desert washes that occur within this community support additional species, the most common being the catclaw acacia (*Acacia greggii*) and desert willow (*Chilopsis linearis*).

The Mixed Mojave Scrub - This community occurs between 300-1500 meters elevation on all slopes in shallow and deep soils that are occasionally rocky. The Mixed Mojave Scrub community is comprised primarily of the dominant Yucca species (*Yucca schidigera*, *Yucca bacata*) and associated species like winter fat (*Kraschenninnokovia lanata*), boxthorn species (*Lycium* sp.), spiny menodora (*Menodora spinescens*), spiny hopsage (*Grayia spinosa*) and cacti species (*Opuntia* sp., *Mammallaria* sp., *Echinocactus* sp., *Ferocactus* sp., *Echinocerus* sp.).

The Desert Grassland - (Big Galleta series) - This community occurs from 75 meters below sea level to 1400 meters above sea level on flat ridges, lower slopes and stabilized sand dunes. The Desert Grassland community is dominated by big galleta (*Pleuraphus rigida*) with associated native and non-native grasses including black grama (*Boureloua eriopoda*), needle grama (*Bouteloua aristidoides* var. *aristidoides*), Indian rice grass (*Achnatherum hymenoides*), desert needle grass (*Achnatherum speciosum*), fluff grass (*Erioneruon pulchellum*), red brome (*Bromus madritensis* ssp. *rubens*), Mediterranean grass (*Schismus* sp.) and cheat grass (*Bromus tectorum*).

Sensitive Plant Species

Several sensitive plants are known to occur on lands proposed for sheep grazing. Several of these plants are annuals; one is a herbaceous perennial and one a grass. These species, their regulatory status, and habitat are listed in Table 5. These species occur within allotments where appropriate habitat can be found.

Table 5. Sensitive Plant Species Within Sheep Allotments

Species Name	Regulatory Status	Habitat
Mojave Monkey Flower	BLM Sensitive	Granitic soils, gravelly banks of desert washes
Barstow Woolly Sunflower	BLM Sensitive	Bare substrates with little soil and a shallow subsurface cliché layer
Desert Cymopterus	BLM Sensitive	Sandy soils
Parish’s Alkali Grass	No Special Status	Alkali Seeps and Springs
Alkali Mariposa Lily	California Species of Special Concern	Alkali soils, seeps, and playas

Threatened or Endangered Plant Species

The Lane Mountain milkvetch (*Astragalus jaegerianus*) occurs within the superior valley allotment. This species has been listed as endangered by the USFWS. These plants grow on granitic substrates with shallow soils and also require a host plant to provide support.

B. Environmental Consequences

1. Impacts of Proposed Action

Sensitive plants typically have limitations in habitat needs and occur in localized areas. How sheep may impact these species would likely depend on access to habitat where these species occur as well as the intensity of grazing in those locals. Sheep may impact individual plants by consuming them or trampling them. Indirect impacts may occur to sensitive plants if habitat becomes modified by a large concentration of animals in habitats where sensitive species occur.

The Lane Mountain milkvetch occurs within the Superior Valley Allotment. This allotment is not in use. Therefore, this species would not be affected.

2. No Grazing

The above described impacts would not occur.

3. Cumulative Impacts

The BLM’s multiple use mission typically results in a variety of activities that are authorized to occur on the same lands. Other activities that may overlap grazing allotments include: utility corridors (including electrical towers and natural gas pipelines), general recreation (i. e. picnicking, and camping), scientific study, and off-highway vehicle (OHV) activities.

The three active sheep allotments occur in OHV open areas. In designated open areas, off-trail, cross-country travel is allowed. Vehicle operation within an OHV open area has the potential to result in a range of intensities from a rather benign single driving event to the establishment of routes.

The Bureau has drafted a Environmental Impact Report for the West Mojave Plan (WMP), a plan amendment for the California Desert Conservation area. The WMP proposes new management strategies to protect sensitive and T&E plants and animals through habitat conservation. Of the sensitive plant species listed above, an ACEC would be established for the Mojave monkey flower in the Stoddard Mountain (Middle Unit) allotment.

C. Consultation

No federally listed plants would be affected by the proposed action. Obligations per the Endangered Species Act of 1973, as amended, would not be necessary for this critical element.

D. Maps

N/A

E. References

Boarman, W. I. 2002. Threats to desert tortoise populations: A critical review of the literature. Unpublished report prepared for the West Mojave Planning Team, Bureau of Land Management. U. S. Geological Survey, Western Ecological Research Center. San Diego, CA.

