ENVIRONMENTAL ASSESSMENT
Issuance of 10-Year Grazing Lease for the Hauser Mountain Allotment
DOI-BLM-CA-060-0009-0010-EA

U.S. Department of the Interior
Bureau of Land Management
Palm Springs South Coast Field Office
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CHAPTER 1: INTRODUCTION

A. Summary

The Bureau of Land Management (BLM) is proposing to issue a ten year lease on the Hauser Mountain Allotment (approximately 3,366 acres) to authorize livestock grazing in accordance with law and policy described in the Purpose and Need section below. The following is a summary of the current situation:

Hauser Mountain Allotment acres	3,366*
Public land Acres in allotment:	3,366
Critical Habitat Acres (species)	0
Kind of livestock:	Cattle
Current authorized Use:	Seasonal Use
Plan Area:	South Coast RMP
Identified for Voluntary Relinquishment	No

* Total acres different than SCRMP totals due to improved GIS information

B. Background

The Bureau of Land Management (BLM) is proposing to issue a ten-year lease to authorize cattle grazing on suitable portions of the Hauser Mountain Allotment. Grazing would occur on approximately 550 acres within a 3,366 acre allotment on public land located approximately two miles west of Campo, California in San Diego County. This grazing allotment is typical of central San Diego County, with low, rolling hills and a mosaic of dense chaparral and open spaces. Elevations in the allotment area range from 3000 to 3300 feet.

The current lessee has intermittently grazed this area since the 1970s. Subsequently, grazing authorizations were garnered via completion of the Otay Grazing Environmental Impact Statement (EIS) of 1984. Since 1984, grazing activity has become increasingly intermittent and ephemeral due to change in vegetation community types, recent change to climatic conditions, extensive drought, and changing fire regimes in the region. Therefore the allotment does not get grazed every year and habitat conditions are considered excellent in the allotment.

The lease for the Hauser Mountain Allotment expired in 2002; however, it was subsequently renewed under the authority of Public Law 106-113 for 10 years with the same terms and conditions as the expired lease. Public Law 106-113 requires compliance with all applicable laws and regulations including the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Following the analysis of environmental impacts, this grazing lease may be approved, canceled, suspended or modified, in whole or in part, to meet the requirements of such applicable laws and regulations.

C. Tiering to the South Coast Resource Management Plan and Final Environmental Impact Statement; Record of Decision dated June, 1994.

The Otay Grazing EIS (1984) decisions summarized in Tables G-1 and 2 are incorporated by reference into the South Coast Resource Management Plan (SCRMP) and provide site-specific analysis for this grazing allotment. Analysis of environmental issues previously considered and addressed in the SCRMP will be incorporated by reference.

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

1. The SCRMP provides overall direction for managing and allocation of BLM public land resources and developing and establishing conservation strategies for special status plant and animal species within the South Coast Area. As part of this conservation strategy, the BLM determined which public lands would be available or unavailable for livestock grazing based, in part, on impacts to these resources. In addition, the SCRMP by reference of the Otay Grazing EIS established programmatic management prescriptions including: land health standards and guidelines; utilization prescriptions for perennial species; and restrictions on cattle grazing within sensitive habitat. This EA analyzes the specific application of the programmatic management prescriptions of the SCRMP Plan and considers alternative means to achieve the purpose and need on this allotment as described in Section C of this chapter.

2. The SCRMP considered a range of alternatives for the livestock grazing program, including more or less restrictive management approaches on the 129,000 acres of public lands within the planning area.

D. Purpose and Need for the Proposed Action

The purpose of the proposed action is to authorize cattle grazing on public lands, determined suitable for this use, in a manner that is consistent with law and regulation. Since completion of the Otay Grazing EIS and SCRMP, there have been considerable changes in circumstances surrounding the original permit authorizations. Noticeable changes in allotment conditions have occurred since the original permit approvals, including lack of proposed vegetation treatments, drought, increased fire frequencies, invasive species, and many newly recognized listed and sensitive species over the last decade.

Actions must be in conformance with the implementing regulations for the National Environmental Policy Act, NEPA (40 CFR Part 1500), the Federal Land Policy and Management Act (FLPMA), BLM grazing regulations (43 CFR Part 4100), and Public Law 106-113 section 325.

E. LAND USE PLAN CONFORMANCE and Other Regulatory Compliance:

Grazing in this area is in conformance with the following plans:

> The South Coast Resource Management Plan and Record of Decision, June, 1994 specifically:

- The Allotment Boundary is within the San Diego County Management Area Map 2-1. The Allotment is adjacent to the U.S. Mexico International Boarder. Currently, adjacent BLM parcels are authorized for grazing

- Otay Grazing Area EIS. July, 1984

- Hauser Mountain Allotment Management Plan March 1993

The allotment meets the Secretary of the Interior's Approved Rangeland Health Standards as follows:

Table 1: 1999 Rangeland Health Assessment

Rangeland Health Standard	Meets Standard	Does Not Meet Standard	Impacts from Livestock Yes or No	Remarks
Soils	X	n/a	n/a	
Riparian	X	n/a	n/a	
Stream Channel	X	n/a	n/a	
Native Species	X	n/a	n/a	

Authority:

1. General Grazing

Authority for the proposed action includes:

- the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) as amended by the Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.);
- the Taylor Grazing Act of June 28, 1934 as amended (43 United States Code 315, 315a through 315r);
- Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); and the
- Public land orders, executive orders, and agreements authorize the Secretary to administer livestock grazing on specified lands under the Taylor Grazing Act or other authority as specified.

2. State Historic Preservation Officer 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 for processing grazing permit lease renewals as defined in 43 CFR 4100.0-5. The State Director and the SHPO amended the 2004 *State Protocol Agreement between California Bureau of Land Management and The California State Historic Preservation Officer* with the 2004 Grazing Amendment, Supplemental Procedures for Livestock Grazing Permit/Lease Renewal. This amendment allows for the renewal of existing grazing permits prior to completing all NHPA compliance as long as the 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.

F. Voluntary Relinquishment

The 1994 SCRMP does not identify this allotment for Voluntary Relinquishment. A lessee may request voluntary relinquishment of their lease at any time; however, a plan amendment would be required for subsequent designation of the allotment as unavailable for livestock grazing. If BLM determines that such an amendment is not warranted, the allotment would remain available for livestock grazing and BLM would consider new applications for lease by qualified applicants.

G. Tribes, Individuals, Organizations, or Agencies Consulted

1. Public Participation

Notification of the proposed action and analysis has been prominently posted in the Palm Springs South Coast Field Office public area and on the Field Office web site during the environmental review process. The web site main page provides a link to projects currently under environmental review.

2. Native American Consultation and Coordination:

The following Native American Tribes were consulted during formulation of the SCRM Plan, which included land use plan level analysis of the Hauser Mountain Allotment:

- Agua Caliente Band of Cahuilla Indians, Palm Springs, CA
- Barona Indian Mission
- Cahuilla Band of Mission Indians
- Campo Band of Mission Indians
- Cuyapaipe Indian Reservation
- Inaja and Cosmit Reservation
- Jamul Indian Village
- La Jolla Indian Reservation
- La Posta Band of Mission Indian
- Los Coyotes Band of Mission Indians
- Mesa Grande Band of Mission Indians
- Morongo Reservation
- Pala Indian Reservation
- Pauma Band of Mission Indians
- Pechanga Band of Mission Indians
- Ramona Indian Reservation
- Rincon Reservation
- San Pasqual Indian Reservation

- Santa Rosa Band of Mission Indians
- Sycuan Band of Mission Indians Viejas Tribal Council

3. (CCC) Consultation, cooperation, and coordination with the Lessee
   2/5/02: The BLM contacted the lessee regarding the expiring grazing lease and the Secretary of the Interior's direction on renewal under the provisions of Section 114, (Public Law 107-67)

   2/23/02: The BLM contacted lessee regarding renewal of lease, pending signatures under existing terms and conditions.

   5/15/03: The BLM received signed copy of lease und provisions of Section 114, Fully Processed lease to follow.

   2/23/05: The BLM informed the lessee about the process of lease issuance, and how other programs may affect the Allotment activities.

   11/14/07: The BLM contacted lessee about the BLM's public meeting for the proposed South Coast Resource Management Plan revision and did allotment site visit.

   9/23/08: The BLM contacted lessee with ongoing analysis of lease renewal for coordination and consultation purposes.

   7/29/09: The BLM met with lessee and reviewed specific allotment water sources and discussed lessee's cooperation with Border Patrol.

CHAPTER 2: ALTERNATIVES CONSIDERED FOR DETAILED ANALYSIS

Management Common to All Action Alternatives: Given the ephemeral nature of vegetation production in this region, in relationship to variable climatic changes including long term drought conditions, and significantly increased fire frequency, the BLM would require onsite inspections prior to livestock turn out, in order to assess range conditions. BLM would authorize non-use for those years that range conditions are not conducive for grazing.

Rangeland Health and Biological Monitoring: The methods described in the Interagency Technical References 1734-6 series Utilization and Residue Measurement, Sampling Vegetation Attributes, and Measuring and Monitoring Plant Populations would be used for overall monitoring. Methods used would be specific to monitoring for vegetation utilization, trend, and species diversity for those specific seasons where grazing has been authorized. Rangeland health monitoring would not be conducted during years when no grazing occurs. In addition, BLM as a result of monitoring would set objectives for residual dry matter (i.e., the amount of forage left in area after cattle have been removed) for this allotment in order to protect watershed resources.

Alternative A: Current Use

This alternative is to reissue the existing 10-year lease in conformance with the SCRMP, and the

Otay Grazing EIS.

Authorized Use:

a. Livestock Numbers and Season of Use

Allotment Name	Cattle Number *	AUMs**	Season of Grazing Use***	
			From	To
Hauser Mountain	11	66	December 16	June 15

* The number of livestock authorized to graze during the season of use.
** Animal Unit Month (AUM) the amount of forage necessary for the sustenance of 1 cow or its equivalent for a period of 1 month.
*** The period livestock typically graze forage on the allotment. The grazing period of use does not apply (NA) to ephemeral allotments because grazing use would occur when forage is available

- Utilization of key perennial forage species as identified in the Hauser Mountain AMP will not exceed proper levels: Key species are as follows:

Common Name	Scientific Name	Proper Use
Deergrass	*Muhlenbergia rigens*	50%
Mountain mahogany	*Cercocarpus betuloides*	60%
Deervetch	*Lotus argophyllus*	50%

In addition no key species were identified in the Otay EIS or subsequent terms and conditions BLM will further refine key species based on newly established monitoring.

- Grazing use shall be managed according to grazing regulations, allotment management plans, the South Coast RMP as amended. Grazing use shall be curtailed to protect perennial plants during severe or prolonged drought. Grazing uses may also be modified to minimize conflict with threatened and endangered species.
- In years when weather results in extraordinary conditions the BLM may require the lessee to modify grazing to allow seed germination, seedling establishment, and reproduction of native plant species. During prolonged drought the BLM would require the lessee to reduce stocking rates.
- Submission of actual use reports would be required within 15 days after the end of the grazing authorization. Actual use reports would be required to provide detailed location and number of livestock.

Alternative B: No Action (No Grazing) Alternative

This alternative would authorize no grazing of the allotment and the existing permit would be cancelled.

Alternative C: Seasonal Use Modification and AUM Reduction Alternative

This alternative is to re-issue the existing 10-year lease with specific seasonal restraints as follows: Two months are grazed in a 6 month period.

Authorized Use:

Livestock Numbers and Season of Use

Allotment Name	Cattle Number *	AUMs**	Season of Grazing Use***	
			From	To
Hauser Mountain	11	22	November1	March 30

* The number of livestock authorized to graze during the season of use.
** Animal Unit Month (AUM) the amount of forage necessary for the sustenance of 1 cow or its equivalent for a period of 1 month.
*** The period livestock typically graze forage on the allotment.

All other permit terms and conditions would continue to apply.

CHAPTER 3: AFFECTED ENVIRONMENT

A. Issue Identification

Significant issues are defined as those actions which may cause a direct or indirect effect to the physical or biological environment, create an unresolved conflict between uses or have the potential for significant resource degradation.

Non-significant issues that will not be addressed in detail are those outside of the scope of the proposed action, already decided by law, regulation or policy, not germane to the decision being made, or are conjectural or lacking factual evidence.

The following table summarizes potential impacts to various elements of the human environment, including the "critical elements" listed in BLM Manual H-1790-1, Appendix 5, as amended. Elements for which there are non-substantial impacts are briefly described in the body of this document with supporting rational and will not be discussed further in this document. No analysis is provided for those resources that are not present.

An interdisciplinary team was used to identify potential issues to be address by this environmental assessment. The following table identifies those issues to be addressed by detailed analysis.

Environmental Element	Action Alternatives	No Action Alternative
Air Quality	Negligible affect	No impact
ACEC's	Not present	Not present
Cultural Resources	See discussion	See discussion
Native American Concerns	See discussion	See discussion
Farmlands	Not present	Not present
Floodplains	Not affected	Not affected

Energy (E.O. 13212)	Not present	Not present
Minerals	Not affected	Not affected
T&E Animal Species	Not Present	Not Present
T&E Plant Species	Not Present	Not Present
Invasive, Nonnative Species	See discussion	See discussion
Wastes (hazardous/solid)	No impact	No impact
Water Quality (surface and ground)	See discussion	See discussion
Wetlands/Riparian Zones	See discussion	See Discussion
Wildlife	See discussion	See Discussion
Wild and Scenic Rivers	Not present	Not present
Wilderness	Not present	Not present
Environmental Justice	No issues identified	No issues identified
Vegetative condition	See Discussion	See Discussion
Visual Resource Mgmt.	Not impacted	Not impacted

AIR QUALITY

Affected Environment

The South Coast Air Basin, Air Quality Management District (SCAQMD) has State air quality jurisdiction over the area associated with the proposed action. The SCAQMD has rules that apply to this project along with permitting requirements. Much of the time, air quality throughout the project area is generally good. However there are times that the area does not meet air quality standards due to locally generated and/or wind transported pollutants. The vicinity in which all subject grazing allotments are located is currently classified as a federal non-attainment area for ozone and particulate matter less than 10 microns in diameter (PM-10) under national standards. The area is within the South Coast PM-10 Planning Area and the San Diego Air Pollution control District (SDAPCD) non-attainment area. The State Implementation Plan (SIP) identifies sources of PM-10 emissions and control measures to reduce emissions. The SIP emphasizes controls and management.

Environmental Consequences:

a. Impacts of All Action Alternatives

In general, soil disturbance from the trampling action of the livestock when soil moisture levels are low would result in increased fugitive dust emissions (PM10) in the allotment. In addition, vehicles used in association with livestock operations on the access roads would also generate small additional amounts of PM10 emissions and various precursor emissions for ozone.

However, the overall effect on air quality would be slight due to the minimum number of livestock and generally wide distribution of livestock movement patterns in the allotment. Occasionally, livestock would be concentrated in temporary holding areas for short periods off the allotment. Emissions would be higher during potential holding periods, but would not exceed standards. PM-10 and ozone emissions within this allotment are de minimus and no further conformity determination is required.

b. Impacts of No Action Alternative.

No soil disturbance from the trampling action of the livestock would occur and additional fugitive dust emissions would not result.

c. Cumulative Impacts of Action Alternatives

The slight increase in PM10 emissions resulting from grazing would make a very small contribution to overall PM10 levels in the general area. Sources of PM10 particles in the area include vehicles being driven on unsurfaced roads and areas devoid of vegetative cover and subject to wind erosion.

Consultation: Consultation with South Coast Air Quality Management District was not undertaken as emissions are expected to be de minimus and air quality is not expected to be impacted.

2. CULTURAL RESOURCES

Affected Environment

Cultural resources are definite locations of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological and historic, or architectural sites, structures, districts, or places with important public and scientific uses and may include locations of traditional cultural or religious importance to specified social and/or cultural groups. Significant cultural resources are those that meet one or more criteria for inclusion in the National Register of Historic Places (NRHP). The responsibilities of federal agencies with respect to these resources are identified in several regulations, including the National Historic Preservation Act (16 U.S.C. § 470), the Archaeological Resources Protection Act (16 U.S.C. §470aa), and the Native American Graves Protection and Repatriation Act (25 U.S.C. § 3001).

Domestic Livestock Grazing Impacts on Cultural Resources

Experimental studies designed to address the impacts of domestic livestock grazing on archaeological resources have demonstrated that intensive trampling may have an adverse impact (ASPNN 1990: Osborn et al. 1987; Roney 1977: and Nielson 1991). Intensive trampling may result in artifact breakage and disruption of features, stratigraphy, and spatial patterning of archaeological materials. Removal of vegetation or loosening of surface soils may lead to erosion. Halford (1999:np) notes: “Intensity of grazing , soil hardness, moisture, vegetation cover, and type are factors influencing the level and types of impacts. The areas of greatest concern are those locations where livestock congregate and tend to spend a large percentage of their time (field observations1999).” Based on these observations, cultural resources surveys

should be focused on areas where cattle tend to congregate (man-made and natural water sources, meadows, salt licks, and range improvement areas).

Records Search Results

In October 2009, BLM Archaeologist Chris Dalu conducted a records search of cultural program report files, site files, base maps, GLO maps and BLM land patent records, as part of the cultural resources compliance for this EA. Records indicate that two Class III cultural resources inventories (Chandler and Bholat 2008; Laylander and Pallette 2006) were completed within a portion of the Hauser Mountain Grazing Allotment, and one site evaluation (Queen 2006) was completed immediately adjacent to the allotment. As a result of the Class III surveys, 100 acres within the 3,366-acre allotment were examined. In addition, a Class II field survey associated with the proposed Hauser Mountain Fuel Break project was recently completed within approximately 132 acres of the allotment. Although a final report has not been completed for the proposed fuels break, the consultant, RECON, has provided their draft report and field findings to the BLM (Underwood et al. 2008), which have been incorporated into this EA. The Class III and Class II surveys were conducted in areas subject to grazing within the allotment. Areas subject to grazing were determined relative to vegetation density and slope.

Allotment area	Grazable acres within allotment	Acres subject to Class III Inventory within allotment	Percentage of total allotment inventoried	Percentage of grazable acres inventoried within allotment
3,366 acres	550 acres	232 acres	7%	42%

Records also indicate that 29 cultural resources have been recorded as a result of past Class II and Class III surveys within the allotment. Eight of these resources are associated with a discontiguous historic ranch complex (SVW-1H) located within and outside of the allotment. Resources identified to date within the allotment are provided in the following table.

Temp Cultural Resource #	Permanent Trinomial #	Resource Description	Year Recorded	NRHP Evaluation Status
	37-29418	BLM datum (stamped 1954)	`	Recommended ineligible by consultant, not evaluated by BLM
	37-29447	Metal trough	2008	Recommended ineligible by consultant, not evaluated by BLM
	37-29448	Isolated flake	2008	Recommended ineligible by consultant, not evaluated by BLM
	37-29466	Isolated biface	2008	Recommended ineligible by consultant, not evaluated by BLM
	37-25680	San Diego & Arizona Railway, constructed 1909	2006	Segments on BLM land recommended ineligible by consultant, not evaluated by BLM
SVW-1H		Discontiguous historic ranch complex located primarily in central and southwestern portion of allotment. Includes dams/ponds (CZH-1H, CZH-8H, HJP-9H, HJP-10H, HJP-17H), stock tank (CZH-7H), & stock troughs (SVW-2H, KDL-3H).	2008	No recommendation from consultant, not evaluated by BLM

CZH-2		Bedrock milling/10 elements	2008	No recommendation from consultant, not evaluated by BLM
CZH-22		Bedrock milling/2 features/2 elements	2008	No recommendation from consultant, not evaluated by BLM
HJP-6		Bedrock milling/2 slicks	2008	No recommendation from consultant, not evaluated by BLM
HJP-7		Bedrock milling/ 1 slick	2008	No recommendation from consultant, not evaluated by BLM
HJP-8		Bedrock milling /2 elements	2008	No recommendation from consultant, not evaluated by BLM
HJP-13		Bedrock milling/2 features/4 elements	2008	No recommendation from consultant, not evaluated by BLM
***HJP-14`**		**Bedrock milling/4 features/26 elements/ lithics & ceramic, midden deposit**	**2008**	**No recommendation from consultant, not evaluated by BLM**
HJP-15		Bedrock milling/3 features/12 elements	2008	No recommendation from consultant, not evaluated by BLM
HJP-16		Bedrock milling/5 features/16 elements/lithic	2008	No recommendation from consultant, not evaluated by BLM
HJP-21		Bedrock milling/1 feature/1 element	2008	No recommendation from consultant, not evaluated by BLM
KDL-2		Bedrock milling/2 elements	2008	No recommendation from consultant, not evaluated by BLM
***KDL-4**		**Bedrock milling/1 elements, lithic scatter**	**2008**	**No recommendation from consultant, not evaluated by BLM**
JLU-1		Bedrock milling/4 elements	2008	No recommendation from consultant, not evaluated by BLM
ISO-1		Isolated core	2008	No recommendation from consultant, not evaluated by BLM
ISO-2		Isolated core	2008	No recommendation from consultant, not evaluated by BLM
ISO-4		Isolated flake	2008	No recommendation from consultant, not evaluated by BLM

*** bolded resources indicate those resources most sensitive to impacts from grazing.**

A review of the site records for resources recorded within the allotment does not indicate that any of the resources have been impacted by grazing activities.

GLO rectangular survey maps of the Hauser Mountain Grazing Allotment indicate that segments of existing roads/trails within the allotment were mapped as early as 1921 and 1931. BLM Historic Index and GLO records indicate the following substantial grants and land actions occurred within the allotment:

<u>T18S, R4E:</u>
Section 1:
Joseph Nachbauer, 1/19/1891, 160 acres SW and NW, Sale-Cash Entry;
Serafin Wunderle 10/4/1890, 80.15 acres, Sale-Cash Entry.
Section 14:
Alfred M Jamison, 11/23/1891, 160 acres, Sale-Cash Entry.

<u>T18S, R5E:</u>
Section 6:
H Monroe Johnson, 9/30/1932, 361.75 acres, NE and NW, Homestead Entry-Stock Raising;

Fred A Redwine, 6/1/1920, 106.5 acres NENE, Sale-Cash Entry.
Section 7:
H Monroe Johnson, 9/30/1932, 361.75 acres NWNW, Homestead Entry-Stock-Raising.
Section 17:
Elirce E Jessup, 10/27/1916, 160 acres SESE, Sale-Cash Entry;
Frank R Stanley, 10/20/1932, 280 acres NENE, Homestead Entry;
William M Stelzner, 3/16/1936, 160 acres N1/2SW, Homestead Entry;
Laura P Wright, 10/24/1894, 160 acres S1/2SW, Homestead Entry.

T17S, R4E
Section 36:
State of California, 5/3/1859, California Enabling Act;
Carl H Hollenbeck, 10/8/1935, 50.25 acres, Homestead Entry.

T17S, R5E
Section 31:
Wilbur W Grigsby, 7/10/1922, 158.78 acres, Lot 62, Homestead Entry;
Carl H Hollenbeck, 10/8/1935, 50.25 acres, Lot 4 of SWNW, Homestead Entry;
Gustave L Molchan, 11/15/1935, 637.16 acres, NE, E1/2SW, SENW, NWSE, Lot 10 of SWSE, Lot 5 of NESE, Lot 8 of SWSE, Homestead Entry-Stock;
Pacific Pipeline construction, 5/4/1955, 78.4 acres, Lot 3 of NWNW, NENW, Sale-Title 32 Chapter 7;
Carlos Pine, 7/9/1894, 200 acres, Lot 64, Homestead Entry;
Fred A Redwine, 6/1/1920, 106.5 acres, lot 63, Sale-Cash Entry;

Environmental Consequences of the Action Alternatives:

a. Impacts of the Action Alternatives

Cultural resources were reviewed within the grazing allotment, as noted in the previous section. According to site records and associated archaeological reports, none of those resources have been impacted by grazing; however, this has not been verified in the field by the BLM and past surveys by consultants were not specifically designed to identify impacts from grazing. There appears to be little to no potential for the proposed grazing activities associated with this EA to impact any of the historic-age resources or those prehistoric-age resources where only bedrock milling features (with an absence of artifacts or ecofacts) are present. However, two of the prehistoric sites within the allotment contain bedrock milling features in addition to lithics, ceramics and/or midden (HJP-14 and KDL-4). It is imperative that the BLM visit these sites during the grazing season to determine the content and extent of the sites, and whether they are or are not being impacted by grazing activities. If it is determined that these, or any other sites within the allotment are being impacted by grazing activities, then efforts will be made to terminate the use of those areas for grazing. A program to monitor the condition of cultural resources within the allotment will also be undertaken, as will more precise mapping of cattle congregation areas and past range improvements. Although the use of the allotment is relatively light and seasonal, there is the potential that such use could be impacting

sites HJP-14 and KDL-4, or any other sites that contain artifacts on the ground and potential subsurface deposits. It is essential to identify cattle congregation areas relative to those places within the allotment that exhibit physiographic characteristics conducive to prehistoric use.

The Action Alternatives will have no effect to historic properties.

b. Impacts of No Action

The No Action Alternative will have no effect to historic properties as livestock use would not be authorized.

c. Cumulative Impacts of the Action Alternative

No impacts to cultural resources as a result of grazing have been identified thus far. Based on current information, There would therefore be no cumulative impacts to cultural resources as a result of permit renewal.

Maps: Locations of cultural resources are not included in this EA due to the proprietary nature of the information; however, the maps are stored within the cultural resources data files.

References:

ASPPN
1990 Impacts of Domestic Livestock Grazing on Archaeological Resources Archaeological sites Protection and Preservation Notebook, Technical Notes I-15. U.S. Army Engineer Waterways Experiment Station, Vicksburg MS.

Bholat, Sara and Evelyn Chandler
2008 Cultural Resources Inventory of BLM Routes within the Border Mountains Planning Area San Diego County, California. Report on File: BLM Palm Springs-South Coast Field Office.

Halford, F. Kirk
1999 A Research Design for the Bishop Field Office Grazing Allotment Lease Renewal Assessments. Cultural Resource Project: CA-170-99-04. On file at the Department of the Interior, Bureau of Land Management, Bishop Field Office, Bishop, CA.
2003 Affected Environment. In: Environmental Assessment, Livestock Grazing Authorization. Department of the Interior, Bureau of Land Management, Bishop Field Office, Bishop, CA.

Laylander, Don and Drew Pallette
2006 Archaeological Survey Report for the District 11 TEA21 Rural Route Survey, State Route 94, San Diego County, California.

Nielsen, Axel E.
1991 Trampling the Archaeological Record: an Experimental Study. American Antiquity 56(3):483-503

Osborn, Alan, Susan Vetter, Ralph Hartley, Laurie Walsh, and Jesslyn Brown
1987 Impacts of Domestic Livestock Grazing on the Archaeological Resources of Capitol Reef national Park, Utah. Midwest Archaeological Center Occasional Studies in Anthropology No. 20. National Park Service.

Roney, John

1977 Livestock And Lithics: The Effects Of Trampling. Manuscript on file at the Bureau of Land Management, Winnemucca District Office, Winnemucca, NV.

Underwood, Jackson, Carmen Zepeda-Herman and Harry Price

2008 Draft Class II Cultural Resources Survey for the Hauser Mountain Fuel Break Project, San Diego County, California. Draft report on File: BLM Palm Springs-South Coast Field Office.

3. ENVIRONMENTAL JUSTICE

Affected Environment:

The grazing allotment being analyzed is located in rural east San Diego County. The rural areas of this county are typically occupied by moderate to low-income households. No minority communities or low-income communities are located within or adjacent to the proposed project area. The proposed action would not impact the Native American's distinct cultural practices or result in disproportionately high or adverse human health or environmental effects on minority communities.

Environmental Consequences:

a. Impacts of Action Alternatives

The implementation of the proposed action would not affect minority or low income populations. Continued grazing in this allotment under the action alternatives would have an economic benefit to the lessee. This benefit would have a slight direct and indirect benefit on the local Cameron Corners economy.

b. No Action Alternative

Cancellation of the current grazing permit would not affect minority or low income populations. Under this alternative there would be no economic benefit to the lessee and no direct or indirect benefits would accrue for the local economy of the community of Campo.

c. Cumulative Impacts

All of the action alternatives would result in minimal accrual of economic benefits to the local economy of Campo.

Consultation: None
Maps: None
References: None

4. HEALTH AND SAFETY

Affected Environment:

Public use of this rural area consists of occasional through traffic on the Campo Road and low

numbers of recreationists engaged in camping and touring along Highway 94 and the Potrero area. The potential for public visitation proximal to grazing operations and occasional herding, present minimal potential hazards to the public. Most of the grazable portions of the allotment are removed from direct access, limiting public contact with livestock operations.

BLM would retain its responsibility to inspect the allotment for health, safety, and environmental issues.

Environmental Consequences:

a. Impacts of Proposed Action and No Action Alternatives.

The impact of livestock grazing on public health and safety is minimal. The facilities required for grazing, such as existing fences and watering troughs, are minimal and isolated posing little or no risk to the public.

b. Cumulative Impacts

There are no known cumulative impacts to health and safety associated with livestock grazing operations.

Consultation: None
Maps: None
References:
Federal Land Policy and Management Act of 1976, Titles I – III.

Department of Interior, Part 485, Safety and Occupational Safety & Health Program, Chapter 23 Public Safety and Health.

5. NATIVE AMERICAN CONCERNS

Affected Environment:

The following Native American Tribes were consulted during formulation of the SCRMP and the Otay Grazing EIS, of which identified the allotment as available for continued domestic cattle use.

a. Agua Caliente Band of Cahuilla Indians, Palm Springs, CA
b. Barona Indian Mission
c. Cahuilla Band of Mission Indians
d. Campo Band of Mission Indians
e. Cuyapaipe Indian Reservation
f. Inaja and Cosmit Reservation
g. Jamul Indian Village
h. La Jolla Indian Reservation
i. La Posta Band of Mission Indian
j. Los Coyotes Band of Mission Indians
k. Mesa Grande Band of Mission Indians

l. Morongo Reservation
m. Pala Indian Reservation
n.Pauma Band of Mission Indians
o.Pechanga Band of Mission Indians
p.Ramona Indian Reservation
q.Rincon Reservation
r. San Pasqual Indian Reservation
s. Santa Rosa Band of Mission Indians
t. Sycuan Band of Mission Indians Viejas Tribal Council

None of the tribes have identified any concerns over the grazing authorizations for this allotment which have been in place for over thirty years.

Environmental Consequences:

a. Impacts of Proposed Action and No Action Alternatives.

No impacts were identified associated with continued cattle grazing in this allotment.

b. Cumulative Impacts

No cumulative impacts were identified during the Native American consultation process.

Consultation: See above list of tribes consulted.
Map: None.
References: None.

6. RECREATION

Affected Environment:

The Hauser Mountain Allotment receives light recreational use in the area (primarily on and adjacent to Campo Road). Limited water, dense chaparral vegetation, and steep terrain present challenging opportunities for hunting, bird watching, or hiking. In addition the allotment is contiguous with the U.S/Mexico border fence area and a significant amount of Department of Homeland Security (DHS) activity throughout the area. The presence of Border Patrol agents can intimidate the casual recreationist.

Environmental Consequences:

a. Impacts of Action Alternatives.

The impact of cattle grazing on recreation would not be substantial given the low numbers of recreationists using this area and no facilities in the allotment. The Western and Northern access routes are primitive 4 wheel drive presenting difficult means of travel. This limited access, coupled with no developed recreational facilities currently precludes intensive recreation activity.

b. Impacts of the No Action Alternative

This alternative would have no effect on recreation because proposed facilities or management practices that could potentially alter existing recreation uses or use patterns do not exist in this allotment. Recreationists would continue to encounter livestock infrequently under any of the alternatives.

c. Cumulative Impacts

There are no known cumulative impacts to recreation associated with this perennial cattle grazing allotment given the low levels of human activity in the general area.

Consultation: None
Maps: None
References: None

7. SOCIAL AND ECONOMIC

Affected Environment:

The Hauser Mountain Allotment Lessee manages his livestock operation from the Star Ranch adjacent to the Allotment. He has grazed this area since 1970s. Although grazing is currently authorized seasonally, the allotment has been grazed far less than the allowable use. Due to long-term drought and vegetation succession on the allotment, resulting in insufficient forage, the allotment has been grazed infrequently. Warmer, dryer climate trends have resulted in what is essentially, ephemeral use of the allotment. During years of non-use the lessee uses his own fields near Campo and, livestock are moved from pasture to pasture depending on available forage.

It is unknown what percentage of the lessee's income is derived from cattle operations or to what degree that percentage of income is maintained by the lessee's dependence on grazing this allotment. Local ranchers in Campo realize income from rental of pasture for the lessee's livestock. Other support services such as transport, veterinary, and equipment suppliers realize economic gains related to the lessee's operations.

Overall, the lessee's economic contributions to the economy of eastern San Diego County are relatively small. This region's economy is primarily based upon other investments (especially along the (International Boarder DHS), farming, the State Prison, military operations and Interstate 8 related businesses.

Environmental Consequences:

a. Impacts of the Action Alternatives.

Under these alternatives grazing would continue at current or seasonally reduced levels resulting in a nominal influence on the local and regional economy of Eastern San Diego County.

b. No Action Alternative

No economic benefits would accrue for the local or regional economy.

c. Cumulative Impacts

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

Consultation: None
Maps: None
References: None

8. SOIL

Affected Environment:

Soils in the Proposed Action area consist of Mottsville-Calpine and the Tollhouse-La Posta Rock land association. The Mottsville series is a deep, loamy coarse sand, occurring in valleys and on alluvial fans. The Calpine series is also granitic and on alluvial fans, but it is on very deep coarse sandy loams. Tollhouse soils are excessively drained, shallow or very shallow coarse sandy loams. About 10 percent of the surface is typically covered with rock outcrops and 20 percent with boulders. Permeability of these soils is rapid, runoff is medium to rapid, and the erosion hazard is moderate to high. The La Posta series consists of somewhat excessively drained loamy coarse sands. Rock outcrops cover 5 to 10 percent of the surface in some areas. The La Posta rocky loamy coarse sand is moderately sloping to moderately steep and is 40.6 to 81.3 centimeters (16 to 32 inches) deep. Permeability is rapid, runoff is medium, and the erosion hazard is moderate (U.S. DON 2002a).

Observed erosion appears to be a typical condition of this area that has not been aggravated by current grazing practices.

A Rangeland Health Assessment, conducted on May 10, 1999, rated all soils as stable.

Environmental Consequences

a. Impacts of Action Alternatives

Localized areas of soil impacts may be associated with congregation areas such as watering sites or trailing areas. Alternative A would represent an increase of cattle use within the allotment over the seasonal use alternative. Alternatives C would minimize soil impacts due to a reduction of forage use, resulting in more biomass left to protect the soil surface and reduce potential sediment transport and erosion. Alternatives C would result in limited seasonal use of this allotment and, low

intensity cattle grazing would not be expected to create any downward trends in soil stability.

b. No Action Alternative

Under the No Action Alternative, livestock would be permanently removed and livestock related soil impacts would not occur.

b. **Cumulative Impacts**

Currently, the primary impacts to soils on this allotment are low levels of vehicular use on the Potrero trail and several other routes used by Border Patrol agents in the area. Little increased erosion has been observed from these activities due to on-going maintenance of the Pacific Crest Trail, fuel breaks and low levels of vehicular use in the area.

Consultation: None
Maps: None
References: None

9. WASTE, HAZARDOUS OR SOLID

Affected Environment:

The BLM has no records of solid waste dumping; reportable spills of fuel or other petroleum products; or the dumping of cattle carcasses associated with cattle grazing in this allotment. .

Environmental Consequences:

a. Impacts of Action Alternatives.

There is very limited potential for grazing-related releases of hazardous and/or solid waste including dumping of cattle carcasses and/or releases of fuel or any other petroleum products from haul and service trucks. In addition, there may be minimal risk to the public that may come into contact with any contaminated areas.

d. No Action:
Under this alternative, there would be no potential for grazing related hazardous materials release.

b. Cumulative Impacts:

There is a low potential for hazardous or solid waste contamination from recreation use on the area, however, there are no known records of such contamination in the area.

Consultation: None
Maps: None

References: None

40CFR Part 300, National Oil and Hazardous Substance Pollution Contingency Plan; Federal Land Policy and Management Act of 1976, Titles I – III. ;

Department of Interior, Part 485, Safety and Occupational Safety & Health Program, Chapter 23 Public Safety and Health.

10. WATER QUALITY, SURFACE AND GROUND

Affected Environment:

Composed of steep, naturally erosive mountains formed by dynamic geologic forces, the watersheds surrounding the Allotment area provide a relatively direct delivery system for precipitation and sediment to reach streams. The allotment's hydrology is influenced by several factors, including those that are natural (topographic, geologic, climatic, etc.) and human influenced (land use, etc.). Proper management and stewardship of water resources are fundamental to natural resource and land use sustainability.

The Allotment area is within the Tijuana Hydrologic Unit. The Tijuana Hydrologic Unit is drained by Cottonwood and Campo creeks, which are tributaries of the Tijuana River. Runoff is primarily captured by Morena Reservoir and Barrett Lake on Cottonwood Creek. The Campo and Cameron Hydrologic Areas are two of eight hydrologic areas in the Tijuana Hydrologic Unit. The majority of the Proposed Action area is in the Campo Hydrologic Area with a small portion in the Cameron Hydrologic Area.

The presence of robust phreatophytic plants indicate that ground water is present in portions of the allotment. At least three mining-related water wells are present in the allotment area, but they have been abandoned for many years. BLM has no data on the depth or extent of ground water on the allotment.

The allotment exists within a Pacific montane environment, characterized by highland areas below the tree line, with temperatures ranging from below freezing in the winter to greater than 30 degrees Centigrade (°C) (86 degrees Fahrenheit [°F]) in the summer. Moderate amounts of snowfall are experienced in the winter and rainfall averages 51 to 76 centimeters (20 to 30 inches) annually. Surrounding areas in the lower elevations experience a Mediterranean-type climate with moderate temperatures and rainfall amounts generally less than 25 to 30 centimeters (10 to 12 inches) per year. Urban development near and adjacent to the allotment can have a dramatic effect on natural resources. Many stream channels downstream of the allotment have been altered through flow management or channelization, which resulted in a break in the connectivity with natural streams that previously flowed through towns, cities, and farmland to the Pacific Ocean.

There are no permanent surface water resources within the Allotment area. The property drains via ephemeral channels, primarily to the south and west and ultimately into the Tijuana River drainage basin. Most water produced in the Cleveland National Forest (adjacent to the allotment meets or exceeds federal and state water quality standards. Groundwater quality in the Proposed Action area is generally good.

Environmental Consequences:

a. Impacts of Action Alternatives.

Regardless of the alternative chosen, the impacts of cattle on water quality in the area is very low given that any surface water quickly infiltrates into the sandy loam soil. Since no ground water testing has been done on the allotment, it is not known whether cattle have caused any introduction of pollutants to the ground water. However, it is very unlikely that cattle grazing would cause adverse impacts due to the occasional nature of cattle use and, a lack of long-term concentrations of cattle in localized areas.

b. No Action Alternative

Under the No Action Alternative, there would be no potential for livestock related surface or ground water impacts.

c. Cumulative Impacts

There is a low potential for water quality issues associated with grazing operations, Border Patrol activities, recreation use or the road that traverses the area, however, there are no known records of such contamination in the area.

Consultation: None
Maps: None
References: None

11. WILDLIFE HABITAT

Affected Environment:

Wildlife (General)

The wide range of habitats in the area supports a great diversity of wildlife. Desert transitional/desert scrub, mountain, and coastal species may be found throughout the area. The area supports populations of representative common mammal species either observed directly or detected indirectly by sign (e.g., tracks, scat, or fur) within the project area. Those species include numerous small mammals, mountain lion (*Felis concolor*), bobcat (*Felis rufus*), coyote (*Canis latrans*), and mule deer (*Odocoileus hemionus*).

The allotment includes potential habitat for common reptilian species. Reptile species observed within the Proposed Action area include relatively common species such as the garter snake (*Thamnophis* sp.), northern red diamond rattlesnake (*Crotalus ruber ruber*), western fence lizard (*Sceloporus occidentalis*), alligator lizard (*Gerrhonotus multicarinatus*), and side-blotched lizard (*Uta stansburiana*). Also occurring on-site were the common kingsnake (*Lampropeltis getulus*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), coastal rosy boa (*Lichanura trivirgata roseofusca*), western whiptail (*Cnemidophorus tigris*), granite spiny lizard (*Sceloporus*

orcutti), and San Diego horned lizard (*Phrynosoma coronatum blainvillii*). Other amphibians and reptiles expected to occur on-site include San Diego gopher snake (*Pituophis melanoleucus annectens*), California tree frog (*Pseudacris cadaverina*), and Pacific tree frog (*Pseudacris regilla*).

The allotment supports a variety of resident and migratory bird species, with 48 species documented within the local area. Resident species include the spotted towhee (*Pipilo maculatus*), western scrub jay (*Aphelocoma californica*), redtailed hawk (*Buteo jamaicensis*), common raven (*Corvus corax*), and song sparrow (*Passerella melodia*), black-throated sparrow (*Amphispiza bilineata*), common raven (*Corvus corax*), white-crowned sparrow (*Zonotrichia leucophrys*), Brewer's sparrow (*Spizella breweri*), red-tailed hawk (*Buteo jamaicensis*), Western kingbird (*Tyrannus* verticalis), black-tailed gnatcatcher (*Polioptila melanura*), blue-gray gnatcatcher (*Polioptila caerulea*), phainopepla (*Phainopepla nitens*), northern mockingbird (*Mimus polyglottos*), Gambel's quail (*Lophortyx gambelii*), American kestrel (*Falco sparverius*), turkey vulture (*Cathartes aura*), verdin (*Auriparus flaviceps*), mourning dove (*Zenaidura macroura*), lesser nighthawk (*Chordeiles acutipennis*), horned lark (*Ermophila alpestris*), Poorwill (*Phalaenoptilus nuttallii*), rock wren (*Salpinctes obsoletus*), canyon wren (*Catherpes mexicanus*), Anna's hummingbird (*Calypte anna*), Costa's hummingbird (*Calypte costae*), and house finch (*Carpodacus mexicanus*).

Migratory bird species on the Hauser Mountain Allotment use the open space within the allotment area as a temporary stopover point during the winter or summer seasons, while other migratory species, such as the western wood-pewee (*Contopus sordidulus*) and the yellow-rumped warbler (*Dendroica coronata*), likely nest within the local area.

Threatened and Endangered Species:

There are no known federally listed species in the grazing allotment or unoccupied suitable habitat within the allotment.

Sensitive Species

One sensitive reptile species and four sensitive avian species are also known to occur in the allotment. The northern red diamond rattlesnake (*Crotalus ruber ruber*), a California state species of special concern was observed on occasions throughout the upland vegetation series of the parcels. Three avian species, the Cooper's hawk (*Accipiter cooperi*), northern harrier (*Circus cyaneus*), and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), are also considered California state species of special concern. The Cooper's hawk was observed throughout portions of the allotment containing coast live oak series. There is a high potential that this species nests and forages on-site within the coastal live oak series and associated upland series. The northern harrier is associated with grassland series.

Environmental Consequences:

a. Impacts of Action Alternatives

General Wildlife Impacts: Under Alternatives A, 11 cattle would be authorized six months or seasonally. Alternative A would present the greatest opportunity to provide

conflict with wildlife in that cattle could be present half a year and usage of quality forage would be expected to occur. The potential for half year utilization of vegetation during dry months could also increase competition for dwindling forage adversely affecting nutrient intake for a variety of wildlife.

Alternative C could provide for less forage competition with wildlife by seasonally limiting forage utilization to wetter months when forage competition would be of less concern. It also represents a reduction of forage utilization over utilization of forage that would occur under Alternative A.

Alternative C could offer the greatest opportunity to eliminate forage competition concerns and conflicts with wildlife. Livestock authorization would only occur if sufficient precipitation exists to produce suitable forage. Given future predictions for drying trends, it is expected that non-use or minimal use of the allotment would continue.

Sensitive Species

Grazing may contribute to habitat change by introducing or spreading invasive species and habitat degradation, especially in areas of concentrated cattle use. Most herpetofauna and fossorial mammals burrow in soft dirt or move into rock crevices or under debris, so it is possible that cattle could turn over these areas during their normal activities. It is unlikely that cattle will inadvertently consume herpetofuana or/and small mammals. Implementation of utilizations standards should help reduce the effect of habitat degradation on these species. The current cattle grazing program is not expected to further fragment the habitat for these species or increase movement barriers above and beyond what was already occurred in the past. Current stocking rates are significantly lower than what was previously authorized, so there is no expected increase in potential disturbance.

b. Impacts of No Action Alternative

Under the No Action Alternative, livestock use of the allotment would be eliminated and no impacts from grazing would occur.

c. Cumulative Impacts

Sensitive:

For the purpose of cumulative effects, the entire allotment would be considered the action area, despite the reality that cattle do not use the entire allotment for grazing. Approximately 80% of the allotment is inaccessible to cattle due to topography, unpalatable forage, and infrastructure (i.e. fencing, etc.). The grazing allotments on the South Coast BLM contain known or suitable habitat for BLM sensitive species. All of the species known to occur have been, are, and will continue to be affected by the continuation of the livestock grazing program. Historically, the cattle stocking rate for the Field Office was much higher than the current levels. Effects to species and their habitats were most likely more significant than currently observed.

Implementation of the terms and conditions and utilization standards and, the flexibility of the AMP should help reduce future impacts to these species and their habitats.

Many other BLM activities occur within the allotment boundaries. Activities include: recreation (camping, biking, hiking, equestrian use, target shooting, hunting), OHV use, road maintenance, hazardous fuels treatment, mining, prospecting, special use events, law enforcement, fuel wood cutting, Native American gathering and fire suppression. BLM lands are also places where numerous illegal activities including marijuana plantations, hazardous material dumping, trash dumping, and illicit drug cultivations occur. State and private activities and/or events may also occur on the BLM with or without permits or authorizations.

Cumulative effects from BLM projects consist of alteration of occupied, suitable or potentially suitable habitat for sensitive wildlife species. Several BLM hazardous fuels reduction projects have altered reduced or increased the amount of available suitable habitat for wildlife species. Prescribed burns such as the Poppet Flats, (implemented in 2005) opened up large areas of chaparral habitat. Prescribed burning and removal of chaparral may be beneficial for species that prefer disturbed or more open habitats. The Border, Otay Mountain and Hauser hazardous fuels project will affect a portion of other Allotments. While these treatments would have a short-term negative effect on the habitat, over the long term they would prove beneficial in reducing the risk of landscape scale, high intensity wildfire, and providing a mosaic of habitat types that could enhance biological diversity.

On-going activities such as regional growth and development, and increased demand for recreation are expected to increase in the present and near future, as the population of Southern California continues to increase. The cumulative effect of all of these activities is a reduction in quantity and quality of habitat for sensitive species over the long term. This effect is permanent, as more areas become developed and fewer areas remain undisturbed placing greater emphasis on public lands to provide the mechanism to conserve dwindling habitats. However, the livestock grazing program on the South Coast BLM alone does not result in moving these species towards thresholds of vulnerability or listing.

The No Action alternative would have no effect on sensitive species and would not contribute to cumulative effects.

Consultation: Informal
Maps: See Appendix 1
References: Upon Request

13. VEGETATION INCLUDING INVASIVE/NON-NATIVE SPECIES

Affected Environment:

Generally, the Allotment area consists of steep hills and slopes that are bisected by narrow

ravines and a few broad valleys. Chaparral characterizes most of the Hauser Mountain Allotment area. More than 85 percent of the vegetation within the Hauser Mountain Allotment is mapped as the chamise series and not typically preferred by livestock. The holly-leaf cherry, scrub oak-chamise, and chaparral whitethorn series are also conspicuous series within much of the area. The holly-leaf cherry and chaparral whitethorn series are more prevalent on the steeper, rockier slopes while the scrub oak chamise series is more common on the flatter and gentler slopes. The coast live oak series occurs along some of the canyon valleys and ravines with seasonal water. The California annual grassland series occurs in the broader valleys where the majority grazing has occurred in the past.

Upland forage on the allotment consists of introduced annual grasses and native perennial bunch grasses. Intermixed with these grasses are a suite of native (e.g., *Nasella pulchra*) and non-native forbs. There is an increase in abundance of montane native perennial grasses such as California brome, red fescue, squirreltail, blue wildrye, and *Poa secunda* and non-native perennials such as *Poa pratensis*. The arid communities have an abundance of non-native annual grasses (especially red brome) and non-native annual forbs like filaree. There are also native bunchgrasses like Littleseed muhly, tall melic, squirreltail and non-native perennials like rabbitfoot and Mediterranean schismus. In moisture areas, there are stands of deergrass. Desired conditions for these grasslands are to maintain productivity, ground cover and increase native species diversity. There is also a desire to manage to increase the relative groundcover made up by native perennial grasses. Reduction of cover of non-native annuals in the arid communities is important as these may increase fire frequency and spread in these communities.

Research has shown that climatic variability is the driving force behind grassland productivity and composition in California grasslands (Jackson and Bartolome 2002). Light to moderate grazing has been shown to result in higher species diversity in grasslands than heavy grazing or complete exclusion (Hart 2001, Hayes 2003). Rest from grazing does not result in these types of grasslands moving towards a pre-European state, nor does it increase the proportion of native grasses in most studies (D'Antonio et al. 2002). In California annual grasslands, leaving a moderate amount of residual dry matter (RDM) increases productivity of rangelands as well as providing protection from soil erosion and nutrient losses (Bartolome et al. 2002).

Research results have been mixed as how to determine methods for increasing native perennial composition in California grasslands (D'Antonio et al. 2002) but, grazing in late winter or early spring may reduce the competition for light and nutrients from introduced annual grasses (Dyer 1999).

Comparisons of grazed and ungrazed sites in Arizona with a similar mix of perennial bunchgrasses and cool season non-native annual grasses found that sites with light to moderate grazing had higher percentages of native perennial bunchgrasses and were more resilient to drought than sites with long term grazing exclusion (Sprinkle et al 2007).

The chaparral plant communities contained in the allotment are mostly impenetrable and unpalatable to cattle. Some species, especially Mountain mahogany and *Ceanothus spp.* are palatable as browse species. These areas are considered secondary range because after fire or disturbance access is possible and there is usually a flush of herbaceous vegetation that is palatable to cattle. Woody species in the chaparral recover rapidly from fire. In the local area, cattle grazing alone have not been shown to prevent the recovery of chaparral in burned areas.

There is a concern that non-native annual grasses may increase fire frequency in chaparral areas. This concern is addressed in the noxious weed section.

There are 18 vegetation series within the Allotment area. A description of the species composition of applicable series is discussed below.

Big sagebrush series

This series occurs along the upper edges of the valley floor, typically adjacent to dirt roads and other areas that had some prior disturbance. Big sagebrush (*Artemisia tridentata*) is the dominant species, but other species such as chamise (*Adenostoma fasciculatum*), white sage, and California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*) may also be present. Big sagebrush is conspicuously absent from adjacent undisturbed communities suggesting that this is a disturbance-mediated species.

Birchleaf mountain-mahogany series

This series occurs on some of the lower and upper slopes within the Allotment area. This series is relatively open and dominated by birchleaf mountain-mahogany (*Cercocarpus betuloides*) though scattered chamise, chaparral whitethorn (*Ceanothus leucodermis*), and hollyleaf cherry are also present. Because this series is so open, ripgut brome (*Bromus diandrus*) and red brome (*Bromus madritensis* ssp. *rubens*) are present in high numbers.

California annual grassland series

Annual grasses and herbs are dominant in the ground layer of this series. Within the Allotment area, this series is present in the valleys and some of the slopes of adjacent hillsides. Ripgut brome and red brome are the two dominant species within this series. Cheat grass (*Bromus tectorum*), filaree (*Erodium* sp.), fiddleneck (*Amsinkia* sp.), and popcorn flower (*Plagiobothrys* sp.) are also present. The present species composition in these areas is likely the result of previous grazing activities. Ripgut brome and red brome are conspicuous components of other series in the Proposed Action area, again probably due to prior grazing activities. California buckwheat is scattered throughout the areas of this series suggesting that in the absence of disturbance these areas may develop into scrub or chaparral communities.

California buckwheat-white sage series

California buckwheat and white sage are the two dominant species within this series. This series occurs on lower slopes and is relatively open allowing for the occurrence of annual grasses and herbs such as ripgut brome, red brome, popcorn flower, and white pincushion-flower (*Chaenactis artemisiaefolia*).

California buckwheat series

This series appears to be another disturbance-mediated community. Several of the areas within the Allotment area where California buckwheat is the dominant species are alongside dirt roads. Other areas occur on some of the higher slopes that may be periodically burned. Ripgut brome and red brome are also present.

Chamise series

Chamise is the most common shrub within the Allotment area and occurs on a variety of topographic features from the flat valleys to steep slopes. This series is used to describe those areas where chamise is the primary dominant species though other shrub species may also be present and locally common. Generally, California peony (*Paeonia californica*) is the primary component of the understory. On the valley floors, big sagebrush, scrub oak (*Quercus berberidifolia*) and sugar bush (*Rhus ovata*) may be associates. On the adjacent slopes, Eastwood manzanita (*Arctostaphylos glandulosa*), bigberry manzanita (*Arctostaphylos glauca*), holly-leaf cherry, and chaparral whitethorn are associates. Openings in this series may support such species as chia (*Salvia columbariae*), white pincushion-flower, and several spineflower species (*Chorizanthe* spp.).

Chamise-bigberry manzanita series

This series is similar to the chamise series; the difference is that bigberry manzanita is much more conspicuous in these stands. This series appears to be more prevalent in areas of decomposing granite. Undisturbed stands of this series are usually very dense and have low plant species diversity, supporting very little understory species. Disturbed areas have a higher component of introduced grasses and forbs.

Chamise-Eastwood manzanita series

This series is very similar in appearance to the chamise-bigberry series, only Eastwood manzanita replaces the bigberry manzanita as the major associate of chamise. This series is also very dense with little understory components. Understory species are only present in sandy openings, where chia, white pincushion-flower, and several spineflower species may be present or in areas of disturbance where ripgut brome and red brome are present.

Chaparral whitethorn series

This series occurs on the slopes within the Allotment area. Chaparral whitethorn is the dominant species, but chamise, holly-leaf cherry, California buckwheat, and birchleaf mountain mahogany may also be present. This series intergrades with the holly-leaf cherry series in rockier areas. Open areas support a dense cover of ripgut brome and red brome. Small islands of this community are also present on rock outcrops within the chamise series. On these rock outcrops, species such as monkeyflower (*Mimulus aurianticus*), onion grass (*Melica imperfecta*), silverleaf lotus (*Lotus argophyllus* ssp. *argophyllus*), and fringed spineflower (*Chorizanthe fimbriata* var. *laciniata*) may be present.

Coast live oak series

This series is best represented along the major north-south-oriented valleys within the Allotment area. Smaller, isolated stands are present along some of the narrower lateral canyons. Coast live oak (*Quercus agrifolia*) is the dominant species. Arroyo willow (*Salix lasiolepis*) is a minor component in at least one of these stands. Shrub species such as chamise, big sagebrush,

and poison oak (*Toxicodendron diversilobum*) are infrequent within this series, generally occurring along the outer edges of the canopy. Dirt roads and some structures are present beneath some of the larger stands. In these instances, the disturbance has eliminated all but the most weedy understory species, such as ripgut grass, red brome, and horehound (*Marrubium vulgare*).

Holly-leaf cherry series

This series occurs on the slopes within the Allotment area and intergrades with the chaparral whitethorn and chamise series. Holly-leaf cherry is the dominant species but chaparral whitethorn is a common associate. Chamise, California buckwheat, and birchleaf mountain mahogany may also be present. Similar to the chaparral whitethorn series, open areas support a dense cover of ripgut brome and red brome. Small islands of this community are also present on rock outcrops within the chamise series. On these rock outcrops, species such as monkeyflower, onion grass, silverleaf lotus, and fringed spineflower may be present.

Scrub oak-chamise series

This series occurs on some of the lower slopes within the Allotment area. Though chamise is still the most common species, scrub oak is such a co-dominant that it is much more conspicuous than the chamise. Sugar bush and California peony are fairly common, but because this is a relatively dense community, species diversity is low.

Scrub oak series

Though scrub oak is present within and co-dominant in several series, areas dominated solely by scrub oak are uncommon within the Allotment area and are represented by relatively small stands. Scrub oak is the dominant species and its dense cover precludes the presence of many understory species, though individuals of chamise and chaparral whitethorn may be present. This series is most common along some of the washes and mesic north-facing slopes within the Allotment area.

Scrub oak-birchleaf mountain-mahogany series

This series is very similar to the scrub oak series, only birchleaf mountain-mahogany is more common within this series. Similarly, this series is represented by small stands that are uncommon within the Allotment area. The high cover and density of the overstory shrubs in this series preclude the presence of many understory species, except for the aforementioned nonnative annual grasses, and thus this series has a low diversity of species.

Scrub oak-chaparral whitethorn series

This series is very similar to the scrub oak series, only chaparral whitethorn is more common within this series. Similarly, this series is represented by small stands that are uncommon within the Allotment area. The high cover and density of the overstory shrub species of this series preclude the presence of many understory species and thus this series has a low diversity of species.

Federally Listed Plant Species

No federally listed plant species were observed or are known to occur within the Hauser Mountain Allotment area. A CNDDB Search (RareFind 3) was conducted for the USGS Cameron Corners quad (i.e., the Proposed Action area) and the five quads (Morena Reservoir, Descanso, Mount Laguna, Sombrero Peak, and Live Oak Springs) surrounding the Allotment area.

No federally listed plant species are reported from Cameron Corners. Only one federally listed species, San Bernardino blue grass (*Poa atropurpurea*) is reported from these quads and this species is restricted to montane meadows within coniferous forests. Neither of these communities occurs within the Allotment area. As such, the San Bernardino blue grass is not expected to occur within the Allotment area and will not be further discussed within this document.

Vegetation data for the allotment is good but trend data for this allotment is sparse. Due to the lack of any large disturbances in the area and few seasons of grazing in recent years, downward vegetative trends are unlikely.

Noxious Weeds

Livestock can affect the distribution of noxious weeds in several ways. Livestock moving into an area can be a source of seed from seeds sticking in their hair, hooves or in fecal pats. Disturbance from livestock can open growing space for some noxious weeds. Livestock can alter the competitive interaction among plant species as well. This effect can both encourage noxious weed spread or used to control or remove noxious weeds from a site. Some landscape scales studies have shown that actively grazed cattle ranches contain fewer non-native plants than adjacent ungrazed natural areas (Maestas, Knight 2003). While no quantifiable survey has been conducted on the BLM lands in the South Coast comparing grazed and ungrazed areas, there does not appear to be considerably more noxious weeds in grazed sites than similar ungrazed sites on the BLM lands.

This EA differentiates between noxious weeds and certain introduced species that have already become widespread and, in effect, naturalized, such as many non-native annual grasses and forbs. Non-native annual grasses dominate much of the drier grasslands and oak and pine savanna areas in these allotments. Land management of these areas can seek to try to improve cover of native perennials and forbs, but no method has been shown to essentially shift dominance of these areas back to native species. Management of these areas in terms of noxious weeds seeks to prevent and limit the spread of certain species that are capable of producing monocultural type stands or lead to other ecological degradation. Noxious weeds of concern in the area include yellow starthistle (currently in very limited distribution on BLM lands and not found on this allotment), Italian thistle, medusahead grass (also limited distribution and not currently found on the allotment), and riparian invaders like tamarisk, castor bean, edible fig and tree of heaven.

In chaparral the occurrence on non-native annual grasses is considered problematic as these species can lead to increased fire frequency. Increased fire frequency can in turn limit the

regeneration of chaparral and may lead to type conversion to non-native herbaceous dominated systems.

Environmental Consequences

a. Impacts of Action Alternatives:

There is a potential for cattle to bring seed onto the allotments from private lands. However, this effect will be negligible because cattle are not expected to introduce seeds not already present in the project area or introducible by a variety of other vectors. Cattle are only fed hay on the allotments in emergency situations. Hay in Riverside and San Diego Counties comes mostly from the Imperial Valley which does not have infestations of starthistle or other noxious weeds not currently in abundance on BLM South Coast lands already. Best Management Practices calls for certified weed-free feed to be used on public land.

Cattle may cause some ground disturbance that may be colonized by noxious weeds. However, forage utilization standards will limit the amount of bare ground created by grazing. Indirectly, cattle grazing in spring in the allotment will put grazing pressure on introduced annual grasses, *schismuss spp*, *bromus spp*, *avens spp*, *erodium spp.* and *brassica spp.* while they are most palatable and before seed set. This may reduce their competitiveness with native perennial grasses.

All of the Action Alternatives would result in increased monitoring by BLM personnel on the allotment as well as presence of the permittees. This should lead to an increased ability to detect new noxious weed invasions early, especially for starthistle and medusahead grass and Russian thistle.

Cattle may introduce small amounts of annual grass seed into recently burned chaparral areas. This effect is considered minor compared to the amount of seed introduced by other vectors, including wildlife. In addition, this effect is expected to be minor on these allotments because current herding practices do not require movement through chaparral areas and the proposed action does not allow increased numbers to graze increased herbaceous forage in recently burned chaparral areas.

It is thought that biological soil crusts help prevent the spread of non-native grasses into chaparral vegetation. Cattle may impact these crusts through trampling and trailing, possibly opening up a seed bed for annual grasses. This effect is expected to be minor and confined to areas already adjacent to primary rangelands and road or trails. This is due to the relative inaccessibility of mature chaparral to livestock. Livestock may enter these areas after wildfire, but herding or increasing stocking rates to use of these areas would not occur.

b. No Action Alternative:

Under this alternative livestock would not be a potential source of seed into this allotment. However, this benefit is unlikely to protect this allotment from non-native plant invasion since many of the most noxious weeds have wind-dispersed seed or could be carried in by wildlife, hikers or on vehicle tires from adjacent areas.

There would be no potential for grazing to open up growing space through disturbance for noxious weeds. Under this alternative, non-native annual grasses and forbs can be expected to increase in more productive areas of the allotment, especially in the California annual grassland series. In addition, no grazing may serve to increase the amount of fine fuels and thatch in natural grasslands that may carry fire quicker into adjacent areas.

c. Cumulative effects:

The allotment is adjacent to private lands and also has lightly to moderately traveled access roads into and adjacent to the allotment. There are also areas of dispersed camping and other recreational activities within the allotment boundaries. These activities act as a source of noxious weed plant seed into the area and, the roads act as a potential source of ground disturbance due to unauthorized OHV use. Livestock movement in and out of the allotment adds a small amount to these already present vectors of weed transmission. Fire suppression is also a source of weed seed and disturbance into these areas during wildfires. Post fire, rehabilitation activities and noxious weed surveys are conducted. Grazing management may be altered if new infestations are detected due to these activities.

Drought and fire are also disturbances that can open growing space for noxious weeds. Range management practices such as pasture resting after fire and during drought would minimize the cumulative impacts of these disturbances.

Environmental Consequences:

a. Impacts of Action Alternatives:

It is expected that by implementing the proposed action and following forage utilization standards vegetation will be maintained or improved. Forage located in accessible portion of the allotment upland forage, lower elevation in the allotment, would be subjected to light grazing pressure from domestic cattle. Forage productivity and plant diversity in these areas would be maintained.

Implementation of monitoring for forage utilization standards and enforcement of reduced season of use when standards have been met would result in an improvement in upland forage condition in the Hauser Mountain Allotment. The season of use favors utilization of non-native annual grasses and forbs. It is expected that the proposed action would result in some favorable removal of non-native annual grasses and forbs but is not expected to have a measurable impact due to the highly dispersed nature of the grazing use.

Chaparral areas do not typically receive grazing use except after fire and in less sparse areas immediately adjacent to primary range or travel routes. Under the proposed action, use of chaparral areas is expected to be very light and incidental. No herding into these areas would be authorized and the proposed action does not allow for increased numbers in response to fire. After fire, grazing is not expected to slow or prevent the recovery of chaparral with the minimal permitted numbers of cattle. It is undetermined how much grazing practices contribute to the introduction and/or spread of non-native invasive species. It is possible that livestock can cause the

spread of invasive species through seeds sticking to their hide, or deposition of seed through their digestive system. Improper grazing practices reduce the diversity, and reproductive abilities of native, mediterranean plant communities. This, in turn, promotes the establishment and spread of non-native invasive species that now occupy habitat once inhabited by native species. Grazing practices that allow for periodic recruitment opportunities commonly have lower densities of non-native species and are more compatible with sustaining native plant communities.

Overall, the current densities of non-native invasive species on the allotment being analyzed in this document are considered moderate. Annual fluctuations in densities are directly influenced by the amounts of late winter, early spring precipitation.

Implementation of the proposed terms and conditions, including Standards and Guidelines and biological stipulations, along with grazing strategies that require proper cattle distribution and the long periods of non-grazing, would aid in sustaining native plant communities, and would ensure that cattle grazing would have only a slight risk of introducing and/or spreading non-native/ invasive species on the Hauser Mountain Allotment.

e. Impacts of the No Action Alternative

Under this alternative livestock would not be a potential seed source into these allotments. However, this benefit is unlikely to protect these allotments from invasion since many of the most noxious weeds have wind-dispersed seed or could be carried in by wildlife, hikers or on vehicles from adjacent areas.

There would be no potential for grazing to open up growing space through disturbance for noxious weeds. Under this alternative, non-native annual grasses and forbs can be expected to increase in more productive areas of the allotments,

c. Cumulative Impacts –Grazing Lease Renewal for Hauser Mountain Allotment

Cumulative impacts, as defined by Council of Environmental Quality regulations in 40 CFR 1508.7, are “the impacts on the environment which result 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 persons undertakes such other actions.” The cumulative impact analysis for the Hauser MountainAllotment is tiered to the analysis of the SCRMP incorporated by Otay Grazing EIS as described below.

<u>Cumulative Impact</u>

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

activities, past, present, and future have contributed to the introduction and spread of non-native/invasive plant species.

Future activities may include grazing, rights of way, authorized and unauthorized vehicle use, and activation of additional mining claims, and recreational activities. The terms and conditions in the proposed action would, offset the impact potential for cattle grazing to introduce and spread non-native/invasive species and cumulative impact of past, present and future activities.

Consultation: None

Maps: None
References:

Sawyer, J.O. and T. Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento, CA.

APPENDIX 1
MAPS