ALLOTMENT MANAGEMENT PLAN

FOR THE

MESCAL ALLOTMENT

SIERRA VISTA RANGER DISTRICT

CORONADO NATIONAL FOREST

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INTRODUCTION

The Mescal Allotment is permitted to Sands Properties, L.L.C. and managed by Marilyn Harris. In 2009, an environmental analysis (EA) was completed. The EA and Decision Notice (DN) are the guiding documents for this allotment management plan (AMP).

The Mescal Allotment is located approximately 5 miles northwest of Whetstone, Arizona, on the south end of the Whetstone Mountains. The terrain varies from gently rolling limestone hills at the lower elevations to rugged granite and limestone hills at the higher elevations. Much of the higher elevations are non-capable due to slope of the terrain being greater than 40%. There are various ecological sites across the allotment, but most are classified within the 41-1 MLRA (Major Land Resource Area). The parent materials of these sites are either granite or limestone. There are two areas on the allotment mapped out in the Forest Plan as having riparian habitat, and those areas are around Bear and Simpson Springs. The allotment is currently used as the winter pasture for the Sands Ranch. The Ranch controls the grazing rights on all of the adjacent private and state land that borders the National Forest.

The Mescal Allotment consists of approximately 17,572 Coronado National Forest acres, 9,972 of which are capable and suitable for livestock grazing. The ranch is managed as a cow-calf operation. The allotment is fenced into 2 pastures. However, livestock are largely managed by herding and the use of natural barriers (topography). Typically, a single herd enters the allotment on November 1st, on the west side (area around Wild Cow and Bear Springs) and is moved east as the feed and water diminish. The cattle end up in French Joe Canyon on the east side of the allotment at the end of the grazing season in April.

Ecological condition data show most of the uplands are in fair to good condition with stable trends. Lehmann lovegrass dominates much of the lower elevations of the Mescal Allotment, reducing condition ratings based on similarity to native vegetation communities. This exotic grass does, however, provide excellent soil protection and abundant livestock forage. The Mescal Allotment is not located on the international border, but it does receive a fair amount of smuggling traffic and it suffers from the trash left behind.

The Mescal Allotment is permitted seasonally for 800 cow/calf pairs from 11/1 through 4/30. The Decision Notice stated the permitted AUMs (Animal Unit Months) to be 6,336. These figures were calculated on the 1.32 factor for a Cow/calf pair. Since that time, the Southwestern Region has implemented policy for the use of the 1.0 factor for a Cow/calf pair. Using this factor, the corresponding AUMs for the permitted numbers is 4,800. Numbers authorized in annual operating instructions (AOI) may fluctuate from year to year based on such variables as precipitation patterns and resulting forage production, changes in the grazing system or class of animal, potential impacts of wildfire, and the permittee's performance in implementing proper grazing practices as indicated in the AMP and AOI.

This AMP will be implemented annually through the Annual Operating Instructions (AOIs). The district and permittee will jointly prepare an AOI prior to each grazing year that would set forth:

- The permissible grazing use authorized on the allotment for the current grazing season and the numbers, class, type of livestock, and timing and duration of use.
- The planned sequence of grazing on the allotment, or the management prescriptions and monitoring that will be used to make changes.
- Structural and non-structural improvements to be constructed, reconstructed, or maintained and who is responsible for these activities.
- Allowable use or other standards to be applied and followed by the permittee to properly manage livestock and forage resources.
- Monitoring for the current season that may include, among other things, documentation demonstrating compliance with the terms and conditions in the grazing permit, AMP and AOI.

GOALS & OBJECTIVES

The Coronado National Forest Land and Resource Management Plan (LRMP, page 10) contains the following goals for the range program on the Forest:

- To restore rangeland to at least moderately high ecological condition (70% to 75% of potential production, fair range condition) with stable soil and a static-to-upward trend.
- Produce livestock products consistent with other resources and uses.
- Eliminate grazing from areas not capable of supporting livestock without significant detriment to range or other resources.
- Balance permitted grazing use with grazing capacity.
- Provide habitat for wildlife populations consistent with the goals outlined in the Arizona Department of Game and Fish Comprehensive Plans and consistent with other resource values.
- Provide for ecosystem diversity by at least maintaining viable populations of all native and desirable nonnative wildlife, fish and plant species through improved habitat management.
- Improve the habitat of and the protection for local populations of Threatened and Endangered species to meet the goals of the Endangered Species Act of 1973.
- Provide a favorable flow of water in quantity and quality for off-forest users by improving or maintaining all watersheds to a satisfactory or higher level.
- Allow the use of available National Forest lands for appropriate public or private interests consistent with National Forest Policies.

Based on Forest Plan guidance and site-specific knowledge of the allotments, the following objectives constitute the desired condition for the analysis area. Monitoring methods to be used to determine achievement of each objective are also identified.

- Livestock stocking is consistent with annual forage production and use is monitored annually. Management controls livestock use and distribution so that sufficient herbaceous vegetation is retained to protect soils and provide herbaceous wildlife cover; zones of heavy use are minimized. Management plans provide sufficient flexibility to allow management to adapt to changing resource conditions. Achievement will be monitored through implementation monitoring described under the proposed action.
- Areas of historic heavy livestock use have increasing ground cover and litter and stable soils. Achievement will be monitored through implementation and effectiveness monitoring described under the proposed action.
- Ecological sites within the four allotments have stable soils, functional hydrology and support functional biotic communities. All areas are at or moving toward their ecological potential. Lower elevation sites are dominated by warm season perennial grasses and are increasing in diversity of grasses, forbs and shrubs. Achievement will be monitored through effectiveness monitoring described under the proposed action.
- Native vegetation in riparian bottoms is a diverse mix of perennial grasses, forbs, shrubs and trees. Recruitment of young trees is occurring and trees and shrubs show no evidence of high-lining or hedging. Riparian bottoms throughout the allotments provide suitable year-round habitat for species dependent on herbaceous cover. Achievement will be monitored through implementation and effectiveness monitoring described under the proposed action and monitoring at established riparian monitoring transects.
- Occupied habitats for threatened, endangered, sensitive and management indicator species are maintained or improved and recovery objectives are being met. Achievement will be monitored through surveys and occurrence records, implementation and effectiveness monitoring.
- All grazing improvements on all allotments are in proper working order and are contributing toward improved livestock distribution and pasture reliability. Achievement will be monitored through implementation monitoring and facility inspections.

The purpose of this AMP is to describe on-the-ground management practices which will achieve the above goals and objectives.

ALLOTMENT MANAGEMENT PLAN

This AMP will specify the goals and objectives of management, management strategies, range improvements and monitoring activities for the Mescal Allotment. The objectives in this AMP are derived from the desired condition statements identified in the EA on page 6. This AMP will be included in Part 3 of the grazing permit. It will also incorporate an adaptive management strategy that is described below. The use of coordinated resource management plans (CRMPs) will continue where in place and will be encouraged where the presence of intermingled ownership is conducive to more flexible and efficient ranch management.

GRAZING STRATEGY

The current management will be continued and implemented by this AMP. The winter use of the two pastures on the allotment will continue with no change to the permitted on/off dates. The allotment will receive summer growing season rest each year. The timing of entry and exit from the allotments and the sequence and timing of pasture moves will be based on monitoring of range readiness, ecological condition, water availability and utilization.

Forage utilization will be managed at a level corresponding to light to moderate intensity (30-45%) in order to provide for grazed plant recovery, increased plant vigor, and retention of herbaceous litter to protect soils and provide forage and herbaceous cover for wildlife. Consistent patterns of utilization in excess of 45% of key species in key areas would be used as a basis to modify management practices or take administrative actions necessary to reduce utilization in subsequent grazing seasons.

An adaptive management strategy will be implemented on the Mescal Allotment. Adaptive management uses the documented results of management actions (monitoring) to continually modify management in order to achieve specific objectives identified in the AMP. Adaptive management provides the flexibility to adjust livestock numbers and the timing of grazing so that use is consistent with current productivity and is meeting management objectives. Under the adaptive management strategy proposed, the specific number of livestock authorized, specific dates for grazing, class of animal and modifications in pasture rotations may be administratively modified as determined to be necessary and appropriate, based on implementation and effectiveness monitoring. However, such changes will not exceed the limits for timing, intensity, duration and frequency authorized in this decision. Administrative changes will be documented and implemented in the AOI, AMP and/or the term grazing permit.

In the case that changing circumstances require physical improvements not disclosed or analyzed previously, further interdisciplinary review would occur. The review will consider the changed circumstances and site-specific environmental effects of the improvements in the context of the overall project. Based on the results of the interdisciplinary review and in accordance with Forest Service Handbook (FSH) 1909.15(18) and FSH 2209.13(96.1), the Ranger will determine whether correction, supplementation or revision of the EA is necessary,

MITIGATION

To mitigate resource impacts, the following measures will be implemented on the Mescal Allotment where grazing is authorized. These measures have been demonstrated to be successful when used on similar projects and are considered effective at reducing environmental impacts. They are consistent with applicable Forest Plan standards and guidelines, Best Management Practices and the terms and conditions and conservation measures of applicable U.S. Fish and Wildlife Service Biological Opinions. Implementation of the mitigation measures and design criteria is intended preclude the occurrence of potentially significant environmental impacts.

Soil, Water and Vegetation – the objective is to mitigate effects of livestock grazing and facility construction through the use of Best Management Practices (FSH 2509.22) and adaptive management. Practices include, but are not limited to the following.

- Utilization of key upland herbaceous forage species in key areas will be managed to achieve the goal of light to moderate grazing as a pasture average. The objective is to protect plant vigor, provide herbaceous residue for soil protection and to increase herbage producing ability of forage plants. A utilization guideline of 30-45% use of key species in key areas will be used to achieve this objective.
- Management practices will be used to achieve proper distribution or lessen the impact on sensitive areas. Practices include herding, salting and controlling access to waters. Salt will be placed on good feed, one quarter to one half mile from waters and salting locations will be moved annually. Placement of liquid or bulk supplements will require prior approval of the District Ranger.
- No hay will be placed on Forest lands in order to minimize the introduction of weed seeds.

Wildlife – the objective is to mitigate impacts to wildlife from livestock grazing and from disturbance associated with maintenance of range facilities.

- All water developments will include wildlife access and escape ramps. Waters will be kept available to wildlife year round.
- All new and reconstructed fencing will be built to Forest Plan standards (Forest Plan, p. 35) to provide for wildlife passage through the fence. At a minimum, this will be a 4-strand fence with smooth bottom wire 16 inches off of the ground and a total height of 42 inches or less.
- Range construction projects will be designed to avoid the destruction of agaves. If impacts to agaves are unavoidable, the Forest will insure that no more than 1% of agaves within 800 meters of a project are impacted. The objective is to avoid impacts to lesser long-nosed bat food resources.
- All proposed range facilities will be surveyed for threatened, endangered or sensitive species prior to any ground-disturbing activities. Facilities will be designed and constructed to have no adverse effect on listed species.
- Within areas meeting the definition of high quality Montezuma quail habitat, herbaceous vegetation will be managed to maintain a minimum of 6 inches of herbaceous stubble height, which is generally interpreted as less than 45% utilization of key herbaceous species (PR 36). The objective is to provide herbaceous vegetation as cover for quail and other wildlife.
- Stockpond maintenance and cleaning will be conducted in accordance with the Forest's Stockpond and Aquatic Habitat Management and Maintenance Guidelines for the Chiricahua Leopard Frog (*Rana chiricahuensis*) (PR 41). The objectives are 1) to minimize short-term impacts to frogs while allowing maintenance activities that maintain occupied habitats, and 2) to protect shoreline and emergent vegetation and to improve water quality.

Heritage Resources – The objective is to protect heritage resources (historic and prehistoric sites) from direct or indirect impacts caused by ground-disturbing activities associated with the construction of range facilities and to monitor the effects of cattle

grazing on sites to ensure that adverse effects are not occurring. In general, these measures include the following:

- All proposed range facilities will be surveyed by qualified personnel for heritage resources prior to any ground-disturbing activities. Facilities will be built or modified to avoid impacts to sites. The following specific measures have been identified for sites that have been surveyed:
    - The Dry Canyon Well to Upper Dry Canyon trick tank pipeline will be located to avoid disturbance to site AR03-05-03-408.
- If unrecorded sites are discovered during the course of project implementation, activities will cease and the Forest or District Archeologist will be notified.
- Range facilities, if needed, will be located so as to avoid concentrations of livestock on identified heritage resource sites.
- No salting will occur within or adjacent to identified heritage sites.
- If impacts from grazing (e.g. excessive trampling, cattle rubbing against and knocking down standing features) are occurring to heritage sites, measures will be taken (e.g. fencing) to protect them.

LIVESTOCK DISTRIBUTION

Use of salt, protein, and other nutritional supplements are encouraged for livestock health and to improve livestock distribution. All supplements will be placed on forage, no less than ¼ mile from water, and away from natural concentration areas such as drainage bottoms, saddles, roads and trails. Supplement locations will be rotated periodically. No hay or bulk feed may be fed on Forest Lands.

- Water may be turned off to discourage livestock use in a portion of a pasture, but must be made available again once livestock leave the pasture.
- Water lots around dirt tanks will be maintained in satisfactory condition to control livestock access to water.
- Regular herding of livestock will be used to improve livestock distribution.

RANGE IMPROVEMENTS

Several improvements were evaluated under the 2009 EA for implementation on the Mescal Allotment. These improvements will help to achieve the desired conditions (EA, page 6) listed in this AMP. These improvements were proposed in the context of adaptive management, meaning that they have been identified as possible practices to assist in the achievement of desired conditions if management alone is not sufficient. Future monitoring may indicate that the projects are not necessary, in which case they would not be constructed. Current levels of Forest Service funding are unlikely to be sufficient to fund all projects identified. This decision assumes that the permittee may need to pursue outside sources of funding or bear a larger portion of the costs in order to complete all projects. A list of the new improvements to be installed when resources needs deem it necessary is as follows:

1. Pump water from a mine in upper Mine Canyon to provide upland water to the ridges between Mine Canyon and Christmas Tank Canyon.

2. Pump water from an existing storage at Cottonwood Spring to supplement the existing Cottonwood trick tank and Christmas dirt tank.
3. Re-drill the Dry Canyon Well, and pump water to Upper Dry Canyon trick tank.

The following existing improvements need to substantial maintenance or removal.

1. Place two new 5,000 gallon HDPE storages along the French Joe Pipeline to replace the large dilapidated steel rim storage that sits at the Forest Boundary. The existing steel rim storage needs to be removed from the forest for aesthetics and safety reason.

An option that needs to be addressed by the permittee and the Forest Service is the proposal of placing a well on the west side of the allotment to provide water for the Mescal and Coalmine Allotments. This project would require grant funding and it would also require a Section 18 review for implementation.

Maintenance of existing improvements will continue as needed. The responsibility for maintenance of range improvements is assigned to the permittee(s) in the terms and conditions of each grazing permit (FSM 2244.03). On an annual basis, responsibilities for repair and maintenance of existing improvements will be identified in the AOIs.

FIRES

One of the goals of the Forest Service is to re-establish the role of fire on the landscape. Naturally ignited wildfires will be aggressively fought when they endanger life or homes. Fires on other portions of the allotment will be fought with a containment strategy, being allowed to burn to the nearest roads or natural barriers. When planning prescribed fires, the permittee will be consulted, so that they will have time to make adequate preparations for the livestock operation, and so the rotation can be altered to allow fine fuels to accumulate. Burned areas will be allowed to rest for 1-2 growing seasons to ensure adequate recovery before livestock will be allowed access.

MONITORING

The objective of monitoring is to determine whether management is being properly implemented and whether the actions are effective at achieving or moving toward desired conditions.

Effectiveness monitoring includes measurements to track condition and trend of upland and riparian vegetation, soil, and watersheds. Monitoring will be done following procedures described in the interagency technical reference[1] and the Region 3 Rangeland

[1] Sampling Vegetation Attributes, Interagency Technical Reference. 1996. Cooperative Extension Service, USDA Forest Service and Natural Resources Conservation Service, and USDI Bureau of Land Management.

Analysis and Training Guide.[2] These data are interpreted to determine whether management is achieving desired resource conditions, whether changes in resource condition are related to management, and to determine whether modifications in management are necessary. Effectiveness monitoring will occur at five to ten year intervals, or more frequently if deemed necessary. Examples of effectiveness monitoring include, but are not limited to dry weight rank, pace transects, pace quadrat frequency, Parker 3-step, riparian evaluations (RASES or proper functioning condition), soil and watershed condition assessments and repeat photography. Monitoring will occur at established permanent monitoring points.

Implementation monitoring will occur on an ongoing basis and will include but not be limited to such things as inspection reports, forage utilization measurements, livestock counts, Grazing Response Index (PR 78) and facilities inspections. Utilization measurements are made following procedures found in the Interagency Technical Reference[3] and with consideration of the Principles of Obtaining and Interpreting Utilization Data on Southwest Rangelands (Smith et al 2007, PR 32). Utilization will be monitored on key forage species, which are perennial grasses that are palatable to livestock. At a minimum monitoring will include use in key areas, but may include monitoring outside of key areas. Utilization may be monitored both during the grazing season (seasonal use) and at the end of the growing season (annual utilization). The Sierra Vista District Range Staff Officer and the permittee will be responsible for monitoring livestock grazing utilization. Over time, changes in resource conditions or management may result in changes in livestock use patterns. As livestock use patterns change, new key areas may be established and existing key areas may be modified or abandoned in cooperation with the permittee(s).

The permittee will be encouraged to participate in monitoring activities. Records of livestock numbers, movement dates and shipping records will be kept by the permittee and will be provided to the District Range Staff annually.

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[2] Rangeland Analysis and Management Training Guide. 1997. USDA Forest Service, Southwestern Region.

[3] Utilization Studies and Residual Measurements. Interagency Technical Reference. 1996. Cooperative Extension Service, USDA Forest Service and Natural Resources Conservation Service, and USDI Bureau of Land Management. Revised 1999.