

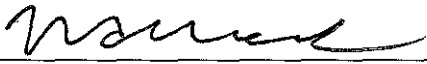
Allotment Management Plan

For The

Mowry Allotment

Sierra Vista Ranger District

Coronado National Forest

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Introduction

This document is an Allotment Management Plan (AMP) for the Mowry Allotment on the Sierra Vista Ranger District, Coronado National Forest. It is designed to be a flexible guide for improved livestock management on these allotments, as directed by the environmental assessment (EA) and subsequent decision notice (DN) signed by Acting District Ranger John Kraft on March 23, 2022. This AMP is part of the permit for the Mowry Allotment.

Based on the 2022 DN, the decision was made to authorize 8 – 25 cow/calf pairs year-long (96 – 300 AUMs). This increase from the current 8 cow/calf pairs year-long is based off of historical stocking records when the allotment was managed under a Special Use Permit and annual monitoring that indicates additional capacity is present on the allotment.

The Mowry Allotment is located on the west side of the San Rafael Valley along Mowry Wash. It contains only 418 acres, all of which are capable for livestock grazing. The Mowry Allotment is considered to be an on/off allotment, meaning that Forest Service administered lands (159 acres) and privately owned lands (259 acres) collectively make a single grazing unit due to their adjacency. The Mowry Allotment was historically referred to as the Buyer Pasture and was permitted under a Special Uses Permit. According to direction provided in Forest Service Manual (FSM) 2722.15, the Special Uses Permit was to be converted to a Term Grazing Permit with on/off provision. Vegetation on the Allotment is broadleaf and evergreen woodland and semi-desert and plains grasslands. The EA indicates that the allotment is in Mid Similarity condition with a static trend

STANDARDS AND GUIDELINES

The 2018 Forest Plan states the following Standards, Guidelines and Desired Conditions for Range Management on the Forest and how they pertain to the management of the Mowry Allotment.

Desired Conditions for the Range Program are:

- Domestic livestock grazing does not move the landscape away from the desired composition and structure of plant communities. Rangeland ecosystems are diverse, resilient, and functioning with a healthy, sustainable landscape in the face of a changing climate. Areas that are grazed have stable soils, functional hydrology, and biotic integrity, while supporting healthy, diverse populations of native wildlife.
- By supporting livestock production on working landscapes with an extensive, low impact land use, the Coronado National Forest contributes to preserving large areas of unfragmented open space. These open spaces sustain biological diversity and ecological processes and help to preserve the rural cultural heritage of southeastern Arizona and southwestern New Mexico.

Standards for the Range Program are:

- New issuance, renewal, modification, and management of grazing permits shall comply with the Coronado National Forest's "Stockpond Management Plan."

Guidelines for the Range Program are:

- Forage utilization should be based on site-specific resource conditions and management objectives, but in general should be managed at a level corresponding to light to moderate intensity (15-45% of current year's growth). Exceptions may be allowed in order to meet objectives related to scientific studies, fuels reduction, invasive plant control, or other targeted grazing or site-specific objectives.
- Burned areas should be given sufficient deferment from grazing, especially during the growing season, to ensure plant recovery and vigor.
- Construction or reconstruction of livestock fencing and replacement of nonpermeable fencing where wildlife movement is restricted should be consistent with the appropriate state wildlife agency standards for safe passage of wildlife and/or species-specific fencing guidelines developed at the local or regional level.
- Grazing management practices should be designed to maintain or promote ground cover that will provide for infiltration, permeability, soil moisture storage, and soil stability appropriate for the ecological zone. Additionally, grazing management should retain ground cover sufficient for the forage and cover needs of native wildlife species.
- Within riparian areas, structures used to manage livestock should be located and used in a way that does not conflict with riparian functions and processes.
- Treatments for restoring rangelands should emphasize the use and perpetuation of native plant species.
- Grazing intensity, frequency, occurrence, and period should provide for growth and reproduction of desired plant species while maintaining or enhancing habitat for wildlife.

Guidelines for Riparian Areas that apply to the Range Program are:

- Management activities should only be allowed in riparian areas if soil function and structure, hydrologic function and riparian plant communities (except noxious and/or invasive plants) are kept the same or improved.

Guidelines for Constructed Waters (developed springs, wells, stock ponds) that apply to the Range Program are:

- Wildlife escape ramps should extend to the bottom and near the edge of aboveground constructed waters, and at an angle to avoid entrapment of wildlife in constructed water facilities.
- Artificial waters constructed for livestock should be designed and/or retrofitted to provide a year-round drinking and habitat resource for native wildlife.
- Overflow should be diverted to allow for soil moisture recharge and creation or maintenance of wetland habitat features.

Guidelines for Natural Water Sources (springs, small streams and seeps) that apply to the Range Program are:

- Projects in upland habitats adjacent to streams should be designed to minimize input of sediment to streams.
- Water quality, quantity, soil function and structure, and wildlife habitat (including aquatic species habitat) should be protected or enhanced at natural springs and seeps.
- Management activities should not impair soil moisture recharge at outflows of natural water sources.
- Fences constructed around natural waters should allow bats and other desirable wildlife to pass through unharmed

ESA Section 7 Consultation

Management direction applies as specified in the September 27, 2019 Amended Biological Assessment for Coronado National Forest Livestock Grazing Program and the September 30, 2021 Biological Opinion on Ongoing Grazing on the Coronado National Forest.

MANAGEMENT STRATEGY

Under the 2022 EA and DN, grazing would be authorized on the allotment under the following terms and conditions.

- **Duration, timing, and frequency of grazing** – The Mowry Allotment is on a year-round grazing permit. Grazing management would be designed to ensure that pastures receive periodic growing season rest or deferment in order to provide for grazed plant recovery. The sequence and timing of pasture moves will be based on monitoring of range readiness, ecological condition, forage and water availability and long-term utilization amounts and patterns.
- **Grazing intensity** - Grazing intensity, while combined with other forms of implementation and effectiveness monitoring (see monitoring section below), can help guide management decisions to meet desired conditions. Grazing intensity across the Forest is described as forage utilization on key forage species. Forage utilization would be managed at a level corresponding to light to moderate intensity (30-45% annual utilization in key areas) to provide for grazed plant recovery, increased herbage production and retention of herbaceous litter to protect soils and provide forage and cover for wildlife (Holechek et al 2004). While utilization monitoring often occurs annually, it's the long term view of that monitoring that guides management decisions. Reviews of stocking rate studies supports this practice as its recommended that grazing intensities guideline are target over 5-10 year periods to account for climatic variables (Holechek and Galt 2000). However, consistent patterns of annual 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.

Table 1. Permitted numbers and grazing management

Allotment	Management System	Animal Unit Months (AUMs)	Cattle Numbers- Season
Mowry	3 Pasture - Rest Rotation	127 - 396	8-25 cow/calf – 03/01-02/28

- Forage use would be managed at a level corresponding to light to moderate intensity (30-45%)^{1,2} 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.

Adaptive management will be the guiding strategy on the Mowry Allotment. This approach is intended to provide flexibility to adapt management to changing circumstances and resource conditions. If monitoring indicates that desired conditions are not being achieved, the Forest Service and permittee will cooperatively modify management practices. Modifications may include the number of livestock authorized in annual operating instructions (AOI), dates for grazing, class of animal, pasture rotations, and grazing systems. Any changes will not exceed the limits for timing, intensity, duration, and frequency analyzed in the 2022 Environmental Assessment (EA).

Numbers authorized in the 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. Actual rotation dates are based on ecological conditions, water availability and utilization within each pasture and Forest Service/permittee goals. Rotation dates are developed by the permittee and Forest Service Range Staff and authorized in the AOI. Records of livestock numbers, movement dates, shipping records, and

¹ Based on review of numerous grazing intensity studies, Holechek (1999, 2004) identifies light to moderate grazing as 32-43% average use of primary forage species. These averages are based on pasture-wide utilization averaged over time. The Forest Service monitors utilization based on the use of key forage species in key areas. Key areas are selected to be representative of management effectiveness over the entire pasture. For the purposes of monitoring, an annual use guideline of 30%-45% of key species in key areas will be used to monitor use in all pastures, which, combined with growing season rest or deferment, should insure pasture-wide average use of less than 45%.

² Grazing intensity is the percentage of forage produced in the current season, to the date of the measurement that has been consumed or trampled by animals. It is a comparison of the amount of herbage left compared with the amount of herbage that has been produced to the date of the measurement. Grazing intensity is measured at the end of a grazing period. Grazing intensity differs from utilization because it does not account for subsequent growth of either the ungrazed or grazed plants. May also be referred to as "seasonal utilization" or "relative utilization". Descriptors for grazing intensity levels as determined at the end of the grazing period (FSH, R3-2209.13-2016-1). Light to non-use 0-30 percent, Conservative 31-40 percent, Moderate 41-50 percent, Heavy 51-60 percent, Severe 61+ percent.

rainfall dates and amounts will be kept by the permittee and will be provided to the USFS annually.

Management Practices and Design Features

To mitigate resource impacts, the following measures would be implemented. These practices 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 and Forest Service Best Management Practices. Implementation of the mitigation measures and design criteria is intended to reduce and/or minimize environmental impacts.

Soil, Hydrology, Vegetation and Watershed – 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 would be managed to achieve the goal of light to moderate grazing as a pasture average. The objective is to protect plant vigor, increase herbaceous residue needed for soil protection and to increase herbage producing ability of forage plants. A utilization guideline of up to 45% use of key species in key areas would be used to achieve this objective.
- Management practices would be used to achieve proper distribution or lessen the impact on sensitive areas. Practices include herding, salting and controlling access to waters. Salt would be placed away from roads and at least one quarter mile from waters. Placement of liquid or bulk supplements would require prior approval of the District Ranger.
- Use permit authorities to change operations to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources when special circumstances (e.g. drought) occur.
- Locate water source developments in such a manner as to avoid or minimize disturbance to riparian areas and streambanks, and erosion and sedimentation to the extent practicable.
- Utilize natural land contours where possible for the installation of buried pipeline to reduce slope of disturbed areas.
- Limit the size of the construction footprint (area of bare soil with reduced infiltration capacity) to the minimum necessary for efficient operations to the extent practicable.
- Apply soil protective cover on disturbed areas where natural revegetation is inadequate to prevent accelerated erosion before the next growing season.
- Limit operation of equipment on wet soils to minimize soil compaction, displacement, erosion, and sediment runoff.
- Stabilize steep, excavated slopes (through the use of water bars, soil cover, and/or seeding).
- Install appropriate signage or barriers (e.g. dead and downed trees) where necessary to prevent off-road travel along proposed pipeline routes.

- In areas where livestock numbers are being increased, soil condition monitoring will be conducted to ensure soil condition remains satisfactory. If monitoring indicates downward trends in soil condition, administrative actions will be taken to reverse this trend.
- Only dormant season grazing will be permitted for larger drainages with more consistent flow and predominant riparian vegetation, including Redrock Canyon and Harshaw Creek. These drainages will also be monitored for condition trends. If monitoring indicates declines in riparian vegetation condition, then administrative actions will be taken to reverse this trend.

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

- All water developments would include wildlife access and escape ramps and would be designed for improved access for all wildlife species. Waters would be kept available to wildlife year-round unless prior approval is given to shut waters off to control livestock use patterns.
- Follow the Stockpond Management Plan and work towards developing a local strategy for how stockponds will be used in livestock operations and the management of wildlife.
- Notify permit holders and Range Staff of the operational procedures in the Chiricahua leopard frog (CLF) and Sonoran tiger salamander (STS) Recovery Plans to minimize take from the introduction of non-native species and disease contamination.
- Construction or reconstruction of livestock fencing and replacement of non-permeable fencing where wildlife movement is restricted should be consistent with the appropriate state wildlife agency standards for safe passage of wildlife and/or species-specific fencing guidelines developed at the local or regional level.
- No human disturbance or construction actions associated with the livestock grazing will occur within 0.25 miles of Mexican spotted owl Protected Activity Centers (PACs) during the breeding season (March 1-August 31). Exceptions may occur where recent surveys indicate non-breeding or infer absence.
- If the construction or repair of range improvements may disturb breeding western yellow-billed cuckoo, then that activity will be avoided within the YBCU breeding season (June 1 – September 30).
- Avoid the removal of yucca or agave to conserve nectar sources for bats.
- Grazing management practices should be designed to maintain or promote ground cover that will provide for infiltration, permeability, soil moisture storage, and soil stability appropriate for the ecological zone. Additionally, grazing management should retain ground cover sufficient for the forage and cover needs of native wildlife species.
- Within riparian areas, structures used to manage livestock should be located and used in a way that does not conflict with riparian functions and processes.

- Treatments for restoring rangelands should emphasize the use and perpetuation of native plant species.
- Grazing intensity, frequency, occurrence, and period should provide for growth and reproduction of desired plant species while maintaining or enhancing habitat for wildlife.
- Burned areas will be evaluated site specifically in accordance with the Regional Supplement to FSH 2209.13 – 2015-1, Section 19.2 Considerations for Re-Stocking and Management of Grazing Allotments Post Wildfire and Other Disturbances. The site-specific analysis will guide grazing management to ensure proper vegetation and soil recovery.
- Where possible, limit livestock access to aquatic sites occupied by CLF in order to minimize direct mortality and injury due to trampling, the destruction of bankline cover, and deterioration of water quality. Emphasize sites that play a major role in metapopulation dynamics and long-term population persistence.
- Through regular monitoring, the Forest will determine whether there is a need to specifically assess hydrologic function in Redrock Canyon. If watershed improvements are determined to be necessary, the Forest will coordinate with partners to facilitate the installation of check dams in the upper reaches of the watershed.
- Maintain existing exclosures designed to reduce livestock pressure on Gila topminnow habitat. While permitted livestock are grazing pastures bordering an exclosure, the Forest will ensure:
 - Exclosure fences are functional upon livestock entry to these pastures.
 - The Forest and/or the permit holder will check and repair these fences to ensure that no fence is non-functional for more than two weeks.
- The Forest will continue to commit personnel to coordinate with the Arizona Game and Fish Department, New Mexico Department of Game and Fish, and FWS to:
 - Attend stakeholder meetings.
 - Discuss translocating Chiricahua leopard frog to suitable sites on the Forest, emphasizing the enhancement of metapopulation dynamics and long-term population persistence.
 - Support and implement a robust program to control nonnative aquatic organisms on the Forest, particularly bullfrogs, fish in the families Centrarchidae and Ichthyuridae, and crayfish.

Cultural Resources – The objective is to protect cultural resources (historic and archaeological sites and traditional cultural properties) 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 new proposed range facilities will be surveyed by qualified personnel for cultural resources prior to any ground-disturbing activities. Facilities would be built or modified to avoid impacts to sites.

- If unrecorded cultural resources are discovered during the course of project implementation, activities would cease and the Forest or District Archeologist would be notified.
- Proposed facilities are located so as to avoid concentrations of livestock on identified cultural resource sites.
- No salting would occur within or adjacent to identified cultural resource sites.
- If impacts from grazing (e.g. excessive trampling, cattle rubbing against and knocking down standing features) are determined to be impacting cultural resource sites, measures would be taken (e.g. fencing) to protect them.

Invasive Weeds – The objective is to minimize the introduction and establishment of invasive weeds being established on National Forest System lands.

- Equipment would be cleaned prior to moving between units known to be infested with invasive plants and other units that are free of such plants.

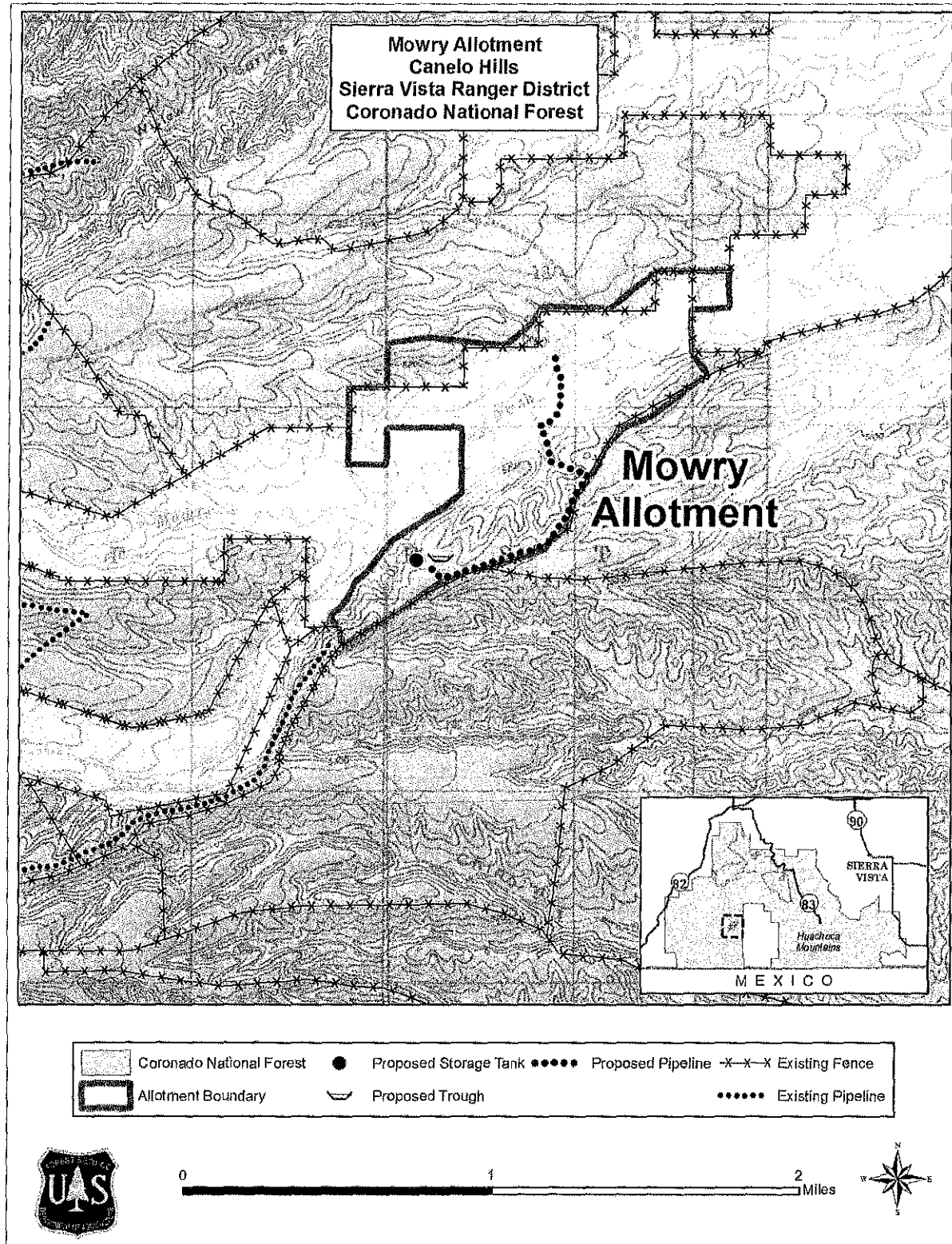
Range Improvements

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. The Forest Service will assist in supplying materials if budgets allow.

The following improvements were approved in the 2022 EA:

- Install/bury a pipeline and install a water trough and storage tank in the South pasture. The source would either come as an extension off of an existing pipeline from the neighboring allotment to the west, or from the ranch headquarters to the northeast.

Cultural and biological clearance will need to be conducted prior to the installation of these improvements.



Mowry Allotment Proposed Improvement Map

Fire

One of the goals of the Forest Service is to re-establish the role of fire on the landscape. 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 evaluated site specifically in accordance with the Regional Supplement to FSH 2209.13 – 2015-1, Section 19.2 Considerations for Re-Stocking and Management of Grazing Allotments Post Wildfire and Other Disturbances. The site-specific analysis will guide grazing management to ensure proper vegetation and soil recovery.

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. Monitoring is necessary under the adaptive management strategy proposed to implement timely and effective management changes. The Sierra Vista Ranger District Range Program would be primarily responsible for monitoring. Active cooperation and participation by the permittee would be encouraged.

Effectiveness monitoring includes measurements to track condition and trend of upland and riparian vegetation, soil, and watersheds. Monitoring would be done following Sampling Vegetation Attributes procedures described in the Interagency Technical Reference (1996) and the Region 3 Rangeland Analysis and Training Guide. This data would be 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 typically occurs every three to five years but would occur at least once over the ten-year term of the grazing authorization.

Implementation monitoring would occur yearly and may include inspection reports, forage utilization measurements in key areas, livestock counts and facilities inspections. Utilization measurements are made following procedures found in the Interagency Technical Reference (1999) and with consideration of the Principles of Obtaining and Interpreting Utilization Data on Southwest Rangelands (2007).

Utilization would be monitored on key forage species, which are perennial grasses that are palatable to livestock. At a minimum, monitoring would 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).

Utilization guidelines are not intended as inflexible limits. Utilization measurements can indicate the need for management changes prior to this need being identified through long-term monitoring. Utilization data would not be used alone but would be used along with reporting actual use (the number of AUMs grazed), climate and condition/trend data, to determine stocking levels and pasture rotations within the Mowry grazing allotment for future years.

The Sierra Vista District Range Staff and the permittees would be responsible for monitoring livestock grazing utilization. Permittees would be encouraged to participate in monitoring activities. Records of livestock numbers and movement dates would be kept by the permittees and would be provided to the District Range Staff.