Allotment Management Plan
Horsethief

Bradshaw Ranger District, Prescott National Forest

Yavapai County, Arizona

Introduction

The Horsethief Allotment is located on the Bradshaw Ranger District of the Prescott National Forest (PNF) in the southeast corner of the District, approximately 10 miles south of Mayer, Arizona.

The topography of the allotment averages from 2,900 feet along Rattlesnake Canyon to 6,500 feet at the southernmost point of the crest of the Bradshaw Mountains. The allotment is located on the eastern slopes of the Bradshaw Mountains. The primary riparian drainages within the allotment are Poland Creek, Turkey Creek, and Castle Creek. Poland and Turkey Creeks converge to form Black Canyon. Castle Creek is a tributary that flows into Black Canyon Creek.

The prominent ecotype occurring on the allotment is Sonoran desert shrub and chaparral in the lower elevations. Saguaro cactus, paloverde, mesquite, catclaw, and grasslands dominate the lower elevations. Higher elevations favor chaparral plant communities that include shrub live oak, mountain mahogany, and Manzanita with pinion and juniper on the southern slopes. Ponderosa pine and isolated pockets of Douglas fir are found at the highest elevations on the allotment, in the mountainous terrain included within the Castle Creek Wilderness. The topography in the higher elevations is very steep with precipitous slopes and deep canyons. These slopes break off into a gentler gradient forming benches at the lower elevations. Approximately half of the allotment is located within the Castle Creek Wilderness, which was established in 1984.

Under the current term grazing permit the allotment authorization is ranging from 450 to 993 Animal Unit Months (AUM's), for up to 182 days, equivalent to a range of livestock numbers from 106 to 207 yearlings cattle for 6 months. An AUM is defined as the measure of the average amount of forage used by one cow-calf pair over the course of one month. Seasonal grazing for up to 182 days between the months of September and April. Livestock grazing has generally been a yearling steer operation during the dormant season. There are no pasture division fences on this allotment and livestock are generally stocked and rotated on a combination of natural geographic boundaries and available water. It has been approximately 10 years since this allotment was last stocked with cattle.

Desired Condition & Resource Objectives

The desired conditions and resource objectives for resources and infrastructure on this grazing allotment, based on the Forest Plan and the work of the Interdisciplinary Analysis Team, include:

- rangeland management that can respond to local or national demands for livestock production while maintaining air, soil and water resources at or above minimum local, State or Federal standards (Forest Plan, pg. 11);
- range administration that provides for the maintenance of satisfactory rangeland management status with a static or upward apparent trend (Forest Plan, pg. 32);
- management of the grazing operations using a system that is responsive to changing climatic or environmental conditions;
- the maintenance of vegetation with mid- to high similarity to the potential natural plant community (PNC) providing for ecological functionality and resiliency following disturbance while sustaining long-term productivity of the land;
- the installation and maintenance of structural improvements, such as water-supply systems, that enhance management control and flexibility and allow for effective distribution of forage use;
- the maintenance of soils in satisfactory condition over the long-term with improvement in areas departing from satisfactory condition where livestock grazing is affecting the condition;
- the maintenance of satisfactory conditions for water resources that meet total maximum daily load (TMDL) and other State water quality objectives;
- the maintenance of functioning spring-fed riparian systems, and saturated soils where potential exists, that support vegetation within site potential and provide habitat for riparian-dependent plants and animals while providing water sources for wildlife and livestock needs;
- the maintenance of fully functional riparian systems supported by herbaceous and multi-age woody vegetation, within site potential, that provides for geomorphically stable stream channels and banks and habitat for riparian-dependent plants and animals. Functional riparian systems support water quality and both hydrogeomorphic and biological attributes and processes;
- protection and preservation of important historic and cultural sites; and
- the maintenance of suitable habitats for Management Indicator Species, Migratory Bird Treaty Act species, federally Threatened and Endangered species, Forest Service Sensitive species, and for indigenous plant and animal species.

Grazing Management

A. *Permitted Numbers, Season of Use, and Animal Months*

Permittee	Permit Type	# of Livestock	Season of Use	Animal Months
Jerold Collings	Term (10 years)	106- 207 head of cattle	Seasonal 182 days Sept-April	Ranging from 450 to 883 Animal- Unit-Months

The period of grazing and the stocking numbers on NFS lands will be determined by monitoring, designated in the Annual Operating Instructions and authorized in the Bill for Collection.

B. Grazing Management and Allowable Use

Site	Utilization levels
Upland sites	Upland forage (growing season) – 31-40% (Sept 1 – 30th) Upland forage (non-growing season) – 41-50% Upland Browse – 50- 60%
Riparian	Riparian Woody - 20% Riparian Herbaceous – 4-6" minimum stubble height where sedges and rushes are key species and 8" where deergrass is key species unless in area of concern"

Grazing Intensity Guidelines – Site-specific Resource Protection Measures for Areas of Concern

1. Conservative grazing intensity guideline (31-40% use) during the dormant season on impaired soils and to discourage concentrated livestock use on TES map unit 275.
2. Maintain minimum stubble heights on key herbaceous species at riparian and spring areas in partially functional status (functional – at risk), which includes Castle Creek, Poland Creek, Black Canyon Creek, and lower reach of Turkey Creek. The guideline is to maintain 8" of stubble where sedges and rushes are the key species, and 12" where deergrass is the key species.

Application of standard management practices such as salting, herding, and controlling access to water to achieve proper distribution or lessen the impact on areas which are sensitive or are natural concentration areas will be applied by the permittee.

Protein, salt, and other supplements will not be placed within ¼ mile of water or any identified sensitive plant population. New improvements (e.g. pipelines, troughs, tanks, or fences) will be designed to avoid adverse impacts to any such populations.

Annual Operating Instructions will be prepared each year in cooperation with the permittee to allow for consideration of current allotment conditions and management objectives. This AOI will detail the current season's grazing schedule, the stocking level, the improvement maintenance needs, needed improvements, and the allowable use levels on key forage and browse species.

C. Rangeland Improvement Program

Adaptive management would allow for the construction of rangeland improvements if they have been identified and are determined, through monitoring, to be necessary for achieving resource objectives. However, if some or all improvements are not implemented, the upper limits of permitted livestock numbers may not be achievable. In addition to the structural improvements included above in site-specific resource protection measures, the following improvements are authorized for construction:

1. Reconstruct 3 to 4 miles of the west allotment boundary fence within the Castle Creek Wilderness;
2. Establish a reference soil and vegetation monitoring exclosure in TES 275

- All new or reconstructed fencing will be built to accommodate wildlife passage using a 4-strand fence with a smooth bottom wire 18 inches off the ground and a total fence height of 42 inches or less.
- All new or reconstructed water developments will include wildlife access and escape ramps.
- Cooperation of the permittee will be sought to make stock water supplies available for wildlife needs during critical periods, if water is available at the sources (e.g. storage tank).
- The permittee will ensure that structural range improvement maintenance is completed to standard; that livestock do not enter the allotment or a pasture prior to the approved entry date; that livestock are removed from pastures and the allotment as specified in the AOI; and that livestock do not enter or re-enter pastures that either have already been grazed, or that are planned for rest.

[1] Travel Way – Any transportation facility that allows vehicle passage of any sort, that came into existence without plans, design or standard construction methods, that is not maintained or signed and has a very low traffic volume.

D. **Maintenance of Range Improvements**: The Term Grazing Permit includes a list of all improvements which the permittee will continue to maintain at a level that effectively provides for their intended uses and purposes. Range improvements will be inspected periodically during the term of the permit to document condition. Annual Operating Instructions (AOIs) will identify range improvements in need of maintenance. Existing improvements may be replaced when needed as conditions warrant .All maintenance of exterior fences must be completed prior to turn on each year. *(It is the responsibility of the permittee to ensure that the necessary coordination occurs between adjacent allotments to ensure maintenance is completed in a timely manner).*

Access to Improvements: Authorization for cross-country motorized travel is provided for the permittee to administer the livestock operation and maintain improvements under the terms and conditions of the Term Grazing Permit.

E. Drought Management

Perennial grasses and major browse species need deferment/rest in order to provide time to recover from drought induced stress.

Move cattle when utilization in pastures is met. If removal of livestock is necessary, they may be authorized to return to the allotment once conditions improve; meaning sufficient recovery from the effects of drought stress has occurred and there has been enough herbaceous production to support livestock numbers. Potential return of livestock will be evaluated no earlier than the summer growing season.

Monitoring and Evaluation

Three types of monitoring will be used - implementation monitoring, periodic monitoring of short-term indicators of resource conditions, and effectiveness monitoring.

Implementation Monitoring: This monitoring will be conducted on an annual basis and will include such things as livestock actual use (# of head, # of months) and scheduled and unscheduled inspections to ensure that all livestock and grazing management measures stipulated

in permits, AMPs and AOIs are being implemented (e.g. cattle numbers, on/off dates, rotation schedules, maintenance of improvements, mitigation measures).

Periodic Monitoring of Short-term Indicators of Resource Conditions: Short-term indicators of resource conditions such as forage utilization, residual forage, species composition, plant cover, frequency or density, and/or vegetative ground cover will be monitored on the allotment at key areas and at areas identified with site-specific resource concerns. Methods will include generally accepted monitoring protocols.

The purpose of periodic monitoring of short-term indicators is to determine:

1. If individual plants have had an opportunity to recover, grow and reproduce following grazing impacts.
2. If sufficient residual forage remains at the end of the growing season to provide for other resource values or requirements such as soil productivity, wildlife habitat, and dormant season use.
3. If maintenance or improvement of rangeland conditions are indicated.
4. If management adjustments are warranted for the following season to provide for the physiological needs of primary forage species and other resources identified as concerns.
5. If soils and riparian areas are maintaining or moving toward desired conditions.
6. If critical areas are moving toward desired conditions.

Effectiveness Monitoring: to evaluate the success of management in achieving the desired objectives will occur within key and critical areas or on permanent transects at an interval of 10 years or less. Initial baseline information will be collected on this allotment. Effectiveness monitoring may also occur if data and observations from monitoring of short-term indicators suggest a need for additional information.

Permittee Review / Agreement

Reviewed by/ agreed to Judd L. Collings Date 12/20/2014
Permittee

Forest Officer Approval

Approved By _____ Date 1/6/15
Sarah E. Tomsky, Bradshaw District Ranger