ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION

EA Number: CA-650-2008-27

Allotment Name: Lacey-Cactus-McCloud Allotment

Bureau of Land Management
Ridgecrest Field Office
July, 2011

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CHAPTER 1: INTRODUCTION

A. SUMMARY

The Bureau of Land Management (BLM) is proposing to issue one 10 year term permit on the Lacey-Cactus-McCloud (L-C-M) Allotment to authorize livestock grazing in accordance with laws and policy described in the Purpose and Need section below. The L-C-M Allotment is located east of Olancha, California in Inyo County. U.S. Route 190 borders the allotment on its north side, and the Naval Air weapons Station borders the allotment on the southern and eastern side.

Table 1:
Acres in the allotment: 165,140
Acres of public land: 162,765
Acres of private land: 2,375
Kind of livestock: cattle
Type of grazing: perennial
Plan area: West Mojave (WMP)
Current authorized use: No AUMs, no current permit
Acres of T&E Habitat (Tortoise): None
Acres of Area of Critical Environmental Concern: None
Acres/Name of Wilderness: 49,296 Coso Range, 3,860/Argus Range, 698 Darwin Falls Wildernesses
Identified for Voluntary Relinquishment: No

The allotment is located in Inyo County, California. Elevation range is between 3750 feet and 7493 feet. Vegetation communities are a mix of Creosote Bush Scrub, Joshua Tree Woodland, and Great Basin Scrub.

Within the context of the CDCA Plan as amended with the West Mojave Desert Plan amendment (WMP), BLM is proposing specific permit terms and conditions to ensure that an appropriate multiple use balance is maintained on this allotment while providing for conservation in accordance with WMP and the associated biological opinion. In addition, BLM may use its authority to close an area of the allotment to grazing use or take other measures to protect resources if needed. Therefore, issuance of a fully processed grazing permit 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. (43 USC 1732(b)).

B. BACKGROUND

The administration of the Lacey-Cactus-McCloud (L-C-M) has been in limbo since the Navy canceled grazing on the Naval Air Weapons Station (NAWS) in 2000. That action by the Navy removed approximately 2/3 of the allotment area. This resulted in an immediate loss of available forage. In addition, livestock management became very difficult because most of the water sources were on the NAWS and there were many miles of unfenced boundary between the BLM and the NAWS. The Navy indicated that they would not tolerate any drift of cattle

onto the NAWS. Another issue was access to portions of the allotment in Darwin Wash and east into the Argus Range because the access would be through the NAWS. The existing permit expired at that time and was not renewed due to the need to totally revise it.

Since that time the BLM has considered a number of alternative ways to graze cattle on what was left of the L-C-M allotment. A number of alternatives included the construction of new range improvements such as boundary fences and additional watering sites. Many of these alternatives were the subject of previous draft Environmental Assessments. As a result of the reviews, a number of alternatives were dropped from further consideration. In some cases, the alternatives were thought to be too expensive, impractical or not implementable in any reasonable time scale. At the same time, the base property and preference has been transferred to a new operator.

Another issue has been the rating of the grazing capacity for the revised allotment. The original adjudication of the allotment in 1966 allocated 4,873 AUMs to the permittee at that time. The allotment was configured differently then so it is unclear what the total carrying capacity was at that time. The California Desert Conservation Area (CDCA) Plan (1980) rated the L-C-M allotment at 19 acres per AUM. Other allotments in the area were rated at 20 acres per AUM (Olancha Common Allotment) and 24 acres per AUM (Tunawee Common Allotment) by the CDCA Plan. Several attempts have been made at reconstructing the CDCA Plan inventory to estimate the carrying capacity for the L-C-M Allotment. Several of these have been presented in previous draft versions of this Environmental Assessment. These reconstructed estimates of carrying capacity showed the carrying capacity for the Cactus Flat-McCloud Flat area at 2193 AUMs (listed as Adjusted Renewable Forage Production). This works out to approximately 19 acres per AUM. The subtractions to the available forage shown in the previous documents don't all apply to the actions analyzed in this EA, but will be addressed as applicable in this document.

C. TIERING TO EXISTING LAND USE PLAN/EIS

This Environmental Assessment (EA) is tiered to the West Mojave Plan (WMP) Final EIS of (January 2006) and provides site-specific analysis on the allotment level. Tiering helps focus this EA more sharply on the significant issues related to grazing on these allotments while relying on the WMP analysis for background. Analysis of environmental issues previously considered and addressed in the WMP plan will be incorporated by reference. The site-specific issues analyzed for this allotment, as well as the issues that are incorporated by reference but will not be analyzed in detail, are identified in chapter 3 of this EA.

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

1. WMP is an amendment to the California Desert Conservation Area (CDCA) Plan developed expressly to address special status plant and animal species and to establish conservation strategies for those species within the multiple use context required for the CDCA by section 601 of the Federal Land Management and Policy Act (FLPMA). Part of the conservation strategy BLM developed applies to the L-C-M Allotment. These include a determination of which public lands will be available or unavailable for livestock grazing. Livestock grazing in the CDCA is an economic resource of public lands recognized in section 601 of FLPMA. In

addition to designating lands available or unavailable for grazing, the WMP established programmatic management prescriptions including regional land health standards and guidelines for grazing management; utilization prescriptions for perennial species; and monitoring requirements (pg 2-130 from WMP FEIS). This EA analyzes the specific application of the programmatic management prescriptions of WMP and considers alternative means to achieve the purpose and need on these allotments as described in section C of this chapter.

2. This EA analyzes the range of alternatives for grazing consistent with WMP, including a proposed action and continuation of current management (No Action). A no grazing alternative is considered to address voluntary relinquishment and subsequent designation of the allotment as unavailable for grazing. 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 were 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, cultural resources, wilderness, socio-economic impacts and cumulative impacts. The regional analysis is incorporated by reference in this EA (pg 3-1 through 3-294; WMP FEIS). A general discussion of these impacts will not be repeated. This EA analysis will focus on the site specific environmental issues associated with livestock grazing on the L-C-M Allotment and will include areas where livestock congregate on the allotment and areas of special status species that may be affected by grazing on this allotment. The EA also addresses highway safety issues and military security issues along the China Lake Boundary. Discussion of the specific topics analyzed in this EA, as well as other resource topics addressed regionally but that will be excluded from further analysis in the EA, is contained in chapter 3.

4. WMP balances conservation with public use, occupancy, and development on a regional level. For example, Areas of Critical Environmental Concern (ACECs) 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. Within the context of the CDCA Plan as amended by WMP, BLM is proposing specific permit terms and conditions to ensure that an appropriate multiple use balance is maintained on these allotments while providing for conservation in accordance with WMP and the associated biological opinion. In addition, BLM may use its authority to close an area of the allotment to grazing use or take other measures to protect resources if needed. Therefore, issuance of a fully processed grazing permit 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. (43 USC 1732(b)).

D. PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to complete a site-specific evaluation of grazing that provides information to be analyzed by the BLM in conformance with the implementing regulations for the NEPA (40 CFR Part 1500), FLPMA, BLM grazing regulations (43 CFR Part 4100), and Public Law 106-113 section 325 to determine whether to authorize grazing within this allotment and what stipulations are necessary.

The need for the proposed action is to determine whether or not to authorize grazing for this public land grazing allotment in compliance with the prescriptions prescribed in the WMP, dated January, 2005, the Biological Opinion for the California Desert Conservation Area Plan, dated March 31, 2005, and the proposed Regional Rangeland Health Standards.

E. PLAN CONFORMANCE

The alternatives analyzed under this EA are subject to the California Desert Conservation Area Plan (CDCA Plan), as amended. The Proposed Action, Alternative B, and the No Action Alternatives have been determined to be in conformance with this plan as required by regulation (43 CFR §1610.5-3(a)). The Proposed Action, Alternative B, and No Action Alternative would occur in areas identified for livestock grazing as indicated in the Livestock Grazing Element in the CDCA Plan 1980 (1999), pages 56 to 68. The proposed action, Alternative B, and No Action Alternative are consistent with the land use decisions, and goals and objectives listed in the CDCA Plan. The proposed action is consistent with the CDCA Plan Amendment for the West Mojave Plan (WMP) as prescribed in section 2.0, (pages 2-118 through 2-129)

The Darwin Allotment was comprised of 7,323 acres and was located entirely within the L-C-M Allotment (See allotment map) as an area where both domestic horses and cattle could graze. The allotment was classified as a domestic horse allotment which authorized 44 AUMs for grazing domestic horses. The conflicts between the domestic horses and the known populations of wild horses made it difficult to manage. This allotment had not been used for many years. The WMP eliminated the Darwin allotment and the classification of suitable for domestic horses. The area originally designated as the Darwin allotment remains a portion of the L-C-M allotment along with the classification of suitability for cattle. The Darwin allotment name along with its suitability classification for domestic horses has been eliminated. The AUMs of preference associated with domestic horses have been suspended and are not transferable to cattle.

The Rangeland Health Assessment was completed on the L-C-M allotment in 2005. The assessments indicated the Rangeland Health Standards were not met due to flood damage and the presence of salt cedar and not as a result of cattle use.

Table 2: Rangeland Health Assessments

Rangeland Health Standard	Standard Met / Not Met	Standard Not Applicable	Impacts from Livestock Yes or No	Remarks
Soil Permeability	Met			
Riparian/Wetland	Not Met		No	Salt Cedar present, and head cutting from flood events

Rangeland Health Standard	Standard Met / Not Met	Standard Not Applicable	Impacts from Livestock Yes or No	Remarks
Stream Morphology	Not Met		No	
Native Species	Not Met		No	Salt Cedar

Rangeland Health Fall Back Standards and Guidelines for Livestock Grazing remain in effect until CDD S&G are approved by Secretary.

F. VOLUNTARY RELINQUISHMENT

WMP does not identify this allotment for voluntary relinquishment. A permittee may voluntarily relinquish their permit at any time. Because this allotment was not identified for voluntary relinquishment however, a plan amendment would be required if a voluntary relinquishment were received and the BLM determined that the allotment should be unavailable for grazing. If BLM determines that the allotment should remain available for grazing, an amendment would not be required and BLM would consider new applications for permits by qualified applicants.

G. RELATIONSHIP TO STATUTES, REGULATIONS, AND PLANS

1. Wilderness Act (1964) and the California Desert Protection Act (1994). Section 4(d)(4)(2) of the Wilderness Act of 1964 states "the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture." This language reappears in Section 103(c) of the California Desert Protection Act of 1994 and is reaffirmed in BLM regulation (43 CFR Parts 6300 and 8560, Wilderness Management; Final Rule) and policy (BLM Manual 8560.37A.1.). The use was established if grazing was authorized by permit or lease at the time the area was designated as wilderness.

Congressional Grazing Guidelines (House Committee Report 96-1126 on the Colorado Wilderness Act, P.L.96-560, December 1980) further explain the intent of Congress regarding the grazing of livestock in wilderness. There will be no curtailments of grazing in wilderness areas simply because the area is designated wilderness. The numbers of livestock permitted to graze in wilderness should remain at approximately the same levels as at the time of wilderness designation. The maintenance of pre-existing supporting facilities is permissible. Where practical alternatives do not exist, such maintenance may be accomplished through use of motorized equipment. The construction of new facilities or replacement of deteriorated facilities in wilderness is also permissible in accordance with management guidance for the area. However, new construction should be primarily for the purpose of resource protection rather than to accommodate increased numbers of livestock.

BLM regulations regarding the administration of grazing in wilderness areas are contained in 43 CFR Parts 6300 and 8560 Wilderness Management; Final Rule (12/14/2000). Section 6304.25 of these rules state that a person may continue to graze livestock if she/he or their predecessors were exercising a BLM grazing permit or lease before Congress designated the area as wilderness. All grazing activities must comply with 43 CFR Part 4100 Grazing Administration rules (09/12/1983). Grazing support facilities existing prior to wilderness designation may be maintained or reconstructed in accordance with management plans for the area. However, BLM will not authorize new support facilities for the purpose of increasing the number of livestock. The construction of new facilities must be solely "for the purpose of protection and improved management of wilderness resources." Similarly, BLM may authorize an increase in livestock numbers only if it can be demonstrated that "the additional use will not have an adverse impact on wilderness values."

Wilderness values and resources requiring protection are naturalness, untrammeledness, solitude, opportunities for primitive and unconfined recreation, and other features of cultural, geological, or ecological value, including native plant communities and wildlife populations or habitat. (Section 2(c) of the Wilderness Act)

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

In August 2004, and renewed in October 2007, 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 State Protocol Agreement between California Bureau of Land Management and the SHPO with the 2004 Grazing Amendment, Supplemental Procedures for Livestock Grazing Permit/Lease Renewal.

This amendment allows for the renewal of existing grazing permits as long as the 2007 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 Permittee would comply with any future standard protective measures that may be developed for the protection of cultural resources after the completion of further allotment inventory and determination of any additional protection measure needs for significant cultural resources.

BLM will also utilize and coordinate the NEPA commenting process to satisfy the public involvement process for Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470f) as provided for in 36 CFR 800.2 (d)(3).

3. Biological Opinions on the California Desert Conservation Plan

There are no federally listed threatened and/or endangered species, or their habitat occurring in the L-C-M Allotment.

CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

Several grazing alternatives are reviewed for feasibility and analysis in this Environmental Assessment. The elimination of cattle grazing on the Naval Air Weapons Station (NAWS) necessitates changing the entire grazing operation. Not only did the elimination of grazing on the NAWS eliminate grazing on the base, but it resulted in losses of access to water and historic grazing patterns. One of the alternatives is to graze most of the remaining BLM managed portions of the allotment. It does not address grazing in the Darwin Wash portion of the allotment due to a lack of water in the area. This alternative is described as Alternative B. The proposed action (Alternative A) is to graze only the Cactus Flat and McCloud Flat portion of the allotment. Both of these alternatives leave portions of the allotment ungrazed. These ungrazed portions of the allotment will remain a part of the allotment and could be reconsidered in the future. Several sets of stipulations are common to all grazing alternatives and would apply to each one. One of these is the Measures to Adhere to Livestock Grazing Amendment of Cultural Resources Protocol (See Appendix 5).

A. PROPOSED ACTION -- ALTERNATIVE A

Under this alternative the area east of Darwin and into the Argus Range would not be open to grazing. Likewise, an area north of Route 190 and bordering on the Hunter Mountain Allotment would be excluded from grazing. And lastly, the area south of Owens Lake and north of Route 190 has been incorporated into the Bishop Resource Area and is unavailable for grazing. This leaves 149,819 acres in the allotment as a whole.

The proposed action consists of authorizing cattle grazing on the Cactus Flat-McCloud Flat portion of the L-C-M Allotment under a grazing permit, for a term of 10 years. This area contains approximately 41,900 acres of which approximately 14,000 acres are in wilderness. Table 3 describes the proposed season of use and permitted AUM use level. The management prescriptions and stipulations stated below would also be included in this grazing permit.

Livestock Numbers and Season of Use

The CDCA Plan lists the season of use for the LCM allotment as fall, winter and spring. Under this alternative cattle would graze from December through March each grazing season.

Mandatory Terms and Conditions

Table 3
Typical Grazing Schedule

Use Period	Number of livestock	Class of Livestock	Animal Unit Months
December 2 – March 31	200	Cow/calf	790

The basis for the AUMs for the reconfigured allotment was the California Desert Conservation Area (CDCA) Plan of 1980 which established the original number of acres and the original number of AUMs for the entire allotment. The calculations used in the CDCA Plan used

satellite images of the vegetation and spectral analysis to determine the amount and productivity of vegetation on the allotment. This method employed a correction factor, and incorporated adjustments for condition class, dry years, distance from water, sparse vegetation, and allocations for wildlife, and wild horses and burros. The number of AUMs in Table 3 was arrived at after considering the process described above and using the permitted number of AUMs from 1994, the year of wilderness designation. (See Appendix 2 for the derivation of acreages and AUMs).

Under this alternative there would be no grazing in the Lower Centennial Flat area. However, grazing could be considered again in this area when range improvements are brought up to functional standards, particularly the boundary fence with China Lake NAWS.

Grazing in the Cactus Flat-McCloud Flat area would be contingent upon: (1) the extension of the Navy boundary-security fence to the north up a hill for less than an eighth of a mile; and (2) building a set of two gap fences running south from the southern end of the Navy boundary-security fence to a rock outcrop north of the fence coming up from a pumice mine. A site specific environmental assessment will be done for these fences.

2. Livestock Management and Grazing prescriptions (Other terms and conditions)

a. The existing Allotment Management Plan would terminate.

b. Livestock grazing would follow a one pasture grazing strategy. Cattle would graze from December 2 through March each year. (See Table 3 above).

c. Utilization levels (based on current year's growth by weight, as measured during the grazing season) stipulated for plant assemblages in the WMP Plan will be used unless thresholds (Proper Use Factors (PUF'S)) listed in Appendix 2 are lower. Where forage utilization levels reach or exceed these identified thresholds, the livestock would be removed from that area or portion of the allotment and not allowed to return for the remainder of the grazing season. Utilization levels will be checked prior to turnout of cattle, and in late January and late February. Though the plant assemblages listed in the WMP do not correspond directly to the plant groups found on the Lacey-Cactus-McCloud Allotment most of the plants are found within the Salt Desert Shrubland and the Semi-desert Grass and Shrub Land assemblages.

d. All mineral supplements would be placed at least ¼ mile from natural water sources.

e. All structural improvements would be maintained in proper functioning condition.

f. The rangeland monitoring of this allotment would continue to occur as described under the affected environment.

g. The Regional Standards & Guidelines from the recent approval of the WMP amendment would be incorporated into this grazing permit and management practices once they are approved by the Secretary of Interior, without further notice. Until that time, the National Fallback Standards would remain in effect. Rangeland health assessments would be conducted

and a Determination made, prior to the renewal of the next grazing permit. See Appendix 4 for regional and fallback standards and guidelines.

The rangeland monitoring of this allotment would continue to occur as described under the monitoring section in the Livestock Grazing critical element (page 17). There are no riparian areas in the area proposed for grazing covered by the Proposed Action.

3. Range improvements

See Chapter 3.A.1.4 for a list of the existing and proposed range improvements that would function to support livestock grazing management under this alternative, as well as maintenance actions that would occur to keep these improvements functioning. See allotment maps in Appendix 1 for location of the range improvements. All proposed range improvements will be analyzed with separate site specific environmental assessments.

A new set of drift fences is proposed which would be constructed prior to the turnout of cattle. The purpose of these fences would be to control any drift of cattle coming out of McCloud Flat and heading east toward the Navy portion of Upper Cactus Flat. One fence would be on the boundary between the Coso Range Wilderness (BLM) and the Naval Air Weapons Station (NAWS). The fence would be less than 1/8 mile long and go up the hill on the section line between sections 33 and 34 in Township 20 South, Range 38 East. This would entail accessing NAWS because transport for materials cannot go through BLM wilderness. This fence will be built on the section line separating NAWS and BLM wilderness. Mechanized equipment would not be used to construct this segment of fence since it is so close to wilderness.

Two more segments of drift fence would be built outside of wilderness. The second drift fence would start at the south end of the existing boundary fence and go south for approximately 130 feet and tie off in a rock outcrop. The third segment of drift fence is about ¼ mile in distance and would start at the base of a rock outcrop on BLM land and go east to the Navy boundary. From that point it would head southwest and loop back into BLM land and end by bending back to a point on the Navy boundary to the south. It would tie off in a rock outcrop just to the north of an existing fence which comes north from a pumice mining operation.

Upper Centennial Spring is an important water source for wild horses. Any activities which could impair their access to water would have a negative effect on the herd. Prior to any dismantling activities of this range improvement, an assessment needs to be done to assure that water from the spring would be available for animals which have become dependent upon this water source.

4. Monitoring: The use of short term utilization monitoring is a tool to gauge the effect of the current authorization. This type of monitoring consists of actual use, current climatic conditions and the collection of utilization data. This type of data would be collected on a yearly basis at minimum. The collection of utilization data would be carried out in three situations: (1) prior to the turnout of cattle, (2) during the time that cattle are grazing to be sure they have not exceeded the threshold Proper Use Factor (PUFs) of key forage species; and (2) prior to the time that the grazing period ends on the pasture or allotment to determine the total

utilization levels for the grazing season. (See table of Proper Use Factors (PUFs) for key forage species in the Ridgecrest Field Office Area, Appendix 3.)

B. ALTERNATIVE B

Under this alternative, as well as in Alternative A, the proposed action, the area east of Darwin and into the Argus Range would not be open to grazing. Likewise, an area north of Route 190 and bordering on the Hunter Mountain Allotment would be excluded from grazing. And lastly, the area south of Owens Lake and north of Route 190 has been incorporated into the Bishop Resource Area and is unavailable for grazing. This leaves 149,819 acres in the allotment as a whole, however, in Alternative B two grazing areas would be used.

The action in Alternative B consists of authorizing cattle grazing on the L-C-M Allotment under a grazing permit for a term of 10 years. Grazing would occur within the area described in the proposed action and the area known as Centennial Flat and east to the community of Darwin as shown on the map showing grazing areas for Alternative B in Appendix 1. This alternative would occur over approximately 84,600 acres. Areas of the allotment not included in this alternative would continue to be part of the allotment and could be included in future alternatives pending future analyses and grazing decisions. Table 4 describes the season of use and permitted AUM use level. The management prescriptions and stipulations stated below would also be included in this grazing permit.

1. Livestock Numbers and Season of Use

Mandatory Terms and Conditions
Table 4:

Season of Use	Number of livestock	Class of Livestock	Animal Unit Months
November 1 to February 28	100	Cow/calf	395
March 1 to May 31	100	Cow/calf	302

The basis for the AUMs for the reconfigured allotment was the California Desert Conservation Area (CDCA) Plan of 1980. The plan established the original acreage and the original number of AUMs for the entire allotment. The calculations for the original AUMs were based on information gathered using satellite images of the vegetation and spectral analysis to determine the productivity of vegetation on the allotment. This method employed a correction factor and incorporated adjustments for condition class, distance from water, sparse vegetation, wildlife, and wild horses and burros. The number of AUMs in Table 4 was arrived at after considering the process described above and using the permitted number of AUMs from 1994, the year of wilderness designation. (See Appendix 2 for the derivation of acreages and AUMs)

2. Livestock Management and Grazing prescriptions

Other Terms and Conditions

a. The existing Allotment Management Plan would terminate.

b. Livestock grazing would follow a two pasture deferred rotation grazing strategy. In year one, livestock would be turned out in Lower Cactus Flat, McCloud Flat and the flats to the west of the Coso Range, grazing from November 1 through February 28, then rotated to Centennial Flat from March 1 through May 31. The second year, livestock would turn out in Centennial Flat from November 1 until approximately February 28, then rotated to the flats west of the Coso Range, Lower Cactus Flat and McCloud Flat. The mid season move would have two weeks flexibility depending on forage conditions and utilization. Key forage species Proper Use Factors would not be exceeded.

c. Utilization levels (based on current year's growth by weight, as measured during the grazing season.) stipulated for plant assemblages in the WMP Plan will be used to assess use levels unless levels (Proper Use Factors (PUF's)) listed in Appendix 2 are lower for key forage species. Where forage utilization levels reach or exceed these identified thresholds, the livestock mould be removed from that area or portion of the allotment and not allowed to return for the remainder of the grazing season. Though the plant assemblages listed in the WMP do not correspond directly to the plant groups found on the Lacey-Cactus-McCloud Allotment most of the plants are found within the Salt Desert Shrubland and the Semi-desert Grass and Shrub Land assemblages.

d. All mineral supplements would be placed at least ¼ mile from natural water sources.

e. All structural improvements would be maintained in proper functioning condition.

Monitoring:
The rangeland monitoring of this allotment would continue to occur as described under the monitoring section in the Livestock Grazing critical element (page 17). In addition, all riparian areas, including the adjacent upland benches, would be added as key areas for monitoring in the L-C-M Allotment.

Salt grass, sedge, rushes and willows would be added to the key species list along with their proper use factors to the L-C-M Allotment terms and Conditions. The PUFs would be salt grass (30%), sedge (30%), rushes (30%) and willow (10%). When utilization levels reach or exceed those levels, livestock would be removed from that riparian area.

With the recent approval of the WMP amendment the Regional Standards & Guidelines would be incorporated into this grazing permit and management practices once they are approved by the Secretary of Interior, without further notice. Until that time, the National Fallback Standards would remain in effect. Rangeland health inventory studies would be conducted and a Determination made, prior to the renewal of the next grazing permit. See Appendix 4 for regional and fallback standards and guidelines.

4. Range improvements
See Chapter 3.A.1.4 for the existing range improvements that would continue to function and support livestock grazing management on this allotment, as well as maintenance actions that would occur to keep these improvements functioning. The following proposed range improvements are planned if this alternative is chosen. Separate EAs will analyze the impacts

from the construction, maintenance and use of these improvements which are determined necessary for the management of livestock on the L-C-M Allotment with this alternative. See allotment maps in appendix 1 for location of the following range improvements.

Table 5: Proposed Range Improvements

Range Improvement Name/Number	Location	Purpose	Improvement Necessary prior to authorizing grazing Yes/No
Lower Centennial Spring Repair with Pipeline extension, storage tank and trough, 5053	Lower Centennial Spring & Flat, T19S, R39E, Sec 20, ¼ NE, ¼ SE ¼ SE & ¼ NE, ¼ NE T19S, R39E, Sec16, ¼ SW, ¼ SW	Distribute grazing away from spring and small riparian area	No
Black Springs Reconstruction, & Lacey Pipeline Reconstruction, 5355	Black Springs T19S, R39E, Sec 27, ¼ NW, ¼ SE	Distribute grazing by making water available to pipe to tanks on Lower Centennial Flat to the north and east	Yes
2 LCM Water Haul Sites, 5383	(See Below)	Distribute grazing more evenly throughout the allotment	Yes

Proposed project descriptions:

a. #5053, Lower Centennial Spring Reconstruction, Pipeline Extension, Tank & Trough; The cisterns at the spring site will be cleaned out and a cover constructed to discourage use of the spring by wildlife and cattle (also, the Tamarisk will be removed to conserve ground water, this may be analyzed separately under the weed protocol). A 2" diameter perforated PVC pipe will be secured to collect water from the cisterns and the perforated pipe will be spliced to a 1¼ " PVC pipeline which run in the dry stream bed to a low point in the road. It will continue down the road as a buried pipeline for about 0.7 mile where it will be spliced to a 2" pipe leading to a storage tank on the east side of the road (UTMS: E 431656, N 4014743). The tank will be a 4245 gallon galvanized steel tank with 2" intake and outlet vents and painted beige. From the outlet vent a 2" PVC pipe will go to a watering trough equipped with a float valve. The trough will be equipped with a bird ramp and be available for livestock, and year round for wildlife and wild horses and burros. If necessary it will be recessed into the ground. The pipeline, in the middle of the road, will be trenched and laid by a tractor with a trenching tool attached. The labor of construction will be provided by the permittee.

b. #5024, Black Springs Reconstruction & #5355 Lacey Pipeline Reconstruction; There are two springs at the Black Springs site. The upper spring is high on the west side of the dry wash and seeps into a cistern which will be cleaned out. The lower spring near the old road head is in the bottom of the wash above where the road ends. The cistern will be dug out and reconstructed and the head wall cut to increase flow if necessary. A 1¼" PVC pipe will be secured at the cistern and run to the old road bed where it will be spliced to the existing Lacey Pipeline (1¼" PVC). The labor of construction will be supplied by the permittee.

c. #5383, L-C-M Water Haul Sites; There are 2 new water haul sites proposed:

#1 – Centennial Corral, T18S, R39E, Section 31. ¼ NE

#2 – On the pass east of Reed Corral, T19S, R39E, Section 24.
UTMs: E 441449, N 4013531

There will be a 4245 gallon galvanized steel water storage tank placed at each site. There will be a gravel base upon which the tank will be placed. Water will be pumped from a truck through a manhole in the dome of the tank. Each tank will have intake and outlet vents and will be painted beige. At the 2" outlet a PVC pipeline will run to a watering trough. There will be a float valve in the pipeline to conserve water. These water haul sites will be used when grazing is authorized during a particular grazing season. The troughs will be equipped with bird ramps. The labor of construction will be provided by the permittee.

In addition the following stipulations will be followed, as applicable, for all three projects to ensure environmental protection.

a. In the event that cultural or paleontological resources, not previously identified, are discovered during development activities, operations in the vicinity shall cease immediately and the BLM archaeologist will be notified. The BLM will evaluate the significance of the site and determine the need for mitigation.

b. No blading of the area is permitted.

c. Garbage will be kept in closed containers to discourage scavengers.

d. Post holes will not be left uncovered overnight.

e. All construction in wilderness will be done with hand tools, without use of motor vehicles or motorized or mechanized equipment.

C. NO ACTION ALTERNATIVE

The No Action Alternative would typically maintain current management practices. In June, 2000, the grazing permit expired. At that time, the Naval Air weapons Station decided not to renew their portion of the permit. This action automatically withdrew approximately 233,535 acres from grazing or more than 55% of the total allotment. With this significant loss of land, grazing could not continue under current management strategies. Therefore, BLM has delayed

reissuing the grazing permit until a new grazing strategy could be identified and analyzed through NEPA.

Because current management practices could not be implemented, this alternative will not be further analyzed within this EA.

D. NO GRAZING ALTERNATIVE

This alternative would not issue a grazing permit on the L-C-M Allotment. As a result, grazing would not continue on the L-C-M Allotment. This is to be a permanent action. The BLM would initiate a process in accordance with the 4100 regulations to permanently eliminate grazing on the allotment.

CHAPTER 3 ENVIRONMENTAL ANALYSIS

A. LIVESTOCK GRAZING

1. Affected Environment

Grazing on the L-C-M Allotment has not occurred during the past ten years. Prior to that, the majority of grazing occurred within the Naval Air Weapons Station. Nearly two thirds of the range improvements occurred within the NAWS lands (see range improvement section below for remaining existing range improvements).

1. Recent Historic Use to the Present Proposal

1. Original Allotment Size = 421,172 acres, reduced to 415,554 by range line agreement
   This was the size of the entire grazing allotment when wilderness areas were designated in 1994 by the California Desert Protection Act. Wilderness acres in the allotment:

Coso Range Wilderness	49,296 acres
Darwin Falls Wilderness	698 acres
Argus Range Wilderness	3,860 acres

2. From 1988 – 1998 grazing years, the years spanning wilderness designation, the permit allowed 448 cow/calf pairs, totaling 3,136 AUMs over a 7 month period for the entire original allotment. The seven month period spanned from November 1 through May 31.
3. A permit was issued on March 1, 1998 which expired on June 15, 2000. The allotment was last grazed in May 2000. This permit was not renewed because the Navy cancelled grazing on their part of the allotment in the spring of the year 2000. This left 165,140 acres. With the loss of grazing on Navy property four of the six grazing areas were lost. One area was deemed unsuitable for grazing and another was limited in its use. Essentially two grazing areas were lost to the Navy. This left two grazing areas outside the Navy property on the BLM. These grazing areas were (1) Lower Cactus Flat – McCloud Flat and the western portion of Upper Cactus Flat, and (2) the Lower Centennial Flat Area.

4. A newly configured allotment which excluded Navy lands and included the old Darwin Allotment was mandated by the WMP Amendment in 2006. There were approximately 165,140 acres in the newly configured allotment. The carrying capacity for this acreage is 9210 AUMs. The Ridgecrest BLM, in its planning, also, decided to stop grazing in the area east of the southern portion of Darwin Road which includes a portion of the Argus Range Wilderness. Furthermore, lands north of Route 190 along Owens Lake were ceded to the Bishop BLM and areas north of Route 190 and adjacent to Hunter Mountain Allotment were left out of the reconfiguration. These parcels contain approximately 15,321 acres and an estimated 855 AUMs. Subtracting these parcels out leaves approximately 149,819 acres in the allotment with 8355 AUMs for a carrying capacity. .
5. The earliest Environmental Assessment (2005) called for grazing 100 cow/calf pairs for 7 months with rotated grazing areas. Year one would have 4 months of grazing in the winter in the Cactus Flat-McCloud Flat area and 3 months of grazing in the spring in the Lower Centennial Flat area. In year two this rotation would have been reversed. This would have used 697 AUMs. This proposal is the same proposed in Alternative B. This plan was abandoned because of issues with the Navy over boundary fences to keep cattle from encroaching on the Navy from Centennial Flat. It also required upgrading several water improvements before it was suitable for grazing.
6. In 2009 the BLM looked for a way to allow the rancher to resume grazing while the BLM continued to negotiate with the Navy over the boundary fence on the south side of Centennial Flat. The proposed action of the environmental assessment calls for grazing 200 cow/calf pairs in the Lower Cactus/McCloud/western Upper Cactus Flats area for 4 months of winter grazing. This proposal calls for 790 AUMs in an area of 41,900 acres. [See Appendix 2 for the derivation of the AUMs)
7. The California Desert Conservation Area Plan of 1980 established carrying capacities for three allotments in close proximity to one another, Lacey-Cactus-McCloud, Olancha Common, and Tunawee Common. The respective stocking rates for these allotments based upon carrying capacities were 18 acres per AUM, 20 acres per AUM, and 24 acres per AUM. The carrying capacity for the Cactus Flat-McCloud Flat proposed grazing area is approximately 2300 AUMs which in 41,900 acres yields 18 acres per AUM. When the stocking rate for permitted AUMs is calculated there are 53 acres per AUM (790 AUMs in 41,900 acres) which is very light usage. By comparison, Olancha Common, across the valley, has a permitted AUM stocking rate of 26 acres per AUM and Tunawee Common, adjacent to LCM Allotment on the southwest, has a permtted stocking rate of 29 acres per AUM.
8. The grazing proposal described would not allow grazing during the spring growing season, only winter grazing. The current watering sites are more than a mile from a wilderness boundary. The one watering area within the wilderness would not be maintained (it is a dirt reservoir which has an intermittent water supply). And, the rancher would be required to provide an alternative water site outside the wilderness boundary whether water was present in the reservoir or not. There would be increased utilization monitoring to assure that the forage vegetation is adequate for livestock and the Mojave Ground Squirrel.

The original Lacey-Cactus-McCloud (LCM) Allotment covered approximately 421,172 acres. The reconfigured allotment covers the acreage outside the Naval Air Weapons Station minus the area east of the Darwin road and into the Argus Range and smaller areas north of Route

190. This would exclude the Argus Range Wilderness and would leave approximately 149,819 acres (See map, Appendix 1) in the reconfigured allotment. The acreage used in the Proposed Action – Alternative A is 41,900 for one grazing area. The acreage used in Alternative B is 84,600.

2. Rangeland Health Assessments were conducted on the L-C-M Allotment in 1999 and 2005. The assessments covered both uplands and riparian areas. The assessments found that the uplands met health standards and two riparian areas did not meet standards due to flood damage and salt cedar.

3. Monitoring

The rangeland monitoring of this allotment would continue in a manner similar to the way it has in the past. The focus of monitoring would be to conduct utilization studies and Rangeland Health Assessments.

The use of short term monitoring is a tool to gauge the cause and effect of the current authorization. This type of monitoring consists of actual use, current climatic conditions and the collection of utilization data. This type of data would be collected on a yearly basis at minimum. The collection of utilization data would be carried out in three situations: (1) prior to the turnout of cattle, (2) during the time that cattle are grazing to be sure they have not exceeded the threshold Proper Use Factor (PUFs) of key forage species; and (2) prior to the time that the grazing period ends on the pasture or allotment to determine the total utilization levels for the grazing season. (See table of Proper Use Factors (PUFs) for key forage species in the Ridgecrest Field Office Area, Appendix 3.)

The collection of long term monitoring data typically occurs every ten years. The collection of trend data, both photo and measured trend is used to determine long term cause and effect of long term grazing strategies. Trend data would continue to be collected using the current quadrat frequency and line intercept techniques.

4. Regional Rangeland Health Standards

The collection of indicators of rangeland health information is a qualitative method that requires the formation of an interdisciplinary team that makes observations of various indicators to determine the health of rangelands and the achievement of regional standards of rangeland health. This process is also considered long term, and typically occurs every ten years.

With the recent approval of the WMP the Regional Standards & Guidelines (Appendix 3) will be incorporated into this grazing lease and management practices without further notice, once the Secretary of the Interior approves them. Rangeland health inventory studies will be conducted and a Determination made, prior to the renewal of the next grazing permit.

5. Range Improvements

There are 19 existing & proposed range improvements within the L-C-M Allotment (See map in Appendix 1). Thirteen of these sites are concentration sites for livestock, such as dirt tanks, water troughs, and corrals. These typically are 1 acre in size and many of them date back 50 years or more. These range improvements include, fences, cattle-guards, springs, pipelines, tanks and water troughs. These range improvements support livestock management practices on the allotment and will be maintained to ensure properly functioning condition. These maintenance actions include:

a. Spring Developments – the use of specialized equipment may be necessary to cut headwalls, clean cisterns to collect water, or secure intake pipe. The vast majority of repairs would require access by motorized vehicles, using mechanized equipment.

b. Water pipeline repairs- digging/trenching along pipeline route to locate and repair leaks in existing pipelines. Up to two pickup trucks may be used to transport labor and equipment along these pipelines to accomplish this work. Specialized equipment could include a walk-behind trencher or tractor w/ backhoe.

c. Fence repairs - Although much of the minor repairs to fences can be done by foot or horseback, major repairs to fence lines may require vehicle access along fence line corridor, or follow historic tracks which were made during original construction. Up to two pickup trucks could be used to support maintenance and repairs by transporting labor, materials, and equipment.

d. Corral repairs – The replacement of posts by digging up to 12 inch wide holes, up to three feet deep by use of hand-held auger, or augur on the back of a skip loader or tractor. Replacement of corral panels as well as repairs to the water trough and associated pipeline through digging and/or trenching to find leaks and replace pipelines could occur.

e. Dirt Tank repairs – The two existing dirt tanks have existed for 30 + years without any maintenance. The expectation is that they are not going to need repairs in the next 20+ years. If maintenance is needed on the lower Cactus Flat Reservoir it would be abandoned and replaced by a haul water site. If the McCloud Flat Reservoir needs repairs in the future, it would be evaluated at that time.

f. There would be no use of motor vehicles or motorized or mechanized equipment inside wilderness without prior written approval and an additional site-specific Environmental Assessment.

The following table lists all proposed and existing range improvements located within the LCM allotment.
Table 6. Existing Range improvements

Range Improvement Name/Number *= Proposed Action	Located in Wilderness Yes/No	Functional/ Non-Functional	Required for Turn-out	Proposed for Removal
Black Springs, 5024	No	Non-Functional Repair	Yes, With Alt.	No

Range Improvement Name/Number *= Proposed Action	Located in Wilderness Yes/No	Functional/ Non-Functional	Required for Turn-out	Proposed for Removal
		See Alternative B	B	
Upper Centennial Spring, 5052	Yes	Non-Functional	No, with Alt. B	Yes, unless needed for WH&B
Lower Centennial Spring & Pipeline, & Extension 5053	Yes	Non-Functional Repair & Extension See Alternative B	Yes, with Alt. B	No
Upper Centennial Spring Storage, 5285	Yes	Non-Functional	No, with Alt. B	Yes
Lacey- Black Rock Storage, 5293	No	Functional	Yes, with Alt. B	No
Upper Centennial Spring Pipeline, 5326	Yes	Non-Functional	No, with Alt. B	Yes
McCloud Flat Reservoir, 5342 *	No	Functional	Yes, with Alt. A	No
Lacey Pipelines, Tank, & Trough, 5355	No	Non-Functional Repair See Alternative B	Yes, with Alt. B	No
Lower Cactus Flat Reservoir, 5357 [1 *]	Yes	Unreliable Functional	No ; will substitute a water haul site.	No
Black Rock Canyon Pipeline, Tank & Trough, 5381	No	Functional	Yes, with Alt. B	No
LCM Water Haul Sites, 5383	No	Proposed, 2 new water haul sites See Alternative B	Yes, with Alt. B	No
Cactus Flat Troughs & Tanks, 5384*	No	Functional	Yes, With Alt. A	No
Navy Barrier Fence,	Border	Functional	No, with	No

Range Improvement Name/Number *= Proposed Action	Located in Wilderness Yes/No	Functional/ Non-Functional	Required for Turn-out	Proposed for Removal
5503*			Alt. A	
LCM Exclosures, 5540*	Centennial Flat - No, Lower Cactus Flat- Yes	Functional Functional	No, with Alt. B No, with Alt. A	No No
Centennial Corral, Summit, 5583	No	Functional	No, with Alt. B	No
Reed Corral, 5589	No	Functional	Yes, with Alt. B	No
Nine Mile Corral, 5604	No	Functional	No, with Alt. B	No
Cactus Flat Road Cattleguard, 5698*	No	Non-Functional Routine Maint.	Yes, with Alt. A	No
Upper Cactus Flat Drift Fences *	No	Proposed, 3 Drift Fences	Yes, with Alt. A	No
NOTES: 1. Lower Cactus Flat Reservoir, (5357) This project is located inside wilderness. It has not needed maintenance for over 35 years, and no maintenance is anticipated in the future. However, its functionality as a watering source is contingent on water run-off. To supplement its usefulness a water haul site will be developed outside of wilderness. If reservoir becomes non-functional in the future, it will be abandoned.				

2. Environmental Consequences

Impacts of Proposed Action – Alternative A

The Proposed Action re-establishes grazing in the Lower Cactus Flat & McCloud Flat area where defined grazing areas and fencing enable drift of cattle to be controlled.

b. Impacts of Alternative B

The establishment of the three range improvements described in Alternative B and the establishment of the grazing regime described in Alternative B would enable to the permittee to resume grazing on the entire allotment if drift on to the Naval Air Weapons Station can be controlled. It is critical to the success of this alternative that the drift of cattle onto the Naval Air Weapons Station be controlled. Grazing under this alternative would not occur unless control of the drift of cattle can be assured.

c. Impacts of No Grazing

The cancellation of grazing would have an immediate impact to the permittee. Replacement forage would need to be acquired to replace the forage lost from not grazing the allotment. This would have an economic impact to the ranching operation.

B. AIR and CLIMATE

AIR QUALITY

1. Affected Environment

The management/enforcement of the air quality standards falls on several different jurisdictions. The USEPA (United States Environmental Protection Agency) has the primary responsibilities under the Federal Clean Air Act. The USEPA had transferred a number of responsibilities to the states and in most cases, regional air quality management districts. The regional Great Basin Unified Air Pollution Control District (GBUAPCD) has jurisdiction over point and area sources in the project area (ARB1992). The state Air Resources Board has jurisdiction over mobile sources.

Air quality throughout the allotment area is generally good. There are however, times that portions of the area have not met air quality standards due to locally generated and/or transported in pollutants. Currently portions of the project area are classified as nonattainment areas for PM_{10} under state standards and National Ambient Air Quality Standards (NAAQS) (ARB2006a). The area is unclassified for the new $PM_{2.5}$ standard. The L-C-M Allotment falls within the USEPA designated Owens Valley PM_{10} Planning Area (nonattainment).

An implementation plan has been prepared for the Owens Valley PM_{10} planning area which identifies sources of PM_{10} emissions and control measures to reduce emissions. Livestock grazing is not addressed in the PM_{10} plan as an important source. The emphasis in the plan is control of emissions from Owens Lake which is the largest source of PM10 emissions in the United States. Owens Lake accounts for 99.9% of the PM emissions within the planning area (GBUAPCD 2003 & 2004).

2. Environmental Consequences

a. Impacts of Proposed Action (Alternative A)

Emissions of pollutants as a result of the proposed action would be very small and are clearly deminimus. Grazing related PM_{10} emission levels are not considered significant in the PM_{10} SIP. No significant offsite impacts are anticipated. The emissions from the proposed grazing use would not exceed the deminimus emission levels and is exempt from conformity determination (40 CFR Part 93.153 (iii)) (USEPA 1993) which exempts continuing and recurring activities such as permit renewals where activities will be similar in scope and operation to activities currently being conducted. As a result no further conformity analysis or determination is necessary.

b. Impacts of Alternative B

The impacts to air quality from alternative B would be similar to the Proposed Action . A slight increase in PM10 emissions could result from the larger area grazed. These increases would continue to be below deminimus levels.

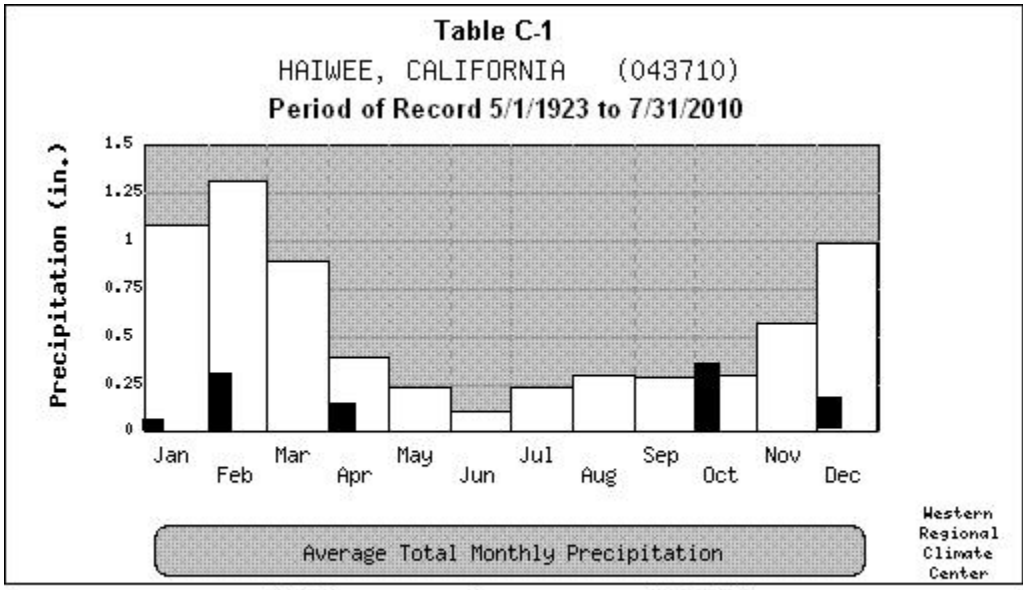
c. Impacts of No Grazing

No impacts to air would occur as a result of grazing activities.

CLIMATE

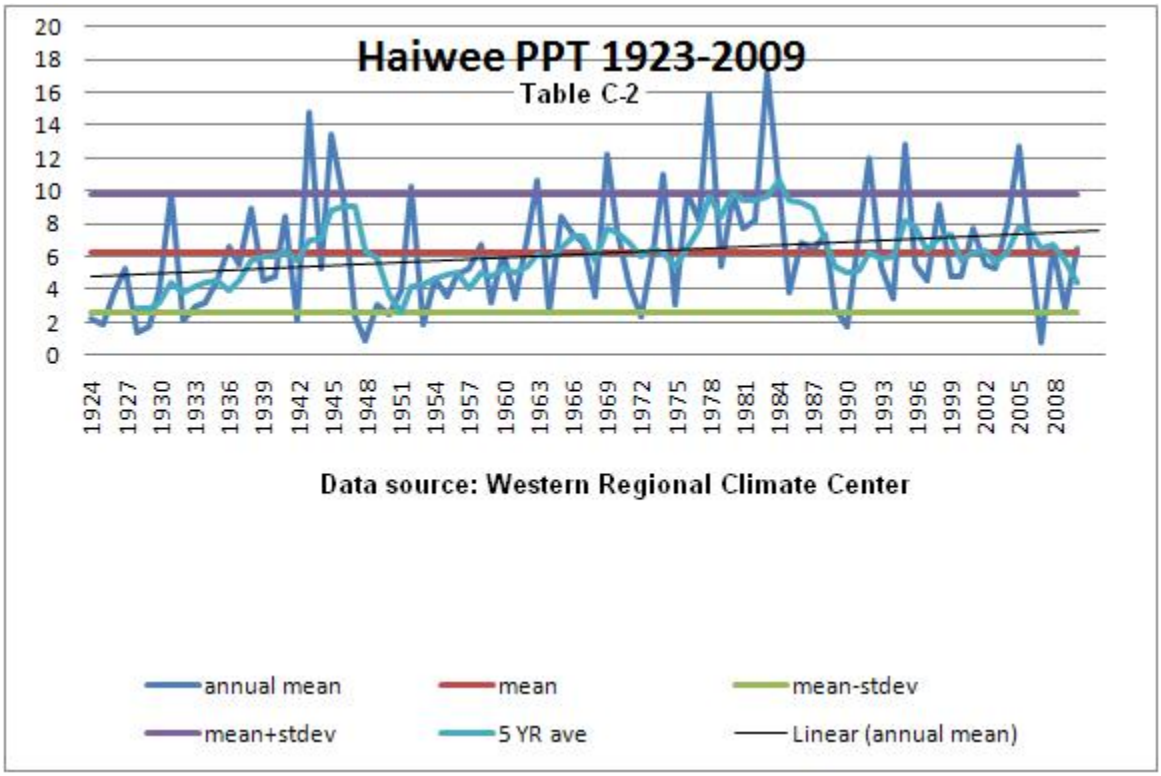
Affected Environment

The L-C-M Allotment lies between 3750 and 7493 feet elevation in the northern Mojave Desert. The Sierra Nevada Mountains are just west of the allotment and blocks much of the moisture from the west. The climate for the area is best characterized as a warm desert. The elevation and the blocking nature of the mountains have resulted in a range of precipitation values for the area. Factors such as slope, aspect, and elevation cause local variations in winds, temperatures, and rainfall. These local variations are to the regional climate with its familiar cycles of rainfall, snowfall, draughts and extreme temperatures. There is a NOAA weather station located at Haiwee Reservoir, California at the western edge of the allotment. It has climate records dating back to 1923 which give indications of the regional climate. The mean temperature for the Haiwee station is 58.7 degrees F with a standard deviation of 1.57 degrees F. The long term trend in temperatures at the weather station is down about 1 degree since the 1920s. The mean precipitation for the Haiwee station is 6.55 inches. The calendar year precipitation has ranged between 17.27 and 1.85 with a standard deviation of 2.65 inches. The data shows that the precipitation is not equally distributed throughout each month of the year, but rather it is heavily biased toward the winter cool season. In the 2007 water year, there was little rainfall (0.95 inches) which is about 14% of normal (see table c-1). The rainfall in water year 2008 was 1.91 inches which is 28% of normal. In spite of the low precipitation the last several years, the overall trend over the last 84 years has increased around 2 inches (table C-3).



White represents mean monthly PPT
Black represents PPT for water year 2007 (10/2006 to 9/2007

Ongoing scientific research has identified the potential effects of so-called "greenhouse gas" (GHG) emissions (including carbon dioxide (CO2); methane; nitrous oxide; water vapor; and several trace gasses) on global climate. Through complex interactions on a regional and global scale, these GHG emissions cause a net warming effect of the atmosphere, making surface



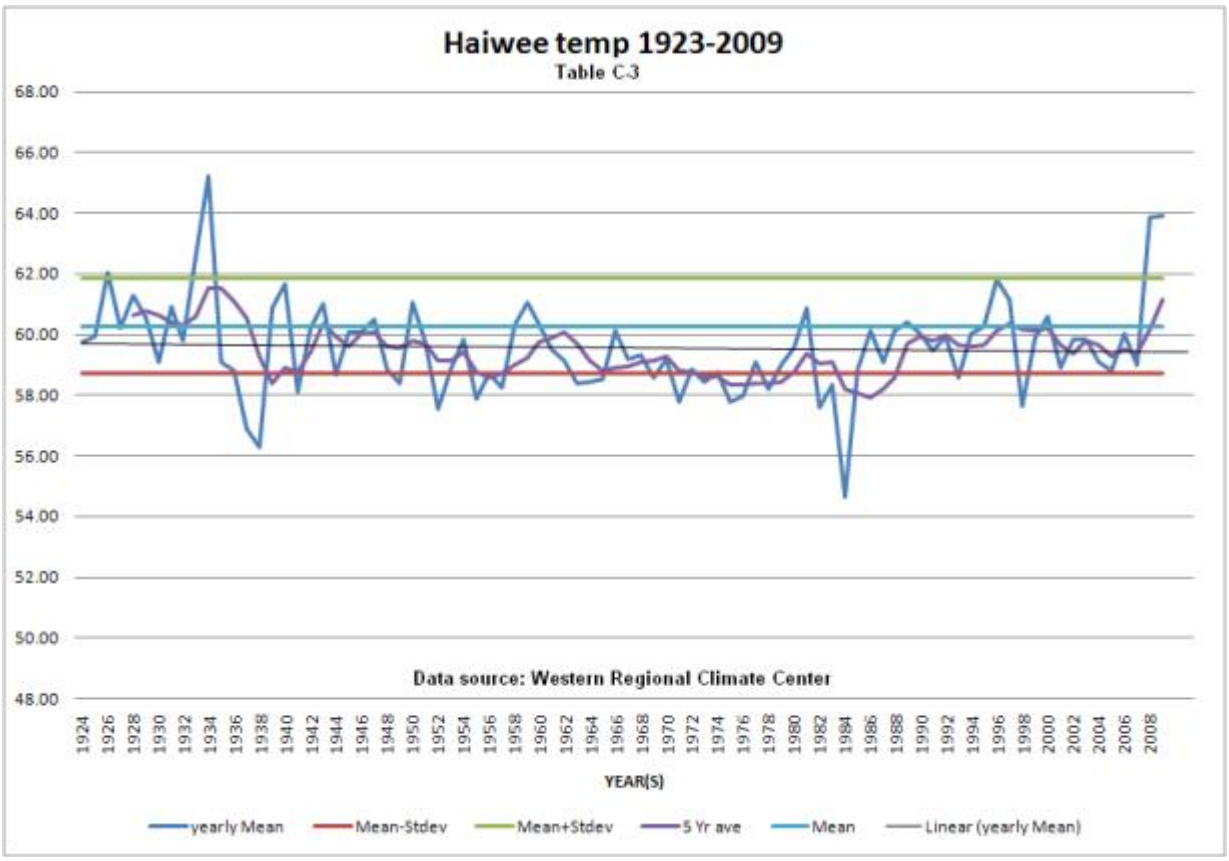
temperatures suitable for life on earth, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia, with corresponding variations in climatic conditions, recent industrialization and burning of fossil carbon sources have caused CO2 concentrations to increase dramatically, and are likely to

contribute to overall climatic changes, typically referred to as global warming. Increasing CO2 concentrations also lead to preferential fertilization and growth of specific plant species.

The assessment of GHG emissions and climate change is in its formative phase, and it is not yet possible to know with confidence the net impact to climate. Observed climatic changes may be caused by GHG emissions, or may reflect natural fluctuations (U.S. GAO 2007). We know that in the past the earth has gone through a number of ice ages with periods of warming and droughts between the periods. The most recent Ice Age ended around 13,000 years ago and the climate has warmed and dried since then. The warming and drying has not been continuous. As recently as 2500 years ago, the Owens river flowed into Searles Lake even though it had ceased for some time. Around 900 AD, a 200 year drought nearly dried up Mono Lake (called the Medieval Warming) (Singer, S. Fred and Dennis T. Avery. 2007). The Intergovernmental Panel on Climate Change (IPCC, 2007) recently concluded that "Warming of the climate system is unequivocal" and "Most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic [man-made] greenhouse gas concentrations."

Global mean surface temperatures have increased nearly 1.0°C (1.8°F) from 1890 to 2006 (Goddard Institute for Space Studies, 2007). However, both observations and predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. The data indicated that northern latitudes (above 24° N) have exhibited temperature increases of nearly 1.2°C (2.1°F) since 1900, with nearly a 1.0°C (1.8°F) increase since 1970 alone. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHG are likely to accelerate the rate of climate change. In 2001, the IPCC indicated that by the year 2100, global average surface temperatures will rise 1.4 to 5.8°C (2.5 to 10.4°F) above 1990 levels. The National Academy of Sciences (2006) has confirmed these findings, but also indicated there are uncertainties how climate change will affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be higher than during the summer.

An analysis of the Haiwee, CA temperature data from 1924 (first year with complete data) to 2009 shows that the 5 year mean temperature has declined over the last 10 years and is currently just above the long term mean temperature (table C-2). Analyses of precipitation data for the same period of time indicates that the precipitation has increased slightly over the last 84 years.



2. Environmental Consequences

a. Impacts of Proposed Action (Alternative A)

The U.S. Department of Interior (2001) issued orders to include global climate change in connection with planning efforts. It is questionable whether permit renewals fall within the order, but the point is moot as noted by the General Accounting Office (GAO) (2007). The GAO, in their report, noted that there has been no guidance issued as to how to implement the order. They also note that there is insufficient site specific information to allow managers to plan for climate change. It is generally accepted that there has been an increase in the rate of temperature increase and the likely cause is an increase in (GHG) especially carbon dioxide (CO_2). Livestock consumes vegetation and give off CO_2, methane and other GHG. Range conditions do not produce the large amounts of methane associated with dairy because the decomposition is generally aerobic rather than anaerobic. The natural decomposition of vegetation also produces GHGs. The combined GHG emissions (CO2 equivalents) from forestry and agriculture in California account for 8% of the totals (Held et al. 2007). Cattle account for around 6.1% of the agricultural products in California and consume 2,855,668,844 AUMs (USDA Census of Agriculture 2002). Based upon that, the potential maximum of 790 AUMs of cattle use in any one season under the Proposed Action would account for 0.00002% of the cattle GHG emissions in California. The volume of GHG produced by cattle in the L-C-M Allotment beyond background natural emissions is relatively very small and the proposed cattle grazing would have little influence on the Global Climate. The rancher uses vehicles to

manage his livestock and maintain the range improvements. The expected vehicle caused GHG emissions relating to the livestock grazing use on the L-C-M Allotment would be very small. Certain activities may contribute to or moderate climate change through GHG emissions/sequestrations. However, because of the vast number of sources of GHGs world-wide, it is impossible to determine the impacts of individual project emissions on global climate change. The effect of climate change on other resources is addressed in the resource specific sections.

b. Impacts of Alternative B:

Alternative B would produce approximately the same impacts to climate as the Proposed Action. The AUMs of forage consumed is 697 AUMs is slightly less than the Proposed Action. Overall GHG emissions would be approximately two millionth of a percent of the California cattle GHG emissions.

c. Impacts of No Grazing Alternative:

There would be no impact to climate from livestock grazing in the L-C-M Allotment.

C. AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

1. Affected Environment

The proposed action and alternatives would have no affect on ACECs because there are no lands so designated in the allotment.

D. BIOLOGICAL SOIL CRUSTS

1. Affected Environment

The open space between higher plants is not always bare of all life. At some sites highly specialized organisms can make up a surface community that may include cyanobacteria, green algae, lichens, mosses, micro-fungi and other bacteria. Soils with these organisms are often referred to as cryptogamic soils and form what is referred to as biological crusts. The cyanobacteria and micro-fungal filaments weave through the top few millimeters of soil and aid in holding loose soil particles together forming a biological crust which stabilizes and protects soil surfaces. The biological crusts aid moisture retention, fix nitrogen, and may discourage the growth of annual weeds. Below the surface, the soil flora grows various rhizhomes, hyphae, and filaments that further bind the soil together. Most of the biological crust organisms make their growth during cool moist conditions. The intermountain region has many-extensive complex crusts. Many of those areas are so fragile that even casual foot traffic can cause extensive damage. Many of the intermountain areas have fine textures soils, cooler climates and summer rains which are conducive to crust development.

As a contrast, the western Mojave desert has coarse-textures soils, high temperatures, little summer rain and very high potential evapo-transporation (PET). According to Jane Belnap (2003, 2005) “less stable, coarse-textured soils often support only highly mobile, large

filamentous cyanobacteria (such as Microcoleus) spp.)." She also says (2003 and 2005): "Cyanobacteria heavily dominate crusts of hot desert sites (Sonoran, Mojave, and Chihuahuan) where PET is high." She also indicated that some hot desert sites may not support biological crusts (Belnap 2005). The latest data, Belnap (2003 and 2005) and USDI BLM 2001, indicates that the likelihood is that they would be simple crusts that are highly mobile and quick to recover from disturbance. This is consistent with the health assessments and field observations in the L-C-M Allotment (USDI BLM 2005, Harris 1974-2008). Soil crusts were found at 4 of the 7 upland sites sampled during the rangeland health assessments. Most of the crusts found were the large filamentous Cyanobacteria.

2. Environmental Consequences

a. Impacts of Proposed Action:

Grazing animals can apply compressional and shear forces to the soil. The crust response to these disturbances is highly variable. Moisture and burial are two important factors relating to the degree of impact. With coarse textured sandy soils, moist crusts are better able to withstand disturbances than dry soils (Belnap 2003 and USDI BLM 2001). Many of the biological crust species are not mobile and cannot survive burial. However as range health assessments have found in the area, and as Belnap (2002 and 2005 and USDI BLM 2001) noted, the hot desert crusts are simple crusts that are highly mobile and quick to recover from disturbance. The large, filamentous cyanobacteria can move 5mm per day if it is wet (Belnap 2003 and USDI BLM 2001b). Normally rain and moist soils occur through part of the winter grazing season. Grazing in the later part of the spring can reduce the cover of biological crusts if the soils are dry. The proposed action would graze during the moist season. These simple crusts would likely recover within days once the rain returns. Because the crusts are simple to nonexistent, site recovery should be such that the impact would not be significant. The various range improvements and associated high use sites currently occupy around 4 acres or 0.009% of the Proposed Action area and this would not change. The maintenance of range improvements would affect very small areas for very short periods of time and have no appreciable impact to biological crusts.

b. Impacts of Alternative B

The impacts from alternative B would be similar to the Proposed Action for the Cactus Flat-McCloud Flat area (the Proposed Action area). Alternative B would include the larger use area in the rotation and the same type impacts would be extended over the entire use area. As with the Proposed Action, alternative B would involve grazing primarily during the moist season with the same type rotation. The alternative B area would graze the opposite part of the season as the Proposed Action area. The use in May would be mostly a dry season use. Cattle use would be seasonally rotated such that every other year each area would be rested during the dry season which would allow additional recovery and rest. These simple crusts would likely recover within days once the rain returns. The overall stocking rate for either alternative is quite low. The additional area grazed under alternative B would have a reduced stocking rate VS the Proposed Action (214 acres/AUM) VS (53 acres/AUM). Because the crusts are simple to nonexistent, site recovery should be such that the impact would not be significant. The various range improvements and associated high use sites currently occupy around 13

acres or 0.008% of the allotment and this would not change. The maintenance of range improvements would affect very small areas for very short periods of time and have no appreciable impact to biological crusts. The proposed new range improvements would include 2 acres of new disturbance at haul water sites. The reconstruction at Black and Lower Centennial Springs would be mostly to previously disturbed areas in washes where there are few crusts.

c. Impacts of No Grazing

Cattle grazing would no longer disturb soil crusts. As this is not a current impact, there would not be an expected change. Disturbance from other actions such as wild horses and burros, mining and geothermal development would continue.

E. CULTURAL RESOURCES

1. Affected Environment

The Allotment is wrapped artificially around the northern end of the China Lake Naval Air Weapons Station. The Pleistocene Owens River gorge forms the western boundary with the Owens Lake basin and Tertiary volcanic Malpais Mesa framing the north boundary, with the eastern boundary extending to the margins of Panamint Valley. The core of the allotment's terrain comprises the northern periphery of the Quaternary volcanic Coso Range, which is made up of Rhyolite and Obsidian structural landscape features. In addition, the Rose Valley area, to the southwest, was an important prehistoric trading center for obsidian nodule exports to other areas in southern and central California. Approximately 1,620 acres, or a little over 1% of the allotment's public lands, has been surveyed for cultural resources.

Eighty two (82) archeological sites have been recorded within the allotment. Many of them were recorded during the late 1970 and early 1980s for undertakings related to the development of the Coso Known Geothermal Area. A significant number of these sites, 94%, are prehistoric sites containing midden soils, bedrock metates and mortar pits, rock rings, rock art panels of petroglyph and pictograph elements, and lithic debitage scatters of varying density levels and materials. Just six of these sites, 5% of the total, are historic in nature, and are associated primarily with hard rock mining, 19th Century transportation routes, and homestead activities.

When these 82 sites were being recorded, between 1975 and 2007, none of their recordation forms contained any statements under the *Current Condition* sections that disturbances being caused by livestock grazing were observed.

There are no historic properties within the allotment that are listed on the National Register of Historic Places (NRHP), and none of the 82 sites have been evaluated for their eligibility for the NRHP. However, for management purposes, they are all being treated by BLM as if they were indeed eligible for the NRHP, until such time as they can be formally evaluated by BLM for their significances.

2. Environmental Consequences

a. Impacts of Proposed Action, Alternative A,
Under the Proposed Action, there would be no change to the cultural resource management components of the California Desert Conservation Area Plan, as amended. Cattle grazing would continue at levels pursuant to planning and management prescriptions. Proposed range improvements, repair or removal of existing range improvements, and changes in approved management plans would be reviewed pursuant to Section 106 of the National Historic Preservation Act as implemented in the *State Protocol Agreement between the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer Regarding the Manner in which the Bureau of Land Management will meet Its Responsibilities under the National Historic Preservation Act*, October 2007, (hereinafter referred to as the *Protocol*) and the Supplemental Procedures for Livestock Grazing Permit/Lease Renewals, August 2004, (hereinafter referred to as the *Supplement*).

Grazing has occurred in the California Desert since the 19th Century. Our knowledge and understanding about the effects of livestock grazing on cultural properties is limited for the California Desert, but studies of grazing impacts have been reported for other areas in California and the Great Basin region. The primary threats from grazing behavior would be damage to artifacts and site integrity resulting from the breakage, chipping, and displacement of artifacts, which might compromise the context and information potential of a historic property. Grazing threats to cultural properties would be greatest in areas where cattle congregate around springs, watercourses, shade and salt licks.

The potential threats to cultural properties would continue, but the intensity of the threats would diminish significantly from current levels, due to the reduced acreage involved. Under the Proposed Action livestock grazing would be limited in the vicinity of historic properties until an assessment of effects can be completed in accordance with procedures outlined in the *Supplement*. Under the Proposed Action, BLM would continue to implement the procedures outlined in the *Supplement* to identify historic properties that may be affected by livestock grazing. Where conflicts between livestock grazing and significant cultural properties are identified, BLM would implement the appropriate Standard Protective Measures specified in the *Supplement*, or in cases where conflicts cannot be resolved, the BLM would consult with the California State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act and the *Protocol*.

b. Impacts of Alternative B,
Under Alternative B, there would be no change to the cultural resource management components of the California Desert Conservation Area Plan, as amended. Cattle grazing would continue at current levels pursuant to planning and management prescriptions. Proposed range improvements, repair or removal of existing range improvements, and changes in approved management plans would be reviewed pursuant to Section 106 of the National Historic Preservation Act as implemented in the *Protocol* and the *Supplement*.

Grazing has occurred in the California Desert since the 19th Century. Our knowledge and understanding about the effects of livestock grazing on cultural properties is limited for the California Desert, but studies of grazing impacts have been reported for other areas in California and the Great Basin region. The primary threats from grazing behavior would be

damage to artifacts and site integrity resulting from the breakage, chipping, and displacement of artifacts, which might compromise the context and information potential of a historic property. Grazing threats to cultural properties would be greatest in areas where cattle congregate around springs, watercourses, shade and salt licks.

The threats to cultural properties would continue and would not show marked change from current levels. Under Alternative B livestock grazing would be limited in the vicinity of these historic properties until an assessment of effects can be completed in accordance with procedures outlined in the *Supplement*. Under Alternative B, BLM would continue to implement the procedures outlined in the *Supplement* to identify historic properties that may be affected by livestock grazing. Where conflicts between livestock grazing and significant cultural properties are identified, BLM would implement the appropriate Standard Protective Measures specified in the *Supplement*, or in cases where conflicts cannot be resolved, the BLM would consult with the California State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act and the *Protocol*.

A number of specific range improvements are included in Alternative B.[1] At the Lower Centennial Spring, the existing cisterns would be cleaned out so that it can be used again to store water. From the cistern, a reconstructed pipeline would travel along a new alignment, first on the ground surface down a dry streambed to a point where it meets the adjacent access road. From there the pipeline will be placed in a shallow trench excavated down the center of the road for about 0.7 mile, where it will then lead to a storage tank placed alongside the road. From the tank a short feeder pipeline will go to a nearby livestock watering trough. During February 2008 the Area of Potential Effects (APE) of this improvement was surveyed by BLM Archeologists in order to identify any historic property that might be affected, but none were found.

At Black Springs, there are two springs. The upper one is located high on the west side of a dry wash, and seeps into a existing cistern, which would be cleaned out. The lower spring is in the bottom of the main wash. This cistern would also be cleaned out and reconstructed. A short length of PVC pipe will connect this cistern with the existing Lacey Pipeline, previously buried in the adjacent access roadbed.

To supplement these spring developments, two water haul sites are also proposed. These are identified as: **Site 1**, known as Centennial Corral, located in Township 18 South, Range 39 East, Section 31; and **Site 2**, located on the pass east of Reed Corral, in Township 19 South, Range 39 East, Section 20. All legal descriptions are Mt. Diablo Base Meridian.

At each of these water haul sites there will be a 4,245 gallon water storage tank placed on a circular gravel base. Water will be delivered by motorized vehicle and pumped into the tanks, which will be located adjacent to the access roads. Each tank will have an outlet pipe that will travel a short distance to a livestock watering trough. These water haul sites will be used only when grazing is authorized during a particular grazing season.

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[1] The land south of Owens Lake was changed recently from Class M to Class L (Limited Use) land in the West Mojave Plan.

The two springs, Lower Centennial Spring and Black Spring, have been inspected for cultural resources by BLM heritage professionals. There were no cultural resources evident at Black Spring, however, the proposed alignment of the reconstructed pipeline at Lower Centennial Spring does travel down a desert wash between two cultural resources. A Coso style petroglyph occurs on one side of the wash, and a standing structure known as the Astral Artz Cabin is on the other side. Both features have not yet been evaluated for their eligibility for the National Register, but the placement of the new pipeline within the wash channel will not cause any effects to the integrity or potential eligibility of either.

The two proposed water haul sites have also been inspected for cultural resources by BLM heritage professionals. Only a fragment of a bottle and a flattened beverage can, each at different proposed haul sites, were evident, and they are not considered significant resources. Thus, the development of these two proposed sites for water tank and trough installation will not have any effect upon significant cultural resources.

The Permittee would also be required by term of the grazing permit to perform normal maintenance on all range improvements located within the Allotment, including occasional repair of fences. This normal maintenance, whether it would be walking along the fencelines using hand tools to repair broken wire strands; replacement of individual posts and side boards at corrals; or replacing broken water pipe sections, on an as needed-when needed basis; are allowed without the need for further heritage compliance review by one of the Exemption clauses contained in the Protocol's Appendix D: Activity A-34: "Modification of existing fences, gates, grills or screens".

c. Impacts of the No Action, Alternative C

The No Action Alternative would typically maintain current management practices. As such, the threats to cultural properties would continue and not change significantly from current levels. Thus, the discussions contained in the impact Sections E.2.a and E.2.b above also would apply here, and are incorporated herein by reference.

d. Impacts of the No Grazing, Alternative D

Implementation of this alternative would eliminate the threats from grazing to the 82 recorded sites located within the boundaries of the Lacey-Cactus-McCloud Allotment. Thus, there would be no impacts to cultural resources from livestock grazing under this alternative, except for potential impacts resulting from the removal of existing range improvements.

F. ENVIRONMENTAL JUSTICE

1. Affected Environment

The grazing allotment being analyzed is located in rural Inyo County. The rural areas of this county are typically occupied by moderate to low-income households. The permittees that hold the grazing permits for the allotment being analyzed typically have moderate incomes.

Seasonal laborers that may be hired by the permittee generally come from low-income households.

2. Environmental Consequences

a. Impacts of Proposed Action – Alternative A, & Alternative B

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

The grazing of livestock in rural Inyo County has been a common practice for over 100 years. Typically ranching has been performed by persons of low to moderate income, and may or may not be considered a minority. There are no Native American communities on or near any of the allotments being analyzed.

b. Impacts of No Grazing

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

G. FARMLANDS, PRIME OR UNIQUE

1. Affected Environment

The proposed action and alternatives would have no affect on unique or prime farmlands because there are no lands so designated in the allotment

H. FLOOD PLAINS

1. Affected Environment

Flood plains are associated with all of the main drainages in the allotment. Alluvial fans occur at the mouth of nearly all drainages. Most of the flood events are associated with summer thunderstorm events. These large events tend to be localized events which may drop over 4 inches of rain in a short time. The very large events may have a return interval of 25-50 years. These large events are a result of high intensity storms and are little affected by cultural practices in the watershed. None of the flood plains in the allotment are designated FEMA 100 year flood plains.

2. Environmental Consequences

a. Impacts of Proposed Action:

The proposed action is not likely to result in impacts in flood plains. The loss of existing and future structural range improvements in flood plains would continue at irregular intervals in the future. Such damage would be limited and could be repaired by normal maintenance activities. Flood events where the flows exceed bank full flows and move onto the floodplain generally occur as a result of large summer thunderstorms where the cultural practices such as grazing have little influence on flood size.

b. Impacts of Alternative B:

Impacts are similar to what is expected from the proposed action.

c. Impacts of No Grazing

Cattle would not have an effect on flood plains located within the allotment since grazing would be eliminated under this alternative.

I. INVASIVE, NON-NATIVE SPECIES

1. Affected Environment

Peter Rowlands et al. (1982) in Brooks (1998) notes that alien species comprise a relatively small portion of the flora in the deserts. They indicate that there approximately 1836 species of vascular plants in the California portion of the Mojave Desert of which 156 (9%) are alien to the region. This compares to the global average of 16% alien plants (Rowlands et al. 1982). Fraga (2005) studied the area south of the L-C-M Allotment and found that non-native species comprised 4% of the flora in that area. Rangeland health evaluations completed in the allotment identified four species of non-native/invasive species in the area. Species identified in the allotment include filaree (*Erodium cicutarium)*, Mediterranean grass (*Schismus arabicus*), Russian thistle (*Salsola (iberica) tragus*) and salt cedar (*Tamarix spp*). The non-native species can be classified into three general groups.

The first group is invasive, non-native plants which are common across the landscape. Species in this group are common across the desert and are common in surrounding bioregions as well. In this allotments, these species occur in low numbers in portions of allotment (2of 3 sites) and combined they generally constitute less than 1 % of the total cover. Species in this group include filaree and Mediterranean grass. None of the species in this group are classified as noxious weeds.

The second group of invasive, non-native species is also common in the desert, but are more restricted in the habitats they occupy. For the most part this group is limited to road sides, some washes and other highly modified sites where there is little competition from other plants and water concentrates to provide late season soil moisture. Adequate soil moisture in the late spring and summer is important for these species. The only representative species in the allotment is Russian thistle which is found along road corridors through and adjacent to the allotment. Road maintenance practices and equipment play a strong role in maintaining the site disturbance and in spreading seeds of these type species. There is a future concern for Moroccan mustard (*Brassica tourenefortii*), Mediterranean mustard (*Hirschfedia incana*), and

black mustard (*Brassica nigra*) which are spreading along road corridors in the region. Russian thistle is a state listed category "C" noxious weed.

The third group of invasive non-native species is species which occur as a series of specific infestations at specific sites. All of these species are listed noxious weeds and have active control efforts in place. Salt Cedar is the only identified representative of this group in the allotment. It was found at Lower Centennial Spring and its existence is not related to livestock grazing.

The introduction of invasive, non-native species, especially noxious weeds is very difficult if not impossible to reverse if not detected early. For that reason, the integrated weed management plan includes detection and prevention plans (USDI BLM 2006b).

2. Environmental Consequences

a. Impacts of Proposed Action

As a generalization, livestock grazing have the potential to influence invasive, non-native species several ways. These possible influences could include transporting new species in from other regions, moving seeds from infested sites within the allotment to non infested sites and by modifying sites to be more favorable to invasive, non-native species. The movement and introduction of new species as a result of livestock grazing in the L-C-M Allotment has a low probability due to the low numbers of cattle using the area. In addition, the cattle come from areas adjacent to the allotment. Most existing invasive, non-native species are widespread and have been for a long time. Current livestock management is unlikely to cause any additional spread as most of these species occur over most of the region already. There are few intense use sites that could provide a more favorable environment for the invasive, non-native species and the proposed action would not result in the creation of any new sites and cattle use patterns would be the same as in the past.

b. Impacts of Alternative B

The impacts of alternative B would be similar to the Proposed Action. Alternative B would involve the cattle spread over a much larger area (41,900 VS 149,800). Alternative B also includes the construction and maintenance of a number of new watering sites which become high impact sites. These new sites would provide 2 acres of potential habitat for invasive species. Based upon observations of existing sites, where there has been not new infestations of non-native invasive species, the probability appears low. The salt cedar infestation is not related to livestock grazing.

c. Impacts of No Grazing

There would not be any expected changes in vegetation composition on an overall basis (Sanders (1992) and Johnson and Meyeux (1992)). Some high impact type sites may increase their perennial cover. Based on current literature and observations of areas which are not grazed, selecting the no grazing alternative would not be expected to result in any appreciable changes in the occurrence of current invasive, non-native species. Grazing would cease to be a

factor in non-native, invasive species management, but the non-native, invasive species would continue to occur in the area.

J. NATIVE AMERICAN CONCERNS

1. Affected Environment

The area encompassed by the Lacey-Cactus-McCloud Allotment was inhabited at historic contact by small family based communities of Paiute and Shoshone Indians. These people had family and cultural ties with both California and Great Basin Native American communities. These groups inhabited the Owens Valley, Owens Lake, Rose Valley, Coso Range, and Panamint-Searles Valley region.

There are currently five federally recognized tribes that BLM consults with, four within the Owens Valley, at Bishop, Big Pine, Fort Independence, and Lone Pine, and the Timbisha Shoshone Tribe in Death Valley.

BLM requested in November, 2007 specific comments on the proposed undertaking from all of these Tribal organizations.

2. Environmental Consequences

a. Impacts of the Proposed Action: Proposed Action

Consultation with the Native Americans Tribes and communities in the locality has been completed to determine whether there could be significant effects to tribally important locations and resources by the proposed action. No effects have been identified by the Tribes.

b. Impacts of Alternative B: Lower Centennial Flat option

Consultation with the Native Americans Tribes and communities in the locality has been completed to determine whether there could be significant effects to tribally important locations and resources by the proposed action. No effects have been identified by the Tribes.

c. Impacts of Alternative C: No Action

Implementation of this alternative, because it would continue existing permit stipulations, would not eliminate the threats caused by livestock grazing to known tribally important locations and resources located within the boundaries of the Lacey-Cactus-McCloud Allotment.

d. Impacts of Alternative D: No Grazing

Implementation of this alternative would eliminate the threats caused by livestock grazing to known tribally important locations and resources located within the boundaries of the Lacey-Cactus-McCloud Allotment.

3. Consultation

BLM has consulted with five Native American Tribes of the locality regarding the Proposed Action. These Tribes included: Bishop Paiute, Big Pine Paiute, Ft Independence Paiute, Lone Pine Paiute-Shoshone, all in the Owens Valley, and Timbisha Shoshone of Death Valley. BLM requested comments on the proposed undertaking during November 2007, and invited the Tribes to consult under the Executive Memorandum of April 29, 1994 (Government-to-Government Consultation) and other applicable laws and regulations. No tribes have requested to initiate consultation, nor commented on this proposed action.

K. RECREATION

1. Affected Environment

The public lands in the allotment provide a wide range of outdoor recreational opportunities and experiences including backpacking/hiking, horseback riding, mountain biking, camping, hunting upland game birds, nature study, wildlife viewing, ATV and motorcycle riding, four-wheel driving, rock climbing and target shooting. Annually a Special Recreation Permit for use within the borders of the allotment has been issued to a promoter of dual sport motorcycle tours. Additionally along the western boundary of the allotment are three popular trail heads.

2. Environmental Consequences

a. Impacts of Proposed Action – Alternative A, and Alternative B

While participating in casual and permitted recreational pursuits participants may encounter such range improvements as fence lines, closed gates, cattle guards, corrals and water developments as well as encountering herds of cattle on the public lands. While range improvements such as closed gates and cattle guards may delay ones recreational pursuits these impediments do not create a significant impact on recreational opportunities. Conversely the sighting of livestock grazing on the open range may be of interest to visitors and may enhance one's recreational experience depending upon the observer's point of view.

In general the proposed Range Improvement projects will not result in increased impacts on recreational users. The water haul sites, existing and proposed, may provide instances where cattle and visitors come in contact with each other. Although these situations exist, they should not adversely affect the recreational opportunities within the allotment.

b. Impacts of No Grazing

The elimination of grazing would have little effect on recreational opportunities in the region except for eliminating the experience of seeing cattle on the open range of the "Wild West.". Until all range improvements were removed recreational participants may still encounter the remnants of these developments which may delay but not prohibit pursuing one's recreational interest.

L. SOCIAL AND ECONOMIC VALUES

1. Affected Environment

The community of Olancha is a traditional rural settlement. Part of its economic base depends on ranching while another sector of the economy depends upon servicing the through traffic on Highway 395. The community of Olancha is not fully developed in the sense of offering a full array of goods and services, and many of its citizens commute long distances to work. It draws labor from other areas in the valley who work at the bottled water plant.

2. Environmental Consequences

a. Impacts of Proposed Action – Alternative A, and Alternative B

The proposed action would have no affect on the social or economic values of the community.

b. Impacts of No Grazing

The cancellation of grazing on the allotment would likely erode the social values of those in the community who see value in living in a small western ranching community. It would also impair those businesses and families in the community who count on the Cabin Bar Ranch for business and employment.

M. SOILS

1. Affected Environment

No formal soils surveys have occurred in the allotment. The soils occur on recent alluvial fans and are generally poorly developed, well drained and coarse textured. The soil depth ranges from deeper alluvial materials to very shallow or non-existent over the rocky substrate. The common coarse textured soils with gravely surfaces are quite stable. The finer textured soils without clays are more susceptible to accelerated erosion from wind and water especially when the surface has been disturbed. The soils in the area have been subject to periodic disturbance from historic trails, livestock grazing, and utility Right-of-way maintenance. Established watering sites have concentrated the cattle into small areas resulting in trampling impacts to those sites. The trampling has resulted in increased compaction in the soil surface, reductions of vegetative cover, and destruction or disruption of biological soil crusts at these sites. These sites cover less than 13 acres or 0.08% of the allotment.

Soil stability was evaluated in the L-C-M Allotment as part of the Rangeland Health evaluations. Seven upland sites were evaluated and the soil surface factor (SSF) in the allotment averaged 9.8 which is in the stable range. Soil impacts were noted at sites where cattle were concentrating. Most of these were developed sites at management facilities such as water developments.

2. Environmental Consequences

a. Impacts of Proposed Action

Different degrees of impacts would occur to soils from different portions of the grazing operation. The proposed action would result in continued use of existing concentration sites. Additional new impacts to soils at the established sites are unlikely.

As opposed to the intense use at concentration areas including watering and management facilities, the general grazing use is an extensive use with the animals and their hoof action spread over large areas. This use can be best characterized as a series of small impacted spots (hoof marks) with large interspaces. This use would not result in the loss of vegetative cover or increased compaction and reduced infiltration rates. Wind and water erosion rates are not expected to increase above current levels as a result of the Proposed Action. The current stable SSF ratings for the allotment would not be expected to change as a result of the Proposed Action.

b. Impacts of Alternative B

Impacts to soils from the alternative B would be similar to those for the Proposed Action. Differences would be from the increased area grazed, impacts around additional range improvements and construction of new range improvements. Alternative B would graze a larger area, but the impacts would less intense because the same use would be spread over a larger area with a stocking rate around half of that in the Proposed Action. Impacts at existing range improvements would increase from 4 to 13 acres. Overall the impacts would be very low. The proposed new construction of range improvements could impact an additional 2 acres.

c. Impacts of No Grazing

Elimination of grazing would eliminate any potential future impacts to soils as a result of cattle grazing. Soils at concentration areas would slowly return to a more natural compaction rate, infiltration rate and stability.

N. SPECIAL STATUS PLANTS

1. Affected Environment

One special status plant species occur in the L-C-M Allotment area. Table N- 1: BLM Special Status Plant Species in the L-C-M Allotment

Common Name	SPECIES SUBSPECIES / VARIETY	STATUS CNPS	HABITAT	Location	Number of Populations in species range
Ripley's Cymopterus	Cymopterus ripleyi var saniculoides	1B	Mojave desert scrub/ Joshua tree woodland 3100-6700 ft elevation. Sandy soils often with carbonate.	NE end of Haiwee Reservoir	3 populations in CA, all in Inyo County Also occurs in Lincoln and Nye counties, NV

CNPS Status: 1B Plants rare, threatened, or endangered in CA and elsewhere

Ripley's Cymopterus is a small perennial herb that flowers in late winter through spring. Three populations of Ripley's Cymopterus occur in California and several populations also occur in 2 counties in Nevada. In California, one population is in Lee Flat northwest of the L-C-M allotment in Death Valley National Park, and it is fenced. Another population is on private property in Sage Flats at the base of the Sierra Nevada Mountains south of Olancha. A third population grows on a bench along a north – south distance of about 4 miles from the NE end of Haiwee Reservoir at the base of the Coso Mts. Part of this population is northwest of Cactus Flat outside of the proposed grazing area. Mojave Milkvetch, *Astragalus mojavensis* var *hemigyrus,* is a BLM special status plant species, but it occurs to the east of the L-C-M allotment and is not recorded within the allotment. In 1891 Inyo Hulsea (*Hulsea vestita ssp inyoensis*) was recorded at Crystal Spring on China Lake NAWS, but has not been recorded on the allotment (CNDDB 2007)

2. Environmental Consequences

BLM manages special status species in a manner to prevent them from becoming listed as federally threatened or endangered. For plant species, there are several factors to consider when assessing the risk of a species becoming threatened or endangered. The following considerations determine the level of risk the species faces of becoming increasingly rare: the range or geographical extent of the species; the number of populations; the size of each population; the health of each population; specialized habitat requirements of the species; exposure of populations to perceived threats, considering terrain, accessibility, land ownership, and use; and susceptibility and reaction of the population to perceived threat.
When assessing the impact of a management action on a BLM special status plant species, BLM takes the factors listed above into account. If the risk is assessed to be high, BLM takes management actions to protect the population at risk.
These 2 special status species were assessed based on the 7 risk factors listed above. The assessment indicates the risk that cattle grazing poses to the existence of the species.

a. Impacts of Alternative A – Proposed Action

No BLM special status plant species or suitable sites for occurence are on the Cactus Flat/McCloud Flat portion of the allotment that would be grazed under the Proposed Action.

b. Impacts of Alternative B:

The population to the north and east of Haiwee Rservoir was surveyed on May 11 and May 24 of 2011, and no signs of cattle or past grazing were found in the area where Ripley's Cymopterus was growing. The area where Ripley's Cymopterus occurs is outside of the area that is grazed.

c. Impacts of No Grazing Alternative
No adverse impacts would occur to special status plant species if there were no grazing.

O. THREATENED AND ENDANGERED WILDLIFE SPECIES

1. Affected Environment

The desert tortoise is a State and Federally Threatened species. The most recent information on the desert tortoise is found in the Desert Tortoise Recovery Plan Assessment Draft (Tracy, et al, 2004) and the Final West Mojave Plan (U. S. Bureau of Land Management, 2004). The L-C-M allotment is entirely outside of the desert tortoise range as designated in WMP. BLM has no records of desert tortoises within the allotment.

The Mohave ground squirrel (MGS) is listed as threatened by the state of California. In April 2010, the US Fish and Wildlife Service issued a positive finding on a petition to list the Mohave ground squirrel under the Endangered Species Act. It was determined that this listing may be warranted due to destruction, modification, or curtailment of the species' habitat or range. The USFWS acknowledged that livestock grazing may have contributed to the range contraction of the MGS.

The BLM has also discussed the impacts of grazing with the California Department of Fish & Game and with Dr. Phil Leitner who has conducted several scientific studies on Mohave Ground Squirrel in the northern Mojave Desert. The result of these discussions is the monitoring regime which is stated in the Environmental Consequences section that follows.

The allotment is almost entirely within the Mohave Ground Squirrel Conservation Area as described in WMP. Ground disturbance and habitat destruction is restricted to 1% of the total area of Conservation Areas as defined in WMP. Mohave ground squirrels have been captured at on Lower Cactus Flats within the allotment. They could occur along the western edge of the allotment north of Haiwee Reservoir. The MGS is typically associated with a variety of habitats, including desert scrub, alkali scrub, and Joshua tree woodland. In the northern portion of its range, the MGS feeds on the leaves, seeds, and fruits of shrubs when annual plants are not available. Male Mohave ground squirrels typically emerge from hibernation at the beginning of February, while the females emerge around mid-February. By the end of February, mating is well underway. Summer aestivation generally begins sometime between July and September, but may begin as early as April or May during drought conditions (Leitner et al., 1995). Reproductive success of the MGS depends on the amount of fall and winter rains and the resulting growth of annual forage. Leitner and Leitner (1992) suggest that a crop of about 1 gram / sq ft may be necessary for MGS reproduction. If rainfall is not sufficient, annual herbaceous plants are scarce. At such times, the MGS is unable to store enough fat and does not breed. By not reproducing, the MGS retains sufficient body fat to survive the next winter. This ground squirrel uses burrows at the base of shrubs for cover and builds its nest in the burrow system. A litter of about 6 young are born between March and May with a peak in April (Burt 1936, Recht 1977).

2. Environmental Consequence

a. Impacts of Alternative A – Proposed Action:

Mojave ground squirrels in the Centennial Flat pasture would not be at risk from cattle impacts since the Proposed Action does not allow grazing there.

Under the Proposed Action, water haul sites would be used in McCloud and Cactus Flats to draw the cattle to specific areas at different times during the 4 month grazing period. There would be 2 water haul sites to prevent over-use of forage. One area would be supplied with water for 2 months. Then an area at the other end of the allotment would be supplied with water to move cattle across the allotment and prevent concentration due to grazing. This action would assure availability of sufficient forage for the Mojave ground squirrel. BLM will assess forage availability through utilization studies. If the amount of forage falls below the threshold values for key species, cattle will be removed. Using 2 water haul sites would prevent excessive utilization by cattle. Enough food resources would be reserved to support the MGS if cattle are removed when threshold values of utilization are reached. The water haul sites consist of previously disturbed ground. No new disturbance would occur.

The period of grazing would be December 2 through March 31, so most of the grazing period would be while the MGS is hibernating. The Mohave ground squirrel is generally active in March through May. Since the area is located at relatively high elevations, the soil would be moist longer than at lower elevations. Therefore, the growing season for shrubs is usually late Feb through May unless it is a drought year. The stocking rate would be 53 acres/ AUM, which means 1 cow and her calf on 53 acres for 1 month. This is quite light use. Studies conducted by Phil Leitner in the Coso Range indicate some dietary overlap between cattle and MGS, especially for shrub foliage such as winterfat and spiny hopsage. However, these plant species are a small component of the vegetation communities within the allotment and are absent from many of the plant communities. The MGS is probably utilizing Atriplex species in some areas. According to Phil Leitner, a grazing system that results in light utilization of edible shrubs and does not deplete annuals would provide the squirrels with sufficient nutrition and would have minimum impacts on the MGS population.

WMP sets the thresholds of utilization during dormant season grazing at 40% for Mojave/Sonoran Desert Scrub and 35% for Salt Desert Shrub land. Many of the plants in these plant assemblages occur on the allotment. The Spiny Hopsage (Graya spinosa) threshold would be 30% because PUF threshold in the CDCA plan is lower than in WMP. The threshold for shadscale would be 10% for the same reason. The threshold for both winterfat and four-winged saltbush is 40%. When any one of the thresholds is reached, cattle would be removed from the allotment to prevent over-grazing. This strategy has been used in the past to prevent overgrazing in this allotment and should maintain shrub forage in healthy condition. Utilization monitoring would be conducted prior to turnout of cattle and at the end of January after cattle have been grazing for 2 months. If none of the utilization thresholds were reached or exceeded, cattle would continue to graze for 1 more month. At the end of February, BLM would again monitor utilization, and if thresholds were still not exceeded, cattle would be allowed to graze until March 31. This schedule means that BLM would monitor utilization before turnout of cattle, ½ way through the grazing period and then a third time ¾ of the way through the grazing period. Cattle would have to be removed from the allotment as soon as any of the utilization thresholds were met or exceeded, which may be the situation in a drought year.

b. Impacts of Alternative B:
The impacts of Alternative B would be greater than those for the Proposed Action because grazing would also occur in the Centennial Flat pasture, which is also within MGS habitat.

Therefore, more land within the MGS Conservation Area would be affected by grazing since the period of grazing is longer (Nov 1 – May 31) under Alternetive B. The grazing period for the Proposed Alternative is Dec 2 – March 31.
c. No Grazing
No adverse impacts would occur if grazing were eliminated.

P. WASTE, HAZARDOUS OR SOLID

1. Affected Environment

Detailed surveys of hazardous or solid wastes have not been undertaken on this allotment. BLM maintains no records of reportable spills in the allotment. Although use of motorized vehicles and equipment by the livestock operator may have resulted in periodic and scattered spills or releases of fuel and petroleum products in the allotment, none are documented. For this reason we believe that the proposed action and the alternatives would have no affect on hazardous or solid waste.

Q. WATER QUALITY, SURFACE AND GROUND WATER

1. Affected Environment

The L-C-M Allotment is located on the western edge of the Mojave Desert. The climate and annual precipitation is typical for the desert environment. Large variations in yearly perception volumes are common. Most of the perception comes in the form of rain at the lower elevation and many times snow at the highest elevations. Most of the perception falls between November and mid March. Large summer rain events are not common, but can be quite large causing considerable watershed damage when they do occur. Additional climate information can be found under "B Air and Climate"

The U.S. Geological Survey identified portions of two large watersheds in the allotment. These are the Indian Wells-Searles Valley basin and the Owens Lake basin. A number of canyons drain through the allotment from the Coso Mountains with storm water draining to the north into the Owens Lake or west into Rose Valley or playas in Upper and Lower Cactus Flats and McCloud Flat. The Final Unified Watershed Assessment (1998) classified the Owens Lake basin as a category 1 (impaired) priority watershed and the Indian Wells-Searles Valley basin as a category 1 (impaired) low priority watershed. These impaired classifications were not related to livestock grazing.

The Lahontan Basin Plan (RWQCB 1994) 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. The minor wetlands category has an additional beneficial use of freshwater recharge. Riparian areas are found in Centennial and Blackrock Canyons along the south edge of Lower Centennial Flat. The only surface water in the allotment occur at the two springs in those canyons which have been developed for livestock water.

The Clean Water Act and the UESEPA classify water pollution from rangelands as non-point source pollution (NSP). Management of NSP is through a series of management practices called best management practices (BPS). According to the USEPA, "The restoration or protection of designated water uses is the goal of BMP systems designed to minimize the water quality impact of grazing and browsing activities on pasture and range lands." Management practices can minimize the delivery and transport of pollutants to surface and ground waters. According to the USEPA, management practices control the delivery of NPS to receiving water resources by: minimizing pollutants available; retarding the transport and/or delivery of pollutants; and/or remediating or intercepting the pollutant before or after it is delivered to the water resource.

The USEPA has produced guidance titled National Management Measures to Control Non-point Pollution from Agriculture. In that document section 4E addresses grazing management. The state of *California has provided guidance called California Nonpoint Source Encyclopedia* (SWRCB 2004) updated July 2004. *Further guidance can be found in those documents.*

2. Environmental Consequences

a. Impacts of Proposed Action

There are no natural water sources within the proposed action area. Therefore there would be no impact to any natural waters as a result of the proposed action. All drinking water for the cattle would come from developed sources. It is estimated that cattle would consume approximately 0.4 acre feet of water. This would be from runoff water stored in reservoirs in Lower Cactus Flat and McCloud Flat and water hauled in from outside the allotment.

b. Impacts of Alternative B

Range inspections and Rangeland Health Assessments have documented several sites with issues affecting water quality in the allotment. Two sites were identified that did not meet rangeland health standards. Both of the sites not meeting standards were in riparian areas and were not a result of livestock grazing. One of the sites that did not meet standards was a result of salt cedar, the other was the result of headcutting in a riparian area that resulted from a large flow event. All of the upland sites in the allotment met rangeland health standards and the proposed action is not likely to result in any degradation of water quality. The Proposed Action does not represent point source impacts to water quality and no 401 permit is necessary. Impacts from the Proposed Action represent non-point-source impacts which are controlled by the implementation of Best Management Practices (BMP). The proposed action is to provide alternate water sites, and institute better livestock management. These are BMP practices. Water consumption would not exceed 0.7 acre feet for the grazing season at full stocking rates. This is a very small percentage of the water in the area.

c. Impacts of No Grazing Alternative

No impacts to water resources would occur due to cattle grazing.

R. WETLANDS/RIPARIAN ZONES

1. Affected Environment

Three springs occur within the allotment: Upper Centennial Spring, Lower Centennial Spring and Black Spring. Rangeland Health Assessments completed in 2005 indicated that these 2 springs were below health standards because of head-cutting at Black Spring (unrelated to grazing) and the presence of salt cedar at Centennial Spring. Established range improvements exist at Lower Centennial and Black Springs, but they are in need of repair to make them functional. Black Spring supports a variety of riparian plant species, including willows and shrubs with good vertical structure important to maintaining bird species diversity. The riparian area at Black Spring covers about half an acre and is fenced to protect the vegetation. Upper Centennial Spring has abundant willows and mesquite and is the most significant riparian area in the allotment. Lower Centennial Spring does not have any woody species other than a small salt cedar. This spring is less than ¼ acre and supports herbaceous riparian plant species. Floods periodically damage some of the vegetation growing at these springs.

2. Environmental Consequences

a. Impacts of Alternative A – Proposed Action

No riparian areas exist within the proposed grazing area of Alternative A

b. Impacts of Alternative B

Established range improvements at Lower Centennial and Black Springs would be rehabilitated prior to the resumption of grazing. The water improvement at Lower Centennial Spring would be developed to serve both cattle and burros. Both of these improvements involve piping water to a trough away from the springs and riparian habitats. Cattle would not be attracted to open water at these springs since cattle could access water below the canyons in which these springs are located. The riparian habitat on which riparian wildlife species depend would not be at risk from cattle grazing. In addition, a series of water haul sites would be established throughout the allotment, preventing cattle from concentrating at springs. Piping water to a trough away (down canyon) from Lower Centennial Spring would also protect Upper Centennial Spring by encouraging cattle to stay at the water development below the 2 springs.

c. No Grazing

No adverse impacts would occur if grazing were eliminated.

S. WILD AND SCENIC RIVERS

1. Affected Environment

The proposed action and alternatives would have no affect on wild and scenic rivers because there are no rivers so designated within the allotment.

T. WILDERNESS

1. Affected Environment

Approximately 53,832 acres or 33% of public lands within the Lacey-Cactus-McCloud Allotment lies within wilderness. Virtually all 49,296 acres of the Coso Range Wilderness lies within the allotment. About 3,860 acres or .06% of the Argus Range Wilderness and another 698 acres or .08% of the Darwin Falls Wilderness also fall within the allotment boundary. (See Map in Appendix 1)

As the Argus Range Wilderness and Darwin Falls Wilderness portions of the allotment would not be grazed under any of the proposed alternatives, they will not be analyzed further.

The 49,296 acre Coso Range Wilderness is located near the center of the reconfigured allotment. The wilderness area encompasses the northern half of the Coso Mountains, an area of extensive erosion with colorful volcanic displays along small washes, up deep canyons, and encircling several broad flats. Elevations range from 4000' to 7400.' Except for two active clay pit operations that straddle the western boundary, the area is largely natural and pristine. Most of the estimated 30 miles of old vehicle routes have been successfully closed and restored. Notable exceptions include the bulldozed vehicle route into the Lower Cactus Flat Reservoir (5357) and the old jeep trail from the Naval Weapons Boundary to Upper Centennial Spring. Several areas of cultural interest exist within wilderness. There is a well-known petroglyph site at Upper Centennial Springs. The wilderness also contains historic features, two-free standing structures, some stone ruins, vertical shafts, and other vestiges of mining and ranching activity that date back to the late 1800's and early 20th century. Opportunities for solitude and for primitive and unconfined recreation are excellent. The area is only infrequently visited due to the lack of water in the interior. Well-prepared hikers, backpackers, and equestrians will use perimeter roads as jumping off places for moderate cross-country exploration. Destinations include Centennial Canyon, Joshua Flat, Vermillion Canyon and Sugar Loaf Mountain. Upper and Lower Centennial springs along the eastern edge of the wilderness are two of only three possible springs (Thorndyke along the western boundary being the third one) capable of supplying water and supporting small riparian communities in the area. Hunters will converge on these springs during chukar and dove season. Most of the ORV-trespass still-occurring in the area is associated with this type of use.

Currently there are six range developments inside the Coso Range Wilderness (excluding the NAWS barrier fence), of which at least three at Upper Centennial Springs (5052, 5285, & 5326) are proposed for removal under all alternatives. The remaining three include: the Cactus Flat exclosure fence (5540), the Lower Cactus Flat Reservoir (5357), and the spring development, cistern, pipeline and trough (5053) at Lower Centennial Spring.

The Lacey-Cactus-McCloud Allotment is a perennial cattle grazing allotment which has been moderately to intensively grazed in the past. The grazing permit on the original allotment for the 10 year period from 1988-1998 authorized use of up to 448 cows and 3,136 AUMs annually over a 7 month period from November-May. During the period from 1992-1994, the allotment actually supported 254-520 cattle annually using 1,380-3,135 AUMs. The grazing permit for the original allotment expired in 1999. In 2000, the Naval Air Weapons Station terminated grazing on military lands, removing approximately 60% of the original allotment. This action resulted in the loss of four of the six grazing areas within the allotment. Cattle were removed from the remaining two areas, Lower Cactus/McCloud/western Upper Cactus

Flat and Lower Centennial Flat, until a new grazing strategy could be devised. As a consequence, this allotment has not been grazed since 2000.

With respect to estimating 1994 use levels and devising a new grazing strategy for the remaining two grazing areas, it is important to note that the original six grazing areas were not grazed evenly. Former grazing strategy dictated that some areas were used more intensively as pastures and others more lightly as trailing zones between pastures. Some areas were better-watered and/or supported better forage and were used more intensively than others. Estimates of probable cattle distribution and use in 1994 and new use levels are based upon a spectral analysis of available forage in the respective areas per the CDCA Plan of 1980. It is estimated that 60% of the available forage allocation or 1881 AUMs were removed from the original allotment, as a result of NAWS terminating grazing. In the reconfigured allotment, it is estimated that 40% of the available forage allocation or 1254 AUMs remain on BLM lands. This works out to proportionately 181 cows/calves per year on the allotment over a 7 month period. Under all alternatives, additional AUMs were eliminated in removing the non-use areas east of Darwin Road, within the Darwin Falls Wilderness, within the Argus Range Wilderness, the area north of Route 190 adjacent to Hunter Mountain Allotment, and the area between Owens Lake and Route 190. This leaves a balance of 1138 AUMs which would allow for 165 cow/calf pairs for 7 months or 288 cow/calf pairs for 4 months in the remaining two grazing areas.

Under the Proposed Action, new proposed use levels, 200 cow/calf pairs using up to 790 AUMs over a 4 month period per year in just one of these grazing areas (Lower Cactus/McCloud/western Upper Cactus Flat), would stay below combined 1994 estimated use levels for both areas, but would exceed estimated use levels for this area alone. (See Appendix 2)

Under Alternative B, proposed use levels, 100 cows using a combined total of 697 AUMs per year over a 7 month period, would be significantly below estimated use levels established for these areas in 1994. (See Appendix 2)

Lands with Wilderness Characteristics. There may be lands with wilderness characteristics (LWCs) in the portion of the allotment (Little Cactus Flat and McCloud Flat) proposed for grazing under this EA. No previous Wilderness Study Area was identified in this south pasture area. However, portions of Little Cactus Flat and McCloud Flat areas immediately adjacent to the Coso Range Wilderness are still quite remote and pristine. These areas may qualify as LWCs under standards set by the new Secretarial Order 3310 (December 22, 2010).

Under the new Secretarial Order, BLM is required to complete a wilderness inventory for areas that might qualify as wilderness before reaching a decision, <u>if the proposed action would impact these areas' future designation as Wild Lands</u>. BLM, however, is <u>not</u> required to complete inventories for these areas if the proposed action would <u>not</u> impact possible future Wild Lands designation (BLM Manual 6300-2-Consideration of Lands with Wilderness Characteristics in the Land Use Planning Process, .21B. When Wilderness Inventory is Not Required).

The proposed action would not affect possible future designation of possibly eligible portions of the Lower Cactus Flat and McCloud Flat areas for the following reasons:

1. Grazing is a non-conforming but acceptable use within wilderness (Section 4, Special Provisions (D)(4), Wilderness Act of 1964.) Cattle grazing in itself, even an increase in cattle grazing within acceptable resource limits, would not affect/stop future designation of these areas as Wild Lands or their eventual designation as Wilderness.

2. The proposed action does not include any potentially disqualifying actions. BLM is not proposing to construct new roads or permanent facilities or installations within potentially eligible areas. Instead, BLM is proposing to use several existing water haul sites and to add one more off of the existing vehicle route network. Water haul sites are not permanent installations.

BLM is proposing to build 3 short drift fences. These could be considered "permanent," but they are very short (less than ¼ mile each) and are located along the BLM/NAWs boundary, i.e., on the periphery of the areas that could be considered eligible.

For these reasons, Lands with Wilderness Characteristics will not be considered further.

2. Environmental Consequences

Under all alternatives, BLM would not authorize grazing east of the Darwin Road or within the Darwin Falls or Argus Range wildernesses. This would eliminate all cattle grazing impacts within these areas.

Under all alternatives, three of the six range developments (5052, 5285, and 5326,) in the Coso Range Wilderness would be retired and could be removed. These developments include all developments at Upper Centennial Spring. Upper Centennial Spring and Lower Centennial Spring are the only two riparian areas with surface water in the entire Coso Range Wilderness. Cattle often visibly impact such areas. Cattle will erode stream banks, muddy water, trample vegetation, leave stubble, drop cow pies, and scar hillsides. These impacts can disrupt and alter natural processes (proper functioning stream condition), compromising naturalness and untrammeledness (wildness). Opportunities for primitive and unconfined recreation which rely on good water, attractive campsites, availability of wildlife, and unmarred scenery can become degraded. Cultural values can be put at risk by cattle which trample and modify sites by their activities. Retiring these important spring and riparian areas from cattle use would help protect and preserve these valuable and sensitive resources. Removing the structures at Upper Centennial Spring would also help restore naturalness and untrammeledness to the wilderness area by eliminating all manmade imprints and interference with the area's natural functioning condition.

The closed vehicle way to Upper Centennial Spring is a chronic vehicle trespass entry point into the wilderness, particularly during bird season when hunters converge on the area. A considerable amount of effort and some progress have been made to close this route permanently to vehicles. Reopening the route for the permittee and/or staff to service the developments there would make it more difficult to stop others from driving in illegally. Permanently retiring this vehicle route, i.e., aggressively rehabbing it and allowing it to

disappear completely, would stop vehicle trespass, rather than exacerbating it. Elimination of these developments and the need to maintain them by vehicle would be of great benefit to wilderness.

Three range developments would remain inside wilderness. The Lower Centennial Spring development and pipeline (5053) would remain and could be repaired and extended (outside of wilderness) in preparation for the resumption of grazing in the Lower Centennial Flat area. The small exclosure fence (5540) located in Cactus Flat immediately north of the open vehicle route to Thorndyke Canyon would also remain for monitoring purposes. These developments do not require a road or use of a road, or use of motor vehicles, or use of motorized or mechanized equipment to repair and keep functional. However, their presence would continue to detract from the overall naturalness of the area.

The stock pond known as the Lower Cactus Flat Reservoir (5357) would remain for use by cattle, approximately ½ mile inside wilderness off of the Cactus Flat Road. However, BLM would no longer allow this stock pond to be accessed by vehicle or maintained by the permittee. In the past, periodic maintenance could have involved use of heavy, motorized equipment (a tractor or bulldozer) to dredge-out the bottom of a small dry lake, as was done initially to create the stock pond, to keep the stock pond functional. However, the lakebed has not been dredged in over 40 years. Now BLM has decided it is inappropriate to permit modification of a natural feature, use of heavy, motorized, earth-moving equipment, and maintenance of a permanent road inside wilderness. The lake will be left undisturbed. It will be allowed to fill-in and recover, assuming a more natural appearance and function over time. In addition, the very visible and compacted route to the stock pond has attracted several vehicle users each year to trespass into wilderness. With no maintenance requirements for the stock pond, the route can be now rehabilitated and closed to vehicles. This will also result in a net improvement in wilderness character (naturalness) and values (opportunities for solitude and primitive and unconfined recreation). An additional water haul site will be developed outside of wilderness when the stock pond fills-in, if not before.

NAWs would continue to maintain existing fences (5503) along the NAWS/Coso Range Wilderness' southern and eastern boundaries.

a. Impacts of Alternative A (the Proposed Action).

Under this alternative, BLM would not immediately authorize grazing in the Lower Centennial Flat area and the area south of highway 190, encompassing more than 35,000 acres of the Coso Range Wilderness. Joshua Flats, Lower Centennial Spring and Upper Centennial Spring and the important spring and riparian areas and cultural sites associated with these areas would not be affected by grazing as they would be outside of the permitted use area.

Instead, grazing would be restricted to what has historically been the most intensively grazed portion of the allotment, the Lower Cactus/McCloud/ and western Upper Cactus Flats area, where range facilities currently exist in good repair and additional water haul sites can be most easily added to support cattle. Under this alternative, general grazing impacts (trampling, trailing, soiling, loss of vegetation) would occur only on the western flanks of the Coso Range Wilderness, but not on its northern or eastern flanks. Cattle would not be expected to stray far

into the waterless interior, particularly as the range's western escarpment is so rugged and steep. In sum, only about 14,296 acres or 29% of the Coso Range Wilderness would still be affected by cattle grazing.

However, the Lower Cactus/ McCloud/ and western Upper Cactus Flats area may be grazed more intensively than before. Fewer cow/calf pairs (200 instead of 288) would be permitted to use up to 790 AUMs per year in this one use area alone. This would exceed estimates of the number of AUMs permitted over a comparable 4-month period (708) at the time of wilderness designation (1994). Permitted AUMs would increase by about 9%.

Under BLM's grazing regulations for wilderness (43 CFR Parts 6300, Wilderness Management; Final Rule (2000)), BLM may authorize such an increase in livestock numbers only if it can demonstrate that "the additional use will not have an adverse impact on wilderness values." (Section 6304.25) BLM believes there would be no adverse impact on wilderness values as a result of this increase in permitted AUMs, because: (1) the wilderness comprises only about 1/3 (34%) of the area to be grazed; two-thirds of the area lies outside of wilderness and is available to absorb most of the impacts of more intensive use; (2) with the exception of the Lower Cactus Flat Reservoir (5357), all watering sites where cattle would be expected to concentrate are located outside of wilderness and more than a mile from the wilderness boundary; and (3) cattle would be grazing in the area for only 4 months each year and only during the winter months of the year. The last point would be a significant improvement over what was occurring in 1994, when cattle were permitted to graze up to 7 months each year and throughout the spring time. The proposed change in the grazing regime would avoid direct impacts to plants and soils during the critical spring growing season. The net effect would be positive and would help sustain the overall improvement in wilderness character and values since grazing was suspended in the area in 2000.

Proposed Mitigation: It is recommended that a new water haul site outside of wilderness be established immediately as a substitute for the stock pond. This would ensure that more intensive use of the area would not become concentrated in wilderness. More intensive use would be directed instead outside of the wilderness boundaries. Otherwise, the stock pond area should be monitored closely for unacceptable impacts to wilderness. An alternative watering source (new water haul site) should be established immediately if such impacts develop.

b. Impacts of Alternative B

Under this alternative, BLM is proposing to graze only a little more than half the number of cattle (100) estimated to have been grazed (177) within the remaining two use areas in 1994. In addition, BLM is proposing to allow use of only a little more than half (697) of the estimated 1138 AUMs permitted in these two pastures combined over a 7 month period in 1994. The specific numbers of cattle (100) and AUMs (302-395) proposed for use on a rotating basis within each area over a 3 or 4-month period also fall below estimated use levels (up to 150 cow/calves and 531-708 AUMs) for each of these areas in 1994.

Historically cattle have grazed the Lower Cactus Flat/McCloud Flat area intensively and the Lower Centennial Flat area much less intensively. The water developments at Upper and Lower Centennial Springs were used to move cattle from BLM land onto NAWs lands, not to

sustain them in place for any significant length of time. While cattle historically grazed the waterless interior (Joshua Flats) of the Coso Range Wilderness, they did not spend much time there. These historical realities are reflected in the numbers proposed for each of the two grazing areas. The numbers for the Lower Cactus/McCloud/western Upper Cactus Flats area are suppressed to keep Centennial Flat numbers low (within their historic range) so the numbers can be used interchangeably for both areas, despite the fact that the available grazing acreage under this alternative has tripled (up to 155,677 acres from just 41,852 acres). The reductions are appropriate, given the history of use, especially when one considers that 35,000 acres lie entirely within a portion of the Coso Range Wilderness that was only lightly grazed before.

Cattle would be grazed on a two-pasture, seasonal rotational system. The first year, cattle would be turned out in one pasture in winter for 4 months and moved to the second pasture in spring for three months. In the following year, cattle would be turned out in the second pasture in winter for 4 months and moved to the first pasture in spring for 3 months. This would allow each area to be rested every other year during the critical spring growing season. This should help sustain wilderness character and values as grazing areas would be allowed at least some time to recover each year.

Several new water haul sites are proposed. These sites would be used to more evenly distribute grazing between the two use areas flanking wilderness. While fewer cattle would be grazing for shorter periods of time in each area each year, this would change the pattern of grazing from what it was in 1994, when greater numbers of cattle would be grazing longer principally in just one of these areas per year. In balancing things out, grazing impacts may actually diminish in the Lower Cactus Flat/McCloud Flat/Upper Cactus Flat area. However, they could intensify in and about the Lower Centennial Flat area.

Two new water haul sites are proposed for the Lower Centennial Flat area, in addition to two preexisting water developments at Reed Corral and Lower Centennial Spring. These sites would be located outside wilderness in formerly waterless sections to make better use of the general area and to make the rotational system between the two remaining use areas feasible (See Map in Appendix 1). Cattle would be more evenly distributed within this use area as a consequence. In addition, water sites would be used as management tools, turned on and off throughout the grazing season, to move cattle off areas when Proper Use Factors for key forage species are exceeded.

One of these new water haul sites would be located immediately outside of the wilderness boundary. The site (5383-1) would be located near an existing corral at the foot of a drainage leading up to Joshua Flats (an impressive Joshua tree forest in the interior of wilderness). As cattle will range within 5 miles of a water source, cattle impacts to this Joshua tree forest could exceed impacts in 1994 if the water was left on too long at this particular location. Visible impacts would include trampling, trailing, soiling, and loss of vegetative cover, particularly among the Joshua trees where cattle often concentrate for shade and shelter. This area will need to be monitored for unacceptable impacts to wilderness character and values, such as naturalness and the health of the Joshua tree forest, particularly if they appear to exceed impacts occurring in 1994.

The other new water haul site would be located 3½- 4 miles away, in a location where wilderness is better buffered from an increase in cattle use in this section by intervening topography. No additional impacts to wilderness are anticipated from this outside development.

The spring and pipeline developments (5053) at Lower Centennial Spring would remain and are proposed for repair, with the pipeline extended outside wilderness to a more distant trough location. This would concentrate cattle impacts farther from the spring and riparian area, and farther outside wilderness. As the cistern, pipe, and trough are located less than a tenth of a mile inside of the wilderness area and the work would not require use of a road or motor vehicles, or motorized equipment, impacts from this work are anticipated to be light and temporary in nature. The benefits to wilderness would outweigh the losses.

The Centennial Canyon drainage which contains both springs will need to be monitored. It is narrow and steep-walled. If retiring the developments at the upper springs and relocating the trough at the lower springs do not deter cattle from using this drainage, some type of gap fencing may need to be installed along the wilderness boundary across the mouth of the canyon to keep cattle out of these important spring areas.

Proposed Mitigation: Water may need to be turned off at watering facilities close to the wilderness boundary to move cattle off sensitive areas (such as Joshua Flats or Centennial Canyon) if cattle use damages resources and undermines wilderness character and values. A new drift fence may need to be built across the mouth of Centennial Canyon to prevent cattle from drifting into and using the sensitive spring, riparian, and cultural sites at Lower and Upper Centennial springs. An alternative watering site to the stock pond in Lower Cactus Flat may need to be developed to avoid unacceptable impacts to the wilderness area there.

c. Impacts of No Action

Grazing could not be permitted under current management strategies with the loss of more than 55% of the allotment. The impacts would essentially be the same as that of the No Grazing Alternative. (See below.)

d. Impacts of No Grazing

The impacts of no grazing on wilderness would be to improve naturalness, untrammeledness, aesthetic and scenic qualities, specific adversely-affected resources, and opportunities for quality primitive and unconfined recreational experiences.

U. WILD HORSES AND BURROS

1. Affected Environment

Management of wild, free-roaming horses and burros on federal lands was authorized by Congress on December 15, 1971, by the Wild Free – Roaming Horses and Burros Act (PL 92-195; 16 U.S.C. 1331-1340) (Act), as amended, by the FLPMA of 1976 (PL 94-579) and the Public Rangelands Improvement Act of 1978 (PL 95-514). The regulations found at 43 CFR

Part 4700 and Part 4700 of the BLM Manual prescribe the authorities, objectives, and policies that guide the protection, management, control, and disposition of wild free-roaming horses and burros in accordance with the Act.

The areas where wild horses and burros were known to exist in the California Desert District (CDD) at the time of the passage of the Wild Horse and Burro Act are addressed in the 1980 California Desert Conservation Area (CDCA) Plan. The CDCA Plan identified the Centennial Herd Area (HA) and two Herd Management Areas (HMAs) which are adjacent and within the proposed L-C-M Allotment. There is approximately 1,030,357 acres in the HA which includes: 619,162 acres China Lake NAWS; 351,675 acres BLM; 36,480 acres private; and 15,680 acres State lands. The Death Valley National Park administered by the National Park Service, acquired approximately 7,360 acres of the HA through the 1994 California Desert Protection Act.

The CDCA Plan identified two HMAs within the Centennial HA. One is for the management of wild horses and the other is for the management of burros.

The Centennial HMA for wild horses comprises approximately 318,468 acres which includes 232,897 acres China Lake NAWS; 71,369 acres BLM; 9,121 acres private; and 5,081 acres State lands. The CDCA Plan established the appropriate management level (AML) at 168 wild horses, based on the allocation of 2020 AUMs and that a single horse consumes 1 AUM. The 2008 and 2010 aerial census counted 254 and 459 wild horses, respectively. Based on the census data, approximately 95 percent of the lands utilized by the wild horses are within the China Lake NAWS. The census data indicates there is approximately 55-60 head of wild horses utilizing lands along the boundary of the Navy and BLM lands, which would have the potential to be in the existing L-C-M Allotment any time throughout the year. The level of use by the wild horse population with in the current L-C-M Allotment is very low. It is suspected the lack of perennial water in the area has not been conducive for the wild horses to inhabit this area.

The 1981 Amendment 24 to the CDCA plan, deleted the Centennial HMA for burros, because of the conflicts that they were imposing on the Naval Air Weapons Station. Historically, the Centennial burro HMA comprised of approximately 665,366 acres with 80 percent of the HMA within the China Lake NAWS. The CDCA Plan established the AML at 1,137 burros, based on the allocation of 9,551 AUMs and that a single burro consumes 0.7 of an AUM. Current population estimate for the Centennial HA is 120 burros. No burros were sighted during the 2008 and 2010 aerial census in the proximity of the L-C-M Allotment. There is a known population of approximately 30 burros in the Darwin Hills area, most eastern boundary of the L-C-M Allotment.

The 1994 California Desert Protection Act, Public Law 103-433-October 31, 1994, Section 805(g)(4) assigned the Secretary of Navy responsibility for the management of wild horses and burros located on the NAWS China Lake lands. This is approximately 80 percent of the Centennial HMA and approximately 95 percent of the wild horses home range. The remaining 20 percent of the HMA on BLM lands supports approximately 5 percent of the wild horse use.

The 2005 NAWS/China Lake Wild Horse and Burro Management Plan identified the goals and objectives for wild horses and burros residing within the China Lake NAWS. It identified that it will retain the HMA for wild horses at an AML of 168 animals and would continue to implement the total removal of burros from China Lake NAWS administered lands.

The China Lake NAWS is currently updating their management plan and evaluating the wild horse AML in relation to habitat, costs, reproductive rates, genetic viability, and the development of a 3 - 5 year gather plan strategy.

Upper Centennial Spring is a water source for wild horses. The site was visited on December 15, 2010. There was surface water in the drainage. The range improvement (pipeline and trough) was not functional.

2. Environmental Consequences

a. Impacts of Proposed Action – Alternative A

The current wild horse use level in the area where the proposed cattle grazing would occur is very low. The census data indicates there is approximately 3-10 wild horses utilizing lands along the boundary of the Navy and BLM lands which they would have the potential to be within the proposed L-C-M Allotment any time throughout the year. There would be no adverse impacts to wild horses. The majority of the wild horse use occurs within China Lake NAWS.

Range improvements 5342, 5357, 5384-2 and 3 would provide water for cattle which may attract some wild horses and burros into the area and allow them to stay for the duration of the grazing season. Due to the overlapping dietary needs from both classes of animals, the wild horses may contribute to reducing the grazing season if the thresholds for utilizatopn levels on the key forage species are met.

The impacts of the proposed fencing projects are addressed in the Upper Cactus Flat Boundary Fence Environmental Assessment. The analysis concluded that there is a slight potential the proposed drift fences could impede wild horse and burro travel, but would not restrict their ability to move between BLM and NAWS lands in the general area, due to the many areas along NAWS northern/western boundary which are not fenced.

The grazing season does occur during periods when the NAWS and BLM may conduct wild horse and burro removals utilizing the helicopter assisted gather methods. However, most of all the gather activity is conducted within NAWS. If it is determined that removals are necessary on BLM administered lands, it may require that if horses or burros are intermingled with some cattle, that these animals would need to be separated from the group, temporarily hazing the cattle. It is not anticipated there would any negative impacts to the cattle or gather operations.

No impacts would be expected to the wild horses and burros utilizing Upper Centennial Spring with any proposed dismantling of any part of the range improvements at the site.

b. Impacts of Alternative B

The current wild horse and burro use level in the area where the proposed cattle grazing would occur is low. The census data indicates there are approximately 45-50 wild horses utilizing lands along the boundary of the Navy and BLM lands which they would have the potential to be within the proposed L-C-M Allotment any time throughout the year. The burros found in Darwin Hills, the most eastern edge of the L-C-M Allotment, typically move northward and eastward through the Darwin Wash area and into the Argus Mountain Range. There would be no adverse impacts to wild horses or burros. The majority of the wild horse use occurs within the China Lake NAWS.

Range improvements 5342, 5357, 5383-1 and 2, 5384-2 and 3 would provide water for cattle which may attract some wild horses and burros into the area and allow them to stay for the duration of the grazing season. Due to the overlapping dietary needs from both classes of animals, the wild horses may contribute to reducing the grazing season if the thresholds of utilization levels on the key forage species are met.

The Lower Centennial Spring Reconstruction, Pipeline Extension, Tank & Trough Range Improvement (#5053) would increase the amount of water for wild horses and burros due to the removal of the tamarisk around the spring which would increase the potential for surface water and the yearlong water at the trough site. The increased availability of water may increase the wild horse and burro use in the area. This may lead to increased use on the key forage species throughout the year, which may affect the duration of the grazing season for cattle when the PUF for the key species are reached. If for some reason the tank should fail to provide water outside the grazing season, the wild horses or burros would utilize any surface water at Black Rock, Lower and Upper Centennial Springs or move back onto the spring sources located on China Lake NAWS.

The impacts of the proposed China Lake NAWS boundary fencing projects are addressed in the Upper Cactus Flat Boundary Fence Environmental Assessment. The analysis concluded that there is a slight potential the proposed drift fences could impede wild horse and burro travel, but would not restrict their ability to move between BLM and NAWS lands, due to the many areas along NAWS northern/western boundary which are not fenced.

The grazing season does occur during periods when the NAWS and BLM conducts wild horse and burro removals utilizing the helicopter assisted gather methods. However, most of all the gather activity is conducted within NAWS. If it is determined that removals are necessary on BLM administered lands, it may require that if horses are intermingled with some cattle, that these horses would need to be separated from the group, temporarily hazing the cattle. It is not anticipated there would any negative impacts to the cattle or gather operations.
No impacts would be expected to the wild horses and burros utilizing Upper Centennial Spring with any proposed dismantling of any part of the range improvements at the site.

c. Impacts of the No Action - Alternative C

Reduce any potential for forage competition from the dietary overlap between cattle and wild horses within the L-C-M Allotment.

The proposed fence range improvements would not be implemented reducing any impacts by restricting wild horse and burro movements between BLM and NAWS administered lands.

The proposed water improvements would not be implemented, limiting the wild horses and burros to the existing waters available.

d. Impacts of No Grazing - Alternative D

Same as the No Action Alternative.

V. WILDLIFE

1. Affected Environment

Key forage species used by both wildlife and cattle include *Graya spinosa* (Hopsage), *Krascheninnikovia lanata* (Winterfat), *Ephedra nevadensis* (Mormon Tea), *Artemesia spinescens* (Bud-sage), *Atriplex canescens* (4-winged saltbush), *Elymus elymoides ssp. elymoides* (Wild Rye), Indian ricegrass (*Achnatherum (Oryzopsis) hymenoides*), and *Sitanion hystrix* (Squirreltail).

Small mammals- Rodent and rabbit populations fluctuate greatly depending on climate but can be affected by overgrazing. Some bat species occur in the area. The pallid bat (Antrozous pallidus), a BLM special status species, has been recorded at "Dirty Socks" near the northwest edge of the allotment. Bats may also occur near Black Spring and Upper and Lower Centennial Spring. Bats often forage over water where insects are abundant. Sufficient vegetation is required to provide the diversity of invertebrates that comprise the bats' diets.

Large mammals and "game" animals - Historically, mule deer have used the allotment, but most of their range has been on NAWS, with only small areas of habitat in the Argus Range and near Coso Peak. With the large reductions in the burro herd on NAWS, the deer population could increase. Desert Bighorn Sheep (*Ovis canadensis nelsoni*) occur in the Argus Range on lands that used to be in the BLM allotment but are now on China Lake NAWS. The LCM allotment does not have bighorn sheep habitat. Bighorns prefer extensive rugged, rocky areas where they can easily escape predators. Bobcats and coyotes are scattered sparsely over the allotment. Big and small game animals are hunted under CDFG regulations. The main species of upland game birds are California quail, chukar, and mourning dove. These species are mainly ground- nesting birds, so cattle could potentially crush their nests. However, nests are normally built hidden from predators, allowing some protection. These mammal and bird populations fluctuate with the weather. Rainfall influences vegetative forage production on which the prey of larger wildlife species depend. Large mammals and game birds are affected by factors that affect their food supply.

Bird species –Raptors, as a group, use the upland primarily for hunting prey. They require a vegetative community that produces abundant rodents, rabbits, reptiles, and other prey. Raptors that use the allotment include Cooper's Hawk (*Accipiter cooperii*), Golden Eagle (*Aquila chrysaetos*), and Prairie Falcon (*Falco mexicanus*), and Sharp-shinned Hawk (*Accipiter striatus*). Leconte's Thrasher (*Toxostoma lecontei*), Loggerhead Shrike (*Lanius ludovicianus*)

are among the upland bird species in the allotment. Riparian bird species use the vegetation at Lower Centennial and Black Springs. Several bird species use these Black Spring during migration. A variety of bird species nest on the allotment, including sage sparrow, black-throated sparrow, Le Conte's thrasher, and cactus wren.

Reptiles - The allotment is within the range of a variety of lizard species. No special status species of lizards have been documented in the allotment.

Aquatic Invertebrates- These species require high water quality with a suitable substrate for feeding and reproduction. Aquatic invertebrates could occur at both Black and Lower Centennial Springs when there is open water. Several bird and bat species depend on the adult stages of aquatic invertebrates.

2. Environmental Consequences
For impacts to species using riparian habitat, see the section of this EA entitled "WETLANDS/RIPARIAN ZONES". For impacts to Mohave Ground Squirrel, see section on "THREATENED AND ENDANGERED WILDLIFE SPECIES".

a. Impacts of Alternative A – Proposed Action
The Proposed Action involves a one (1) pasture grazing system in which the Cactus Flat/McCloud Flat pasture would be grazed from December through March each year. This pasture system allows utilization of the range during the winter or dormant season. Cattle would be well-distributed because water haul sites would be used in conjunction with earthen water catchments to rotate cattle to specific areas within the use area at different times during the grazing season rather than over-utilizing the forage throughout the use area. These range improvements are situated to prevent over-grazing and to maintain healthy wildlife habitats. BLM would continue to monitor livestock use. Utilization levels would be set at 40% for winterfat and four-winged saltbush and at 30% for spiny hopsage, important shrub species for wildlife. These utilization levels would ensure that 60% and 70%, respectively, of new growth would be available for wildlife. These utilization thresholds would prevent overgrazing and would maintain forage species in healthy condition. No riparian areas exist in the portion of the L-C-M allotment that would be grazed under the Proposed Action. Therefore, riparian species would not be impacted by the Proposed Action. Habitats for upland species would be healthy since BLM would assess rangeland health and insure that health standards are being met. The allotment is outside of the desert tortoise habitat designated in WMP. The area is north of the tortoise's range.

Small mammals - Since BLM would monitor utilization and the condition of the allotment, rabbits, rodents, bats, and other small mammals would not be adversely impacted.

Large mammals and "game" animals – These species (chukar, quail, bobcats, and coyotes) depend on healthy rangeland since rangeland conditions affect both seed and forage production, as well as prey abundance. BLM would monitor cattle utilization to prevent depletion of food sources used by wildlife species.

Bird and Reptile species –Habitats for upland bird species and reptile species would be healthy since BLM would assess rangeland health and insure that health standards are being met. Thus,

the bird and reptile species would not be adversely impacted by the proposed grazing. The allotment is outside of the desert tortoise habitat designated in WMP. The area is north of the tortoise's range.

b. Impacts of Alternative B

Impacts of Alternative B are the same as those of the Proposed Action except that Alternative B involves grazing the Centennial Flat pasture of the allotment which has riparian areas. However, watering sites and range improvements would prevent adverse impacts to riparian habitats. Water would be piped to a trough away from the springs.

c. No Grazing

If grazing is eliminated, no adverse impacts would occur.

W. VEGETATION

1. Affected Environment

The L-C-M Allotment is located at the southwestern edge of the Great Basin Floristic Province as described in the *Jepson Manual, Higher Plants of California*. It is adjacent to the California Floristic Province and the Desert Floristic Province. This has resulted in components from all three of these provinces occurring in the area. Most of the allotment supports what Sawyer and Keeler-Wolf in *A Manual of California Vegetation* describe as vegetation series (now called alliances) dominated by shrubs. These shrub series typically support an herbaceous layer that may include less than a dozen species of perennial grasses and forbs. In addition the herbaceous layer usually includes an extremely diverse number of annual forbs and several species of annual grasses. The riparian vegetation series are the most complex in that they can have multiple tree layers in addition to the shrub layer and the herbaceous layer. In addition the riparian zones with free water have an additional layer below the water surface.

The L-C-M Allotment consists primarily of a series of basins and alluvial flats plus a number of volcanic mesas along the western and northern side of the Coso Mountains. These features are scattered at different elevations ranging from 3750 feet at Owens Lake to 7493 feet at Silver Peak just north of the NAWS boundary in the Coso Mountains. This has resulted in a range of different vegetation series in the area ranging from greasewood shrub and sand dunes (site of the Olancha Greasewood Unusual Plant Assemblage) in the north west corner of the allotment to pinyon-juniper woodlands at the higher elevations. Great basin species such as big sage (*Artemesia tridentata*), spiny menodora (*Menodora spinescens*), winter fat (*Krascheninnikovia*(*Eurotia*) *lanata*), spiny hop sage(*Grayia spinosa*), shadscale (*Atriplex confertiafolia*) and bud sage (*Artemesia spinescens*) are common species in the allotment.

Grazing tends to occur at the intermediate elevations in the allotment where seven health assessments have been conducted on upland sites. Sixteen different vegetation series have been identified in the LCM Allotment. Thirty-six species of perennial plants were encountered in the 7 upland transects. The number of perennial plant species found at the sample sites range from 11 to 21. Twelve species were present at over 50% of the sample sites (goldenhead (*Acamptopappus spaerocephalus)*, bud sage (*Artemesia spinescens*), fourwing saltbrush (*Atriplex canescens*), Nevada Joint Fir (*Ephedra nevadensis*), Spiny Hop-Sage (*Grayia*

spinosa), Cooper Goldenbush *(Ericameria cooperi Var. cooperi*), cheese bush (*Hymenoclea salsola*), winterfat (*Krascheninnikovia(Eurotia) lanata*), Cooper's thornbush *(Lycium cooperii*), Silver cholla (*Opuntia echinocarpa*), Joshua tree (*Yucca brevifolia*), Indian ricegrass *(Achnatherum (Oryzopsis) hymenodies*). No sites were rated as low diversity, Three as medium and four as high diversity. The mean number of perennial plant species at the sites sampled was 14.6. Data from the Haiwee, CA weather station show little change in either temperature or precipitation trends over the last 85 years. As a result, climate change in the LCM Allotment would likely result in very little vegetation change over the next ten years. Vegetation would rather be driven by the normal yearly weather variations.

Most plants in the allotment are growing-renewable resources which can tolerate some level of use on a sustained basis. Annual (ephemeral) plant species are the most tolerant of grazing. They will continue to thrive as long as they have been allowed to set seed and the site has not been unduly modified. Many of the annuals can be completely consumed once the seed has dropped. The perennial plants have different needs that make them more susceptible to grazing. Much of the perennial plant's production is directed at maintenance of energy reserves which are necessary to sustain future years' initial growth and flowering. Of secondary importance is the production of seeds. This means that perennial plants need to maintain an adequate level of photosynthetic processes through the year until they go dormant. Grazing removes photosynthetic material and stored energy from plants. The amount of material that can be removed from a plant depends upon the species, the time of year, overall health of the plant and growing conditions (soil moisture and nutrients). This amount of a perennial plant that can be safely removed on a sustained basis is referred to as the proper use factor (PUF). It is expressed as a percent of the current year's growth that can be removed on a sustained basis. Each species has its own PUF. These can run from 50% for some grass species to 10% or less for some shrub species. These PUFs were developed for more average years and should be considered excessive in draught years. The CDCA Plan contains PUFs and states that exceeding the PUFs would lead to moving or removing of livestock. Historically, the vast majority of cattle activity on the current L-C-M Allotment has been light (< 30% utilization). The WMP establishes proper use factors for different plant assemblages. The threshold for the Mojave/Sonoran Desert Scrub assemblage is 40% and for Salt Desert Shrub land the threshold is 35%. Plants from both assemblages are present on the allotment. Where the CDCA Plan stipulates use factors for plants below what is stipulated in WMP, the lower value is used.

The California Desert Conservation Area Plan and Environmental Impact Statement addressed cattle grazing in the L-C-M Allotment. Among the grazing issues addressed was the estimated forage production, allocations of forage, and limits on grazing use (proper use factors). The CDCA Plan rated the carrying capacity for the L-C-M Allotment at 19 acres per AUM. Past monitoring and observations noted large numbers of Wild Horse and Burro used the allotment and had made very heavy use. The CDCA Plan originally allocated nearly 7,000 AUMs to Wild Horse and Burro use prior to a plan amendment which removed the heard management areas (see Wild Horse and Burro section). Currently most of the animals have been removed, but animals continue to drift off the NAWS and are a continuing concern at some sites which could be shared with cattle.

2. Environmental Consequences

a. Impacts Alternative A – the Proposed Action

The vegetation removed by grazing is renewable on a sustained basis at moderate grazing levels. Proposed livestock use levels are very low and use would be very dispersed. The proposed stocking rate is over 50 acres per AUM. Based upon the CDCA Plan carrying capacity estimates of 18 acres per AUM, the Cactus Flat-McCloud Flat area would produce approximately 2,300 AUMs. As a comparison, the adjacent Olancha Common Allotment is stocked at 20 acres per AUM and the estimated production was 12 acres per AUM and the Tunawee Common Allotment is stocked at 24 acres per AUM with a carrying capacity estimate of 20 acres per AUM. Monitoring would continue to evaluate utilization and stocking rates. If modifications are necessary, they would be made. Under this alternative, cattle would be consuming dormant vegetation. This would avoid any grazing during the critical growing season. The rangeland health determination concluded that the allotment meets health standards. Under Alternative A, the Proposed Action, the allotment would continue to meet standards. Maintenance of existing range improvements would cause very little impact to vegetation. Existing improvements currently occupy about 4 acres in the the Proposed Action area.

b. Impacts of Alternative B

Impacts to vegetation would be similar to the Proposed Action. The same AUMs would be allocated, but over a much larger area. Stocking rates and impacts for the the Proposed ActionB area would be lower (105-138 acres per AUM). Cattle would graze portions of the allotment during the growing season. Due to the very low stocking rate and the rotation of animals, there should not be any adverse impacts to vegetation from this alternative. The various range improvements and associated high use sites currently occupy around 13 acres or 0.008% of the allotment and this would not change. The maintenance of range improvements would affect very small areas for very short periods of time and have no appreciable impact to vegetation. The proposed new range improvements would consist of 2 acres of new disturbance at haul water sites. This impact would be a one time impact for construction and several entries during the grazing season to haul water and the seasonal cattle grazing. The reconstruction at Black and Lower Centennial Springs would be mostly to previously disturbed areas in washes.

c. Impacts of No Grazing

No annual or perennial vegetation would be trampled or removed by cattle. There would not be any expected large scale changes in vegetation composition on an overall basis. Cover and vigor of key species could increase at high use site. Standing Biomass levels could increase.

X. CUMULATIVE IMPACTS

There are a number of cumulative resource disturbing activities in the western Mojave Desert. Many of these are documented in the West Mojave Plan (USDI BLM 2005a) and are incorporated by reference. These include paved and unpaved roads, OHV activities, mining, rights-of-ways, residential and commercial development, military activities and livestock

grazing. The roads, mining, rights-of-ways and development activities tend to be permanent dedication of sites and constitute a total loss of the site productivity. OHV activities can be short duration, but are generally repeated throughout the year. Military activities currently occur at major ranges in the region including the Navy's China Lake and Mojave B ranges, the Air Force Edwards AFB and the Army at Fort Irwin.

Historically most of the area was used by the military during WW2 and additional bases existed at Mojave and Cuddeback. Mining in the area dates back to the late 1800s and continues to today. Impacts to resources are the obvious mine spoils, open shafts, pits and buildings. This allotment has seen over 130 years of grazing. In the 60 years prior to the Taylor Grazing Act (1934), large herds of cattle, sheep, horses and burros used the area with no regulation. Table 7 below described cumulative impacts associated with some resources found in the allotment.

Land use - → Resource	Alternative A	Alternative B	No Grazing	Paved Roads	Unpaved Roads	OHV	Mining	Rights of Ways	Military
Air Quality	Minimal Impact less than .01% of regional emissions no long term impact	Same as A	No impact	6.7% of regional PM10 emissions excluding Owens Lake	51% of Regional PM 10 emissions excluding Owens Lake	13% of regional emissions in 1990 excluding Owens Lake	9% of regional emissions excluding Owens Lake	Unknown*	Unknown *
Biological Soil Crusts	Minimal impact resource renewable at first rain.	Same as A	No impact	Paved roads are a total dedication of resources	unpaved roads are a total dedication of resources	separate from unpaved road travel use limited to existing routes and the Olancha Dunes open area	Casual use in / area also some Sand, clay and Gravel and pumice represent partial to total loss of habitat	major corridors along highway 190 which form northern and northeast boundary. total dedication of sites	
Invasive, Non-Native Species	Intense use sites favor some non-native invasive species Historic very heavy use Current use around	Same as A	Historic use sites will recover to resemble surroundi ng specie mix and densities Historic	Roadsides and associated maintenance are a major vector for introduction of new species	Roadsides and associated maintenanc e are a major vector for introduction of new species	Intense use sites favor some non-native invasive species	Intense use sites favor some non-native invasive species Constructio n equipment is a major vector for	Intense use sites favor some non-native invasive species Constructio n equipment is a major vector for introduction	

Land use - → Resource	Alternative A	Alternative B	No Grazing	Paved Roads	Unpaved Roads	OHV	Mining	Rights of Ways	Military
	25% of historic use		very heavy use Current use around 25% of historic use				introductio n and spread of new species	and spread of new species	
Soils	small surface disturbance especially in concentrati on areas	Same as A	none	Paved roads are a total dedication of resources	unpaved roads are a total dedication of resources and amount to approximat ely 1000 miles on BLM in allotments (1200acres)	separate from unpaved road travel use limited to Spangler Hills, Dove Springs and Jawbone Canyon Open Areas (69,000 acres)	Pumace and clay mining in area also some Sand and Gravel represent partial to total loss of habitat	major corridors through Cantil, Monolith, Boron, Bissel, Spangler, Rudnick and Hansen allotments total dedication of sites	
Land use - → Resource	Alternative A	Alternative B	No Grazing	Paved Roads	Unpaved Roads	OHV	Mining	Rights of Ways	Military
Special Status Plants Species –	None	Very Low potential	No potential	No paved roads - any new construction	Road maintenanc e and travel could cause	Very little OHV use in the area	No observed impacts from	No observed impacts from current ROWs	None

Land use - → Resource	Alternative A	Alternative B	No Grazing	Paved Roads	Unpaved Roads	OHV	Mining	Rights of Ways	Military
Lupinus magnificus & Cymopterus ripleyi				would require Environmental Clearances	impacts at NE edge of Haiwee Reservoir		current mining		
Water Quality	None	Very Low potential	None	some from runoff	some from runoff and surface erosion also channeling water		Possible from toxics and erosion	Problems from poor drainage at a number of sites	problems with past hazmat dumping
Wetlands & Riparian Zones	None	Low potential	none	none	none	none	none	no impacts	noise
Wilderness	Smaller and/or more evenly distributed impacts to wilderness. Impacts would be less than what was occurring in 1994.		Improvement in wilderness character and values from no grazing.	N/A	N/A	Moderate impacts from ORV's trespassing into wilderness, particularly during hunting season.	Residual impacts from large ground disturbances caused by 2-3 inactive claypits straddling the wilderness boundary.	No ROWs exist inside wilderness.	Aircraft noise is a disturbance to wilderness character (naturalness) and values (solitude).
Wildlife, including T & E Species	Low potential	Same as A	none	none	Negligible	Very little OHV use in the area	Minor impacts from old	Power line right of way- minor	Noise and potential of aircraft

Land use - → Resource	Alternative A	Alternative B	No Grazing	Paved Roads	Unpaved Roads	OHV	Mining	Rights of Ways	Military
							mining	impacts	crashes damaging habitat
Vegetation	Moderate to renewable vegetation recovery in one growing season Historic very heavy use Current use around 25% of historic use	Same as A	none Historic very heavy use Current use around 25% of historic use	total dedication of sites	total dedication of sites	Series of short duration uses that especially physically impact smaller plants repeatedly and can remove all vegetation at camping and staging areas	can result in long term total dedication of site	can result in long term total dedication of site	

Air Quality:

The cumulative effect area for air resources for the Proposed Action is the Coso Junction and the Owens Valley PM_{10} planning areas. The Owens Lake Bed is identified as the major source of PM10 emissions in the PM10 planning areas as it contributes over 99.9% of the regional PM10 emissions. The expected emission levels are within the levels in the attainment demonstrations in the SIPs and the cumulative NAAQS 24 hour and one year $PM_{2.5}$ and PM_{10} emission standards and the one and eight hour ozone emission standards and are not likely to result in or contribute to incidences where the National Ambient Air Quality Standards are exceeded.

Soil Crusts:

There are a number of soil disturbing activities in the allotment area. These include paved and unpaved roads, mining, rights-of-ways and livestock grazing. The roads and rights-of- tend to be permanent dedication of sites and constitute a total loss of the crustal community. Grazing activities are low intensity, short duration activities and allow for yearly recovery. Evidence indicates that the complex crust communities that exist in the area will continue with grazing and the allotments will continue to meet health standards for soil crusts.

Invasive non-native species

There are a number of activities that result in site modifications and/or are vectors to move invasive/non-native species in the region. Construction and road maintenance activities can disturb large areas and construction equipment is a well known carrier of seeds as it moves from infested areas to non infested area. The Ridgecrest Field Office Integrated Weed Management Plan includes a weed prevention section that addresses a number of prevention activities (BLM 2006b).

Soils

The existing grazing activities would contribute little to any soil losses occurring on a regional basis. Many of the existing grazing intense use sites have been used for many years. Most of the regional erosion problems come from poor drainage on and adjacent to roads and rights-of ways.

Special Status Plants

One special status plant occurs on the allotment, *Cymopterus ripleyi*. Cattle are very unlikely to be impact this species since they would not be in the vicinity of *Cymopterus ripleyi* because of the plants' distance from drinking water. A BLM biologist visited this area of the Ripley's Cymopterus population and saw no evidence of past cattle use. Human activities contribute very few cumulative impacts to this plant species within the allotment. However, vehicles and road maintenance could adversely impact *Cymopterus ripleyi* (CNDDB Occurrence #2) on a dirt road in the south western part of the allotment (CNDDB 2007). Allotment permit renewal does not contribute adverse impacts to Ripley's Cymopterus because cattle do not graze where the plants grow.

Water

There are a number of activities in the region which degrade water quality. Grazing represents only a very small portion of the non-point-source pollution in the watersheds. Other sources include paved and unpaved roads, rights-of-ways, mining and highway construction. Overall grazing would be cumulatively unnoticeable.

Vegetation

Grazing activities are short duration and allow for yearly recovery. Grazing consumes a portion of the renewable production and the rest and restrictions on use allow for recovery. Grazing is one of several land uses that result in impacts to vegetation. Nearly 1/3 of the renewable forage production is allocated to deer. Other impacting uses include paved and unpaved roads, rights-of-ways and mining which result in a total removal of vegetation from areas. The removal of grazing would still allow the other uses to continue to impact vegetation.

Cultural Resources

The degree of potential cumulative impacts and effects to cultural resources, to a large degree, depends upon which allotment is at issue. The size, location relative to the prehistoric and historic uses of it, along with other BLM approved uses within the allotment, including pending development applications, all factor into the cumulative determinations.

The combination of grazing with other on-going activities in the area, such as maintenance and use of State Highway 190, access roads associated with power transmission lines, along with day-use recreation and OHV activities within the area, is not at significant levels. Due to the limited and difficult nature of access to the allotment locale, there is currently little development interest or intentions regarding this area. Thus, the cumulative effects of the renewal of livestock grazing permits for the allotment would not be a significant issue.

Native American Concerns

There will be no cumulative impact effects to those areas, locations, and resources valued by Native American communities because there are minimal impacts and effects occurring presently. Grazing would not cause any increased impacts to these concerns.

Socio-Economic

The loss of grazing privileges by any one ranch is probably negligible to the local economy as a whole. Cumulative impacts would be felt in the community of Olancha, California however, not to a degree of significance.

Wetlands/Riparian

The riparian areas would not be affected by grazing because water would be piped away from the springs. Drought and flood would be the main contributors to cumulative impacts.

Wilderness
Cattle grazing would have some impact on wilderness character and values, but these impacts would be reduced and/or would be more evenly distributed from what they were at the time of designation. Specific sensitive resources (springs, riparian areas, and cultural sites) would benefit from removal of existing developments and/or new proposed range developments. The stock pond (5357) at Cactus Flat would remain available for cattle use, but would not be maintained. As a consequence, the road to the stock pond could be reclaimed and closed to the general public, preventing chronic vehicle trespass into the wilderness area.

Wildlife
Cattle-grazing would be a minor impact on upland and riparian species of wildlife since cattle would be distributed across the allotment through the use of watering sites. Drought would contribute to the cumulative impacts that affect wildlife. Desert climate tends to vary significantly from year to year. Burro and horse grazing are additional impacts. There are a few roads with very low traffic that pass through the allotment which decrease the habitat to a minor extent. Vehicles could kill some animals, but not enough to affect any of the wildlife populations.

4. CHAPTER 4 - CONSULTATION AND COORDINATION

Consultation, Cooperation, & Coordination

1. Interdisciplinary Team Members:

Sam T. Fitton, Interdisciplinary Team Coordinator & Grazing Management
Donald J. Storm, Cultural Resources, Native American Concerns
Glenn Harris, Botany, Soil, Air & Water Resources, Vegetation & Grazing Management
Shelley Ellis, Wildlife Management, Riparian Management
Martha Dickes, Wilderness
Craig Beck, Recreation
Robert W. Pawelek, Resources Branch Chief

The BLM consulted with the following individuals, Federal, state and local agencies, tribes and non-BLM persons during the development of this environmental assessment.

2. Consultation, Coordination, and Cooperation (CCC)

Consultation, Coordination, and Cooperation with Affected Interests groups, Interested Public groups, and other Government Agencies has taken place from November 20, 2007 through the present in the September 2010. The Affected Interest groups consist of the prospective permittee, and the Navy (NAWS) who have both offered comments. Government agencies included the US Fish and Wildlife Service, the California Department of Fish & Game, the Lahontan RWQCB, and the California State Lands Commission. To date, only the CDF&G has responded in relation to potential impacts to the Mohave ground squirrel. BLM also consulted Phil Leitner, an expert on the Mohave ground squirrel; he supplied recommendations on a monitoring schedule for plant

utilization. Interested public groups to which the document was submitted included environmental groups and a few individuals. Initially, The Western Watersheds Project responded with comments. Native American tribes in the area have been contacted but have not responded. The Paiute Tribes of Lone Pine, Fort Independence, Big Pine, and Bishop, and the Timbisha Shoshone Tribe of Death Valley will be sent copies of the EA for the public comment period.

Consultation with the State Historic Preservation Officer regarding the range permit renewal process is accomplished pursuant to the procedures outlined in the *Supplement* to the *Protocol*. Grazing permit renewals have been scheduled for review in accordance with the *Supplement*. BLM Ridgecrest has submitted a schedule for the phased identification and evaluation of historic properties that might be threatened by continued grazing within the allotment. The Supplement provides a systematic long term management strategy to accomplish the identification and evaluation of cultural properties, as well as Standard Treatment Measures that may be utilized when BLM determines that significant historic properties would be affected by livestock grazing. In cases where BLM identifies that conflicts cannot be resolved, the BLM would consult with the California State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and the *Protocol*.

The *Supplement* applies to the renewal of grazing permit authorizations and existing range improvements. All proposed undertakings for range improvements or changes in management prescription would be reviewed for effects to cultural properties pursuant to procedures set forth in the in the *Protocol* and in accordance with Section 106 of the National Historic Preservation Act (NHPA).

BLM has consulted with five Native American Tribes regarding the proposed action. The Tribes include the Bishop Paiute Tribe, the Big Pine Paiute Tribe, the Fort Independence Paiute Tribe, the Lone Pine Paiute-Shoshone Tribe and Timbisha Shoshone Tribe. BLM requested comment on the proposed undertaking during November 2007, and invited the Tribes to consult under the *Executive Memorandum of April 29, 1994* (Government-to-Government Consultation) and other applicable laws and regulations. No tribes have requested to initiate consultation or have commented on this proposed action.

Below is listed the CCC with the permittee/lessees and other interested public that have been completed for this action.

Affected Interests:

Scoping Document sent November 20, 2007
NOPA sent December 20, 2007
Consultations with Anheuser Busch, Cabin Bar Ranch, & China Lake Naval Air Weapons Station, January and February 2009
EA sent out for comment, July 22, 2009
EA & proposed decision sent out for protest period, August 8, 2010
Protest period amended August 17, 2010
Protests received August 2010

Proposed Decision vacated, September 8, 2010
NOPA sent out, September 2010
EA sent out for comment, March 2011

Interested Public:

Scoping Document sent November 20, 2007
NOPA sent December 20, 2007
Comments received from Western Watersheds Project, January 14, 2008
EA sent out for comment, July 22, 2009
EA & proposed decision sent out for protest period, August 8, 2010
Protest period amended August 17, 2010
Protests received August 2010
Proposed Decision vacated, September 8, 2010
NOPA sent out, September 2010
EA sent out for comment, March 2011

Government Agencies:

Scoping Document sent November 20, 2007
EA sent out for comment, July 22, 2009
EA & proposed decision sent out for protest period, August 8, 2010
Protest period amended August 17, 2010
Protests received August 2010
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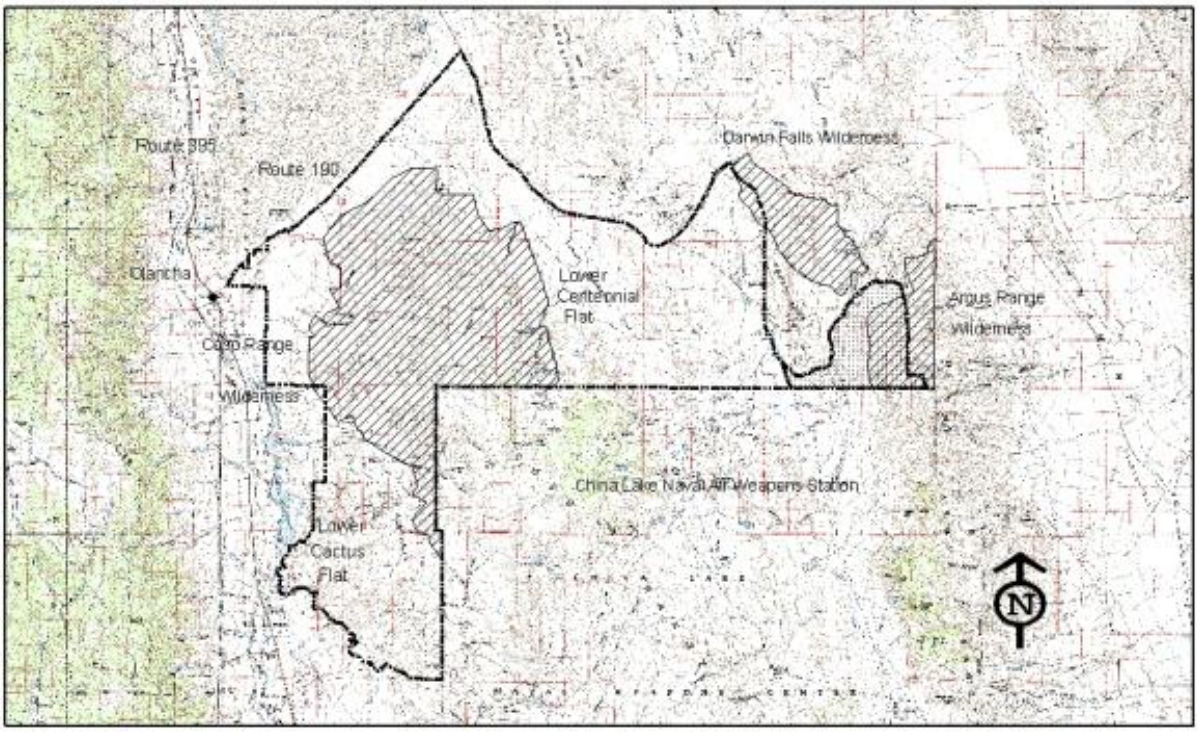
APPENDIX 1

ALLOTMENT MAPS

Lacey-Cactus-McCloud Allotment & Wilderness Areas



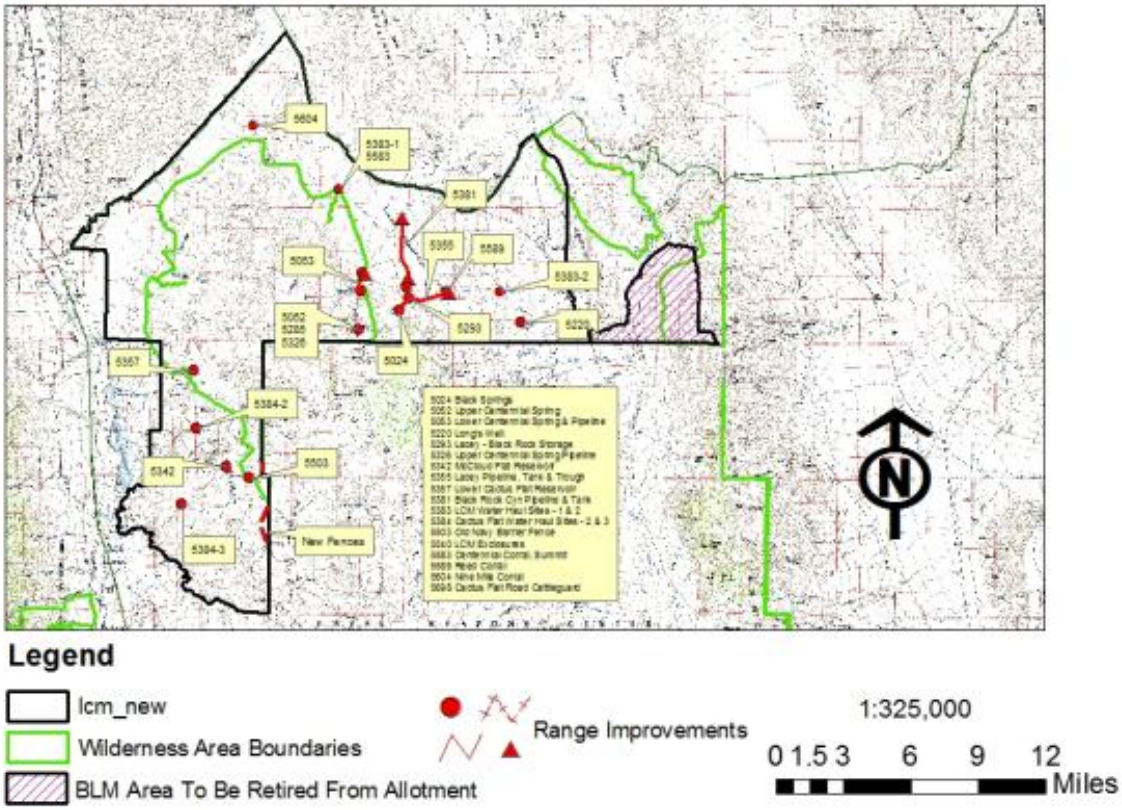
Legend

- Lacey-Cactus-McCloud Allotment Boundary
- Wilderness Areas
- To be retired from grazing

1:300,000

0 1.5 3 6 9 12 Miles

Lacey-Cactus-McCloud Allotment with Range Improvements



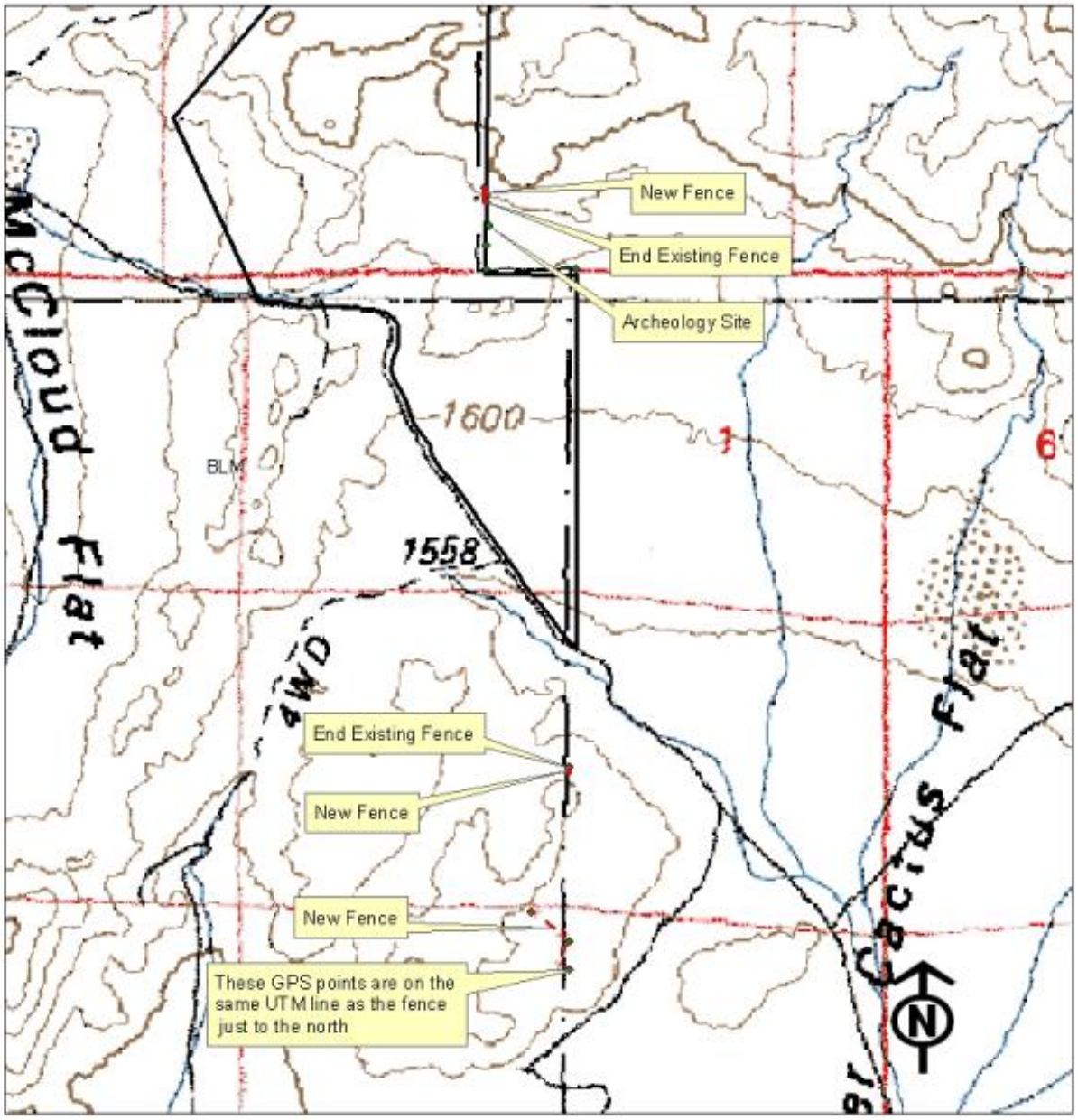
Legend

- lcm_new
- Wilderness Area Boundaries
- BLM Area To Be Retired From Allotment
- Range Improvements

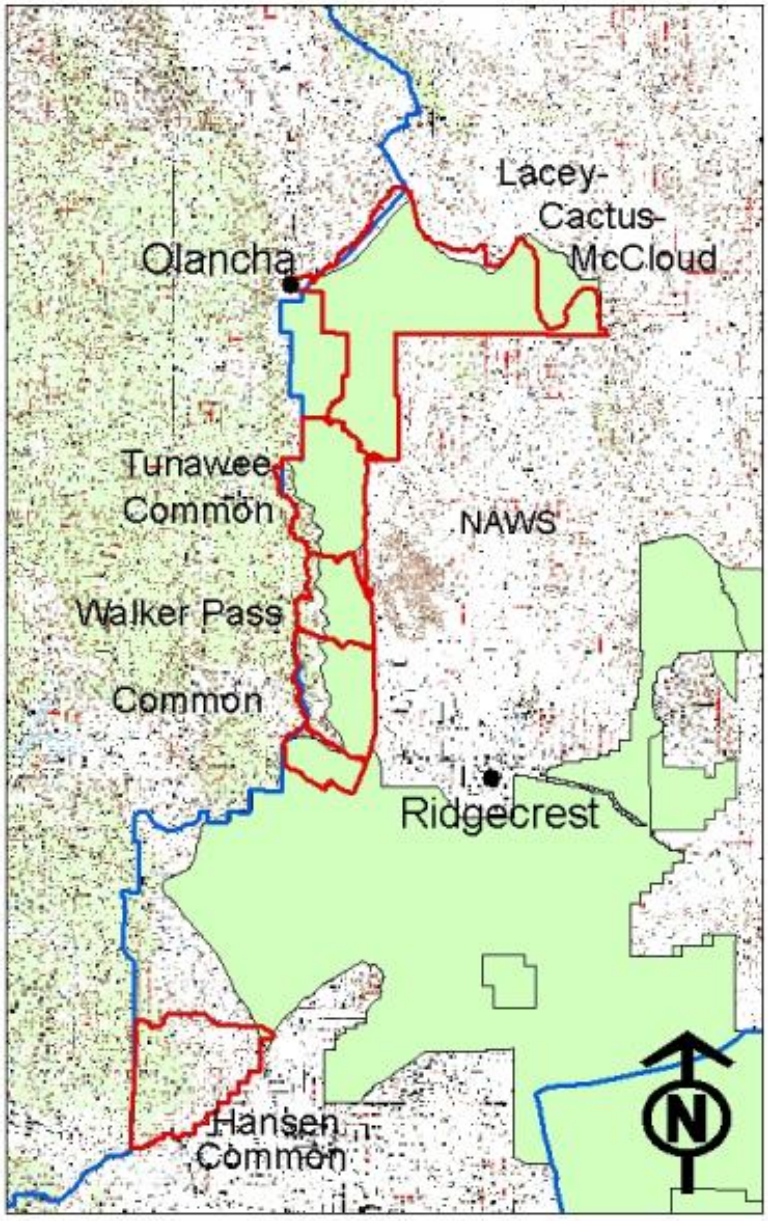
1:325,000

0 1.5 3 6 9 12 Miles

Upper Cactus Flat Fences



Mohave Ground Squirrel Range in Relation to Allotments Assessed In 2008



Allotment Boundaries

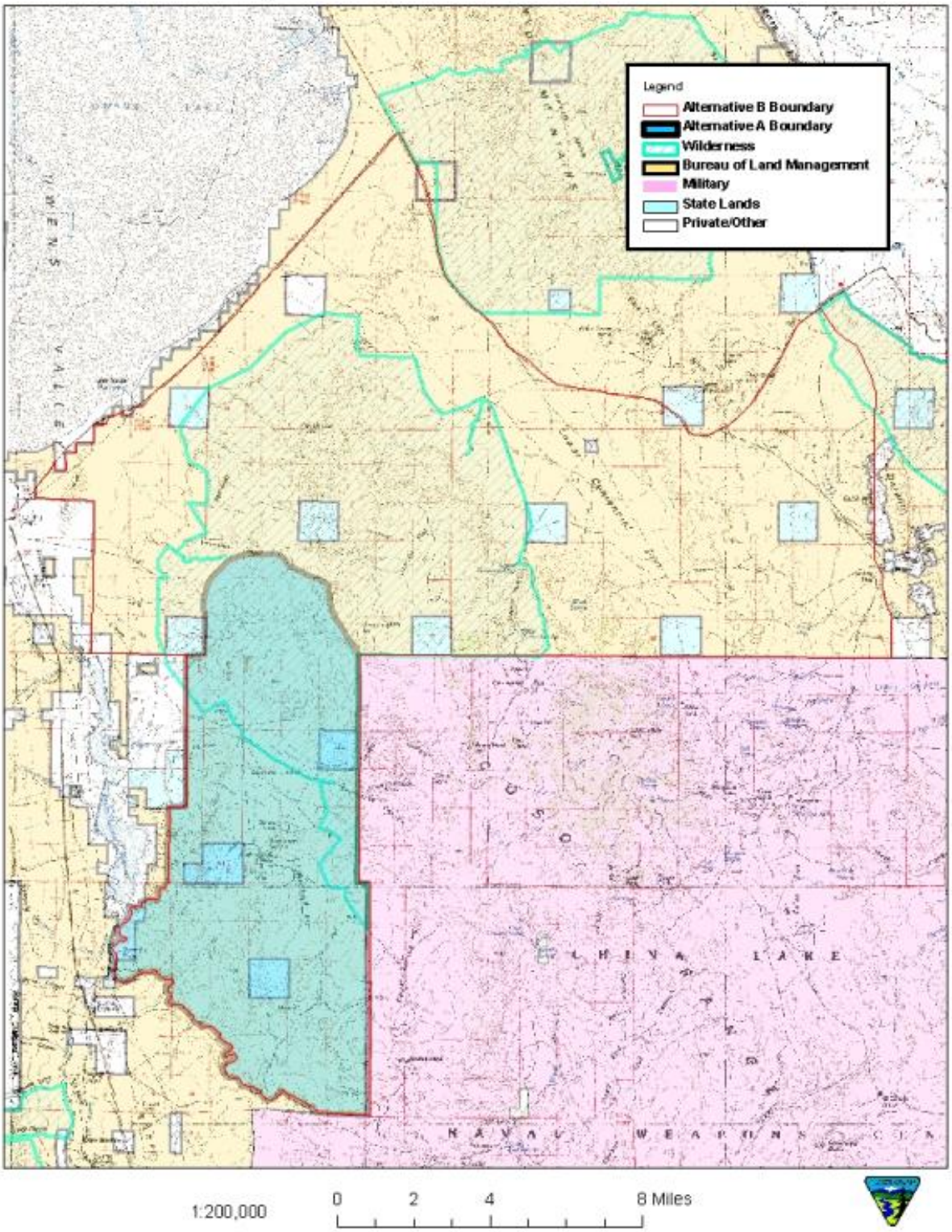
Mohave Ground Squirrel Range

1:900,000

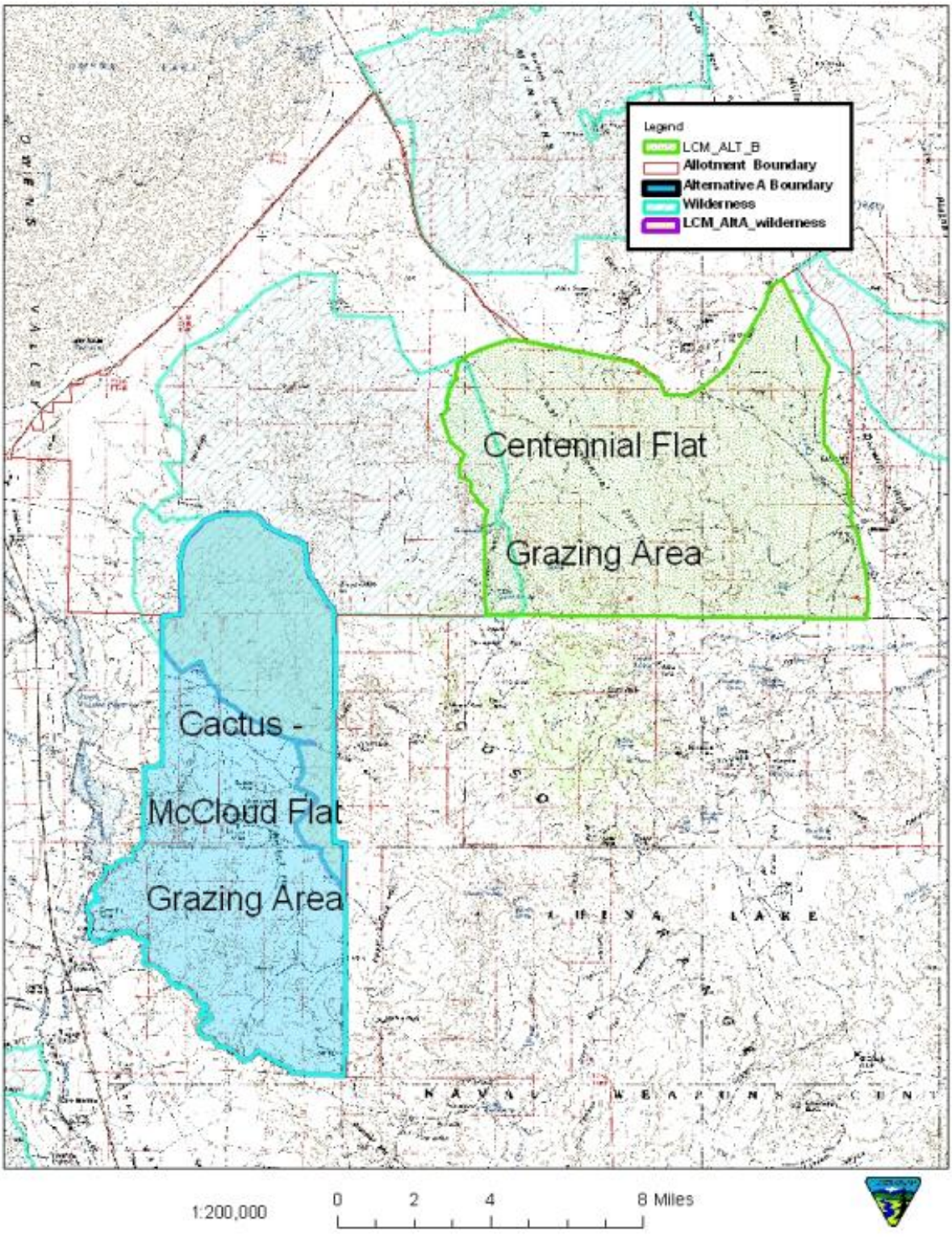
0 3 6 12 18 24

Miles

Lacey-Cactus-McCloud Allotment



L-C-M Allotment Alternative B Grazing Areas



APPENDIX 2

DERIVATION of AUMs

Lacey-Cactus-McCloud (LCM) Allotment
Derivation of AUMs available for grazing

ALTERNATIVE A – PROPOSED ACTION

1) The California Desert Conservation Area (CDCA) Plan of 1980 established the number of acres in the LCM Allotment at 421,172. A subsequent adjustment to the plan moved an area in LCM to the Tunawee Allotment. The area switched was 5,618 acres. This left 415,554 acres in the LCM Allotment.

2) The CDCA Plan and a subsequent adjustment established a carrying capacity of forage on the LCM Allotment at 23,307 Animal Unit Months (AUMs). The basis for this number was Landsat satellite images which mapped the areas on and near the allotment. The images captured reflectance values which were then converted to forage production values. Forage production values were then converted to AUMs. This number for carrying capacity includes adjustments for distance from water and sparse cover, as well as for suitability and wet-dry years.

NOTE: In previous editions of this EA the basis for the derivation AUMs began with data found on spreadsheets which were used to calculate acreages and AUMs for the CDCA Plan of 1980. In this edition the BLM started with the numbers for acreage and AUMs found in the Plan. Numbers 1 and 2, above, took the results then the BLM began to adjust for the area and AUMs outside of the China Lake Naval Air Weapons Station in what would be the reconfigured LCM allotment. This approach assumes that the results reached in the CDCA Plan are accurate rather than trying to recreate the results from spreadsheets.

3) The 23,307 AUMs was reduced by 280 AUMs when allotment boundaries were reconfigured with Tunawee Allotment. This left the carrying capacity for LCM at 23,027 AUMs.

4) In 2000 the Naval Air Weapons Station (NAWS) at China Lake cancelled grazing. Using GIS, the area in the LCM Allotment outside of NAWS computed to approximately165,140 acres. The 165,140 acres computes to approximately 40% of the original allotment.

5) Carrying capacity for the area in LCM outside of NAWs computes to 9210 AUMs at 40% of the original.

6) Using GIS, further reductions in the size of the LCM Allotment total 15,321 acres in three areas – the area east of Darwin and into the Argus Range; the area north of highway Route 190 that is adjacent to the Hunter Mountain Allotment; and, an area north of highway Route 190 and south of Owens Lake which was reassigned to the Bishop BLM Office. These reductions in grazing area leave 149,819 acres in the reconfigured LCM Allotment. This reduction in size leaves 8,355 AUMs of carrying capacity in the reconfigured allotment.

7) The LCM Allotment proposed in this document consists of 149,819 acres supporting 8,355 AUMs of carrying capacity.

8) Alternative A, the Proposed Action, proposes a grazing area within the allotment of approximately 41,900 acres with a proportionate carrying capacity of 2336 AUMs. This works out to stocking rate of 18 acres per AUM.

9) There are reductions for wildlife, wild horses, and condition class applied to this carrying capacity which reduces the AUMs available for grazing to 1588 AUMs for the proposed grazing area.

10) The BLM is proposing to permit 790 AUMs. This computes to a stocking rate of 53 acres per AUM.

11) By comparison allotments in close proximity to LCM, Tunawee and Olancha, have stocking rates for carrying capacity of 24 acres per AUM and 20 acres per AUM respectively. Their stocking rates for permitted AUMs are 29 acres per AUM and 26 acres per AUM.

ALTERNATIVE B

1) The areas proposed for grazing in this alternative are Cactus and McCloud Flats, and Centennial Flat. These areas are comprised of approximately 84,600 acres (computed by GIS). The whole allotment is comprised of 149,819 acres with a carrying capacity of 8,355 AUMs (see above).

2) The proportionate carrying capacity for both grazing areas is 4718 AUMs. This is a stocking rate of 18 acres per AUM.

3) With subtractions for wildlife, wild horses, and condition class the AUMs available for grazing is 3209.

4) Under this alternative the BLM is proposing to permit 697 AUMs which is a stocking rate of 121 acres per AUM.

ADJUSTMENTS TO AUMS DUE TO WILDERNESS REGULATIONS FOR GRAZING

The Wilderness Act of 1994 allows grazing in wilderness as a permitted but nonconforming activity. In general grazing is permitted at the same level that existed at the time of wilderness designation.

1) At the time of wilderness designation in 1994 there were 3136 AUMs active or permitted for the entire LCM allotment. The reconfigured allotment is approximately 40% of the original and the AUMs are also 40% of the original. Therefore, the reconfigured allotment would have 1254 AUMs.

2) Under the Proposed Action, at numbers 5 & 6, the number of AUMs in the allotment outside of NAWS was calculated at 9210 and the number of AUMs after exclusions from the allotment was calculated to be 8355. 8355 AUMs is 90.7% of 9210 AUMs.

3) At 90.7% of 1254 AUMs there are 1138 AUMs available for grazing in the entire allotment.

4) The BLM is proposing to permit 790 AUMs in 41,900 acres on Lower Cactus and McCloud Flats.

5) Under the Proposed Action, calculations showed that there were 1588 AUMs available in the proposed grazing area of Lower Cactus and McCloud Flats. Since 1588 AUMs is two times the number to be permitted the BLM believes there will be very little adverse impact on the wilderness in this area.

APPENDIX 3

PROPER USE FACTORS

FOR FORAGE PLANT SPECIES

In The Ridgecrest Field Office Area

Proper Use Factors (P.U.F.'s) are related as a percentage of plant that is allowed to be grazed. Usually an average is taken from sampling a local population at a site.

PLANT- SCIENTIFIC NAME	COMMON NAME	P.U.F.
	TREES & SHRUBS	
Acamptopappus sphaerocephalus	Goldenhead	10
Ambrosia dumosa	Burrobush	10
Artemesia spinescens	Budsage	20
Artemesia tridentata	Great Basin Sage	<5
Atriplex canescens	Four-wing Saltbush	40
Atriplex confertifolia	Shadscale	10
Atriplex hymenelytra	Desert Holly	<5
Atriplex polycarpa	Cattle Spinach	20
Chrysothamnus nauseosa	Rubber Rabbit Brush	<5
Chrysothamnus viscidiflorus	Green Rabbit Brush	<5
Coleogyne ramosissima	Blackbrush	<5
Encelia farinosa	Brittlebrush	<5
Ephedra nevadensis	Nevada joint fir, Mormon Tea	30
Ephedra viridis	Mountain joint fir	20
Ericameria cooperi	Goldenbush	0
Ericameria linearifolius	Linear-leaved Goldenbush	<5
Eriogonum fasiculatum	California buckwheat	20
Eriogonum wrightii	Wright's buckwheat	40
Grayia spinosa	Spiny Hopsage	30

Gutierrezia sarothrae	Snakeweed	0
Hymenoclea salsola	Cheesebush	<5
Isomeris arborea	Bladder-pod	10
Juniperus californica	California Juniper	0
Juniperus occidentalis	Western Juniper	0
Juniperus osteosperma	Utah Juniper	0
Krascheninnikovia lanata	Winter Fat	40
Larrea tridentate	Creosote bush	0
Lepidium fremontii	Desert Alyssum	<5
Lepidospartum squamatum	Scale-broom	<5
Lycium andersonii	Anderson thornbush	10
Lycium cooperi	Peach thornbush	10
Machaeranthera tortifolia	Desert aster	20
Menodora spinescens	Spiny menodora	20
Opuntia basilaris	Beavertail cactus	0
Psorothamnus fremontii	Indigo brush	10
Salazaria mexicana	Paperbag bush	10
Salix lavaegata	Red Willow	10
Salvia dorii	Purple Sage	10
Senna armata	Desert cassia	<5
Stephanomeria pauciflora	Desert Straw	30
Tetradymia spinosa var. *longispina*	Cotton felt-thorn	0
Yucca brevifolia	Joshua tree	<5

	FORBS	
Mirabilis bigelovii	Wishbone bush	40
Sphaeralcea ambigua	Desert Mallow	40
	GRASSES	
Achnatherum hymenoides	Indian Rice Grass	50
Achnatherum speciosa	Desert Needlegrass	50
Distichilis spicata	Saltgrass	30
Erioneuron pulchellum	Fluffgrass	20
Hilaria jamesii	Galleta grass	50
Poa scabrella	Pine bluegrass	50
Sitanion hystrix	Squirrel-tail	40
Sporobolus airoides	Alkali Sacaton	40

References:
Appendix XIII, Volume F of Final Environmental Impact Statement and Proposed Plan for the California Desert Conservation Area, Sept. 1980
Plant Checklist for BLM Ridgecrest, CA Field Office Area, 2006

APPENDIX 4

STANDARDS & GUIDELINES

APPENDIX 4

PROPOSED REGIONAL STANDARDS & GUIDELINES
&
FALLBACK STANDARDS & GUIDELINES

PART I

The following standards & guidelines are the proposed regional standards which the BLM must meet to assure public rangeland health. These standards and the guidelines may not be implemented until approved and signed by the Secretary of the Interior.

Regional Standards and Guidelines

With the recent approval of the Western Mojave Desert Plan Amendment the following Standards and Guidelines are incorporated into the grazing Permit & management practices.

Standards:

Soil

Soils exhibit infiltration and permeability rates that are appropriate to soil type, climate geology, landform, and past uses. Adequate infiltration and permeability of soils allow accumulation of soil moisture necessary for optimal plant growth and vigor , and provide a stable watershed as indicated by:

Canopy and ground cover are appropriate for the site;
There is diversity of plant species with a variety of root depths;
Litter and soil organic matter are present at suitable sites;
Maintain the presence of micro biotic soil crusts that are in place;
Evidence of wind or water erosion does not exceed natural rates for the site;
Hydrologic and nutrient functions maintained by permeability of soil and water; infiltration are appropriate for precipitation.

Native Species

Healthy, productive and diverse habitats for native species, including special status species (Federal T&E, federal proposed, federal candidates, BLM sensitive, or California State T&E, and CDD UPAs) are maintained in places of natural occurrence as indicated by:

Photosynthetic and ecological processes continue at levels suitable for the site, season, and precipitation regimes;
Plant vigor, nutrient cycle, and energy flow are maintaining desirable plants and ensuring reproduction and recruitment;

Plant communities are producing litter within acceptable limits;
Age class distribution of plants and animals are sufficient to overcome mortality fluctuations;
Distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events;
Alien and noxious plants and wildlife do not exceed acceptable levels;
Appropriate natural disturbances are evident;
Populations and their habitats are sufficiently distributed to prevent the need for listing special status species.

Riparian/Wetland and Stream Function

Wetland systems associated with subsurface, running, and standing water, function properly and have the ability to recover from major disturbances. Hydrologic conditions are maintained as indicated by:

Vegetative cover will adequately protect banks, and dissipate energy during peak water flows;
Dominant vegetation is an appropriate mixture of vigorous riparian species;
Recruitment of preferred species is adequate to sustain the plant community;
Stable soils store and release water slowly;
Plants species present indicate soil moisture characteristics are being maintained;
There is minimal cover of invader/shallow-rooted species, and they are not displacing deep-rooted native species;
Maintain shading of stream courses and water sources for riparian dependent species;
Stream is in balance with water and sediment being supplied by the watershed;
Stream channel size and meander is appropriate for soils, geology, and landscape;
Adequate organic matter (litter and standing dead plant material) is present to protect the site and to replenish soil nutrients through decomposition.

Water Quality

Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the California State Standards, as indicated by:

The following do not exceed the applicable requirements: chemical constituents, water temperature, nutrient loads, fecal coliform, turbidity, suspended sediment, and dissolved oxygen;
Achievement of the Standards for riparian, wetlands, and water bodies;
Aquatic organisms and plants (e.g., macro invertebrates, fish and algae) indicate support of beneficial uses;
Monitoring results or other data that show water quality is meeting the Standard.

Guidelines for Grazing Management

Manage grazing activities with the following regional guidelines.

Facilities are to be located away from riparian-wetland areas wherever they conflict with achieving or maintaining riparian-wetland functions.

The development of springs and seeps or other projects affecting water and associated resources will be designed to protect the ecological functions and processes of those sites.
Grazing activities at an existing range improvement that conflict with achieving proper functioning conditions (PFC) and resource objectives for wetland systems (lentic, lotic, springs , adits, and seeps) will be modified so PFC and resource objectives can be met, and incompatible projects will be modified to bring them into compliance. The BLM will consult, cooperate, and coordinate with affected interests and livestock producer(s) prior to authorizing modification of existing projects and initiation of new projects. New range improvement facilities are to be located away from wetland systems if they conflict with achieving or maintaining PFC and resource objectives. Supplements will be located a sufficient distance away from wetland systems so they do not conflict with maintaining riparian wetland functions.
Management practices will maintain or promote perennial stream channel morphology (e.g., gradient, width/depth ratio, channel roughness, and sinuosity) and functions that are appropriate to climate and landform.

Grazing management practices are to meet State and Feral water quality standards. Where impoundments (stock ponds) and troughs that have a sustained discharge yield of less than 200 gallons per day to surface or groundwater are exempted from meeting State drinking water standards per SWRCB Resolution Number 88-63.
In the California Desert Conservation Area all wildfires in grazing allotments will be suppressed. However, to restore degraded habitats infested with invasive weeds (e.g., tamarisk) prescribed burning may be utilized as a tool for restoration on a case-by-case basis. Prescribed burns may be used as a management tool for chaparral plant communities in the South Coast Region, where fire is a natural part of the regime.
In years when weather results in extraordinary conditions seed germination, seedling establishment and native plant species growth shall be allowed by modifying grazing use.
Grazing on designated ephemeral (annual and perennial) rangeland is allowed to occur only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided.
During prolonged drought, range stocking will be reduced to achieve resource objectives and/or prescribed perennial forage utilization. Livestock utilization of key perennial species on year-long allotments will be checked about March 1 when the Palmer Severity Drought Index/Standardized Precipitation Index indicates dry conditions are expected to continue.
Through the assessment process or monitoring efforts, the extent of invasive and/or exotic plants and animals will be recorded and evaluated for future control measures. Methods and prescription will be implemented, and an evaluation will be completed to ascertain future control measures.
Restore, maintain or enhance habitats to assist in the recovery of federally listed threatened and endangered species. Restore, maintain or enhance habitats of special status species including Federal proposed, Federal candidates, BLM sensitive, or California State T&E to promote their conservation.

Grazing activities will support biological diversity across the landscape, and native species and micro biotic crusts are to be maintained.

Experimental and research efforts will be encouraged to provide answers to grazing management and related resource concerns through cooperative and collaborative efforts with outside agencies, groups, and entities.

PART II

These are the Fall Back Standards and Guidelines which will be in effect until the Secretary of Interior signs the new Regional Standards and Guidelines.

43 CFR 4180.2 Standards and Guidelines for Grazing Administration

(1) Fallback standards.
Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate and landform.
Riparian – wetland areas are in properly functioning condition.
Stream channel morphology (including but not limited to gradient width/depth ratio, channel roughness and sinuosity) and functions are appropriate for climate and landform.
Healthy, productive and diverse populations of native species exist and are maintained.

Fallback Guidelines
Management practices maintain or promote adequate amounts of ground cover to support infiltration, maintain soil moisture storage, and stabilize soils;

Management practices maintain or promote soil conditions that support permeability rates that are appropriate to climate and soils;

Management practices maintain or promote sufficient residual vegetation to maintain, improve or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge, and stream bank stability;

Management practices maintain or promote stream channel morphology (e.g., gradient, width/depth ratio, channel roughness and sinuosity) and functions that are appropriate to climate and landform;

Management practices maintain or promote the appropriate kinds and amounts of soil organisms, plants and animals to support the hydrologic cycle, nutrient cycle, and energy flow;

Management practices maintain or promote the physical and biological conditions necessary to sustain native populations and communities;

Desired species are being allowed to complete seed dissemination in 1 of every 3 years (Management actions will promote the opportunity for seedling establishment when climatic conditions and space allow.);

Conservation of Federal threatened or endangered, Proposed, Category 1 and 2 candidate, and other special status species is promoted by the restoration and maintenance of their habitats; Native species are emphasized in the support of ecological function;

Non-native plant species are used only in those situations in which native species are not readily available in sufficient quantities or are incapable of maintaining or achieving properly functioning conditions and biological health;

Periods of rest from disturbance or livestock use during time of critical plants growth or re-growth are provided when needed to achieve healthy, properly functioning conditions (The timing and duration of use periods shall be determined by the authorized officer.);

Continuous, season-long livestock use is allowed to occur only when it has been demonstrated to be consistent with achieving healthy, properly functioning ecosystems.

Facilities are located away from riparian-wetland areas wherever they conflict with achieving or maintaining riparian-wetland function;

The development of springs and seeps or other projects affecting water and associated resources shall be designed to protect the ecological functions and processes of those sites; and

Grazing on designated ephemeral (annual and perennial) rangeland is allowed to occur only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has be established, and adverse effects on perennial species are avoided.

APPENDIX 5

LIVESTOCK GRAZING CULTURAL AMENDMENT

APPENDIX 5 CULTURAL RESOURCES

SUPPLEMENTAL PROCEDURES

FOR
LIVESTOCK GRAZING PERMIT/LEASE RENEWALS

A CULTURAL RESOURCES AMENDMENT
TO
THE STATE PROTOCOL AGREEMENT

BETWEEN

CALIFORNIA BUREAU OF LAND MANAGEMENT
AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

The purpose of this amendment is to address the National Historic Preservation Act (NHPA) Section 106 compliance procedures for processing approximately 400 grazing permit/lease (hereafter "permit") renewals scheduled for 2004 through 2008. This amendment shall cover grazing permit renewals for livestock as defined in 43 CFR 4100.0-5 as "….domestic livestock – cattle, sheep, horses, burros, and goats." The following procedures will allow for renewal of the permits while maintaining compliance with the NHPA. Alternative approaches to this amendment may be developed by individual Field Offices, but such approaches shall fall under the Section 106 regulations of the NHPA (36 CFR Part 800) and shall require individual Field Office consultation with the SHPO.

These supplemental procedures are an amendment to the State Protocol dated April 6, 1998, which is scheduled for termination on October 25, 2004. These supplemental procedures will remain in effect when that Protocol is terminated and will become an amendment to a successor Protocol document.

This amendment deviates from the Protocol in Section VI. Thresholds for SHPO Review, which states, "BLM shall complete the inventory, evaluation and assessment of effects and document all findings, including negative inventories and no effect determinations, in BLM files before proceeding with project implementation." This amendment would allow for renewal of an existing grazing permit prior to completing all NHPA compliance needs as long as Protocol direction, the BLM 8100 Series Manual guidelines (Protocol Amendment F), and the following specific stipulations are followed:

I. Planning

Grazing permit renewals of any acreage size shall be scheduled for cultural resource compliance coverage over the next ten years. Such long term management includes scheduling for inventory, evaluation, treatment, and monitoring, as appropriate. Schedules for inventories of all renewals to be covered by this amendment shall be delineated by each participating Field Office and submitted to the SHPO and the State Office at the first annual reporting cycle for FY 2004.

This amendment shall only apply to the reissuance of grazing permit authorizations and existing range improvements. All new proposed undertakings for range improvements shall follow the established procedures within the Protocol or 36 CFR 800, the implementing regulations for Section 106 of NHPA.

II. Inventory Methodology

To address the impacts of grazing on cultural resources, a Class II sampling or reconnaissance survey strategy shall be devised by the cultural resource specialist in consultation with range staff which focuses inventory efforts on areas where livestock are likely to concentrate within areas of high sensitivity for cultural resource site locations. Congregation areas where it has been shown that the greatest levels of impact are likely to occur are generally around springs, water courses, meadows, and range improvement areas such as troughs and salting areas.

All existing range improvements within areas of high sensitivity for the location of cultural resource sites shall be inventoried. However, due to the fact that cattle trailing occurs along fence lines and the area of impact is limited to a one meter wide swath and impacts to cultural resources are generally restricted to this corridor, existing linear improvements will not be inventoried except in areas of high sensitivity for the location of cultural resource sites.

Salting areas may change from season to season making locating these areas problematic. Salting locations will be assessed by the cultural resource specialist in consultation with range staff and the permitee. The permitee will be asked to provide a map designating salting areas and these locations will be inventoried if they occur in areas where the probability for the occurrence of cultural resources is high. All livestock loading and unloading areas and corral areas will also be inventoried within areas of high sensitivity for the location of cultural resources.

A Class I records search will also be conducted for each allotment to ascertain previously recorded site locations and areas of prior survey coverage which can be accepted as meeting current standards. Sites located within livestock congregation areas will be visited to evaluate grazing impacts.

All areas identified for inventory in the survey strategy shall be covered intensely. All unrecorded site locations will be recorded and a report of findings for each allotment will be completed. These investigations shall only address public lands administered by BLM. Private, state and county in-holdings will not be evaluated.

III. Tribal and Interested Party Consultation

Field Offices will be responsible for contacting and consulting with Tribes and interested parties as outlined in 36 CFR 800 and the 8120 manual guidelines. This will also meet BLM government-to-government responsibilities for consultation.

IV. Evaluation

Determinations of eligibility to the National Register of Historic Places shall only be undertaken on sites or properties where it can be reasonably ascertained or it is ambiguous that range activities will continue to impact sites and further consultation with SHPO could be required.

V. Effect

A. Range undertakings where historic properties are not affected may be implemented under the Protocol without prior consultation with SHPO. These undertakings shall be documented in the Protocol Annual Report.

B. Range undertakings where historic properties are identified within APEs, and where historic values are likely to be affected or diminished by project activities, require consultation with SHPO, and ACHP if necessary, on a case-by-case basis, pursuant to 36 CFR 800.5-6.

VI. Treatment

Standard Protective Measures can include but are not limited to:

A. Fencing or exclosure of livestock from the cultural resource sufficient to ensure long-term protection, according to the following specifications:
1. the area within the exclosure must be inventoried to locate and record all cultural resources; and
2. the exclosure (i.e.) fence must not divide a cultural resource so that a portion is outside of the fence; and
3. the cultural resource specialist will determine the appropriate buffer to be provided between the cultural resource and its exclosing fence.
B. Relocation of livestock management facilities / improvements at a distance from cultural resources sufficient to ensure their protection from concentrated grazing use.
C. Removal of natural attractants of livestock to a cultural resource when such removal, in the judgment of the cultural resource specialist, will create no disturbance to the cultural resource (e.g. removing vegetation that is providing shade).
D. Removal of the area(s) containing cultural resources from the allotment.
E. Livestock herding away from cultural resource sites.
F. Use salting and/or dust bags or dippers placement as a tool to move concentrations of cattle away from cultural sites.
G. Locating sheep bedding grounds away from known cultural resource sites.
H. Other protective measures established in consultation with and accepted by SHPO.
The Standard Protective Measures defined above may be used to halt or minimize on-going damage to cultural resources. If the standard protection measures can be effectively applied, then no evaluation or further consultation with SHPO on effects will be necessary. The adopted Standard Protective Measures shall be added to grazing permit "Terms and Conditions" as appropriate for each grazing permit issued or reissued as fully processed permits (completed NEPA analysis, consultation, and decision). The "Terms and Conditions" for each permit may be modified by the addition, deletion, or revision of Standard Protective Measures as described in Section VII of these Supplemental Procedures.
VII. Monitoring
A. Field Offices shall adopt the following monitoring guidelines:
1. monitoring shall be conducted yearly and documented to ensure that prescribed treatment measures are effective; and
2. when damaging effects to cultural resources from grazing activities are ambiguous or indeterminate, Field Offices shall conduct monitoring, as necessary, to determine if degrading effects are resulting from grazing activities and if they are continuing to affect the characteristics that may make properties eligible to the NRHP or if they are otherwise adversely affecting the values of cultural resources.
B. When monitoring has yielded sufficient data to make effect determinations, the following apply:
1. When no additional degrading damage will likely occur because standard treatment measures are adequate to prevent further damage from rangeland management activities, SHPO consultation on a case-by-case basis is unnecessary.
2. When no additional degrading damage will likely occur, even without implementation of standard treatment measures, then no further treatment consideration of those resources is necessary, even if past grazing impacts to the ground surface are evident.
3. When additional degrading damage will likely occur, mitigation of adverse effects shall be addressed on a case-by-case basis, pursuant to 36 CFR 800.5-6.

When monitoring results or case-by-case consultation result in a determination concerning addition or deletion of Special Treatment Measure(s) for a specific allotment, then that Measure(s) will be added to, or deleted from, the Terms and Conditions of the fully processed permit for that allotment.

VIII. Disagreements

When a Field Office Cultural Heritage staff and Field Office Manager fail to agree on inventory, evaluation, monitoring, and application of Special Treatment Measures, then the Field Office Manager shall initiate consultation with the SHPO.

IX. Reporting and Amending

A. Each participating Field Office shall report annually to the SHPO and the State Office, a summary of activities carried out under this amendment to the Protocol during the previous fiscal year. The reporting shall be included in the Protocol Annual Report.

B. Annual reports shall summarize activities carried out under this amendment. These reports are not meant to be compilations of the individual project reports prepared for the range projects; they are meant to be programmatic summaries of data and significant findings.

C. Annual reporting shall include at least three major sections:

1. schedules and status of accomplishments in meeting schedules for cultural resource activities in relation to the range management program as identified in Stipulation I; and

2. results, as annual summaries of accomplishment and significant findings resulting from rangeland management cultural resource activities; and

3. appendices to the report that would include project, coverage and cultural resource location maps and tabular summaries of total number of cultural resources located, new cultural resources located, cultural resources evaluated, types of treatment measures employed at each location, and cultural resources monitored.

Annual reports may contain recommendations for new or revised treatment measures.

Either party to this agreement may initiate a process to negotiate new or revised treatment measures or to revise the schedule of inventories. When such a process is initiated, the parties to this agreement shall negotiate new or revised treatment measures or schedule of inventories and such revisions or additions shall be issued as Attachments to these Supplemental Procedures.

STATE DIRECTOR, BUREAU OF LAND MANAGEMENT, CALIFORNIA

_/s/ james wesley abbott *for*_____

By Mike Pool Date: 8/17/04

STATE HISTORIC PRESERVATION OFFICER, CALIFORNIA

_/s/ milford wayne donaldson_____

By Milford Wayne Donaldson Date: 8/18/2004

APPENDIX 6

PUBLIC COMMENTS & BLM RESPONSES

COMMENTS & RESPONSES

Comments from Cabin Bar Ranch

Comment 1: *The Cabin Bar Ranch prefers Alternative Plan B to Plan A.*

However, a third choice would be to use Centennial Flat, Dirty Sox, and Reed Corral areas one year and the next year use Cactus and McCloud. With water haul sites to be the same as Plan B. Time of use would be the same as it was prior to the year 2000. This would give the permittee the ability to use the allotment as it historically was used, matching it with times of use with other permits, leases, and private ground held by Cabin Bar Ranch.

BLM Response: The BLM believes that alternating grazing areas from one grazing year to the next is a valid idea, however, there are issues to be addressed with the Navy and the management of the wild horse herd that currently prevent grazing in the Lower Centennial Flat and Reed Corral area. If these issues are resolved this suggestion will be considered.

Comment 2: *Regarding Alternative A: Trying to stagger the time of use and portions of the McCloud and Lower Cactus area would not work very well, if at all, due to the close proximity and lack of natural or man made barriers. There would be an immediate drift and consolidation of cattle to areas that they prefer. There may be some success in the first season but as cattle become familiar to the area, they would travel back to the areas prefer within hours. These two areas need to be used in the same rotation as one unit.*

BLM Response: Turning on and off waters is a useful tool in rotating livestock through a large area. Leaving all waters on all the time encourages livestock to congregate around the same water source and beat out a bull's eye of vegetation.

Comment 3: *The catch water hole in Lower Cactus should have the option of hand tool use to maintain. The same should apply to upper Centennial and all existing facilities in wilderness.*

BLM Response: The catch water hole in Lower Cactus Flat has never needed cleaning or other maintenance work. If the catch water hole would need repair the BLM is willing to offer a haul water site outside of wilderness to fulfill the permittee's watering need.

Comment 4: *I have contacted the Naval Weapons Center regarding cattle straying on to the NWC base. I was told it would be handled in one of two ways.*

1. *Issue keys to the permittee and telephone for the clearance times and dates.*
2. *Escort on/escort off depending on the areas involved.*

BLM Response: The BLM must let the Naval Weapons Center environmental department determine the risk and efficacy of allowing a permittee on to the base to gather cattle. Their concern is allowing cattle to get on the base in the first place.

Comment 5: *There will be a low rate of drift onto the NWC base, as cattle do not know Crystal Springs, Haiwee, China Gardens, etc. The feed along the drift fences is not substantial enough to entice cattle to push through the fence. Drift fences are in place in the most accessible areas. More drift fences could be built if needed.*

BLM Response: The BLM's and the Navy's assessment of their security fence is in contradiction with the commentor's assessment. The BLM has not ruled out the possibility of grazing Lower Centennial Flat if the fence is brought up to standard.

Comment 6: *With the low number low number of cattle proposed in the alternative plans the holding tanks could be reduced in size 1/3 to ½. There should be Section 3 funds for the fence and the tanks.*

BLM Response: The BLM will take this into account.

Comment 7: *The 1,597 AUMs of the allotment east of Darwin seems incredibly high. These AUMs were deducted from the LCM allotment.*

BLM Response: See Appendix 2, Derivation of AUMs for correction.

Comments from Western Watersheds Project

Comment 1: *The purpose of an EA is to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or issue a finding of no significant impact. [CEQ NEPA ImplementingRegulations, 40 C.F.R. § 1508.9]. Here, the Lacey-Cactus-McCloud allotment includes 158,532 acres of public land, and grazing on the allotment will impact a number of listed and sensitive species, and will have impacts on 14,000 acres of federally-designated Wilderness Areas [EA at 10]. The Lacey-CactusMcCloud allotment has not been grazed in ten years since the boundaries of the allotment were drastically altered [EA at 4]. Reopening this allotment to livestock use is controversial, and the effects likely to be highly significant. Given the scale and scope of the proposed action we believe that preparation of a full EIS is merited.*

BLM Response: As the commenter suggests, one of the purposes of the EA is to determine if the impacts are expected to be significant and if an EIS would be necessary. In the Lacey Cactus McCloud Allotment, the EA did not identify significant impacts with the proposed action that would require the preparation of an EIS. The CDCA Plan and the West Mojave Plan amendments both included EISs which evaluated the suitability of grazing along with kinds of livestock, forage allocations, seasons of use and resource conflicts. Those decisions are a matter of record and their review is not the purpose of this EA. The CDCA Plan and EIS as amended are incorporated by reference into this EA.

Comment 2*: NEPA requires that the agency devote substantial treatment to each alternative and adequately disclose the details of the proposed action. BLM Grazing Regulations require the disclosure of mandatory terms and conditions that specify the kind and number of livestock, the period(s) of use, the allotment(s) to be used, and the amount of use, in animal unit months, for every grazing permit or lease. 43 C.F.R. § 4130.3-1. Here, the BLM has not specified precisely what the proposed action is. Instead, the BLM summarizes the "typical" grazing schedule and proposed authorizations based on current conditions [EA at 10]. However, the EA also states that this authorization could be increased to include the Lower Centennial Flat area when range improvements are completed [EA at 10]. It does not specify what the expected increase will be or what the effects of this proposed increase will be. In the absence of an analysis of the total planned action on this allotment, the BLM will not be able to increase grazing use without an additional EA and further estimations of carrying capacity on the newly opened acres.*

BLM Response: The proposed action in the EA provides a typical grazing schedule with set maximum numbers of livestock and maximum AUMs. The stipulations also state that programmed rest would be required. The schedule is labeled "typical" because the permittee may not start the schedule the exact year shown on the table, he may decide to start late or remove early, or drought or other conditions may preclude grazing at times. The EA addresses mandatory terms and conditions. It also lists the kind and number of livestock, 100 cattle, the season of use, winter, and AUMs, 395 early use or 302 late use. The proposed action only includes the Cactus Flat and McCloud Flat area. The discussion of use in the Centennial Flat area is in alternative B. As noted in the EA (alternative B), the Centennial Flat area has a number of issues that remain unresolved. At this time, the Centennial Flat area remains a portion of the allotment.

Comment 3: *The BLM is using the same authorization level (100 cattle) for the entire allotment under Alternative A (41,900 acres) or Alternative B (149,800 acres) [EA at 10, 12]. This suggests that the authorization is arbitrary and not based on resource availability, in violation of FLPMA's provisions regarding carrying capacity. 43 C.F.R. § 4110.2-2(a) The BLM asserts that carrying capacity was determined using satellite images of vegetation, etc, but does not explicitly state that this was site specific to the two areas proposed for use under the proposed action [EA at 10, 78]. It also does not say whether when the estimation was conducted and whether corrections for drought conditions have occurred [EA at 10]. The Appendix of the EA seems to indicate that the BLM is using the 1980 spectral data to estimate forage production [EA at 77]. This is insufficient given the two decades of grazing use and drought, in addition to changes in nonnative species abundance and recreational impacts, which have occurred in the interim. Clearly then, the carrying capacity of the present configuration of the Lacey-Cactus McCloud allotment is unclear, and even more so for the areas proposed for use under the proposed action.*

BLM Response: Both alternative A and B authorize 100 head of cattle. The difference is that the cattle would be rotated between the two areas seasonally with 7 months of grazing and 697 AUMs rather than the 395 or 305 yearly AUMs and a maximum of 4 months shown in alternative A.

The vegetation production estimates do date to the CDCA Plan. There is no indication that the basic vegetation communities have changed to warrant a rejection of the forage estimates from the CDCA Plan. The current process is to not rely on a one time inventory, but to rather to utilize regular monitoring during the grazing season and make adjustments as necessary. It is especially important in arid climates with large swings in production to be able to track the effects of weather on production rather than restocking strictly on an estimated production from a one time inventory.

Comment 4: *The scoping document stated that the Little Cactus Flat and McCloud Flat areas suffered from grazing pressure in the 1980s and 1990s. [Scoping Notice at 8]. Here, the BLM is proposing to continue pressure on these same two areas [EA at 10]. It is unclear why the BLM is proposing this, especially since the EA does not indicate whether the rangeland health assessment reflects the condition of these areas. [EA 7] Indeed, the EA does not indicate where the RHA was completed, period.*

BLM Response: The grazing pressure during the 1980s and 1990s was primarily from unregulated year around grazing by wild horses and burros (WH&B). Population control on the WH&B populations started in the 1980s. Most of the animals today are on the Navy base and that pressure is gone. The range health assessments conducted in the Cactus Flat McCloud Flat areas indicated that the area meets health standards. The EA states that the area meets health standards.

Comment 5: *The Rangeland Health Assessment which has been completed for the allotment indicates that the Lacey-Cactus McCloud is not meeting the standards of rangeland health. The impacts of head cutting and the presence of non-native invasive species prevent attainment of 3 of 4 standards [EA at 7]. However, the BLM attributes this not to cattle but to flood damage [EA at 7]. What the BLM neglects to provide is an analysis of how livestock grazing in the uplands accelerates erosion and facilitates flood events. Livestock grazing, even at modest levels, in upland areas of watersheds produces soil erosion (reviewed by Belsky et al. 1999; Jones, 2000). This effect is greatest when the grazing occurs during a rainy season, as proposed here [EA at 22;*

Smiens 1975]. The discussion of soils in the EA does not extend to the effects that compaction and damage in the uplands may have on riparian health [EA at 28].

BLM Response: The EA states that the areas that did not met standards for rangeland health were not as a result of cattle grazing. One site (Lower Centennial Spring) had salt cedar. The occurrence of salt cedar was not a result of cattle grazing. The other site has had a flood event that resulted in a head cut into Black Rock Spring. The watershed behind the spring is very steep and rocky and extends into the Navy base. Cattle have not grazed in that area. Both of these sites border onto Lower Centennial Flat and would only be in the grazing area of alternative B. The proposed range improvements for alternative B would include the removal of the salt cedar and the stabilization of the head-cut.

Comment 6: *The EA states that RHAs were conducted on the allotment in 1999 and 2005 [EA at 17]. The 2005 RHA cannot be used to justify grazing, only not grazing, since livestock had not been on the allotment in five years and upland health conditions have recovered in the absence of cattle. The EA should contain comparisons of the two data sets and also explain whether the 1999 RHAs were conducted on areas proposed for grazing now. Earlier versions of the EA stated that China Lake Naval Air Weapons Station withdrew grazing from its portion of the allotment due to downward trends. In general, the summaries of the RHA determinations are insufficient to explain resource conditions on the Lacey-Cactus-McCloud allotment.*

BLM Response: The issue of suitability for grazing was addressed in the CDCA Plan and the West Mojave Plan Amendments. Those documents are incorporated by reference into this EA. Seven range health assessments were conducted in the Cactus Flat- McCloud Flat area over a several year period. The assessments all indicated that the area met range health standards. The EA contains extensive discussions of resource conditions in addition to the range health determination. BLM believes that the information provided in the EA is sufficient.

The issue of downward trend on the China Lake Naval Air Weapons Station was driven by numbers of horses and burros that were well above management levels. In addition to the resource concerns the Navy expressed they expressed concerns for security and conflicts with their mission.

Comment 7: *The BLM has not adequately justified a need for the proposed action. The CEQ regulations require "a brief discussion of the need for the proposal." 40 C.F.R. § 1508.9(b). Because the permittee on the Lacey-Cactus-McCloud allotment has apparently not needed grazing use on this allotment in the last decade, and because the BLM itself admits that either of the grazing alternatives would have no affect on the social or economic values of the community [EA at 38], the BLM has failed to demonstrate the grazing use is necessary.*

BLM Response: The land within the Lacey-Cactus-McCloud Allotment was classified as suitable for grazing by the California Desert Conservation Area Plan of 1980. This designation has not changed. The prospective permittee has stated their intention to graze. The section "Purpose and Need" [EA at 6] states that the EA is for the purpose of "whether or not to authorize grazing within the allotment and what stipulations are necessary." The need is to authorize grazing within the framework of laws and policies governing grazing on public land.

Comment 8: *It is unclear what range developments need repair under the proposed alternative [EA at 19]. The EA should have disclosed the costs associated with the range developments under each of the alternatives. We respectfully remind the agency that new waterhaul sites and developments proposed under Alternative B will require preparation of separate EAs. These EAs need to be prepared prior to any grazing decision beingmade so that the NEPA analysis for the grazing decision can fully determine the cumulative impacts of these incremental components of the decision.*

BLM Response: Table 6 in the EA [p. 19] has been revised to distinguish which range improvements need to be repaired before the turnout of cattle can take place. The table also distinguishes to which alternative the range improvements are pertinent.

Comment 9: *The scoping document stated that there are approximately 18,025 acres of desert tortoise habitat on the Lacey-Cactus-McCloud Allotment. The EA states that there are none [EA at 4]. The EA states that there are no CNDDB records on the allotment. However, there are records immediately adjacent to the allotment boundary south of Haiwee Reservoir, as well as in the Rose Valley to the south. The EA should explain the discrepancy between the scoping document and subsequent EA, and the surveys that support it. The west side of the allotment is near the northern range for the species, and with climate change tortoise numbers may increase in this area. The BLM needs to formally consult with FWS before any turnout of cattle can be authorized on the allotment to ensure that the FWS agrees that the allotment does not contain suitable habitat, and the EA revised to include a discussion of effects to this species.*

BLM Response: The scoping document is in error according to the maps and records which we have and as defined by the West Mojave Plan. CNDDB reports sites outside the allotment to the southwest below Haiwee Reservoir. These are at a lower elevation and separated from the grazing area of the allotment by a ridge of steep hills.

Comment 10: *Lacey-Cactus McCloud Allotment includes 50,520 acres of the Coso Range Wilderness and about 5 square miles of the Argus Range Wilderness Areas. It is unclear, based on the numerous changes in livestock authorizations and the lack of information about water haul sites or other range improvements, whether grazing use would increase in the Wilderness areas under the proposed alternative and Alternative B.*

BLM Response: In the reconfigured allotment (minus the NAWS lands withdrawn in 2000), it is estimated that 43.6% of the available forage allocation or 1367 AUMS remain on BLM lands. This works out to proportionately 195 cows/calves per year over a 7 month period. Under the proposed action, an additional 131 AUMS would be removed from the allotment by non-use of areas east of Darwin Road and within the Argus Range Wilderness. This would leave a balance of 1236 AUMs for the portion of the allotment proposed for grazing. New proposed use levels (100 cow/calf using up to 697 AUMs per year) over a 3, 4, or 7 month period would be significantly lower than use levels established in 1994.

NOTE: The Argus Range Wilderness is not proposed for grazing under either alternative.

Under Proposed Alternative A, about 70% of the Coso Range Wilderness (35,000 acres out of the total 49,296 acres comprising wilderness) would not be grazed. These acres are in Lower Centennial Flat and in the upper interior of the Cosos accessed by this flat.
Approximately 29% of the wilderness or 14,296 acres would be grazed in the Cactus Flat and McCloud Flat area. Under the Proposed Alternative A, about 100 cow/calf pairs using 395 AUMS would be permitted to graze here annually. Grazing would occur on a one pasture rotation strategy that would alternate seasons of use between winter (4 months) and spring (3 months) and would extend intervals between periods of use to 5 months or 1 year. This would result in a marked reduction in grazing use from what was permitted in 1994 when nearly twice as many cow/calf pairs using nearly twice as many AUMs were allowed to graze here each year continuously from November – May (7 months).

Under Proposed Alternative B, all 49,296 acres or 100% of the Coso Range Wilderness would be available for grazing as would 698 acres or 0.8% of the Darwin Falls Wilderness. Use levels would still fall well short of permitted use levels in 1994 at the time of wilderness designation. In 1994, the permittee was permitted to graze nearly twice as many cattle using both pastures simultaneously and continuously over a 7 month period. Under Alternative B, the permittee would be grazing only 100 cow/calf pairs per year. However, he would be grazing the allotment over a 7 month period instead of a 3 or 4 month period as in Alternative A and would be using up to 697 AUMs each year instead of 395 AUMs. Grazing would occur on a two pasture-deferred rotation system. The permittee would be permitted to graze 100 cow/calf pairs per year in one pasture for 4 months before moving them to the next pasture for 3 months. In the following year, cattle would resume grazing where they left off before being moved to the other pasture. This would allow both pastures to be rested every other year during the critical spring growing season. Implementation of Alternative B is dependent on the construction of several new range developments outside and in some cases, immediately adjacent to wilderness. Historically the Lower Centennial Flat area has been used as a pasture and as a trailing area to better pastures on NAWS. The construction of new range developments is predicated on using the area in a more managed way in a rotational system. Water will be made available and turned off to facilitate movement of cattle from one place to the next. This would change the pattern and intensity of grazing in the Lower Centennial Flat area, including its wilderness portions. Wilderness will need to be monitored for unacceptable impacts and corrective actions taken if impacts appear to exceed what was occurring in 1994.

Comment 11: *Lacey-Cactus McCloud Allotment includes the entire Olancha Greasewood Unusual Plant Assemblage (UPA IA3). The CDCA Plan mandates that identified Unusual Plant Assemblages be considered when the BLM conducts site specific analyses to ensure that impacts are minimized. [CDCA Plan at 16].*

BLM Response: The Olancha Greasewood Unusual Plant Assemblage (UPA) occurs completely outside the proposed alternative A grazing area and only in the trailing portion of alternative B. There would not be any expected grazing use in that UPA . Even if cattle did get into the area, greasewood is not considered palatable for cattle and in the UPA, it is located on hummocks which would preclude cattle trampling the plants.

Comment 12: *The allotment is Mohave Ground Squirrel habitat and lies entirely within the BLM's Mohave Ground Squirrel Conservation Area. [WMP Map 2-15]. The allotment is close to the Coso "core area" in the north of the Mohave Ground Squirrel's range. There have been few comprehensive surveys of Mohave Ground Squirrel populations in the area. However, Mohave Ground Squirrels have been trapped at a number of locations northeast of the allotment including one at Lee Flat in spring 2007 (despite it being such a dry year) as well as in the core area to the immediate southwest. The Field office must not confuse a paucity of survey data with an absence of the species. The BLM's West Mojave Plan planning team recognized this when it designated the Mohave Ground Squirrel Conservation Area in 2006. The EA's analysis of effects of the proposed action on this species is limited to a discussion of how utilization limits will limit competition [EA at 43]. Surprisingly, this section of the EA is the first to discuss rotations using water haul sites and earthen water catchments [EA at 43]. The description of the proposed alternative elsewhere in the EA describes only a "one pasture rotation grazing strategy" and does not provide any plan for moving cattle around the pastures. The BLM must clarify what it really intends for management of MGS habitat.*

BLM Response: Under the Proposed Action (Alternative A), Mojave ground squirrels in the Centennial Flat pasture would not be at risk from cattle impacts since Alternative A does not allow grazing there. Under the Proposed Action (grazing Cactus and McCloud Flats), watering sites would be used to move cattle to specific areas. This strategy would allow use of different parts of the allotment at different times rather than grazing all areas all the time. Under Alternative B, grazing would not be allowed until watering sites were developed to move cattle throughout the allotment. Cattle would be well distributed because water haul sites and earthen water catchments would be utilized to move cattle. This action would assure availability of sufficient forage for the Mojave ground squirrel. Moving water haul sites would prevent excessive utilization by cattle, and enough food resources would be reserved to support the MGS. The BLM will edit the EA to clarify these management practices.
As discussed in the EA, utilization levels would be set at 40% for winterfat, 30% for spiny hopsage, 40% for shadscale, and 40% for 4-wing salt bush. This strategy has been used in the past to prevent overgrazing in this allotment and is expected to maintain important shrub forage in healthy condition.

Comment 13: *A number of other rare and localized sensitive species occur on the allotment. This includes one the few known occurrences of Ripley's Cymopterus, Cymopterus ripleyi. The only occurrences in the West Mojave of this CNPS list 1B plant are on the Lacey-Cactus-McCloud Allotment. There are fewer than 10 populations in the state and populations are at risk from cattle grazing (CNPS, 2007). Without providing any supporting data, the EA claims that cattle are not likely to be in the area where Ripley's cymopterus occurs because there is no access to water. If this area is not used by cattle, the BLM should have proposed a minor boundary adjustment to exclude the plant since there is no need to include the location in the allotment.*

BLM Response: Ripley's cymopterus occurs northeast of Haiwee Reservoir. Under the Proposed Action (Alterntaive A), this area is outside of the proposed grazing area. Under alternative B, cattle are not likely to be in the area, because there is no access to water. The chances of cattle trampling Ripley's cymopterus are very small since there would be no reason for cattle to be in that area.

Comment 14: *The Panamint Mountains Lupine also occurs on the allotment. The EA cites the 1998 CNDDB record as evidence that there are no grazing impacts. Where is the BLM's monitoring data on the current status of this population, and how will it be affected by the proposed action? The population is close to cattle watering sites.*

BLM Response: There is no evidence of cattle using the site where these 10 plants were found. Under the Proposed Action (Alternative A), cattle would not be grazing anywhere near Cantennial Flat. Alternative B requires rehabilitation of a range improvement at Lower Centennial Spring, encouraging cattle to stay out of the area near the spring. The range improvement consists of a pipeline that takes water to a trough away from the spring. This range improvement would benefit Panamint Mountains Lupine by offering water to the cattle at a distance away from the spring. If Alterative B is selected, BLM would monitor the area to be sure this strategy works. If cattle are found to be at the spring, BLM would consider fencing it.

Comment 15: *The EA did not address the cumulative effects of grazing and drought or global climate change, despite the reasonable expectation that these will affect the allotment during the proposed permit term.*

BLM Response: The EA contains an extensive climate discussion (page 22-27). The text states that the specific impacts from climate change on a site specific area such as the allotment are not well known. In addition the text presents and discusses local weather station data that indicated that the temperatures have generally stayed within one standard deviation of the mean since the 1920s and the current temperatures are nearly one standard deviation below the mean. The yearly variations in temperature exceed any prediction in warming trends for the next ten years and beyond.

Comment 16: *The analysis of the cumulative effects of livestock grazing and invasive species is scant, at best [EA at 65]. Livestock spread non-native species and this effect increases in livestock watering sites (Belsky and Gelbard 2000; Brooks et al 2006). Drought years increase the relative abundance of invasive species, making drought management more important (Brooks and Berry, 2006). The analysis of the effects of the proposed action on the distribution of invasive species depends upon no new sites of disturbance [EA at 36]. Elsewhere, the BLM describes rotating the location of water haul sites [EA at 43]. Thus, the BLM is simultaneously stating that there will be no new sites and the new distribution of water sites will reduce impacts. The proposed action must be clarified and consistently analyzed in the EA before any decisions can be made.*

BLM Response: The impact of grazing on non-native invasive species is discussed in the non-native invasive species section in the EA. The analysis concluded that the proposed grazing would have very little impact on non-native invasive species. The proposed grazing would then not cause cumulative impacts as noted in the cumulative impact section.

Under Alternative A there would be no new water haul sites proposed. Existing water haul sites are sufficient to move the cattle from one portion of the grazing area to another [EA at 43]. The new water haul sites [EA at 15] are proposed under Alternative B. They are proposed to assist in

trailing cattle back and forth between grazing areas in Lower Cactus Flat and Lower Centennial Flat, and to distribute cattle once they are in the Lower Centennial Flat area.

DEPARTMENT OF THE NAVY
NAVAL AIR WEAPONS STATION
1 Administration Circle
CHINA LAKE, CALIFORNIA 93555-6100

IN REPLY REFER TO:
5090
Ser OPDK/166
March 3, 2009

Mr. Hector Villalobos Mailed Hand 3/19/09
Bureau of Land Management
300 South Richmond Road
Ridgecrest, CA 93555

Dear Mr. Villalobos:

China Lake personnel have reviewed the draft of the Lacey-Cactus-McCloud Environmental Assessment received on 21 January 2009. We appreciate this opportunity to comment on this document and provide the following comments for your consideration.

The reissuance of cattle grazing along the western and northern border of the Station's North Range test complex raises a number of potentially significant safety, security and environmental concerns. Although some of the boundary line between Bureau of Land Management lands and Station property are fenced there are many areas without fencing. In addition, there are many areas where fencing is broken or otherwise in a state of disrepair due to age or having been damaged by cattle, horses and burros which have used or continue to use these areas. Many of the damaged fence sections continue to be actively traversed by horses as noted by Navy and BLM personnel during last years helicopter survey of the fence line.

Because these areas are easily accessible by cattle it is considered highly likely that cattle drift onto Station land will occur. Intact fencing is notably absent along the northern boundary of the Station in the Upper and Lower Centennial Flats areas. At this time the Station does not have the ability to install new fencing or repair existing fencing, particularly in the more rugged, remote and roadless areas along our contiguous properties.

Navy weapons test, evaluation and training missions in the Coso Peak, Coles Flat, Darwin Wash and Etcherron Valley areas continue to change in scope and use intensity in response to mission requirements. All of these areas were routinely accessed by cattle prior to termination of grazing on the Station in 2000. Many of the activities at these sites are, at times, classified or otherwise sensitive and could be significantly impacted by cattle intruding into such an area. In addition to such mission disruptions intrusion of cattle would present significant security concerns to whatever extent the Station would need to allow ranchers access to these areas to retrieve stray animals (including any cattle that might become lost or die after drifting onto Station property).

The increase in mission activity on the North Range has also resulted in increases in vehicle traffic by personnel accessing the remote test sites. Interactions between vehicles and cattle, particularly at night, raise an additional safety concern, particularly insofar as Station personnel

would likely be unaware of any cattle that might have drifted into the area.

Alternative A, the Preferred Alternative, would restrict cattle to the western portion of the Station's boundary. Fencing along this stretch of our shared boundary is mostly intact and continuous except in the more rugged terrain near the northwest corner of the Station. If cattle grazing is allowed to be reestablished on the LCM Allotment it is suggested that grazing only be allowed in this area and that water sources and other cattle attractants be placed as far from the fence line as possible to minimize the potential for drift on to the Station. While Alternative A is clearly preferable to Alternative B, the analysis of Alternative A should nonetheless be expanded to incorporate discussion of the nature and extent of any potential impacts within the Station boundary, including discussion of measures to reduce or avoid any such impacts. What if any action would be taken for restoration and/or continuing maintenance of fencing (to include measures to prevent damage to the fence by cattle or other animals, or to repair any such damage)? Additionally, there should be consideration given to developing safety/security protocols and any other arrangements that might be necessary to provide for access to the Station for purposes of retrieving any stray cattle.

From the Station's perspective, Alternative B presents similar concerns as Alternative A, but to a considerably greater extent. The discussion of impacts associated with implementation of Alternative B, which would allow grazing along the Station's northern border, indicates that grazing would not be allowed to occur in this area unless "control of drift of cattle can be assured". However, since fencing along this area is known to be in a state of disrepair or entirely lacking, and given the acknowledged history of cattle using this area to access the Station, and the proximity of water sources just north of the boundary line, it would appear that control of drift through this area cannot be assured. The Station concurs with the Environmental Assessment's conclusion that allowing grazing to occur in this area is not a Preferred Alternative and that approval of Alternative B would create safety, security and environmental consequences beyond the scope of an Environmental Assessment.

We concur that Alternative A is the preferred alternative. We recommend that this alternative be selected for this undertaking provided that additional analysis, to include consideration of measures to reduce or avoid impacts on Station property, is developed in accordance with the discussion above. In particular, we recommend that the BLM consider requiring that fencing be installed (and maintained) on BLM land to preclude cattle drift onto the Station.

Sincerely,

JOHN O'GARA
Head, Environmental Management Division
By direction of
the Commanding Officer

DEPARTMENT OF THE NAVY
NAVAL AIR WEAPONS STATION
1 Administration Circle
CHINA LAKE, CALIFORNIA 93555-6100

IN REPLY REFER TO:
5090
Ser OPDK/717
August 31, 2009

Mr. Hector Villalobos
Bureau of Land Management
300 South Richmond Road
Ridgecrest, CA 93555

Noted Hector 9/9/09
Regards - Bob

Robert - FYI & review w/ staff for consideration.
Keith.

Dear Mr. Villalobos:

China Lake personnel have reviewed the final Environmental Assessment (EA), Livestock Grazing Assessment for the Lacey-Cactus-McCloud (LCM) Allotment. We appreciate the opportunity to review this document and provide the following comments and recommendations for your consideration.

As noted in our prior comments on this document, cattle grazing along the north-western portion of the Station's North Range presents a number of potentially significant safety, security and environmental concerns to the Naval Air Weapons Station (NAWS) mission. During discussions between our respective staffs, both agree that controlling cattle drift onto the Station will be impossible along the northern boundary of the Station and will likely occur along portions of the western boundary line as well. For this reason we concur that Alternative A, the Proposed Action, appears to be the most reasonable grazing proposal. This Alternative will only allow for resumption of grazing in the Cactus Flat-McCloud Flat portion of the LCM.

Alternative A provides for the "conditional" construction of a drift fence from "the south end of the fence separating NAWS from LCM Allotment at the Upper Cactus Flat boundary and run west to the ridge bordering McCloud Flat". The document indicates that this fence would only be constructed if circumstances (cattle drift) indicate that it is necessary. Even though there is Navy fence along most of the area proposed in Alternative A, there are portions that are not fenced and cattle drift onto the Station is highly likely. This portion of the NAWS ranges continues to be used extensively for weapons test and training activities. Cattle trespass and related recovery efforts would have a negative effect on security and safety aspects of our mission, as well as potentially adverse impacts to riparian areas and historic properties located in this part of the Base.

For these reasons we are recommending that the drift fence be constructed prior to permitting cattle turn-out and that routine fence inspection and maintenance be made a permit condition for this allotment. This proactive effort would minimize the Station's operational and compliance concerns cattle trespass would create.

5090
Ser OPDK/717
August 31, 2009

Thank you for the opportunity to comment on the Environmental Assessment for reactivation of grazing on the LCM allotment. Should you have any questions or require additional information please contact Mr. Tom Campbell at (760) 939-3222 or at tom.campbell@navy.mil.

Sincerely,

JOHN O'GARA
Head, Environmental Management Division
By direction of
the Commanding Officer

FINDING OF NO SIGNIFICANT IMPACT

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
Lacey-Cactus-McCloud Grazing Permit Renewal Environmental Assessment
CA-650-2008-27

Finding of No Significant Impact:

The proposed action, as analyzed in the attached Environmental Assessment CA-650-2008-27, is not a major federal action, as defined in Title 40 Code of Federal Regulations (CFR) 1508.18, and will have no significant impacts on the human environment; therefore preparation of an Environmental Impact Statement (EIS) pursuant to Title 40 CFR 1508.13 is not required.

Rationale for Finding of No Significant Impact:

The primary purpose for conducting an environmental assessment is to determine whether or not a proposed action will have a significant impact on the human environment and therefore will require the preparation of an EIS. As defined in 40 CFR 1508.13, the Finding of No Significant Impact (FONSI) is a document that briefly presents the reasons why an action will not have significant effect on the human environment. The regulations further define the term "significantly" in 40 CFR 1508.27 and require that the context and intensity of impacts be considered in analyzing significance. The following provides an analysis of the significance of impacts of the proposed grazing actions in terms of context and intensity as defined in the regulations.

Context: The selected alternative is limited in geographic context (40 CFR 1508.27 (a)). The area that is proposed for grazing is a relatively small portion of the existing livestock grazing throughout the California Desert. There are no Federally listed threatened and/or endangered species present on the allotment. The discussion of significance criteria that follows applies to the intended action and is within the context of local importance. The Environmental Assessment (CA-650-2008-27) details the effects of the project and is incorporated by reference into this FONSI. None of the effects identified including direct, indirect and cumulative effects, are considered significant based on the stocking rate, minimal impacts to the native vegetative community, and on conformance with the overall West Mojave Plan (WMP) desert plan amendment.
Intensity: This issue is addressed through the ten "significance" criteria described in 40 CFR 1508.27, and discussed below:

1) *Beneficial and adverse Impacts.*

Due to the design features of the approved Environmental Assessment, the predictive effects would include no infringement in habitat protection for the local fauna compared to the current conditions. A slight increase in protection for cultural and archeological resources is predicted as well. However, of all the alternatives, the proposed action provides the best balance between the livestock use and conservation of natural and environmental resources. Details concerning the effects of the proposed action are included in the Environmental Assessment.

2) *The degree to which the proposed action affects public health or safety.*

Adverse effects to the public health and safety anticipated to result from the implementation of the proposed action are minor and unlikely. Public health and safety was not identified as an issue.

3) *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park areas, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

The allotment contains unique cultural and archeological sites within the project area however, the proposed action implements simple avoidance measures to eliminate adverse impacts. The project area does not contain habitat for the desert tortoise or other federally listed threatened and/or endangered species.

4) *The degree to which the effects on the quality of the human environmental are likely to be highly controversial.*

The nature of potential effects on the human environment from the proposed action is well established and not likely to be highly controversial. While the public may perceive this issue to be controversial, there are no known scientific controversies over the impacts of the decision. The effects of the proposed action on the quality of the human environment were addressed in the Environmental Assessment. Although there are effects that are clearly identified, strategies have also been built the proposed action to offset these effects.

5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

The proposed action is not unique or unusual. BLM has authorized livestock grazing on the Lacey-Cactus-McCloud Allotment since before the 1980's. The effects on the human environment from the proposed action are not uncertain and do not involve unique and unknown risks. All proposed actions are standard practices that have been previously implemented with known cause and effect relationships outlined in the Environmental Assessment.

6) *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

The proposed action does not set a precedent for future actions that may have significant effects, nor does it represent a decision in principle about a future consideration. The proposed action continues a traditional use of the public lands with consideration for sensitive species and the native plant community. Any future grazing lease renewals will be evaluated through the National Environmental Quality Act process, consistent with current laws and regulations.

7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

The proposed action was evaluated in the context of past, present, and reasonably foreseeable actions. These cumulative effects are identified in the Environmental Assessment and the WMP EIS from which this Environmental Assessment tiers. Significant cumulative effects are not predicted from the proposed action, based on the grazing permit renewal that would occur as a result of the decision herein.

8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.*

The proposed action will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor will the proposed action cause loss or destruction of known significant scientific, cultural, or historical resources. The cultural resource survey strategy and subsequent conservation strategies that are identified in the proposed action will help in the identification and conservation of both documented and undocumented cultural and paleontological resources.

9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

There are no federally listed threatened and/or endangered species located in the allotment.

10) *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

The approved action does not violate any known Federal, State or local law or requirement imposed for the protection of the environment. The Environmental Assessment and supporting project record contain discussions pertaining to the Endangered Species Act, National Historic Preservation Act, Clean Water Act, Clean Air Act, and Executive Order 12898 (Environmental Justice). Furthermore, the approved proposed action is consistent with applicable land management plans, policies, and programs.

Approved: _____ _____
Ridgecrest Field Manager Date

Attachment:
Lacey-Cactus-McCloud Allotment CA-650-2008-27 EA