

**ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION
CA-680-06-82
Allotment Name: Round Mountain**

**BARSTOW FIELD OFFICE
JANUARY 2007**

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CHAPTER 1: INTRODUCTION

A. Summary

The Bureau of Land Management (BLM) is proposing to issue a 10-year lease to authorize livestock grazing on the Round Mountain Allotment in accordance with laws and policy described in the Purpose and Need section below. The Round Mountain cattle allotment is located approximately 33 miles south of Barstow, California and less than 2 miles south of the city of Apple Valley, California. The following is a summary of the current grazing lease:

Public land acres in allotment: 15,565
Kind of livestock: cattle
Ephemeral or perennial: winter perennial/ephemeral
Plan Area: West Mojave
Current authorized use: 880 AUMs
Acres Critical Habitat: 0 (public lands)
DWMA* Acres in allotment: 0 (public lands)
Identified for Voluntary Relinquishment: No
Request for Grazing Lease Renewal Received: Yes

*Desert Wildlife Management Areas (DWMA) are Areas of Critical Environmental Concern designated in the West Mojave Plan Amendment for the conservation of desert tortoise.

B. Background

In October 1991, the Barstow Field Office (BFO) issued a 10-year grazing lease for authorized livestock use of the Round Mountain Allotment to the current lessee.

In 1999, the Willow Fire burned approximately $\frac{2}{3}$ of the Round Mountain allotment. As a result of the fire on November 15, 1999 BLM closed this allotment to livestock grazing until the re-entry criteria contained in that decision was met. In May and September of 2003 rangeland ground cover studies revealed that the re-entry criteria of 10% perennial ground cover had been met.

In 2000, the grazing lease for the Round Mountain Allotment (cattle operation) expired at the end of the 1999 grazing year (February 28, 2000). This grazing lease was renewed under the authority of Public Law 106-113. The duration of this grazing lease renewal was five years 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 this grazing lease may be approved, canceled, suspended or modified, in whole or in part, to meet the requirements of such applicable laws and regulations.

During the temporary Willow Fire closure for this allotment (January 29, 2001) the BLM and a consortium of environmental groups entered into a stipulated agreement effective immediately, herein known as the "Settlement Agreement" for the management of livestock grazing. The

Settlement Agreement prohibited the resumption of grazing on the Round Mountain Allotment until the West Mojave Plan (WMP) Amendment to the California Desert Conservation Area (CDCA) Plan was approved. Based on an April 25, 2002 amendment this stipulation remained in effect until the signing of the Record of Decision (ROD) for the West Mojave Plan Amendment to the CDCA Plan. The ROD for the WMP was approved on March 13, 2006, and the stipulation for the Round Mountain Allotment and other allotments within the West Mojave planning area that were identified in the Settlement Agreement expired at that time.

On March 1, 2005 the grazing leases for the Round Mountain Allotment expired. An application for lease renewal was received from the lessee.

C. Tiering to Existing Land Use Plan/EIS

This environmental assessment (EA) is tiered to the WMP Final EIS of January 2005 and provides site-specific analysis on the allotment level. Tiering helps focus this EA more sharply on the important issues related to grazing on the allotment while relying on the WMP analysis for background. Analysis of environmental issues previously considered and addressed in the WMP plan will be incorporated by reference. The site-specific issues analyzed for this allotment, as well as the issues that are incorporated by reference but will not be analyzed in detail, are identified in chapter 3 of this EA.

A summary of the analysis tiered in this EA is as follows:

1. WMP is an amendment to the California Desert Conservation Area (CDCA) Plan of 1980; the WMP was developed expressly to address special status plant and animal species and to establish conservation strategies for those species within the multiple use context required for the CDCA by section 601 of the Federal Land Management and Policy Act (FLPMA).

As part of the conservation strategy BLM determined which public lands will be available or unavailable for livestock grazing. In addition to designating lands available or unavailable for grazing, WMP established programmatic management prescriptions including regional land health standards and guidelines for grazing management; utilization prescriptions for perennial species; restrictions on cattle grazing within desert tortoise habitat; monitoring requirements; and specific management prescriptions for DWMA's such as the elimination of ephemeral authorizations and the implementation of an ephemeral forage production threshold of 230 pounds per acres (pp. 2-127 and 2-128 of the West Mojave Plan/FEIS). This EA analyzes the specific application of the programmatic management prescriptions of WMP and considers alternative means to achieve the purpose and need on this allotment as described in section D of this chapter.

2. The WMP considered a range of alternatives for the public land livestock grazing program. The alternatives considered more restrictive and less restrictive management approaches, and were addressed at a regional level for the approximately 3.2 million acres of public lands in the WMP planning area. This EA analyzes the range of alternatives for grazing consistent with WMP, including a proposed action and continuation of current management (No Action). A no grazing alternative is considered to address voluntary relinquishment and subsequent designation

of the allotment as unavailable for grazing. In addition, a reduced grazing alternative is included on allotments where a lower level of grazing than under the proposed action should be considered. Chapter 2 of this EA describes the alternatives analyzed in detail and identifies the alternatives considered but dismissed from detailed consideration.

3. Impacts of livestock grazing are addressed at a regional level in the WMP. The WMP analysis addresses the impacts of livestock grazing on a wide range of resource topics, including impacts to air quality, soil, vegetation, wildlife, cultural resources, wilderness, and socio-economic impacts. The regional analysis is incorporated by reference in this EA (WMP FEIS pages 4-4 thru 4-282) and general discussion of these impacts will not be repeated.

This allotment-specific EA analysis will focus on the specific environmental issues associated with areas where livestock are having or may have substantive site-specific effects. This includes (1) areas where they congregate on the allotment; (2) specific areas of the allotment which are not meeting rangeland health standards due to grazing; and (3) habitat of special status species that may be affected by grazing on this allotment. Discussion of the specific topics analyzed in this EA, as well as other resource topics addressed regionally but that will be excluded from further analysis in the EA, is contained in Chapter 3.

4. The WMP balances conservation with public use, occupancy, and development on a regional level. For example, Areas of Critical Environmental Concern/DWMAs are established; routes of travel on public lands are designated open, limited or closed to motorized vehicles; and other management prescriptions are provided to guide multiple use management. In accordance with the CDCA Plan as amended by WMP and the associated biological opinion (1 -8-03-F-58, available online at www.fws.gov), BLM is proposing to adopt specific lease terms and conditions identified within the WMP to ensure that an appropriate multiple use balance is maintained on the Round Mountain allotment while providing for resource conservation. In addition, under the terms of the West Mojave Plan, BLM may use its authority to close an area of the allotment to grazing use or take other measures to protect resources if needed. .

D. Purpose and Need

The purpose of the EA is to determine whether to authorize grazing within this allotment and whether changes are necessary to current management of the allotment.

The need for the proposed action is to evaluate the lessee's request to graze cattle within the Round Mountain Allotment, consistent with the prescriptions identified in the WMP Plan, dated March 13, 2006 and with the Regional Rangeland Health Standards approved in the WMP, and to determine any allotment management changes needed to maintain or improve resource conditions within the Round Mountain allotment.

. Plan Conformance

The proposed action is subject to the California Desert Conservation Area Plan (CDCA Plan), as amended. The decisions of the CDCA plan that specifically pertain to this proposed action include the CDCA Plan Grazing Element as amended by the West Mojave (WMP). The decisions of the WMP plan that specifically pertain to this proposed action include:

BLM will continue to administer existing authorizations and uses and will consider future requests consistent with this ROD. Any new authorizations or use of public land within the West Mojave Desert area must be in conformance with the West Mojave Plan and subject to site-specific analysis. Such authorization and use would be subject to administrative review at the time of issuance of a final BLM decision regarding the authorization or use.

This ROD approves the Regional Public Land Health Standards and Guidelines to be consistent with the other regional amendments of the CDCA Plan and provide uniform management with respect to grazing, protection of riparian areas, fragile soils and water quality. The regional standards must be submitted to the Secretary of Interior for final approval.

F. Voluntary Relinquishment

The WMP did not identify the Round Mountain Allotment for voluntarily relinquishment. However, a lessee may request voluntary relinquishment of their lease at any time. Because this allotment was not identified for voluntary relinquishment in previously completed planning documents, a plan amendment would be required for subsequent designation of the allotment as unavailable for livestock grazing. If BLM determines that an amendment is not warranted, the allotment would remain available for livestock grazing and BLM would consider new applications for lease by qualified applicants.

G. Tribes, Individuals, Organizations, or Agencies Consulted

Consultation on grazing within the West Mojave, including the Round Mountain allotment has been extensive, as it has been conducted in the context of an extensive EIS process over many years. On May, 2003 the Draft EIS for the WMP was issued to all lessees and interested publics, including Tribal governments. Included in the Plan were alternatives for grazing of the Round Mountain Allotment and associated analysis, including an alternative consistent with the proposed action as evaluated herein. Comments on that Draft EIS were incorporated into the Final EIS alternatives and analysis.

On or about July 19, 2004 the Barstow Field Office (BFO) mailed Chapters 1 and 2 of an environmental assessment (EA) for grazing within Round Mountain allotment to the lessees and all interested publics, including pertinent Indian tribes for scoping purposes. The BFO requested feedback on the proposed action and alternatives and asked if any additional alternatives should be considered. Input from that scoping activity was considered during the development of scope and alternatives for this EA.

On September 30, 2004 the BFO issued Proposed Grazing Decisions to the grazing lessees and all interested publics that would be in effect until the decision of the West Mojave Plan. The Proposed Grazing Decisions issued for the Round Mountain Allotment would be vacated as part of this grazing lease decision process.

In January, 2005 the Final EIS for the WMP was issued to all lessees and interested publics. On 13 March, 2006, the Record of Decision for the WMP was approved by the California State Director of the BLM.

On April 6, 2006 the BFO issued a cover letter and an earlier iteration of this EA proposing the grazing lease renewal for this and others allotments to the lessees and all interested publics, including pertinent Indian tribes for the purpose of soliciting input to make grazing within the Round Mountain and other West Mojave allotments consistent with the guidance in the West Mojave Plan.

On July 12, 2006 the BFO issued a letter to the Round Mountain allotment lessee informing him of the status of the EA and anticipated time line for completion of the EA, and for issuance of the proposed and final decisions and a 10-year grazing lease, if appropriate.

On September 6, 2006 BFO met with the lessee for the Round Mountain Allotment to discuss the proposed action and alternatives as outlined in the administrative EA.

On January 5, 2007, the BFO issued a revised EA to the lessee and the interested publics for comment.

H. Relationship to Statutes, Regulations, and Plans

A site-specific evaluation of the proposed grazing lease renewal is required by BLM implementing regulations for NEPA, FLPMA, grazing regulations found at 43 CFR 4100 et seq. and the WMP ROD. Various other environmental laws are pertinent to analysis of critical elements of the human environment as defined in CEQ and DOI policy, and are addressed within this EA in the context of the analysis of specific elements.

1. State Historic Preservation Office Protocol Amendment for Renewal of Grazing Leases

In August 2004, the State Director, California Bureau of Land Management and the California State Historic Preservation Officer (SHPO) addressed the issue of the National Historic Preservation Act (NHPA) Section 106 compliance procedures for processing grazing permit lease renewals for livestock as defined in 43 CFR 4100.0-5. The State Director and the SHPO amended the 2004 State Protocol Agreement between California Bureau of Land Management and The California State Historic Preservation Officer with the 2004 Grazing Amendment, Supplemental Procedures for Livestock Grazing Permit/Lease Renewal. This amendment allows for the renewal of existing grazing permits as long as the 2004 State Protocol direction, the BLM 8100 Series Manual Guidelines, and specific amendment direction for planning, inventory methodology, tribal and interested party consultation, evaluation, effect, treatment, and monitoring stipulations are followed (see Attachment 1).

The lessee would comply with any future standard protective measures that may be developed for the protection of cultural resources after the completion of further allotment inventory, site evaluation, and determination of any additional protection measure needs for significant cultural

resources.

2. Grazing Prescriptions Contained in the WMP Addressed to BLM

a. The Round Mountain Allotment would have a completed assessment of public land health prior to the resumption of livestock grazing.

b. Within 12 months after completing a Health Assessment for a specific area (i.e., grazing allotment, watershed, etc.), the BLM would use field and office information to make a health determination, which would serve as baseline information to develop corrective management strategies. Where a determination indicates that standards are not being achieved, changes in grazing management would be implemented that may result in new terms and conditions to achieve standards and conform to guidelines. Although not reiterated below, this same regulatory process would be required following specified time-frames given for the health assessments that follow.

CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

This chapter discusses three alternatives including the proposed action, and one additional alternative considered but dismissed from further analysis.

A. Proposed Action - West Mojave Plan

The proposed action is: issuance of a 10-year lease in conformance with CDCA Plan and the WMP Amendment as described parts 1-5 of this section. The intent of the proposed action is to balance environmental protection with continued use of the allotment for livestock grazing.

1. Livestock Numbers and Season of Use

As Table 1 indicates, under the proposed action BLM proposes to authorize a winter seasonal, cow-calf grazing operation with a maximum permitted use of 880 AUMs (approximately 220 cows) on 13,325 acres of public land.

Table 1.

Allotment	Number of Animals	Kind	Class	From	To	AUMs
Round Mountain	220	Cattle	Cow-calf	December 1	March 31	880

2. Livestock Management

Livestock graze throughout the season of use, are separated into smaller herds (approximately 10 to 20 head) and are dispersed allotment wide. Because the allotment has only one developed water source the use of undeveloped sources is common. The developed spring, Round Mountain Spring is located in the south central portion of the allotment just NE of Bowen Ranch. The undeveloped sources are more concentrated in the central and eastern portions of the allotment. Because the season of use is winter and forage availability is fairly uniform, livestock distribution is also fairly uniform.

Under the proposed action, livestock grazing would continue under this strategy as modified herein, within the parameters of the grazing prescriptions contained in the WMP for this allotment and other stipulations for this allotment listed in Section 6(a.) of this chapter.

The boundary fence between the BLM and the San Bernardino National Forest (SBNF) currently does not span the entire southern boundary. Approximately $\frac{1}{3}$ of this boundary associated with the SW portion of the allotment is unfenced; however this area slopes steeply down to Deep Creek located on the SBNF. The SBNF has expressed concern that cattle could drift down to Deep Creek where they are not authorized and which contains habitat for the federally listed Arroyo Southwestern Toad (*Bufo microscaphus californicus*). In cooperation with the SBNF, the lessee would have 48 hours after notification to remove cattle from the SBNF and return them to the Round Mountain Allotment as a resulting of damage to the boundary fence. The

damaged portion of the boundary fence would be repaired after the cattle have been returned to public land.

To address these concerns under the proposed action grazing would not be authorized in the SW portion of the allotment until a final solution is developed. The prohibition from grazing this area of the allotment would encompass the east half of Section 7 and all of sections 8, 9 and 10, T.3N, R.3W (approximately 2,240 acres). Because the SW portion of the allotment that is prohibited from grazing represents less than 15% of public land that would be authorized for grazing and contains no permanent water sources there would be no temporary reduction of AUMs. This management action would be accomplished by herding. If cattle are discovered in this area, the lessee would have 48 hours from notification to remove the cow(s).

In addition, standard terms and conditions (e.g. requirement to perform normal maintenance on range improvements) contained in the existing or expired grazing lease for this allotment would be incorporated into this lease renewal and are included in the grazing stipulation section.

3. Range Improvements

The seven existing range improvements, including the BLM/SBNF boundary fence would continue to be maintained. No new range improvements are currently proposed or anticipated in the reasonably foreseeable future. Subsequent proposals for range improvements may come forward as a result of the resumption of grazing on this allotment. BLM would conduct a project-specific EA prior to development or construction of any future proposed range improvements.

The BLM/SBNF boundary fence also represents the allotment's southern boundary. Because this fence was constructed by the SBNF over 20 years ago no BLM range improvement number or record exists. Under the proposed action, BLM would require the lessee to maintain this boundary fence as part of his grazing authorization. BLM would assign Range Improvement Record Number 8503 and document maintenance activities by both the lessee and BLM.

4. Additional Projects

No additional projects have been identified under the proposed action at this time.

5. Monitoring

Under the proposed action, BLM would resume water quality monitoring on the Round Mountain Allotment using established protocols, on a seasonally basis. The results of water quality monitoring would be used to identify additional appropriate Best Management Practices as identified by EPA in Section 4E, *National Management Measures to Control Non-point Pollution from Agriculture*.

Ten known cultural sites within the allotment would be monitored before and after the resumption of grazing to document any impacts by livestock and determine the need for protective measures. If protective measures are warranted, BLM would prepare a site-specific

EA for the construction or development of the appropriate protective measures.

Rangeland monitoring (both uplands and riparian) on the Round Mountain Allotment under this alternative would continue to be conducted on an annual and/or periodic basis and as it is currently conducted in three categories. These categories are 1) short term monitoring, 2) long term monitoring, and 3) rangeland health assessments.

The use of short term monitoring is a tool to gauge the cause and effect of the current authorization. This type of monitoring consists of actual use, current climatic conditions and the collection of forage-utilization data (including stubble height in meadows if appropriate). This type of data would be collected on a yearly basis at minimum and would be collected at, but not limited to the existing four key areas (see Map 1). The collection of forage-utilization data would be triggered by the growing season of key species, which include desert needle grass, pine bluegrass, desert bitterbrush, ephedra, desert almond and California buckwheat. This time period would correlate with important phenological events (such as budding or flowering) of key species.

In riparian areas, additional seasonal monitoring would be conducted to identify any new physical impacts to vegetation, soils and stream banks. For most of the season of use, both upland and riparian key species are dormant and determining what represents current year's production may not be that evident. Based on utilization thresholds adopted in the West Mojave Plan, the maximum forage use allowed on this allotment under this alternative is 40%.

The collection of long term monitoring data typically occurs every three years. The collection of trend data is used for statistical analysis of vegetative attributes to make inferences on the effectiveness of long-term grazing strategies. The collection of measured trend has typically been accomplished through the collection of frequency data at key areas. The collection of this type of data has not occurred in over ten years due to the fire closure and subsequent interim-measure closure. Additional trend data collection is an important goal during this ten-year lease cycle.

The assessment of indicators of rangeland health information is a qualitative/quantitative method that requires the formation of an interdisciplinary team that makes observations and direct measurements of various indicators to determine the health of rangelands and the achievement of fallback or regional standards of rangeland health. This process is also considered a long term process, and typically occurs every five to six years. An initial assessment of Rangeland Health has not yet been completed on this allotment since grazing was not occurring due to closures from the fire and interim measures when the Rangeland Health Assessment process was adopted. The initial rangeland health assessment is currently occurring on this allotment and is anticipated to be completed in late 2006 using *Indicators of Rangeland Health* (BLM Technical Reference 1734-6 Version 4).

The analysis of rangeland monitoring data, including the determination generated from the Rangeland health Assessment would be used to determine if adjustments in stocking rates are warranted, or if additional management actions are necessary to protect riparian habitat or reduce soil erosion.

6. Measures to Maintain or Achieve Standards (Terms and Conditions of Lease) by Allotment:

As stated previously, the Round Mountain Allotment is currently being assessed for the achievement of Fallback Standards as required under 43 CFR 4180.2. BLM anticipates completion of this assessment in late 2006. Therefore no specific measures have yet been identified based on the assessment. Measures have been identified in the WMP, based fallback and regional standards and guidelines, that would be triggered based on climatic conditions and on the results of current and future assessments and monitoring.

a. Proposed Grazing Prescriptions - WMP

1. Rangelands that are grazed during the dormant season and in good range condition shall not exceed 40 % utilization of key species. Utilization levels on key upland and riparian species on the Round Mountain Allotment shall not exceed 30 % from March 1st thru March 31st. Utilization levels on key upland and riparian species shall not exceed 40 % between December 1 and February 28. When utilization levels exceed prescribed levels, the lessee shall be required to remove livestock from use and/or key areas.

Rangeland in good condition and grazed during the dormant season can withstand the higher utilization level. Rangelands in poor condition or grazed during the active growth season would receive lower utilization levels (see Table 2).

Table 2 Grazing Guidelines for Range Types

RANGE TYPE	PERCENT OF USE OF KEY PERENNIAL SPECIES	
	POOR – FAIR RANGE CONDITION OR GROWING SEASON	GOOD – EXCELLENT RANGE CONDITION AND DORMANT SEASON
Mountain Shrub land	30	40
Pinyon-Juniper Woodland	30	40

2. All cattle carcasses found within 300 feet of a road or watering source would be removed by the lessee and disposed of in an appropriate manner (i.e., not buried) within two days of being found or, if this is not practicable, such reasonable time as is acceptable to the BLM Authorized Officer. Carcasses found farther than 300 feet from a road or watering source will remain unless determined to be a hazard for reasons of health and safety.

b. Other Proposed Grazing Prescription

1. The lessee shall comply with any future standard protective measures that may be developed for the protection of cultural resources based on site-evaluation and determination of significance.
2. The lessee shall comply with any future standard protective measures that may be developed for the protection of cultural resources after an allotment inventory and determination of

significant cultural resources has been completed.

3. The lessee is required to perform normal maintenance on all range improvements located on public land within the Round Mountain Allotment.
4. The lessee's certified actual use report is due no later than 15 days after the end of authorized grazing but no later than March 15th and September 15th.
5. The terms and conditions of this lease may be modified if additional information derived from Rangeland Health Assessments indicates that revision is necessary to conform to 43 CFR 4180.2.
6. The payment of grazing fees shall be received within 15 days of the due date or the lessee will be charged a late fee assessment of \$25 or 10% of the grazing bill, whichever is greater, not to exceed \$250. Failure to make payment within 30 days of the due date may result in trespass action.

c. Fallback Guidelines based on the Guidelines contained in 43 CFR 4180

1. The lessee would place supplements (salt/and or mineral blocks) a minimum of ¼ mile from natural water sources (such as wetlands, riparian areas, and springs) and cultural sites. The lessee would notify the BLM of the proposed location prior to placement.
2. Natural water sources developed as range improvements by the lessee would be modified and maintained to ensure no excessive loss of water through the use of float valves or other devices.
3. In years when weather results in extraordinary conditions the BLM may require the lessee to modify grazing to allow seed germination, seedling establishment, and reproduction of native plant species.
4. During prolong drought the BLM will require the lessee to reduce stocking rates.

d. *Regional Guidelines based on the WMP

1. Natural water sources developed as range improvements by the lessee would be modified and maintained to ensure there is no excessive loss of water to protect the ecological function and processes of these sites. This may be achieved with the use of float valves or other devices.
2. The lessee would place supplements (salt/and or mineral blocks) a minimum of ¼ mile from natural water sources (such as wetlands, riparian areas, and springs) and cultural sites. The lessee would notify the BLM of the proposed location prior to placement.
3. In years when weather results in extraordinary conditions the BLM may require the lessee to modify grazing to allow seed germination, seedling establishment, and reproduction of native

4. During prolonged drought the BLM would require the lessee to reduce stocking rates.

* Implementation of regional standards for public land health and guidelines for grazing management as approved in the WMP cannot occur until the Secretary of the Interior also approves them. This process is underway. Until that time, the nationally developed fallback standards and guidelines would continue as the basis for public land health.

B. Alternative II -No Action (No Grazing)

The grazing lease for the Round Mountain Allotment expired in 2005, under this alternative BLM would not renew the grazing lease. Because of conflicting resource management associated with OHV use and the high density of cultural resources, the BLM would develop a plan amendment making this allotment no longer available for livestock grazing.

C. Alternative III - Modified Grazing

This alternative emphasizes environmental protection while maintaining use of the allotment for grazing in conformance with the CDCA Plan and the WMP Amendment.

1. Livestock Numbers and Season of Use

As Table 3 indicates, under the Modified grazing alternative, BLM would authorize a winter seasonal, cow-calf grazing operation with a maximum permitted use of 500 AUMs (approximately 125 cows) on 15,565 acres of public land.

Table 3.

Allotment	Number of Animals	Kind	Class	From	To	AUMs
Round Mountain	125	Cattle	Cow-calf	November 1	February 28	500

2. Livestock Management

Under Alternative III, the Bureau of Land Management (BLM) is proposing to issue a 10-year lease to authorize livestock grazing on the Round Mountain Allotment with the permitted use being temporarily reduced from 880 AUMs to 500 AUMs for this lease cycle unless rangeland monitoring verifies that a higher carrying capacity is feasible based on upland and riparian utilization levels and soil impacts observed over three consecutive grazing seasons. This difference represents a temporary reduction of approximately 43%. In addition BLM would modify the season of use from December 1 to March 31, to November 1 to February 28. This modification to the season of use would reduce any impacts to perennial forage species during the early stages of the critical growth period in the spring.

Rangeland monitoring, including utilization and examination of any soils impacts over three

consecutive grazing seasons would be conducted. At the end of the third grazing season a determination would be made concerning stocking levels based on monitoring data collected over those years.

Under this alternative, the criteria for increasing the stocking rate would be as follows: 1) Utilization levels on key species would be at 30% or below on a consistent basis over three consecutive grazing seasons, 2) Outside of concentration areas, soil compaction and accelerated erosion caused by grazing activities would be consistent with achievement of the soil standard under the Indicators of Rangeland Health (see reference under Chapter 3 – Soils) when evaluated at random locations on a consistent basis over three consecutive grazing seasons, and 3) When the above criteria has been met, increases in stocking rates would occur at 100 AUM increments over a four year period.

Like the proposed action, under this alternative livestock would graze through out the season of use and are separated into smaller herds (approximately 10 to 20 head) and is dispersed allotment wide. Water availability and use by cattle is the same as the proposed action

Livestock grazing would continue under this strategy as modified herein. As with the proposed action, additional grazing prescriptions contained in the WMP for this allotment and other stipulations for this allotment listed in Section 6(a.) of this chapter would apply.

The unfenced boundary between the BLM and the San Bernardino National Forest (SBNF) would be addressed under this alternative the same as under the proposed action. Until the BLM/SBNF boundary fence is extended and complete (see Table 4) or another final solution is developed, grazing would not be authorized in the SW portion of the allotment. As with the proposed action, this management action would be accomplished by herding and immediate removal of any cow(s) found in this area.

In addition, standard terms and conditions (e.g. requirement to perform normal maintenance on range improvements) contained in the existing or expired grazing lease for this allotment would also be incorporated into this lease renewal and are included in the grazing stipulation section.

3. Range Improvements

All existing range improvements would continue to be maintained. Unlike the proposed action, Table 4 contains two new range improvement projects BLM, in cooperation with the lessee would develop in the reasonably foreseeable future. These future range improvements are being included in this document in the context of their general and cumulative effects. The specific locations of these range improvements have yet to be determined. BLM would conduct a site specific analysis on these projects prior to development or construction.

The purpose of these additional developments would be to enhance progress towards achievement of rangeland health standards and to better identify allotment boundaries. As with the proposed action, all existing range improvements would continue to be maintained under this alternative (see Table 5).

Table 4. Alternative III Range Improvements

Project Name/No.	Location Township/Range/ Section	General Comments	Mitigation Description (indicate resource benefit of improvement)
Southern Boundary Fence Extension # 8507	Yet to be determined	Proposed three mile extension of the BLM/FS boundary fence.	This fence development would ensure no cattle drift onto the SBNF and further ensure no impacts to the habitat of arroyo southwestern toad by cattle.
Unnamed Spring Development # 8037	Yet to be determined.	Proposed spring development in the eastern portion of the allotment.	This spring development would further enhance cattle distribution and therefore potentially reduce impacts to other undeveloped springs.

4. Additional Projects

No additional projects have been identified under Alternative III at this time.

5. Monitoring

As with the proposed action, water quality monitoring would be resumed on this allotment and appropriate Best Management Practices applied based on the results of that monitoring. In addition, ten known cultural sites would be monitored after the resumption of grazing to document and make a determination of any impacts by livestock per the range management section of the BLM /SHPO protocol (see Attachment 1). If protective measures are warranted, BLM would prepare a site specific EA for the construction or development of the appropriate protective measures.

Under Alternative III, rangeland monitoring (both uplands and riparian) on the Round Mountain Allotment would continue to be conducted on an annual and/or periodic basis and as it is currently conducted. No changes from the proposed action would occur to the monitoring regime under Alternative III. This monitoring is described in Section A.5 earlier in this chapter.

6. Measures to Maintain or Achieve Standards (Terms and Conditions of Lease) by Allotment:

The Round Mountain Allotment is currently being assessed for the achievement of Fallback Standards as required under 43 CFR 4180.2. BLM anticipates completion of this assessment in late 2006. Therefore, Alternative III includes the same eleven measures as identified for the proposed action (see Section A.6), except for the reduced stocking rate, modified season of use, and the two additional range improvements already identified in the text above. The eleven measures have been identified in the WMP, based fallback and regional standards and guidelines, and cover maximum utilization thresholds, parameters on the use of salt and other feeding supplements, and other standard measures. These measures would be triggered based on the results of current and future assessments and climatic conditions.

CHAPTER 3: ENVIRONMENTAL ANALYSIS

This chapter addresses, by affected resource, the affected environment, environmental consequences, and consultation sections of the EA for 20 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 this environmental assessment.

Elements:

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

*Critical Elements of the Human Environment

A. LIVESTOCK GRAZING

1. Affected Environment

The Round Mountain Allotment, #08013, is an ephemeral/perennial allotment with potential forage production to enable the Bureau of Land Management (BLM) to authorize ephemeral forage and an established perennial forage allocation. The current grazing lease, #046852, authorizes 880 animal unit months (AUMs), equivalent to 221 head of cattle from December 1 through March 31 on the Round Mountain Allotment. An area of 18,090 acres is located within the boundaries of the allotment, of which 15,565 acres are BLM-managed land subject to the terms of this lease.

This allotment is located in the urban-rural interface of southwestern San Bernardino County, less than 2 miles south of the city of Apple Valley. The allotment is located on a plateau dissected by two fairly steep ephemeral drainages, between the populated valley floor on the north and the San Bernardino Mountains on the south. Elevations range from 4,000 to 5,848 feet. The southern boundary of the allotment abuts the San Bernardino National Forest.

Table 5 depicts the existing range improvements on the allotment:

Table5. Existing Range Improvements

<i>Allotment Name/</i> Project Name	<i>Location</i> Township/Range/ Section	<i>Comments</i>	<i>Mitigation Description</i>
Round Mountain Round Mountain Spring # 8030	T.3N.,R.3W., Section 12 NE¼NW¼	Key water source for both livestock and wildlife.	Source is proposed for fencing and trough re-located to prevent impacts to riparian habitat.
Round Mountain Stone Spring Riparian Fence #8482	T.4N.,R.3W., Section 35 SE ¼ SE ¼	Important riparian habitat for wildlife.	Prevents impact to the riparian habitat from cattle.
Round Mountain Juniper Flats Riparian Fence #8474	T.3N., R.3W., Section 2 SE ¼ NW ¼	Important riparian habitat for wildlife.	Prevents impact to the riparian habitat along Cottonwood Creek from cattle.
Round Mountain West Round Mountain Fence #8459	T.3N.,R.3W., Section 7	Western allotment boundary fence.	Prevents livestock drift off the allotment.
Round Mountain North Round Mountain Fence #8460	T.3N.,R.2W., Section 5	Northern allotment boundary fence.	Prevents livestock drift off the allotment.
Round Mountain Grapevine Canyon Fence and Cattleguard #8468	T.4N., R. 2W., Section 35 NW ¼	Northern allotment gap fence.	Prevents livestock drift off the allotment.
Round Mountain BLM/SBNF Boundary Fence #8503	T.3N., T.2W., Section 1	Southern allotment boundary fence.	Prevents livestock drift off the allotment onto the SBNF.

Livestock grazing in the western Mojave Desert has been occurring as an industry since the late 1800's. Based on BLM records, cattle grazing on what is now the Round Mountain Allotment has been ongoing since the early 1980's. The 1980 CDCA Plan rates the Round Mountain Allotment in good range condition, with a carrying capacity of 1,048 AUMs or 87 cows year-long. This allotment began as part of a year-round three-pasture grazing system that also included the lessee's Forest Service grazing permit. The lessee at the time used this allotment as his winter pasture in coordination with late spring through early fall use of two pastures located within the boundaries of the San Bernardino National Forest (SBNF).

In 1983 a unified SBNF/BLM Allotment Management Plan (AMP) was approved and known as the Deep Creek AMP. This AMP allocated 880 AUMs of cattle use for the "Round Mountain Unit" of the Deep Creek Allotment, where the "Round Mountain Unit" covered the BLM portion of the combined allotment.

As a result of a SBNF land-use planning decision in 1998, livestock grazing on the national forest portions of the Deep Creek Allotment is no longer authorized. Winter use continued on the BLM portion, identified as the Round Mountain Allotment until the Willow Fire of 1999. This fire resulted in loss of vegetation over approximately 75% percent of the allotment, and resulted in an emergency closure of the area and a temporary suspension of the allotment authorization through a grazing decision issued November 15, 1999, in order to allow for natural restoration. In 2003, rangeland monitoring data indicated that the allotment met the grazing re-entry criteria contained in the Grazing Decision that had suspended use on the allotment.

The 2001 Settlement Agreement between BLM and the Center for Biological Diversity et al. required additional criteria to be met prior to the resumption of cattle grazing on this allotment, including the completion of the West Mojave Plan (WMP) and any additional conditions identified in the WMP. The WMP requires that a Rangeland Health Assessment be completed prior to the resumption of grazing on this allotment. That assessment is ongoing and BLM anticipates completion in the near future. Upon completion of this Rangeland Health Assessment, grazing may resume on this allotment consistent with assessment results and the Field Manager's final decision on grazing lease renewal.

2. Environmental Consequences

a. Impacts of Proposed Action

Under the proposed action, grazing would resume on the Round Mountain Allotment for 10 years, subject to the findings of the soon-to be completed Rangeland Health Assessment for this allotment. Grazing would be subject to prescriptions contained in the WMP, as well as other terms and conditions deemed necessary by the BLM Field Manager. The grazing prescriptions consist of utilization thresholds, protective measure for cultural resources, a requirement for pre-notification on the placement of salt blocks, measures to prevent excessive loss of water at water developments, and provisions for prolong drought conditions. These grazing prescriptions are not anticipated to substantially change current grazing practices. There would also be a temporary restriction on grazing use from the unfenced BLM/FS boundary in the southwestern portion of the allotment. This restriction, covering approximately 15% of the allotment's acreage would not substantially affect grazing operations because the excluded area has historically been lightly used.

The WMP requires site specific NEPA analysis for all new range improvements or proposed changes in grazing management that are considered more than minor. The allotment would be monitored on a regular schedule to detect any potential impacts that may occur to riparian, cultural, or other resources, or identify other management needs. If future monitoring reveals that changes to grazing management and/or construction of protective fencing is needed to protect sensitive resources or improve grazing practices, then subsequent mitigation measures or operational changes would be evaluated and adopted through the NEPA process.

b. Impacts of No Action

Under this alternative grazing operations on the allotment would cease. Because there are no grazing allotments available on public land the lessee would be forced to lease private pasture which can be substantially more expensive. This additional cost could result in the loss of another grazing operation in the Mojave Desert. This impact is consistent with overall local or regional trends of decreasing range acreage and opportunities in Southern California, but does not represent a significant loss of agricultural (beef) production.

c. Impacts of Modified Grazing

Under this alternative, grazing would resume on the Round Mountain Allotment for 10 years, subject to the findings of the soon-to be completed Rangeland Health Assessment for this allotment. Grazing would be subject to terms and conditions in the WMP, as well as other terms and conditions deemed necessary by the BLM Field Manager. These grazing prescriptions are not anticipated to substantially change past grazing operations. They would include key terms and conditions concerning the management of livestock, maintenance of range improvements and restricting grazing use from the unfenced BLM/FS boundary in southwestern portion of the allotment. This restriction will not substantially affect grazing operations because the excluded area is typically lightly used.

The WMP requires site specific NEPA analysis for all new range improvements or proposed changes in grazing management that are considered more than minor. The allotment would be monitored on a regular schedule to detect any potential impacts that may occur to riparian, cultural, or other resources, or identify other management needs. If future monitoring reveals that changes to grazing management and/or construction of protective fencing is needed to protect sensitive resources or improve grazing practices, then subsequent mitigation measures or operational changes would be evaluated and adopted through the NEPA process.

The impacts of this alternative on the grazing operation would not be substantially different from the proposed action. There would be a slight shift in the season of use and a modest decrease in the permitted use (880 vs 500). The shift in the season of use would typically deprive the cattle from grazing young, tender shoots of new spring growth from both perennials and native annuals. The reduction in the permitted use would reduce the total number of cow/calf pairs resulting in lower rates of herbivory and physical impacts. This reduction in stocking rates is considered temporary, and would not represent a substantial impact to the lessee based upon the average stock rates prior to the Willow Fire.

Based on the criteria stated in Chapter 2, a decision would be made concerning future stocking levels. It is anticipated that at these lower stock levels forage utilization would be slight to light with minimal impacts to soils outside of concentration areas. Because most, if not all perennial forage would be dormant during the season of use impacts to the health of the native plant communities would be negligible.

Under this alternative, two range improvements would be developed. A spring development, at a yet to be determined unnamed spring in the eastern portion of the allotment would protect riparian habitat while continuing to enhance cattle distribution. The construction of an extension to the southern boundary fence would allow cattle use of the SW portion of the allotment

(>2,000 acres) in approximately the same timeframe as the proposed action, but would also result in additional maintenance requirements for the lessee.

3. Consultation

Consultation has been initiated and would continue with the Round Mountain allotment lessee, interested publics, county governments, and Native American tribes with traditional ties to these lands, with an interest in grazing use in the allotment.

4. Maps

See Maps1&2.

5. References:

U.S. Bureau of Land Management. 1980. California Desert Conservation Area Plan. Riverside, CA

U.S. Bureau of Land Management. 2006. West Mojave Plan Amendment. Moreno Valley, CA

B. AIR QUALITY

1. Affected Environment

The project area for the purpose of this analysis is the Round Mountain Allotment, located in rural San Bernardino County (see Map1).

The project area is part of the Mojave Desert Air Basin. Most days air quality is good to fair. Windblown air pollutants from the South Coast Air Basin, which includes Orange County and non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, strongly influence the air quality of the Mojave Desert Air Basin. As pollutant emissions continue to decline in the South Coast Air Basin, the Mojave Desert Air Basin will benefit.

The pollutant emissions from sources, climatic conditions, and atmospheric interactions determine the quality of air. Air quality in a given location is described by the concentration of various pollutants in the atmosphere. An area is designated by the EPA as being in non-attainment for a pollutant if ambient concentrations of that pollutant are below the National Ambient Air Quality Standards (NAAQS).

Non-attainment areas are designated if repeated violations of the NAAQS occur, and the relative seriousness of the problem is determined at the time that a basin is determined to be in non-attainment of national standards. The classification may be deemed to be Very Serious, Serious or Moderate non-attainment. The California Clean Air Act of 1988 also requires that areas of California be designated attainment, non-attainment, and unclassified for state ambient air quality standards. The Round Mountain allotment is included in an area classified by EPA and the California Air Resources Board as a Moderate non-attainment area for particulate matter

(PM¹⁰) and serious non-attainment for ozone.

Sources for ozone missions include exhaust from primary transportation vehicles (particularly diesel trucks) industrial sources, including secondary sources, and climatic sources. Grazing management activities do not contribute measurably to ozone emissions.

Primary sources for emissions of particulate matter under 10 microns, PM¹⁰, in the project area are wind erosion on unpaved surfaces including disturbed areas, construction activities, mining-related activities, use of unpaved routes, and dirt storage piles. During most days of the year, visibility exceeds 25 miles. Exceptions occur during strong westerly winds when dust is blowing and when smog filters up from the Los Angeles Basin. There are no major single sources of pollutant emissions in the project area. Generally, locally generated PM¹⁰ pollution is somewhat greater in the OHV open areas, which have increased disturbed area and route densities, as well as increased unpaved route use associated with recreational activities.

The Mojave Desert Air Quality Management District (MDAQMD) has State air quality jurisdiction over San Bernardino County, and has been delegated authority to implement the Clean Air Act from the EPA. MDAQMD has analyzed impacts from existing sources for PM¹⁰, and prepared a state implementation plan (SIP) for the Mojave Desert planning area which identifies sources of emissions and control measures to manage existing emissions and reduce new emissions (MDAQMD, 1995).

In the SIP, Miscellaneous Area Sources were considered to be a minor category of PM¹⁰ emissions in the planning area, generating 1.3% of total emissions in 1990. Agricultural activity is a small contributor within this miscellaneous category, and Ord grazing allotment a small portion of the agricultural activity contributions. No measures were identified in the SIP specific to existing livestock grazing activities, and renewals of leases were exempted from conformity determinations consistent with the SIP, due to their nominal (less than 15 tons/year) contributions to air quality in the Mojave Desert planning area (BLM, 1997). None of the alternatives would result in increased grazing activities over those historic levels, and regional exceedances of PM¹⁰ standards have decreased approximately 10% (EPA, 2003) due to voluntary and SIP measures to decrease emissions from substantial sources. Therefore, there would be no substantial affect to air quality under any of the alternatives.

2. References

Final Mojave Desert Planning Area Federal Particulate Matter (PM10) Attainment Plan, Mojave Desert Air Quality Management District, 31 July 1995, approved by MDAQMD in July, 1996.

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

National Air Quality and Emissions Trend Report, 2003, Fig. 2-40: Trend in PM10 annual mean concentration by EPA Region, 1992–2001.

C. AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

The project area for the purpose of this analysis is the Juniper Flats Cultural ACEC within the Round Mountain grazing allotment, located in rural San Bernardino County (see Map 1).

1. Affected Environment

Juniper Flats Cultural ACEC

The Round Mountain allotment overlaps the entire Juniper Flats Cultural Area ACEC. The Juniper Flats Cultural Area was designated in 1988 to protect cultural resources and includes 4,547 acres within the Round Mountain Allotment. Specific relevant features that formed the basis for ACEC designation are the multiple rock shelter sites and associated middens, milling stations, lithic scatters, and historic structures. These features met the importance criteria for ACEC designation because of their diversity of artistic styles, their association with related cultural sites, and their significance to the religious and spiritual concerns of Native Americans. A substantial number of the significant resources for which this area met relevance and importance criteria for ACEC designation are not readily accessible to livestock. It is possible that grazing may affect some individual cultural resources however grazing operations are not anticipated to substantially affect the relevance and importance of this ACEC. Site-specific cultural impacts, including those to rock shelters and middens, are addressed further in the Cultural Resources analysis.

2. References

Management Plan for Juniper Flats Cultural Area, an Area of Critical Environmental Concern, Bureau of Land Management, Barstow Resource Area, approved 15 September 1988.

D. CULTURAL RESOURCES/NATIVE AMERICAN CONCERNS

1. Affected Environment – Cultural Resources

There are 10 documented sites within the Round Mountain allotment managed by the Barstow Field Office (BFO). Previous surveys of the allotment covered approximately 60% of the total allotment and were conducted in the 1970s and 1980s. The surveys focused on natural water sources in the area

The Round Mountain allotment overlaps essentially the entire Juniper Flats Cultural Area ACEC. The Juniper Flats Cultural Area was designated by the California Desert Conservation Plan (1980) to protect cultural resources. Specific relevant features that formed the basis for ACEC designation are the unique concentration of habitation and special-use archaeological sites that are characterized by subsurface deposits. These features met the importance criteria for ACEC designation because of their ability to contribute temporal, cultural and ecological information about past man-land relationships and to the paleoecology of the region.

In the ACEC Management Plan (BLM, 1988), livestock grazing was identified as one of three resource activities that needs management to protect the valuable cultural values of the ACEC.

One protective action was identified in the management plan to protect cultural resources from grazing impacts at that time. Fences have been erected to protect cultural resources from cattle and off highway vehicles and are currently being maintained.

Since the 1999 Willow Fire, grazing has not been permitted on the allotment, in order to provide for rehabilitation of vegetation and associated highly erosive soils. Vegetation rehabilitation has now been completed to post-fire standards. Due to the lack of cattle grazing over the past 7 years, there are no visible impacts to cultural resources. If the proposed action is selected, the allotment is scheduled to resume cattle grazing in 2007.

2. Affected Environment – Native American Concerns

Four Native American tribal Reservations have interests in the Round Mountain Allotment within the Barstow Field area. There were no concerns expressed for specific sites or allotments.

3. Unavailable Information

Field survey pursuant to the Supplemental Programmatic Agreement for Cattle Grazing for the Round Mountain allotment is scheduled for completion in FY-2007 (see Attachment 1). Areas with known cultural resources, natural water sources, fence lines, salt licks, and other cattle congregation areas will be the main focus of the survey.

Within the jurisdiction for the BFO there is approximately 450,000 acres of land utilized for cattle grazing. The Supplemental Programmatic Agreement for Cattle Grazing allowed 10 years to complete the cultural resource surveys of the grazing allotments as this is a time consuming task. There are eight years remaining to fulfill the surveys. The agreement “allows for renewal allow for renewal of an existing grazing permit prior to completing all NHPA compliance needs as long as Protocol direction, the BLM 8100 Series Manual guidelines (Protocol Amendment F), and the following specific stipulations are followed” (see Attachment 1).

4. Environmental Consequences

a. Impacts of Proposed Action

Reasonable and prudent protection has already been implemented for sites with known potential conflicts between protection of sensitive cultural resources and livestock grazing. Cultural sites within the allotment have been monitored prior to being reopened to grazing and show no adverse impacts. Monitoring would be conducted at six week intervals after winter cattle turnout. Standard Protective measures would be implemented to sites showing impacts as a result of grazing.

b. Impacts of No Action

Under this alternative there would be no further impacts to under this alternative that threats from grazing would be eliminated and the Supplemental Programmatic Agreement (see Attachment 1) would no longer apply to future actions.

c. Impacts of Modified Grazing

The same as the proposed action.

d. Consultation

Consultation was initiated in April 2006 with the Native Americans and interested publics for grazing matters on file with BLM on the proposed lease renewals for this allotment. Comments and concerns regarding cultural and religious values within this allotment that may be affected by livestock grazing will also be solicited and incorporated into follow-up site-specific cultural evaluations for allotments when visited.

Consultation was conducted with the California State Historic Preservation Office November 17, 2004 to submit a schedule for implementation of the *Supplemental Procedures for Livestock Grazing Permits/Lease Renewals, A Cultural Resource Amendment to The State Protocol Agreement California Bureau of Land Management and the California State Historic Preservation Officer* (see Attachment 1).

e. References:

Letter to the California State Historic Preservation Office Dated November 17, 2004. The letter outlined strategy and schedule for implementation of the Supplemental Procedures for Livestock Grazing Permits/Lease Renewals.

Supplemental Procedures for Livestock Grazing Permits/Lease Renewals, A Cultural Resource Amendment to The State Protocol Agreement California Bureau of Land Management and the California State Historic Preservation Officer (see Attachment 1).

E. ENVIRONMENTAL JUSTICE

1. Affected Environment

The project area for the purpose of this analysis is rural San Bernardino County. Individual incomes vary widely in the cattle industry, depending on size of farm and whether activities are pursued on a full-time or part-time basis. Generally, farm incomes are above average as compared with other incomes in rural San Bernardino County (*USDA National Agriculture Statistics Service, 2002 Census of Agriculture, CA, SBCO County*). Overall, seasonal laborers hired by farm industries, including livestock ranchers, come from low-income households. This is typical of rural areas in general as compared with the overall population average income. Also, minority populations in the cattle industry are typical for rural San Bernardino County and farm industries in general. Therefore, the proposed action or any alternative would have no adverse affect to environmental justice issues.

F. FARMLANDS, PRIME OR UNIQUE

1. Affected Environment

The proposed action or any alternative would have no affect on farmlands, prime or unique because no prime or unique farmlands are present in or adjacent to the Round Mountain grazing allotment. In the Mojave Desert, prime or unique farmlands are associated with floodplains, which are absent in the allotment.

G. FLOOD PLAINS

1. Affected Environment

The proposed action or any alternative would have no affect on flood plains because no flood plains are present in or adjacent to the Round Mountain grazing allotment (FEMA Flood Hazard Maps, 2006).

H. VEGETATION/INVASIVE, NON-NATIVE SPECIES

1. Affected Environment

a. Vegetative Communities

The vegetative communities within the Round Mountain Allotment vary with elevation, soils, aspect and annual precipitation. Elevational gradients within this allotment range from 4,000 to 5,848 feet. This allotment is dominated by coarse, sandy soils. Precipitation on this allotment ranges from 6 to 10 inches annually, depending on elevation. Terrestrial natural communities have been mapped using the classification employed 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) and the California Native Plant Society's A Manual of California Vegetation (Sawyer and Keeler-Wolf, 1995) (see Map 3).

Key forage plant species for livestock consumption are palatable species that may be utilized frequently, when available, as forage for livestock. Common key forage species that occur in one or more of the plant communities within this allotment include: Mormon tea (*Ephedra* spp.), pine bluegrass (*Poa secunda*), desert needle grass (*Achnatherum speciosum*), cliff rose (*Purshia mexicana stansburyana*), desert almond (*Prunus fasciculatum*) and desert ceanothus (*Ceanothus greggii*).

The primary plant communities occurring within the allotment are Mojave Mixed Woody Scrub, and Mojavean Juniper Woodland and Scrub. Other native plant communities include Mojavean Pinon Pine Woodland, Semi-Desert Chaparral and riparian plant communities. The riparian communities make up a very small percentage of the overall allotment (approximately 1%) but are extremely important to the biodiversity of this area. These important plant communities are scattered throughout the allotment occurring when site conditions are conducive to support such vegetation. Riparian vegetation is discussed under the Wetland/Riparian Zone Section. The following is a description of the key plant species or plant communities that may be affected by the proposed action.

Mojave Mixed Woody Scrub - This community occurs between 1,000-5,000 foot elevation on all slopes in shallow and deep soils that are occasionally rocky. The Mojave Mixed Woody Scrub community is comprised primarily of the dominant Yucca species (*Yucca brevifolia*, *Yucca schidigera* and *Yucca bacata*) and associated species like winter fat (*Kraschenninnokovia lanata*), boxthorn species (*Lycium* sp.), spiny menodora (*Menodora spinescens*), spiny hopsage (*Grayia spinosa*), cacti species (*Opuntia* spp., *Mammillaria* spp., *Echinocactus polycephalus*, *Ferocactus cylindraceus*, *Echinocerus* spp.) and California buckwheat (*Eriogonum fasciculatum*). This vegetative community comprises approximately 29% (4,514 acres) of the allotment.

Mojavean Juniper Woodland and Scrub - This community occurs between 4,000-6,000 foot elevations on primarily north slopes of mountain ranges in the Mojave Desert. The Mojavean Juniper Woodland and Scrub community is comprised primarily of the dominant California juniper (*Juniperus californicus*) and associated species like yucca species (*Yucca brevifolia*, *Yucca schidigera* and *Yucca bacata*), cacti species (*Opuntia* spp., *Mammillaria* spp., *Echinocactus polycephalus*, *Ferocactus cylindraceus*, *Echinocerus* spp.), California buckwheat (*Eriogonum fasciculatum*), big sagebrush (*Artemisia tridentata*), cliff rose (*Purshia mexicana stansburyana*), desert shrub oak (*Quercus turbinella*), turpentine-broom (*Thamnosma montana*), Nevada ephedra (*Ephedra nevadensis*) and desert needlegrass (*Achnatherum speciosum*). This vegetative community comprises approximately 33% (5,136 acres) of the allotment.

Semi-Desert Chaparral - This community occurs between 2,000–5,000 foot elevations on primarily north slopes of mountain ranges in the Mojave Desert. The Semi-Desert Chaparral community is comprised primarily of the dominant desert ceanothus (*Ceanothus greggii*) and associated species like California juniper (*Juniperus californicus*), cliff rose (*Purshia mexicana stansburyana*), California buckwheat (*Eriogonum fasciculatum*), desert shrub oak (*Quercus turbinella*), big sagebrush (*Artemisia tridentata*), desert almond (*Prunus fasciculatum*) and desert needlegrass (*Achnatherum speciosum*). This vegetative community comprises approximately 23% (3,580 acres) of the allotment.

Mojavean Pinon Pine Woodland - This community occurs between 3,280-8,000 foot elevations on primarily north slopes of mountain ranges in the Mojave Desert. The Mojavean Pinon Pine Woodland community is comprised primarily of the dominant California juniper (*Juniperus californicus*) and associated species like single-leaf pine (*Pinus monophylla*), Joshua tree (*Yucca brevifolia*), big sagebrush (*Artemisia tridentata*), cliff rose (*Purshia mexicana stansburyana*), desert shrub oak (*Quercus turbinella*), Nevada ephedra (*Ephedra nevadensis*), and desert needlegrass (*Achnatherum speciosum*). This vegetative community comprises approximately 14% (2,179 acres) of the allotment.

Montane Riparian Scrub - This community occurs between 3,900-9,500 foot elevations on primarily canyon and drainages on the north slopes of mountain ranges in the Mojave Desert. Montane Riparian Scrub community is comprised primarily of the dominant arroyo willow (*Salix lasiolepis*) and associated species like mountain alder (*Alnus incana*), bulrush (*Scirpus* spp.), sedges (*Carex* spp.), bluejoint reed grass (*Calamagrostis canadensis*), Sandberg's bluegrass (*Poa secunda*), longstalk clover (*Trifolium longipes*) and tufted hairgrass (*Deschampsia cespitosa*). This vegetative community comprises approximately <1% of the allotment.

Mojave Riparian Forest - This community occurs between sea level and 7,800 foot elevations on primarily canyon and drainages on the north slopes of mountain ranges in the Mojave Desert. Mojave Riparian Forest community is comprised primarily of the dominant Fremont cottonwood (*Populus fremontii*) and associated species like arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), box elder (*Acer negundo*), California wild grape (*Vitis californica*), narrowleaf willow (*Salix exigua*) and California sycamore (*Platanus racemosa*). This vegetative community comprises approximately <1% of the allotment.

b. BLM Sensitive Plant Species

There are no BLM Sensitive Species known to occur on the Round Mountain Allotment.

Three Unusual Plant Assemblages (UPAs), as defined by the CDCA Plan of 1980, are found within the allotment. The Round Mountain UPA's are riparian areas that occur along Arrastre, Grapevine, Cottonwood and Lovelace Creeks. Portions of these UPA's were burned in the 1999 Willow Fire. Flooding in 2005 altered small sections of the stream course along Arrastre Creek. Most of Cottonwood Creek has been fenced to exclude livestock and OHV use. Recovery of these affected riparian areas from the Willow Fire has been substantial.

c. Invasive, Non-Native Species

The Round Mountain Allotment contains varying densities of invasive and non-native annual species over the vast majority of the allotment. These annual species include Red brome (*Bromus madritensis ssp. rubens*), cheat grass (*Bromus tectorum*), schismus (*Schismus arabicus*), filaree (*Erodium cicutarium*), and several mustard species, including Sahara mustard (*Brassica tournefortii*). These are the five most widespread invasive species present in the allotment. There are areas in the western portion of the allotment off Juniper Flats road that contain high densities of cheat grass.

The invasive and non-native species compete with native herbaceous species, especially annual species, for available moisture, nutrients, and spatial occupation of available upland habitat. Because they are annual species densities vary widely. There are numerous documented causes for the spread and establishment of invasive and non-native species, weeds. Weeds prefer disturbance that could be caused by OHV, livestock concentration areas, or in the case of this allotment repeated wild fires. Well-managed rangelands in good condition is the best defense against the spread of weeds, however even well managed rangelands are susceptible to natural disturbance such as wildfire. Vectors for the spread of weeds include vehicles, wind, recreationists, waterways, animals including livestock, and weed-contaminated hay (Petroff and Sheley 1999). On Round Mountain Allotment, these species are most widespread in the areas most affected by the 1999 Willow Fire.

d. Historic Range Conditions

Rangeland monitoring (utilization and photo trend) prior to the Willow Fire (over the last 15 years) has revealed very limited utilization rates (12 to 15%) at all upland key areas. Historic

production and diversity observations have indicated highly productive and diverse rangelands. No past monitoring records have indicated signs of overgrazing or degradation of native plant communities. Historic information on cattle use of riparian habitat has been minimal but would increase substantially under the Proposed Action or Alternative III. Vegetation rehabilitation has now been completed to post-Willow Fire standards.

2. Environmental Consequences

a. Impacts of Proposed Action - Vegetation

The vegetation used by cattle is affected in a number of ways. Grazing utilization is the proportion and degree of the current year's forage production that is consumed or destroyed by livestock (ITR-Utilization Studies 1996). Forage utilization, plant vigor, abundance and age class distribution of key species are generally more intensely impacted around water sources or high-use facilities due to constant soil compaction from trampling and continual cropping of vegetation by cattle. Therefore, impacts to vegetation next to water developments are expected, and the area substantially impacted will vary in size. Impacts to vegetation would be mitigated through elimination of cattle during the vast majority of the growing season, providing for rapid re-growth and recruitment.

Since the 1999 Willow Fire, grazing has not been permitted on the allotment in order to provide for rehabilitation of vegetation and associated highly erosive soils that resulted from the fire. Therefore, due to the lack of cattle grazing over the past 7 years, no recent cattle grazing impacts to upland or riparian vegetation have occurred. The riparian communities have undergone substantial recovery from past fire damage. BLM estimates the allotment to currently be in good to excellent range condition.

The trend in vegetation condition surrounding range improvements and areas of past concentrated grazing use have attained an upward trend. Because most of the season of use is winter, the perennial plants are in senescence and are not substantially impacted by light-to-moderate grazing or browsing. In addition, use of the allotment during the cooler winter months results in greater livestock distribution. Therefore, BLM anticipates that the vegetative trend would continue to remain static to upwards overall under the proposed action.

Although the overall native plant communities affected by the Willow Fire have recovered substantially, the juniper overstory has not recovered because juniper is very susceptible to damage by fire. It will take sometime before the juniper overstory recovery occurs because reproduction has to occur by seed. Juniper does not re-sprout from the root crown or reproduce vegetatively. Although not typically browsed by cattle, a juniper overstory can provide an important structural component for wildlife.

b. Impacts of Proposed Action - Invasive, Non-Native Species

Overall, the current densities of non-native invasive species on the allotment are considered moderate. In areas most affected by the Willow Fire, densities of cheatgrass are high. Repeated wildfires can greatly increase the areas dominated by cheatgrass because cheatgrass is a vigorous and opportunistic competitor (Yplisantis 2003).

Annual fluctuations in densities of these species are directly influenced by the amounts of late winter and/or early spring precipitation. As the native perennial plant communities continue to recover and become or remain healthy, densities of non-native annual species are anticipated to decrease over time due to competition for nutrients and available water from a diverse, native plant community (Petroff and Sheley 1999).

Because portions of the allotment is heavily infested with cheatgrass and other weed species cattle would spread weed seed that sticks to their hides. It is unknown at this time what future impact this may have if weed seed is spread to currently non-infested portions of the allotment by cattle. Low levels of ground disturbance associated with grazing activities may increase the potential for weed establishment. These potential impacts would be monitored as part of the allotment's overall monitoring program.

c. Impacts of No Action

Under this alternative, livestock grazing on this allotment would not resume. This action would eliminate any future cattle impacts to native vegetation that may occur if grazing continues.

This alternative would eliminate the potential of cattle transporting weed seeds on their hides from areas of infestation to areas of no infestation. Under this action there would be no ground disturbance related to grazing activities that increase the potential for weed establishment.

d. Impacts of Modified Grazing

Under this alternative, the shift in the season of use from December to November and March to February would have a negligible positive affect on both perennial seedlings and a negligible negative affect annual non-native species. The shift in the season from March to February would eliminate the potential of cattle grazing most perennial seedling that would begin germination and the early stages of growth in March. There would be a slight negative impact to the management of non-natives because cattle would not have the opportunity to graze young annual weeds in March.

e. Consultation

Consultation has been initiated and would continue with the lessee, interested publics, county governments, and Native American tribes that have an interest in biological resources within the Round Mountain Allotment.

f. Maps

See Map 3.

g. References:

Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of

California. Calif. Dept. of Fish and Game, Sacramento, CA.

Petroff, Janet K. and Roger L. Sheley 1999. *Biology and Management of Noxious Rangeland Weeds*. Montana State University and Oregon State University Press.

Sawyer, John O. and Todd Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society, Sacramento, CA.

Ypsilantis, William 2003. *Risk of Cheatgrass Invasion After Fire in Selected Sagebrush Community Types*. Resource Notes #63. Bureau of Land Management – National Science and Technology Center.

U. S. Bureau of Land Management. 1996. *Interagency Technical Reference – Utilization Studies and Residual Measurements*, Denver, CO.

I. RECREATION

1. Affected Environment

The Round Mountain Allotment is located within the Juniper Subregion of the WMP. The area provides opportunities for open-space based outdoor recreation for the nearby communities of Hesperia, Apple Valley, and Lucerne Valley. A variety of recreational activities occur in the area including hiking, horseback riding, Off Highway Vehicle (OHV) use, mountain biking, sight seeing, wildlife viewing, photography, hunting and hang gliding. While overnight camping is permitted, most visitors enjoy the area in a day-use setting returning to their homes in local communities at night. Camping on public lands is allowed for up to 14 days but no improved facilities are provided on public lands for this activity. Nearby facilities are available on private lands and adjacent Forest Service lands. Many visitors also utilize the area because it is located between the local high desert communities and the San Bernardino National Forest, their ultimate destination.

Vehicle travel on public lands within the area is limited to improved County and USFS roads and BLM-managed routes designated for vehicle use, as identified in the West Mojave Plan. Routes that are available for use by motorized vehicles are signed as “Open Routes” and have been assigned a route number to help guide visitors through the area. A small segment of the open routes are Limited to Motorcycle use only. The “Open” and “Limited” routes available for vehicle use, along with their corresponding numbers, have been illustrated on Map 1.

Hiking and equestrian use is not limited to a specific route or trail network. Hiking and horseback riding occurs along the open and limited route network as well as cross country where no route or trail exists. The area between Arrastre and Grapevine Canyons is particularly well used by equestrians, as it provides a fairly direct route to a horseman’s camp on USFS-managed lands.

Hunting in the area is managed by the California Department of Fish and Game and is subject to their limitations on season of use and bag limits. The area provides good hunting opportunities

for deer and upland birds. Hunting and other casual-use activities such as photography and sightseeing occur in conjunction with hiking, equestrian and OHV use.

2. Environmental Consequences

a. Impacts of Proposed Action

Recreationists enjoy the area year round with most use occurring during the early fall and late spring when temperatures are cooler than in lower-elevational areas of the desert. Renewal of the grazing lease will mean that cattle will become a part of the visitor's experience during the winter months. Different visitors react differently to the presence of cattle. Generally, visitors with an expectation of a natural setting may perceive that the presence of cattle detracts from that experience. Those participating in active sports and exploration activities may perceive that the cattle give them a tie to western heritage and therefore add to their outdoor experience. Given the size of the area, limited number of cattle, and duration of grazing activities, a significant conflict or change in recreational use is not anticipated as a result of the proposed resumption of cattle grazing.

Concern had been previously raised by OHV groups during the comment period for the DEIS for the WMP that some visitors will feel restricted by the allotment boundary fencing. No new allotment boundary fencing is proposed under the proposed action, so renewal of the grazing lease will not change the visitor experience in this manner. Also concern was raised by OHV groups that the BLM maintain ingress and egress along routes that cross through the allotment boundary fence. BLM has reviewed the allotment boundary fence and current route designations, and has found two locations where open routes cross through the allotment fence. In the near future BLM will conduct a field investigation to determine the extent of this conflict. If a conflict exists, a gate, cattle guard or other mechanical feature would be installed under this alternative to allow access into and out of the allotment at these two locations while still confining cattle to the allotment.

Concerns have been raised by several local residents that the resumption of grazing might result in cattle/vehicle collisions. The Bureau appreciates the concern for the safety of vehicle based recreationists. The Bureau manages vehicle based recreation within cattle allotments throughout the western United States. This experience has shown a very low occurrence of vehicle/cattle collisions in cattle allotments. There is no record of past vehicle/cattle collisions within the Round Mountain Allotment, although a slight potential always exists. While recreational use of the area has increased, a substantial increase in risk of vehicle/cattle collisions is not anticipated.

b. Impacts of No Action

Under this alternative, grazing on the Round Mountain allotment would not resume. Therefore the slight potential for future conflicts between grazing and recreational uses would not occur.

c. Impacts of Modified Grazing

The modification of season of use and lower stocking rates under this alternative would not

result in substantially different impacts than those identified for the Proposed Action.

4. Consultation

Consultation has occurred and would continue with the Round Mountain lessee and interested publics that may have an interest in recreational activities within the Round Mountain allotment.

5. Maps

See Map 1.

6. References:

U.S. Bureau of Land Management. 1980. California Desert Conservation Area Plan. Riverside, CA

U.S. Bureau of Land Management. 2006. West Mojave Plan Amendment. Moreno Valley, CA

J. SOCIAL AND ECONOMIC VALUES

1. Affected Environment

The project area for the purpose of this analysis is San Bernardino County.

Approximately 425,000 acres of San Bernardino County is considered pasture lands. While overall land area and farm size has been decreasing over time, market values of all farm products have been increasing. This increase was over 61% between 1997 and 2002 (*2002 Census of Agriculture*, Table 6, USDA, National Agricultural Statistics Service, Vol. 1, Ch. 2, 2004). Cattle production ranks 2nd behind milk production in market value of farm products produced in San Bernardino County (Ibid, Table 2), although cattle ranching comprises only 85 of 1336, or 6.1% of all farming operations (Ibid, Table 51). In 2002, cattle livestock generated approximately \$61.0 million dollars in market value of sales, up from \$48.3 million in 1997 (Ibid, Table 2).

Individual incomes vary widely, depending on size of farm and whether activities are pursued on a full-time or part-time basis. Just over 50% of farms make net profits while almost as many register net losses. On average, net cash income from farm operations are above average as compared with incomes of other industry sector workers in rural San Bernardino County (Ibid, Table 4). These figures are based on very large gains from a few larger operations, modest incomes from small to mid-sized farms worked full-time, and losses from small to mid-sized ranches that are ranched part-time. Most farms, including livestock operations, employ 1 to 10 seasonal or year-round laborers. Round Mountain Allotment is in this latter category.

According to the 2002 Census of Agriculture, cattle ranching in San Bernardino County ranked 7th in the State of California and in the top 10% of production in the nation. Overall, ranching-related production represents approximately 1% of the State's gross state product, ranking

behind most other industries, but still contributing a measurable amount of production to the State GDP (*California Statistical Abstract*, California Department of Finance, Table D-4, January, 2006). The sale of calves 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. Secondary affects to the economy come from wholesale businesses related to cattle processing and hay production. Most individual cattle operations, including the Round Mountain Allotment operation are considered small to mid-sized.

Approximately \$15,000 to \$25,000 of the BLM grazing fees collected is returned to San Bernardino County (RIAC) annually depending on what the grazing fee is for that year and the number of AUMs utilized.

The Round Mountain allotment is abutted by an urban area on the southwest and south that continues to grow at a rapid pace. Conflicts between residents and plans for adjacent urban areas and traditional rural land uses such as ranching are typical. In addition, residents that own private property within the allotment boundaries have expressed concerns about the resumption of grazing because they believe that cattle may drift onto their private property and cause damages.

2. Environmental Consequences

a. Impacts of Proposed Action

Under the proposed action, grazing would resume at the stocking rate contained in Table 1. These levels are at their lowest point when compared to historic levels. This grazing operation is small, and would therefore continue to have a nominal influence on the local and regional economy of San Bernardino County.

Due to decreased funding to BLM for range improvements, requests for the use of funding from San Bernardino RIAC for maintenance of existing improvements and any future identified improvements is anticipated to increase.

b. Impacts of No Action

Under this alternative, impacts to grazing and its socioeconomic values would be the same as the proposed action on a regional or State-wide level. Individual adverse impacts could occur to the individual rancher, based on the loss of income associated with ranching activities. These losses would be at least partially off-set by gains from the sale of ranching privileges, and could represent a substantial financial hardship on the individual lessee.

c. Impacts of Modified Grazing

Under this alternative, impacts to grazing and its socioeconomic values on a regional or Statewide level would be nominal, similar to the proposed action. Stocking rates on the Round Mountain Allotment would be reduced by approximately 43% for the proposed action. These

factors combined would represent substantial economic impacts to the lessee and an overall reduction in net income to the lessee, but would not be significant from a local or regional economic perspective because of the relatively small size of the operation.

Due to decreased funding to BLM for range improvements the reliance on funding from San Bernardino RIAC for maintenance and construction of new improvements, as well as any future improvements, would increase.

3. Consultation

Consultation has been initiated and would continue with the lessee, interested publics and County and local governments with an economic or community interest in the Round Mountain Allotment. Local residents that own private property within the allotment boundaries have expressed concerns about the resumption of grazing in the past. These residents are likely to support the No Action (No Grazing) alternative based on their past written comments.

4. Maps

N/A

5. References:

2002 Census of Agriculture, USDA, National Agricultural Statistics Service, Vol. 1, Ch. 2, 2004.

California Statistical Abstract, California Department of Finance, Table D-4, January, 2006.

K. SOILS

1. Affected Environment

The soil classifications of the Round Mountain Allotment were mapped during a 1978 Order III soil survey. Based on this soil survey, the Round Mountain Allotment is dominated by four complexes and associations:

- 1) The Arrastre-Rock Outcrop Complex is primarily a sandy loam, deep and well drained, with a moderate erosion potential;
- 2) The Bryman-Cajon Association is dominated by stone to gravelly sand, very deep and well drained, with a low to moderate erosion potential;
- 3) Crafton-Sheephead-Rock Outcrop Association is dominated by sandy loam to gravelly sandy loam, moderately deep and well drained to shallow and somewhat excessively drained, with a moderate erosion potential; and
- 4) Cushenbury-Crafton- Rock Outcrop Complex has a soil texture that is loamy sand to sandy loam, moderately deep and well drained, with a moderate erosion potential.

Biological Soil Crust

The soils in the open spaces between higher plants are not generally bare of life. Highly specialized organisms can make up a surface community that may include cyanobacteria, green algae, lichens, mosses, microfungi and other bacteria. Soils with these organisms are often referred to as cryptogamic soils and form what is referred to as biological soil crusts (BSCs).

Previous monitoring efforts on the allotment note that cryptogams or BSCs were present in the extreme western and southern portions of the allotment. These populations were generally small and scattered but intact. In general, the distance to developed water appears to be a major factor; the further from water, the less fragmented the biological soil crusts are.

In general, cyanobacteria and microfungi filaments weave through the top few millimeters of soil and aid in holding loose soil particles together, forming a biological crust which stabilizes and protects soil surfaces. The biological crusts aid moisture retention, “fixes” nitrogen, and may discourage the growth of annual weeds. Below the surface, the soil flora grows various rhizomes, hyphae and filaments that further bind the soil together. Most of the biological crust organisms have their growth period during cool moist conditions. The intermountain region had many-extensive complex crusts due to fine textures soils, cooler climates and summer rains which are conducive to crust development. Many of these areas are so fragile that even casual foot traffic can cause extensive damage.

In contrast, the foothills and terraces of the San Bernardino Mountains generally have coarse-textured soils, high diurnal temperatures, little summer rain and high potential evapotranspiration potential (PET). According to Belnap (2003, 2005) “less stable, coarse-textured soils often support only highly mobile, large filamentous cyanobacteria (such as *Microcoleus* spp.).” She also observes that (2003 and 2005), “Cyanobacteria heavily dominate crusts of hot desert sites (Sonoran, Mojave and Chihuahuan) where PET is high.”

2. Environmental Consequences

a. Impacts of Proposed Action

Under the proposed action, localized, negative affect on soils associated with cattle congregation areas such as watering sites and corrals would continue to occur because of compaction (approximately 1% of the allotment). Soil compaction results in accelerated erosion by allowing for rapid run-off of water due to decreased infiltration potential and impedes seed germination. The vast majority of soils in this allotment would continue to exhibit minimal soil disturbance from grazing due to the dispersed grazing use outside of congregation areas.

Grazing animals apply compressional and shear forces to the soil. The crust response to these disturbances is highly variable. Soil moisture and burial are two important factors relating to the degree of impact. With coarse textured sandy soils, moist crusts are better able to withstand disturbances than dry soils (Belnap 2003 and BLM 2001). Many of the biological crust species are not mobile and cannot survive burial. Although rain and moist soils occur at the start of the

grazing season, grazing in the later part of the spring can reduce the cover of biological crusts because the soils are drier. Site recovery, outside of congregation areas should be such that the impact would not be substantial (BLM -TR 1730-2 2001). Also, since grazing on this allotment is seasonal and generally occurs during the wetter portions of the year there would sufficient time for recovery of BSC's from any impacts related to grazing.

b. Impacts of No Action

Under the no action alternative livestock grazing would not resume. The continued threat to biological soil crusts due to fragmentation and/or destruction from grazing would not occur. Specifically, there would be positive impacts to soils in congregation areas (approximately 1% of allotment) because they would not be exposed to future compaction related to grazing activities. However these benefits may be partially offset by other uses on the allotment.

c. Impact of Modified Grazing

Under this alternative the overall impacts to soils would remain substantially the same as the proposed action.

3. Consultation

None.

4. Maps

See the soils map contained in the Soil Survey of San Bernardino County California, Mojave River Area, and the Southwest Desert Area Report and General Soils Map.

5. References:

Belnap, J and O. L. Lange. 2003. Biological Soil Crusts: Structure, Function and Management. Springer, New York

Belnap, J. 2005. Personal communication.

Soil Conservation Service. 1978. Soil Survey of San Bernardino County California. Mojave River Area.

U.S. Bureau of Land Management. 2001. Biological Soil Crusts: Ecology and Management, Technical reference 1730-2. USDI Bureau of Land Management, Printed Materials Distribution Center, Denver, CO

U.S. Bureau of Land Management. 2005. Interpreting Indicators of Rangeland Health, Technical reference 1734-6. USDI Bureau of Land Management, Printed Materials Distribution Center, Denver, CO

L. WASTE, HAZARDOUS OR SOLID

1. Affected Environment

The proposed action or any alternative would have no affect on hazardous and solid wastes on public lands as no hazardous wastes are present in or adjacent to the Round Mountain grazing allotment, and agricultural solid wastes are not managed as an environmental contaminant under federal or State law, except at confined animal facilities. Under 41 CFR 261.4 (b), *Identification and Listing of Hazardous Waste*, the EPA has determined that the raising of animals, including animal manures are solid wastes that are exempt from consideration as hazardous wastes if returned to the soils.

Use of agricultural solid wastes, including manure, is managed pursuant to State and local law under RCRA implementing regulations (RCRA Subtitle D). California has issued joint California Integrated Waste Management Board/State Water Resources Control Board regulations (Division 2, Title 27). Use of non-hazardous decomposable waste is generally exempt from these regulations. The Regional WQCB may issue waste discharge requirements or reclamation requirements to cover such materials, and has done so for confined animal facilities such as feed lots and poultry farms. Cattle on the Round Mountain allotment do not spend extended periods of times in confined facilities (corrals), which are used primarily for animal herding between allotment areas. Since agricultural solid wastes from free-roaming cattle are not managed by federal or State law, any site-specific impacts associated with free-roaming cattle are analyzed in the context of water quality.

M. WATER QUALITY, SURFACE AND GROUND WATER

1. Affected Environment

Surface water sources occurring on the Round Mountain Allotment include four creeks and 14 known springs. There is one developed water source on public land that provides surface water to livestock on the Round Mountain allotment. The remainder of the water sources on this allotment is undeveloped. There is one known undeveloped spring and one creek, Cottonwood Creek, that have been fenced or are sufficiently armored to protect water quality and riparian habitat. Arrastre, Grapevine and Lovelace Creeks, along with numerous other undeveloped springs on public lands have not been fenced. Very limited water quality and flow data has been collected at these sources, to date (see Table 6).

Table 6. Water Quality

Spring Source/Type	Currently Used by Livestock	Water Quality Data Available	Source Protected
Stone Spring	Yes	Yes, limited	Yes
Cottonwood	Yes	No	Yes
Arrastre Creek	Yes	Yes, limited	No
Lovelace Creek	Yes	No	No
Grapevine Canyon	Yes	No	No
Round Mountain	Yes	No	No

Spring			
Unnamed Springs	Yes	No	No

It is currently unknown whether these creeks and undeveloped spring sources are associated with human consumption or meet drinking water standards. Typically this would not be an issue; however some of the local residents lack wells and have indicated from comments received in earlier scoping efforts that they depend on several local springs for drinking water. This data gap concerning water quality would be addressed through increased monitoring under the proposed action.

The Lahontan Regional Water Quality Control Board has issued a Basin Plan for the North and South Lahontan Basins. This basin plan identifies beneficial uses (Chapter 2, LARWQCB, 1994) and water quality objectives (Chapter 3, LARWQCB, 1994) for the surface waters in the Round Mountain Cattle Allotment. The basin plan lists specific beneficial uses as standards to maintain or meet. For many of the sources, the plan states that beneficial uses includes municipal, agricultural, ground water recharge, recreation, warm water fisheries, cold water fisheries and wildlife.

The Clean Water Act and the U.S. Environmental Protection Agency (USEPA) classify water pollution from rangelands as non-point source pollution (NSP). Management of NSP is through a series of management practices called best management practices (BMP). According to the USEPA, “The restoration or protection of designated water uses is the goal of BMP systems designed to minimize the water quality impact of grazing and browsing activities on pasture and range lands.” Management practices can minimize the delivery and transport of pollutants to surface and ground waters. According to the USEPA, management practices control the delivery of NPS to receiving water resources by:

- minimizing pollutants available;
- retarding the transport and/or delivery of pollutants; and/or,
- remediating or intercepting the pollutant before or after it is delivered to the water resource.

The USEPA has produced guidance titled National Management Measures to Control Non-point Pollution from Agriculture. In that document section 4E addresses grazing management. The following grazing management measure is taken from that document:

“Manage Rangeland, pasture and other grazing lands to protect water quality and aquatic and riparian habitat by:

1. Improving or maintaining the health and vigor of selected plant(s) and maintaining a stable and desired plant community while, at the same time, maintaining or improving water quality and quantity, reducing accelerated soil erosion, and maintaining or improving soil conditions for sustainability of the resources. These objectives should be met through the use of one or more of the following practices:

- a. maintains enough vegetative cover to prevent accelerated soil erosion due to wind and water;
- b. manipulates the intensity, frequency, duration and season of grazing in such a manner that the impacts to vegetation and water quality will be positive;
- c. ensures optimum water infiltration by managing to minimize soil compaction or other detrimental effects;
- d. maintains or improve riparian and upland vegetation;
- e. protects streambanks from erosion;
- f. manages for deposition of fecal material away from water bodies and to enhance nutrient cycling by better manure distribution and increased rate of decomposition; and,
- g. promotes ecological and stable plant communities on both upland and bottom lands sites.

2. Excluding livestock, where appropriate, and /or controlling livestock access to and use of sensitive areas, such as streambanks, wetlands, estuaries, ponds, lake shores, soils prone to erosion, and riparian zones through the use of one or more of the following practices:

- a. use of improved grazing management systems (e.g. herding) to reduce physical disturbance of soil and vegetation and minimize direct loading of animal waste and sediment to sensitive areas;
- b. installation of alternative drinking water sources;
- c. installation of hardened access points for drinking water sources;
- d. placement of salt and additional shade, including artificial shelters, at locations and distances adequate to protect sensitive areas;
- e. provide stream crossings, where necessary, in areas selected to minimize the impacts of the crossings on water quality and habitat; and,
- f. use of exclusionary practices, such as fencing (conventional and electric), hedgerows, moats and other practices as appropriate,

and

3. Achieving either of the following on all rangelands, pastures and other grazing lands not addressed above:

- a. apply the planning approach of the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) to implement the grazing land components in accordance with one or more of the following from NRCS: a Grazing Land Resource Management System (RMS); National Range and Pasture Handbook (USDA-NRCS, 1997b); and NRCS Field Office Technical Guide, including NRCS prescribed Grazing 528A;
- b. maintains or improves grazing lands in accordance with activity plans or grazing permit requirements established by the Bureau of Land Management, the National Park Service, or the Bureau of Indian Affairs of

the U.S. Department of Interior, or the USDA Forest Service; or other federal land manager.”

The text in number 3 above is included in the state of California guidance called California Non-point Source Encyclopedia (SWRCB 2004) updated July 2004.

2. Environmental Consequences

a. Impacts of Proposed Action

The unfenced water sources currently available for cattle would be seasonally impacted by use from cattle. Associated trampling and utilization of riparian vegetation, streambank erosion, and deposition of manure could occur, resulting in temporary impairment of water quality factors. Due to the season of use and extensive number of water sources, these impacts would be dispersed throughout the allotment. Also, cattle use less water during this season; thus visits by cattle to any particular water source occurs less frequently and cattle have a much lower tendency to linger at water sources. Increased sedimentation and fecal coliform contamination would dissipate relatively quickly with time and through normal spring flood flows.

Under the proposed action, surface water sources available to livestock will be evaluated through the periodic monitoring of key water quality components. If warranted, the appropriate management action(s) listed above as BMPs for NPS would be implemented based on the specifics of the situation, including, but not limited to, actions such as fencing of impacted water sources. If any water gaps are used, they would be located in areas least prone to bank erosion.

A program-wide water quality monitoring strategy is under development for the Barstow Field Office for all active grazing allotments. BMPs for water quality are being developed for public lands in California with the various regional water quality boards, including the Barstow Field Office and would be adopted upon approval. Until these BMPs have been approved BLM would conform to EPA guidance for NPS resulting from cattle grazing on the Round Mountain Allotment. Regional Rangeland Health Standards, which include a standard for water quality, have been approved by the State Director and cover public lands in the Round Mountain allotment.

b. Impacts of No Action

Under the no grazing alternative livestock grazing on this allotment would not resume. Future impacts to water quality from livestock grazing would not occur.

c. Impacts of Modified Grazing

Under this alternative, the change in season of use and reduced numbers of cattle would result in similar impacts to water quality as the proposed action. The addition of another water development would further enhance cattle distribution and may result in less concentrated cattle presence at other water sources. Protective measures (e.g. fencing) would protect water quality and riparian habitat near this water development. The extension and maintenance of the southern

allotment boundary fence would eliminate the potential for any water quality impacts to Deep Creek.

3. Consultation

The BLM is currently consulting with Lahontan Regional Water Quality Board to develop a Management Agency Agreement (MAA) for non-point sources on public lands to address water quality issues. Upon agreement by both agencies, relevant portions of the Management Agency Agreement would be incorporated into the grazing lease to address any remaining water quality issues or conflicts. A draft of this agreement is anticipated this year.

4. Maps

N/A

5. References:

RWQCB. 1994. Water Quality Control Plan for the Lahontan Region. California Regional Water Quality Control Board, Lahontan Region. South Lake Tahoe and Victorville, CA

SWRCB, 2004. California Non-point Source Encyclopedia. California State Water Resource Control Board. At www.swrcb.ca.gov/nps/encyclopedia.html/. Sacramento, CA

U.S. Bureau of Land Management. 1980b. California Desert Conservation Area Plan. Riverside, CA

U.S. Bureau of Land Management. 1980c. California Desert Conservation Area Plan Appendix XIII: Livestock Grazing., Riverside, CA

USEPA. 1982. Grazing Non-point Source Control Strategy. Environmental Protection Agency, Region VIII, Denver, CO

USEPA. 2004a. National Management Measures to Control Non-point Source Pollution from Agriculture. At <http://www.epa.gov/owow/nps/agmm/index.html>. Washington, DC

USEPA. 2004b. Polluted Runoff (Nonpoint Source Pollution). At <http://www.epa.gov/nps/MMGI/Chapter2/ch2-2e.html>. Washington, DC

N. WETLANDS/RIPARIAN ZONES

1. Affected Environment

Water sources on the Round Mountain Allotment are numerous when compared to what is typical in the Mojave Desert and include four creeks and at least 14 known springs. Riparian habitat associated with the four creeks is extensive. The springs are generally small (<1 acre) and heavily vegetated. At some springs the riparian vegetation is so dense that little to no

surface water is present. Vegetation associated with these springs generally consists of limited amounts of small herbaceous plants, but may include riparian shrubs and trees. These species include inland saltgrass (*Distichlis spicata*), sedge (*Carex spp.*), bull rushes (*Scirpus spp.*), coyotebrush (*Baccharis spp.*), and willow (*Salix spp.*).

Creeks and springs provide much needed water to wildlife species that require a perennial water source. Both game and non-game species routinely visit these creeks and springs. Endemic micro fauna can also be found inhabiting these rare water sources. It is currently unknown if any of the undeveloped spring sources or creeks provide habitat for any federally listed or BLM-sensitive species.

Two springs and three creeks on the allotment have been assessed for riparian conditions. The method used is a standardized, qualitative method called Proper Functioning Condition or PFC (Prichard 2003). The PFC method separates the wetland and creeks into three major components: hydrology, soils, and vegetation. Each component is addressed according to its site potential. Together, these three components allow an interdisciplinary team to assess the functionality of the physical processes of a spring or creek. Functionality is described using three specific terms: functional (F), functional at risk (FAR), nonfunctional (NF), and unknown (UK). These terms are defined below:

Functional (PFC) - A riparian-wetland area has adequate vegetation, landform, or debris is present to: dissipate energies associated with wind action, wave action, and overland flow from adjacent sites, thereby reducing erosion and improving water quality.

Functional at Risk- Riparian-wetland areas that are in functional condition, but an existing soil, water, or vegetation attribute makes them susceptible to degradation. The functional at risk term is further defined with an indication of trend either downward or upward.

Nonfunctional- Riparian-wetland areas that clearly are not providing adequate vegetation, landform, or debris to dissipate stream energy associated with high flows, and thus are not reducing erosion, improving water quality, etc.

Unknown- Riparian-wetland areas lack sufficient information to make any form of determination.

The three evaluated creeks and two springs have been compiled into Table 7 below.

Table 7. Proper Functioning Condition of Evaluated Waters in the Round Mtn. Allotment

Creek/Spring	Allotment	PFC Assessed	PFC Rating	Cattle Excluded
Cottonwood Creek	Round Mountain	Y	PFC	Yes
Arrastre Creek	Round Mountain	Y	FAR – Upward Trend	No

Grapevine Canyon	Round Mountain	Y	FAR – Upward Trend	No
Stone Spring	Round Mountain	Y	PFC	Yes
Round Mtn. Spring	Round Mountain	Y	PFC	No

There are 12 springs and 1 creek that have yet to be assessed using the PFC method.

The PFC assessment that was conducted on Arrastre and Grapevine Creeks in 2003 noted that streambank damage and excessive sedimentation was a result of OHV use. A PFC assessment of the VP Mine area of Arrastre Creek conducted in December 2006 concluded that this reach of the creek was currently in PFC. There is currently an upward trend or PFC on other reaches of Arrastre Creek as recovery from the Willow Fire continues.

2. Environmental Consequences

a. Impacts of Proposed Action

If not fenced out or modified for avoidance, cattle may trample and utilize vegetation resulting in a decrease in vigor or complete elimination of vegetation from the vicinity of the spring or along a creek, where otherwise vegetation would be robust and often unique to the wetter microclimate. Because the majority of grazing occurs during the dormant season, impacts to riparian vegetation would be considered nominal. There may be some level of grazing use on early spring green up for riparian plant species in March however substantial re-growth should occur during the remainder of the growing season. Hoof action typically creates divots known as “punching” in wet soils, can increase erosion, and can create poor water quality at springs.

Riparian areas that have been evaluated (Table 6) are satisfactorily meeting Regional Rangeland Health Standards, and impacts from cattle grazing to riparian resources are anticipated to be short-term, minor, and acceptable. If, upon evaluation, any developed or undeveloped riparian area exhibits a downward trend in condition, it would be targeted for mitigation, based on priority (potential for future impacts) and funding availability. Cattle grazing has not occurred on this allotment in over seven years so any impacts to riparian habitat from cattle grazing are currently not evident. BLM’s objective would be to improve the condition of these important riparian resources and avoid or substantially reduce future potential impacts from cattle grazing if a given riparian areas is determined to display unacceptable impacts from cattle grazing. Typical tools used to accomplish this objective include fencing, adding additional troughs, re-routing pipelines systems and placing shut-off devices (floats) within the water delivery system.

Monitoring of riparian vegetation and water quality could also identify degenerative impacts of cattle intrusion in riparian areas and result in additional mitigation measures. Fencing has already been constructed to protect selected riparian areas on the Round Mountain Allotment. A riparian enclosure fence on the Round Mountain Allotment along Cottonwood Creek has had

positive results. If any water gaps are identified in the future in conjunction with riparian area fencing, they would be located in areas least prone to bank erosion.

Another measure instituted under the proposed action to avoid or minimize impacts to riparian areas is the prohibition of salt and/or mineral blocks within one-quarter mile of creeks and springs.

b. Impacts of No Action

Under the no grazing alternative livestock grazing on this allotment would not resume and therefore any future impacts to riparian areas from livestock grazing would not occur.

c. Impacts of Modified Grazing

Under this alternative, impacts to the riparian habitat would be slightly less than under the proposed action, due to lower stocking rates, earlier removal from the allotment prior to new spring growth, and exclusion of the Deep Creek area from potential grazing.

3. Consultation

None.

4. Maps

N/A

5. References:

Prichard, Don et al. 2003. A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas. TR 1737-16. Bureau of Land Management. BLM/RS/ST-03/001+1737, Denver, CO. 109 pp.

O. WILD AND SCENIC RIVERS

1. Affected Environment

The proposed action or any alternative would have no affect on wild and scenic rivers because no wild and scenic rivers are present or influenced by grazing activities in the Round Mountain Allotment.

P. WILDERNESS

1. Affected Environment

The proposed action or any alternative would have no affect on wilderness because no wilderness areas or wilderness study areas are located within or adjacent to the Round Mountain

Allotment.

Q. WILD HORSES AND BURROS

1. Affected Environment

The proposed action or any alternative would have no affect on wild horse and burros because no wild horse and burros are present in the Round Mountain Allotment.

R. WILDLIFE

1. Affected Environment

a. Common Animals

Common species of animals found in most vegetation communities within the Round Mountain Allotment (see Vegetation, Affected Environment) include: mule deer (*Odocoileus hemionus*), woodrats (*Neotoma* spp.), badger (*Taxidea taxus*), white-tailed antelope ground squirrels (*Ammospermophilus leucurus*), desert cottontail (*Sylvilagus audubonii*), kit foxes (*Vulpes macrotis*), and coyotes (*Canis latrans*). Common bird species include Gambel's quail (*Lophortyx gambelii*), scrub jay (*Aphelocoma coerulescens*), loggerhead shrike (*Lanius ludovicianus*), and mountain chickadee (*Parus gambeli*). Some common reptiles include the southern alligator lizard (*Elgaria multicarinata*), western whiptail (*Cnemidophorus tigris*), gopher snake (*Pituophis melanoleucus*), and the southern pacific rattlesnake (*Crotalus viridis helleri*).

b. BLM Sensitive Wildlife Species

Three sensitive wildlife species (two birds and one reptile) occur on lands proposed for the resumption of grazing. Their regulatory status and habitat preference are indicated in Table 8. The gray vireo and horned lizard prefer juniper woodlands; however due to the 1999 Willow Fire large extents of this habitat burned and have not recovered. The WMP includes amendments to the Juniper Flats ACEC that incorporate monitoring and adaptive management practices to minimize habitat loss and reduce other threats to the gray vireo and San Diego horned lizard. It is currently unknown to what extent the undeveloped spring sources or creeks provide habitat that is used by these or other BLM-sensitive species.

Table 8. Sensitive Wildlife Species Within Round Mountain Allotment

Species Name	Regulatory Status	Preferred Habitat
Gray Vireo (<i>Vireo vicinior</i>)	BLM Sensitive; California Species of Special Concern	Arid slopes dominated by short, densely branched, stiff-twigged shrubs
Golden Eagle (<i>Aquila chrysaetos</i>)	BLM Sensitive; California Fully Protected	Mountainous Terrain, Cliffs

San Diego Horned Lizard (<i>Phrynosoma coronatum blainvillii</i>)	BLM Sensitive; California Species of Special Concern	Areas with loose, fine soils. Found in juniper woodland, mixed Mojave & chaparral >3,000 ft.
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c. Threatened or Endangered Wildlife Species

No federally or State-listed wildlife species or their designated habitat has been identified within the Round Mountain allotment. The desert tortoise (*Gopherus agassizii*), a federally- and State-listed reptile, is widely distributed across the California desert but is not known to occur in this allotment.

2. Environmental Consequences

a. Impacts of Proposed Action

Common Animals

Most wildlife species are mobile and can avoid being trampled by cattle. Impacts to wildlife are typically indirect. Cattle may impact wildlife indirectly by modifying habitat on which wildlife depend. Cattle 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 salt licks and watering holes where cattle congregate. Soil compaction typically occurs along cattle trails, however this compaction is very localized and limited and the impact to common animals is generally negligible. BLM’s enforcement of land health standards on this allotment will serve to ensure that adverse impacts to common wildlife are avoided or substantially reduced.

This allotment contains mule-deer winter range. Range quality had been routinely monitored prior to the Willow Fire. This mule-deer range monitoring would resume under the proposed action. Previous monitoring of important mule-deer browse species revealed light use by cattle, and therefore little forage competition.

Sensitive Wildlife Species

Direct impacts are not anticipated to occur to sensitive wildlife. The sensitive species listed in Table 7 are mobile and can avoid being injured. Indirect impacts are the same as for other wildlife. Although cattle can degrade habitat, impacts are localized. Therefore, grazing is not anticipated to result in substantial adverse impacts to the three sensitive wildlife species listed above.

b. Impacts of No Action

Under the no grazing alternative livestock grazing on this allotment would not resume. Future impacts from cattle grazing to native plant communities, which provide habitat for wildlife species, would not occur.

c. Impacts of Modified Grazing

Under this alternative, there would be slightly lower impacts to common and sensitive species and their habitat on the Round Mountain Allotment than the proposed action, because of a lower stocking rate and no early spring grazing.

3. Consultation

U.S. Fish and Wildlife Service. 2006. Biological Opinion for the California Desert Conservation Area Plan [West Mojave Plan] (6840(P) CA-063.50) (1-8-03-F-58).

4. Maps

See Map 2.

5. References:

U.S. Bureau of Land Management. 2006. West Mojave Plan Amendment. Moreno Valley, CA

4. CUMULATIVE ANALYSIS

Bureau of Land Management regulations implementing NEPA require that the cumulative impacts of a proposed action be assessed. CEQ regulations implementing the procedural provisions of NEPA define cumulative effects as: "The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." (40 CFR 1507)

This cumulative analysis tiers off of the Cumulative Analysis found in the West Mojave Proposed Plan/Final Environmental Impact Statement (January 2005) for San Bernardino County and adjacent areas. The cumulative analysis in this document therefore does the following:

- Briefly summarizes the West Mojave cumulative analysis as it relates to grazing issues;
- Focuses on information from activities other than grazing specifically occurring within the Round Mountain grazing allotment and that may contribute to cumulative effects from the proposed action or alternatives, as appropriate, and
- Discusses resource-specific cumulative effects for the Round Mountain grazing allotment.

Where there has been no change in the previous analysis the conclusions of the previous document are briefly summarized and the reader is referred to the West Mojave Proposed Plan/FEIS for more detail.

1. Summary of West Mojave Plan Cumulative Analysis

The West Mojave Plan described the current environment of the planning area as having been broadly influenced by past activities occurring prior the passage of FLPMA in 1976, such as development of major highways, railroads, and communities in the region. Other important activities related to the baseline condition of the planning area have included the Land Tenure Adjustment Program, mining, military use, recreation, lands actions, wildfire, special area designation and management, and livestock grazing (Proposed Plan/FEIS, Chapter 3).

West Mojave Plan further addressed recent and reasonably foreseeable future changes in land use resulting from FLPMA and other resource management related laws, including State and Federal Endangered Species Acts and the California Desert Protection Act, and the Fort Irwin expansion legislation (Proposed Plan/FEIS, pages 4-135 to 4-141). West Mojave Plan considered BLM's six CDCA regional plan amendments that were approved or under preparation as key determinants of environmental conditions (Proposed Plan/FEIS, pages 4-139 and 4-140).

The West Mojave Plan specifically recognized the cumulative conservation benefits of other past actions by Congress in setting aside large areas within the CDCA for parkland, non-surface disturbing military use, the desert tortoise natural area, and wilderness; benefits derived from designation by US Fish and Wildlife Service of millions of acres of critical habitat in the CDCA. In addition, the West Mojave plan identified benefits resulting from the implementation of management actions established under BLM land use planning for six regional plan areas in the CDCA. In the West Mojave planning area, these benefits included mineral withdrawals, voluntary grazing relinquishments, elimination of ephemeral grazing, and ACEC management for special status species. The plan also acknowledged cumulative adverse impacts, particularly to wildlife in incidental take areas, from factors such as urban-interface conflicts, use within adjacent OHV Open Areas, and the Fort Irwin expansion.

The West Mojave Proposed Plan discusses factors that affect both forage availability and use, and grazing use in cattle allotments, including the Round Mountain grazing allotment, as well as the cumulative effects of grazing management in the region. These effects are discussed relative to past, present, and reasonably foreseeable actions that would occur as a result of grazing management within the parameters of the West Mojave Plan.

Cumulative effects for the following resources and activities/uses are identified in the West Mojave Plan that also affect or are affected by grazing in the Round Mountain grazing allotment: vegetation and wildlife; watershed values, water quality, cultural resources; vehicle access; and socioeconomic resources. In addition, new legislation facilitating alternative energy development and expansion of energy corridors, as well as other large-scale resources or uses specific to the Round Mountain grazing allotment are addressed in this cumulative analysis. The cumulative treatment will focus on how the adoption of the **Proposed Action** would modify the cumulative effects with respect to these factors.

The cumulative effects region for effects of grazing management for the Round Mountain Allotment and other past, proposed, and reasonably foreseeable actions varies by resource as noted herein. There are two main analytical frameworks considered in this cumulative effects analysis of grazing management in the Round Mountain Allotment:

- Grazing management activities or activities with similar impacts to grazing management (those activities that can or do modify forage availability and public land health) that are occurring within the Round Mountain grazing allotment and the cumulative effects region;
- Other activities within the Round Mountain Allotment that similarly affect (as does grazing management) specific resource values and uses.

2. Past, Present, and Reasonably Foreseeable Actions affecting the Round Mountain Allotment

One of the CDCA Plan (1980) decisions included designations of allotments and associated levels of AUM (numbers of animals). Allotment management plans were developed for each allotment to manage livestock and use of resources associated with grazing. These allotments and associated animal numbers were reviewed in the West Mojave Plan (2005) and other bioregional plans in southern California and in some cases, boundaries or uses were modified or eliminated, or AUM was adjusted.

In addition to the activities discussed in the cumulative effects analysis in the West Mojave Plan, there have been substantial actions and proposals that have resulted in or have the potential to add to cumulative impacts for one or more resources being affected by grazing management in the Round Mountain grazing allotment. A listing of the most substantial of these follows. Whether or not these are individually mentioned, they have or have the potential to contribute to cumulative effects, based on the amount of land base they may affect or change in land use they could produce, not only within their boundaries, but regionally (at least indirectly).

- **Sensitive Spp Inventory**
- **Juniper Flats Route Rehabilitation and associated route signing**

The BLM's multiple use mission typically results in a variety of activities that are authorized to occur on the same lands, consistent with designations for geographic-specific planning units within the land use plan (California Desert Plan, 1980, as amended). Activities that overlap the Round Mountain grazing allotment include: approval and use of the utility corridor H designated in the 1980 California Desert Plan, multiple (3) Round Mountain communication sites, casual-use recreational activities (i. e. hunting, picnicking, camping, hiking, motor-vehicle touring and rock hounding), off-highway vehicle (OHV) Open Area organized use, small mining operations, and scientific study. Many of these activities were occurring in some manner or in existence prior to the development of the CDCA land-use plan, such as the historic LADPW power lines in utility corridor H that link Los Angeles and Las Vegas, small mining, and casual-use recreation activities.

The Bureau minimizes disturbances through the planning and associated NEPA process as well as through subsequent site-specific NEPA compliance. With respect to planning decisions, all areas are designated based on the spectrum of resource use vs. resource protection within the multiple-use mandate of FLPMA. In addition, resource-specific allocations have been made across broad landscapes in the land-use plan.

For instance, large linear utility projects have been identified for co-location in specific designated utility corridors to minimize potential surface disturbances outside of those corridors. Routes of travel have been designated for casual recreational vehicle use to minimize off-route impacts. OHV Open Areas have been designated for organized and intensive recreational uses and other activities compatible with those recreational uses. Other areas have been identified for sensitive resource protection, special management actions beyond those identified in the CDCA Plan, or to define parameters for areas with potentially conflicting uses. Mining operations in the California Desert Conservation Area (wilderness, multiple-use class Limited, special areas) require a plan of operations regardless of size, and in any event, where a SMARA plan is required (over 1 acre). In addition, several livestock allotments were identified and allotments were designated for particular landscapes, including numbers and types of livestock, types of forage management, and grazing seasons of use.

The Round Mountain cattle allotment was one of the allotments designated in the CDCA Plan, and a subsequent allotment management plan was written. Subsequently, new parameters were identified through the West Mojave Plan that has been incorporated into the current proposed action for the Round Mountain allotment. Impacts from grazing management may be short term (for example, impacts resulting from construction of new range facilities) and long term (impacts resulting from continued grazing). Both the short-term and long-term impacts are consistent with the analysis of the West Mojave Plan. When added to effects identified in the West Mojave Plan and effects of other actions on the allotment, the cumulative impact of the proposed action would not be significant as summarized below.

3. Resource-specific Cumulative Assessment

This environmental assessment concludes that no significant impact would result from the proposed grazing permit renewals or other alternatives. Impacts to the following 11 critical resources and other resource uses and values of the human environment are minimal, as described below:

- 1) Areas of Critical Environmental Concern. Affects to specific resources within ACEC that would not affect importance or relevance for ACEC designation are discussed under the appropriate topic.
- 2) Protection of Native American values has not been identified by tribes as an issue during consultation. Concerns about prehistoric cultural sites were identified by one of the tribes, and are addressed under cultural resources.
- 3) Environmental Justice Issues are not present within the allotment.
- 4) Prime or unique farmlands are not present within the allotment.
- 5) Floodplains are not present within the allotment.
- 6) Hazardous or solid wastes are not present, based on federal and State regulations that are associated with grazing. Affects to water quality from grazing are discussed under that topic.
- 7) Wild and scenic rivers are not present.
- 8) Wild horses and burros are not present.
- 9) Air quality impacts are not contributing to air quality exceedances under any alternatives and are consistent with the State Implementation Plan.
- 10) Wilderness is not present.
- 11) Recreational use would not be substantially adversely affected by grazing activities because grazing activities have not affected overall recreational opportunities, impacts from viewing cattle or horses, and associated structures are subjective, and any past, present and reasonably foreseeable cumulative affects from the proposed action on recreation would be nominal.

Impacts described in this EA include insignificant impacts to biological resources, invasive species, cultural resources, social and economic values, soils, water quality, wetlands and riparian areas. These impacts have been determined to be insignificant because both the short-term and long-term impacts are consistent with the analysis of the West Mojave Plan, contributions from grazing are insubstantial as compared to other effects that contribute to cumulative impacts, and substantial cumulative effects have been offset by substantial positive

strategies identified in the West Mojave Plan. When added to effects identified in the West Mojave Plan and effects of other actions on the allotment, the cumulative impact of the proposed action would therefore be insignificant as summarized below:

Biological Resources

The past, present, and reasonable foreseeable future cumulative impacts of cattle grazing on plants and wildlife in the West Mojave Bioregion are anticipated to decrease due to the implementation of the West Mojave Plan. The proposed voluntary relinquishment of three grazing allotments totaling over 248,000 acres would reduce the overall cumulative impacts of grazing to biological resources in the West Mojave.

Some loss of plant and wildlife will still occur. Slower, less mobile wildlife species may not be able to escape being injured or killed by cattle, particularly because of small-mammal burrow collapse. The likelihood of such losses is small away from cattle congregating areas (i.e. rangeland waters). In cattle concentration areas, the density and frequency of animals increases the likelihood of direct loss. Some plant species, particularly attractive cattle browse species, will suffer reduced growth and reproduction potential.

However, these losses are small when compared to those that may occur from other desert activities, such as direct mortality and vegetation loss from fast moving recreational vehicles or construction-related losses from the use of heavy equipment in and around the allotment.

Indirectly, casual and organized OHV use, other recreational activities, and construction and related activities have the potential to degrade habitat by removing vegetation, and degrading areas through compaction of soils and elimination of microclimates that facilitate re-vegetation. Habitat is impacted by recreational vehicles in localized areas where favorite trails or hill climbs exist, at OHV staging areas, and at well-used camping areas. A power line crosses the allotment, and has resulted in the loss of habitat for construction and an associated maintenance route. Past mining activities have resulted in one fairly large localized area of intense disturbance and several small localized disturbances within the allotment. Rural development on adjacent private lands has also resulted in habitat loss. Grazing in cattle concentration areas contributes to the localized adverse effects to wildlife habitat. Rehabilitation of localized disturbances occurs more quickly in the moister, more productive environment of the Round Mountain allotment than in hotter and dryer parts of the West Mojave. With the exception of the un-reclaimed mine site, these localized impacts have not resulted in substantial adverse damage to wildlife habitat.

Wildfire, on the other hand, has resulted in large-scale short-term and long-term impacts in the allotment and has been a recurring part of the ecological system due to favorable climatic conditions. Although, natural wildfire is an expected occurrence in these vegetative communities, several factors have contributed to increased frequency and extent of wildfire. Primary factors are risks from growing population centers in mountain communities nearby, and increasing numbers of arson fires. Other factors include permanent changes to vegetation communities due to slow fire recovery, and increasing non-native invasive populations. Wild fire has had a recurring and cumulatively significant adverse affect on wildlife habitat in this area. Other impacts may indirectly contribute to wildfire occurrence and severity, including

grazing management, but the overall effect of grazing on wildfire has been insubstantial when compared to other factors.

The designation of routes in the West Mojave planning area will reduce cumulative impacts, including direct wildlife losses and long-term habitat degradation. Particularly positive is the impact reduction that occurs from the closure of substantial mileage of routes. Not only are rehabilitated areas improved, but also additional areas that are no longer readily accessible by vehicle are improved. When rangeland health standards are met throughout allotments, forage is left for herbivorous wildlife and grazing does not contribute substantially to adverse impacts to wildlife habitat. When rangeland health standards are not met and if wildlife forage species are adversely affected, corrective actions are recommended to avoid long-term cumulative effects to wildlife habitat.

Invasive Species

Past and present grazing practices are one of several activities that have negatively impacted native plant communities on portions of grazing allotments in the West Mojave. As discussed above, there are other activities such as casual and organized OHV use and construction activities that occur on public land that also contribute to the degradation of native plant communities. Fragile, plant communities require periodic rest from anthropogenic pressures to maintain long-term stability. The proposed action would allow some level of periodic rest from anthropogenic pressures through the seasonal limitation on grazing use of the allotment.

The spread and establishment of non-native invasive species occurs through a variety of man-made and natural mechanisms, including grazing or other disturbances that promote non-native species over natives. Grazing is a relatively small contributor to non-native species spread, because of the relatively small areas of substantial disturbance. Impacts from non-native species are partially offset by the management of invasives and activities and parameters on permits and leases to minimize the potential for non-native establishment and recruitment, such as through planting of native species and spraying areas to prevent non-native establishment.

Cultural Resources

Most known sites that have been adversely affected are as a result of either natural weathering or vandalism. Vandalized sites include cultural resources that have been removed, scratched with hard sharp rock, or had modern graffiti added to obscure the prehistoric or historic cultural values, and sites on the ground that have experienced substantial damage from OHV use off of designated routes. In much of the allotment where livestock are more dispersed or in rock areas without sufficient feed, impacts would be restricted to surface displacement or hoof action on subsurface midden areas, and impacts from grazing are anticipated to be minimal.

Grazing is known to cause movement and mixing of cultural resources in areas where livestock congregate on allotments, including the historic ruins near Cottonwood Spring in the Round Mountain Allotment. This site has been fenced to protect it from cattle damage. Approximately 10% of the known sites are found in active allotments and these sites have been subject to grazing for many years without documented damage. Sites with documented damage from

grazing would be fenced or otherwise protected until their importance can be determined, and appropriate mitigation, such as data recovery performed on valuable sites.

Only a few sites have documented damage from grazing in the West Mojave, while substantial damage has been documented by vandalism or OHV-related casual use. Impacts resulting from the proposed grazing permit renewal are not expected to add any further adverse impact to known sites. The combined impact would be insignificant, both incrementally and cumulatively, because BLM will implement procedures in accordance with amended 2004 State Protocol Agreement to insure compliance with section 106 of the National Historic Preservation Act.

Social and Economic Values

There would not be substantive cumulative impacts to the local or regional economy of San Bernardino County from the implementation of any of the alternatives. Farming and ranching in the West Mojave region continue to decrease in land area, numbers of operations, and numbers of animals, regardless of these lease renewals or non-renewals. These downward trends are anticipated to continue in San Bernardino County as in most parts of the country, and are the result of downward pressures on production costs of agricultural products as farm production increases in other parts of the world, as well as regional upward pressures for non-rural development activities for residential and commercial enterprises. The past, present, or future gross domestic product contributions of these operations to the local or regional economy are nominal and are expected to continue to decrease as a percent of the total regional economy.

In conjunction with the increasing non-rural development of the region, OHV use has been steadily increasing over the past 10 years. This use is anticipated to further increase in the Round Mountain allotment and surrounding areas, as urban development in the Apple Valley and surrounding Victor Valley areas continues. Local private-property owners within and adjacent to the allotment boundaries have expressed concerns about how OHV use may affect their private property, as well as the cumulative effects of rangeland management activities, increasing residential use, and related recreational use in the area.

Soils

The past, present and in the reasonably foreseeable future cattle grazing operations will continue to have a localized, cumulative impact on soils in congregation areas such as water sources and corrals. Other land uses also contribute to compaction and accelerated erosion both on a localized scale and on a broader scale.

These cumulative impacts to soils are similar to those for vegetation. Indirectly, casual and organized OHV use, other recreational activities, mining, and construction and related activities have the potential to modify soil structure, increase erosion potential, decrease re-vegetation potential, and adversely affect biological soil crusts. Impacts to soils from OHV activities may be substantial in localized “areas and on the route network, but are generally low to moderate over broad areas. However, off-route impacts from OHV use to biological soil crusts (BSC) which can result in the burial of those crusts—including when soil moisture is low—may have fairly substantial effects on the sustainability of sensitive BSC populations within the allotment.

Rehabilitation of soil productivity can be enhanced through de-compaction of soils in heavily used areas and providing microclimates for plant seedlings, thereby decreasing erosion potential over the long-term.

The designation of routes will reduce cumulative impacts to soils. Particularly positive is the impact reduction that occurs from the closure of substantial mileage of routes. Rehabilitated areas are improved by reduced erosion and elimination of compaction, and additional areas that are no longer readily accessible by vehicle are improved.

Water Quality/Ground and Surface

Perennial water sources are rare in the West Mojave Desert. Past grazing practices have also adversely affected water quality at small isolated springs, primarily from increased dissolved solids and elevated fecal coliform levels. Current grazing practices include protection of all natural water sources. Those used as watering sites for cattle include pipes and troughs away from the natural water source to protect water quality. These protections would continue in the future under any alternative that authorizes cattle grazing. Past areas adversely affected by grazing either have recovered or are on the way to recovery. Reasonably foreseeable impacts from the proposed action would be addressed through regular monitoring and additional protection measures to maintain or improve rangeland health, as needs are identified. Therefore there are minimal cumulative effects to water quality from grazing.

In conjunction with the increasing non-rural development of the region, water quality may be degraded directly in the region by increased runoff from disturbed areas and associated sedimentation, and indirectly by associated infrastructure development and use. These impacts are anticipated to further increase in the areas surrounding the Round Mountain Allotment, as urban and semi-urban development in the Apple Valley and surrounding Victor Valley and Lucerne Valley areas continues. Therefore, development is likely to have a significant cumulative effect on water quality within the region. Strategies for management and oversight of these impacts are the responsibility of the Lahontan Regional Water Quality Control Board.

Water use and overuse is a substantial issue in the desert. Overall, extractions from aquifers from all sources have been steadily increasing to the point that the aquifers overall may be overdrafted in the Mojave River Basin. The contribution of the livestock industry to regional water use is declining over time, is not a substantial percentage of the total water use, and existed before overdraft conditions began. It is anticipated that this trend will continue. Therefore, from a regional perspective these developments represent a nominal cumulative impact to water resources, and the decreased water use by the livestock industry provides a small offset to increases from other segments of the economy.

Wetlands/Riparian

Riparian areas within the allotment consist of small natural springs, one improved spring, as well as multiple high-elevation ephemeral drainages. In the Round Mountain Allotment ephemeral drainages are fairly substantial in the winter months due to higher elevations and additional localized rain and snowmelt run-off within the allotment.

Springs may be subject to both man-made and natural impacts. Other activities authorized by the Bureau are not anticipated to adversely impact springs but they may be subject to impacts from casual users, including OHV recreationists and equestrians. There is foot traffic to many springs to picnic and enjoy the shade, flora and fauna. Foot traffic also increases in the vicinity of some of the springs during hunting season, but has not resulted in cumulative effects to riparian vegetation. The fencing of a popular spring in the Round Mountain Allotment has reduced impacts from both cattle and humans coming to enjoy what the spring has to offer. Earthquakes are a frequent occurrence in the West Mojave and can result in new springs, or an increased or decreased flow at existing springs.

Springs have been developed and water wells have been dug within the West Mojave area for domestic and livestock for over 100 years. There have been localized riparian impacts in the past to springs from grazing activities due to trampling and promotion of invasive species, but these impacts do not substantially contribute to cumulative effects in the West Mojave due to fencing and other mechanisms to avoid or reduce impacts. On a regional basis, there may be localized cumulative impacts from grazing to spring resources based on the overall volumes extracted over time and recharge rates, and consequential loss of riparian vegetation and habitat associated with springs. This is not an issue on the Round Mountain Allotment. In addition, as livestock grazing operations in the West Mojave planning area continue to decrease, both in numbers of animals and in the number of viable ranching operations that remain, impacts to spring resources from grazing will continue to decrease, and therefore do not contribute to cumulative impacts to spring and riparian resources.

Grazing Management

Temporary limits on grazing in areas not meeting rangeland health standards may have a short-term adverse affect to grazing operations at a local level, but would not affect the majority of the land base within grazing allotments. There are no identified long-term cumulative impacts to livestock grazing from the implementation of the proposed action. In the Round Mountain allotment, the Modified Grazing Alternative would modify grazing numbers and season of use, resulting in nominal impacts to grazing. The current larger regional trend of reduced agriculture and ranching in the West Mojave is the result of economic and development pressures unrelated to the proposed action or the small changes identified in the Modified Grazing Alternative.

The no grazing alternative would have a small negative present and reasonable foreseeable future cumulative impact on the livestock industry in the Mojave Desert by cumulatively adding to the current trend of reduced ranching presence on a regional basis. This impact is relatively large on an individual basis, given the overall downward trends of local ranching as a segment of the economy and historic settlement of the region, and the relatively few remaining operations. However, it is not a significant trigger or accelerant of the decline of ranching industry, because it is unlikely any reasonable strategy can reverse the overall trend away from agriculture and ranching in the region.

5. CONSULTATION AND COORDINATION

A. Participating Staff

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B. Consultation

Affected grazing lessees, interested publics and affected Native American tribes.

