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United States Department of the Interior
Bureau of Land Management

Grand Canyon-Parashant National Monument

Environmental Assessment

Mt. Logan Allotment Grazing Permit Renewal

EA-AZ-130-2007-0033

I. INTRODUCTION

This Environmental Assessment (EA) analyzes the proposed grazing permit renewal for the Mt. Logan allotment. The action culminates an evaluation conducted on the allotment under the Arizona BLM Standards for Rangeland Health and Guidelines for Grazing Management (S&Gs). In addition, this EA looks at the present allotment management, and determines if current grazing management practices would maintain desirable conditions and continue to allow improvement of public land resources where that potential has been identified, or if changes in grazing management for this allotment are necessary. This EA is intended to evaluate the findings of the Mt. Logan assessment as it relates to vegetation conditions and resource values in the allotment. This is done in an effort to balance demands placed on the resources by various authorized uses within the allotment.

Analyses of allotment monitoring data indicate that two key areas are in upward trend, and two are in downward trend. Species composition data suggest vegetation cover objectives are being met or are progressing toward Desired Plant Community objectives. The Interdisciplinary Assessment Team (IAT) determined during the assessment process, that resource conditions on the allotment are meeting Standards for Rangeland Health.

Purpose and Need

The purpose and need of this action is to renew the grazing permit associated with the Mt. Logan (#5218) grazing allotment for a period of ten years. The Mt. Logan grazing allotment is located approximately 55 miles south of Colorado City, Arizona within the Grand Canyon-Parashant National Monument and Arizona Strip District. The allotment is within the boundaries of T. 34 and 35N., R. 7 and 8W. Elevations range from 4,800' in the grassland valleys of lower Tuweep to 7,600' on the ponderosa pine slopes of Mt. Logan.

Conformance with Land Use Plan

This proposal is found to be in conformance with the Arizona Strip District Resource Management Plan (RMP) dated January 1992, as amended April 1997. The RMP adopted

resource specific activity plans from the Vermillion Grazing EIS (April, 1979), including allotment management plans. The Vermillion Grazing EIS proposed that the Mt. Logan allotment should continue to be managed under the implemented grazing rotation.

Grand Canyon Parashant National Monument

The majority of Mt. Logan allotment is within the Grand Canyon Parashant National Monument. Designation of the monument does not, in and of itself, require modification of the current grazing practices. The presidential proclamation states that "Laws, regulations, and policies followed by the Bureau of Land Management (BLM) in issuing and administering grazing leases on all lands under its jurisdiction shall continue to apply…". However, Interim Management Guidelines (IM 2002-008, October 11, 2001) have been established to guide management while current planning efforts are under way. These guidelines postpone the implementation of new range improvement projects (fences, pipelines, vegetative treatments) until a new Resource Management Plan (RMP) is completed. Under the Antiquities Act, BLM must protect objects identified in the presidential proclamations that establish national monuments. Therefore, if BLM determines, through the current planning process or otherwise, that any monument objects are harmed by current management, then management (including permit conditions) will be modified accordingly.

BLM is in the process of revising the resource management plan for the Arizona Strip District. During the planning process, lands in the southern portion of the Mt. Logan Allotment have been identified as having wilderness characteristics, and those characteristics are currently being considered for management that would maintain them. The proposed action may contribute to maintaining or enhancing a higher a degree of naturalness by improving and promoting the health of native flora. In the long-term, these effects would be minor. Therefore, the proposed action should not preclude future management consideration of these areas for maintaining wilderness characteristics. However, until a Record of Decision is signed for a new RMP, the area is managed in accordance with the 1992 RMP, as amended.

Relationships to Statutes, Regulations, or other Plans

This action is in conformance with Arizona's Standards and Guides, which were developed through a collaborative process involving the Arizona Resource Advisory Council and the Bureau of Land Management State Standards and Guidelines team. The Secretary of the Interior approved the Standards and Guidelines in April 1997. The Decision Record, signed by the BLM Arizona State Director (April 1997) provided for full implementation of the Standards and Guides in all Arizona BLM Land Use Plans

Grazing permit renewals are also provided for in 43 CFRs 4100 where the objectives of regulations are"....to promote healthy, sustainable rangeland ecosystems; to accelerate restoration and improvement of public rangelands to properly functioning conditions; to promote the orderly use,....; to establish efficient and effective administration of grazing of public rangelands;....", and as provided for in the Land Use Plans in accordance with multiple-use objectives,

requirements and provisions of established laws, regulations and BLM policies incorporating Desired Plant Community (DPC) objectives using the Ecological Site Index approach.

Grazing management practices of the Mt. Logan allotment are in conformance with Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. These practices are intended to assist management in meeting the Standards for Rangeland Health.

Renewal of the Mt. Logan permit conforms to the President's National Energy Policy and would not have adverse energy impacts. This action would not deny energy projects, withdraw lands, close roads or in any other way deny or limit access to mineral materials to support energy actions.

Issues raised relating to Standards for Rangeland Health

Identification and discussion of issues for the Mt. Logan S&G evaluation and this assessment were accomplished by the Rangeland Resources Team (RRT), Interdisciplinary Assessment Team (IAT), and livestock permittee during scoping on October 27, 2004. A field trip to the allotment was also conducted on June 8, 2005. Specific issues brought forward for further analysis in this EA are as follows:

- Poor ground cover and small gullies in valley bottom at east end of the Head of Tuweep pasture.
- Lack of understory and vegetative diversity at this same location.

Other issues recognized during this process but not analyzed further in this EA are listed below.

- *Trash from large camping groups;* Trash from camping groups is being left at campsites on the allotment. A collective effort between BLM resources staff, law enforcement, AGFD, and the permittee will continue to work on this issue. This issue is being coordinated with the BLM recreation program.
- *Net wire along boundary fence approximate to the Lion wildlife catchment should be removed to mitigate safe wildlife access to drinker.* The BLM Rangeland Management Specialist, AGFD Wildlife Manager and the livestock permittee will collaborate on an individual project basis. They will work together to alleviate the wildlife access problems without compromising the effectiveness of the development for managing livestock. In July 2004, the net wire approximate to the Lion catchment was removed to allow safe access to wildlife drinker.
- *Scotch thistle at Arkansas Ranch*; Scattered infestations of scotch thistle occur on approximately 1 acre of ground. The majority of this infestation is found on an old farming plot of private ground at Arkansas Ranch, which is not included in the allotment. The area has been treated with herbicide and reseeded. Past efforts have stopped the spread of the noxious weed, but have not yet eradicated it. Future treatment and monitoring will be done in an effort to eradicate the weeds.

- *Water availability on the west end of Little Spring pasture, Turkey Track water catchment not functioning*. The apron pad at the Turkey track catchment is in need of resurfacing. The existing asphalt bidum apron has become largely not efficient and no longer sheds enough water to fill both the wildlife and livestock tanks. BLM plans to resurface the apron with a new 60 mil HDPE sheeting, which should restore water shedding capacities enough to fill both tanks and provide livestock water to the west end of the Little Spring pasture.
- *Integrity of boundary fence between Mt. Logan and Tuweep allotments. Fence maintenance is not being done by neighboring permittee*. In July of 2004, a segment of the boundary fence between Mt. Logan and Tuweep allotments was reconstructed. Work was completed by a private contractor hired by the permittee of the Tuweep allotment. Efforts to maintain fence integrity between these two allotments is on-going and will continue.
- *Gates are being left open by large numbers of visitors in Little Spring pasture*. Impacts to livestock management are increasing. The permittee and BLM continue to work together to try and find solutions to these problems. The range and forestry programs are currently looking at installing a cattle guard or a new swing gate at the boundary fence in Sawmill Canyon to solve this problem.
- *Impacts of the restoration project and associated activities on the turkey population. (John Sims, AGFD)*; The turkey population in the vicinity of this allotment was introduced in 1961. The population has been in apparent decline for the past five years but recent observations (2006-2007) by AGFD and BLM field staff indicate bird numbers are increasing. These indications are anecdotal, as no data from AGFD or BLM has been collected on actual turkey number trends. The cause of this downward population trend is not definitely known. Possible causes could be the recent drought, negative effects of restoration, disturbance associated with forest restoration activities, or other unknown causes. It is possible that there will be a negative effect on turkeys for the first few years following restoration treatments due to reduced cover, but the area should regenerate into good turkey habitat. AGFD is in the process of beginning a study of forest restoration treatment effects on turkeys in the Flagstaff area. This may be correlated to the Mt. Logan area.

Current Planning Process

The Arizona Strip District Office is currently involved in a planning process that will result in three stand alone RMPs, one for each new National Monument and one for the Arizona Strip outside of the monuments. No grazing changes are currently anticipated for this allotment. However, there may be modifications as a result of the new RMPs. The 10- year grazing permit, in part, states "This permit is subject to (A) modification, suspension or cancellation as required by land plans and applicable law; (B) annual review and to modification of terms and conditions as appropriate; ...". BLM may use these permit conditions to implement any changes required under the new RMPs.

II. PROPOSED ACTION AND ALTERNATIVES

Proposed Action (Renewal of 10 Year Grazing Permit with current terms and conditions of the Mt. Logan allotment)

The Proposed Action is to renew the grazing permit on the Mt. Logan allotment for a period of ten years with current terms and conditions. Under this alternative, BLM would:

- Cancel the existing annual permit (Table 2) and reissue term (ten year) grazing permit on the Mt. Logan allotment as listed in Table 1. Livestock grazing would occur during the season of use, livestock numbers, and AUMs, identified in Table 1. There would be no change to the current active grazing preference on the allotments.

- Consider, through the NEPA process any new range improvements to assist in grazing practices and promote rangeland health.

Table 1 - Proposed Action Ten Year Term Permit Issuance

Allotment Name	Permittee	Permit Number	Livestock			Active AUMs	Public Land (acres)	% Public Land
			No.	Kind	Season of Use			
Mt. Logan	N/A	5218	88	Cattle	03/01-02/28	930	18,996	88%

Table 2 – Annual Grazing Permits to be Cancelled

Allotment Name	Permittee	Permit Number	Livestock			Active AUMs	Public Land (acres)	% Public Land
			No.	Kind	Season of Use			
Mt. Logan	N/A	5218	88	Cattle	03/01-02/28	930	18,996	88%

Alternatives Considered But Rejected For Further Analysis

Alternatives are tiered to the Arizona Strip District RMP (January, 1992) and the Vermillion Grazing EIS (April, 1979) which was adopted into the RMP and are basically the same for this action. The Grazing EIS addressed five alternatives: Full Stocking with Management, Stocking Level by Condition Class, No Vegetation Manipulation, Elimination of Grazing on Public Lands, and Less Intensive Management of Livestock Grazing.

The following three alternatives were considered for this EA but rejected because they were analyzed in the RMP, to which this document is tiered.

- **Full Stocking with Management alternative** would allow stocking at the estimated livestock carrying capacity of the allotment with no reductions for the rest pasture in rest-

rotation grazing systems.

- **Stocking Level by Condition Class alternative** would set the stocking level based on the average condition and apparent trend of the allotment.

- **No Grazing Alternative (Elimination of Livestock Grazing on Public Lands).** The decision to authorize livestock grazing in this area and specifically on the Mt. Logan allotment is documented in the approved land use plan. The absence of new information or other land use plan decisions showing that continued livestock grazing would preclude BLM from meeting or making significant progress toward achieving land health standards renders the existing land use plan authorizing grazing valid. A no grazing alternative or not renewing a grazing permit would not conform to the land use plan. A plan amendment would be required before closing an allotment to livestock grazing.

The Grazing System Description for the Mt. Logan Allotment

The permittee runs a cow/calf operation. The grazing system on Mt. Logan is a 4-pasture rest-rotation system. Pastures included in the grazing rotation are Little Spring, Little Oak, Toroweap, and Head of Tuweep. The Lower Kent (state) and Holding pasture (private/state) also receive grazing use in the rotation.

Little Spring serves as the summer/early fall (July 1-October 30) grazing unit. Little Oak, Toroweap, Head of Tuweep, Lower Kent (state), and Holding pasture are grazed and rotated through the late fall/spring (November 1-June 30) period. This grazing rotation is designed and intended to provide spring grazing rest, summer growing season deferment, trampling and planting of disseminated seed, seedling establishment, vigorous plant communities, and livestock production.

Grazing Preference and Current Use on the Allotment

Mt. Logan

Livestock Numbers	Season of Use	% Federal	Active AUMs
88 Cattle	03/01 to 02/28	88%	930
		Total	930

Terms and Conditions of Grazing Permit

Grazing would be in accordance with the grazing preference, livestock numbers, and season of use specified on the grazing permit. Billing for grazing use would be based on the actual use report which is due on or before March 15 each year. Livestock may be moved 15 days before or after scheduled move dates.

Desired Plant Community (DPC)

This EA also incorporates by reference the "Implementation of Standards for Rangeland Health

and Guidelines for Grazing Administration, Mt. Logan Allotment S&G Assessment" (2007)[1]. The Mt. Logan Allotment Assessment lists and evaluates achievement of the allotments DPC objectives summarized below. These objectives are expressed in species composition by weight and percent vegetation cover.

Key Area #1 – Head of Tuweep Pasture (Loamy Upland 10-14"pz)

Maintain the perennial grass composition between 20 to 50% through the year 2035 by:
- Maintaining Bogr CBW at between 15 and 30%
- Increasing Hija CBW to between 1 and 5%
- Maintaining Sihy CBW at between 2 and 7%
- Maintaining Spcr CBW at between 1 to 3%

Maintain shrub/tree composition between 15 to 45% through the year 2035 by:
- Decreasing Artr CBW to between 5 and 20%
- Maintaining Juos CBW at between 0 and 5%
- Maintaining Pied CBW at between 0 and 5%

Maintain forbs CBW at between 5 to 15% through the year 2035.
Maintain ground litter at between 30 and 50% through 2035.
Maintain basal cover at between 5 and 15% through 2035.

Key Area #2 – Little Oak Spring Pasture (Cinder Upland; Woodland 13-17"pz)

Maintain the perennial grass composition between 2 to 15% through the year 2035 by:
- Maintaining seeded Agropyron species CBW at between 1 and 3%
- Maintaining Brin CBW at between 1 and 3%
- Maintaining Sihy CBW at between 1 and 5%

Maintain shrub/tree composition between 15 to 45% through the year 2035 by:
- Decreasing Artr CBW to between 20 to 40%
- Maintaining Juos CBW at between 5 to 15%
- Maintaining Pied CBW at between 5 to 15%

Maintain forbs CBW at between 5 to 15% through the year 2035.
Maintain ground litter at between 25 and 45% through 2035.
Maintain basal cover at between 2 and 8% through 2035.

Key Area #3A – Little Oak Pasture (Loamy Upland; POPI 17-22"pz)

Maintain the perennial grass composition between 40 to 80% through the year 2035 by:
- Maintaining seeded Agropyron species CBW at between 30 and 65%
- Maintaining Brin CBW at between 5 and 10%
- Maintaining Sihy CBW at between 5 and 10%
- Maintaining Popr CBW at between 1 to 5%

[1] Mt. Logan Allotment S&G Assessment, available at the Bureau of Land Management, Arizona Strip Field Office, 345 E. Riverside Drive, St. George, Utah 84790.

Maintain shrub/tree composition between 20 to 45% through the year 2035 by:
- Maintaining Artr CBW at between 10 to 20%
- Maintaining Quga CBW at between 5 to 10%
- Maintaining Pipo CBW at between 1 to 5%

Maintain forbs CBW at between 2 to 10% through the year 2035.
Maintain ground litter at between 35 and 50% through 2035.
Maintain basal cover at between 5 and 15% through 2035.

Key Area #3B – Little Oak Pasture (Loamy Upland; POPI 17-22"pz)

Maintain the perennial grass composition between 65 to 85% through the year 2035 by:
- Maintaining seeded Agropyron species CBW at between 60 and 80%
- Maintaining Brin CBW at between 1 and 5%
- Maintaining Sihy CBW at between 1 and 5%
- Maintaining Popr CBW at between 1 to 5%

Maintain shrub/tree composition between 5 to 15% through the year 2035 by:
- Maintaining Artr CBW at between 5 to 10%
- Maintaining other shrubs CBW at between 1 to 5%

Maintain forbs CBW at between 2 to 10% through the year 2035.
Maintain ground litter at between 40 and 55% through 2035.
Maintain basal cover at between 5 and 15% through 2035.

Monitoring

The goals of monitoring would be to determine if the fundamentals or conditions of Rangeland Health are being met within the allotment area under 43 CFR 4180. These conditions of Rangeland Health are:

(a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and land form and maintain or improve water-quality, water quantity, and timing and duration of flow.

(b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

(c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.
(d) Habitats are, or are making significant progress toward being restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

To monitor rangeland health conditions, key areas as defined in the *Monitoring* "Planning for Monitoring", "TR 4400-1", (1984) would be used. The key area would be used as an indicator area to reflect the effect of on the ground management on the site they represent. Each key area would be established based on a Range Site/Ecological Site (developed by the Natural Resource Conservation Service, (NRCS)) with a specific Potential Natural Community (PNC) and specific physical site characteristics. Knowing the PNC of the area, and using the ecological site descriptions as a guide, DPC objectives can be developed. The DPC then becomes the objectives by which management actions would be measured.

Dry Weight Rank (DWR) method of data collection would be used to monitor species composition. In addition, Pace Frequency and Step-Point studies would be used at each key area to detect changes of individual species and vegetative cover, which indicates a trend and status of basal and foliar cover. Pace Frequency, Step-Point and DWR would be completed on each key area every 3-6 years. DWR and Pace Frequency study methods are described in *Sampling Vegetation Attributes*, "Interagency Technical Reference 1734-4" (1996).

Livestock use on forage plants would be determined by conducting grazing utilization studies using the Grazed-Class Method as described in the *Utilization Studies and Residual Measurements* "Interagency Technical Reference 1734-3" (1996). Utilization studies would be completed annually in each grazing unit by BLM prior to and/or after livestock have been removed from the pasture. Study data would be compiled each year. Other information to be collected and compiled is precipitation, actual use, etc. All monitoring data would be used to evaluate current management and assist BLM in making management decisions that helps achieve vegetation objectives on the allotment.

Analysis of existing allotment data suggests DPC objectives are being met or are progressing toward being met. It was determined by the Interdisciplinary Assessment Team (IAT) during the assessment process, that resource conditions on the allotment are meeting Standards for Rangeland Health.

Allotment compliance would be conducted annually on the allotment. Compliance monitoring assures terms and conditions of the permit and any other subsequent requirements attached to range improvement permits (Cooperative Agreements and Section 4) are being met.

Based on analyses of the allotment's monitoring data and supporting documentation contained in the Mt. Logan S&G Assessment Report (2007), resource conditions on the allotment are meeting the applicable standards for rangeland health.

III. AFFECTED ENVIRONMENT

The Mt. Logan grazing allotment is located approximately 55 miles south of Colorado City, Arizona on the Arizona Strip. The allotment is within the boundaries of T. 34 and 35N., R. 7 and 8W. Elevations range from 4,800' in the grassland valleys of Tuweep to 7,600' on the ponderosa pine slopes of Mt. Logan.

The affected environment is tiered to the Arizona Strip District RMP (January 31, 1992), Affected Environment pages III-1 to III-58, and pages 2-1 to 2-56 of the Vermillion Grazing EIS (April, 1979) which was adopted into the RMP and are essentially the same for this action. Chapter 2 of the Vermillion Grazing EIS describes the environmental components likely to be impacted by the proposed action. Environmental components discussed in the EIS that might affect or be affected by the proposal are: Climate, Vegetation, Threatened and Endangered Plant Species, Riparian Vegetation, Soils, Water Resources, Animals (wildlife), Cultural Resources, Visual Resources, and Land Uses including livestock grazing and recreation.

This EA also incorporates by reference the "Implementation of Standards for Rangeland Health and Guidelines for Grazing Administration, Mt. Logan Allotment S&G Assessment" (2007)[2]. This S&G Assessment describes the resources and issues applicable to the allotment area. See the Mt. Logan Allotment S&G Assessment Appendix for other resource data and associated information.

The following critical elements of the human environment or resources are not present in the allotment or would not be affected by the proposed action or alternatives.

- Air Quality
- Native American Religious Concerns
- Water Quality, Drinking or Ground
- Wild & Scenic Rivers
- Wetlands/Riparian Areas
- Areas of Critical Environmental Concern (ACECs)
- Wild Horses and Burros
- Minerals
- Hazardous Materials
- Floodplains

Climate

The Mt. Logan Allotment falls within two precipitation zones. The higher elevations on Mt. Logan and on the west half of the allotment are in the 18-20" ppt. zone and are most represented by the Nixon Flats rain gauge. Approximately 14 percent (2.66") comes in the fall, 33 percent (6.08") comes in the winter, 21 percent (3.85") comes in the spring and 32 percent (5.95") comes in the summer.

The east half of the allotment in Tuweep Valley falls in the 12.5" ppt. zone and most represented by the Tuweep rain gauge. Approximately 12 percent (1.44") comes in the fall, 30 percent (3.76") comes in the winter, 21 percent (2.61") comes in the spring and 38 percent (4.70") comes in the summer.

[2] Mt. Logan Allotment S&G Assessment, available at the Bureau of Land Management, Arizona Strip Field Office, 345 E. Riverside Drive, St. George, Utah 84790.

Vegetation

The principal vegetative subtypes[3] within the allotments are pinyon-juniper woodlands, sagebrush, ponderosa pine, and grassland.

- The pinyon-juniper subtype includes pinyon, juniper, sagebrush, cliffrose, turbinella oak, banana yucca, blue grama, squirrel tail and various annual/perennial forbs.
- Associated species in the sagebrush subtype are big sagebrush, ephedra, cliffrose, fourwing saltbush, snakeweed, blue grama, squirrel tail, galleta, and a mixture of forbs.
- The ponderosa pine woodland type consists of ponderosa pine, gambel's oak, pinyon pine, Utah juniper, locust, big sagebrush, blue grama, Arizona fescue, seeded wheatgrass, mutton grass and various forbs.
- The grassland subtype is characterized by scattered big sagebrush, snake weed, banana yucca, blue grama, black grama, sand dropseed, galleta, squirrel tail, indian ricegrass, and associated forbs.

Within these vegetative subtypes are four dominant ecological sites[4] that are part of the Major Land Resource Units, as defined by the NRCS.

Water Sources

Mt. Logan allotment contains:

- 2 fenced reservoirs
- 3 unfenced reservoirs
- 1 developed spring
- 2 livestock catchments
- 3 wildlife catchments

Threatened and Endangered (T&E) Species

The Threatened and Endangered (T/E) species that may occur within or adjacent to the Mt. Logan Allotment are as follows.

- Bald eagle (*Haliaeetus leucocephalu*)
- Mexican spotted owls (*Strix occidentalis lucida*)
- California condor (*Gymnogyps californianus*)

The bald eagle and California condor may occasionally fly over the area. An experimental non-essential population (as defined under section 10J of the Endangered Species Act) of California

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[3] Vermillion Grazing Environmental Impact Statement

[4] An ecological site is a distinctive kind of land that differs from other kinds in its ability to produce a chacteristic plant community. Each ecological site is a product of all environmental factors responsible for its development. Each site is capable of producing and supporting a plant community typified by an association of species that differs from other ecological sites in species kind, proportion and total production.

condors was established on the Vermillion Cliffs in 1996. These birds may eventually forage on carrion within the allotment but have not yet been observed doing so. No Mexican spotted owls (MSO) have ever been documented in the Mt. Logan area or on this allotment. The Colorado Plateau Working Group for Mexican spotted owls and the 2001 Willey habitat model did not include any MSO habitat on this allotment. There are no riparian areas that would provide habitat for the southwestern willow flycatcher (*Empidonax trailii extimus*).

No other, federally listed T&E species (flora or fauna) are known to occur in the area covered by this EA.

BLM Sensitive and State Species of Concern

Ferruginous (*Buteo regalis*) and Swainson's (*Buteo swainsoni*) hawks are known to forage over grassland habitat similar to that found on the allotment, though specific sightings have not been recorded for the species. Black-crowned night Heron (*Nysticorax nycticorax hoactli*) and snowy egrets (*Egretta thula brewsteri*) have occasionally been observed using stock tanks in the area, but have not been recorded on the allotment. A variety of sensitive bat species have been captured on neighboring allotments including Townsend's big-eared (*Corynorhinus townsendii*), spotted bats (*Euderma maculatum*), small-footed myotis (*Myotis ciliolabrum*), fringed myotis (*Myotis thysanodes*), and big free-tailed bats (*Nyctinomops macrotis*).

Wildlife

The Mt. Logan/Mt. Trumbull area within the Mt. Logan allotment supports a population of mule deer. Introduced populations of Merriam's turkey and Kaibab squirrel are also present at higher elevations on the allotment. The allotment is in the Arizona Game and Fish Department's Game Management Unit 13A. Mule deer (*Odocoileus hemionus*) is the primary big game animal found in this allotment. Habitat for mule deer on this allotment is considered summer crucial in the western portion of the allotment, summer in the central portion, and yearlong in the remainder. Deer population data is not collected specifically for this allotment, but is collected for the Game Management Unit as a whole.

The western portion of the allotment is part of the Mount Trumbull Restoration Project. This project includes units of varying treatments for research and forest health improvement. Numerous studies on wildlife are being conducted by AGFD in the treatment units, including bluebird nestling parasite loads, mule deer habitat use, changes in lizard populations, and foraging rates of migratory songbirds. Results from the bluebird study indicate that nestling parasite loads are higher in treated areas, but nest rate success is also higher in these areas.

Nongame wildlife found on the allotments are typical of the area, including mountain lions, bobcats, coyotes, a variety of small mammals, grassland birds, raptors, and reptiles. The allotment supports an abundant and diverse bird fauna, due in part to more mesic conditions in the ponderosa pine/oak woodland habitats. All waters within this arid region are considered important for wildlife.

Soils

The only soils monitoring data for this area is the Phase 1 Watershed Conservation and Development Inventory of 1971-1973 (See Field Office Files 7300). It was based upon a general soils map and thus ended up as broad interpretations and averages over large areas. Other more specific and detailed soils information is as follows:

Soils and Ecological Sites - SSA 625

11 Curhollow-Prieta complex, 4 to 20 percent slopes, (fan terraces, hills), limestone, basalt; Basalt Upland, 10" to 14" ppt

12 Godding gravelly loam, 3 to 40 percent slopes, (hills, fan terraces), basalt, pyroclastics; Loamy Upland (PJ-Woodland), 18" to 30" ppt

20 Jocity silty clay loam, 1 to 4 percent slopes, (stream terraces), mixed alluvium; Silty Upland, 7" to 11" ppt

22 Kinan gravelly loam, 1 to 15 percent slopes, (fan terrace), limestone; Loamy Upland, 7" to 11" ppt

26 Lava Flows, basalt; No Ecosite

27 Lozinta extremely gravelly loam, 1 to 15 percent slopes, (fan terraces), scoriaceous basalt and pyroclastics; Cinder Upland (PJ-Woodland), 14" to 18" ppt

28 Lozinta extremely gravelly loam, 15 to 45 percent slopes, (cinder cones), scoriaceous basalt and pyroclastics; Cinder Hills (PJ-Woodland), 14" to 18" ppt

29 Manikan silty clay loam, 1 to 4 percent slopes, (stream terraces), sandstone, shale; Clayey Upland, 10" to 14" ppt

33 Mellenthin very gravelly loam, 1 to 25 percent slopes, (hills), limestone; Shallow Loamy, 10" to 14" ppt

39 Milok gravelly loam, 1 to 15 percent slopes, (fan terraces), limestone; Loamy Upland, 10" to 14" ppt

40 Moab loam, 1 to 5 percent slopes, (fan terraces), limestone; Loamy Upland, 10" to 14" ppt

48 Poley cobbly silty clay loam, 1 to 5 percent slopes, (fan terraces), basalt, pyroclastics; Clay Loam Upland, 10" to14" ppt

49 Poley-Moab complex, 1 to 10 percent slopes, (fan terraces), basalt, pyroclastics; Poley=Clay Loam Upland, 10" to 14" ppt; Moab=Loamy Upland, 10" to 14" ppt

57 Showlow-Section complex, 1 to 15 percent slopes, (hills, fan terraces), basalt, pyroclastics, limestone; Showlow= Clay Loam Upland (P-J Woodland),14" to 18" ppt; Section= Loamy Upland (P-J Woodland), 14" to 18" ppt

59 Showlow very cobbly clay loam, 1 to 15 percent slopes, (hills, fan terraces), basalt, pyroclastics; Clay Loam Upland (PJ-Woodland), 14" to 18" ppt

60 Showlow very cobbly silty clay loam, 15 to 35 percent slopes, (hills, fan terraces), basalt, pyroclastics; Clay Loam Upland (PJ-Woodland), 14" to 18" ppt

61 Sponiker gravelly loam, 1 to 15 percent slopes, (hills, fan terraces), basalt, pyroclastics; Loamy Upland (PIPO-Woodland), 18" to 30@ ppt

62 Sponiker gravelly loam, 15 to 40 percent slopes, (hills, fan terraces), basalt, pyroclastics; Loamy Upland (PIPO-Woodland), 18" to 30@ ppt

63 Torriorthents-RO complex, 30 to 70 percent slopes, (hills, scarps), Moenkopi colluvium; Breaks, 10" to 14" ppt

66 Whiskey silt loam, 1 to 4 percent slopes, (stream terraces) mixed alluvium; Loamy Upland, 14" to 18" ppt

68 Wutoma-Lozinta complex, 1 to 15 percent, slopes, (fan terraces), scoriaceous basalt, pyroclastics; Cinder Upland (PJ-Woodland), 14" to 18" ppt

69 Wutoma-Lozinta complex, 15 to 50 percent slopes, (cinder cones), scoriaceous basalt, pyroclastics; Cinder Hills (PJ-Woodland), 14" to 18" ppt

70 Wutoma-RO complex, 1 to 15 percent slopes, (fan terraces), scoriaceous basalt, pyroclastics; Cinder Upland (PJ-Woodland), 14" to 18" ppt

73 Yumtheska very gravelly loam, 30 to 50 percent slopes, (hills), limestone; Limestone Hills (PJ-Woodland), 14" to 18" ppt

Lithology

The southwest portion of the Mt. Logan allotment consists of basalt capped mountains and hills. The side slopes are Shinarump conglomerate over Moenkopi mudstones or just mudstones. The valley floodplains are clayey alluvium. The east half of the allotment, is basalt flows over Kaibab limestone. Tuweep valley is alluvial deposits of silty and gravelly soils.

Cultural/Historical

Prehistoric and Historical sites exist throughout the allotment.

Visual Resources

The majority of the allotment has been designated as VRM Class II. The Mt. Logan Wilderness portion is Class I, and small portions along the northern edge of the allotment are Class III and IV.

The objective for Class I areas is to preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.

The objective for Class II areas is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer.

The objective for Class III areas is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The objective for Class IV areas is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention.

Livestock Grazing

The Mt. Logan Allotment (#5218) is comprised of 18,996 acres of federal BLM land, 1,120 acres of state land, plus 640 acres of uncontrolled state land, ,200 acres of private land, and 320 acres of uncontrolled other private land. The total number of active AUMs on the allotment is 930. The season of use is March 1st to February 28th. Uncontrolled state and private lands are unfenced parcels within the allotment boundary that are accessible to livestock grazing the allotment.

Recreation Resources

Within the allotment area, recreation setting attributes include geology, scenic view sheds, remoteness and solitude. General recreation activities include: driving for pleasure, camping, horseback riding, hiking, hunting, rock collecting, photography, bird watching, and nature study.

- OHV designations: Ranges from Closed (wilderness area) to Limited to Existing Roads and Trails
- Special Management Areas: Mt. Trumbull Special Recreation Management Area; Mt. Logan Wilderness; Nampaweap ACEC.

Recreation activities occur primarily in physical settings that range from Roaded Natural to Semi-Primitive Non-Motorized; social settings that range from Primitive to Semi-Primitive Motorized; and administrative settings that range from Rural to Primitive. (See following tables)

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	**Semi-Primitive Non-Motorized**	**Semi-Primitive Motorized**	**Roaded Natural**	**Rural**	**Urban**
SPECIFIC PHYSICAL ATTRIBUTES					
a. Remoteness					
>3 miles from any road	>½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near 4WD roads, but at least ½ mile from all improved roads, though they may not be in sight	On or near improved country roads, but at least ½ mile from all highways	On or near primary highways, but still within a rural area	On or near primary highways, municipal streets, and roads within towns or cities
b. Naturalness					
Undisturbed natural landscape	Naturally-appearing landscape	Naturally-appearing landscape except	Landscape partially modified by	Natural landscape substantially	Urbanized developments dominate this

PHYSICAL – Resources & Facilities: Character of the natural landscape					
Primitive	**Semi-Primitive Non-Motorized**	**Semi-Primitive Motorized**	**Roaded Natural**	**Rural**	**Urban**
landscape	landscape having modifications not readily noticeable	landscape except for obvious primitive roads	modified by roads, utility lines, etc., but none overpower natural landscape features	substantially modified by agriculture or industrial development	dominate this landscape
c. Facilities					
None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campgrounds, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, groceries, and book stores

SOCIAL – Visitor Use & Users: Character of recreation & tourism use					
Primitive	**Semi-Primitive Non-Motorized**	**Semi-Primitive Motorized**	**Roaded Natural**	**Rural**	**Urban**
SPECIFIC SOCIAL ATTRIBUTES					
d. Group Size (other than your own)					
Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group
e. Contacts (w/other groups)					
Fewer than 3 encounters per day at campsites and fewer than 6 encounters per day on travel routes	3-6 encounters/day off travel routes(e.g., campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes(e.g., staging areas) and 15-29 encounters/day en route	15-29 encounters/day off travel routes(e.g., campgrounds) and 30 or more encounters/day en route	People seem to be everywhere, but human contact is still intermittent	Other people consistently in view
f. Evidence of Use					
Only footprints may be observed	Footprints plus slight vegetation trampling at campsites & travel routes. Only infrequent litter	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn	Well-worn soils and vegetation, but often gravel surfaced for erosion control. Litter may be frequent	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive	A busy place with what seems like constant noise. Unavoidable litter seems to be a lifestyle choice

ADMINISTRATIVE – Administrative & Service Setting: How public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents					
Primitive	**Semi-Primitive Non-Motorized**	**Semi-Primitive Motorized**	**Roaded Natural**	**Rural**	**Urban**
SPECIFIC ADMINISTRATIVE ATTRIBUTES					

g. Visitor Services					
None is available on-site	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available	Everything described to the left in this row, and describe experiences and benefits available. Area personnel do on-site education	Everything described to the left in this row, plus regularly scheduled on-site outdoor skills demonstrations and clinics
h. Management Controls					
No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage
i. Mechanized Use					
None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	4WD, ATV, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	2WD vehicles predominant, but also 4WD and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic	Wide variety of street vehicle and highway traffic is ever-present

Wilderness

The Mt. Logan Wilderness Areas is located along the southwest boundary of the Mt. Logan allotment. Approximately 1,200 acres of this wilderness is within the allotment boundary. Mt. Logan Wilderness and portions of the Unkaret Mountains are areas of recent volcanic origin. This area includes basalt ledges, ponderosa pine forests, piyon-juniper woodlands, and a colorful, natural eroded amphitheater known as Hell's Hole. The Mt. Logan wilderness provides habitat for deer, turkey, Kaibab squirrels, and various non-game and avian species.

Noxious Weeds

A scattered infestation of scotch thistle approximately 1 acre in size has been identified on an old farming plot of private ground at Arkansas Ranch. This scotch thistle site is outside but adjacent to the Mt. Logan allotment boundary. The area has been treated with herbicide and reseeded. Efforts over the past eight years to treat this infestation have stopped the spread of the noxious weed, but have not yet eradicated it. Future treatment and monitoring of the area will be done in an effort to eradicate the weed infestation.

Socio/Economic

Economic revenue generated from the Arizona Strip is mainly ranching with a few gypsum/selenite mines and uranium operations. Nearby communities are supported by tourism (including outdoor recreation), construction and light industry. The social aspect involves remote, unpopulated settings with moderate to high opportunities for solitude.

IV. ENVIRONMENTAL IMPACTS

Only impacts that may result from implementing the proposed action or alternatives are described in this EA. If an ecological component is not discussed, it should be assumed that the resource specialists have considered effects to the component and found the proposed action or alternatives would have minimal or no effects. General effects from projects similar to the proposed action alternative are also described in the documents to which this plan is tiered.

This document incorporates by reference the Mt. Logan Allotment S&G Assessment (2007), which provides a complete discussion, analysis and summaries of the range resources and associated issues. Also, see the Mt. Logan S&G Assessment Appendix for specific resource data and other associated information.

Climate

Implementing the Proposed Action would have no effect on the climate. The Proposed Action would allow affected resources to respond to the climate with improvement to these resources, as mentioned below in the vegetation section.

Drought

In response to drought conditions, BLM may modify the terms and conditions of the grazing permit (ie. number of cattle, turn out dates, removal dates, etc.) temporarily or on a more long-term basis. Most modifications are accomplished on a cooperative basis with the livestock permittee. However, if a permittee disagrees with BLM's assessment of the resource conditions or the necessary modifications, BLM may nevertheless issue a Full Force and Effect Grazing Decision to protect resources.

Vegetation

Grazing impacts on vegetation under the Proposed Action are mitigated by timing of use, duration of grazing, adjusting of stocking rates, and conformance with Standards and Guidelines for Grazing Management. The Proposed Action would have an established grazing rotation designed to allow each pasture a different season of rest during growing cycles, let cool and warm season grasses and browse to elongate their apical buds, build vigor and achieve seed ripe.

The allotments' major vegetation component consists mainly of pinyon-juniper woodlands with

an associated understory of sagebrush, cliffrose, desert holly, blue grama, squirrel tail, sand dropseed, and a variety of forbs.

Vegetation issues identified on the Mt. Logan allotment are described below.

- *Poor ground cover and small gullies in valley bottom at east end of the Head of Tuweep pasture*. The specific issue area at the Head of Tuweep is on the east side of the pasture. The area of concern is approximately 30 acres in size and is confined to the east end of the drainage. The area of poor ground cover and gullies is within an old road bed from earlier years. The road has since been moved out of the immediate drainage bottom and is silting in and grasses, forbs, and shrubs have re-established within the road corridor.

- *Lack of understory and vegetative diversity at this same location*. The vegetative diversity and lack of understory issue is also associated with the old road bed and adjacent sagebrush bottom. Much of the issue is directed at the over abundance of sage brush in this particular 30 acre area. However, to the west, south and north, the area was treated with herbicide to reduce the composition of sagebrush and demonstrates a more diverse, ecologically healthy rangeland. Although this area to the south is a different range site, similar results in the issue area could be achieved through herbicide treatment. Given the area of concern is relatively small, and that the IAT and RRT observed healing taking place on the west end of the drainage, the group concluded current livestock grazing was not preventing the site from progressing toward a more stable state.

For a complete analysis and discussion of these issues refer to the Mt. Logan Allotment S&G Assessment.

Monitoring data (1981 to 2004) on the Mt. Logan allotment indicates that two key areas are in an upward trend and two are in a downward trend of frequency. Utilization has been below allowable levels. These data reflect and suggest that current management coupled with precipitation would allow objectives for the vegetation components to be met on the allotment. These vegetation components constitute the ecological sites upon which DPC objectives are based. Key areas are established on ecological sites and monitored to determine the species composition, the frequency of plant species, and the vegetative ground cover. Pace frequency summaries for each pasture are shown below.

<u>Key Area #1, Head of Tuweep Pasture - Loamy Upland 10-14" pz</u>

- Key Species index decreased in frequency from 97 to 68.
- Live Vegetative Cover increased from 6% to 10%
- Based on frequency data trend is **down.**

<u>Key Area #2, Little Oak Pasture – Cinder Upland (Woodland) 10-14" pz</u>

- Key Species index decreased in frequency from 87 to 4.
- Live Vegetative Cover decreased from 9% to 4%

- Based on frequency data trend is **down.**

Key Area #3A, Little Spring Pasture - Loamy Upland (PIPO) 17-25" pz

- Key Species index increased in frequency from 105 to 117.
- Live Vegetative Cover increased from 4% to 22%
- Based on frequency data trend is **up.**

Key Area #3B, Little Spring Pasture - Loamy Upland (PIPO) 17-25" pz

- Key Species index increased in frequency from 95% to 116%
- Live Vegetative Cover increased from 4% to 24%
- Based on frequency data trend is **up.**

Key area #1 is in a down trend because of one factor. The frequency of one key species (blue grama) decreased from 91% to 54%. The decrease was solely related to the 2002 drought. All other key species, basal cover, and ground litter increased in percent frequency. Key area #2 is in an old vegetative treatment area (railing) that has since invaded and encroached back into a dense sagebrush or pinyon-juniper vegetation type. Recent drought and lack of needed maintenance has allowed area to revert back to a woody dominated vegetative community. Invading woody species have crowded out the desirable grasses, shrubs and browse species that were present, thus showing a decrease or downward trend in key species.

Utilization data from 1994-2006 has been compiled for this evaluation. The Key Species Grazed Class method was used to collect the data. Utilization is read at or around the designated key area for each pasture.

Utilization levels on a key species in the Head of Tuweep pasture has not exceeded the 50% allowable during the evaluation period from 1994 through 2006. The highest overall use in the Head of Tuweep pasture occurred in 1999 at 42%. Overall key species utilization in the pasture for the evaluation period was 31%. In the Little Oak pasture utilization exceeded the 50% allowable once during the evaluation period from 1994 through 2006. That use occurred in 1996 on squirrel tail at 54%. The highest overall use in the Little Oak pasture was also in 1996 at 49%. Overall key species utilization in the pasture for the evaluation period was 38%.

Utilization levels on a key species at Key Area #3A in the Little Spring pasture exceeded the 50% allowable three times during the evaluation period from 1994 through 2006. That use occurred on smooth brome and Poa spp. at 53% and 51% in 1994, and again on smooth brome at 54% in 1997. The highest overall use at Key Area #3A was also in 1994 at 48%. Overall utilization at the key area for the evaluation period was 34%. At Key Area #3B in the Little Spring pasture utilization on key species exceeded the 50% allowable two times during the evaluation period from 1994 through 2006. That use occurred on Agropyron spp. and smooth brome at 52% and 53% in 1997. The highest overall use at Key Area #3B was also in 1997 at 48%. Overall key species utilization at the key area for the evaluation period was 34%.

Threatened and Endangered (T&E) Species

The Proposed Action would not impact any listed threatened or endangered species nor would the Proposed Action have an impact on an occasional fly over by the bald eagle or California condor. Neither of these species has been documented or observed on or near the allotment.

BLM Sensitive Species and State Species of Concern

The Proposed Action would have no substantial impact on BLM sensitive and state species of concern. These species include the avian species, Ferruginous hawk, Black-crowned Night Heron, and snowy egret and sensitive bat species such as Townsend's big eared, spotted bats, small-footed myotis, fringed myotis and big free-tailed bats.

Wildlife

The Proposed Action would have no substantial impacts on big game (mule deer) or the other nongame wildlife found on the allotment. Mule deer (Odocoileus hemionus) occur in limited numbers on the allotment. Mule deer generally occupy sagebrush, pinyon/juniper, interior chaparral and pine/oak woodlands in this unit. Deer densities are generally low throughout the unit even in ponderosa pine high quality habitat areas. The area is included within Game Management Unit (GMU) 13A.

Migratory Birds

Executive Order 13186 requires BLM and other federal agencies to work with the U.S. Fish and Wildlife Service to improve protection for migratory birds. Implementation of the Proposed Action is not likely to adversely affect any species of migratory bird known or suspected to occur on the allotments. No take of any such species is anticipated.

Soil

Attributes making up the soil resource should remain stable or improve thru implementation of the Proposed Action and enforcement of the Arizona Standards and Guides process for permitted livestock grazing within the Mt. Logan grazing allotment. Grazing rotations associated with the Proposed Action would allow for seasonal plant rest resulting in increased vigor and allowing ground litter and cover to increase, thus protecting the soil. Utilization levels are within that allowable and current trends are up.

Cultural Resources

There would be no substantial impact to cultural or historical sites as a result of renewing these grazing permits under the Proposed Action. Cultural resources project file AZ BLM 100-2002-15 contains documentation of compliance with Section 106 of the National Historic Preservation Act. Great efforts are made to avoid these sites during allotment project implementation.

Further, archaeological inventories are completed prior to all project initiation.

Visual Resources

The long-term success of improving land health could contribute to enhancing visual resource conditions by increasing the variety of visual forms, lines, colors and textures where past land use practices may have virtually eliminated any such variety. Conversely, the proposed action could potentially create slight to minor visual contrast from the construction of rangeland developments. Also such developments could add weak to moderate horizontal structural lines to the landscape. In the long-term, these potential effects may only require more intensive mitigation if placed within VRM Class I and II areas. Conducting a Visual Resource Contrast Rating evaluation as part of rangeland development design would likely enable most projects to be mitigated to meet VRM Class objectives.

Livestock Grazing

Under the Proposed Action the forage preference would remain active and livestock grazing would continue. The permittees would continue to have the opportunity to take non-use on all or portions of the allotments if approved by BLM and carried out in accordance with current grazing policy.

Recreation Resources

Future construction of rangeland developments in the allotment could slightly impact physical recreation settings and recreation opportunities in the short term due to the presence of new structures and access routes in semi-primitive non-motorized physical settings. Future construction of new fence developments could have a slight to minor impact to recreation settings and recreation activity opportunities in the short-term due to fencing as an impediment to access, as well as the increase in evidence of human use created by the placement of the fencing.

Wilderness

Any future construction of rangeland developments in the wilderness portion of the allotment could impact wilderness settings to a negligible to minor degree, due to the presence of new structures (affecting naturalness); due to possible new fencing as an impediment to access (primitive recreation); and due to possible construction operations (solitude.)

Cumulative Impacts

Cumulative Impacts are tiered to the Arizona Strip RMP (1992), Environmental Consequences pages IV-36 to IV-38, and to chapter 3 of the Vermillion Grazing EIS (1980) which was adopted into the RMP. Unavoidable Adverse Impacts, Relationship between Local Short-term Uses of Man's Environment, Maintenance and Enhancement of Long-term Productivity, and the Irreversible and Irretrievable Commitments of Resources were discussed.

Cumulative impacts occur when additional management facilities are added to those already present. Grazing plans set specific objectives in the plan area and include rangeland improvements that are designed to maintain or improve wildlife habitat, watershed, and overall resource conditions, thus improving ecosystem health.

Past, present, and reasonably foreseeable actions within the analysis area would continue to influence range resources, naturalness, aesthetics, watershed conditions and trends. The impact of land treatments targeting woody species, voluntary livestock reductions during dry periods and implementation of a grazing system have improved range conditions. The net result has been greater species diversity, improved plant vigor, and increased ground cover from grasses and forbs. No cumulative impacts are predicted to the range resource as a result of the Proposed Action.

Residual Impacts

Residual Impacts are tiered to the Arizona Strip RMP (1992), Irreversible and Irretrievable Commitments of Resources page 7-1 of the Vermillion Grazing EIS (1979) which was adopted into the RMP. Though the Proposed Action does not propose any new fences, it does allow for the existence of present fence lines, which do create some restrictions of free passage, but do not prevent or prohibit passage of mule deer.

There are no residual impacts as a result of the Proposed Action to the vegetative resource. Future maintenance of existing vegetation treatments would likely take and would not affect additional acres beyond that done previously. Residual impacts from maintenance activities would be improved watershed conditions, wildlife habitat, and rangeland resources over time.

Monitoring

The monitoring addressed in the proposed action (pages 9-10) is sufficient to identify changes in vegetation as a result of livestock grazing activities. In addition to those methods described, there are efforts in place to inventory for noxious weed establishment, as well as monitor treated areas for treatment effectiveness. BLM weed specialist (LD Walker) has the lead on monitoring and treating noxious weeds on the Arizona Strip. He has provided training in identification and treatment as well as ways to reduce the spread of weeds to BLM employees and permittees.

Annual allotment compliance would be included in monitoring conducted on the allotment. Compliance monitoring would assure terms and conditions of the permit are being met. Compliance checks would also monitor any special conditions or mitigation included in Cooperative Agreements, Section 4 Permits, or other grazing regulations.

Mitigation

When noxious weeds are located, various methods are used for their control depending on the

size of the infestation and growth stage of the plants. The methods include but are not limited to:

Physical or mechanical
Biological
Chemical or Cultural

If vegetative monitoring indicates current livestock grazing practices are causing non-attainment of resource objectives, BLM would modify the terms and conditions of the grazing permits (i.e. number of cattle, turn out dates, removal dates, etc.) temporarily or on a more long-term basis. Most modifications are accomplished on a cooperative basis with the livestock permittees. However, if a permittee disagrees with BLM's assessment of the resource conditions or the necessary modifications, BLM may nevertheless issue a Full Force and Effect Grazing Decision to protect resources.

V. CONSULTATION AND COORDINATION

This EA was prepared by the Bureau of Land Management, Arizona Strip Field Office, 345 E. Riverside Drive, St. George, UT 84790. Phone (435) 688-3200. Public involvement for the Mt. Logan S&G evaluation began on October 27, 2004. An assessment field trip to the allotment was held on June 8, 2005. The Interdisciplinary Assessment Team (IAT) was assisted by the Rangeland Resources Team (RRT) appointed by the Arizona Resource Advisory Council. A draft evaluation was sent out for public review and comment to Individuals, Groups and Agencies. Comments from those individuals, groups and agencies were incorporated in to the Final Mt. Logan evaluation report. This EA reflects those comments.

Interdisciplinary Assessment Team (IAT)

Linda Price.....Project Coordinator
Whit Bunting....Range/Grazing
John Herron.....Archaeologist
Robert Smith....Soils, Watershed
Michelle Bailey.....Wilderness/Recreation
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Linda Price, S&G Coordinator
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Ron Wadsworth, Supervisory Law Enforcement
L.D. Walker, Noxious Weeds Coordinator
Dennis Curtis, GCPNM Manger

Reviewed by Arizona Strip District Office Planning and Environmental Coordinator (P&EC)

	JULY 24, 2007
Richard Spotts, **Planning and Environmental Coordinator**	**Date**

FINDING OF NO SIGNIFICANT ENVIRONMENTAL IMPACT

The Environmental Assessment AZ-130-2007-0033, hereby incorporated by reference, analyzed a livestock grazing permit renewal action conducted under the Arizona BLM Standards for Rangeland Health and Guidelines for Grazing Management (S&Gs) where an intensive allotment evaluation was conducted with public and other agency involvement throughout the process. Analysis of existing study data indicates that pace frequency trends at two keys are up and two are in downward trend. The resource conditions on the allotment are meeting Standards for Rangeland Health. Issues were analyzed and it was determined that current management is not a factor in preventing attainment of Standards.

The Environmental Assessment reaffirmed the allotment's current grazing practices, and determines that the present grazing management program would continue to allow improvement to the health of public land resources, such as soil, water, vegetation, wildlife habitat, and wildlife and other resource values.

Based on the analysis of Environmental Assessment AZ-130-2007-0033, I have determined that the renewal of the Mt. Logan Livestock Grazing Permit with current terms and conditions will not have a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared.

Dennis Curtis — 7/24/07

Manager,
Grand Canyon-Parashant National Monument

Date