



United States
Department of
Agriculture

Forest
Service

Mormon Lake
Ranger District

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File Code: 2230

Date: April 4, 2007

Jim Shiew
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Flagstaff, AZ 86003

Dear Jim:

These are your revised and updated 2007 Annual Operating Instructions (AOI) for the Deep Lake and Youngs Canyon Allotments. 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.

Deep Lake Allotment Area Description

The Deep Lake Allotment consists of 10,877 acres southeast of Flagstaff, Arizona. These acres lie within the northeast corner of the Mormon Lake Ranger District of the Coconino National Forest. The allotment lies below the rim of Anderson Mesa within the pinyon-juniper/transition grassland belt. The grazing system is a two pasture deferred rest rotation system.

The southern portion of the allotment extends to the top of Anderson Mesa, which is ponderosa pine, at an elevation of approximately 7100'. Going north the allotment descends the rim to and is dominated by pinyon-juniper and chaparral. The remainder of the allotment is denominated by pinyon-juniper/transition bluegrass grassland. Natural pothole lakes on the allotment are Deep and Horse Lake. These lakes have riparian values, however, in periods of extended drought the water and riparian vegetation dry up. Elk Springs is the only spring on the allotment and has some riparian vegetation.

The allotment contains the following Land Management Plan Management Areas:

- MA 3-Ponderosa Pine and Mixed Conifer
- MA 7-Pinyon Juniper on less than 40% slopes
- MA 8-Pinyon Juniper on greater than 40% slopes
- MA 10-Transition Grassland
- MA 12-Riparian

The Deep Lake Allotment occurs in one 5th code watershed. 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.



5 th Code Watershed (Acres)	Allotment (Acres)	% of Allotment Within Watershed
Canyon Diablo (223,885)	11,010	5

Youngs Canyon Allotment Area Description

The Youngs Canyon Allotment consists of 10,365 acres southeast of Flagstaff, Arizona. These acres lie within Peaks Ranger District of the Coconino National Forest. The allotment is south of Interstate Highway 40 just south of Winona, Arizona. The grazing system is a four pasture deferred rest rotation system.

The majority of the allotment is a pinyon-juniper community at an elevation of approximately 6400'. Walnut Canyon runs through the northwestern portion of the allotment and contains some riparian values. The southern portion of the allotment is transition grassland with sparse ponderosa pine and pinyon-juniper throughout.

The allotment contains the following Land Management Plan Management Areas:

- MA 3-Ponderosa Pine and Mixed Conifer
- MA 7-Pinyon Juniper on less than 40% slopes
- MA 8-Pinyon Juniper on greater than 40% slopes
- MA 10-Transition Grassland

The Young's Canyon 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.

5 th Code Watershed (Acres)	Allotment (Acres)	% of Allotment Within Watershed
Canyon Diablo (223,885)	6,161	3
Lake Mary (97,203)	4,204	4

The following is a list of Best Management Practices (BMP's) developed for these Annual Operations Instructions.

- One of the main goals for livestock grazing practices on this allotment is to maintain or improve the quality of water.
- The location, timing, and intensity of livestock grazing activities should be controlled with objectives of achieving soil cover to prevent accelerated erosion and to protect water quality.
- Structural range improvements, such as fences, water developments, trails and corrals, should be planned, constructed and utilized in a manner to enhance or maintain water quality.

- Land treatments to manage vegetation or practices to reduce erosion should be planned, implemented and maintained to minimize adverse impacts on water quality.
- Livestock management activities, such as parasite control, feeding and salting, should be done in a manner to protect water quality.
- Monitor and enforce permittee compliance with terms and conditions of the grazing permit.
- Manage livestock grazing within (TES unit 41) meadow areas at intensity that will improve vegetation ground cover (primarily the litter component) and improve species diversity of perennial grasses.

Permitted Grazing Information 2007

Your term grazing permit information along with your 2007 grazing schedule for the Youngs Canyon and Deep Lake Allotments are listed below.

Deep Lake

<u>Permittee Name</u>	<u>Permit Type</u>	<u>Allotment</u>	<u>Season</u>	<u>Permitted No.</u>
Jim Shiew	Term	Deep Lake	5/1-10/31	105 cows/calves & bulls

Youngs Canyon

<u>Permittee Name</u>	<u>Permit Type</u>	<u>Season</u>	<u>Permitted No.</u>
Jim Shiew	Term	5/15-10/31	63 cows/calves & bulls

<u>Pasture Name</u>	<u>Use Dates</u>	<u>Total Number</u>
Walnut/Onyx/Headquarters	5/15-7/10	190 cows
Deep Lake/Slaten	7/11-9/25	190 cows
Shipping/Antelope	9/26-10/15	190 cows

Due to the current drought conditions it is vital to 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 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 habitats that support Mexican spotted owls, northern goshawks, 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 this year 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 AOI, livestock utilization and overall range condition and trends.

Adjustments in numbers, rotation schedule or season of use will be made if utilization standards are exceeded. The option to return livestock to a pasture that has received adequate plant regrowth will be considered if all resource objections can be met. To achieve the desired allowable use, it is important to have proper livestock distribution.

Refer to the attached map for the areas that are excluded from cattle grazing during the 2007 grazing season. All fences must be maintained to ensure cattle stay out of these areas. 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.

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 Annual Operating Instructions.

/s/ Jim Schiew
Jim Shiew

Planned Monitoring

Monitoring includes the following activities: permit compliance, allotment inspections, range readiness, forage production, rangeland utilization, condition and trend, soil condition, noxious weeds, and threatened and endangered species. Monitoring frequency varies by each activity and may be accomplished by either the permittee and/or Forest Service personnel.

Permit Compliance: Throughout each grazing season Forest Service personnel would monitor to determine accomplishments of the permit terms and conditions, the AMP, and the AOI.

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 document may include weather history, the year's success, problems, improvement suggestions for the future, and a monitoring summary.

Range Readiness: Each spring, Forest Service personnel and/or the grazing permittee would assess range readiness prior to cattle coming on the allotment 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 to replenish root reserves so that grazing will not seriously impact these forage plants.

Forage Production: Production surveys for this allotment would be done every 9 to 13 years. Methods used for these surveys would use the best available methods at that time. These values would be used as tools to manage this allotment, but will not be the sole measurement to establish carrying capacity. The most recent forage production surveys were done as part of this analysis in 1999. The next survey is scheduled to occur after 2009.

Rangeland 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 (Smith et al. 2005). 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 in the 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 when seasonal utilization in a pasture approaches a “moderate” level. For Alternatives 1, 3 and 4 (35 percent utilization guideline), moderate seasonal utilization would be approximately 21-50 percent. For Alternative 5 (20 percent utilization guideline), moderate seasonal utilization would be approximately 10-35 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 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.

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 1999 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 (Ruyle 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 allotments 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.

Condition and trend monitoring was established at the following wetlands using photo point and plant inventories in the fall of 2003: Deep Lake and Horse Lake. Horse Tank was added in 2005. Additional monitoring of these plots may occur in the next 10 years if funding is available.

Canopy cover, frequency and composition plots were established at Deep Lake, Horse Lake and Horse Tank. Additional monitoring of these plots may occur in the next 10 years if funding is available.

Residual cover monitoring will occur at Deep Lake and Horse Tank to determine the height and density of wetland vegetation: from cattle grazing after July 15 and within wetland exclosures. This monitoring would be established after the exclosures are built at Deep Lake and Horse Tank. Monitoring would occur during the waterfowl nesting season as funding is available.

Noxious Weeds: State-listed noxious weeds located in these allotments 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 1 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. Within key forage monitoring areas, select appropriate key species to monitor average allowable use (USDA 1987, p. 66-1).

One key area plot is already established on the Deep Lake Allotment and monitored annually:

- Management Area: Meadow
- Pasture: Deep

- Location: Meadow west of 82 road
- Key Species: Blue grama, wheat grass