ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION

EA Number CA 170-08-16

Allotment Number and Name(s)

6024 Hammil Valley
6025 Marble Creek
6026 Mathieu
6027 Adobe Valley
6038 Bramlette
6053 Lone Tree
6080 Blind Springs

BLM Bishop Field Office
Prepared
July 2008

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Chapter 1:
INTRODUCTION

A. Summary

This Environmental Assessment (EA) is prepared to analyze and disclose the environmental consequences of re-authorizing livestock grazing permits for 10-years as proposed on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments. The EA is a site-specific analysis of potential impacts that could result from the implementation of the proposed action or one of the alternatives. The EA assists the Bureau of Land Management (BLM) in project planning and in ensuring compliance with the National Environmental Policy Act (NEPA) and other applicable laws and policies affecting the proposed action and alternatives. If the authorized officer determines that this action has "significant" impacts following the analysis in the EA, then an Environmental Impact Statement (EIS) would be prepared for the action. If not, a Grazing Decision will be issued along with a Finding of No Significant Impact (FONSI) statement, documenting the reasons why implementation of the selected alternative would not result in "significant" environmental impacts.

B. Background

The Hammil Valley, Marble Creek, Lone Tree, and Blind Springs allotments analyzed in this EA are located in Benton Management Area of the BLM Bishop Field Office. Their elevation range is between 4,400 near the southern end of the Hammil Valley allotment and 7,300 feet in the hills of the Benton Range. Vegetation communities for these allotments are a mix of sagebrush and bitterbrush, and semi-desert grass and shrubland at lower elevations.

The Mathieu and Adobe Valley allotments analyzed in this EA are located in the Granite Mountain Management Area of the BLM Bishop Field Office. Their elevation range is between 6,480 and 7,200 feet. Vegetation communities for these allotments are a mix of sagebrush and bitterbrush interspersed with pinyon-juniper woodlands in the higher elevations.

Livestock kind, permitted season of use, allocated animal unit months (AUMs), and use type for each allotment as prescribed in the Bishop Resource Management Plan (BLM 1993) are:

Allotment	Kind	From	To	AUMs*	Use
Hammil Valley	Cattle	10/1	6/15	1964	Perennial
Marble Creek	Cattle	3/1	2/28	845	Perennial
Mathieu	Cattle	6/1	10/31	50	Perennial
Adobe Valley	Cattle	6/15	11/15	1391	Perennial
Bramlette	Cattle	10/1	5/31	655	Perennial
Lone Tree	Cattle	10/1	5/15	301	Perennial
Blind Springs	Cattle	6/15	2/28	130	Perennial

* Amount of forage a 1,000 lb cow with calf will eat in a month

Approximate public, state, and private land acreages (See Map 1-4) within each allotment are:

Allotment Name	Public Land	State Land	Private Land
Hammil Valley	40,203	1,417	2,695**
Marble Creek	15,030	445	2,375
Mathieu	1,871	0	107
Adobe Valley	23,858	912	641
Bramlette	34,253	781*	5,072
Lone Tree	3,399	0	158
Blind Springs	5,248	0	1,591

* includes combined state, Native American, and county lands
** includes Los Angeles Department of Water and Power lands

There is no designated critical habitat for any federally listed species in any of these seven allotments and no federally listed species are known to occupy any of these allotments.

The 10-year grazing permits for these seven allotments have expired. In the interim, the grazing permits for all allotments were issued in accordance with Section 325 of Public Law 108-108. The interim permits which authorize use on the Hammil Valley, Mathieu, Adobe Valley, Marble Creek, and Lone Tree allotments will expire in 2011. The interim permit which authorizes use on the Blind Springs allotment will expire in 2014. The interim permit which authorizes use on the Adobe Valley allotment will expire in 2008. The interim permit which authorizes use on the Bramlette allotment will expire in 2015. Renewing permits under the appropriations act authorized existing grazing use to continue, while allowing BLM time to complete rangeland health allotment assessments and to meet applicable National Environmental Policy Act (NEPA) requirements to analyze the environmental consequences of issuing 10-year grazing permits.

C. Purpose and Need for the Action

The purpose of the action is to consider whether to authorize grazing for 10-years on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments. If authorized, grazing would be in accordance with 43 Code of Federal Regulations (CFR) 4100 and consistent with the provisions of the Taylor Grazing Act (1934), as amended, the Public Rangelands Improvement Act (1978), and the Federal Land Policy and Management Act (FLPMA) of 1976. The purpose of the action is also to ensure that grazing authorizations implement provisions of, and are in conformance with, the Bishop Resource Management Plan (BLM 1993) and the Secretary of the Interior approved Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (July 2000).

The action is needed to respond to the expired 10-year grazing permits and to replace the appropriation act permits with fully processed 10-year grazing permits.

D. Scoping and Issues

Public Scoping

On January 23, 2006, the Bishop Field Manager sent a letter to the three permittees who graze these seven allotments informing them of the status of the 10-year grazing permits and included a proposed schedule for environmental assessment and permit completion.

On November 23, 2007, the Bishop Field Manager sent a second letter to the three permittees who graze these seven allotments informing them how the environmental assessments would be prepared and the status of the 10-year grazing permits. Included with the letter was a proposed schedule for environmental assessment and permit completion.

On December 17, 2007, a Notice of Proposed Action (NOPA) was sent to the three permittees who graze these seven allotments and to interested publics including the Interim Management Policy for Lands under Wilderness Review (IMP) mailing list. The NOPA contained the Need for the Proposed Action, Plan Conformance, the Proposed Action and Alternatives, a schedule for EA completion, and area maps. The NOPA was also posted on the BLM internet site for public review at http://www.blm.gov/ca/st/en/fo/bishop.html. The NOPA provided a 30 day comment period on the proposed action and alternatives.

On July 3, 2008, a draft EA was posted for two weeks on the BLM internet site for public review at http://www.blm.gov/ca/st/en/fo/bishop.html. The draft EA was developed using the BLM, California State Office Revised Environmental Assessment Template for Consideration of Livestock Grazing Authorizations (Instruction Memorandum No. CA-2007-014). The three permittees, Center for Biological Diversity, and Western Watersheds Project were notified that the EA had been posted on the BLM internet site.

Issues and Alternatives

One letter was received from the Natural Resource Conservation Service (NRCS) on December 21, 2007 which commented on one portion of the "Proposed Terms and Conditions" from the Notice of Proposed Action signed on December 17, 2007. The NRCS letter stated, "Under item 2, Riparian Areas and Wetlands, one of the reasons given for maintaining sufficient residual stubble or regrowth at the end of the growing season is sediment entrapment." The NRCS letter explained and documented the extensive research that has been conducted over the years on stubble height. Research has demonstrated that stubble height had no significant difference in sediment trapping. The NRCS letter summarized the findings and stated, "Minimum Stubble Heights help to maintain plant vigor, provide maintenance of sufficient biomass to reduce late-season browsing of willows, and are an easily communicated management criteria, but do not entrap sediment for streambank building unless there is inundated flow (overtops vegetation)…" To address the NRCS letter, BLM Bishop Field Office will modify the language associated with Riparian Areas and Wetlands within the proposed terms and conditions to state, "Grazing practices should maintain a minimum herbage stubble height of 4-6 inches on the average on all stream-side, riparian, and wetland areas at the end of the growing season. There should be

sufficient residual stubble or regrowth at the end of the growing season to meet the requirements of plant vigor, maintenance, and bank protection."

On March 15, 2008, a protest letter was filed on behalf of the Center for Biological Diversity (CBD) and Western Watersheds Project (WWP). CBD and WWP protested a proposed grazing decision to issue a ten year grazing permit on two other allotments which are administered from the Bishop Field Office. From the protest, two issues were raised which also have relevance to these allotments and have been addressed within this environmental assessment. The two issues are habitat for greater sage-grouse and global climate change following the Department of Interior Order No. 3226.

No additional issues or alternatives were identified as a result of public scoping or draft EA review.

E. Tiering to Existing Land Use Plan(s)/Environmental Impact Statement(s)

The Bishop Resource Management Plan (BLM 1993) provides a comprehensive framework for managing land use authorizations, including grazing permits, for public lands administered by the Bishop Field Office. The Bishop Resource Management Plan replaced the Benton-Owens Valley (BLM 1982) and the Bodie-Colville (BLM 1983) Management Framework Plans. Grazing decisions and changes in grazing decisions from the Benton-Owens Valley and the Bodie-Coleville Management Framework Plans are summarized in Appendix 4 of the Bishop Resource Management Plan (pages A4-1 through A4-11).

This EA is tiered to the Final Bishop Resource Management Plan and Environmental Impact Statement (BLM 1991). Tiering helps focus this EA more sharply on the significant issues related to grazing on the allotments while relying on the Final Bishop Resource Management Plan and Environmental Impact Statement for the overall analysis of grazing actions throughout the Field Office. Livestock grazing was analyzed in Chapter 4, Impacts, of the Final Bishop Resource Management Plan and Environmental Impact Statement (pages 4-20 through 4-26).

Impacts associated with adoption of the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (July 2000) were analyzed in Chapter 4 of the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final Environmental Impact Statement (BLM 1998). The analysis contained in this EA also tiers to that analysis.

F. Prevention of Unnecessary or Undue Degradation

In addition to management prescriptions analyzed in this EA, including all terms and conditions, BLM may use its authority to close any area of an allotment to grazing use or take other measures to protect resources at any time, if needed. Therefore, issuance of a grazing permit with appropriate terms and conditions is consistent with BLM's responsibility to manage public use, occupancy, and development of the public lands and to prevent unnecessary or undue degradation of those lands (43 USC 1732(b)).

G. Relationship to other Statutes, Regulations, and Plans

The following Statutes, Regulations, and Plans provide additional legal framework for grazing on public lands.

Air Quality

Section 176 (c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 et seq.), and regulations under 40 CFR part 93 subpart W, with respect to the conformity of general Federal actions to the applicable State Implementation Plan apply to projects within any Federal Air Quality Non-Attainment/Maintenance Areas. Under those authorities, "no department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan." Under CAA 176 (c) and 40 CFR part 93 subpart W, a Federal agency must make a determination that a Federal action conforms to the applicable implementation plan before the action is taken.

> 40 CFR Part 93.153 Applicability.
>
> (c) The requirements of this subpart shall not apply to the following Federal actions:
>
> (ii) Continuing and recurring activities such as permit renewals where activities will be similar in scope and operation to activities currently being conducted.

Where livestock grazing occurs within an area classified as a Federal Air Quality Non-Attainment/Maintenance Area, BLM will make a determination whether the action is in conformance with the applicable State Implementation Plan requirement. The Great Basin Unified Air Pollution Control District (GBUAPCD) has state air quality jurisdiction over parts of Inyo and Mono County.

The Hammil Valley, Marble Creek, Mathieu, Bramlette, Lone Tree, and Blind Springs allotments occur outside of any Federal Air Quality Non-Attainment/Maintenance Area. However, the Adobe Valley allotment occurs within the Mono Basin Federal Air Quality Non-Attainment/Maintenance Area and conforms to the applicable State Implementation Plan requirement.

Cultural Resources

California BLM has the responsibility to manage cultural resources on public lands pursuant to the 1966 National Historic Preservation Act, the 1980 Rangeland Programmatic Memorandum of Agreement with the Advisory Council on Historic Places (WO IM 80-369), the 1997 Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic

Preservation Act, the State Protocol Agreement Between the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer (2004) and other internal policies.

Special Status Plant Species

BLM Special Status Plant Species are those species that have been listed by the California Native Plant Society as List 1B species, which includes plants that are rare, threatened, or endangered in California and elsewhere. All of the plants constituting List 1B meet the definition of Sec. 1901, Chapter 10 (Native Plant Protection Act), or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. The Bishop Resource Management Plan (BLM 1993, p. 17) stipulates year-long protection of sensitive plants (Special Status Plants) and their associated habitats.

The following table represents Special Status Plant Species that occur in the identified allotments:

Grazing Allotments	Special Status Plant Species	Trend
Adobe Valley	*Ivesia kingii var. kingii* (alkali Ivesia) *Arabis bodiensis* (Bodie Hills rock-cress)	Static Unknown
Bramlette	*Orthotricum shevockii* (Shevok's bristlemoss)	Unknown
Blind Springs	*Crepis runcinata* ssp. *hallii* (alkali hawksbeard)	Static

No other Special Status Plant Species populations are present on the Hammil Valley, Marble Creek, Mathieu, or Lone Tree allotments based on historical records, field monitoring, and/or habitat suitability.

Threatened and Endangered Species (T&E)

Pursuant to Section 7 of the Endangered Species Act, formal consultation with the U.S. Fish and Wildlife Service (FWS) is required on all allotments for which livestock grazing may affect listed species. The stipulations of any grazing permit may be modified to conform to the terms and conditions specified in a FWS biological opinion. In addition, the terms and conditions of any grazing permit may also need to be modified through subsequent land use plan amendments or revisions to conform to decisions made to achieve recovery plan objectives. In August 2003, the Bishop Field Office submitted a Biological Evaluation and requested formal consultation on the Bishop Resource Management Plan under Section 7(a) (2) of the Endangered Species Act to the FWS. The Biological Evaluation analyzed potential effects of six listed species that occur within the Bishop Field Office's jurisdiction. A subsequent request for action on the formal consultation was made to the FWS in September 2005. To date, no action has been taken by the FWS.

No Threatened or Endangered Species are present or likely to occur, based on historical records, field monitoring, and/or habitat suitability in the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

Water Quality

All allotments are within watersheds governed by basin plans subject to California's Clean Water Act. Nationally, Executive Order # 12088 directs federal agencies to comply with state administrative procedures. Recently, Standards and Guidelines reiterated the intent of the Federal Clean Water Act (CWA) and States' water quality plans. An MOU (BLM Manual Supplement 6521.11) with the California Department of Fish and Game (CDFG) describes how BLM and DF&G will coordinate when activities could affect aquatic or riparian habitat. The Unified Federal Policy to Insure a Watershed Approach in Federal Land and Resource Management (UFP) requires 1) all plans and activity management be conducted on a watershed basis, 2) that all land owners/managers within a watershed be solicited for participation in the planning and management of the watershed, 3) that citizens and officials are better informed of planning and management, 4) that best science is used. The EA should analyze grazing within the Watershed Concept described in the UFP. Where there is a threat to water quality or where water quality violates state standards, coordination must occur with the regional water quality control board(s) and where aquatic or riparian habitat may be impacted CDFG coordination must occur as well. All allotments that contain any water bodies (streams, lakes, springs, etc.) must have adopted Best Management Practices (BMP) for all associated livestock management activities that could affect water quality. Pursuant to the decisions affecting water quality in the Bishop Resource Management Plan, BMPs for the Field Office area have been submitted to meet the requirements under the CWA.

Wild and Scenic Rivers

Wild and scenic river values are described in Appendix 2 of the draft Bishop RMP and EIS dated September of 1990. The Interim Management Guidelines for Study Rivers provides direction for grazing management on eligible creeks until the creek is designated a wild and scenic river or released from the wild and scenic river review process. Continued livestock grazing within allotments would be in compliance with this policy. For further information, see Appendix 3 of the final Bishop RMP and EIS dated August of 1991.

The Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments contain no designated or eligible segments of Wild and Scenic Rivers.

Wilderness Study Areas

Livestock grazing on public lands within Wilderness Study Areas (WSAs) must comply with and be managed consistent with BLM’s Interim Management Policy Handbook (H-8550-1) For Lands Under Wilderness Review. The law provides for, and the BLM’s policy is to allow, continued grazing uses on lands under wilderness review in the manner and degree in which these uses were being conducted on public land when the Federal Land Policy and Management

Act (FLMPA) was signed (October 21, 1976). Grazing within WSAs is subject to reasonable regulations, policies, and practices.

Wilderness values are described in the 1979 Final Wilderness Intensive Inventory Report while the WSA's existing range and other improvements are identified in the 1990 California Statewide Wilderness Study Report (WSR). The Interim Management Policy for Lands Under Wilderness Review (IMP) provides direction for grazing management in WSAs until the WSA is designated wilderness or released from the wilderness review process. (See Appendix A)

The Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments do not occur within any designated Wilderness Area. However, approximately 63% (13,246 acres) of the Chidago Canyon WSA (CA-010-079) occurs within the Hammil Valley allotment.

H. Plan Conformance

Determination

The proposed action is in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993, as amended by the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000.

Rationale

The proposed action would occur in areas identified as available for livestock grazing in the Bishop RMP (BLM 1993). The proposed action is consistent with the General Policies, Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions, and Support Needs prescribed in the RMP. A summary of key RMP prescriptions specific to the proposed action include: 1) Livestock management decisions from the Benton-Owens Valley and the Bodie-Coleville Grazing Environmental Impacts Statements (EISs) provide the basis for grazing management throughout the Bishop Field Office (RMP, Valid Existing Management, page 10 and Area-Wide Decisions, page 22). Those livestock grazing decisions carried forward are summarized in Appendix 4 (RMP, pages A4-1 through A4-11); 2) Standard Operating Procedures specific to grazing systems, grazing management, and range improvement project development throughout the Bishop Field Office (RMP, pages 10 through 12); and 3) Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM2000) that amended the Bishop RMP (Central California S&Gs, pages 3 through 12).

I. Rangeland Health

Rangeland health assessments have been completed on these grazing allotments in conformance with the Record of Decision, Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Decision, pg 12).

Qualitative rangeland health field assessments were completed for each allotment on the following dates:

Hammil Valley	May 2001
Marble Creek	May 2000
Mathieu	May 2001
Adobe Valley	May 2001
Bramlette	April 2001
Lone Tree	May 2000
Blind Springs	May 2002

Geographical Information System (GIS) database information was used to stratify the number of areas (ecological sites) to sample. Field assessments consisted of following protocol established in BLM Technical Reference 1734-6, Interpreting Indicators of Rangeland Health Version 3 (2000). A "preponderance of the evidence" was the criterion used to determine if rangeland health standards are being met at each sample site. Rangeland Health Assessment Determinations, following the Central California Resource Advisory Council assessment protocol, were completed for the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

Areas of an allotment does (does not) meet the Secretary of the Interior Approved Rangeland Health Standards as follows:

Rangeland Health Standard	Meets Standard	Does Not Meet Standard	Livestock are the causal factor for not meeting Yes or No	Remarks (locations, etc.)
Hammil Valley	X			
Marble Creek	X	X (Riparian Marble Creek)	No	Recent (2003) unauthorized destruction of riparian with equipment unrelated to rangeland management. Historic ditching and dewatering prevented adequate vegetation establishment.
Mathieu	X			
Adobe Valley	X			
Bramlette	X	X (Riparian Montgomery Creek)	No	Highly erdodible soils. Lower ¾ mile altered by unauthorized bulldozer use unrelated to rangeland management has prevented adequate vegetation establishment.
Lone Tree	X			
Blind Springs	X			

Chapter 2:
PROPOSED ACTION AND ALTERNATIVES

An environmental assessment (EA) for a livestock grazing permit must consider a reasonable range of alternatives (WO IM No. 2000-022) including 1) issuing a new permit based on the application (the proposed action), 2) issuing a new permit with the same terms and conditions as the expiring permit (no action), and 3) a no grazing alternative. If the application for a permit is the same as the expiring permit (no changes in the terms and conditions), then the proposed action and the no action alternative are the same. In addition, other alternatives may be needed to resolve conflicts or address new conditions or new information. If other alternatives are identified during scoping but are determined by BLM not to reasonably address the purpose and need for action, they may be dismissed from further analyses.

No additional alternatives were identified as a result of livestock operator consultation, cooperation, and coordination or public scoping efforts. The proposed action, no action, and no grazing alternatives are described in detail below.

A. Alternative 1 - Proposed Action

The proposed action is to authorize grazing for 10-years on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments with applicable terms and conditions and other provisions as described in this section. The proposed action differs from current management (the no action alternative) in that the terms and conditions from both the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000) are applied specifically for each allotment, with defined implementation guidelines, and tailored to specific vegetation communities and other resources present on these seven allotments.

Terms and conditions, and provisions related to range improvements and monitoring requirements included in the proposed action are:

A. Mandatory Terms and Conditions

Mandatory terms and conditions including livestock number, livestock kind, season of use, percent public land (% P.L.), and allocated animal unit months (AUMs) are required for each allotment in accordance with 43 CFR 4130.3-1.

The proposed mandatory terms and conditions as prescribed in the Bishop Resource Management Plan (BLM 1993) for each allotment are:

Allotment	Number	Kind	From	To	% P.L.	AUMs
Hammil Valley	230	Cattle	10/1	6/15	100	1958
Marble Creek	70	Cattle	3/1	2/28	100	840
Mathieu	10	Cattle	6/1	10/31	100	50
Adobe Valley	274	Cattle	6/15	11/15	100	1387
Bramlette	82	Cattle	10/1	5/31	100	655
Lone Tree	40	Cattle	10/1	5/15	100	300
Blind Springs	15	Cattle	6/15	2/28	100	128

B. Terms and Conditions - Bishop Resource Management Plan

All Allotments

No trailing through a neighboring allotment is allowed without prior authorization by the BLM. Prior to trailing through a neighboring allotment, the trailing permittee would notify the BLM and all identified interested parties.

Hammil Valley (6024) Allotment

No salt or other nutrient supplement is allowed within 1/4 mile of identified archeological or petroglyph sites.

Marble Creek (6025) and Bramlette (6038) Allotment

No salt or other nutrient supplement is allowed within 1/4 mile of creeks.

Adobe Valley (6025) Allotment

No salt or other nutrient supplement is allowed within 1/4 mile of creeks, special status plant populations, and identified archeological or petroglyph sites .

C. Terms and Conditions - Central California Standards for Rangeland Health and Guidelines for Livestock Grazing

All Allotments

The goal of these terms and conditions is to provide the permittee the opportunity to realize the highest, long-term, agricultural, economic return with the least risk to rangeland health. Livestock would be managed to progress toward maintaining or promoting adequate vegetative ground cover, and maintaining soil moisture storage and soil stability appropriate for the ecological sites within the management units. Maintaining adequate ground cover

should allow soil organisms, plants, and animals to support the hydrologic, nutrient, and energy cycles.

Sagebrush Grassland: *Adobe Valley (6027)*

Sagebrush Grassland and Semi-desert Grass & Shrubland: *Hammil Valley (6024), Marble Creek (6025), Lone Tree (6053) and Blind Springs (6080) Allotments*

Sagebrush Grassland and Pinyon-Juniper Woodland Rangelands: *Mathieu (6026) and Bramlette (6038) Allotments*

Livestock grazing operations will be conducted so that forage utilization on key perennial species does not exceed 40 percent on the average. Key areas will be selected and utilization on key species will be estimated in accordance with the current BLM technical reference. Utilization monitoring will be conducted by a BLM employee, permittee, and/or trained range consultant. Then, all key area data for the allotment will be averaged and checked by a BLM employee to determine if the term and condition has been met. If utilization guidelines on the average of the upland key areas across the allotment are exceeded for 2 consecutive years or in any 2 years out of 5 years, BLM will consult with the permittee to address the situation, potentially with a management change (e.g. change in livestock distribution). Because of the potential long-term damage to perennial grass species associated with severe grazing, when grazing utilization exceeds 70% in any upland key area for more than 2 consecutive years, immediate management action will be taken to remedy the problem in the area of the allotment that key area represents.

Riparian Areas & Wetlands: *Marble Creek (6025) and Bramlette (6038) Allotments*

Grazing practices should maintain a minimum herbage stubble height of 4-6 inches on the average on all stream-side, riparian, and wetland areas at the end of the growing season. There should be sufficient residual stubble or regrowth at the end of the growing season to meet the requirements of plant vigor, maintenance, and bank protection.

Riparian guidelines are not applicable to the stretch of Marble Creek below the fence exclosure.

Critical Mule Deer Habitat: *Hammil Valley (6024), Marble Creek (6025), and Blind Springs (6080) Allotments*

Within identified critical Mule Deer winter range and migration habitat (Bishop RMP, 1993) within your allotments, there will be no more than an average of 20 percent utilization of the current year's annual growth on key browse species (bitterbrush) prior to October 1.

D. Other Terms and Conditions

All Allotments

No supplemental feeding (i.e. hay, pellets/cubes, or other forages) is allowed at any time on public lands without the BLM's authorization. If authorization is granted, the permittee would be required to obtain "certified weed-free" feed for supplemental feeding of livestock.

Range improvements in each pasture/allotment would need to be functioning properly prior to livestock turnout.

Periodically check livestock for weed seed to minimize or stop the spread of weeds such as perennial pepperweed from private land or other areas where known weed infestations exist. A guide on preventing the spread of weeds along with specific species of concern is described in the Eastern Sierra Weed Management Area Noxious Weed Identification Handbook.

Notify BLM of noxious weed locations when encountered on allotments.

Adobe Valley (6007) Additional

Graze the Adobe Valley allotment in accordance with the Allotment Management Plan.

E. Range Improvements

No new range improvements need to be constructed and no existing range improvements need to be removed to achieve or maintain rangeland health on these seven allotments. Therefore, no new range improvements are planned to be constructed and no existing range improvements are planned to be removed as part of the proposed action. However, existing range improvements under cooperative rangeland improvement agreements for these allotments need to be maintained and properly functioning annually. If, through monitoring, the Bishop Field Office identifies a need to construct a new range improvement to achieve or maintain rangeland health or to address a site-specific resource concern, a subsequent site-specific project level environmental assessment would be completed at that time.

F. Monitoring

In general, rangeland allotment monitoring (both upland and riparian) would continue to be conducted annually and/or periodically under three applicable oversight categories. These categories include 1) short-term monitoring, 2) long-term trend monitoring, and 3) compliance assurance. All monitoring would continue to be performed according to BLM policy and following protocols from BLM approved manuals and technical references. Monitoring would be conducted on an annual schedule for Selective Management Category to Improve (I) allotments and periodically on Selective Management Category to Maintain (M) and Custodial (C) allotments.

The Mathieu and Lone Tree allotments are designated as Category C allotments, the Blind Springs allotment is designated as a Category M allotment, and the Hammil Valley, Marble Creek, Adobe Valley, and Bramlette allotments are designated as Category I allotments in the Bishop Resource Management Plan (Appendix 4, pages A4-5 through A4-7). Consistent with BLM policy, monitoring on the Category C and M allotments would be conducted periodically and the Category I allotments will be conducted annually.

Short-Term Monitoring

Short-term monitoring is a tool to gauge the cause and effect of the current grazing management on resource conditions on the allotments. This monitoring consists of information addressing current climatic conditions and the collection of utilization data. Key areas would be selected and utilization on key species would be estimated in accordance with the current BLM technical reference. Utilization monitoring would consist of documenting utilization levels to compare estimated utilization data to the utilization guidelines. This would assure compliance with permit terms and conditions for the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

Long-Term Trend Monitoring

Trend refers to the direction of change in vegetation composition and cover over time. Rangeland data collected at different points in time on the same site in accordance with the BLM technical reference are compared to detect change. Trend data are important in determining the effectiveness of on-the-ground management actions.

The Hammil Valley allotment has 5 permanent photo points (established in June 2006) and 3 range site inventory trend plots (established in October 2006) on BLM managed public lands. The Marble Creek allotment has 9 permanent transects established in August 1956 (re-read in November 1978) and 3 range site inventory trend plots (established in October 2006) on BLM managed public lands. The Adobe Valley allotment has 5 range trend plots established (or reestablished) in October 1969 on BLM managed public lands and were re-read in November 1970, October 1977, September 1978, June 1982, September 1983, August 1987, and June 1992. Also, the Adobe Valley allotment has 4 range site inventories established (or reestablished) in October 2006 on BLM managed public lands.

The Mathieu, Bramlette, Lone Tree, and Blind Springs allotments do not have established long-term trend plots. There is no plan at this time to establish long-term trend plots in these four allotments given current management priorities.

Compliance Assurance

Allotment compliance would be conducted on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments on an annual schedule to assure adherence to permit terms and conditions. Compliance involves assuring that livestock

are on/off the allotment according to annual application dates, counting livestock numbers, identifying their location, checking brands, and assuring range improvements function properly.

Joint Cooperative Monitoring Plan

A Joint Cooperative Monitoring Plan was instituted under the authority of the Memorandum of Understanding (MOU) between the U.S. Department of the Interior, Bureau of Land Management (BLM) and the Public Lands Council dated January 30, 2004. Furthermore, an MOU was established between the BLM, Bishop Field Office and Lone Tree Cattle Company (LTCC) on January 10, 2008. Both parties believe that cooperative rangeland monitoring is an important tool in the management of livestock grazing, and maintaining desired range conditions on public lands. The BLM and LTCC entered into a Joint Cooperative Monitoring Plan with the intent to strengthen their partnership in monitoring and management of the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Lone Tree, and Blind Springs allotments. Monitoring on these six allotments will follow BLM policy, the MOU, and Joint Cooperative Monitoring Plan.

B. Alternative 2 - Current Management (No Action)

This alternative involves issuing new 10-year permits with the same terms and conditions as under the existing authorizations.

A. Mandatory Terms and Conditions

Mandatory terms and conditions would be the same as described in the proposed action alternative.

B. Terms and Conditions - Bishop Resource Management Plan

Hammil Valley (6024), Marble Creek (6025), Mathieu (6026), Adobe Valley (6027) and Lone Tree (6053) Allotments

Grazing use is not to exceed 60% on key forage species or 30% on bitterbrush.

Stagger or restrict livestock use on bitterbrush sites in Hammil Valley and Marble Creek allotments.

No salt or other nutrient supplement or sheep bedding is allowed within 1/4 mile of creeks, aspen groves, meadows, sage grouse strutting grounds or special status plant habitat.

No trailing through a neighboring allotment without prior authorization by the BLM.

Adobe Valley (6027) and Bramlette (6038) Allotments

Stagger or restrict livestock use on bitterbrush sites.

No salt or other nutrient supplement or sheep bedding is allowed within 1/4 mile of creeks, aspen groves, meadows, sage grouse strutting grounds or special status plant habitat.

No trailing through a neighboring allotment without prior authorization by the BLM.

Burned areas will be rested for a minimum of 3 growing seasons before grazing, to achieve proper functioning condition, recovery of vegetation or desired plant community.

The Bishop RMP Decision for the Desired Plant Community for riparian vegetation along streams is: "riparian vegetation growth is vigorous for woody plants and at least 4-6 inches of residual herbaceous plant height will remain at the end of the growing season or at the time of livestock turnoff, whichever is later."

C. Terms and Conditions - Central California Standards for Rangeland Health and Guidelines for Livestock Grazing

Adobe Valley (6027) and Bramlette (6038) Allotments

Comply with the Central California Standards and Guidelines for Livestock Grazing Management.

The maximum forage utilization limit for key perennial species is not to exceed 40% on sagebrush grassland, semi-desert grassland, semi-desert grass and shrubland or pinyon-juniper woodland rangelands. On salt desert shrubland ranges, the maximum utilization limit for key perennial species is not to exceed 35%.

The maximum forage utilization limit in riparian areas and wetlands is not to exceed 45% for herbaceous species of 20% for shrubs and trees.

The maximum utilization limit for bitterbrush in mule deer concentration areas (i.e. migration corridors or winter ranges) is not to exceed 20% of annual growth before October 1.

D. Other Terms and Conditions

No supplemental feeding (i.e. hay, pellets/cubes, or other forages) is allowed at any time on public lands without the BLM's authorization.

Ensure that livestock are not infested with or cannot transport weed seed, or other weed plant material from such species as 'perennial pepperweed,' coming from private land or other areas where known weed infestations exist. Specific species of concern are those described in the Eastern Sierra Weed Management Area Noxious Weed Identification Handbook.

Adobe Valley (6007) Additional

Graze the Adobe Valley allotment in accordance with the Allotment Management Plan.

E. Range Improvements

Range improvements would be the same as described in the proposed action alternative.

F. Monitoring

Monitoring would be the same as described in the proposed action alternative.

C. Alternative 3 - No Grazing

This alternative would cancel the permit for the Hammil Valley, Mathieu, Adobe Valley, Marble Creek, and Lone Tree allotments, the permit for the Blind Springs allotment, the permit for the Bramlette allotment, and the permit for the Adobe Valley allotment. As a result, grazing would not be authorized on these allotments. Under this alternative, BLM would initiate the process in accordance with 43 CFR parts 4100 and 1600 to eliminate grazing on these allotments and amend the Bishop Resource Management Plan.

D. Other Alternatives

No other alternatives were identified or developed as a result of livestock operator consultation, cooperation, and coordination or public scoping efforts.

Chapter 3:
ENVIRONMENTAL ANALYSIS

A. LIVESTOCK MANAGEMENT

1. Affected Environment

Past and Present Grazing

Prior to 1859, the Owens Valley had minimal if any domestic livestock grazing. L. R. Ketcham of Visalia, California in 1859 was documented as the first cattleman to drive cattle into the Owens Valley (Jeff Putman and Genny Smith (editor) 1995). By 1910 the Farm Census had reported 43,000 sheep and 20,000 cows and cattle in the Owens Valley.

After the enactment of the Taylor Grazing Act in the 1934, government began taking an active role in managing public lands in the Owens Valley, creating allotment boundaries and developing grazing management systems. In 1946 the General Land Office and Grazing Service merged to create the Bureau of Land Management.

Over the last forty years, grazing on public and private lands in the eastern Sierra region has generally consisted of optimizing stocking rates when forage production was adequate to support livestock, generally throughout various habitat types. Grazing permits on public lands have incorporated numerous federal laws, regulations, policies, and management guidelines to protect and improve various resource values including rangeland and vegetative/wildlife habitat conditions. Monitoring has also been incorporated into grazing management to ensure compliance with permit stipulations. These grazing management practices have generally lead to improving trend in rangeland health and habitat conditions within the region.

Presently, the Bishop Field Office administers 58 allotments with 25 permittees spanning a geographic distance from Olancha to Topaz, California, a 750,000 acre linear and narrow configuration of public land straddling the edge of the eastern Sierra and Great Basin. The physical environment ranges from Great Basin habitat in the north to Mojave Desert in the south. Subsequently, forage capability is often limited by precipitation and elevation which tends to be more favorable in the northern portion of the field office area.

Allotment Specific

The Bramlette allotment is located within the Benton Management Area as defined in the Bishop Resource Management Plan (RMP) (See Map 3). The allotment is located north of the town of Benton and encompasses the majority of Benton Valley. The allotment extends onto the western slopes of the White Mountains, to the Nevada border, and onto the eastern slopes of the Benton Range.

Livestock number, livestock kind, permitted season of use, percent public land, and allocated animal unit months (AUMs) for the Bramlette allotment are:

Allotment	Number	Kind	From	To	% P.L.	AUMs
Bramlette	82	cattle	10/1	5/31	100	655

There is one permittee for the Bramlette allotment who recently acquired the base property in 2005. Since 2005, the permittee has run approximately 35 head of cattle from October to April (about 240 AUMs) depending on forage condition. The BLM land is unfenced from the permittees' base property ranch (approximately 820 acres), allowing unimpeded livestock drift. Livestock use perennial water sources (2 ponds and 12 springs) located on private property. Livestock only graze within the allotment west of Highway 6 and north of Highway 120. Prior to 2005, the allotment had been grazed with few livestock numbers because of permittees ranching practices.

The Adobe Valley allotment is located within the Granite Mountain Management Area as defined in the Bishop Resource Management Plan (RMP) (See Map 4). The allotment is located west of Benton along Highway 120 and east of Granite Mountain, within Adobe Valley. Livestock number, livestock kind, permitted season of use, percent public land, and allocated animal unit months (AUMs) for the Adobe Valley allotment are:

Allotment	Number	Kind	From	To	% P.L.	AUMs
Adobe Valley	274	cattle	6/15	11/15	100	1387

There are two livestock operators that are permitted to use the Adobe Valley allotment. Livestock operator, livestock number, livestock kind, permitted season of use, and allocated animal unit months (AUMs) for the Adobe Valley allotment are:

Livestock Operator	Number	Kind	From	To	AUMs
#1	195	cattle	6/15	11/15	987
#2	80	cattle	6/15	11/15	405

The Allotment Management Plan (AMP) for the Adobe Valley allotment (BLM 1985) outlines management of resources including goals, objectives, constraints, and management actions. The Adobe Valley allotment has had an AMP since 1969. Three evaluations conducted prior to 1983 indicated that a revision of the AMP was necessary.

The Adobe Valley allotment has an Allotment Management Plan (AMP) that was revised in 1985 which outlines management of resources including goals, objectives, constraints, and management actions. The Adobe Valley allotment has had an AMP since 1969. Three evaluations conducted prior to 1983 indicated that a revision of the AMP was necessary.

Livestock management follows the grazing prescriptions of the AMP to meet the goals and objectives of the plan. There is a five-pasture rotational system with two season-long pastures, two rest-rotational pastures, and one deferred-rotational pasture. Each pasture has a well (windmill), and there are a few spring sources that are perennial or intermittent. The two operators plan annually to determine how the allotment will be grazed in a given year.

Livestock operator #1 will often use pasture 1 because of the close proximity to their adjacent base property and BLM Black Lake allotment. Since receiving the permit in 2003, the permittee has only used the allotment twice. The permittee ran approximately 60 head of cattle from July to November (about 260 AUMs) consistent with forage condition. For the other three years, the permittee took non-use because of drought conditions and/or lack of water for livestock.

Livestock operator #2 uses 3 of the 5 pastures (pastures 3, 4, and 5) in a rotational plan in accordance with the AMP. Adobe Valley allotment has been rested 2 years out of the past 10 due to dry conditions, to improve plant vigor, and fluctuations in the cattle market. Part of the drought strategy for this permittee has been to maintain adequate carryover forage on the Adobe Valley allotment to reduce pressure on other allotments during drought periods. Grazing on the Adobe Valley allotment is permitted from June 15 to November 15. However, in most years to avoid early snowfall conditions, the permittee leaves the allotment in October. This allotment receives no spring, critical-growing season grazing.

The Mathieu allotment is located within the Granite Mountain Management Area as defined in the Bishop Resource Management Plan (RMP) (See Map 4). The allotment is located west of Benton and is southwest of Highway 120 on the southern fringe of Adobe Valley. Livestock number, livestock kind, permitted season of use, percent public land, and allocated animal unit months (AUMs) for the Mathieu allotment are:

Allotment	Number	Kind	From	To	% P.L.	AUMs
Mathieu	10	cattle	6/1	10/31	100	50

There is one permittee for the Mathieu allotment who has not grazed the allotment for over 10 years. The Mathieu allotment is fenced and grazed in common with the Inyo National Forest Service, Black Canyon allotment. The Black Canyon allotment is currently vacant and may be analyzed by the Inyo National Forest Service for permit renewal in the future.

The Hammil Valley, Marble Creek, Lone Tree, and Blind Springs allotments are located within the Benton Management Area as defined in the Bishop Resource Management Plan (RMP) (See Maps 1-2). The Hammil Valley allotment is located on the west side of Hammil Valley, with Chidago Canyon as the southern boundary and Blind Springs Hill as the northern boundary. The Marble Creek allotment is located south of Benton and east of Highway 6 extending onto the alluvial fans of the White Mountains. The Lone Tree allotment is located on the east side of Hammil Valley and extends onto the alluvial fans of the White Mountains. The Blind Springs allotment is located south of Benton and is west of Highway 6 encompassing a portion of Blind Springs Hill. Livestock number, livestock kind, permitted season of use, percent public land, and allocated animal unit months (AUMs) for the Hammil Valley, Marble Creek, Lone Tree, and

Blind Springs allotments are:

Allotment	Number	Kind	From	To	% P.L.	AUMs
Hammil Valley	230	cattle	10/1	6/15	100	1958
Marble Creek	70	cattle	3/1	2/28	100	840
Lone Tree	40	cattle	10/1	5/15	100	300
Blind Springs	15	cattle	6/15	2/28	100	128

There is one permittee for these four allotments. This permittee is also Permittee #2 for the Adobe Valley allotment, described above in this section. These four allotments are grazed as part of a rotational grazing plan that includes the Adobe Valley allotment and private lands. The permittee plans the rotation to provide critical growing season deferment to each use area in (at least) one year out of three. The rotation is based on long-term plans as adjusted by seasonal growing conditions and site-specific resource objectives. The permittee coordinates with BLM on an annual (or more frequent) basis to facilitate attaining resource objectives across the allotments.

The Hammil Valley allotment is permitted for use from October 1 through June 15. The majority of grazing that occurs on the Hammil Valley allotment is winter grazing on residual dry matter. Grazing is rotated within the allotment to different, unfenced use areas through management of livestock drinking water. A few perennial and intermittent springs (dependent on annual precipitation) exist within the allotment on public and private lands. However, the majority of the allotment is watered by wells, and/or pipelines and troughs which are strategically located on public and private lands. These range improvement water projects are a management tool that can be turned on and off to control and distribute livestock in general use areas. The well and storage tank for one of the pipelines, located in the center of the allotment, was recently rebuilt (2006 and 2007) resulting in opportunities for improved livestock distribution.

The Marble Creek allotment is permitted from March 1 through February 28. Historically and recently the allotment has been used seasonally, dependent on precipitation and forage condition. The current permittees grazing plan does not incorporate year-long grazing for this allotment. The Marble Creek allotment is used in the fall and winter months. Occasionally, the allotment is used in the spring or summer months to provide deferment to other allotments. There are three major perennial water sources which flow out of the White Mountains onto or through the Marble Creek allotment. Montgomery Creek is located at the northern portion of the allotment, however, is considered a poor water source because of location and distance to adequate forage. Marble Creek is located a few miles south of Montgomery Creek and is a major source of water for the central portion of the allotment. Marble Creek feeds a pipeline and series of troughs that contour the alluvial fans and extend through the center of the allotment. The pipeline and troughs is a management tool that can be turned on and off to control and distribute livestock into the center of the allotment and away from the creek. Pellisier Creek is located at the southern end of the allotment. At the mouth of the canyon, the majority of the water is diverted into a ditch and a portion of the water is used to feed a pipeline and troughs. The pipeline and

troughs are used to retain livestock in the southern portion of the Marble Creek allotment. The ditch contours the alluvial fans and eventually enters an aqueduct pipe generating hydro-power. Livestock can water along the ditch and will graze the southern most portions of the allotment. As a result of the three natural water sources and strategic locations of the pipelines and troughs, the allotment can be used as three pastures.

The Lone Tree allotment was transferred to the current permittee in 2007 and is permitted for use from October 1 to May 15. Livestock obtain water at an open ditch and ponds located on private land. Also, water is acquired from developed sources for an adjacent farming operation where the permittee runs water in a pipeline and trough system. The grazing plan incorporated the Lone Tree allotment which offered more flexibility in the grazing plan by providing an alternative for spring deferment, and reduces grazing pressure on the Marble Creek, Hammil Valley, and Blind Springs allotments. The allotment is planned to be used anytime during the permitted season in accordance with the permittees grazing plan. However, livestock use will only occur up to a maximum of three of those months during any given year, depending on the rotational grazing plan and/or forage condition.

The Blind Springs allotment adjoins the northern portion of the Hammil Valley allotment along an unfenced boundary. It is permitted for use from June 15 to February 28. This allotment is watered by a seasonal spring source on the northern portion of the allotment. There is also water available on private lands adjoining the allotment. The Blind Springs allotment is generally used during the dormant season for 1-3 months, providing management flexibility and grazing deferment to other allotments.

Livestock distribution for the Hammil Valley, Marble Creek, Lone Tree, and Blind Springs allotments are maximized during the winter and early spring months because temperatures are cooler and their need for water is much less, allowing cattle to drift further from water. Timing of winter and spring precipitation has an effect on forage condition resulting in vegetative growth and vigor of perennial species and can affect the abundance of annual species. For these four allotments, the operator may turn out in the early spring months and adjust the grazing plan on the amount of annual forage produced. These strategies included a slight increase in livestock numbers during wet years, or decrease in numbers during drier periods. These operational changes required concurrence by the BLM.

2. Environmental Consequences

a. Impacts of Proposed Action

Reissuing the grazing permits with revised, allotment specific terms and conditions would not create negative impacts to livestock operations. Because livestock grazing practices would follow the Bishop RMP guidelines as amended by the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000) and the revised terms and conditions, permittees would have to manage their livestock (e.g. strategic salt placement or adjustment in livestock distribution) so forage utilization on key perennial species do not exceed utilization levels, as defined in the proposed terms and conditions. Furthermore, these terms and

conditions are designed to help maintain, protect, or improve rangeland health, increasing the probability of long term economic viability for the permittees.

b. Impacts of No Action

For the permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, the no action alternative would not create negative impacts to current livestock operations. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000 amended the RMP. Terms and conditions would still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40 percent on the average which was determined to help maintain, protect, or improve rangeland health.

c. Impacts of No Grazing

The cancellation of grazing on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments would require the operators to look for alternative forage and may increase the cost of their ranching operations. For the operators that also have private and/or Los Angeles Department of Water and Power (LADWP) leases, the grazing capacity of their private and/or LADWP land may not accommodate the increased use or meet management requirements of those lands. The permittees may be forced to operate with fewer livestock or sell the entire livestock business. If the business is sold, private lands associated with a ranch have potential to be sold and developed. Ranches build connections between public and private land, and between rural and urban communities. “Private lands are disproportionately important to the maintenance of our region’s natural heritage because they are disproportionately more productive” (Knight 2007). Private lands, especially in the eastern Sierra, often contain springs, riparian, rich soils, and/or critical habitat that wildlife depends on. A few of the consequences from development of rural lands are landscape level fragmentation, decrease in biodiversity, and loss of important wildlife habitat.

3. Maps

Overview of Allotments (Map 1 – 4)

4. References

Knight, R.L. 2007. Ranchers as a Keystone Species in a West That Works. Rangelands 29:4-9.

Talbert, C.B., R.L. Knight, and J.F. Mitchell. 2007. Private Ranchlands and Public-Land Grazing in the Southern Rocky Mountains. Rangelands 29:5-8.

B. AIR QUALITY

1. Affected Environment

The Hammil Valley, Marble Creek, Mathieu, Bramlette, Lone Tree, and Blind Springs allotments are not within any federal non-attainment/maintenance area under jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). Federal actions are not subject to conformity determinations under 40 CFR 93. However, the Adobe Valley allotment occurs within the Mono Basin Federal Air Quality Non-Attainment/Maintenance Area and conforms to the applicable State Implementation Plan requirement. The Mono Basin Federal Air Quality Non-Attainment/Maintenance Area is under jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD), federal actions are subject to conformity determinations under 40 CFR 93.

2. Environmental Consequences

a. Impacts of Proposed Action

The proposed action would create no new impacts because the proposed terms and conditions are designed to help maintain, protect, or sustain rangeland health including soils, and to keep the ecosystem functioning properly. Support vehicles emit various precursor emissions for ozone. Fugitive dust emissions could occur due to the soil disturbance as a result of the trampling action of livestock when soil moisture levels are low. Ruminant animals emit methane gas which is a precursor emission for ozone. Actual emission amounts from this grazing activity are negligible.

For the Adobe Valley allotment, support vehicle use on the access roads will generate small amounts of PM_{10} emissions throughout the grazing area and could carry soils onto the paved roads which would increase entrainment of PM emissions. The proposed action would not measurably change PM_{10} emissions within the Mono Basin Federal Air Quality Non-Attainment/Maintenance Area.

b. Impacts of No Action

Fugitive dust emissions could occur due to the soil disturbance as a result of the trampling action of livestock when soil moisture levels are low. Ruminant animals emit methane gas which is a precursor emission for ozone. The support vehicles emit various precursor emissions for ozone. Actual emission amounts from this grazing activity are negligible.

For the Adobe Valley allotment, support vehicle use on the access roads will generate small amounts of PM_{10} emissions throughout the grazing area and could carry soils onto the paved roads which would increase entrainment of PM emissions. The no action alternative would not measurably change PM_{10} emissions within the Mono Basin Federal Air Quality Non-Attainment/Maintenance Area.

c. Impacts of No Grazing

The no grazing alternative would have little to no impact on soils since few impacts currently occur. There would be no fugitive dust emissions from livestock trampling or precursor emissions for ozone.

C. AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

1. Affected Environment

Six of the seven allotments analyzed in this environmental assessment, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments, do not contain nor adjoin any designated Area of Critical Environmental Concern (ACEC). Therefore, the proposed action, no action, and no grazing alternatives in these allotments would have no effect on ACECs.

One allotment, Hammil Valley, contains a portion of the Fish Slough ACEC within its boundaries. One permit is issued for allotment use and authorized for cattle grazing. Approximately, 10,318 acres (26%) of the ACEC lies in the allotment. The ACEC is classified into three management zones. Approximately, 1,300 acres of the ACEC in the allotment is designated Zone 2 while the remainder is classified as Zone 3. No portion of Zone 1 occupies the Hammil Valley allotment. Other portions of the ACEC were analyzed in grazing authorization EAs and related decisions completed in 2007.

The Fish Slough ACEC comprises three management zones. Zone 1, classified as the Fish Slough Ecological Area, includes the Owens Valley Native Fish Sanctuary, BLM Spring, and the main feeder springs, slough, and marsh of Fish Slough proper. Grazing is prohibited in Zone 1. Zone 2, classified as the Volcanic Tableland western aquifer, includes the area to the northwest of Fish Slough proper, but is within the surface drainage basin next to it. Zone 3, classified as the Volcanic Tableland northern aquifer, includes the area to the north of Chidago Canyon to Red Rock Canyon, located west of Hammil Valley.

The ACEC was designated in 1984, encompassing nearly 36,000 acres, in recognition of the unique assemblage of resource values. Values include endangered T&E species habitat (plants and animals), wetlands, and archeological resources. No endangered species or wetlands that occur in the ACEC would be affected by the proposed action. Although, cultural sites exist throughout the ACEC, impacts have been minimal because of low livestock use.

Livestock use impacts comply with the RMP and the Fish Slough ACEC Plan. Since livestock use is authorized for cattle grazing under this permit, present physical impacts consist of slight soils compaction from trailing with associated inability of plants to complete their phenological growth. Under current utilization levels, the grazing system is designed to sustain natural processes as defined in the above plans. The plant communities within the Hammil Valley allotment have not been negatively impacted by livestock grazing because of the uniform distribution of cattle. Utilization of key forage species in the spring, e.g. desert needlegrass, hopsage, winterfat, and budsage is within the slight to moderate range (20-40%) as per the grazing standards. Livestock graze throughout the ACEC where several range improvements related to water are located. Areas around water improvements are impacted by trampling and associated vegetation loss.

The principal wildlife habitat types found in the ACEC are saltbush/shadscale scrub and mixed desert scrub. Common small mammals, reptiles, and birds are distributed throughout these communities. The ACEC is also used by larger ungulates during the winter, i.e. mule deer.

2. Environmental Consequences

a. Impacts of Proposed Action

Reissuing the grazing permit with revised, allotment specific terms and conditions for the Hammil Valley allotment would maintain existing physical impacts to the Fish Slough ACEC similar to those identified in the Affected Environment with some improvements in weed control and the ACEC's ecological health.

The proposed action would create no new impacts to soils because the proposed terms and conditions are designed to help maintain, protect, or sustain rangeland health including soils, and to keep the ecosystem functioning properly. Additionally, site conditions and native vegetation would benefit from improved control of weedy species that compete with area vegetation. The timing of grazing, normally before seed set, would reduce the spread of invasive species.

The implementation of the terms and conditions on the Hammil Valley allotment would enhance and sustain the large-scale ecological function of the ACEC's plant communities especially during non-drought years (BLM 1999, 2000) and when stocking rates are low. The proposed action would sustain and improve perennial grass cover, root distribution, species diversity, vegetative structure and recruitment (BLM 1998).

The overall wildlife habitat quality of the ACEC would be maintained or slightly improved

because of a lack of concentrated use in any one area of an allotment which reduces significant alteration impacts to soil and vegetation, thus maintaining more intact wildlife habitats

Impacts to cultural resources are expected to be low since livestock use would remain dispersed throughout the ACEC.

b. Impacts of No Action

The no action alternative would result in no new impacts. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000 amended the RMP. Terms and conditions would still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40 percent on the average which was determined to help maintain, protect, or improve rangeland health.

c. Impacts of No Grazing

The no grazing alternative would have slight benefits to the soil component since disruption would cease from termination of grazing operations. Individual plant populations within the communities that are commonly grazed would have an opportunity to complete all phenological stages. Impacts to the ecological function of these plant communities would be confined to natural disturbances, e.g. fire, insect damage, drought, and other non-anthropogenic induced effects. No grazing would also eliminate all livestock threats of damage to cultural properties.

3. Map:

Overview of the Hammil Valley Allotment (Map 1)

4. References

Bureau of Land Management. Bishop Resource Management Plan Record of Decision, April 1993.

Bureau of Land Management. Bishop Field Office. Livestock Grazing Authorization Environmental Assessments #CA170-07-10 (05/15/2007) and #CA170-07-06 (05/10/2007)

Ferren, W.R. 1991. Biotic inventory and ecosystem characterization for Fish Slough: Inyo and Mono Counties, CA. Unpublished report by the Fish Slough Research Team of the University of California, Santa Barbara for the California Department of Fish and Game.

D. CULTURAL RESOURCES

1. Affected Environment

Located on the western fringe of the Great Basin physiographic province the Owens Valley region, incorporated within the Bishop Field Office, contains the highest archaeological site densities within the Great Basin (Basgall and McGuire 1988; Bettinger 1975, 1982). In 1981 and 1982 the BLM completed two Environmental Impact Statements (EIS) addressing grazing on public lands within the Bishop Field Office; "Proposed Livestock Grazing Management for the Benton-Owens Valley Planning Unit", 1981 and "Proposed Livestock Grazing Management for the Bodie-Coleville Planning Units", 1982. In both EIS's cultural resource reviews are limited to Class I literature searches of existing data.

Using existing survey data (BLM 1978; Busby et al. 1979; Hall 1980; Kobori et al. 1980), site densities were predicted to range from 9 sites per square mile (m^2) in the Benton Planning Unit to 4 sites/m^2 in the Owens Valley Planning Unit.

To evaluate each allotment for cultural resource values, a Class I records search was conducted and a Geographical Information System (GIS) data collection was utilized to determine previously surveyed acres and sites recorded on each allotment. Range improvements where cattle congregate (troughs, salt licks, reservoirs, etc.) were mapped. Following the Bishop Field Office research design for grazing allotment assessments (Halford 1999), all areas with a high probability for the congregation of cattle and for the occurrence of significant cultural resources were field evaluated. Inventory was focused on known or suspected areas of historic ground disturbing activities associated with livestock grazing such as water sources, corrals, supplemental feeding areas, bedding areas, and salt block stations. The results of the analyses are used to protect or mitigate impacts to cultural resources. If significant cultural resources are identified, the stipulations of the grazing permit may be modified to reflect the presence and protection of these resources.

The following table shows the results of the cultural resource analyses.

Allotment	Previously Surveyed (% of allotment)	Newly Surveyed	Previously Recorded Sites	Newly Recorded Sites
Hammil Valley	2620 ac (6.5 %)	30 ac	121	22
Marble Creek	1158 ac (8%)	Cursory	12	0
Mathieu	101 ac (5%)	Cursory	2	0
Adobe Valley	1497 ac (6%)	20 ac	95	1
Bramlette	5441 ac (16%)	Cursory	160	0
Lone Tree	538 ac (15%)	3 ac	4	0
Blind Springs	314 ac (5%)	Cursory	10	0

2. Environmental Consequences

a. Impacts of Proposed Action

Cattle use on the Hammil Valley, Marble Creek, Mathieu, and Blind Springs allotments is generally highly dispersed. Due to the fact that no known sites occur within areas of heavy congregation, impacts to cultural properties are predicted to be minimal as a result of the proposed action. Three significant petroglyph sites (two of which are listed on the NRHP) occur on the Hammil Valley allotment. Moderate to low use occurs at these sites periodically, but cattle use degrades the feeling and setting of these sites. Troughs currently in use on these allotments have been surveyed previously and no cultural resource concerns have been identified. Over 60% of the troughs are no longer in use and would be subject to evaluation prior to re-commissioning.

Site densities are significant in the Adobe Valley area. In most cases cattle use on the subject allotment is generally highly dispersed across thousands of acres, but heavy congregation occurs around existing water improvements or springs.

The most heavily impacted areas containing known cultural resources are found within the Adobe Valley Allotment. One new site was found at the North Adobe Well (well #7530). The site does not appear to be eligible for listing on the NRHP but has been significantly impacted by cattle congregation in the area and site integrity has been compromised. The Antelope Springs area has been fenced to protect the spring, but concentrated cattle and wild horse use occurs in the area. Eight known sites occur within 1/4 mile of the spring. Two sites, MNO-174 and MNO-204, are within 100 meters of the spring and have been heavily impacted. MNO-174 in particular has been disturbed by cattle bedding in the big sage within the site. The top 20-30 cm of the site have been physically and chemically impacted. The artifact concentration and diversity at the site suggest the site still contains data potential to be eligible for listing on the NRHP. Subsequently, MNO-174 was fenced to protect the remaining data potential at the site. Placing a trough ¼ mile to the west of Antelope Spring and continued maintenance of the spring exclosure fence would reduce cattle and horse use of the spring area and would reduce impacts to cultural sites in the area.

Mitigation Measures:

1) Conduct cultural resource evaluations at trough locations that have been decommissioned or that are no longer in use prior to re-commissioning.

2) To curtail impacts at two previously recorded sites, MNO-205/174, an exclosure fence was constructed in 2003 to protect the site(s) from further degradation resulting from the cumulative impacts of cattle and wild horse use of the area.

3) The trough, located on the southwest portion of the Antelope spring protective fence, could be relocated at a remote location to reduce cattle and wild horse congregation near the spring and the site(s). Grazing activities could be removed from this area of the allotment.

4) The site(s) at Antelope Spring could be tested to determine eligibility and a data recovery program instituted if found to be eligible for listing on the NRHP.

5) Cattle use at the Yellow Jacket, Chalfant, and Red Canyon Petroglyph sites, within the Hammil Valley allotment, should be reduced if not eliminated to avoid resource degradation at these sites. Cattle use in the area of these sites should be monitored and cattle moved from site locations when identified.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, for example 60% utilization levels, there would be less dispersion and potentially more congregation of livestock which may have increased cultural impacts.

c. Impacts of No Grazing

This alternative would eliminate all livestock threats of damage to cultural properties.

3. Maps

None, due to the proprietary nature of the cultural resource information.

4. References

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E. ENVIRONMENTAL JUSTICE

There are no low-income or minority populations living on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

There are 11 Native American communities who reside in close proximity to these seven allotments. Members of these communities do some hunting and subsistence collecting of materials from public lands on various allotments throughout the BLM, Bishop Field Office such as, pinyon nuts, basket weaving materials, medicinal plants, etc. Some work in nearby local communities or are employed on their respective reservations.

There may be low-income minorities working for the livestock operators on these allotments.

2. Environmental Consequences

a. Impacts of Proposed Action

The proposed action for livestock grazing on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments would have no effect upon any low-income or minority populations. If any changes in grazing management are required, there may be a loss of a job to a member of a low-income or minority population. There may also be new jobs created and sustained as a result of the long-term livestock grazing sustainability from rangeland health standards implementation. Any such impacts would be limited to a single job here or there. There would not be a disproportionate impact, either negative or positive, to any low-income minority.

b. Impacts of No Action

Continued livestock grazing on the seven allotments under the no action alternative would have no new effects upon any low-income or minority populations. If any changes in grazing management are required, there may be a loss of a job to a member of a low-income or minority population. There would not be a disproportionate impact, either negative or positive, to any low-income minority.

c. No Grazing

If there were no grazing allowed on these allotments, there may be a loss of some jobs to members of a low-income or minority population. Any such impacts would be limited to a single job here or there.

There might be a slight positive impact to some groups (e.g. Native American) through increased availability of some vegetative resources that are collected on public lands. This would however vary by area and type of resource, and would probably be minimal on these allotments.

F. ESSENTIAL FISH HABITAT

The proposed action, no action, and no grazing alternatives would have no effect on essential fish habitat because there are no anadromous fish species or designated essential fish habitats on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

G. FARMLANDS, PRIME OR UNIQUE

The proposed action, no action, and no grazing alternatives would have no effect on farmlands, prime or unique, because none are present on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

H. FLOOD PLAINS

The proposed action, no action, and no grazing alternatives would have no effect on flood plains because none are present on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

I. GLOBAL CLIMATE CHANGE

1. Affected Environment

United States Department of Interior, Order Number 3226, signed January 19, 2001, Evaluating Climate Change Impacts in Management Planning, is an order to ensure that climate change impacts are taken into account in connection with planning and decision making. Climate change refers to any significant change in measures of climate (e.g. temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from: natural processes, such as changes in the sun's intensity; natural processes within the climate system (e.g. changes in ocean circulation); human activities that change the atmosphere's composition (e.g. burning fossil fuels) and the land surface (e.g. urbanization) (IPCC, 2007).

Rising greenhouse gas (GHG) levels are likely contributing to global climate change. In the Bishop Field Office resource area, climate change is typically expected to result in warmer, drier conditions, and potentially more extreme weather events. Natural processes such as volcanic eruptions contribute to the increasing levels of GHGs in the atmosphere (IPCC, 2007).

Livestock grazing related to the proposed action and no action alternatives, also contribute GHGs in the form of methane (USEPA #430-R-08-005, April 2008).

2. Environmental Consequences

The assessment of GHG emissions and climate change remains in its formative phase. The lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts of climate change on resources within the Bishop Field Office. In addition, while the proposed action and no action alternatives may involve some future contribution of GHGs, these contributions would not have a noticeable or measurable effect, independently or cumulatively, on a phenomenon occurring at the global scale believed to be due to more than a century of human activities.

3. References

Intergovernmental Panel on Climate Change. IPCC Fourth Assessment Report: Climate Change 2007. Available at: <http://www.ipcc.ch/ipccreports/assessments-reports.htm>

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J. INVASIVE, NON-NATIVE SPECIES

The following table represents invasive weed species that occur in the identified allotments:

Allotment	Invasive Weed Species	Estimated % Cover
Hammil Valley	*Salsola tragus, Bromus madritensis ssp. rubens, Shismus arabiscus*	15-20% for all species
Marble Creek	*Bromus madritensis ssp. rubens, Shismus arabiscus, Cirsium vulgare* (riparian reach), *Melilotus albidus* (riparian reach)	5%, 5%, 15%, 20% respectively
Mathieu	*Salsola tragus, Bromus madritensis ssp. rubens, Shismus arabiscus*	<10% for all species
Adobe Valley	*Salsola tragus*	10%
Bramlette	*Halogeton glomeratus* in association with Pumice Mine	15-20%
Lone Tree	*Bromus madritensis ssp. rubens, Shismus arabiscus*	10% for both species
Blind Springs	*Bromus tectorum. Salsola tragus, Halogeton glomeratus*	5, 10, and 15% respectively

The density of invasive, non-native plant species is highest in the Hammil Valley allotment and increases in *Salsola tragus* as well as non-native annual grass species has occurred within the last 3 years following two consecutive years of above-average precipitation. Adobe Valley and Mathieu allotments exhibit 10% or less cover of invasive, non native plant species. Higher densities of weed species on the Hammil Valley allotment are associated with mineral block locations, livestock watering facilities, roadsides, and historic mineral exploration sites. If weed densities within the Hammil Valley allotment continue to increase, there could be an elevated risk of fire impacts due to increased fine fuel loading in the desert scrub communities that comprise the majority of the allotment. The recent infestations of *Cirsium vulgare* and *Meliotus albidus* along the riparian reach of Marble Creek have also occurred within the last two years due to unauthorized backhoe channel clearing activity associated with the site. Current weed densities on the Mathieu, Adobe Valley, Bramlette, and Blind Springs allotments are not affecting native species composition or cover on the allotment, nor contributing to other environmental impacts, such as fire hazard, increased erosion, or large-scale reductions in mychorrhizal densities (Bethlenfalvay and Dakessian 1984). Periodic monitoring (1-3 years) of the allotments would facilitate documenting changes in site composition and density of these invasive weed species.

It should be noted that the current permittee for the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Lone Tree, and Blind Springs allotments does graze cattle in Fish Slough on a Los Angeles Department of Water and Power (DWP) lease. Recently, a population of *Lepidium latifolium* (perennial pepperweed) was discovered on this DWP lease and there is a high probability that cattle may carry seed and plant material from this species. The permittee has been contacted and told that he should take measures to ensure that weed seed is not transported via cattle to BLM allotments.

Arid ecosystems have been predicted to be one of the most responsive ecosystem types to elevated atmospheric CO_2 and associated global climate change (Strain and Bazzar 1983, Melillo 1993, Smith, Monson and Anderson 1997). Net increases in above-ground non-native annual grass production and seed rain increases at elevated CO_2 levels have been demonstrated (Smith, et. al 2000) which could lead to increased risk of species composition in favor of exotic annual grasses and commensurate declines in biodiversity and ecosystem function in the arid regions of North America.

2. Environmental Consequences

a. Impacts of Proposed Action

The proposed action would benefit site conditions and native vegetation on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree and Blind Springs allotments because the proposed terms and conditions are designed to help reduce the spread of weeds and maintain or improve rangeland health. Early season grazing, normally before seed set, of these annual grasses may help reduce weed invasion (Olson 1999, Mosley and Roselle, 2006, and Taylor 2006) by reducing inputs into the seed bank of particular sites. Provisions for grazing before seed set of these species has been included in allotment grazing stipulations. Potential long-term and landscape impacts of increased weed densities will be more of a function of increased CO_2 levels than the effects of the proposed action. Currently, the cover values for weed species is low and continued implementation of grazing timing stipulations may reduce weed spread. Implementation of the Rangeland Health Standards and Guidelines that identify the need to keep non-native species at "acceptable" levels will require frequent monitoring since weed densities are likely to increase given their life histories and affects of Global Climate change.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed

Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, there could be an increased risk of weed seed transport due to grazing after seed set of the target weed species.

c. No Grazing

Under the no grazing alternative, impacts from invasive weed species on native plant communities may increase and be greater than the proposed action. There would no longer be herbivory of invasive weed species prior to seed dissemination which could potentially increase seed bank densities. However, the no grazing alternative would reduce the chances that weed seed from roadsides, and other disturbed locations are spread to new areas. Even this alternative is unlikely to off-set the effects of increased CO_2 on spread and production of non-native annual grass species.

3. References

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K. NATIVE AMERICAN CULTURAL VALUES

1. Affected Environment

There are 11 Native American communities who reside in or in close proximity to the eastern Sierra region administered by the Bishop Field Office. None of these communities are living on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind

Springs allotments. There are no treaty rights (hunting, fishing, etc.) associated with any of the communities or any of these allotments.

Some members of these communities hunt and some do subsistence collecting of materials from public lands such as, basket weaving materials, medicinal plants, etc. However, this is general use and there were no specific "traditional use areas" identified at this time by any of the Tribes on any of these allotments. Any other traditional uses or use areas have not been divulged to this office.

Some general concerns associated with Native American cultural values identified by the Tribes during consultation are:

- They have general concerns with overgrazing and want BLM to control overgrazing to protect the ecosystem and ensure that it is functioning properly.
- They have concerns that water (or other) developments not impact cultural sites and that they not affect deer habitat (through de-watering streams / springs, or trampling of habitat around new troughs, etc.).
- They do not want cattle grazing on top of individual burials or grave sites or within known Native American cemeteries.
- They do not want sheep bedding on top of cultural sites.
- They do not want BLM to use herbicides on plants that they might collect.
- They do not want BLM to cut / remove pinyon for grazing habitat improvement.

2. Environmental Consequences

a. Impacts of Proposed Action

The proposed action is not expected to have any impacts to Native American concerns described above. The rangeland health assessment showed these allotments currently meet rangeland health standards. The proposed terms and conditions are designed to help protect and sustain rangeland health, keep the ecosystem functioning properly, and thereby maintain or improve the natural environment that Native American cultural values depend on. Monitoring would continue and any impacts that affect Native American sites from high congregation and concentration of livestock use would be corrected.

b. Impacts of No Action

The no action alternative is not expected to have any new impacts to Native American concerns described above. The rangeland health assessment showed these allotments currently meet rangeland health standards. Monitoring would continue and any impacts that affect Native American sites from high congregation and concentration of livestock use would be corrected.

c. No Grazing

Removing grazing would generally result in fewer impacts to the natural environment, thus alleviating Native American concerns with overgrazing, water project development, and grazing impacts to cultural resources/burial sites, etc.

L. RECREATION

1. Affected Environment

Recreation activities in the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments are many. Activities that take place consist of motorized touring, single track motorcycle riding, horseback riding, and low levels of walking, hiking, hunting, climbing, and dispersed camping. Access consists of approximately 150 miles of primitive 4 wheel drive and single track motorized vehicle routes and trails throughout these seven allotments. Access is spread over a very large geographic area, with no developed recreational facilities. This lack of development currently precludes intensive recreation activity. Encounters with livestock occur infrequently due to the dispersed nature of the grazing that is occurring.

2. Impacts of Alternatives

The proposed action, no action, and no grazing alternatives would have no effect on recreation because proposed facilities or management practices that could potentially alter existing recreation uses or use patterns do not exist in these allotments. Recreationists would continue to encounter livestock infrequently under the proposed action and no action alternative.

M. SOCIAL AND ECONOMIC VALUES

1. Affected Environment

Regionally, livestock operations involve use of BLM, Forest Service (USFS), or Los Angeles Department of Water and Power (LADWP) lands. The Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments have three permittees. There is a careful balance of livestock numbers and seasons of use for grazing these allotments, such that any substantial change of use, would negatively affect their overall operation. Having other permits or lease land available does not in itself lead to increased flexibility.

The local economy is benefited by these grazing operations from capital spent to establish and maintain a ranching operation and contributions to the labor force. In Inyo County for 2006, agriculture was the second largest industry and remains an integral part of the county's economy

(Counties of Inyo and Mono Agriculture Department 2006). Beef and alfalfa production was the primary production crops. Of a 100% total in agricultural values, livestock production accounted for 55%. This amounted to $9,755,120 or 55% of the total $18,025,920 agricultural production in Inyo County. In Mono County for 2006, agriculture was also the second largest industry and is an integral part of the county's economy. Beef and alfalfa production is the primary production crops. Of a 100% total in agricultural values, livestock production accounted for 60% in Mono County. This amounted to $17,497,050 or 60% of the total $29,336,050 agricultural production.

Additionally, the allotments lie in a broad region that is largely undeveloped and rural in nature. Tourism is a primary industry of the area, attracting millions of annual visitors who enjoy the rural, isolated nature of Adobe Valley and the Owens Valley situated along the eastern Sierra. Livestock grazing, for some people, complements the frontier setting they seek in their visits to the area.

2. Environmental Consequences

a. Impacts of Proposed Action

These grazing operations benefit both Inyo and Mono Counties economy from monies spent to establish and maintain a ranching operation and contributions to the labor force. Sustaining these operations, from continued use of these allotments, would have a positive economic effect on the stability of their overall livestock operation. The social value of retaining a rural, agricultural lifestyle would be preserved and would keep with the public's perception of the eastern Sierra western culture. The proposed action would not adversely impact the social and economic stability of these ranching operations.

b. Impacts of No Action

Same as the proposed action.

c. No Grazing

If grazing were terminated on these seven allotments, there would be adverse impacts to the three operators. The grazing capacity of their other federal permits or private leases may not accommodate the increased use or meet land management requirements. The permittees may be forced to operate with fewer livestock. There would be unauthorized grazing use onto BLM lands, since some private and/or federal permitted lands are unfenced. Cattle trespass or drift onto BLM land would result in administrative costs to the agency. The BLM may also receive criticism of this decision from its local constituency because of potential agricultural economic losses.

3. References

2006 Annual Crop and Livestock Report, Inyo- Mono Counties (prepared June 14, 2007)

N. SOILS

1. Affected Environment

The soil classifications of the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments have been mapped in detail by the Natural Resource Conservation Service (NRCS). BLM assessed these allotments in 2000, 2001, and 2002 to determine if the rangeland health standards were being met. Specific soils standards relate to permeability and infiltration. All sites examined were found to meet the standards for soils.

Soils on the Hammil Valley allotment are predominantly a volcanic tableland association which are volcanic in origin and restrict water infiltration and plant rooting. These soils primarily are gently sloping to moderately steep, very shallow to moderately deep, well drained to somewhat excessively drained soils that formed in volcanic ash over rhyolitc tuff. Ashy loamy sands are inclusions occurring within depressions or valleys between the slopes. These soils are well drained, which provide a more favorable habitat for both grasses and mixed desert shrub species. Valley floor soils may have inclusions of calcareous loam along remnant river terraces that exhibit duripans which inhibit water infiltration and restrict shrub rooting depths. Erosion potential on the valley floor range from slight to moderate due to wind erosion and can be somewhat attributable to the effects of livestock hoof action which disturbs the soil surface. Erosion potential of soils on the Hammil Valley allotment is low due to infrequent and limited areas of use by livestock. There are no identified erosion problems on the allotment.

Soil associations for the Marble Creek, Bramlette, and Lone Tree allotments are primarily comprised of gravelly loamy coarse sand, very gravelly loamy coarse sand, or very gravelly sandy loam occurring on alluvial fans, the predominance of allotment acreage. These soils are mostly very deep, well drained, with gravelly to cobbly surfaces and subsurface textures. These soil types tend to limit the establishment of seeds and seedling development because of the sand to cobble structure. The erosion potential on the alluvial fans is low due to the gravelly surface texture and there are no identified erosion problems on these allotments. A portion of the Bramlette allotment contains soils of the intermountain valleys which are moderate to very deep, well to somewhat excessively drained ashy loamy sands with many Duripans present.

The general soil association for the Blind Springs allotment is soils of the mountainous region. These soils are very shallow to very deep, well drained to somewhat excessively drained, and gently sloping to very steep soils. These soils formed in residuum and colluvium derived from metasedimentary, metavolcanic, and granitic rock. These soil types tend to limit the establishment of seeds and seedling development because of the low available water capacity, rooting depth, depth to bedrock, rock outcrops, and cobbles, stones, and boulders. Erosion potential of soils on the Blind Springs allotment is low due to infrequent and limited areas of use by livestock.

Two general soil types exist for the Adobe Valley allotment. The first soil type is soils of the intermountain valleys which are moderate to very deep, well to somewhat excessively-drained ashy loamy sands. Soils of these types tend to limit the establishment of seeds and seedling

development because of the sand structure. Furthermore, the very shallow soils may restrict water infiltration and plant rooting. These soils primarily occur on slopes and ridges. Ash loamy sands are inclusions occurring within depressions or valleys between the slopes. These soils are well drained, which provide a more favorable habitat for both grasses and mixed desert shrub species. The second soil type is soils of the saline-alkali valley floors. These soils are very deep, nearly level to gently sloping, poorly to somewhat excessively drained ashy loamy sands, sandy loams, and silt loams on valley floors. These soil types tend to have higher salinity and sodicity, a high water table, wetness, low available water capacity, and slow permeability. There is potential for wind erosion and dustiness, and can be somewhat attributable to the effects of livestock hoof action which disturbs the soil surface. Erosion potential of soils on the Adobe Valley allotment is low due to infrequent and limited areas of use by livestock.

2. Environmental Consequences

a. Impacts of Proposed Action

The proposed action would create no new impacts because the proposed terms and conditions are designed to help maintain, protect, or sustain rangeland health including soils, and to keep the ecosystem functioning properly. For example, improvements in ecological attributes would be a result of less intensive forage utilization levels which would lead to increases in plant biomass production resulting in adequate soil protection (e.g. wind erosion).

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, the no action alternative would result in no new impacts. There is potential with higher utilization standards (e.g. 60% on key species) that interactions between physical, chemical, and biological properties of soils can be affected compared to the proposed action. For example, with more intense livestock grazing there will be less standing plant biomass and therefore, there will be less plant litter which provides surface cover protecting soils from wind and water erosion.

c. No Grazing

The no grazing alternative would have little to no impact on soils since few impacts currently occur.

3. References

Bishop Resource Management Plan and Environmental Impact Statement. August 1991. Benton-Owens Valley Planning Unit, Draft Environmental Impact Statement

United States Department of Agriculture, Natural Resource Conservation Service. 1996. Soil Survey of Benton-Owens Valley Area, California, Parts of Inyo and Mono Counties.

O. VEGETATION/THREATENED AND ENDANGERED

Plant Communities

1. Affected Environment

Hammil Valley, Marble Creek, Bramlette, Lone Tree, and Blind Springs Allotments

A baseline range inventory for these allotments was completed in 1977 and correlated to the recently completed 1999 NRCS soil/vegetation inventory to document plant cover and composition as well as develop updated ecological site descriptions. The allotments occur in the Great Basin and Northern Mojave Floristic Provinces. The dominant plant communities are mixed desert scrub, shadscale scrub and sagebrush/bitterbrush. Shadscale scrub is dominated by shadscale (*Atriplex confertifolia)* and budsage (*Artemisia spinescens)* with a sparse (15% or less) understory of desert needlegrass (*Achnatherum speciosum)* and Indian rice grass (*Achnatherum hymenoides)* (Barbour and Major 1977). Additional species include, but are not limited to: hop sage (*Grayia spinosa),* horsebrush (*Tetradymia canescens* and *T. axillaris),* Nevada ephedra (*Ephedra nevadensis),* winter fat (*Krasheninnikovia lanata),* yellow rabbitbrush (*Chrysothamnus naseosus),* green rabbitbrush (*Chyrsothamnus teretifolious),* gold bush (*Ericameria cooperi),* cheesebush (*Hymenoclea salsola).* During years of high precipitation, annual forbs are abundant and include species from the following genera: Cryptantha, Mentzelia, Linanthus, Phacelia, as well as genera in the Asteraceae Family.

The sagebrush/bitterbrush communities that comprise portions of the Marble Creek, Hammil Valley, and Blind Springs Allotments are dominated by sagebrush (*Artemisia tridentata* ssp. *vaseyana* and *Artemisia tridentata* ssp. *wyomingensis*), bitterbrush (*Purshia tridentata* var. *glandulosa* and *P. tridentata* ssp. *tridentata*. Understory grasses such as desert needlegrass (*Achnatherum speciosum*), and Indian rice grass (*Achnatherum hymenoides)* can make up 15-20% of the cover at the higher elevations of the alluvial fans. Galleta grass (*Pleuraphis jamesii*) makes up approximately 5% of the understory cover and is confined to the higher elevation sites as well.

The majority (80-90%) of the upland plant communities within these allotments have not been significantly impacted by livestock grazing because of the infrequent use and low number of animals that make use of these allotments as well as the general topography and rough terrain which reduces livestock access. Generally, utilization of key forage species, e.g. desert needlegrass, hopsage, winterfat, budsage, and bitterbrush is slight to moderate and occurs in spring (March-early May). Forage capacity on these allotments is low and the plant communities are incapable of sustaining large numbers and frequent livestock use which has been shown to be detrimental to the various attributes of ecological function including plant vigor, seedling recruitment, and recovery (Clary and Holmgren 1987; Hughes 1982).

Adobe Valley and Mathieu Allotments

A baseline range inventory for these allotments was completed in 1977 and correlated to the recently completed 1999 NRCS soil/vegetation inventory to document plant cover and composition as well as develop updated ecological site descriptions. The allotments occur in the Great Basin and Northern Mojave Floristic Provinces. The dominant plant communities are sagebrush/bitterbrush and pinyon woodland. The sagebrush/bitterbrush communities are dominated by sagebrush (*Artemisia tridentata* ssp. *vaseyana*, *A. tridentata* ssp. *wyomingensis* and *A. tridentata* ssp. *parishii*), bitterbrush (*Purshia tridentata* var. *glandulosa* and *P. tridentata* ssp. *tridentata)*. Understory grasses such as indian rice grass (*Achnatherum hymenoides*), desert needlegrass (*Achnatherum speciosum*), needle and thread (*Hespirostipa comota*), western needlegrass (*Achnatherum occidentalis*), and Thurber's needlegrass (*Achnatherum thurberianum*) can make up 15-20% of the cover at the higher elevations of the allotments (Barbour and Major 1977). Additional species include, but are not limited to: hop sage (*Grayia spinosa),* horsebrush (*Tetradymia canescens),* Nevada and green ephedra (*Ephedra nevadensis.* and *E. viridis),* and yellow and curly-leaved rabbitbrush (*Chrysothamnus nauseosus and C. viscidiflorus).* During years of high precipitation annual forbs are abundant and include species from the following genera: *Astragalus*, *Cryptantha*, *Eriogonum*, *Phacelia*, as well as genera in the Asteraceae Family.

The pinyon woodland communities are dominated by an overstory (15-20% cover) of singleleaf pinyon pine (*Pinus monophylla)* with a sagebrush/bitterbrush understory. Perennial forbs include species from the following genera: *Astragalus, Cryptantha, Eriogonum,* and *Phlox.*

The majority (80-90%) of the upland plant communities within these allotments have been moderately impacted by livestock grazing. Generally, utilization of key forage species, e.g. needlegrass species and bitterbrush is slight to moderate and occurs between spring and summer. Forage capacity on these allotments is moderate and the plant communities are incapable of sustaining large numbers and frequent livestock use which has been shown to be detrimental to the various attributes of ecological function including plant vigor, seedling recruitment and recovery (Clary and Holmgren 1987; Holcheck 1983; Sneva 1980)

2. Environmental Consequences

a. Impacts of Proposed Action

Impacts of the Proposed Action on the vegetation within these allotments are directly affected by grazing timing, intensity, and stocking rates. Current stocking rates are moderate, but do not significantly impair the large-scale ecological function of these plant communities during non-drought years. On the Hammil Valley, Blind Springs, and Marble Creek allotments, when grazing occurs in the spring, it has been shown to increase shadscale (*Atriplex confertifolia)* and reduce bud sage (*Artemisia spinosa*) densities at moderate to high grazing intensities (Clary and Holmgren 1987). The key forage species which receive the most use at spring turn-out are the perennial bunch grasses.

The plant communities within the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments have not been negatively impacted by livestock grazing because of the infrequent use and the low number of animals that use these allotments. Topography and rough terrain also reduce livestock access and commensurate impacts (BLM 1999, 2000). Forage capacity on these allotments is low. The plant communities are incapable of sustaining large numbers and frequent livestock use, which has been shown to be detrimental to various ecological function attributes including plant vigor, seedling recruitment, and recovery (Clary and Holmgren 1987; Hughes 1982). Generally, utilization of key forage species, e.g. desert needlegrass, hopsage, winterfat, and budsage is within the slight to moderate range (20-40%) and occurs in the spring.

Under the proposed action, grazing impacts such as weed presence and localized soil disturbance would affect very small portions (< 1-2 acres in size) of the Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments and be associated with mineral blocks and/or livestock watering facilities. These impacts would not contribute to a large-scale reduction in ecological function of the plant communities that occur within these allotments, but would require periodic (2-5 years) monitoring to determine impact thresholds. On the Hammil Valley and Marble Creek allotments increased weed densities could affect larger-scale upland (Hammil Valley) and riparian (Marble Creek) ecological function. These effects would include a potential increase in susceptibility of fire due to increased weed fuels on Hammil Valley, and decreases in native plant community composition and plant recruitment along reaches of Marble Creek due to increases in bull thistle.

The terms and conditions outlined in the proposed action would sustain and improve the following key floristic and ecological attributes within these allotments (BLM 1998);

- Increased cover of perennial grasses
- Better root distribution
- Increased species diversity
- Increased photosynthetic period
- Increased vegetation structure
- Increase in episodic recruitment of shrubs, grasses, and forbs

Such improvements in floristic and ecological attributes would be a result of less intensive forage utilization levels and annual maintenance of range improvements which would lead to commensurate increases in annual below and above ground grass and forb biomass production. The implementation of the terms and conditions on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments would enhance and sustain the large-scale ecological function of these plant communities especially during non-drought years (BLM 1999, 2000) and when stocking rates are low.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, the no action alternative would result in no new impacts. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000 amended the RMP. Terms and conditions would still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40 percent on the average which was determined to help maintain, protect, or improve rangeland health. Grazing at the 60% level would decrease the long-term productivity of several species, particularly on the Hammil Valley and Marble Creek allotments, such as perennial bunchgrass

species, budsage and winterfat (Clary and Holmgren 1987), especially during drought years. The Central California Standards and Guidelines (2000) specifically address the impacts of sustained 60% use on desert scrub species. At use levels prescribed under the proposed action several floristic and ecological attributes would be sustained to include, but not be limited to, increased plant cover, root distribution, species recruitment and diversity.

c. No Grazing

Under this alternative, livestock grazing on these allotments would cease. Individual plant populations within the communities that are commonly grazed would have an opportunity to complete all phenological stages. Slight increases in weed densities could occur due to a reduction of early season grazing on these target species. Impacts to the ecological function of these plant communities would be confined to natural disturbances, e.g. fire, insect damage, drought, and other non-anthropogenic induced effects.

3. Maps

California Natural Diversity Database GIS coverage (not included in EA).

4. References

Barbour, M.G., Major J. 1977. Terrestrial Vegetation of California. John Wiley and Sons. Pages 853-854.

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Clary, W.B. and R.C. Holmgren. 1987. Difficulties in interpretation of long-term vegetation trends. IN: Proceedings of the Symposium on Plant-Herbivore Interactions. General Technical Report INT-222. U.S. Forest Service, Intermountain Research Station, Ogden, Utah.

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Department of the Interior, Bureau of Land Management. 1998. Rangeland Health Standards and Guidelines for California and Northwestern Nevada. BLM/CA/ES-98/005+4100.

Department of the Interior, Bureau of Land Management. 1999, 2000. Rangeland Health Assessments. Technical Reference 1734-6, 2000, Interpreting Indicators of Rangeland Health (Version 3).

Department of the Interior, Bureau of Land Management. 1998 Riparian area management: a user guide to assessing proper functioning condition and the supporting science for lotic areas. Technical Reference 1737-15, U.S. Department of the Interior, Bureau of Land Management, Denver, CO

Elmore, W. and B. Kauffman. 1994 Riparian and Watershed Systems: Degradation and Restoration IN: Ecological

Hughes, L.E. 1982. A grazing system in the Mohave Desert. Rangelands 4, 256-257.

Laycock, W.A. 1994. Implications of grazing vs. no grazing today's rangelands. In: M. Vavra, W. Laycock and R. Pieper, eds. Ecological implications of livestock grazing in the West. Society for Range Management. Denver, CO.

Threatened and Endangered Plant Species

The proposed action, no action, and no grazing alternatives would have no effect on threatened or endangered vegetation species because no federally listed threatened or endangered species are present on the in the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments based on historical records, field monitoring, and/or habitat suitability.

Special Status Plant Species

1. Affected Environment

A summary of California Native Plant Society (CNPS) List 1B species occurring within the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments is provided below:

Grazing Allotments	Special Status Plant Species	Trend
Hammil Valley	None	N/A
Marble Creek	None	N/A
Mathieu	None	N/A
Adobe Valley	*Ivesia kingii var. kingii* *Arabis bodiensis*	Static Unknown
Bramlette	*Orthotricum shevockii*	Unknown
Lone Tree	None	N/A
Blind Springs	*Crepis runcinata* ssp. *hallii*	Static

Grazing impacts to the above mentioned Special Status Plant populations have been minimized by avoidance of these sites during key reproductive periods. In addition, no Special Status Plant populations occur in the vicinity of watering or supplement locations on any of the analyzed allotments. The Adobe Valley allotment receives moderate use that includes both livestock and wild horse grazing. Some trampling of the I*vesia kingii* var. *kingii* and *Crepis runcinata* ssp. *hallii* does occur, but it is dispersed and not consistent from year to year. In addition, both these species occur in robust numbers over the entire eastern edge of the allotment. There is potential

of future impacts to these rare plants due to the recent increases in wild horse numbers in both allotments.

2. Environmental Consequences

a. Impacts of Proposed Action

Impacts of the proposed action would likely improve the habitat for the alkali meadow Special Status Plant Species that occur in the Adobe Lake and Blind Springs allotments. Key habitat improvements would consist of reducing stress on surrounding native vegetation with lower use levels, and commensurate benefits to key pollinator habitat. The status of Special Status Plant populations on the Bramlette and Arabis bodiensis population on the Adobe Valley allotments would not significantly change under the proposed action because of the infrequent and low intensity use of these allotments and the relative isolation of most of these plant populations.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, Impacts to the following species could occur due to increased trampling effects and impacts to surrounding pollinator habitat; *Crepis runcinata* ssp. *hallii* and *Ivesia kingii* var. *kingii.*

c. No Grazing

Impacts of the no grazing alternative would affect Special Status Plant populations in the Black Lake and Adobe Lake allotments by removing livestock trampling of Special Status Plants in certain areas of the allotments. The no grazing alternative would have minimal effect on the Special Status Plant populations of *Orthotricum shevockii* in the Bramlette allotment and *Arabis bodiensis* in the Adobe Valley allotment due to the infrequent and low intensity movement and use of livestock in the vicinity of the populations.

3. Maps

California Natural Diversity Database and BLM Special Status Plant Species GIS coverage (not included in EA).

4. References

Department of the Interior, BLM. 1999, 2000. Rangeland Health Assessments, Technical Reference 1734-6, 2000, Interpreting Indicators of Rangeland Health (Version 3).

California Natural Diversity Database and BLM Special Status Plant Species GIS coverage.

California Native Plant Society. 2001. Inventory of Rare and Endangered Plants of California. Sixth Edition.Sacramento, CA

California Department of Fish and Game. 2007. California Natural Diversity Data Base.

P. WASTE, HAZARDOUS OR SOLID

The proposed action, no action, and no grazing alternatives would not generate hazardous or solid waste on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

Q. WATER QUALITY, DRINKING-GROUND

1. Affected Environment

Perennial surface water occurs in 3 of the 5 grazing allotments in the form of streams and natural springs. The Blind Spring and Mathieu allotments are devoid of any surface water sources on public land. The Hammil Valley allotment is almost devoid of surface water except for the very slight occasional flow of water from Yellowjacket Spring from private land on to public (no water quality information available) and a spring which produces a few gallons per minute flow in T.2S., R.31E., Section 26 and has not been inventoried for its water quality.

The Bramlette allotment contains three natural free flowing sources of water on public land. Morris Creek begins on Inyo National Forest land at approximately the 10,000 ft. elevation contour and is primarily a spring supported flow with some contribution from snow melt. The stream occurs on public land confined in a ditch (aqueduct) that delivers water to a private parcel of land historically identified as the Pedro Ranch. The ditch is accessible to wildlife species and livestock, generally along the entire length of the delivery system. There is no information on the chemical and physical characteristics of the water. General observations of wildlife use along the aqueduct and the presence of an abundant aquatic macroinvertebrate fauna in the channel substrate, as found in other streams with known good water quality characteristics,

indicates water quality is apparently good. Montgomery Creek water quality conditions are mentioned, below, under the Marble Creek allotment discussion. A natural spring (inventory number 9-19-1B) occurs in the first drainage west of the Truman Meadows jeep road, at the extreme northern end of the allotment. This spring has a very small discharge (approx. 0.3 cubic feet/second or 135 gallons/minute) with apparent low turbidity and low soil compaction/erosion. The immediate area of spring discharge and downstream flow is naturally protected primarily by a cobble to boulder strewn channel, making it difficult for cattle to access this drainage. There was no evidence of livestock use when the site was visited in the last 5 years. Wildlife use was very evident in the form of large mammal (primarily mule deer) and passerine song bird presence.

The Adobe Valley allotment contains natural free flowing sources of water. Antelope Spring in the Adobe Valley allotment produces a very minor amount of water; less than 5 gallons per minute. There are no known water quality problems with Antelope Spring. The outflow has been designed to place water onto a small alkaline meadow for the retention of vegetation and to provide habitat for small mammals and aquatic invertebrate species. A portion of the flow also supplies a nearby water trough for livestock and feral horses.

Adobe Creek is a perennial flowing stream emanating from the combined flows of Dexter Creek and Taylor Canyon Creek which have their watersheds on the north aspect of Glass Mountain on the Inyo National Forest. Adobe Creek typically has a summertime flow of between 10 and 15 cubic feet per second (cfs). There are no known water quality problems with Adobe Creek. A substantial amount of the original meandering channel on public land was altered sometime after 1954 by straightening and narrowing the channel. This and other more recent alteration of the channel by unknown persons has caused erosion of streambanks on most of the public land segment. Despite this alteration, the stream is generally stable in the amount of sediment moving through the water column.

The Marble Creek allotment contains the most surface water with all or portions of 4 streams flowing across the length of public land from the White Mountains. Water distribution is relatively poor across the allotment due to the substantial distances between each of the streams. Marble Creek is the only stream that traverses the entire alluvial fan from the point of exit from the White Mountains to its intersection with private land west of Highway 6. An estimated average flow in Marble Creek is 1.0 cfs.

Water quality for the perennial streams within the Marble Creek allotment (Birch, Marble, Montgomery, and Pellisier) fall well within secondary drinking water standards for measured constituents like $CaCO_3$, CO_2, pH, total dissolved solids (conductivity), and turbidity. A complete analysis for secondary drinking water constituents has never been performed on any stream. For short time periods lasting a few days to several weeks, water quality in Marble Creek has been degraded due to suspended sediment deposition from bank trampling by cattle grazing. Water quality is not known to be substantively affected by livestock grazing in other water sources.

Other indicators of water quality, like the presence/absence, diversity, and abundance of aquatic macroinvertebrate species, are potentially helpful especially when monitored over a sufficient span of time. Data along this line are not available for the above streams. Families of aquatic insects like the Ephemeroptera (mayflies), Plecoptera (stoneflies) and Trichoptera (caddisflies) are often sensitive (absent or poorly represented) to the presence of toxic substances and general poor water quality conditions. A one time sampling of aquatic invertebrates for Marble Creek found several species within the three families present in Marble Creek, providing some additional evidence of good to fair water quality.

Water quality constituents examined on the streams are absent on the few springs within the allotments. Generally the springs are unperturbed by livestock or other human related use.

There is no information known for water quality relating to groundwater.

2. Environmental Consequences

a. Impacts of Proposed Action

Water quality should be maintained in all sources or slightly improved for Marble Creek and Adobe Creek with implementation of the proposed terms and conditions. Improvement on post grazing period residual stubble height would meet the requirements of plant vigor, maintenance, and bank protection for the Marble and Adobe stream channels.

Water quality in Antelope Spring will not be affected since the source and major component of the outflow are within a livestock exclosure fence.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, the no action alternative would result in no new impacts. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13,

2000 amended the RMP. Terms and conditions would still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40 percent on the average which was determined to help maintain, protect, or improve rangeland health. The primary determinant for ensuring water quality is not degraded, under this alternative, is the requirement for a minimum of 4-6 inches of residual stubble height be present along stream banks or other mesic sites at the end of the growing season or livestock turnoff. Riparian stubble height in this range acts to retard or prevent loose soil and sediment flow (during rainfall or snowmelt periods) from entering the stream channel and affecting water quality. Streams like Marble Creek, Montgomery Creek, and Morris Creek would maintain their current water quality within the spectrum of normal livestock use.

c. No Grazing

Water quality would be expected to remain at or near the current conditions if no grazing occurred. The lower portion of Marble Creek would be restored to good water quality. Adobe Creek water quality would be improved over the long term as complete restoration of riparian vegetation occurred. Water quality would remain the same at Antelope Spring for the reason mentioned above.

3. References

Hershler, R. 1988. *Status Survey of Hydrobiidae in Owens River Drainage.* Final Report. California Department of Fish and Game. Contract C-1922. 29pp.

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R. WETLANDS/RIPARIAN ZONES

1. Affected Environment

Bramlette

Riparian vegetation along the ditch (aqueduct) that is Morris Creek is composed almost entirely of willows (*Salex spp*.) and wild rose (*Rosa woodsii var. ultramontana*). The vegetation is never grazed and in good condition as evidenced by the frequency and diversity of song birds using the site. Morris Creek has not been assessed for functional condition since the entire portion on BLM land is an artificial channel.

Hammil Valley

The one natural spring and associated riparian vegetation in the Hammil Valley allotment (no inventory number; T.2S., R.31E., Section 26) is in good condition with little to no impact from livestock grazing or other historic use.

Adobe Valley

The Adobe Valley allotment contains extensive wetlands (600 acres) which include the following plant communities (Barbour 1977): 1) Transmontane Freshwater Marsh (permanently flooded), Freshwater Seep, Transmontane Alkali Marsh (seasonally flooded), Alkali Seeps, and Alkali Meadow (saturated soils). The wetland community types integrate following a gradient of moisture and alkalinity.

Transmontane Freshwater Marsh/Freshwater Seep

Transmontane Freshwater Marsh is a Rare Natural Community, State-ranked S2.2 (threatened). Marsh vegetation is dominated by bulrush (*Scirpus americanus*), (*Juncus* spp.), sedge *(Carex aquatilis* and *C. nebrascensis*), and spikerush (*Eleocharis* spp.). Common perennial wetland forbs include marsh speedwell (*Veronica scutellata),* monkeyflower (*Mimulus guttatus*) and arrow grass (*Triglochin concinna*).

Transmontane Alkali Marsh

Transmontane Alkali Marsh is a rare natural community, State-ranked S2.1 (very threatened). As the wetland system shifts away from its freshwater source, marsh and seep vegetation shift to a more alkaline community type dominated by saltgrass (*Distichlis spicata*).

Alkali Meadow

Alkali Meadow is a Rare Natural Community, State-ranked S2.1 (very threatened) and it is the most extensive wetland vegetation type within the allotment. Dominant species include a variety of perennial grasses such as salt grass (*Distichlis spicata*), alkali cordgrass (*Spartina gracilis),* Great Basin wild rye (*Leymus cinereus*), alkali sacaton (*Sporobolus airoides*), bluegrass (*Poa secunda* ssp. *juncifolia)* and meadow brome (*Hordeum brachyantherum*). Common rushes include baltic rush (*Juncus balticus*) and perennial forbs include *Crepis runcinata* ssp. *hallii*, *Ivesia kingii* var. *kingii* and *Pyrrocoma racemosa* var. *sessilifolia*, alkai peppergrass (*Lepidium montanum* var. *nevadense*) and blue-eyed grass (*Sisyrinchium halophytum)*

Marble Creek

Riparian vegetation on the Marble Creek allotment is found along the entire length of Marble Creek, along Montgomery Creek, Birch Creek and along Pellisier Creek for about 1/4 mile. The primary woody species are willows *(Salix lutea, S. lasiolepis, S. exigua)* and wild roses *(Rosa*

woodsii var *ultramontana),* and herbaceous species are primarily comprised of bluegrasses *(Poa spp.),* sedges *(Scirpus* and *Carex spp.)* and rushes *(Juncus spp.).*

Marble Creek is a perennial stream flowing across more than three miles of public land. The condition of riparian vegetation on the upper 2 miles of Marble Creek is generally good. The upper reach is densely vegetated and well shaded, and root systems bind the soil of the channel. Here the stream is surrounded by dense mature willows which function as a natural fence, promoting understory growth and protecting stream banks from erosion along much of the stream while allowing cattle access to water in several places. This reach is in Proper Functioning Condition (PFC) (BLM 1998) and meets riparian Desired Plant Community (DPC) goals established by the 1993 RMP.

The lower 1.2 mile of Marble Creek is in a slightly degraded condition and growth of woody vegetation has been held in check by grazing. As a result, the stream banks are not as heavily protected from cattle access and are subject to trampling, breakage, and compaction and resultant instability. Stream survey files document poor condition of this reach in 1978, due to livestock use (BLM 1978). Since that time its condition improved with measureable increases in both willow density and cover; however, the lower reach remains degraded compared to the upstream reach. This reach is classified as Functioning At Risk condition.

Riparian vegetation on Montgomery Creek was assessed to be in a Non Functional Condition (BLM 1998) in 1993. This functional condition of this stream was affected by a large mud flow that completed covered the riparian vegetation on the alluvial fan during the late 1980s. Riparian conditions have improved on some segments of the stream since that time but the overall physical condition of the channel is easily modified by flood flow. The stream, generally, does not meet the DPC goals. However, natural flood processes, not livestock use, is the principal factor affecting riparian habitat quality on this stream. The stream channel is prone to instability due to the soil type consisting of large boulders and cobble with silt. There are essentially no gravels to stabilize the channel bottom or banks.

Birch and Pellisier Creeks have good riparian vegetation conditions with stable banks on Birch Creek and unstable banks along Pellisier Creek due to discontinuous flow on BLM land. Birch Creek was assessed to be in Proper Functioning Condition with Pellisier Creek in a Functioning at Risk Condition.

2. Environmental Consequences

a. Impacts of Proposed Action

Implementation of the proposed action should continue to improve riparian vegetation conditions on the lower 1+ mile of Marble Creek but may not attain a Proper Functioning Condition status. The riparian vegetation along the lower reach of Marble Creek will continue to be at risk until an exclosure fence is constructed. The only means currently available to recover the lower portion of Marble Creek to PFC level would be with a fence exclosure as occurs just upstream from this

degraded area. Conditions on the other streams and springs will unlikely change from their current status due to little or no livestock use currently occurring on those sources.

Impacts of the Proposed Action on the wetland vegetation within these allotments are directly affected by grazing timing, intensity, and stocking rates. Isolated impacts continue to occur within alkali meadow and spring (Antelope Spring) communities of the allotments including overuse of wetland vegetation, soil compaction and bank chiseling. Continued grazing under the Proposed Action will reduce soil compaction (Clary 1995), changes in site hydrology, and increase in the overall ecological function of these plant communities. The Proposed Action should increase the potential to meet the Riparian Standard (BLM, 1998) e.g. riparian/wetland vegetation, structure and diversity and stream channels and floodplains are, or are making significant progress toward, functioning properly and achieving an advanced ecological status.

Impacts to rare species such as *Calochortus excavatus* and *Ivesia kingii* var. *kingii* will also be reduced under the Proposed Action by increasing the availability of flowers for pollinators, therefore enhancing long-term reproductive vigor for these species. Muir and Moseley (1994) documented that livestock grazing was most detrimental to a rare alkali meadow species (*Primula alcalina*) at the time of plant anthesis and seed dispersal.

Some improvement to streambank (i.e. riparian) condition will continue to occur in the altered segment of Adobe Creek.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, the no action alternative would result in no new impacts. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000 amended the RMP. Terms and conditions would still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40

percent on the average which was determined to help maintain, protect, or improve rangeland health. The primary determinant for ensuring riparian vegetation is not excessively used, under this alternative, is the requirement for a minimum of 4-6 inches of residual stubble height be present along stream banks or other mesic sites at the end of the growing season or at livestock turnoff. With this amount of stubble height, individual plant root systems should survive over winter and the above ground plant material is sufficient to capture loose soil from adjacent uplands entering the riparian zone and, also, capturing sediment within any overland flow occurring in the flood plain. Persistence of a functional riparian should occur.

c. No Grazing

Under this alternative, livestock grazing on the allotments would cease and eliminate any future potential for livestock to discover and use riparian vegetation. Riparian habitat and stream channel condition would improve to a Proper Functioning Condition status on the lower 1+ mile of Marble Creek. Conditions on the other streams and springs would unlikely change from their current status due to little or no livestock use currently occurring on those sources.

3. References

Barbour, M.G., Major J. 1977. Terrestrial Vegetation of California. John Wiley and Sons. Pages 853-854.

Department of Interior, BLM, Bishop Field Office. 1978. Adobe Creek Stream Inventory. File.

Department of Interior, BLM, Bishop Field Office, 1993 Assessment of Functional Condition on Streams, File.

Department of Interior, BLM, Bishop Field Office. 1986. Water Supply Inventory. File.

S. WILD AND SCENIC RIVERS

The proposed action, no action, and no grazing alternatives would have no effect on wild and scenic rivers because there are no designated wild and scenic rivers or eligible river segments on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments.

T. WILDERNESS

1. Affected Environment

The Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments do not occur within any designated Wilderness Area. However, approximately 63% (13,246

acres) of the Chidago Canyon Wilderness Study Areas (WSA) (CA-010-079) occurs within the Hammil Valley allotment.

Wilderness values are described in the 1979 Final Wilderness Intensive Inventory Report while the WSA's existing range and other improvements are identified in the 1990 California Statewide Wilderness Study Report (WSR). The Interim Management Policy for Lands Under Wilderness Review (IMP) provides direction for grazing management in WSAs until it is designated wilderness or released from the wilderness review process. In general, BLM is required to maintain the wilderness characteristics of each WSA until Congress decides whether it should either be designated as wilderness or released for other purposes. The general standard for interim management is that lands under wilderness review must be managed so as not to impair their suitability for preservation as wilderness, also referred to as the non impairment standard.

Grazing existed on the Hammil Valley allotment at the time the WSA was designated by BLM in the 1980s and is a use grandfathered by Section 603(c) of FLPMA. Grazing may continue to the same manner and degree as took place in 1976. The IMP provides specific guidance for implementation of grazing systems. Several livestock water troughs, a pipeline, and two water storage tanks are within the WSA.

The range improvements are located along the southern edge of the allotment (northeast corner of the WSA) where cattle trampling and soil compaction occur for a few hundred feet around the trough sites. The majority of grazing that occurs on the Hammil Valley allotment is winter grazing when livestock can drift further away from water sources due to reduced water needs. However, much of the WSA within the allotment is lightly grazed due to low stocking rates and rugged terrain.

2. Environmental Consequences

a. Impacts of Proposed Action

Overall habitat quality of the allotment would be maintained or slightly improved as implementation of the proposed terms and conditions occur, because they are designed to protect and sustain rangeland health.

Expected ecological improvements in vegetation, weed control, and wildlife habitat caused by changes in grazing timing and intensity would occur with implementation of the proposed action, enhancing the WSA's naturalness. Wilderness values of outstanding opportunities for solitude and a primitive or unconfined type of recreation would remain unaffected. For additional information regarding special features such as cultural values, wildlife, plants, etc., refer to specific narratives addressing these values in other sections of this document.

Continuance of proposed grazing on the Hammil Valley allotment within the Chidago Canyon WSA would conform with the BLM IMP and would not impair Congress's ability to designate the WSA as Wilderness should they choose to do so. The areas containing the two livestock

troughs, pipeline and water tanks would continue to receive concentrated cattle activity around the site(s). Reissuing of the grazing permit would not create any new impacts. Additionally, since grazing was occurring at the time the WSAs were inventoried, and those impacts did not disqualify the areas or any portion of the areas from being designated as a WSA, they would not do so now.

b. Impacts of No Action

For the Hammil Valley allotment which does not contain Central California S&Gs within the terms and conditions, the no action alternative would result in no new impacts. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000 amended the RMP. Terms and conditions would still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40 percent on the average which was determined to help maintain, protect, or improve rangeland health.

c. Impacts of No Grazing

Slight ecological improvements in plant and wildlife habitat may occur due to lack of grazing impacts on various resources allowing natural processes to dominate. Wilderness values of naturalness, outstanding opportunities for solitude and primitive or unconfined types of recreation would remain. The removal of the livestock troughs, pipeline and associated water tanks within the Chidago Canyon WSA would allow approximately 15 acres of land to naturally revegetate, enhancing wilderness character and naturalness.

3. Maps

Overview of Allotments (Map 1 - 4)

4. References

Bureau of Land Management, California Statewide Wilderness Study Report, 1990.

Bureau of Land Management, Benton-Owens Valley and Bodie-Coleville Study Areas Final Environmental Impact Statement, 1987.

Bureau of Land Management, Final Intensive Inventory, 1979

Bureau of Land Management, H-8550-1 Interim Management Policy for Lands Under Wilderness Review, 1995.

U. WILDLIFE/THREATENED AND ENDANGERED

Wildlife

1. Affected Environment

Bramlette, Hammil Valley, Lone Tree, Marble Creek and Blind Springs Allotments

- *Uplands*

The upland plant communities are identified as salt bush scrub, shadscale scrub and sagebrush/bitterbrush. Common small mammals, reptiles, and birds are distributed throughout these communities, as sampled by a 1978 wildlife inventory that included these habitat types.

Small mammals include black-tailed hare, Audubon cottontail rabbit, white-tailed antelope squirrel, Panamint kangaroo rat, long tail pocket mouse, canyon mouse, pinyon mouse, western harvest mouse, and desert wood rat. Coyotes are a common mammalian predator in these habitats.

Reptiles of these habitat types include sagebrush lizard, side-blotched lizard, desert horned lizard, western whiptail, western fence lizard, gopher snake, speckled rattlesnake, Mojave rattlesnake, and sidewinder.

Birds likely to breed in these communities include black-throated sparrow, Brewer's sparrow, sage sparrow, rock wren, blue-gray gnatcatcher, rufous-sided towhee, chipping sparrow, Say's phoebe, Bewick's wren, and house finch. The three sparrows are species of interest because they are considered sagebrush obligates and may be declining range-wide as a result of loss of sagebrush habitat, although in this area they are known to breed in other desert shrub communities. Upland game birds - chukar (non-native), California quail, and mourning dove may reside and breed near water sources, in particular along the foothills of the White Mountains.

The area is used by winter resident raptors including Cooper's hawk and rough-legged hawk, and breeding resident species including northern harrier, red-tailed hawk, golden eagle, prairie falcon, barn owl, and great horned owl.

Sage grouse are not known to occupy habitat within any of these allotments and no seasonally important sage grouse habitats (breeding, late brood-summer, fall or winter) have been identified within any of these allotments. The Lone Tree, Marble Creek and western portion of the Bramlette allotment are located within the White Mountains Population Management Unit (PMU) as identified in the "Greater Sage-Grouse Conservation Plan for the Bi-State Plan Area of Nevada and Eastern California" (2004). The Blind Springs and western portion of the Bramlette allotment are located within the South Mono PMU. Sagebrush habitats within these allotments may serve as potential connectivity or refugia habitat for breeding populations within the White

Mountains and South Mono PMUs; however, telemetry studies and field surveys to date have not detected such movements or use.

Mule deer primarily use portions of the Blind Springs, Marble Creek, and Hammil Valley allotments for winter range. The sagebrush/bitterbrush sites within these allotments provide critically important forage and cover for mule deer. Water sources are very unevenly distributed across these allotments and in combination with deep snow conditions in some winters forcing mule deer to concentrate on limited sagebrush/bitterbrush areas east of Highway 6. Ensuring sufficient forage is maintained on bitterbrush after grazing by livestock is essential to survival of several hundred mule deer, especially across the Marble Creek alluvial fan.

- *Riparian*

The streams and springs (see Wetland/Riparian section above) provide highly productive habitat, of lesser acreage, for many of the species mentioned under the Upland areas. In addition, some songbird species are dependent on these communities for breeding and foraging. Songbirds in this group include Bewick's wren, black-headed grosbeak, black-throated sparrow, blue grosbeak, Brewer's blackbird, brown-headed cowbird, bushtit, California quail, Costa's hummingbird, house finch, lazuli bunting, MacGillivray's warbler, mourning dove, sage sparrow, song sparrow, spotted towhee, and warbling vireo. The three sparrows are species of interest because they are sagebrush obligates and may be declining range-wide as a result of sagebrush habitat loss.

<u>Adobe Valley and Mathieu Allotments</u>

- *Uplands*

For wildlife habitat identification purposes the following vegetation types are found in the proposed action area: valley bottom sagebrush, sagebrush/bitterbrush, pinyon woodland, burned areas, and sprayed sagebrush. Common small mammals, reptiles and birds are distributed throughout these habitat types. The 1978 wildlife inventory included sampling stations in some of these habitat areas.

A sprayed sagebrush/bitterbrush area undergoing recovery from herbicide application in the early to mid 1960's was sampled for small mammals with the following species documented: Great Basin pocket mouse, Ord kangaroo rat, Panamint kangaroo rat, deer mouse, and dark kangaroo mouse. A sprayed valley bottom sagebrush site undergoing recovery from a similar herbicide application provided the following species: pygmy rabbit, least chipmunk, dark kangaroo mouse, Great Basin pocket mouse, deer mouse, pinyon mouse, and sagebrush vole. Assortments of carnivore predators also occur within all habitats mentioned and include those from the small bodied long-tailed weasel to the bobcat.

Reptiles found in one or more of these habitat types would include sagebrush lizard, desert horned lizard, western fence lizard, gopher snake, common kingsnake, and western rattlesnake.

Birds likely to be found and/or breed in the shrub habitat types are sage sparrow, vesper sparrow, Brewer's sparrow, horned lark and sage thrasher. The sage sparrow and Brewer's sparrow are species of special interest because they are considered sagebrush obligates and may be declining range-wide due to the loss of sagebrush habitat.

The area is hunted by Cooper's hawk, red-tailed hawk, prairie falcon, barn owl and great-horned owl to name only a few of the resident or migrant raptorial species.

Mule deer primarily use the entire proposed action area as a migration route to and from the Sierra Nevada for summer and winter habitats. The sagebrush/bitterbrush areas within these allotments provide critically important forage along with thermal and hiding cover as they move to and from the Sierra Nevada. Since water sources are very unevenly distributed across these allotments and in combination with deep snow conditions in some winters, deer are forced to concentrate in limited sagebrush/bitterbrush sites, particularly in the Granite Mountain and Benton Range areas. Ensuring sufficient forage is maintained on bitterbrush after livestock grazing is essential for migrating and some resident mule deer.

There are no substantive livestock grazing use practices known to be causing a measurable problem with habitat conditions for the species mentioned above.

Sage grouse use of habitat within the South Mono Population Management Unit (PMU), which encompasses the Adobe Valley and Mathieu allotments, is known from monitoring strutting grounds (leks) during the breeding period, from individual radio collared grouse located over 1 to 2 year periods as part of studies undertaken by different investigators since 1984, and from field surveys. No sage grouse are currently known to use these two allotments for seasonally important habitats (breeding, late brood-summer, fall or winter). Two breeding populations are recognized in the PMU, Long Valley and Parker. The Granite Mountain area, located north of the Adobe Valley and Mathieu allotments, is treated as a breeding complex within the larger context of the Long Valley breeding population, but it is unknown if sage grouse using the active lek at Gaspipe interact with grouse using the leks in Long Valley proper, or the adjacent Parker or Bodie Hills breeding populations. An active lek on Indian Meadows (private land) within the Symons allotment just north and west of the Adobe Valley and Mathieu allotments, along Adobe Creek was documented from 1984 through 2000. No sage grouse have been documented on this lek in the last 8 years. This decline in use at the Indian Meadows lek coincided with both detection and increased attendance at the Gaspipe lek, however, the actual relationship between these two leks is unknown. The decline in lek attendance at Indian Meadows also coincided with decreased irrigation and management of the meadows associated with the collapse of livestock operations on Adobe Ranch. In addition, no sage grouse have been encountered anywhere in the entirety of Adobe Valley during the same period despite the presence of sign detected during rangeland health and other field surveys. With the exception of 1 marked individual, sage grouse captured at Parker Meadows and in Long Valley proper, according to a substantial number of telemetry locations recorded over the years, have failed to travel the most likely routes through the Mono Basin or over the Glass Mountains, respectively, into Adobe Valley. Upland habitat conditions for sage grouse in the allotments in Adobe Valley are good and have an overall physical appearance of providing substantial overhead and lateral cover from native shrubs and

grasses. Sagebrush (*Artemisia tridentata* ssp. *vaseyana, A. tridentata* ssp. *wyomingensis* and *A. tridentata* ssp. *parishii*) is the predominant shrub in the allotment with grasses such as indian rice grass (*Achnatherum hymenoides*), desert needlegrass (*Achnatherum speciosum*), needle and thread (*Hespirostipa comota*), western needlegrass (*Achnatherum occidentalis*), and Thurber's needlegrass (*Achnatherum thurberianum*) providing substantial amounts of additional cover under the shrubs. From a habitat perspective, there are no apparent deficiencies in the native upland vegetation species cover, composition or physical condition that would directly contribute to sage grouse not utilizing these allotments. In contrast, current information suggest that a general lack of meadows for breeding and late brood-summer habitat is likely the primary factor limiting sage grouse use in grazing allotments in Adobe Valley. Sagebrush habitats within these allotments may also serve as potential connectivity or refugia habitat for breeding populations within the White Mountains and South Mono PMUs; however, as stated above telemetry studies and field surveys to date have not detected such movements or use.

- *Riparian*

Since the amount of actual riparian habitat is extremely limited (e.g. along Adobe Creek), no inventories of wildlife species diversity was undertaken during the inventories in the late 1970's. However, some of the songbird species found along riparian sites like nearby Marble Creek (see EA # 170-02-04) would be expected to occur along the limited riparian habitat on Adobe Creek. There are no substantive livestock grazing use practices known to be causing a measurable problem with wildlife habitat conditions on Adobe Creek.

- *Ephemeral Alkali Pools (Adobe Valley allotment)*

In the years when these alkali lowland pools have sufficient water from snowmelt, shore birds like the American avocet will breed and raise young birds among the adjacent alkali meadows. The alkali pools provide a rich source of invertebrate species (e.g. fresh water shrimp) as food for the avocets and other passing shore bird species for several weeks in the spring and early summer.

2. Environmental Consequences

a. Impacts of Proposed Action

The overall habitat quality of these allotments would be maintained or slightly improved with implementation of the proposed terms and conditions because they are designed to help protect and sustain rangeland health which includes wildlife habitat, and to keep the ecosystem functioning properly. The principal reason for this is a lack of concentrated use in any one area of an allotment which reduces significant alteration impacts to soil and vegetation, thus maintaining more intact wildlife habitats.

The overall habitat quality, reflected in the condition of vegetation communities, should be improved from their current conditions with implementation of the proposed terms and conditions. Species guilds within the rodent and songbird groups should gain the most

immediate benefit from improvement in the availability of food resources and cover. Mule deer habitat should receive some improvement in the availability of current year leader growth (forage) for migrating mule deer. The current condition of the vegetation communities, particularly in the Adobe Valley allotment, will continue to provide the level of quality and vegetation species diversity necessary for meeting the basic conditions for sage grouse to occur. The overall effect on the very limited amount of riparian habitat would be positive but likely not measurable.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, the no action alternative would result in no new impacts. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000 amended the RMP. Terms and conditions would still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40 percent on the average which was determined to help maintain, protect, or improve rangeland health. Species dependent, for the most part, on riparian, like numerous species of song birds and small mammals would benefit due to some similarity in grazing use standards between the RMP and Central California S&Gs. Upland inhabiting animals and song birds would benefit the most within the Adobe Valley and Bramlette allotments where the amount of annual growth remaining after grazing on grasses, bitterbrush, and other shrubs would be the greatest, ensuring sufficient food (like seeds for graminivorous rodents and song birds and new bitterbrush leaders for mule deer) along with sufficient thermal and hiding cover.

c. No Grazing

No impacts to wildlife habitat conditions would occur from grazing since livestock would be completely eliminated from all allotments.

Overall wildlife habitat conditions would be improved, particularly in the immediate effect to species guilds within the rodent and songbird groups. Many rodent species would benefit over a relatively short period of time due to an increased food base, particularly from seed producing plant species. Granivorous rodents would likely benefit, over time, by an increased volume of seed producing plant species. Increased populations of rodents should benefit predatory species groups like canids and raptors. Other species guilds, like songbirds should benefit from restored riparian vegetation on the lower portion of Marble Creek. Also, songbirds, like Brewer's and Vesper sparrows, should benefit from the improved condition and availability of seed producing plant species. Mule deer habitat conditions would eventually attain their potential level of productivity as a food resource and for cover. Riparian habitat on Adobe Creek would be improved, but, again, the change would likely not be measurable.

The loss of grazing permits would likely lead to increased transfer of base property to development interests. This would result in both the direct loss of habitat on private lands to development as well as the indirect effects of disturbance on adjacent public lands associated with development. These habitat loss impacts would likely be concentrated on, or immediately adjacent to, the limited mesic/meadow habitats that are extremely important to a wide variety of species including small mammals, songbirds, mule deer and sage grouse.

3. References

Bureau of Land Management, BLM, Bishop Field Office. 1979. Benton Planning Unit. Unit Resource Analysis. Step II.

Bureau of Land Management, BLM, Bishop Field Office. 1980. Benton Planning Unit. Unit Resource Analysis. Step III.

Heath, S.K., G. Ballard and C. McCreedy. 2001. Eastern Sierra Riparian Songbird Conservation 1998-2000 Final Report. Point Reyes Bird Observatory, Contribution No.1002. Stinson Beach, California, USA.

Kondolf, G.M., J.W. Webb, M.J. Sale, and T. Felando. 1987. Basic hydrologic studies for assessing impacts of flow diversions on riparian vegetation: examples from streams of the eastern Sierra Nevada, California, USA. Environmental Management 11:757-769.

Nevada Department of Wildlife. 2004. Greater Sage-Grouse Conservation Plan for the Bi-State Plan Area of Nevada and Eastern California.

Threatened and Endangered Wildlife Species

The proposed action, no action, and no grazing alternatives would have no effect on threatened or endangered species because no federally listed threatened or endangered wildlife species are present on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments based on historical records and/or field monitoring.

V. WILD HORSE AND BURROS

1. Affected Environment

The Montgomery Pass Wild Horse Territory (MPWHT) established in 1971 encompasses land within the Adobe Valley allotments. The boundary of the territory is poorly defined, but does not include land within the Hammil Valley, Marble Creek, Mathieu, Bramlette, Lone Tree, and Blind Springs allotments. The Inyo National Forest is the lead agency for the management of the MPWHT.

In the mid to late 1970's the wild horses occupying portions of the Adobe Valley allotments were considered a peripheral group of a larger herd proposed for management as part of the Montgomery Pass Wild Horse Management Area (draft plan, May 20, 1979). At that time, Adobe Valley and the Cowtrack Mountain area were not considered key habitat for the horses, however, these areas were recognized as part of their entire territorial use area.

A Coordinated Resource Management (CRM) Plan was approved in June 1988 which documented present and potential issues, identified management objectives (wild horses and habitat), and determined monitoring needs. Rather extensive censuses, which document use areas and population dynamics (adults, yearlings, and foals), have been conducted annually since the approval of the CRM. John W. Turner, PhD, has been the principal researcher of these censuses.

The 2001 Census and Comments Report of Mr. Turner identified state several important changes in wild horse numbers, distribution and use that have occurred since 1988. Important excerpts from this report are presented below:

"Sine 1992, horse numbers have steadily increased in non-lion use areas and have gradually decreased in lion-use areas. This redistribution may also have been influenced by other factors, including changes in availability of water and preferred feed, climatic changes, and intensive outfitter presence in the summer range area in May/June (foaling/breeding period) since 1986. The latter may be of little current consequence since the horse bands intolerant of human presence vacated these areas years ago. A potential benefit of these changes is the habitat/feed recovery in the key summer range area, which has historically experienced some overgrazing. A potential disadvantage is that some recently established areas of at least seasonal (spring/summer) horse use lie outside of the designated MPWHT" (Emphasis added).

"In summary, changes in MPWHT horse distribution have occurred during the past 9 years, and assessment of how this will influence the future of horse numbers, distribution, range utilization, and the predator-prey relationship is warranted. The ratio of summertime horse numbers in historic summer range vs. other range areas has shifted from approximately 1.5 to 0.8 across the past 9 years. This is a very large shift" (Emphasis added).

This shift in spring/summer use areas refers to the increase of use in the Adobe Valley allotment. Although authorized livestock grazing use of the allotment is much reduced since 1992, due

primarily to permittee requested non- use and reduction in livestock numbers, there has been increased forage consumption by wild horses. The BLM's Management Framework Plan, signed in June 1982, set aside forage in animal unit months (AUMs) for wild horses amounting to 98 AUMs for the Adobe Valley allotment. Furthermore, within the last couple of years, there has been a shift of wild horse use into other parts of Adobe Valley which are not recognized as part of the MPWHT.

The acknowledged shift in use areas, period of use, and number of wild horses observed by Turner, as well as BLM, Bishop Field Office staff poses a clear potential for overgrazing and reduced ecological condition in the Adobe Valley allotment. In fall of 2007, one hundred and two wild horses, including both adults and foals, were counted by BLM biologists within the Adobe Valley area.

2. Environmental Consequences

a. Impacts of Proposed Action

There would be no negative impacts to wild horses by implementation of the proposed action. The proposed terms and conditions are designed to help maintain, protect, or sustain rangeland health to keep the ecosystem functioning properly. However, should wild horse numbers increase, period of use increase, and/or expansion of their use within these allotments occur, there would likely be a reduction in the amount of forage available to livestock, wild horses, and wildlife. There is potential for future degradation of ecological conditions of vegetation communities without management of the Montgomery Pass Wild Horses.

b. Impacts of No Action

For permits which contain terms and conditions that have incorporated Central California S&Gs, impacts of the no action alternative would be the same as the proposed action because both alternatives are very similar. The only difference between this alternative and the proposed action alternative is that terms and conditions developed from the Bishop Resource Management Plan (BLM 1993) and the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (BLM 2000), under current management, are applied broadly and uniformly across the allotments. No defined implementation guidelines exist nor are they tailored to address specific vegetation communities and/or resources on the allotments, as in the Proposed Action. For this alternative, there is a possibility under certain situations that BLM and the permittee may need to work together to define allotment specific applications of the rangeland health standards and guidelines.

For the permit which does not contain Central California S&Gs within the terms and conditions, the no action alternative would not create negative impacts to the wild horse population. The no action alternative and current terms and conditions would be in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993. However, the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (Central California S&Gs) approved on July, 13, 2000 amended the RMP. Terms and conditions would

still need to be developed to reflect changes from the Central California S&Gs. For example under current management, grazing use defined within the terms and conditions is not to exceed 60 percent on key forage species. Under the Central California S&Gs, forage utilization on key perennial species is not to exceed 40 percent on the average which was determined to help maintain, protect, or improve rangeland health.

c. No Grazing

No livestock grazing would potentially have a positive affect on the wild horse herd by eliminating a competitor of forage. Currently, horses roam at will, utilize steeper and more remote areas, travel greater distances to and from water than livestock, and are able to use rangelands at any time. Presently, wild horses have expanded their use areas beyond what has occurred since 1992. This could pose some negative impacts to other resources and livestock operators. The wild horse population number may potentially increase as additional amounts of forage become available to them.

3. References

Benton-Owens Valley Planning Unit (Draft Environmental Impact Statement) 1981.

Montgomery Pass Wild Horse Territory (Coordinated Resource Plan) June, 1988. MPWHT Wild Horse Census Summary and Comments, 2001.

W. CUMULATIVE IMPACTS

Introduction

Current conditions in the project area result from a multitude of natural events and human actions that have taken place over many decades. Cumulative effects are defined as the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR § 1508.7). A description of current conditions inherently includes the effects of past actions and serves as a more accurate and useful starting point for a cumulative effects analysis than by "adding up" the effects of individual past actions. "Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." (CEQ Memorandum 'Guidance on the Consideration of Past Actions in Cumulative Effects Analysis' June 24, 2005.) By comparing the "no action" alternative (current condition) to the action alternatives, we can discern the "cumulative impact" resulting from adding the "incremental impact" of the proposed action to the current environmental conditions and trends. The geographic scope of the cumulative impact analysis for this environmental assessment encompasses the public lands administered by the Bishop Field Office. This geographic scope was chosen because of the unique ecotone of public lands composing two distinct habitat types of Great Basin and Mojave Desert rangelands along

the eastern Sierra front range. It is expected that the geographic scope of impacts would be confined to this region.

Regional Impacts

At a regional level, numerous resource disturbing activities in the Owens Valley and throughout the Bishop Field Office area have created impacts similar to or greater than livestock grazing. These activities include paved and unpaved road development, Off-Highway Vehicle (OHV) activities, residential and commercial development, and fire.

The development of roads and trails throughout the region originates from the area's historic settlement at the turn of the twentieth century when access was needed to develop the area's resources and transport goods/services. Settlers, miners, ranchers, merchants, etc. developed a region of small communities and road networks to meet daily sustenance needs. Throughout the latter 20th century, the region evolved from an agrarian economy to its present day tourism. This altered traditional access use from survival and necessity to one that became recreation based, mostly motorized, although mountain biking, hiking and horseback riding may use similar routes. The thousands of miles of paved and unpaved roads in the region tend to be permanent conversions of sites and constitute a total loss of the site productivity. Associated infrastructure needs i.e. power lines, rest areas, etc. expand the permanency and loss of rangeland habitat. Recreation use, such as OHV activities can be short duration, but are generally repeated throughout the year reflecting the tourist value access continues to provide. Sometimes unauthorized routes are created near the rural communities by horses and/or vehicles.

The BLM and the Inyo National Forest have embarked on motorized access efforts throughout the 1990s to implement route designations to manage for environmental issues and recreation needs. These efforts have led to localized rehabilitation projects improving various habitats and scenic vistas, mostly on BLM land. Additionally, BLM works with the counties to reduce and control private subdivision proliferation and trespass onto adjoining public lands.

The dozen or so communities that occupy the Bishop Field Office area have generally been stable and small, although the Mammoth Lakes community has built higher-end homes and increased their housing density in the last decade. Obviously, these permanent alterations have irreversibly committed land to housing development, fragmenting plant/animal habitat, altering scenic vistas, etc. Overall, the greatest potential development impact to habitat would occur from housing development on remaining scattered private land tracts throughout the region. Increased property values and a housing shortage have created a strong real estate market in the eastern Sierra. This has prompted landowners to pursue subdivision development, reducing small acreages of habitat in several locations.

Construction activities, road maintenance, vehicle transport, and livestock use operations are common vectors or site modifications that can move invasive/non-native species. Potential long-term cumulative impacts of the proposed action if weed densities increase, include a reduction in native plant cover and vigor (below and above ground production), increased erosion leading to increased germination of invasive weed seed (Evans and Young 1972), a reduction in

mychorrhizal populations, and increased fire frequency. Eastern Sierra plant communities have experienced increased weed invasions in the past five years due to increased precipitation levels and likely increases in atmospheric nitrogen deposition (Dukes and Mooney, 1999). If this trend continues without commensurate control methods including using early season grazing (pre-seed set), weed proliferation could be exacerbated.

There would not be substantive cumulative impacts to the local or regional economy of Inyo or Mono County from the implementation of the proposed action. Cumulative impacts to low income or minority populations from past, present, and reasonably foreseeable public or private actions including any actions on non federal lands would be extremely low and would not have disproportionate impacts on other segments of the population.

Unpredicted wild or arson fire can have large-scale impacts to the environment, wildlife, and to persons that use public land. These impacts include permanent changes to vegetation communities due to slow fire recovery, increasing non-native invasive populations, and loss of wildlife habitat. Fire that occurs in grazing allotments has the potential to devastate the vegetation and forage base for livestock. Therefore, BLM may temporarily close the allotment until determined appropriate for livestock grazing. If this were the case, livestock operators may be forced to find alternative forage, affecting their economic operations adversely depending on local circumstances.

Site-Specific Impacts

For the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Bramlette, Lone Tree, and Blind Springs allotments, grazing issues and impacts have been minimal due to low livestock use, few facilities to attract and concentrate cattle use, and livestock preference for forage in the lower reaches of the allotments. The low occurrence of sensitive resources such as threatened and endangered plant/animal species, cultural resources, riparian areas, etc., reduces the likelihood of future adverse impacts as well.

The physical structure and ecological function of plant communities are expected to maintain or improve resulting from the lower vegetation utilization standard on key forage species. Improved condition of native bunch grasses and forbs would provide an increased forage base for rodents and passerine birds across all allotments. Populations of these smaller animals should increase in average to above average precipitation years which provide an improved food base for predators. Habitat conditions, both forage quality/quantity and plant physical structure for mule deer and other large mammals, would be improved from the current situation.

The Montgomery Pass Wild Horse Territory population and historic use areas (especially the “key summer range”) have expanded from that recognized in 1971 (passage of the Wild Free Roaming Horse and Burro Act). Grazing by wild horses occur unregulated as to basic principles of range management i.e. proper time/season, amount of use, duration of use, and area of use. Livestock grazing is regulated and more closely follows acknowledged principles and practices of the science/art of rangeland management.

Given the increased wild horse population and their expansion of use areas, it is reasonable to conclude that rangeland vegetative resources have been impacted by horse use over time on the Adobe Valley allotment and surrounding lands. That is not to say that livestock grazing has not been a factor, however, livestock grazing use on the Adobe Valley allotment has diminished considerably from historic use due to improved range management. If a reduction of wild horse numbers through capture and subsequent adoption or placement in a wild horse sanctuary does not occur in the near term, the overall condition and amount of range vegetation could diminish which may affect wild horses, wildlife, and livestock grazing in the future.

Conclusion

The addition of the Proposed Action to the existing environment at the site-specific allotment locations addressed in this EA and within the eastern Sierra region as a whole would not contribute to significant impacts on the human environment. The cumulative impacts of conducting allotment assessments and issuing grazing permits for this EA's allotments with the proposed terms and conditions would help to maintain or improve rangeland health conditions incrementally and positively. In effect, the addition of the Proposed Action would beneficially improve rangeland health conditions at a local level and further BLM's objective to complete its rangeland condition improvement strategy for the remainder of public lands as well. As a result, improvements in plants and animal habitat, water quality, cultural resources, etc. would occur at local and regional levels creating overall positive cumulative impacts.

1. References

Evans, R.D. and J.A. Young. 1972. Microsite requirements for establishment of annual rangeland weeds. Weed Science. 18:154-161

Dukes, J.S. and Mooney, H.A. 1999. Does global change increase the success of biological invaders? Trends in Ecology and Evolution. 14:4:135-139.

Jeff Putman and Genny Smith (editor). 1995. Deepest Valley: Guide to Owens Valley, Its Roadsides and Mountain Trails (2nd Edition). University of Nevada Press, Reno, NV. pp. 231-268.

Chapter 4:
CONSULTATION AND COORDINATION

Livestock Operator Consultation, Cooperation, and Coordination

The following timeline summarizes actions BLM has taken to consult, cooperate, and coordinate with affected livestock operators on the Standards and Guidelines:

On January 27, 1997, the Bishop Field Manager sent a letter to the three permittees at that time which grazed these seven allotments. The letter stated, "as a requirement of implementing the Bureau's Healthy Rangeland Standards, regulations require that mandatory terms and conditions and other terms and conditions (43 CFR Subpart 4100, Section 4130.3-1 and Section 4230.3-2 respectively) are to be included in all permits." The letter also stated, "Another requirement of the regulations are Standards and Guidelines (S&Gs). As of this date, the BLM in California has not completed development of statewide S&Gs and has requested that the Secretary of the Interior grant a 6 month extension to allow their completion and adoption. Therefore the Fallback Standards and Guidelines, as stated in the regulations, will not go into effect on February 12, 1997 if the extension is granted."

On January 14, 1998, the Bishop Field Manager sent a letter to the three permittees at that time which grazed these seven allotments. It stated, "enclosed is a copy of the National Fallback Standards and Guidelines (S&Gs). These S&Gs will remain in effect until the California BLM Healthy Rangelands Environmental Impact Statement is completed in 1998." Enclosures with the letter included Background, Fundamentals of Rangeland Health, S&Gs Basic Concepts, and Fallback S&Gs.

On December 15, 1998, the Bishop Field Manager sent a letter to the three permittees who graze these three allotments which explained the rangeland health allotment assessment requirements.

On December 11, 2000, the Bishop Field Manager sent a letter to the three permittees at that time which grazed the seven allotments and included a copy of the Central California Standards and Guidelines. The letter invited the permittees to two scheduled meetings to ask any questions or present concerns they may have had with the Central California Standards and Guidelines.

Personal Communication

A-B Partnership. 2007. Livestock Operator. BLM and A-B Partnership discussed livestock grazing on the Bramlette allotment. A-B Partnership explained the livestock management for the allotment.

Belenky, Lisa T., Staff Attorney, Center for Biological Diversity (CBD). January 30, 2007, Ms. Lisa Belenky requested by telephone to be notified when draft environmental assessments for grazing permit renewals were posted on the Bishop BLM website. On May 15, 2007, BLM spoke with Ms. Belenky of CBD via telephone. Ms. Belenky requested that BLM send her all

proposed decisions on the grazing allotment renewals from the Bishop Field Office via email. On June 11, 2007, BLM received a phone message from Ms. Belenky. Ms. Belenky again requested to be informed when draft EAs are posted on the BLM website. Ms. Belenky stated she would specifically request proposed decisions on particular allotments to be sent to her. BLM replied via email to Ms. Belenky, acknowledging her requests. However Ms. Belenky did not provide BLM with a listing of specific allotments that CBD was interested in becoming an "interested public" in accordance with 4100.5. On January 18, 2008, per Ms. Belenky's request, BLM sent her via postal mail a copy of the Bishop RMP 1993, RMP EIS Volume I & II, Bodie-Coleville Draft Wilderness Recommendation Final EIS 1987, and the Vehicle Access Strategy Plan.

Burke, Thomas D. 1998. Owner and principal investigator of Archaeological Research Services, Inc. BLM and Thomas discussed grazing impacts to archaeological resources. Refer to Chapter 3, Cultural Resources for further information and results.

California Native Plant Society, Bristlecone Chapter. 1999. BLM invited the Bristlecone Chapter to the Rangeland Health Assessments that began in 1999. Members from the Chapter participated at different times between 1999 through 2003. BLM and Bristlecone Chapter also discussed livestock grazing and invasive, non-native species.

Connor, Michael J. California Science Director, Western Watersheds Project (WWP). On February 29, 2008, BLM responded via e-mail to Dr. Connor of WWP confirming the addition to the BLM list of interested public. BLM sent Dr. Connor a link to the BLM Bishop website to locate the total list of grazing allotments. On March 6, 2008, Dr. Connor of WWP sent a follow-up letter to the February 28, 2008 letter and requested to be added to the list of "interested public" for all grazing allotments and grazing management decisions from the Bishop Field Office.

Fell, Chuck. 1995. Bodie State Historical Park. BLM and Chuck discussed grazing impacts to historic buildings and resources. Refer to Chapter 3, Cultural Resources for further information and results.

Lone Tree Cattle Company (LTCC). 2007. Livestock Operator. BLM and LTCC discussed livestock grazing on the Hammil Valley, Marble Creek, Mathieu, Adobe Valley, Lone Tree, and Blind Springs allotments. LTCC explained the livestock management for the allotment. BLM and LTCC discussed the environmental assessment process and Rangeland Health Standards and Guidelines.

Milovich, George. 1999 through 2007. Agricultural Commissioner Inyo-Mono Counties. BLM and George discussed the process for issuing the full processed 10-year grazing permits. Also, BLM explained the general changes in terms and conditions to the expiring grazing permits due the incorporation of the Central California Standards for Rangeland Health and Guidelines for Livestock Grazing (USDI 2000). Annual Crop and Livestock Reports were obtained annually by visiting the Counties of Inyo and Mono Agriculture Department located in downtown Bishop.

Parker, Jim and Slates, Mike. 2000 and 2007. Great Basin Unified Air Pollution Control District (GBUAPCD). BLM and Jim discussed the environmental assessment (EA) livestock grazing authorizations to be conducted in the future. BLM received language from the GBUACD to be included within the EA's along with maps of the federal non-attainment/maintenance areas. BLM received an updated federal non-attainment/maintenance area map from Mike in 2007.

Taylor, Gary. 2007. Livestock Operator. BLM and Gary discussed livestock grazing on the Adobe Valley allotment. Gary explained the livestock management for the allotment.

Area of Critical Environmental Concern (ACEC)

Previous consultation with the following agencies, which annually review the implementation and monitoring components of the ACEC plan included:

U.S. Fish and Wildlife Service
Los Angeles Department of Water and Power (LADWP)
University of California, Natural Reserve System
California Department of Fish and Game

Native American Communities

There are 11 Native American communities in the Eastern Sierra region, eight of whom are federally recognized, which reside near or inhabited aboriginal homelands within one or more of the allotments.

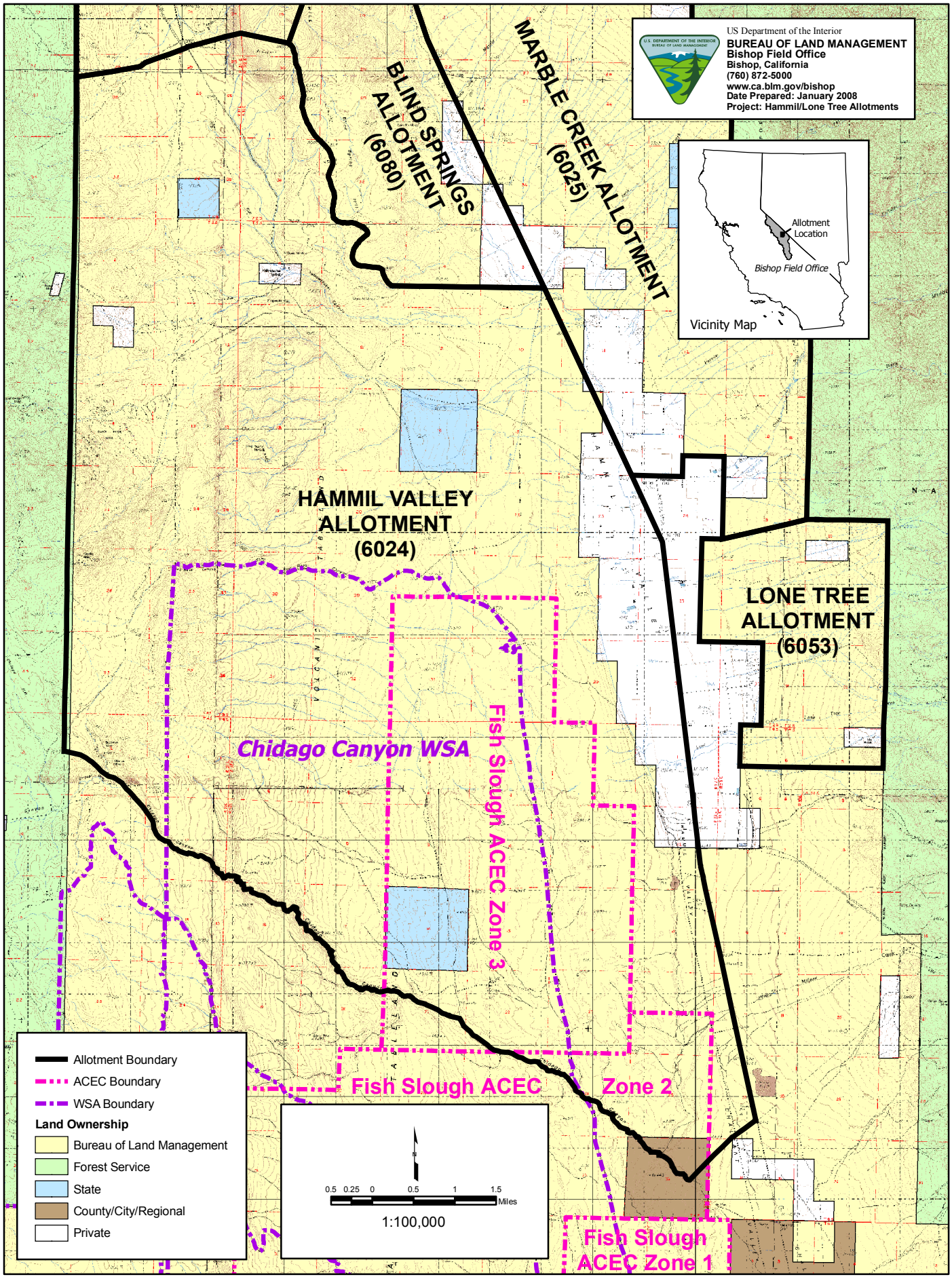
During the initialization of the allotment assessment process in FY 1999, seven Native American communities residing within the area administered by the Bishop Field Office– Bridgeport, Mono Lake, Benton, Bishop, Big Pine, Ft. Independence, and Lone Pine – were contacted by letter (January 11, 1999), with a follow-up phone call, to determine if there were any Native American concerns with the grazing program and if they would like to participate in the allotment assessment process. The communities either said that there were no impacts or decided not to comment/participate. None indicated a desire or need to participate in the assessment process. (Consultation log available for FY 1999)

Each of the local tribal offices was contacted again by phone on 11/30/00 and the letter of January 1999 was sent to them again (fax). Several phone calls were made to each Tribe to follow up after they received the letter. Various individuals stated some general concerns which are addressed in Chapter 3, Native American Cultural Values; but again, they stated that there are no direct specific impacts to their communities or to their community members by the grazing program. (Consultation log available for FY2001)

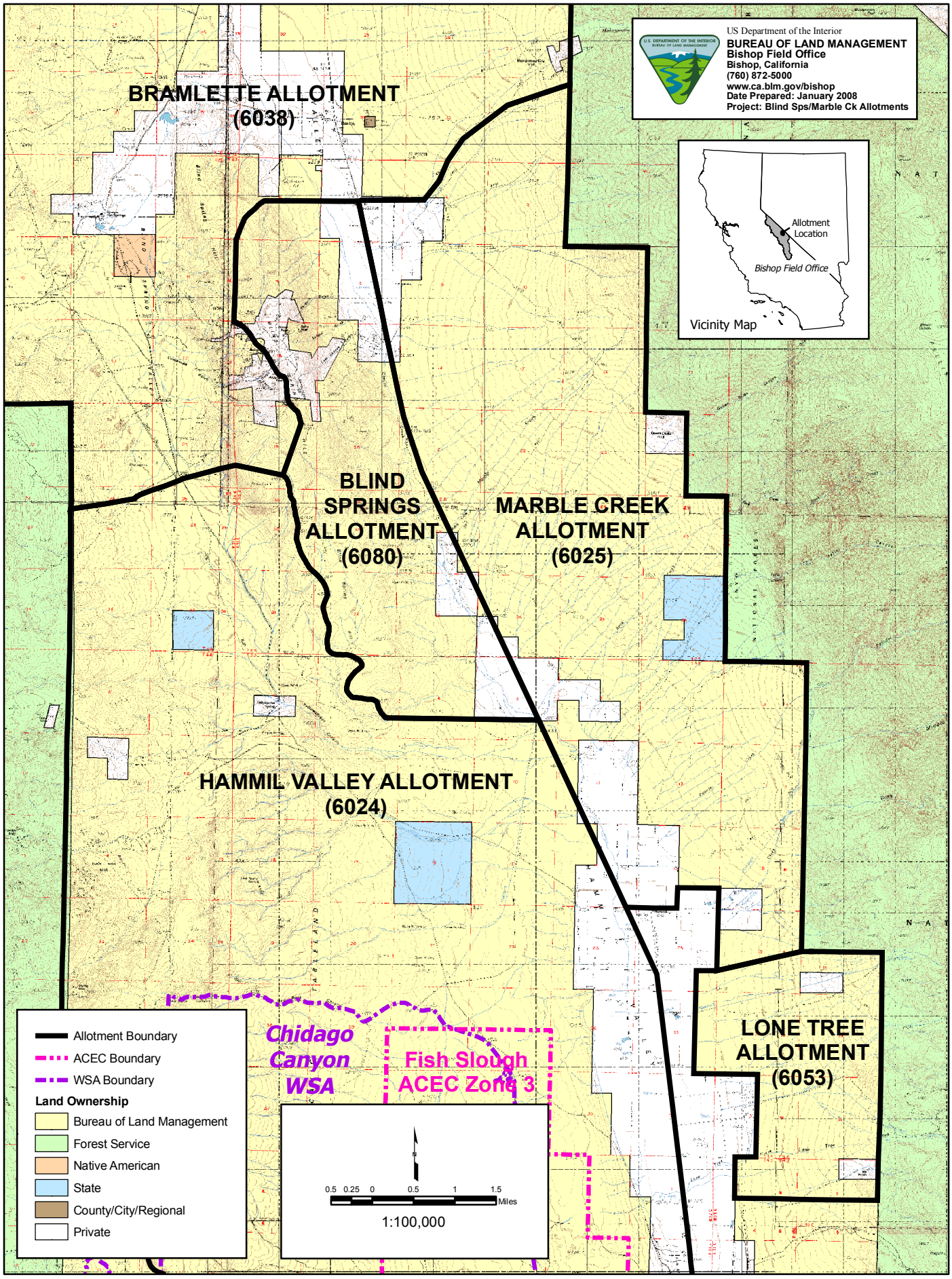
Environmental Assessment Preparers

Jeff Starosta	Rangeland Management Specialist
Anne Halford	Botanist
Steve Nelson	Wildlife Biologist/GIS Coordinator
Diana Pietrasanta	Recreation/Wilderness
Kirk Halford	Archeologist
Terry Russi	Supervisory Wildlife Specialist
Joe Pollini	Assistant Field Manager

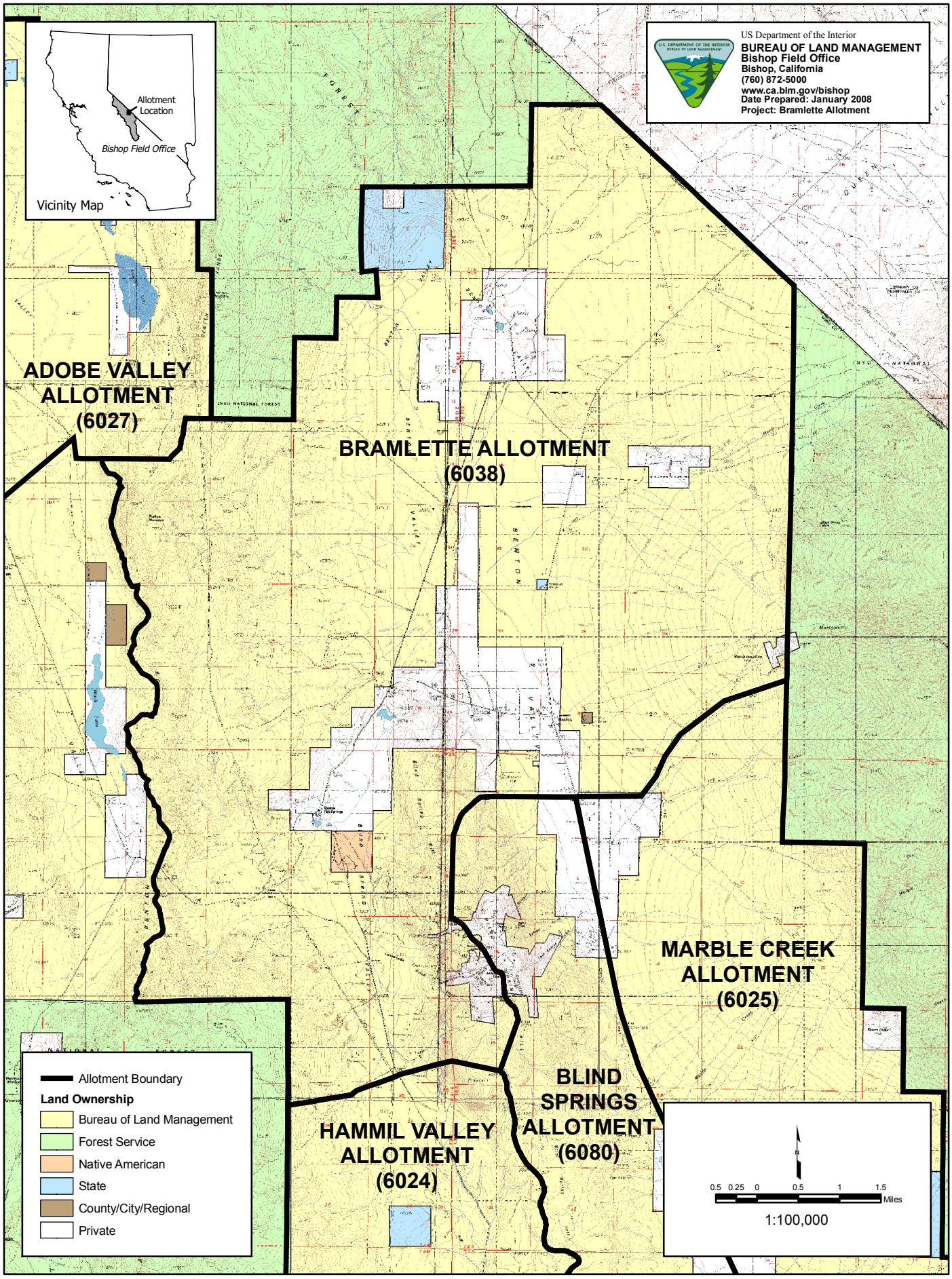
Chapter 5:
APPENDICES



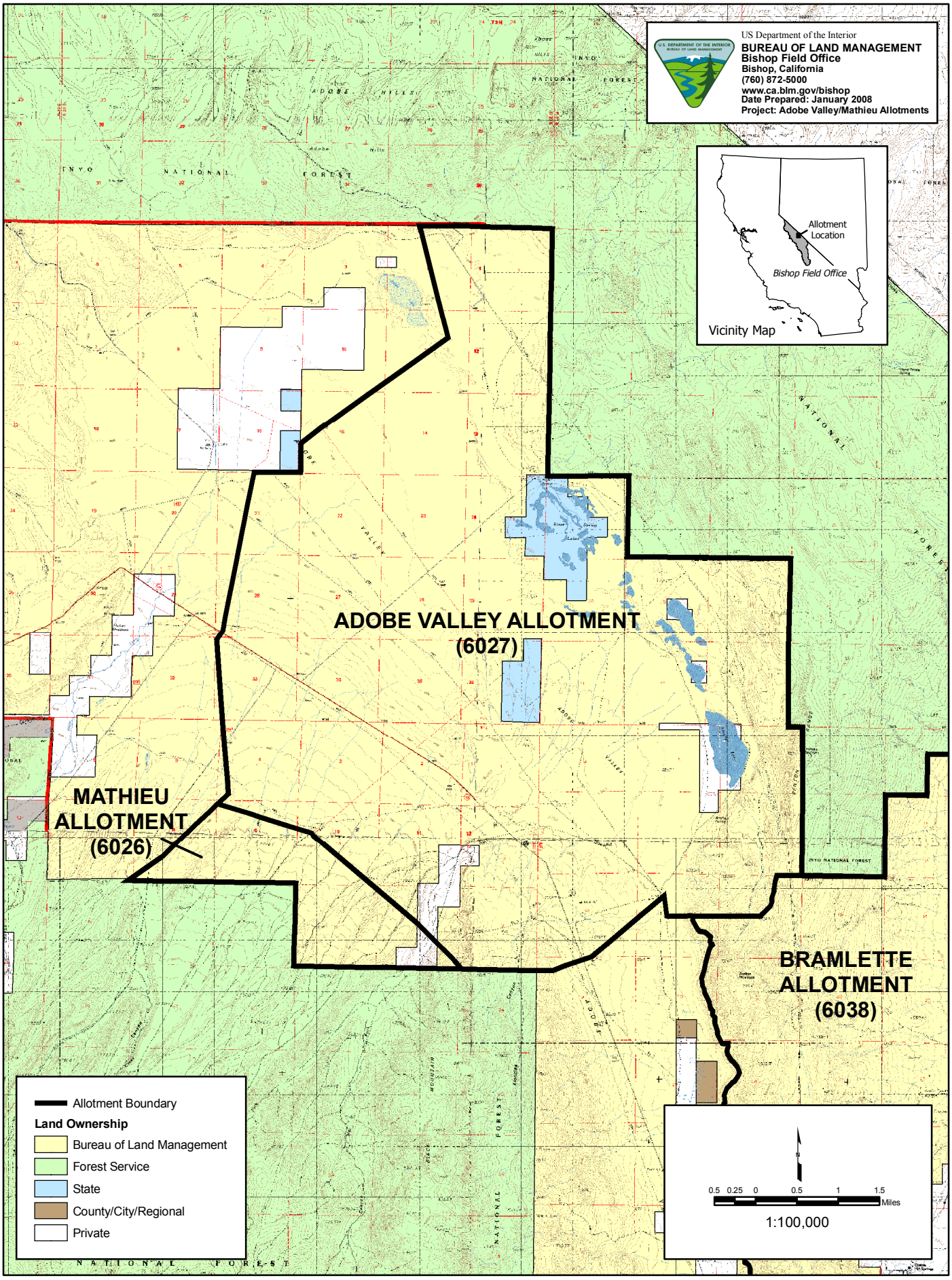
Map 1. Overview of the Hammil Valley and Lone Tree Allotments, Mono County, California. Bureau of Land Management, Bishop Field Office, Benton Management Area.



Map 2. Overview of the Blind Springs and Marble Creek Allotments, Mono County, California. Bureau of Land Management, Bishop Field Office, Benton Management Area.



Map 3. Overview of the Bramlette Allotment, Mono County, California.
Bureau of Land Management, Bishop Field Office, Benton Management Area.



Map 4. Overview of the Adobe Valley and Mathieu Allotments, Mono County, California. Bureau of Land Management, Bishop Field Office, Benton Management Area.