



United States
Department of
Agriculture

Forest
Service

Mormon Lake
Ranger District

4373 S. Lake Mary Road
Flagstaff, AZ 86001-9359
Phone: (928) 774-1147
Fax: (928) 214-2460

File Code: 2230

Date: April 4, 2007

Flying M Ranch
c/o Jack, Kit and Mandy Metzger
P O Box 700
Flagstaff, AZ 86002

Dear Jack, Kit and Mandy:

This is an update to your 2007 Annual Operating Instructions (AOI) for the Anderson Springs Allotment. These Annual Instructions are a part of your term grazing permit as indicated in Part Two. In addition, this letter is to document actions that need to be taken this year to keep the Forest Service and this allotment in compliance with previous commitments from environmental assessments, allotment management plans and guidelines and recommendations for rare wildlife and plant species, including those that are threatened or endangered.

Allotment Area Description

The Anderson Springs Allotment consists of 47,310 acres southeast of Flagstaff, Arizona, and lies within Mormon Lake Ranger District of the Coconino National Forest, see Map 1. The allotment lies east of Mormon Lake and Forest Service Highway 3 and runs east to the forest boundary. The grazing system is a multiple pasture deferred rest rotation system.

The western and southwestern portion of the allotment is a ponderosa pine community at an elevation of approximately 7200'. The northwestern and central portions of the allotment are transition grassland with sparse ponderosa pine and pinyon-juniper throughout. Going east, the allotment has pinyon-juniper, which extends down Anderson Mesa to the forest boundary. Riparian and wetland areas are both man made lakes, such as Kinnikinick Lake, and Morton Lake, as well as seasonal wetlands, and closed basins such as Boot Lake, Yeager Lake, Pine Lake, Mud lake, Antelope Lake, Dry Lake, and Corner Lake. These lakes have riparian values, however, in periods of extended drought the water and riparian vegetation dry up. Kinnikinick Spring is the only spring on this forest allotment and has some riparian vegetation.

The Allotment is grazed in conjunction with the Ashurst Run Cell, which for the most part is located upon private lands. The operation of this permit consists of two and possibly three herds of cattle, which are managed and operated separately. This cell has 20 different paddocks, which are managed intensively. The herd using the Ashurst run cell utilizes some of the forest pastures each year, and is the small group of cattle on the forest permit season long

The allotment contains the following Land Management Plan Management Areas:

- MA 3-Ponderosa Pine and Mixed Conifer
- MA 4-Ponderosa Pine on greater than 40% slope
- MA 6-Unsuitable Timber Land



- MA 7-Pinyon Juniper on less than 40% slope
- MA 8-Pinyon Juniper on greater than 40% slope
- MA 9-Mountain Grassland
- MA 10-Transition Grassland
- MA 12-Riparian

The Anderson Springs Allotment occurs in two 5th code watersheds. The following table is a summary of number of total acres within each 5th code watershed and acres of the allotment, which occur within each watershed on the Coconino National Forest.

5 th Code Watershed (Acres)	Allotment (Acres)	% of Allotment within Watershed
Canyon Diablo (223,885)	43,700	20
Mormon Lake (25,385)	900	4

The following is a list of Best Management Practices (BMP's) developed in the 2005 Anderson Springs and Bar T Bar Environmental Impact Statement.

- Monitor ground conditions before and during construction activities to avoid wet ground conditions that can adversely affect soil condition and water quality.
- Monitor effective ground cover before and after vegetation treatments using Daubenmire plots.
- Monitor through inspections on-site during and after vegetation treatments are completed.
- Monitoring would be done throughout the project layout.
- Monitor through inspections on-site during and after vegetation treatments are completed.
- Monitor through inspections on-site during and after vegetation treatments are completed.
- Monitor stock tanks in identified wetlands for maintenance activities.

Permitted Grazing Information 2007

Your term grazing permit information along with your 2007 grazing schedule is listed below:

<u>Permittee Name</u>	<u>Permit Type</u>	<u>Permitted No.</u>
Flying M Ranch	Term	7042 Head Months, cows/calves&bulls

Schedule

Herd 1

<u>Pasture Name</u>	<u>Use Dates</u>	<u>Total Number</u>
South Boot	5/5-5/11	285
Pine Hill 2 S	5/11-6/5	285
Pine Hill 2 N	6/5-6/21	285
Pine Hill 1 N	6/21-7/5	285
Pine Hill 1 S	7/5-7/15	285

Mud Lake 1 W	7/15-8/29	285
Pine Hill 1 N	8/29-9/13	285
Pine Hill 2 N	9/13-9/26	285
Pine Hill 2 S	9/26-10/15	285

Herd 2

<u>Pasture Name</u>	<u>Use Dates</u>	<u>Total Number</u>
South Boot	5/12-5/21	285
Kinn 2 N	5/21-5/30	285
Yeager S	5/30-7/14	285
Kinn 2 S	7/14-7/31	285
Kinn 1 W	7/31-9/14	285
Kinn 2 N	9/14-9/28	285
South Boot	9/28-10/15	285

Herd 3

<u>Pasture Name</u>	<u>Use Dates</u>	<u>Total Number</u>
Private	5/1-6/11	90
Middle West Side	6/11-7/15	90
Wallace	7/15-8/15	90
Private	8/15-9/20	90
North Boot	9/20-10/17	90

Yearlings

<u>Pasture Name</u>	<u>Use Dates</u>	<u>Total Number</u>
North Burro	5/20-7/15	55

The pasture move dates shown above are an estimate, and may need to be changed on the basis of actual range conditions. Due to the past drought conditions it is vital to closely monitor actual conditions closely, and notify the Forest Service promptly if it appears that livestock will need to be moved sooner or later than estimated above. Grazing dates will be adjusted for this year's soil and vegetation readiness. Field checks in key forage areas such as meadows and riparian areas will be made prior to scheduled entry dates. Dates may be adjusted only with prior approval of the Forest Officer.

To facilitate livestock moves, gates may be opened two days prior to the scheduled move date only when moving into an adjacent pasture. Gates must be closed and the grazed pasture entirely cleaned of livestock no later than five days following the scheduled move date. Grazed pastures must be kept clean of livestock following the pasture move.

Salt or mineral supplement locations should be rotated annually and avoid areas where cattle concentrations could cause excessive vegetation trampling, soil loss or disturbance to sensitive species or habitats. These areas would include Mexican spotted owl home ranges, northern

goshawk home ranges, rare plants, riparian vegetation, meadows or locations closer than 1/4 mile from a water source. The enclosed map shows the general location of these areas that are not obvious on the ground. This map does not include all obvious sensitive areas like all meadows, riparian areas or water sources.

No prairie dog control (i.e., poisoning or shooting) is allowed in association with this permit.

Monitoring will be conducted in partnership with the permittee on a regular basis during the grazing season and will be used to develop next year's Annual Operating Instructions that state when livestock are to be moved and how grazing patterns are to be changed during the grazing season. It is important for you to help us with monitoring of your grazing permit. With present and future downsizing in the Forest range program your assistance in monitoring will become increasingly more important. This monitoring generally includes compliance with your Annual Operating Instructions, livestock utilization and overall range condition and trends.

Due to the intensive grazing management system in place, the allowable level of utilization on herbaceous and woody vegetation is 50% for this allotment. Livestock utilization of woody vegetation in riparian areas may not exceed 20%. This will ensure proper protection and management of resources on this allotment.

Adjustments in numbers, rotation schedule or season of use will be made if allowable utilization standards are exceeded. To achieve the desired allowable utilization, it is important to have proper livestock distribution.

Range improvements on your allotment need to be maintained to proper Forest Service standards. A complete list of these improvements is listed in your grazing permit. No new improvements are scheduled for this year. However, if new improvements are needed during the year, before any of these improvements can be implemented, archeological and biological clearances will be completed.

Cattle exclosures on this allotment include the Northern Arizona University plots, North Boot and Yeager Lake. All fences must be maintained to ensure cattle stay out of these areas. This maintenance may be done with help from the Forest Service, other agencies or groups. There are several new elk exclosures associated with the seasonal wetlands that will be maintained by the Forest Service. You must monitor these areas to ensure cattle do not enter them. If cattle enter these sites immediate action must be taken to remove them and notify the Forest Service if the elk exclosures need repair.

AOI's are appealable and subject to review under 36 CFR 251.

If you have any questions please call Mike Hannemann at 526-0866.

Sincerely,

/s/ Gene Waldrip
Gene Waldrip
District Ranger

I have reviewed and agree with these operation instructions

/s/ Kit Metzger
Kit Metzger

Planned 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: 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. This assessment, along with climate and condition/trend data, is used to set stocking levels and pasture rotation for future years. Utilization is not intended to be the only way to determine when livestock are moved from one pasture to another or as a nonflexible limit of use within any given year.

For this allotment, pasture moves would be determined by a seasonal utilization, which is the use of any given pasture measured before the end of the grazing season. This guideline takes into account any additional growth which might occur that year. Seasonal utilization data can be used as a guideline for moving livestock within the allotment and considers season of use, elk use, weather conditions, availability of forage, and water in pastures. If elk use exceeds this guideline in a pasture, cattle would skip this pasture and move to the next pasture in the rotation.

Utilization monitoring is an estimate of the available forage by weight consumed or trampled through grazing and is expressed as a percent of the current year's biomass removed. Utilization monitoring is designed to assess key forage utilization levels by cattle and elk during the year and from year to year. Key forage species for this allotment include western wheatgrass, blue grama, squirreltail, and Arizona fescue. Utilization monitoring will be conducted by the permittee and spot checked by Forest Service personnel throughout the year in every grazed pasture. This monitoring will calculate an overall seasonal utilization and utilization values for a pasture 1) before cattle go into a pasture, 2) within five days after cattle leave a pasture, and 3) at the end of the growing season in the fall.

Identify key ungulate utilization monitoring areas. These key areas will normally be ¼ to 1 mile from water, located on productive soils on level to intermediate slopes, and be readily accessible

for grazing. The 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 the ¼ mile from water and less than 20 acres. Within key forage monitoring areas, select appropriate key species to monitor average allowable use.

Study plots

Antelope and wetland study plots will be monitored annually for the first two years after establishment. Establishment of additional antelope and wetland monitoring plots after year two will be done as funding becomes available.

Monitoring Study Plots - Pronghorn Study Plots: Quantification of impacts to pronghorn antelope habitat resulting from elk and cattle use on Anderson Mesa is unknown. To assist with our understanding of this, one study area at Reed Lake on the Anderson Springs Allotment has been established by the Sisk Laboratory at Northern Arizona University (NAU) using the frequency transect monitoring method. NAU has also established a monitoring area north of the Anderson Springs Allotment on the Picket/Padre Allotment to compare rest rotation and time controlled grazing systems.

Two other frequency monitoring plots have been established by the US Forest Service in the Kinnickinick Lake exclosure area and in North Boot pasture. Specific location for the construction of these sites will be tied to pronghorn antelope radio collar monitoring data of high use areas. Monitoring of these plots would not only be aimed at comparing grazing effects by ungulates, but would provide information valuable in determining differences in plant species composition and cover in relation to pronghorn habitat requirements.

Monitoring Study Plots - Wetland Study Plots: Two 10 foot by 40 foot elk exclosures have been constructed in 2002 at Corner Lake and Yeager Lake on the Anderson Springs Allotment to monitor the effects of exclusion of wildlife and livestock on seasonal wetlands. Data collected at these paired exclosures would include plant canopy cover, frequency data, and photo point data.

Required Long-term Monitoring

Forage Production: Forage production surveys for the allotment will be done every nine to 13 years. Methods used for these surveys will be done by the best available methods at that time. These values will be used as tool to manage this allotment, but will not be the sole measure to set carrying capacity.

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 trend once every 10 years. In the past, Parker 3-step and paced transects have been used to determine condition and trend. Other monitoring techniques include canopy cover and frequency ground cover plots.

Parker 3-step and paced transect monitoring points were established throughout the allotment in the 1950-60's. These transects are one of the best historic records of range condition and trend. The photo points and vegetative ground cover data show how the site has changed over time.

The new plots and techniques will be placed over the Parker 3-step transects in most locations to take over this historic data. The original photo points will be retaken.

Ocular plant canopy cover 0.10 acre plots will be used to compare existing conditions with potential and desired vegetative community conditions. Over time, these plots will show us 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 that can be a relative gauge of vigor.

Frequency and ground cover data will be collected using the protocols established in, "Some Methods for Monitoring Rangelands and Other Natural Area Vegetation," Edited by G.B. Ruyle, Extension Report 9043, 1997. These plots will monitor trends in plant species abundance, plant species distribution and ground cover. All this information will be statistically valid. 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 be used to help determine the effectiveness of the Allotment Management Plan.

A new key monitoring site will be established within the next two years, and will represent the allotment with annual monitoring data. The following information will be collected at this new location; utilization, canopy cover, frequency, ground cover, and production, along with photos. This annual data will give us site specific information for long term condition and trend. The Forest Service would like the permittee to be involved in selecting the site and collecting the data.