

**ENVIRONMENTAL ASSESSMENT  
LIVESTOCK GRAZING AUTHORIZATION**

**CA-680-06-79**

**Allotment Name: Valley Well**



**BARSTOW FIELD OFFICE  
MARCH 2007**

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## **CHAPTER 1: INTRODUCTION**

### **A. Summary**

The Bureau of Land Management (BLM) proposes to issue a 10-year lease to authorize horse grazing on the Valley Well Allotment in accordance with laws and policy described in the Purpose and Need section below. The allotment is located in rural San Bernardino County, approximately eight miles south of the City of Barstow, adjacent to State Route 247. The following is a summary of the current authorization:

Public land acres in allotment: 520  
Kind of livestock: Horses  
Ephemeral or perennial: Perennial/ephemeral  
Plan Area: West Mojave  
Current authorized use: 24 AUMs  
Acres Critical Habitat: 520 (public land only)  
DWMA\* Acres in allotment: 520 (public land only)  
Identified for Voluntary Relinquishment: No

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**

The grazing lease for the allotment (a horse holding pasture) expired at the end of the 1999 grazing year (February 28, 2000). The grazing lease was renewed under the authority of Public Law 106-113; the duration of the grazing lease renewal was five years, and it contained the same terms and conditions as the expired grazing lease. Public Law 106-113 requires compliance with all applicable laws and regulations, which include the National Environmental Policy Act (NEPA) and the Endangered Species Act of 1973, as amended (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.

On January 19, 2001 BLM and a consortium of environmental groups enter into a stipulated agreement effective on that date (Settlement Agreement) for the management of livestock grazing. The Settlement Agreement prescribed “interim measures;” however, the stipulated agreement did not apply to the Valley Well allotment.

On March 1, 2005 the grazing lease for the allotment expired again. An application for lease renewal was received from the lessee. Livestock grazing continues under provisions of the Administrative Procedures Act (APA), during the processing of this application for lease renewal.

### C. Tiering to Existing Land Use Plan/EIS

This environmental assessment (EA) is tiered to the West Mojave Plan (WMP) Final Environmental Impact Statement (FEIS) of January 2005, and provides site-specific analysis at the allotment level. Tiering helps focus the EA more sharply on the important issues related to grazing on the allotment while relying on WMP analysis for background. Analysis of environmental issues previously considered and addressed in the WMP plan is 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 the 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 of 1976 (FLPMA).

As part of the CDCA 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 livestock grazing within habitat of the federally threatened desert tortoise (*Gopherus agassizii*); monitoring requirements; and specific management prescriptions for desert wildlife management areas (DWMAs) such as the elimination of ephemeral authorizations and the implementation of an ephemeral forage production threshold of 230 pounds per acre (pages 2-127,128). The EA analyzes the specific application of the programmatic management prescriptions of the WMP and considers alternative means to achieve the purpose and need on this allotment.

2. WMP considered a range of alternatives for the public land livestock grazing program 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” alternative). A no grazing alternative is considered to address voluntary relinquishment and subsequent designation of the allotment as unavailable for grazing. 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 WMP. Analysis addressed the impacts of livestock grazing on a wide range of resource topics, including impacts to air quality, soil, vegetation, wildlife, and cumulative impacts. This regional analysis is incorporated by reference (WMP FEIS, pages 4-4 thru 4-282); general discussion of these impacts will not be repeated. This EA analysis will focus on the specific environmental issues associated with areas where horses congregate on the allotment, and areas of special status species or critical habitat that may be affected by grazing on this allotment. Discussion of the specific topics analyzed in the EA, as well as other resource topics addressed regionally (but excluded from further analysis

in the EA) is contained in Chapter 3.

4. WMP balances conservation with public use, occupancy, and development on a regional level. For example, Areas of Critical Environmental Concern (ACECs) and desert wildlife management areas (DWMAs) are established; routes of travel on public lands designated open, limited or closed to motorized vehicles, and other management prescriptions are provided to guide multiple use management. BLM proposes specific lease terms and conditions to ensure that an appropriate multiple use balance is maintained on this allotment, while providing for resource conservation within the context of the CDCA Plan as amended by WMP and the scope of the Biological Opinion for the California Desert Conservation Area (West Mojave Plan) (1-8-03-F-58, January 9, 2006) and subsequent reinitiation. In addition, BLM may use its authority to close areas of the allotment to grazing use or take other measures to protect resources as needed. Therefore, issuance of a “fully processed” grazing lease with such applicable terms and conditions is necessary to manage the public’s use, occupancy, and development of the public lands and prevent unnecessary or undue degradation of the lands (per 43 USC 1732[b]).

#### **D. Purpose and Need**

The purpose of the proposed action is to complete a site-specific evaluation of proposed grazing on the Valley Well Allotment which provides information as required by the Bureau of Land Management implementing regulations for the National Environmental Policy Act, Taylor Grazing Act, Public Rangelands Improvement Act, Federal Land Policy and Management Act, and Public Law 106-113 section 325 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 a proposal for grazing in compliance with the actions prescribed in the West Mojave Plan, dated March 13, 2006, the Biological Opinion of the California Desert Conservation Area Plan (West Mojave), dated January 9, 2006, and the proposed Regional Rangeland Health Standards. Action is needed to maintain or improve resource conditions including rangeland health.

#### **E. 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 that specifically pertain to the proposed action include:

*BLM will continue to administer existing authorizations and uses and will consider future requests consistent with this record of decision (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**

WMP does not identify the Valley Well allotment for voluntarily relinquishment. However, the lessee may request voluntary relinquishment of her lease at any time. Because the allotment was not identified for voluntary relinquishment, 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 future applications for lease by qualified applicants.

## **G. Consultation, Cooperation, and Coordination**

Consultation, Cooperation and Coordination on grazing within the West Mojave, including the Valley Well allotment has been extensive, as it has been conducted in the context of an extensive EIS process over many years. In 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 Valley Well 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 Barstow Field Office (BFO) mailed Chapters 1 and 2 of an administrative version of an environmental assessment (EA) for grazing within Valley Well allotment to the lessees and all interested publics, including pertinent Native American tribes. 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 BFO issued Proposed Grazing Decisions to the grazing lessees and all interested publics. Action on final decisions was deferred until after release of the WMP and Final EIS. These decisions, including the one issued for Valley Well allotment, were never finalized and will be vacated as part of the grazing lease renewal decision.

In January 2005 the final EIS for WMP was issued to all lessees and interested publics for their review and comment. In March 2006, the California State Director of the BLM approved the Record of Decision for the WMP.

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 this allotment and other West Mojave allotments consistent with the guidance in the WMP.

On July 12, 2006 BFO issued a letter to the Valley Well allotment lessee informing her of the

status of the EA and anticipated time line for completion of the EA, issuance of the proposed and final decision and 10-year grazing lease, if appropriate.

On September 6, 2006, BFO met with the lessee for the Valley Well allotment to discuss the proposed action and alternatives as outlined in the administrative EA.

On December 20, 2006, a revised EA was sent to the lessee and the interested publics. Comments were received from four interested publics.

## **H. Relationship to Statutes, Regulations, and Plans**

A site-specific evaluation of the proposed allotment grazing lease renewal is required by BLM implementing regulations for NEPA, FLPMA, and the grazing regulations 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. In addition, additional consultation and coordination is required under certain laws. These are discussed below.

### **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 SHPO with the 2004 Grazing Amendment, Supplemental Procedures for Livestock Grazing Permit/Lease Renewal (see Attachment 1).

This amendment allows for the renewal of existing grazing permits prior to completing all NHPA compliance needs 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.

The lessee would comply with any future standard protective measures that may be developed for the protection of cultural resources upon further allotment inventory and determination of any additional protection measure needs for cultural resources.

### **2. Biological Opinions on the California Desert Conservation Area Plan**

During the development of the BO for the WMP, the USFWS believed that the Valley Well Allotment was degraded and in close proximity to human activities such that it contained neither desert tortoise nor the constituent elements of critical habitat. This analysis was based on discussions and associated documents between the USFWS and a former BLM biologist, and represented the best available information specific to this allotment during the WMP analysis. Therefore, although the WMP BO addressed the Valley Well allotment because it is within

desert tortoise habitat and Terms and Conditions for the WMP BO applied, the allotment was not included in the Incidental Take Statement (ITS) of the WMP BO.

Subsequent to the adoption of the WMP, BLM conducted follow-up verification surveys and based on their results has reinitiated consultation with the USFWS for this allotment. The survey concluded that the allotment contains suitable and occupied habitat for desert tortoise, and therefore does contain the constituent elements of critical habitat for the desert tortoise. Based on this new survey information, BLM has requested concurrence with BLM's determination that issuance of a fully processed grazing lease for the Valley Well Allotment is not likely to adversely affect the desert tortoise. BLM has also requested inclusion of the Valley Well Allotment under the WMP BO Incidental Take Statement (ITS).

### **3. Grazing Prescriptions Contained in the WMP Addressed to BLM**

a. Within 12 months after completing a Rangeland 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.

b. For the Valley Well Allotment the WMP states that ephemeral authorization would only be granted when ephemeral production exceeds 230 pounds per acre.

c. Allotments not voluntarily relinquished after 24 months from adoption of the plan would be scheduled for rangeland health assessment within 18 months.

d. A grazing strategy would be developed within a year and implemented within two years of plan adoption. The strategy would be a written plan detailing the area of removal, natural cattle movements, existing and potential improvements, and other constraints of cattle management.

e. Based on concerns expressed by management and grazing lessee(s), conduct a study of desert tortoise nutritional ecology in relation to livestock grazing, comparable to studies performed in the Ivanpah Valley during the late 1990s. If appropriate, modify grazing program in response to study findings.

## CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

This chapter discusses three alternatives including the proposed action, no action, and no grazing. Due to the small area and small number of livestock in the Valley Well Allotment, a reduced grazing alternative was not considered.

### A. Proposed Action – West Mojave Plan

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

#### 1. Livestock Numbers and Season of Use

**Table 1: Livestock Permitted Use for Valley Well Allotment.**

Allotment	#	Kind	Class	From	To	AUMs
Valley Well	2	Horse	N/A	March 1	February 28	24

#### 2. Livestock Management

Historically, the allotment has been managed as a seasonal domestic horse operation (holding pasture). When adequate forage is available, typically non-native annual plant species the lessee usually turns out two and on occasion four horses when ephemeral production is exceptionally abundant in the spring and fall for several months of continuous use. This pattern of use would continue under the proposed action.

Additional management actions may be required on this allotment to conform to fallback standards and guidelines. These actions would be based on recommendations contained in the Determination of Rangeland Health to be conducted for this allotment in 2008 or 2009, and would be used to address fallback standards and guidelines not being achieved at that time.

In addition, standard terms and conditions (e.g. requirement to perform normal maintenance on range improvements) contained in the existing (expired) grazing lease for this allotment would also be incorporated into this lease renewal. There are no additional terms and conditions directly related to livestock grazing on the Valley Well allotment contained in the WMP biological opinion. Additional terms and conditions are being required by the Authorized Officer based on recent surveys and associated conditions on the ground. These include all terms and conditions from the WMP that pertain to livestock grazing within DWMAs.

#### 3. Range Improvements

There is only one range improvement, the Valley Well Allotment boundary fence (#8641). There are no cross fences. There are no developed water sources within the allotment per se; the allotment is adjacent to the lessee's home, where a large trough has been placed within a small enclosure inside and immediately adjacent to the boundary fence. The trough is filled with water

from the lessee's residence when horses are using allotment.

No additional range improvements would be proposed. The allotment boundary fence would continue to be maintained by the lessee.

#### **4. Monitoring**

Under the proposed action, rangeland monitoring on this allotment would be implemented. Monitoring would be conducted in two categories. These categories are 1) short-term monitoring, and 2) long-term monitoring. One Key Area would be established for this purpose.

\* Short-term monitoring is used to gauge the cause-and-effect relationship of the current authorization. This type of monitoring consists of actual use, current climatic conditions and the collection of utilization data. Collection of grazing intensity (utilization) data is triggered by the growing season of key species and correlates with the phenology of key species. Observations of utilization on key species can provide an indication of the trend in range condition, which is the state of vegetative cover and soils in relation to a standard or predicted condition for a particular ecological site. BLM's Interagency Technical Reference – Utilization Studies and Residual Measurements (1996); defines a Key Area(s) are indicator area(s) that are able to reflect what is happening on a larger area as a result of on-the-ground management actions. A key area should be a representative sample of a large stratum, such as a pasture, grazing allotment, wildlife habitat area, watershed area, etc., depending on the management objectives being addressed by the study.

\* Long-term monitoring: Data is usually collected every two to three years. The collection of trend data is used for statistical analysis of vegetative attributes to determine 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 data are used to make adjustments to grazing as needed to accomplish desired management objectives and to improve rangeland health.

#### **5. Measures to Maintain or Achieve Standards (Terms and Conditions of Lease)**

The entire allotment is within critical habitat of the desert tortoise (*Gopherus agassizii*), a federally listed species. Desert Wildlife Management Areas (DWMA) are areas designated by the WMP for conservation and recovery of the desert tortoise and have a high degree of correlation to designated critical habitat areas. The entire Valley Well allotment is within the Ord-Rodman DWMA, on its western edge.

The allotment is being managed under the fallback standards and guidelines cited under 43 CFR 4180.2(f) (1). The achievement of these standards would be linked to conformance with the terms and conditions contained in WMP and other terms and conditions derived from both fallback and regional grazing guidelines.

To date, achievement of Fallback Standards and Guidelines for Livestock Grazing has not been assessed on this allotment. The assessment of indicators of rangeland health information is a

qualitative/quantitative method. Data is gathered by an interdisciplinary team who take 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 considered a long-term process, and typically occurs not later than every 10 years. Rangeland health assessments would be carried out on the allotment in 2008 or 2009 using BLM Technical Reference 1734-6 Version 4. The completion of a Rangeland Health Assessment is not required to fully process the renewal of a grazing lease.

Fallback Standards that would apply to this allotment are as follows:

1. Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, and landform.
2. Healthy, productive and diverse populations of native species exist and are maintained.

## **6. Proposed Grazing Stipulation**

### **a. WMP (FEIS 2-124 thru 2-136)**

Reasonable and prudent measures from the CDCA biological opinion (1-8-04-F-43R) would be incorporated as stipulations of the lease, along with the grazing prescriptions contained in the WMP and other stipulations required by the BFO Field Manager:

1. Only qualified personnel would be allowed to handle desert tortoises, conduct clearance surveys, and monitor compliance with other desert tortoise protective measures. Handling of desert tortoises by the lessee is prohibited.
2. The lessee would be required to notify BFO immediately upon any instance of “take” of a desert tortoise (as defined by ESA).
3. The lessee would be required to contact BFO immediately if a desert tortoise is found injured or killed by human activity. Grazing may continue pending a review of the incident by BLM and USFWS, provided the lessee has adhered to all other stipulations of the lease.
4. Utilization would be monitored at one key area in the center of this allotment. The Key Forage Plant Method (Technical Reference 1734-6) would be used to determine utilization levels. Utilization of key upland species would not exceed 25% for grazing that occurs during the growing season (between March 1 thru May 31 and October 1 thru November 30) or on areas that do not meet standards. Utilization levels on key upland species would not exceed 40 % between June 1 thru September 30 and December 1 thru February 28. When utilization levels exceed prescribed levels, the lessee would be required to remove livestock from the allotment.

As noted in the following table (from page 2-124 of WMP), rangelands in good condition and that are grazed during the dormant season can withstand higher utilization levels. Poor condition rangelands or those grazed during the active growth season would receive lower utilization levels.

**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
Mojave Desert Scrub	25	40

5. Within the Valley Well allotment, all livestock carcasses found would be removed 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.

6. No ephemeral authorizations shall occur within DWMAs, including the Valley Well Allotment. The Valley Well Allotment is currently capable of authorizing ephemeral and perennial forage for horse use, and under this proposed action would be designated for perennial forage use only.

7. If the lessee or her designee creates hazards to the desert tortoise such as auger holes or trenches, such hazards would be eliminated before the rancher, contractor, or work crew leaves the site.

8. Issuance of temporary non-renewable (TNR) grazing permits shall be prohibited in the Valley Well allotment.

9.. When ephemeral forage production<sup>1</sup> is less than 230 pounds per acre, the lessee shall be required to removed livestock from the Valley Well Allotment.

**b. Other Proposed Stipulations**

10. The lessee would place supplements (salt/and or mineral blocks) no closer than ¼ mile of the water source, cultural sites, or desert tortoise burrows. The lessee would notify BLM of the proposed location(s) prior to placement.

11. Normal maintenance of range improvements is the responsibility of the lessee.

12. Submission of actual use reports are to be received by the Barstow Field Office within 15 days after the end of the grazing authorization. Actual use reports are required to provide detailed location and number of livestock.

13. The terms and conditions of this lease would be modified if additional information derived from Rangeland Health Assessments indicates that revision is necessary to conform to 43 CFR

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<sup>1</sup> The *ephemeral production threshold* should not be confused with *ephemeral authorization*. The 230-pound *ephemeral production threshold* is intended to avoid competition between cattle and tortoises in years of poor rainfall and plant growth. *Ephemeral authorization* is different, in that it allows the lessee to increase the stocking rate during years when ephemeral plant growth is abundant. Whereas, ephemeral authorization would allow more cattle to be grazed (only outside DWMAs), the ephemeral production threshold would trigger the removal of cattle from Exclusion Areas (only inside DWMAs).

4180.2.

14. 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.

Fallback Guidelines:

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), cultural sites, and known desert tortoise burrows. The lessee would notify the BLM of the proposed location prior to placement.
2. In years when weather results in extraordinary conditions (such as extreme drought), BLM may require the lessee to modify grazing to allow seed germination, seedling establishment, and reproduction of native plant species.
3. During prolonged drought BLM would require the lessee to reduce stocking rates as needed.

Regional Guidelines from WMP

1. The lessee would place supplements (salt/and or mineral blocks) a minimum of a quarter mile from natural water sources (such as wetlands, riparian areas, and springs), cultural sites, and desert tortoise burrows. The lessee would notify BLM of the proposed location prior to placement.
2. In years when weather results in extraordinary conditions BLM may require the lessee to modify grazing to allow seed germination, seedling establishment, and reproduction of native plant species.
3. During prolonged drought BLM would require the lessee to reduce stocking rates.

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

**B. No Action Alternative**

Under this alternative, BLM would renew the grazing lease under the existing terms and conditions, including those derived from the March 15, 1994, biological opinion for the management of livestock in habitat of the desert tortoise that were issued prior to the West Mojave Plan (WMP), and the grazing guidelines contained in 43 CFR 4180. In most respects concerning on-the-ground management, including Livestock Numbers, Season of Use, and

Range Improvements, this alternative would be the same as the proposed action. Grazing utilization thresholds would not vary by season of use under this alternative as they would under the proposed action, and prescriptions contained in the WMP for livestock grazing within DWMA would not apply.

Terms and conditions from the 1994 BO (1-8-94-F-17) instead of the WMP BO would be implemented under this alternative. Both the 1994 BO or the WMP BO have general terms for the grazing of livestock in desert tortoise habitat, but neither BO has measures specific to Valley Well Allotment.

### **1. Existing Grazing Stipulation**

1. The lessee shall comply with the grazing stipulations derived from the 1994 biological opinion (1-8-94-F-16) contained in Attachment 2.

(The grazing stipulations listed in Attachment 2 contain restrictions on utilization levels, stipulations related to the construction and maintenance of range improvements and disposition of livestock carcasses).

2. The lessee is required to perform normal maintenance on all range improvements located on public land within the Valley Well Allotment.

3. The terms and conditions of this lease may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180.2.

4. 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. No Grazing Alternative**

This alternative would not authorize livestock grazing and would initiate a process in accordance with the 43 CFR 4100 regulations to eliminate grazing and make the Valley Well Allotment unavailable for grazing. If the lessee submits a request for voluntary relinquishment of the lease for this allotment at any time during the life of the lease, BLM will review the analysis contained in this EA for purposes of determining whether to accept such request. If conditions and circumstances remain substantially the same, no further NEPA document should be needed.

## 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:

- A. Livestock Grazing
- B. Air Quality\*
- C. Areas of Critical Environmental Concern (ACEC)\*
- D. Cultural Resources/ Native American Concerns\*
- E. Environmental Justice\*
- F. Farmlands, Prime or Unique\*
- G. Floodplains\*
- H. Vegetation / Invasive, Non-native species\*
- I. Recreation
- J. Social and Economic
- K. Soils
- L. Waste, Hazardous or Solid\*
- M. Water Quality, Surface and Ground\*
- N. Wetlands/Riparian Zones\*
- O. Wild and Scenic Rivers\*
- P. Wilderness\*
- Q. Wildlife
  - Threatened or Endangered Species\*
- R. Wild Horses and Burros

\* indicates Critical Elements of the Human Environment

### **A. LIVESTOCK GRAZING**

#### **1. Affected Environment**

The Valley Well Allotment, #8001 (see Map 1), is an ephemeral/perennial allotment with existing and potential forage production sufficient to justify BLM to authorize ephemeral forage and an established perennial forage allocation. The expired lease (#046801) authorizes the equivalent of two head of horses year long, or 24 animal unit months (AUMs) for the allotment (#8001). The allotment encompasses 520 acres of public land.

This allotment is located in rural San Bernardino County, approximately eight miles south of the City of Barstow. Elevations range from 2,800 to 3,000 feet. State Highway 247 borders the

allotment on the west, and private land to the north, east and south.

Typically, the lessee grazes domestic horses for three to four months a year in the spring and fall. Horse use on the allotment generally occurs five out of ten years. This horse use facilitates the lessee's cattle operation by providing pasture for her working horses.

## **2. Environmental Consequences**

### **a. Impacts of the Proposed Action**

Under the proposed action, the grazing lease would be renewed for 10 years. The terms and conditions contained in the new lease would include the grazing prescriptions listed in the West Mojave Plan, as well as other terms and conditions deemed necessary by the Barstow Field Office Manager. These proposed grazing prescriptions would not substantially change current grazing operations on the allotment from the expired grazing lease. Lease stipulations would include key terms and conditions contained in previous grazing decisions related to grazing in desert tortoise habitat. WMP requires site-specific NEPA analysis, and project-specific ESA section 7 consultations as needed, for all new range improvements or proposed changes in grazing management that would be considered more than a minor change.

The implementation of the proposed action would not impose a substantial change in grazing operations for the lessee. There would be no anticipated increase in operational costs to the lessee as a result of implementing the proposed action.

### **b. Impacts of No Action Alternative**

Impacts to the grazing operation under this alternative would not be substantially different from the Proposed Action.

### **c. Impacts of No Grazing Alternative**

Under this alternative grazing of the allotment would cease. This should not be confused with voluntary relinquishment; this allotment is not identified by WMP as being available for voluntary relinquishment. The no grazing alternative on this allotment, if selected, would be imposed upon the lessee; it would not be voluntary. This would result in the loss of 520 acres for horse grazing and holding by the lessee. Due to the small area and small number of horses involved, and that feasible alternative options are available to the lessee, this loss of grazing opportunity would not be considered significant.

### **d. Consultation**

Consultation would continue with the lessee, interested publics, county governments, and Native American tribes with traditional ties to allotment land.

### **e. Maps**

See Map 1.

## **f. 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

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).

## **B. AIR QUALITY**

### **1. Affected Environment**

The project area for the purpose of this analysis is the area immediately east of the Slash X community approximately 8 miles south of Barstow, in rural San Bernardino County, adjacent to the Stoddard Valley and Johnson Valley OHV Open Areas.

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 Valley Well Allotment is included in an area classified by EPA and the California Air Resources Board as a Moderate non-attainment area for particulate matter (PM<sup>10</sup>) 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.

The primary source for emissions of particulate matter under 10 microns, PM<sup>10</sup>, in the project

area is wind erosion on unpaved surfaces including disturbed areas. During most days of the year, visibility exceeds 25 miles. Exceptions occur during strong winds when locally generated particulates become airborne or when dust is blowing and when smog filters up from the Los Angeles Basin. Generally, locally generated PM<sup>10</sup> pollution is somewhat greater in the vicinity of increased disturbed areas and route densities, as well as increased unpaved route use associated with recreational activities nearby.

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 PM<sup>10</sup>, 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 PM<sup>10</sup> emissions in the planning area, generating 1.3% of total emissions in 1990. Agricultural activity is a small contributor within this miscellaneous category, and the 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 PM<sup>10</sup> 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**

Mojave Desert Air Quality Management District. 1996. Final Mojave Desert Planning Area Federal Particulate Matter (PM10) Attainment Plan.

U.S. Bureau of Land Management. 1997. Fugitive Dust/PM10 Emissions Control Strategy for the Mojave Desert Planning Area. Barstow Field Office, Barstow, California.

U.S. Environmental Protection Agency. 2003. National Air Quality and Emissions Trend Report; Figure. 2-40: Trend in PM10 annual mean concentration by EPA Region, 1992–2001.

## **C. AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)**

### **1. Affected Environment**

The Valley Well Allotment is on the western edge of the Ord-Rodman DWMA, which is considered an ACEC. The DWMA was established for recovery of the desert tortoise and protection of sensitive species. The implementation of the proposed action would only affect a very small portion of the Ord-Rodman DWMA (520 acres) and would not impact the importance and relevance that established the basis for the designation of this ACEC.

## **2. References**

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

## **D. CULTURAL RESOURCES / NATIVE AMERICAN CONCERNS**

### **1. Affected Environment**

The area has no natural water sources and is traversed by several large washes which make the area less than ideal for human occupation. A record search revealed that no previous surveys have been conducted within the allotment.

Pursuant to the Supplemental Programmatic Agreement (see Section 5), BLM conducted a Class II archaeological survey of the grazing allotment in July 2006. The field survey covered the entire allotment perimeter fence line, horse congregation areas, and desert pavements within the allotment. No cultural resources were observed; BLM consequently prepared a Determination and Findings (D& F). The D& F indicated that a Class II Inventory did not reveal potentially eligible Historic Properties within the area of potential effect.

### **2. Consultation**

Four federally recognized Native American tribes have interests in the Valley Well allotment area. Consultation was initiated in April 2006 with four Native American tribes, and other interested publics, regarding lease renewal for the allotment. The BLM received one response to the consultation letters. The cultural resource coordinator for the Morongo Band of Mission Indians (Cahuilla and Serrano) recommended that BLM should protect Native American habitation and petroglyph sites impacted by grazing (Morongo Band 2006).

In November 2004 consultation was also conducted with the California State Historic Preservation Office. The BLM Barstow Field Office submitted 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).

### **3. Maps**

None (due to the proprietary nature of the cultural resource information).

### **4. References**

Letter dated May 4, 2006. Cultural Resource Coordinator for the Morongo Band of Mission Indians (Cahuilla and Serrano). Banning, California.

U.S. Bureau of Land Management and California State Historic Preservation Officer. 2004a. The Manner in which the Bureau of Land Management Will Meet its

Responsibilities Under the National Historic Preservation Act and The National Programmatic Agreement Among the BLM, and the National Conference of State Historic Preservation Officers. Sacramento, California.

U.S. Bureau of Land Management. 2004b. 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. Sacramento, California.

U.S. Bureau of Land Management. 2004c. Letter to the California State Historic Preservation Office, dated November 17. Barstow Field Office, Barstow, California.

## **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 livestock 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. 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 livestock industry are typical for rural San Bernardino County and farm industries in general. Therefore, the proposed action or any alternative would have no affect on environmental justice issues.

### **2. References**

U.S. Department of Agriculture, National Agriculture Statistics Service. 2002. Census of Agriculture, San Bernardino County, California.

## **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 Valley Well grazing allotment. In the Mojave Desert, prime or unique farmlands are associated with floodplains, which are absent in the allotment.

## **G. FLOODPLAINS**

### **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 Valley Well grazing allotment (FEMA Flood Hazard Maps, 2006).

## **H. VEGETATION / INVASIVE, NON-NATIVE SPECIES**

### **1. Affected Environment - Vegetation**

Because the allotment is very small, there is little variation among vegetative communities present within its boundaries (see Map 2). 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 (Keeler-Wolf, Sawyer, 1995). The primary plant communities occurring within the affected area is Mojave Creosote Bush Scrub, which is the predominant plant community of the Mojave Desert.

The Mojave Creosote Bush Scrub community is found throughout the allotment. The dominant perennial species here is creosote bush (*Larrea tridentata*), the most abundant shrub in the California Desert and high densities of allscapes saltbush (*Atriplex polycarpa*) in the northern portion of the allotment. As is typical throughout the Mojave Desert, the Creosote Bush Scrub plant community here has fairly low diversity of vegetation. Some associated plant species in this community include white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), pencil cholla (*Opuntia ramosissima*), and desert senna (*Senna armata*). No threatened or endangered plant species or BLM-sensitive species have been located within the allotment.

### **2. Affected Environment – Invasive, Non-Native Species**

The allotment also supports varying densities of invasive and non-native species, depending on precipitation and weather conditions. Red brome (*Bromus madritensisi* ssp. *rubens*), downy brome (*Bromus tectorum*), schismus (*Schismus arabicus*), filaree (*Erodium cicutarium*), and several mustard species, including Sahara mustard (*Brassica tournefortii*) are the most widespread invasive species present in the allotment. 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.

### **3. Environmental Consequences – Vegetation/ Invasive, Non-Native Species**

#### **a. Impacts of the Proposed Action - Vegetation**

Seasonal continuous early spring grazing by horses over two decades has eliminated most of the perennial herbaceous species. Based on the existing soils survey the majority of this allotment has been estimated to be correlated within the Limy 3-5" P.Z. Ecological Site. This site has the potential of only containing 5% native annual and perennial herbaceous plant species. Consequently, species diversity has slightly decreased, and now perennial native shrubs dominate. Non-native annual vegetation comprises the majority of the total forage biomass consumed by the horses.

Forage utilization is generally greater, and plant vigor abundance and age class distribution of key species is typically negatively impacted around water sources or high-use facilities due to constant soil compaction from continual trampling and cropping of vegetation by livestock. This allotment contains no natural water sources and one small congregation area associated with a trough adjacent to the fence that separates the allotment from the lessee's private property. Currently, the apparent trend of the native plant community is static. Under the proposed action overall trend is anticipated to remain static.

When ephemeral production is low, the duration of grazing by horses is typically shortened or non-use is taken. This practice has a positive benefit to the extent that perennial vegetation is not exposed to the horses throughout most of the growing season.

When ephemeral production is relatively low (greater than 230 lbs but less than 500 lbs) and horses are still grazing the allotment, there is also a short-term negative impact to the native shrubs because the grazing pressure on perennial shrubs increases and occurs earlier in the growing season, in order to meet the horses' nutritional needs. The result, then, is that even though the duration of grazing is shortened and represents a smaller portion of the total growing season, the browse species absorb a relatively greater share of the grazing pressure. The overall effect is not a substantial impact to the native shrubs because only 2 horses graze the allotment, and their intermittent use of the allotment provides opportunity for species recovery over the long term.

Grazing practices that allow for periodic recruitment opportunities can often result in lower densities of non-native species and are more compatible with sustaining native plant communities because the constant disturbance by livestock is removed; non-native annuals thrive on constant disturbance. Under the proposed action, sustaining native plant communities and reducing the spread of non-native invasive species should be aided by strict compliance with the grazing prescriptions contained in WMP, and the terms and conditions of the WMP BO. However, adherence to these grazing prescriptions would only slightly improve species richness and may have either no affect or only a nominal affect on the densities of non-native invasive species in this allotment. Similarly, lowered utilization thresholds on key forage plants and other requirements should at best, nominally improve the overall trend of native plant communities within the allotment.

A Rangeland Health Assessment conducted on this allotment could establish a baseline on which future assessments could be compared to however these assessments are focused on the indicators of rangeland health. These indicators are assessed both qualitatively and to a certain degree quantitatively. Based on the assumed Ecological Site, level of allotment use (5 out of 10 years), low stocking rates (2 horses) and typically short durations of grazing use (4 months out of 12) it is unlikely that an assessment would reveal non-achievement with applicable fallback standards.

#### **b. Impacts of the No Action Alternative – Vegetation**

Impact under this alternative would be essentially the same as the Proposed Action.

### **c. Impacts of the No Grazing Alternative - Vegetation**

Under this alternative livestock grazing on the allotment would cease. Cessation of grazing would generally have a somewhat positive impact to native plant communities within the allotment boundaries, especially in the short term.

### **d. Impacts of the Proposed Action - Invasive, Non-Native Species**

Overall, the current densities of non-native invasive species on the allotment can be heavy. Yearly fluctuations in densities are directly influenced by the amount of late winter / early spring precipitation. However the populations of these species are concentrated in the seed bank, which increases when non-native plants are able to flower.

Early spring grazing by horses can actually decrease the overall biomass of non-native species by direct herbivory thus reducing the number of seeds entering the seed bank during any given growing season.

### **e. Impacts of the No Action Alternative – Invasive, Non-Native Species**

Impact under this alternative would be essentially the same as the Proposed Action.

### **f. Impacts of the No Grazing Alternative – Invasive, Non-Native Species**

However, also in the short term, impacts from invasive, non-native species would likely be slightly greater than the proposed action because grazing on the allotment would cease entirely. There would no longer be herbivory on invasive, non-native species prior to seed dissemination; therefore, more weed seeds would be contributed to the seed bank. There would a net increase in both the number of non-native plants and the amount of seed entering the seed bank. On the other hand, in the long term, the spread of weed seed would decrease slightly because horses would no longer physically spread weed seed, and disturbance at the ground surface would be reduced, thus reducing opportunities for weed seed to become established.

### **g. Consultation**

Consultation would continue with the lessee, interested publics, county governments, and Native American tribes with traditional ties to the allotment.

### **h. Maps**

Not applicable.

### **i. References**

Belsky, A. J. and J.L. Gelbard. 2000. Livestock Grazing and Weed Invasions in the Arid West. Oregon Natural Desert Association. Bend OR.

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

## **I. RECREATION**

### **1. Affected Environment**

No alternative would have an effect on recreation because very little outdoor recreation occurs on the allotment, and no changes are proposed that would alter current recreational uses.

## **J. SOCIAL AND ECONOMIC VALUES**

### **1. Affected Environment**

The project area for the purpose of this analysis is San Bernardino County. The allotment is located in rural San Bernardino County. The allotment is primarily operated by the lessee, who may hire local labor on a seasonal basis. This labor typically consists of one to three persons.

The contribution of this allotment to the goods and services of the area is nominal. This operation is considered small and its affect on the general economy is minor.

### **2. Environmental Consequences**

#### **a. Impacts of the Proposed Action**

Under the proposed action, grazing would continue at the existing stocking rate (see Table 1). These levels are minimal, both on a local and County-wide basis. This grazing operation would continue to have a nominal influence on the local and regional economy of San Bernardino County.

#### **b. Impacts of the No Action Alternative**

Under the no action alternative, impacts to social and economic values would be the same as the proposed action.

#### **c. Impacts of the No Grazing Alternative**

Under the no action alternative, impacts to social and economic values would be the same as the proposed action.

#### **d. Consultation**

Consultation would continue with the lessee, interested publics, county governments, and Native

American tribes with traditional ties to the lands within the allotments being analyzed.

**e. Maps**

None

**f. References**

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

**K. SOILS**

**1. Affected Environment**

The soil classification of the allotment has been mapped to Order 3. According to the 1978 Natural Resource Conservation Service (formerly Soils Conservation Service) *Soil Survey of San Bernardino County California – Mojave River Area*, there are two main soil series on the allotment. These are the Cajon-Arizo complex and the Helendale-Bryman loamy sands. The Cajon-Arizo complex is gravelly sand to gravelly loamy sand occurring on alluvial fans. The Cajon soil is very deep and somewhat excessively drained and permeability is rapid. The Arizo soil is very deep and excessively drained and permeability is very rapid. Erosion potential of these soils ranges from slight to moderate. There are no identified erosion problems on the allotment.

During a recent tortoise survey of the allotment the no biological soil crusts (BSC) in the form of lichens or moss was observed, however populations of non-heterocystic cyanobacteria (*Microcoleus*) was evident in the northern portions of the allotment. A more intensive inventory to determine if BSCs are more wide spread would be completed in conjunction with the planned Rangeland Health assessment scheduled for this allotment in 2008 or 2009.

**2. Environmental Consequences**

**a. Impacts of the Proposed Action**

Under the proposed action, livestock grazing on the allotment would continue to have a localized, negative affect on soils associated with congregation areas such as watering sites. Based on the limited use of this allotment and the uniform distribution of horses when occupied the vast majority of this allotment is expected to achieve the soils standard.

**b. Impacts of the No Action Alternative**

Impact under this alternative would be essentially the same as the Proposed Action.

**c. Impacts of the No Grazing Alternative**

Under the no grazing alternative livestock grazing would cease. There would be positive impacts to soils in congregation areas because they would be allowed to de-compact. Any threat to BSCs (if present) from fragmentation and/or destruction by grazing would cease.

**d. Consultation**

Not applicable.

**e. Maps**

None

**f. References**

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

**L. WASTE, HAZARDOUS OR SOLID**

The proposed action or no grazing alternative would have no affect on hazardous and solid wastes on public lands as no hazardous wastes are present in or adjacent to the Valley Well 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 the Resource Conservation and Rehabilitation Act of 1976, as amended (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. Since agricultural solid wastes from free-roaming livestock are not managed by federal or State law, any site-specific impacts associated with free-roaming livestock are addressed in the context of water quality in this analysis.

**M. WATER QUALITY, SURFACE AND GROUND WATER**

**1. Affected Environment**

No springs or surface water sources for livestock are located within this allotment. Two blue line ephemeral drainages run through the allotment generally in a west-northwesterly direction towards the Mojave River approximately 12 miles away. One sealed well is also located within

the allotment that provides water for domestic use of the lessee. Depth to groundwater in this area is 80 to 120 feet.

The BLM is working with Lahontan Regional Water Board to develop a Management Agency Agreement 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.

The Lahontan Basin Plans identifies beneficial uses (chapter 2) and water quality objectives (chapter 3) for the surface waters in the 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 1 & 2, warm water fisheries, cold water fisheries and wildlife.

## **2. Environmental Consequences**

### **a. Impacts of the Proposed Action**

There are no known negative affects to water quality at the ephemeral water sources available to livestock. Most of the water use by livestock is from water piped to a trough from private lands outside the allotment. However, unidentified levels of fecal coliform contamination are possible. Overall impacts to water quantity within the Mojave River watershed from horse grazing operations on public land is considered nominal, due to their small numbers and the distance to the Mojave River or other drinking water sources.

A program-wide water quality monitoring strategy has yet to be adopted for the Barstow Field Office. Best Management Practices (BMP) for water quality are being developed for public lands in California, including the California Desert District (CDD) and would be adopted upon approval. The State Director has approved regional Rangeland Health Standards, which include a standard for water quality, for the CDD, which would include the Valley Well Allotment.

Under the proposed action, natural water sources available to livestock will be evaluated for threats to water quality and riparian values. The appropriate management action(s) would be implemented based on the specifics of the situation, including, but not limited to, actions such as fencing, placement of additional troughs and re-design of the facility.

### **b. Impact of No Action Alternative**

Impact under this alternative would be essentially the same as the Proposed Action.

### **c. Impact of No Grazing Alternative**

Under the no grazing alternative, livestock grazing on this allotment would cease. Any threats to water quality from livestock grazing would cease.

#### **d. Consultation**

The Lahontan Regional Water Quality Control Board.

#### **e. Maps**

None.

#### **f. 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](http://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**

The two ephemeral drainages present in the allotment do not provide sufficient water to support riparian communities. Therefore, wetlands / riparian zones would not be affected by any of the alternatives because there is no wetland / riparian habitat present in or adjacent to the allotment.

### **O. WILD AND SCENIC RIVERS**

#### **1. Affected Environment**

Wild and Scenic Rivers would not be affected because there are no proposed or designated Wild and Scenic River segments at or near the allotment.

## **P. WILDERNESS**

### **1. Affected Environment**

There are no effects to wilderness values because there is no designated Wilderness or Wilderness Study Areas within or near the allotment.

## **Q. WILD HORSES AND BURROS**

### **1. Affected Environment**

None of the alternatives would affect wild horses or burros as there are no Herd Management Areas within or near the allotment; the allotment is not used to graze, hold, or station wild horses or burros.

## **R. WILDLIFE**

### **1. Affected Environment**

#### **Common Animals**

Common species of animals found at the allotment are those typically found in the Mojave Creosote Bush Scrub, such as (see Vegetation, Affected Environment) woodrats (*Neotoma* spp.), kangaroo rats (*Dipodomys* spp.), white-tailed antelope ground squirrels (*Ammospermophilus leucurus*), black tailed hares (*Lepus californicus*), kit foxes (*Vulpes macrotis*), and coyotes (*Canis latrans*). Common bird species include mourning doves (*Zenaida macroura*), black-throated sparrows (*Amphispiza bilineata*), common ravens (*Corvus corax*), horned larks (*Eremophila alpestris*), and burrowing owls (*Athene cunicularia*). Some common reptiles include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), gopher snake (*Pituophis melanoleucus*), and the Mojave rattlesnake (*Crotalus scutulatus*).

#### **BLM Sensitive Wildlife Species**

Several sensitive wildlife species use the allotment for feeding, cover, shelter, or breeding. These are: golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), LeConte's thrasher (*Toxostoma lecontei*), and burrowing owl (*Speotyto cunicularia*). Raptors' presence on the allotment would likely be brief, limited to pursuing food or passing through in route to other feeding areas. .

#### **Threatened and Endangered Species**

##### **Desert Tortoise**

The desert tortoise was listed as threatened in 1990 by the U.S. Fish and Wildlife Service (USFWS) and has been listed as threatened by the California Department of Fish and Game (CDFG) since 1989. The USFWS designated four critical habitat units (CHU) within the West Mojave planning area in 1994. The Valley Well allotment occurs within a CHU. The Bureau has also categorized desert tortoise habitat into three categories named I, II, and III (BLM and

CDFG 1992). These categories have been reduced by the West Mojave Plan to only two categories in the planning area: habitat inside a DWMA and habitat outside a DWMA. The allotment was designated as critical habitat in 1994, and is within the Ord-Rodman DWMA.

The desert tortoise (*Gopherus agassizii*) is widely distributed across the California desert. The USFWS had noted in the BO on the WMP (1-8-03-F-58) that suitable or occupied desert tortoise habitat was not likely to occur in the Valley Well allotment. Mojave Creosote Bush Scrub plant community represents prime desert tortoise habitat. In various field surveys that have been conducted throughout the California Desert since the desert tortoise was listed, desert tortoise concentration areas have not been identified within the Valley Well Allotment; however, a recent desert tortoise survey has verified the presence of tortoises and suitable habitat within the allotment.<sup>2</sup>

The WMP states that the grazing prescriptions for allotment within a DWMA do not apply to the Valley Well Allotment. Based on this new information derived from recent tortoise surveys, consultation has been reinitiated with USFWS.

No other threatened or endangered species have been documented to reside on this allotment.

## **2. Environmental Consequences**

### **a. Impacts of the Proposed Action**

#### Common Animals

Most wildlife species are mobile and can avoid being trampled by horses. Therefore, impacts to wildlife on the allotment would be indirect, by modifying habitat. Horses modify habitat by disrupting soils and damaging vegetation. Soils are impacted through hoof shearing and by soil compaction. Vegetation can be damaged or destroyed by horses if trampled, overgrazed, or pulled out of the ground outright. These impacts would be worse where horses congregate, such as near salt licks and close to the water trough. As such, the most severe impacts would be localized, while impacts to common animals would be negligible over the remainder of the allotment. A recent desert tortoise survey conducted on the allotment reveal high densities of small mammal burrows. The allotment is dominated by perennial shrubs, which provides both escape and thermal cover for small mammals and reptiles. Perennial herbaceous plants are few and native and non-native annuals dominate herbaceous plants. In drought years, food sources for small mammals would be limited. In addition, may lead to higher levels of predations by raptors and other predators.

#### Threatened and Endangered Species

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

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<sup>2</sup> Desert Tortoise Survey data, February, 2007, BLM (LaPre et al.)

Under the proposed action livestock grazing on this allotment would be confined to several months in the spring and fall. Livestock presence and duration of grazing on this allotment is highly dependent on ephemeral forage production.

Potential effects of horse grazing on the desert tortoise under the proposed action are trampling of desert tortoises above-ground or in their burrows, removal of or competition for forage, and the eventual replacement of native forage with species that are less palatable and nutritious and which have the capability of carrying wildfires. Direct impacts from trampling are extremely unlikely as horses have keen eyesight and will avoid objects the size of adult desert tortoises; the same cannot be said for sub-adults or neonates because they are so small and may be concealed by vegetation.

Because the presence of horses is linked to ephemeral production there may be a slight positive impact to tortoises. If ephemeral production is low, then horses are unlikely to be present on the allotment leaving the limited ephemeral production to insects and wildlife, including desert tortoises.

During the development of the BO for the WMP, the USFWS believed that the Valley Well Allotment was degraded and in close proximity to human activities such that it contained neither desert tortoise nor the constituent elements of critical habitat. This analysis was based on discussions and associated documents between the USFWS and a former BLM biologist, and represented the best available information specific to this allotment during the WMP analysis.

In late February 2007, BLM conducted a 30-meter presence/absence desert tortoise survey of the allotment.<sup>3</sup> The survey revealed the past and present occupation of desert tortoises on this allotment. During the survey habitat quality was also evaluated. The desert tortoise habitat within the allotment was determined to be suitable, critical habitat. Forty years of use by livestock has not substantially impacted the constituent elements of critical habitat.

The USFWS, based on their best available information at the time the BO was being prepared concluded that desert tortoise are not likely to be present on this allotment due to degraded habitat and close proximity to intensive human activity, and therefore did not apply DWMA prescriptions to this allotment. Based on the new information from the field survey concerning the Valley Well Allotment and desert tortoises, BLM has reinitiated consultation with the USFWS through a biological assessment. BLM is requesting concurrence with BLM's inclusion of DWMA terms and conditions for the Valley Well allotment, its determination that issuance of a fully processed grazing lease for the Valley Well Allotment is not likely to adversely affect the desert tortoise. BLM is also requesting inclusion of the Valley Well Allotment under the Incidental Take Statement (ITS).

A Rangeland Health Assessment conducted on this allotment could establish a baseline on which future assessments could be compared to however these assessments are focused on the indicators of rangeland health. These indicators are assessed both qualitatively and to a certain degree quantitatively. Based on the assumed Ecological Site, level of allotment use (5 out of 10 years), low stocking rates (2 horses) and typically short durations of grazing use (4 months out of

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<sup>3</sup> Ibid.

12), and a recent desert tortoise survey it is unlikely that an assessment would reveal non-achievement of the native species fallback standard that would apply to desert tortoises.

#### **b. Impacts of the No Action Alternative**

Impact under this alternative would be slightly less than under the Proposed Action because DWMA terms and conditions would not apply.

#### **c. Impacts of the No Grazing Alternative**

Under the no grazing alternative livestock grazing of the allotment would cease. The continuing nominal, negative impacts to native plant communities and local wildlife would therefore end. A short-term burst of growth by native vegetation would occur, especially during favorable precipitation years. Wildlife would likely respond correspondingly, and there may be a slight benefit from the release of the area from grazing pressure. The horse concentration area would begin to heal and become available for use by wildlife. Birds that had become accustomed to drinking water at the water trough would find other dependable sources of water.

#### **d. Consultation**

BLM formally consulted with USFWS on five occasions, starting in 1993, regarding the effects of livestock grazing on desert tortoise and its critical habitat. The most recent comprehensive consultation resulted in the West Mojave Plan biological opinion of earlier this year. In March 2007, BLM submitted a biological assessment as reinitiation of consultation based on new information regarding the presence of desert tortoises and habitat suitability.

#### **e. Maps**

See Map 1.

#### **f. References**

- U. S. Bureau of Land Management and California Department of Fish and Game. 1992. California Statewide Desert Tortoise Management Policy. Official policy signed in 1992 by the District manager and State Director of the BLM and Regional Managers (Regions 4 and 5) and the Director of the CDFG.
- U.S. Fish and Wildlife Service. 1994a. Biological opinion for the Bureau of Land Management's interim livestock grazing program in Mojave desert tortoise critical habitat (1-8-94-F-107). Memorandum from Regional Director, Region 1 to State Director, Bureau of Land Management, Sacramento, California. Dated April 20. Portland, Oregon.
- Boarman, W. I. 2002. Threats to desert tortoise populations: A critical review of the literature. Unpublished report prepared for the West Mojave Planning Team, Bureau of Land Management. U. S. Geological Survey, Western Ecological Research Center. San

Diego, California.

Fish and Wildlife Service. 2002. Biological opinion for the California Desert Conservation Area Plan [Desert Tortoise] (1-8-01-F-16). June 17, 2002. Ventura Fish and Wildlife Office, Ventura, California.

Fish and Wildlife Service. 2006. Biological opinion for the California Desert Conservation Area Plan [West Mojave Plan] (1-8-03-F-58). January 9, 2006. Ventura Fish and Wildlife Office, Ventura, California.

## **CHAPTER 4: CUMULATIVE IMPACTS**

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 and incorporates by reference 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 Valley Well Allotment and that may contribute to cumulative effects from the proposed action or alternatives, as appropriate, and
- Discusses resource-specific cumulative effects for the Valley Well 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.

### **a. 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 Valley Well horse 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 because 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 Valley Well allotment: vegetation and wildlife; watershed values, water quality, mineral development, cultural resources; vehicle access; and socioeconomic resources. 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 which effects of grazing management for the Valley Well allotment and other past, proposed, and reasonably foreseeable actions that would be cumulatively recorded or experienced varies by resource as noted herein. There are two main analytical frameworks considered in this cumulative effects analysis of grazing management in the 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 allotment and the cumulative effects region;
- Other activities within the allotment that similarly affect (as does grazing management) specific resource values and uses. Due to the small size of the Valley Well allotment, this second factor is not a substantial contributor to the cumulative effects, as compared with the first factor.

#### **b. Past, Present, and Reasonably Foreseeable Actions affecting the Valley Well Grazing 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 were adjusted.

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). As previously noted, cumulative effects that overlap the Valley Well Allotment are limited substantially by the allotment's small size.

Some other activities occur within and immediately adjacent to the Valley Well Allotment. Routes of travel have been designated for casual recreational vehicle use to minimize off-route impacts. One open route crosses the allotment, through its southeastern corner. It provides access to that part of the allotment for casual-use recreational activities (i. e. hunting, picnicking, camping, hiking and 4-wheel touring), as well as access from the adjacent Stoddard Valley OHV Open Area on the other side of SR 247. This is a well-used route through Stoddard Valley. The OHV Open Area is used for organized and intensive recreational uses, as well as casual recreation and other activities compatible with recreational uses.

The other major public land uses within and adjacent to the allotment are the linear utilities that are serviced by the same open route. This is a historic utility corridor that links Los Angeles and Las Vegas and includes above-ground electrical lines and buried fuel pipelines connecting the two major metropolitan areas. Due to the interspersed public and private lands in this area, and its location adjacent to a major State Highway, there are also some semi-rural homesteads and a bar and restaurant nearby.

The Valley Well Allotment was one of the allotments designated in the CDCA Plan. AUM authorized has remained consistently at 24 (2 horses). Impacts from grazing management may be short term (for example, impacts resulting from maintenance of the existing trough) and long term (impacts resulting from continued grazing). Both the short-term and long-term impacts from grazing in the Valley Well allotment are nominal and are consistent with the analysis of the West Mojave Plan. The impacts from this allotment are very small when compared with other grazing or non-grazing impacts in the West Mojave region. 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.

### **c. 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 are not present within or near the allotment.
- 2) Protection of Native American values on specific sites in this allotment has not been identified by tribes as an issue during consultation.
- 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.
- 7) Wild and scenic rivers are not present within or near the allotment.
- 8) Wild horses and burros are not present within or near the allotment.
- 9) Air quality impacts are not contributing to air quality exceedances under any alternatives and are consistent with the State Implementation Plan.
- 10) Wilderness or wilderness study areas are not present within or near the allotment.

- 11) Recreational use would not be substantially adversely affected by continued grazing activities because grazing activities have not affected overall recreational opportunities and conflicts have not been noted. Impacts from viewing horses are subjective, and any past, present and reasonably foreseeable cumulative effects from the proposed action on recreation would be nominal.
- 12) No wetlands or riparian areas are present within or adjacent to the allotment.
- 13) Due to the small size of the allotment, small number of animals, and availability of other rangelands nearby, no measurable social or economic impacts are anticipated.

Impacts described in this environmental assessment include insignificant impacts to biological resources, invasive species, cultural resources, soils, and water quality. 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 horse grazing on wildlife, including the desert tortoise, in the West Mojave Bioregion are anticipated to decrease due to the implementation of the West Mojave Plan and incorporation of DWMA terms and conditions. The proposed voluntary relinquishment of three grazing allotments within desert tortoise habitat, two within critical habitat, totaling over 248,000 acres would reduce the overall cumulative impacts of grazing to wildlife in the West Mojave. Due to its acreage and animal contribution to grazing activities within the West Mojave, the Valley Well Allotment contributes a very small amount of the direct, indirect, and cumulative impacts from grazing on biological resources.

Some grazing loss will still occur, and may include wildlife within the Valley Well Allotment. Slower, less mobile wildlife species, including sub-adult desert tortoise may not be able to escape being injured or killed by horses. The likelihood of such losses is small away from the grazing congregating area (e.g. the water trough in Valley Well Allotment). These grazing losses are also small when compared to those that may occur from other desert activities. In the Valley Well area, major contributors to biological mortality include direct mortality from road kills on the State Highway and from fast moving recreational vehicles, as well as losses associated with construction. Clearance surveys and seasonal restrictions, fencing, or biological monitors are generally employed to avoid tortoise mortalities during ground disturbing projects operating in tortoise habitat. The most substantial threat to direct mortality of wildlife of all types in this area has been and is likely to continue to come from road kills. Secondary threats include development activities not on public lands and recreational use within the nearby OHV Open Area.

Indirectly, casual and organized OHV use, other recreational activities, and development and

utility-related construction activities have the potential to degrade habitat by removing vegetation and degrading areas through compaction of soils and elimination of microclimates that facilitate revegetation. Grazing in concentration areas, also contributes to these adverse effects to wildlife habitat, although to a minor degree based on their relatively small size. Rehabilitation of such sites generally occurs slowly in the desert, and wildlife habitat may take many years to return to its former productivity, unless degraded areas receive frequent monitoring and additional management inputs at appropriate times.

Two actions in the West Mojave Plan, the designation of the Ord-Rodman DWMA, including the Valley Well Allotment, and the designation of routes, will reduce cumulative impacts including direct plant and wildlife losses in the short-term and habitat degradation over the long-term. When rangeland health standards are met throughout allotments, forage is left for herbivorous wildlife, including the desert tortoise, 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, including the Valley Well Allotment. There are other activities such as casual use, development and construction activities that occur on or adjacent to public land that also contribute to the degradation of native plant communities. The most substantial long-term threat regionally may be from periodic fires, and locally may be from future development along the State Highway.

Grazing is a moderate contributor to non-native species spread in this area. Impacts from non-native species are partially offset by invasives management activities and parameters on construction to minimize the potential for non-native establishment and recruitment, such as through planting of native species and spraying rights-of-way areas to prevent or control non-native establishment in disturbed areas.

### **Cultural Resources**

Most known sites that have been adversely affected are because of either natural weathering or vandalism. Vandalized sites in the West Mojave include prehistoric rock art, historic mining sites, and other 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. Due to the low cultural resource potential of the allotment, effects to cultural resources from these activities have been limited.

Grazing is known to cause movement and mixing of cultural resources in areas where livestock congregate on allotments. 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, none of which are in the Valley Well Allotment, whereas 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.

### **Soils**

Past, present and in the reasonably foreseeable future grazing in the West Mojave Desert will continue to have a localized, cumulative impact on soils in livestock congregation areas. Other land uses also contribute to compaction and accelerated erosion but on a broader scale. In addition, periodic fires modify soil structure. Indirectly, casual OHV use, other recreational activities, development and related activities have the potential to modify soil structure, increasing erosion potential and decreasing re-vegetation potential. 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.

Two actions in the West Mojave Plan, the designation of routes and the limit of surface disturbances within desert wildlife management areas, will reduce cumulative impacts to soils. Not only are rehabilitated areas improved by reduced erosion and elimination of compaction, but also 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. The Valley Wells area is a typically dry desert valley of the desert, receiving approximately four inches of rain per year. Past grazing practices in the West Mojave have adversely affected water quality at small isolated springs, primarily from increased dissolved solids and elevating fecal coliform levels. The only natural waters located within the Valley Well Allotment readily accessible to horses are portions of ephemeral drainages that rarely contain surface flow. In addition, on a regional level, water sources that have been adversely affected by grazing either have recovered or are on the way to recovery. Therefore, there are no cumulative effects to water quality from grazing within the Valley Well Allotment.

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 grazing 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.

## **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. The current trend of reduced agriculture and ranching in the West Mojave is the result of economic and development pressures unrelated to the proposed action.

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 can be relatively large on an individual basis for some of the larger West Mojave allotments 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.

## **CHAPTER 5: CONSULTATION AND COORDINATION**

### **A. Participating Staff**

Remijio Chavez	Rangeland Management Specialist
Charles Sullivan	Natural Resource Specialist
Jim Shearer	Archaeologist
Edy Seehafer	Environmental Coordinator

### **B. Consultation**

The affected grazing lessee and interested publics and affected Native American tribes.