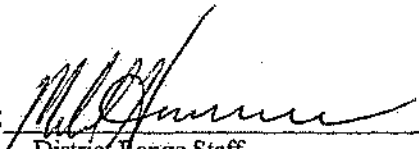



2005 Mud Springs Allotment Management Plan (AMP)

Mormon Lake Ranger District

Coconino National Forest

Prepared by: 
District Range Staff

Date 12/1/05

Agreed to/Reviewed by: *Lockett Ranches, Inc.*

Permittee

Date 11-29-05

Approved by: 
District Ranger

Date 12-1-05

Goals and Objectives of Management

This Allotment Management Plan follows the "Decision Notice and Finding of No Significant Impact for the Mud Springs and Tinny Springs Allotments". This AMP will cover only the Mud Springs portion of this decision, signed on 11/8/95.

Background

This area has had two permittees/herds of cattle for more than 50 years. The Tinny Springs Allotment portion of this allotment was sold in May of 2005. This sale divided the allotment area into two completely divided allotments, Mud Springs to the north and Tinny Springs to the south. The grazing management of each allotment is now separate.

On November 8, 1995, an environmental assessment was completed, and a decision made by Fred Trevey, Forest Supervisor that would allow livestock grazing to occur on the Mud Springs Allotment. At that time, a ten-year Term Grazing Permit was issued to the Lockett Ranch, Inc. The current ten-year Term Grazing Permit for livestock grazing on the Mud Springs Allotment was signed on November, 2005. This permit supercedes the permit issued April 10, 1996.

A deferred grazing system is used on this allotment. The allotment has two main pastures and a holding pasture. Use is rotated yearly.

This Allotment Management Plan follows the "Decision Notice and Finding of No Significant Impact for the Mud Springs and Tinny Springs Allotments". This AMP will cover only the Mud Springs portion of this decision, signed on 11/8/95 which includes the following:

- Issue 10-year grazing permit for the Mud Springs Allotment.
- Manage livestock and wildlife to achieve site-specific forage utilization levels of 35% of annual forage production and within Mexican spotted owl activity centers (PAC's).
- This permit will allow up to 200 yearling cattle in a deferred rotation grazing system with two pastures and a holding pasture from 6/1-10/31.

Existing Improvements

- There will be continued management and maintenance on all real property as listed on the Deferred Maintenance Inventory and Certification for Range Improvements list.

Monitoring

- The monitoring section of this AMP is given near of end of this document.

Purpose and Need

Purpose

The Chief of the Forest Service has provided direction to complete analyses of grazing effects, in compliance with the National Environmental Policy Act, prior to issuing new livestock grazing permits of those that expire December 31, 1995.

The current grazing permit for the Mud Springs Allotment on the Coconino National Forest expires December 31, 2005. The purpose of this proposed action is to authorize grazing on this allotment, thereby fulfilling the requirements listed below.

- Where consistent with the multiple use goals and objectives there is congressional intent to allow grazing on suitable lands.
- The allotment contains lands identified as suitable for domestic livestock grazing on the Coconino National Forest Plan and continued domestic livestock grazing is consistent with the goals, objectives, standards, and guidelines of the Forest Plan.
- It is Forest Service policy to make forage available from lands suitable for grazing and in accordance with land management land to qualified livestock operators.
- It is Forest Service policy to continue contributions to the economic and social well-being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood.
- By regulation, forage-producing lands will be managed for livestock grazing where consistent with land management plans.
- Authorization for a 10-year period is required by law, unless there is documented resource degradation that requires protective action or further comprehensive analysis.

The Forest Service currently issues term grazing permits to qualified applicants for livestock grazing on the Coconino National Forest. A grazing permit authorizes livestock to graze within a designated area called a grazing allotment and designates livestock numbers and season of use for the allotment. Although Forest Service policy does give existing permittees priority status for issuance of new permits, existing term permits have no legal right of renewal.

Need

An interdisciplinary team reviewed current information and on-the-ground conditions within the Mud Springs Range Allotment and defined the existing conditions of the area. These conditions were then compared with the desired conditions for the allotment outlined by the Coconino National Forest Plan, all applicable laws and Forest Service direction, and the site specific needs of the area. This information helped the team to understand why and how the existing conditions developed, and to define resource objectives for grazing management in the project area. Existing conditions for the allotment are listed below.

- The upland watershed and soil are in satisfactory condition, but meadow and riparian areas are generally in unsatisfactory condition. The poor conditions in meadows and riparian areas are attributable to past livestock grazing use and the current cumulative use by large herds of elk, controlled livestock herds, off and on road drivers and other recreation activities. Range conditions in most dry meadow are fair with an upward or static trend. Most wet meadows are in fair condition with a static trend. Ground cover and wetness of the Hoxworth Springs area have improved greatly over the pasture 10 to 15 years. High densities of forest roads and their poor locations and conditions area also contributing to poor soil and watershed conditions throughout the allotment area. In addition, road use during wet weather and off-road use in the area is increasing.
- The allotment management plan (AMP) was updated in 1989 to improve the distribution livestock use, reduce impacts to wildlife and their habitats, and reduce conflicts with uses on adjacent private lands. Livestock distribution has improved with these changes in management and new range structures. These structures are now in place. This new AMP will continue these past efforts.
- The positive results from past changes in livestock management since 1989 may be negated in some sensitive areas by the impacts of a large population of elk using the allotment. The increase in grazing wildlife numbers is due, in part, to an increase in water sources and grass seeding following timber harvests in this area.
- Due to elk and increased recreation in the area, problems exist in maintaining fences and keeping gates closed along the allotment boundaries throughout the area, especially near Mormon Lake and Forest Highway 3. Wandering livestock create hazards for motorist on FH3, conflicts with private landowners and control problems for the permittee.

Objectives

After comparing the existing conditions listed above with the desired conditions for sound and stable watersheds, productive ground and overstory vegetation, and permitted livestock use that are compatible with wildlife and recreation needs, the team developed the following list of project objectives, or goals, to move toward the desired conditions for the Mud Spring Allotment.

- Minimize impacts to meadow and riparian conditions through proper management of livestock grazing use.
- Minimize impacts to, or improve where possible, watershed, soils and vegetation conditions within the ponderosa pine vegetation type through proper management of livestock grazing.
- Control the location, timing, and intensity of livestock grazing to maintain and/or improve long-term soil productivity and water quality.
- Reduce negative impacts associated with the urban interface areas and recreation use within and adjacent to the allotment area.
- Properly care for threatened and endangered wildlife and plant species using current knowledge of their habitat needs and responses to livestock grazing with monitoring information done for this allotment.

Additional Management Items

Annual Operating Instructions: Annual operating plans make adjustments to cattle numbers, and time and duration of pasture use based on current climatic and range conditions. Making these plans each year and adjusting throughout the season as conditions change adds needed flexibility for this alternative.

Roads and Cattle Guards: There is a need to keep forest users from leaving gates open. Where roads are maintained as open, cattle guards will be put in place. Where roads are identified for closure, in past and future road decisions, no cattle guard is necessary.

Cattle Guard Maintenance: Cattle guard maintenance is shared between the Forest Service and the permittee for level 3 roads (main surfaced roads). Cattle guard maintenance on level 2 roads (secondary smaller roads) is the responsibility of the permittee.

Implementation of Structural Improvements: There is a need for cultural, wildlife and recreation coordination when implementing the grazing system. Structural improvements such as fencing, stock tanks and cattle guards will be used to implement the grazing plan. During the life of the permit, there may be additional or fewer improvements needed based on adapting to changes and meeting the goals of the new system. The following parameters need to be followed when implementing structural improvements.

- **Cultural Resource Coordination:** A programmatic cultural report has been completed and approved by the State Historic Preservation Office (SHPO). Using the parameters described in the programmatic report, conduct survey and obtain clearance prior to any ground disturbing activities related to structural improvements.
- **Threatened, Endangered and Sensitive Species Coordination:** Additional very site specific biological assessments and evaluations will be written for chosen actions. Refer to and follow any mitigation measures or implementation parameters described in the biological assessments and evaluations written this action. Location of improvements may be altered somewhat in response to species considerations. Involve a wildlife biologist prior to final planning of any new improvements.
- **Fencing:** All new fencing will contain a smooth bottom wire and appropriate bottom wire height for wildlife. Conduct cultural resources and threatened, endangered and sensitive species coordination as described above. Where possible, locate fences within tree lines to limit impact to visual quality. Elk jumps may be constructed along new fences and along existing fences as appropriate.

Other Management Items: Salting occurs throughout the allotment, but is not used in northern goshawk PFAs, meadows, burn areas or locations closer than 1/4 mile to water. Grazing systems are alternately rested and grazed in a planned sequence. The permittee will rotate livestock in a planned grazing system that alternates rest and graze period throughout a given year and from year to year.

Monitoring

Required Annual Monitoring

Compliance Monitoring: Throughout each grazing season, compliance monitoring will be done by Forest Service personnel to determine accomplishment of the terms and conditions of the term grazing permit, Allotment Management Plan, and Annual Operating Instructions.

Allotment Inspections: Allotment inspections are a written summary completed each fall by Forest Service personnel to document compliance monitoring and to provide an overall history of that year's grazing. This monitoring is completed with the permittee. This document may include weather history, the year's success, problems, improvement suggestions for the future, and a monitoring summary.

Range Readiness: Each spring before cattle are turned out on the allotment, range readiness will be assessed by Forest Service personnel to determine if vegetative conditions are ready for cattle grazing. The range is generally ready for grazing when cool season grasses are leafed out, forbs are in bloom, and brush and aspen are leafed out. These characteristics indicate the growing season has progressed far enough for plants to replenish root reserves so that grazing will not seriously impact the forage plants.

Forage Utilization: Long term condition and trend monitoring is the primary standard for monitoring of this cattle grazing management system. Utilization is used as a tool to understand and achieve the goals of long term management. Utilization guidelines are intended to indicate a level of use or desired stocking rates to be achieved over a period of years.

The definition of utilization and seasonal utilization come from standard protocols established by the Society of Rangeland Management and the new guidelines established by Region 3 Regional Forester [PRD 92]. The following definitions and procedures for utilization were taken and adapted to fit this project.

Utilization is the proportion or degree of current year's forage production that is consumed or destroyed by animals (including insects). It is a comparison of the amount of herbage left compared with the amount of herbage produced during the year. Utilization is measured at the end of the growing season when the total annual production can be accounted for and the effects of grazing in the whole management unit can be assessed. Utilization guidelines are intended to indicate a level of use or desired stocking rate to be achieved over a period of years.

Utilization measurements will be taken in key areas which reflect grazing effects within an entire pasture. One key area would be established within each large pasture, at existing long-term monitoring sites if possible, to represent overall pasture 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 climate and condition/trend data, to set stocking levels and pasture rotations for future years.

Cattle would move from one pasture to another when seasonal utilization in a pasture approaches a "moderate" level. For this allotment, moderate seasonal utilization would be approximately 21-50 percent. Moderate seasonal utilization is an approximate value because it takes into account any additional growth which might occur later that year and considers season of use, wildlife use, weather conditions, availability of forage, and water in pastures. This moderate seasonal utilization level leaves residual cover for wildlife and soils and provides for long term health of the grazed plants.

If monitoring shows utilization rates exceed the utilization guideline in a pasture in a given year, the grazing schedule and/or cattle numbers would be adjusted the following year so the utilization guidelines are not exceeded again. If utilization is exceeded after these adjustments are made, then the grazing management system would be changed to ensure this does not happen in the future.

Long Term Monitoring

Condition and Trend: Watershed and vegetative condition and trend monitoring will help determine the effectiveness of the allotment management plan, and long-term range and watershed trends.

Parker Three-Step and paced transect monitoring points were established throughout this allotment in the 1950-60s. These transects are one of best historic records of range condition and trend. The photo points and vegetative ground cover data show how the site has changed over time. Canopy cover and frequency plots were placed with the Parker Three-Step transects in 2001 to add to this historic data.

Ocular plant canopy cover 0.10-acre plots were used to compare existing conditions with potential and desired vegetative community conditions. Over time, these plots will show how canopy cover changes. Canopy cover will provide an indication of how plants are growing, assuming that if they are getting bigger and occupying more space, then they are doing well and can be a relative gauge of vigor.

Frequency and ground cover data were collected using the widely accepted plant frequency method (University of Arizona, Extension Report 9043, 1997). These plots will monitor trends in plant species abundance, plant species distribution and ground cover. This will provide information on plant composition and additional information on regeneration.

These transects will be read at least every 10 years by Forest Service personnel. These plots will help determine the effectiveness of current management.

Precipitation: Precipitation is currently recorded at the Flagstaff National Weather Service Office at Bellemont. Precipitation data may be recorded within or near the allotment for more localized information. Precipitation data may be recorded throughout the year and summarized in the annual inspection. This data assists managers with forage utilization and production data collection.

Soil and Riparian Condition: The Intergovernmental Agreement between the Forest Service and the State of Arizona that controls water quality and the Clean Water Act requires implementation and effectiveness monitoring. The objectives of monitoring are to: (1) collect data sufficient to evaluate effects of management activities on soil and water resources; and (2) support changes in management activities to protect soil and water quality. Monitoring will help determine how successfully managers are implementing guidance practices and how effectively those practices are protecting soil and water quality. The current and proposed cattle grazing system incorporates Best Management Practices (BMP) and grazing practices (GP) and constitutes compliance with Arizona State and Federal Water Quality Standards. Arizona Department of Water Quality (ADEQ) will continue to monitor water quality in the area.

Watershed condition can be assessed using information from the monitoring schemes above. Monitoring of plant abundance, ground cover, species diversity and estimates of overall soil condition (using the methods described throughout this monitoring section) will indicate whether or not management practices are effectively meeting management goals. Trends toward improvements in species abundance and diversity should indicate that management practices are effectively improving soil condition and by inference, maintaining or improving downstream water quality and complying with water quality standards. Conversely, decreases in plant abundance and species diversity may indicate that management practices are not effective and need to be changed. Environmental factors, especially precipitation, will be considered when evaluating monitoring results.

Noxious Weeds: State-listed noxious weeds located on this allotment would be treated as necessary. The permittee and Forest Service would coordinate the weed inventory and treatment with responsibilities identified through the AOI. Noxious weed monitoring is carried out at the same time allotment inspections are conducted. As noxious weed populations are found they are mapped, monitored and in some areas, manually removed. Other treatment methods will follow guidelines established in the "Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds" (USDA 2005b).

Threatened and Endangered Species: Threatened and endangered species are monitored in compliance and consultation with the USFWS. Vegetation monitoring points (key areas) have been established on the allotment and are monitored according to consultation requirements.

These key areas would normally be one-quarter to one mile from water, located on productive soils on level to intermediate slopes, and be readily accessible for grazing.

Size of the key forage monitoring areas could be 20 to 500 acres. In some situations such as high mountain meadows with perennial streams, key areas may be closer than one-quarter mile from water and less than 20 acres. Within key forage monitoring areas, select appropriate key species to monitor average allowable use (USDA 1987a, p. 66-1) One Mexican spotted owl (MSO) key area plot is already established on the Pickett Allotment and monitored annually:

- Management Area: Ponderosa pine/oak
- Pasture: Howard Mountain
- Location: Southwest portion of this pasture
- Key Species: Squirreltail, June grass, Blue grass, Carex

Wildlife, Fish, and Plants of Concern

Mexican Spotted Owl: Continue to monitor "key areas" annually in restricted habitat and meadows in owl habitat to ensure that appropriate utilization guidelines are followed, as established through NEPA.

Northern Goshawk: Monitor "key areas" annually in northern goshawk habitat to ensure that appropriate utilization guidelines are followed, as established through NEPA.

Game Species: Measure effective ground cover and diversity of shrubs, forbs, and grasses on ten plots in treated grasslands and woodlands.

Cultural Resources

The project administrator must ensure that all ground-disturbing activities receive archaeological surveys and clearances prior to implementation. Avoidance of archaeological resources is required and will be monitored during project implementation.