

2007

Black Bill ~~Summit~~ ^{AK}

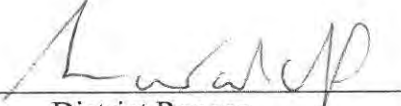
Allotment Management Plan

Peaks Ranger District

Coconino National Forest

Prepared by:  Date 10/5/07
District Range Conservationist

Agreed to/Reviewed by:  Date 10-5-07
Permittee

Approved by:  Date 9-27-07
District Ranger

Record of Decision Summary

This Allotment Management Plan (AMP) follows the "Record of Decision for the Black Bill Summit Allotment Management Plan" and the "Categorical Exclusion" signed on 6/18/07 which includes the following:

- Reauthorize grazing for up to 60 cattle (cow/calf) from June 1st through October 15th (357 AUMs). The authorization is granted through a term grazing permit.
- The permitted use is based on condition and trend studies completed in 2006, actual use data for the allotment for the past 10 years and the effects of this use on resource conditions. It also reflects the estimated annual forage production available for cattle on the allotment considering climate, duration, timing, frequency, and intensity of grazing proposed as well as proper livestock management.
- The current utilization guideline will continue to allow up to 35 percent use by cattle and/or wildlife during the cattle grazing season of May through October. This includes a "moderate" seasonal utilization guideline which is measured before the end of the growing season and is used in determining when cattle need to move. Cattle will move from one pasture to another when seasonal utilization approaches a "moderate" level, approximately 21-50 percent. Pastures will not be grazed again during the grazing season. Once this use standard is met across the allotment, cattle will be moved off the allotment.

Adaptive Management

- The decision includes the continued use of adaptive management, which provides more flexibility for managing cattle. Adaptive management allows the Forest Service to adjust the timing and duration of grazing, movement of cattle within the allotment, and cattle numbers. If adjustments are needed, they are implemented through the Annual Operating Instructions, which will adjust numbers so cattle use is consistent with current productivity. This allows plant, soil, and watershed conditions to be maintained or improved while range improvements are implemented over time. An example of a situation that could call for adaptive management adjustments is drought.
- Adaptive management is designed to provide sufficient flexibility to adapt management to changing circumstances. If monitoring indicates that desired conditions are not being achieved, management will be modified in cooperation with the permittee. Changes may include administrative decisions such as the specific number of livestock authorized annually, specific dates of grazing, class of animal or modifications in pasture rotations, but such change will not exceed the limits for timing, intensity, duration, and frequency defined in this Proposed Action.

Monitoring

The decision includes monitoring. The type and frequency for this monitoring will include:

- Permittee compliance, allotment inspections, range readiness, forage production, rangeland utilization - annually
- Condition and trend - every five to ten years
- Frequency and canopy cover plots and a soil condition rating will be continued at long-term monitoring sites throughout the allotment - every five to ten years
- A monitoring plot was established in 2006 to record annual range observations such as; forage production, moisture, frequency, canopy cover, ground cover and photo points, when the Forest Service budget allows for this data to be collected.

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.

Adaptive Management

- The reauthorization includes the continued use of adaptive management, which provides more flexibility for managing cattle. Adaptive management allows the Forest Service to adjust the timing and duration of grazing, movement of cattle within the allotment, and cattle numbers. If adjustments are needed, they are implemented through the Annual Operating Instructions, which will adjust numbers so cattle use is consistent with current productivity. This allows plant, soil, and watershed conditions to be maintained or improved while range improvements are implemented over time. An example of a situation that could call for adaptive management adjustments is drought.
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Monitoring

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

Mitigation

The Forest Service will apply the following mitigation measures to minimize and reduce potential impacts from grazing management activities.

1. **Watershed Protection:** The grazing system incorporates Best Management Practices (BMP) and constitutes compliance with Arizona State and Federal Water Quality Standards. The following BMPs, applicable to this project, are designed to protect resource values, uses, maintenance of soil productivity, stability, and water quality.

- Monitor ground conditions before and during any future construction activities to avoid wet ground conditions that can negatively affect soil condition and water quality.
 - Grazing systems are alternatively rested and grazed in a planned sequence.
 - Grazing at a level that will maintain enough cover to protect the soils and maintain or improve the quantity and quality of desired vegetation. This practice will be applied through the utilization guidelines.
 - Fencing to improve cattle management, control access, prevent soil loss, and improve water quality. Fencing was not designed to prevent soil loss and improve water quality.
2. **Noxious Weeds:** State-listed noxious weeds located on this allotment will be treated as necessary. The permittee and Forest Service will 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 Coconino National Forest Plan.
3. **Sensitive Plant Species:** Sensitive plant surveys will be completed before constructing any new fences. If sensitive plant species are located, coordination with a wildlife biologist or botanist will occur to mitigate impacts as needed (i.e. flagging specific plants and adjusting the location of the improvement).
4. **Cultural Resources:** Activities associated with allotment improvements will be managed to avoid cultural resource sites and ensure no effect to cultural resources. Before initiating any future improvements, a district archeologist will be notified to ensure the proposed activities have cultural resource clearance and project personnel are aware of the conditions of the Black Bill Summit Allotment Management Plan Cultural Resource Clearance Report. Management practices that tend to concentrate cattle, such as placement of salt, supplements, construction of waters or corrals, etc., will be located away from cultural resources. Ground disturbing activities, such as the construction of improvements (e.g., pipelines, stock tanks, cattle guards, etc.), will require separate archeological survey and clearance prior to implementation.

The district will periodically monitor known archeological sites to ensure they have been avoided, and such inspections will be reported in writing to the forest archeologist. Should any additional prehistoric or historic archeological sites be encountered during the course of this project, they are to be avoided and immediately reported to a district or zone archeologist. If any of these new discoveries are rock shelters, they will be closely monitored and if cattle are using these sites for shelter and impacting the fragile nature of the site, the shelter should be excluded from future grazing. Should the tribes identify any

plants in the area having traditional importance, the district will encourage and protect the natural regeneration of such plants.

Goals and Objectives of Management

Background

The Peaks Ranger District of the Coconino National Forest is proposing to re-authorize cattle grazing on the Black Bill Summit Allotment (see Map 1). The allotment boundary begins approximately 3 miles north of the City of Flagstaff on Highway 89, and lies just west of the Timberline subdivision. This allotment is located within all or portions of T22N, R8E Sections 4, 5, 8, 9, 16, 17, 20, 21, 28 and 29, and T23N R8E Sections 32 and 33.

The Black Bill Summit Allotment consists of approximately 4,116 acres, divided into 4 pastures (see Map 2). These pastures include: Summit, North Black Bill, South Black Bill and Burn. Current permitted use for Black Bill Summit is 60 head of cattle (cow/calf pairs) (357 AUMs), from June 1 through October 15.

Grasslands and ponderosa pine dominate the vegetation on the Black Bill Summit Allotment at an elevation ranging from 6,700 to 7,300 feet. This vegetation varies from open grasslands to dense ponderosa pine trees. The allotment lies on the lower slope of the San Francisco Peaks. No major canyons or riparian areas exist on the allotment.

Purpose and Need

The Black Bill Summit Allotment is scheduled for an environmental analysis of grazing use on the Coconino National Forest, as required by the Burns Amendment (1995). This analysis is required in order to ensure cattle grazing is consistent with goals, objectives, and the standards and guidelines of the Coconino National Forest Plan (1987, as amended).

The purpose of this project is to re-authorize cattle grazing on the Black Bill Summit Allotment and to ensure the allotment is managed in a manner that maintains and/or moves the area toward Forest Plan objectives and desired conditions. Existing condition information outlined above indicates rangeland conditions on the allotment are being maintained or improved with the current cattle grazing management in place. Continued monitoring will help managers to evaluate the status of maintaining and improving rangeland conditions.

Management Strategy

- Reauthorize grazing for up to 60 cattle (cow/calf) from June 1st through October 15th (357 AUMs). The authorization is granted through a term grazing permit.
- Cattle will be grazed in a deferred rotation grazing system, allowing for plant rest at different times, from year to year (example grazing schedules given at the back of this AMP).
- The permitted use is based on condition and trend studies completed in 2006, actual use data for the allotment for the past 10 years and the effects of this use on resource conditions. It also reflects the estimated annual forage production available for cattle on the allotment considering climate, duration, timing, frequency, and intensity of grazing proposed as well as proper livestock management.
- The current utilization guideline will continue to allow up to 35 percent use by cattle and/or wildlife during the cattle grazing season of May through October. This includes a “moderate” seasonal utilization guideline which is measured before the end of the growing season and is used in determining when cattle need to move. Cattle will move from one pasture to another when seasonal utilization approaches a “moderate” level, approximately 21-50 percent. Pastures will not be grazed again during the grazing season. Once this use standard is met across the allotment, cattle will be moved off the allotment.

Adaptive Management

- The decision includes the continued use of adaptive management, which provides more flexibility for managing cattle. Adaptive management allows the Forest Service to adjust the timing and duration of grazing, movement of cattle within the allotment, and cattle numbers. If adjustments are needed, they are implemented through the Annual Operating Instructions, which will adjust numbers so cattle use is consistent with current productivity. This allows plant, soil, and watershed conditions to be maintained or improved while range improvements are implemented over time. An example of a situation that could call for adaptive management adjustments is drought.
- Adaptive management is designed to provide sufficient flexibility to adapt management to changing circumstances. If monitoring indicates that desired conditions are not being achieved, management will be modified in cooperation with the permittee. Changes may include administrative decisions such as the specific number of livestock authorized annually, specific dates of grazing, class of animal or modifications in pasture rotations, but such change will not exceed the limits for timing, intensity, duration, and frequency defined in this Proposed Action.

Monitoring

The decision includes monitoring. The type and frequency for this monitoring will include:

- Permittee compliance, allotment inspections, range readiness, forage production, rangeland utilization - annually
- Condition and trend - every five to ten years
- Frequency and canopy cover plots and a soil condition rating will be continued at long-term monitoring sites throughout the allotment - every five to ten years
- A monitoring plot was established in 2006 to record annual range observations such as; forage production, moisture, frequency, canopy cover, ground cover and photo points, when the Forest Service budget allows for this data to be collected.

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.

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Additional Management Items

Annual Operating Instructions: Annual operating instructions (AOI) make adjustments to cattle numbers and time and duration of pasture use based on current climatic and range conditions. The AOIs are established at the beginning of each grazing season (spring) and published on the Coconino National Forest Web site (www.fs.fed.us/r3/coconino/publications). Annual operating instructions may be adjusted throughout the grazing season as conditions change.

The AOIs are the means by which adjustments of cattle numbers, change of season of use, and pasture rest periods are made in response to monitoring information such as frequency, canopy cover, Parker Three-Step plots and allotment inspections. Cattle numbers may go up or down annually but will not exceed the maximum number permitted. The annual minimum cattle number is zero.

Cattle Guards: For this Allotment Management Plan there is the need to keep cattle contained to pastures and prevent forest users from leaving pasture gates open. Where roads are open for

public use, cattle guards will be maintained. Where roads are identified for closure, in past and future road decisions, no cattle guards are necessary. If gates are left open more often, new cattle guards may need to be installed.

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 (smaller, secondary roads) is the responsibility of the permittee.

Structural Improvements: 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. All future structural improvement projects, including the waterlots and wetland fences, will be coordinated with cultural, wildlife and recreation personnel before implementation.

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 the Region 3 Regional Forester.

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 not intended as inflexible limits.

Utilization measurements will be sampled in a pasture to reflect grazing effects within an entire pasture. Utilization measurements can indicate the need for management changes prior to this need being identified through long-term monitoring. Utilization data will not be used alone, but will be used along with climate and condition and trend data, to set stocking levels and pasture rotations for future years. One key area will be established within the allotment and read yearly (when possible) to monitor vegetation on the allotment. Monitoring at this site will likely include precipitation, ground cover, plant canopy cover, plant frequency, utilization, and production data.

Cattle will move when seasonal utilization in a pasture approaches a "moderate" level. 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 will 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 will be changed to ensure this does not happen in the future.

Fencing: All new fencing will have a smooth bottom wire at an 18-inch height for wildlife passage. Where possible, fences will be located within tree lines to limit impacts to visual quality. Elk jumps and goat bars (PVC pipes placed on the bottom two strands and on the top strand at a crossing point) will be constructed along new fences or along existing fences on game trails and known migration corridors as volunteers and funding are available. As fence inventories are completed, those fence segments that restrict wildlife movement will be modified as funding becomes available.

Stock tank maintenance:

- maintenance will be limited to the original boundary of the stock tank;
- maintenance will be limited to removal of sediment that has accumulated in the stock tank and maintenance of the tank berm and spillway;
- equipment that will be used includes but is not limited to a dozer, backhoe, or front end loader;
- maintenance frequency will range from no maintenance to whenever needed, depending on the amount of sediment flowing into the stock tank;
- maintenance will be done when the stock tanks are either dry or the water level is low enough so that the equipment will not get stuck in the mud;
- any requirements or timing restrictions related to water quality, wildlife, archaeology, or Forest Plan standards and guidelines will be followed; and
- Marshall, Little Dry, Fisher/Fry, Vail, Prime, Dry, Lost, and Youngs Lakes stock tanks will not be maintained for the next 10 years.

Salting:

No salting will be permitted within one-quarter mile from water.

Monitoring

Monitoring will occur during the permit term and 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 Forest Service personnel and/or the permittee.

Permit Compliance: Throughout each grazing season Forest Service personnel will 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 will 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 will be done every 9 to 13 years. Methods used for these surveys will use the best available methods at that time. These values will 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 2006. The next survey is scheduled to occur after 2016.

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 (PRD Reference 80). 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 sampled in a pasture to reflect grazing effects within an entire pasture. Utilization measurements can indicate the need for management changes prior to this need being identified through long-term monitoring. 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 will not be used alone, but will be used along with climate, and condition/trend data, to set stocking levels and pasture rotations for future years. One key area has been established within the allotment and when possible will be read yearly to monitor yearly variations on the allotment. Monitoring at this site will likely include measurements of precipitation, ground cover, plant canopy cover, plant frequency, utilization, production, and photo points.

Cattle will move when seasonal utilization in a pasture approaches a “moderate” level. Moderate seasonal utilization will 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 availability of 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 will 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 will 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.

Three Parker Three-Step and paced transect monitoring points were established throughout this allotment in the 1965. 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 and monitored along with the Parker Three-Step transects in 2006. The data from the canopy cover and frequency plots will add to this historic data for the allotment.

Ocular plant canopy cover 0.10-acre plots are 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, and then they are doing well and can be a relative gauge of vigor.

Frequency and ground cover data are 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.

One key area plot has been established on the Black Bill Summit Allotment:

- Management Area: Ponderosa Pine/Grassland
- Pasture: South Black Bill
- Location: ½ mile west of Highway 89, just north of FR 556
- Key Species: Mountain muhly, blue grama

This plot has been established to monitor the long term condition and trends of soil map unit 551.

Precipitation: Precipitation is currently recorded at the Flagstaff National Weather Service Office at Bellemont. Precipitation data may be also 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 analyses.

Soil 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 in this allotment will be treated as necessary. The permittee and Forest Service 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).

Grazing Schedule

Three grazing schedules for current management are given in tables below. These schedules are given as examples for comparison purposes only. Grazing schedules will be determined each year depending on weather, forage conditions, and with permittee input. Cattle numbers are given as maximums. Numbers may vary below these maximums to zero.

Example grazing schedules for Years 1 to 3 for the Black Bill Summit Allotment.

Year 1

Grazing Location	Graze Dates	Cattle Number
Burn/S.Black Bill	6/1-8/1	60
N. Black Bill	8/2-9/15	60
Summit	9/16-10/15	60

Year 2

Grazing Location	Graze Dates	Cattle Number
Summit	6/1-7/2	60
N. Black Bill	7/3-8/16	60
Burn/S.Black Bill	8/17-10/15	60

Year 3

Grazing Location	Graze Dates	Cattle Number
N. Black Bill	6/1-7/14	60
Burn/S.Black Bill	7/15-9/15	60
Summit	9/16-10/15	60