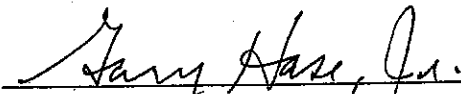



ALLOTMENT MANAGEMENT PLAN

MOQUI ALLOTMENT

TUSAYAN RANGER DISTRICT
KAIBAB NATIONAL FOREST

Prepared By:  Date 2/14/06
Gary Hase, Jr.
Rangeland Management Specialist

Agreed to/
Reviewed By:  Date 2/14/06
Bill Cordasco, Babbitt Ranches LLC

Approved By:  Date 2-14-06
Richard Stahn
District Ranger, Tusayan Ranger District

I. INTRODUCTION

The Moqui Allotment is located approximately 18 miles southeast of Tusayan in the southeastern portion of the Tusayan Ranger District and contains approximately 55,250 acres. Adjacent grazing allotments include the Anita allotment to the north and west, and the Cameron allotment to the north and east.

The Moqui allotment is dominated by a pinyon/juniper woodland community (68%). Other vegetative communities present include: shrub/grassland (15%), ponderosa pine forest (13%), sagebrush (3%), and mountain grassland (1%). Red Horse Wash and Russell Wash are the two dominant topographic features on the allotment. Dominant grass species on the allotment include: blue grama, western wheatgrass, bottlebrush squirreltail, spike muhly, Arizona fescue, mountain muhly, and pine dropseed. Common shrub species include big sagebrush, black sagebrush, rabbitbrush, cliffrose, fourwing saltbush, winterfat, and broom snakeweed. Common herbaceous species include sandwort, globemallow, and various species of buckwheat.

II. GOALS AND OBJECTIVES

The four goals and objectives of grazing management on the Moqui allotment are as follows:

- 1) To provide forage for domestic livestock as directed by the Forest Plan.
- 2) To improve the cool season grass component on the allotment.
- 3) To improve the browse component on the allotment.
- 4) To improve watershed conditions on the allotment.

III. MANAGEMENT STRATEGY

Grazing System

The Moqui Allotment is divided into three grazing pastures (Corbett, Harbison, and Peterson). The allotment will be managed utilizing a deferred rotation system with a grazing period of approximately 56 days in each pasture. The grazing schedule identified on the Pasture Use Plan (pages 5 and 6) is a guide and should be followed as closely as possible in order to achieve the identified goals and objectives.

The seasonal deferment will provide spring growing season rest to each pasture two years out of every three. This management strategy is expected to improve the vigor and density of the cool season grasses and the overall condition and trend of the allotment.

Permitted Numbers

The permitted numbers will be 560 yearling cattle and the permitted season of use will be from May 7 to October 21. This permitted use equates to 2,165 Animal Unit Months. The permitted numbers of 560 yearlings may be converted to adult cows using a conversion rate of 0.7 yearlings/adult cow (560 yearlings = 392 adult cows).

Allowable Utilization

The average allowable utilization in key areas on the allotment will be 30 percent. The average allowable utilization in upland areas will be 20%.

IV. LIVESTOCK DISTRIBUTION AIDS

All developed waters within the Moqui Allotment should be maintained in order to help distribute livestock effectively throughout the allotments. Additionally, portable sites for haul water may be needed and should be used as necessary to assist in livestock distribution. The following requirements will apply to portable haul water locations:

- 1) Coordinate with the District Range Management Specialist to identify portable water haul locations for individual pastures prior to the grazing period.
- 2) To aid in livestock distribution, the portable water haul location should generally be in areas of light forage utilization.
- 3) Generally, portable water hauls will not be located at sites used in previous years or in areas with fragile and erosive soils.
- 4) Portable water haul locations will be moved when the desired utilization levels have been obtained.
- 5) Portable haul water storage tanks and troughs will be removed when livestock leave the pasture.

Salt, protein blocks and supplement will be used as a tool for rangeland management to aid in the distribution of livestock. They will be used in a manner to spread utilization throughout the pastures within the allotment. Salt, protein block and supplement locations will be changed annually and they will not be placed within $\frac{1}{4}$ mile of water, or within areas of depleted rangeland, erosive soils, or sensitive plant species.

V. RANGE IMPROVEMENTS

A) Existing Structures

Range improvements (fencing, waters, handling facilities, etc.) are critical components of any grazing management plan. All range improvements assigned to the permittee (Inventory and Maintenance Responsibility, page 7) need to be maintained in order to facilitate proper management of the allotment. Permittee maintenance responsibilities are also identified on the allotment map (page 8).

Any ground disturbing range improvement maintenance activities will require an archaeological survey and heritage clearance prior to beginning any maintenance work.

B) Structural Improvements

There are no new structural improvements scheduled for construction.

C) Non-Structural Improvements

There are no new non-structural improvements scheduled for implementation.

VI. MONITORING ACTIONS

Collection and interpretation of utilization information is based on two documents; *Principles of Interpreting Utilization Data* (University of Arizona, 2005) and the *Kaibab National Forest Guidelines for Obtaining and Analyzing Use Information* (2005).

Monitoring of utilization in key areas and uplands will be conducted in each pasture at the end of the growing season to ensure compliance with the established utilization standards. Grazing intensity will be assessed in key areas and upland areas at least once during livestock use in each pasture. This is to assure that grazing intensity is not exceeded and to aid in identifying timing of cattle rotation through pastures.

Range condition and trend monitoring will be conducted on the allotment using Parker Three-Step clusters, Pace Frequency transects, and Paced transects. Parker Three-Step clusters and Pace Frequency transects will be read approximately every 10 years. Paced transects will be read at approximately 5 year intervals.

Noxious weeds will be identified during field inspections and follow-up action will be implemented according to the *Coconino, Kaibab, & Prescott National Forests Noxious and Invasive Weed Strategic Plan 1998, Amended 2002*.

VII. DROUGHT MANAGEMENT

Climate in the Southwestern United States is highly variable with periods of below average precipitation and drought being relatively common. Management of livestock during these periods is extremely important in order to protect soils, long-term site productivity, water quality, wildlife, and other Forest resources and activities. To address this issue, the following guidelines have been established for the Kaibab National Forest:

1. Annual and/or seasonal adjustment of authorized livestock numbers to match the current year's forage production and conditions. Required or voluntary reductions in livestock numbers due to drought conditions will be documented as non-use for range improvement purposes, not for personal convenience.
2. Livestock use of a pasture will only be authorized when the current year's forage production exceeds 100 pounds (dry weight) per acre within the key

areas of the pasture. If there are no pastures on the allotment that meet this criterion, grazing will not be authorized on the allotment.

3. The grazing management strategy that is established on the allotment (rest-rotation, deferred rotation, etc.) will be maintained.
4. The utilization standards established for the allotment will be maintained and enforced. In cases of severe drought, and during severe drought recovery periods, the established utilization standards may be reduced.
5. Permittee may be required to haul water to portable troughs to avoid depleting existing water sources.
6. Following severe drought, re-stocking to full capacity will not occur until after a minimum of one growing season rest. Generally, re-stocking the allotment following severe drought will occur incrementally over several years.

VIII. FLEXIBILITY

It is imperative that flexibility be considered when following this allotment management plan. Adjustments to the grazing sequence may be necessary due to weather constraints (i.e. precipitation patterns favor or do not favor certain portions of the allotment), or management activities in an allotment or pasture (P/J treatments, prescribed burning, etc.).

There may also be a need to vary livestock numbers to meet objectives. Drought may force the reduction of livestock numbers (refer to Kaibab National Forest Drought Policy) while on the other hand additional numbers above term permit may be appropriate in certain situations.

GRAZING SYSTEM PASTURE PLAN

ALLOTMENT: MOQUI

DATE PREPARED: 02/02/2006

YEAR	PASTURE	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.
2006	Corbett			█	█		
	Harbison					█	█
	Peterson	█	█				
2007	Corbett	█	█				
	Harbison			█	█		
	Peterson					█	█
2008	Corbett					█	█
	Harbison	█	█				
	Peterson			█	█		
2009	Corbett			█	█		
	Harbison					█	█
	Peterson	█	█				
2010	Corbett	█	█				
	Harbison			█	█		
	Peterson					█	█
2011	Corbett					█	█
	Harbison	█	█				
	Peterson			█	█		

GRAZING SYSTEM PASTURE PLAN

ALLOTMENT: MOQUI

DATE PREPARED: 02/02/2006

YEAR	PASTURE	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.
2012	Corbett						
	Harbison						
	Peterson						
2013	Corbett						
	Harbison						
	Peterson						
2014	Corbett						
	Harbison						
	Peterson						
2015	Corbett						
	Harbison						
	Peterson						

IMPROVEMENT INVENTORY and MAINTENANCE RESPONSIBILITY

MOQUI ALLOTMENT IMPROVEMENTS BY NAME, IMPROVEMENT NUMBER, UNITS IN PLACE, AND MAINTENANCE RESPONSIBILITY.

02/09/2006

<u>IMPROVEMENT NAME</u>	<u>IMPROV. NUMBER</u>	<u>UNITS IN PLACE</u>	<u>MAINTENANCE RESPONSIBILITY</u>
Anita/Moqui Fence	005845A	2.0	Moqui Permittee
Cameron/Moqui Fence	005854B	3.0	Moqui Permittee
Forest Boundary Fence	005939A	4.7	Moqui Permittee
Forest Boundary Fence	005939B	2.8	Moqui Permittee
Forest Boundary Fence	005939C	2.0	Moqui Permittee
Forest Boundary Fence	005939D	4.0	Moqui Permittee
Forest Boundary Fence	005939E	2.5	Moqui Permittee
Corbett Dam Tank	005940	1	Moqui Permittee
Corbett Waterlot	005941	0.4	Moqui Permittee
Corbett Water Storage	005942	1	Moqui Permittee
Hupmobile Tank	005943	1	Moqui Permittee
New Automobile Tank	005944	1	Moqui Permittee
New Automobile Waterlot	005945	0.4	Moqui Permittee
Page Water Storage	005946	1	Moqui Permittee
Corbett/Harbison Fence	005948	5.1	Moqui Permittee
Harbison Tank	005949	1	Moqui Permittee
Harbison Waterlot	005950	0.4	Moqui Permittee
Harbison Pasture Fence	005951	2.0	Moqui Permittee
Bucklar Water Storage	005952	1	Moqui Permittee
CO Bar Water Storage	005953	1	Moqui Permittee
Peterson/Harbison Fence	005954	7.1	Moqui Permittee
Hangover Water Storage	005955	1	Moqui Permittee
Moqui Cabin Fence	005956	1.5	Moqui Permittee
Russell Water Storage	005957	1	Moqui Permittee
Willows/Moqui Fence	005958	5.8	Moqui Permittee
Banks Tank	005959	1	Moqui Permittee
New Dent & Sayer Tank	005960	1	Moqui Permittee
New Dent & Sayer Waterlot	005961	1.0	Moqui Permittee
Old Dent & Sayer Tank	005962	1	Moqui Permittee
Dent & Sayer Water Storage	005963	1	Moqui Permittee
Dillman Pasture Fence	005964	2.0	Moqui Permittee
Michigan Tank	005987	1	Moqui Permittee
Della Water Storage	006010	1	Moqui Permittee
Puff Tank	006011	1	Moqui Permittee
Sagebrush Tank	006012	1	Moqui Permittee
Blowout Water Storage	006023	1	Moqui Permittee
Puff Waterlot	006025	0.1	Moqui Permittee
Armstrong Water Storage	006028	1	Moqui Permittee
Peterson Water Storage	006034	1	Moqui Permittee
New Dent & Sayer Water Lane	006051	0.5	Moqui Permittee