Allotment Management Plan
Wagoner

USDA Forest Service
Bradshaw Ranger District, Prescott National Forest
Yavapai County, Arizona

Introduction

This Allotment Management Plan (AMP) is a direct result of the Environmental Assessment and subsequent Decision Notice/Finding of No Significant Impact (DN/FONSI).

The Wagoner Allotment is located in the southwestern corner of the Bradshaw Ranger District of the Prescott National Forest (PNF). This management plan results from a Decision Notice to continue to allow grazing to occur across all pastures, an area of approximately 30,600 acres. It is located approximately 15 miles southeast of Kirkland Junction, Arizona.

The topography of the allotment varies from relatively flat around Cellar Basin to steep mountain slopes in the southern Bradshaw Range and the McAllister Range. Most of the allotment has hilly terrain that is divided by drainages running through moderate to steep divides or canyons. Elevation on the allotment varies from about 3,450 feet at points where Blind Indian Creek and Minnehaha Creek leave the allotment along the west boundary to 7,000 feet at the crest of Horse Mountain in the Bradshaw Range.

The main vegetation types on the Wagoner Allotment consist of semi-desert grassland and desert scrub mix, interior chaparral, and pinyon/juniper with chaparral. Perennial grasses commonly found on the allotment include sideoats grama, black grama, threeawn, curly mesquite, sand dropseed, needle-and-thread, vine mesquite, and tobosa. Shrubs found in the semi-desert type include catclaw, mesquite, shrub oak, snakeweed, and prickly pear cactus. Interior chaparral vegetation consists of stands of shrub oak, manzanita, mountain mahogany, catclaw, deerbrush, and skunkbush. Shrub density is variable across this type, and perennial grasses are often found inter-mixed, especially on south-facing slopes. Pinyon-juniper with chaparral includes a tree overstory with Utah and/or alligator juniper and pinyon pine, with shrubs in the understory. Riparian areas are found along several major streamcourses including Blind Indian Creek, Cellar Springs Creek, Minnehaha Creek, and Cherry Creek. Fremont cottonwood, willow, and ash are the most common obligate riparian woody species. Herbaceous riparian vegetation is variable in both density and species abundance, but includes sedges, rushes, bulrushes, and deergrass.

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);
- the maintenance of satisfactory rangeland management status with a stable 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 shown in areas departing from satisfactory condition where livestock grazing is contributing to 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, banks, and habitat for riparian-dependent plants and animals
- 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 listed Threatened and Endangered species, Regional Forester Sensitive species, and for indigenous plant and animal species.

Grazing Management

Permitted Numbers, Season of Use, and Animal Months

Permittee	Permit Type	# of Livestock	Season of Use	Animal Months
Maughan revocable Trust of 2007	Term (10 years)	Up to 156 head Cow/calf pairs and bulls	Year long	1,872 Animal- Unit-Months[1]

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

The current grazing permit will allow for up to 156 cow calf pairs and bulls on a yearlong basis or a higher number of livestock when calculated on less than yearlong basis.

AOI 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.

[1] Animal-Unit-Month (AUM) is the amount of oven-dry forage required by one mature cow of about 1,000 pounds, either dry or with a calf up to six months of age, or their equivalent, for a standardized period of 30 animal-unit-days.

Grazing Management

Livestock will be managed using a rotational grazing system incorporating growing season rest or deferment to promote forage plant recovery following grazing. Grazing deferment allows for pastures to be rested for all or a portion of a growing season by not using the pasture for the same period from year to year.

Adaptive management is designed to provide sufficient flexibility to allow livestock management to address changes in climatic conditions, seasonal fluctuations in forage production, and other dynamic influences on the ecosystem in order to effectively make progress toward or maintain desired conditions of the rangeland and other resources. Adaptive management will also include the implementation of resource protection measures.

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.

Allowable Use

Allotment Wide Measures:

Grazing intensity guidelines will be applied across the allotment to provide rangeland managers with information needed to adapt management through adjustments, as may be needed, on an annual basis. Examples of appropriate grazing intensity and forage use guidelines for areas of the allotment that are generally described to be in satisfactory condition include:

- Conservative grazing intensity (35-45% use) on key forage plants in upland key areas as measured at the end of the growing season.
- Up to 50-60% browse use on key upland woody species;
- Minimum stubble height on key riparian herbaceous species, four to six inches where sedges and rushes are key and eight inches where deergrass is key;
- Up to 20% use on key woody species within riparian areas; or less than 50% of terminal leaders browsed on woody vegetation less than 6 feet tall.

Grazing intensity will be determined using key herbaceous and browse species within key areas. Guidelines would be adjusted if periodic monitoring indicates that desired resource conditions are not being maintained.

Site-specific Measures:

The following measures will be applied in areas of concern where current conditions are not meeting desired conditions, and management objectives have been established to measure progress towards meeting desired resource conditions:

- Up to 30% utilization of key forage plants in upland key areas as measured at the end of the growing season in Bain pasture soil map unit 370. Goal is to achieve mid to high

similarity potential grass canopy cover of 28%, and 15% litter and basal vegetation, or achieve an upward trend towards these objectives.

- Up to 30% utilization of key forage plants in upland key areas as measured at the end of the growing season in Cellar Basin, Big, Horse, Knight, and South Paxton pastures soil map unit 363. Goal is to achieve mid to high similarity with potential grass canopy cover of 13%, and 10% litter and 5% basal vegetation, or achieve an upward trend towards these objectives.
- Up to 30% utilization of key forage plants in upland key areas as measured at the end of the growing season in Southwestern Paxton pasture in areas of soil map unit 360. Goal is to achieve mid to high similarity with potential grass canopy cover of 24%, and 12% litter and 14% basal vegetation, or achieve an upward trend towards these objectives.
- Manage timing, intensity, and duration of use to allow obligate and key facultative herbaceous vegetation to become established along the greenline of intermittent reaches and maintain those reaches already established in Bain pasture along Blind Indian Creek. Apply the allotment wide stubble height guidelines. Allow periodically germinated obligate woody species to move from seedling to sapling stage within regime of water availability. Maintain and/or achieve and maintain canopy cover of obligate woody species to near potential (45% TEUI 30.1)
- Manage timing, intensity and duration of use to maintain existing and promote additional obligate and key facultative herbaceous vegetation along the greenline to become established in Big Unit in Blind Indian Creek between Ross Spring and Berry Spring. Apply the allotment wide stubble height guidelines.
- Manage timing, intensity and duration of use to maintain existing and promote additional obligate and key facultative herbaceous vegetation along the greenline to become established below Minnehaha Creek. Apply the allotment wide stubble height guidelines and utilization guidelines to maintain and/or achieve herbaceous and obligate woody vegetative canopy in the floodplain at or near potential (65% TEUI 41).
- Manage use along Cherry Creek in Paxton pasture to allow periodically germinated obligate woody species to move from seedling to sapling stage within regime of water availability. Move toward obligate canopy cover potential of 45% (TEUI 30.1).

In the event that the above resource protection measures do not accomplish site-specific resource objectives, additional optional measures may be implemented. These optional measures will be designed to address site-specific resource concerns and may include, but are not limited to, such things as temporary fencing, electric fencing, drift fences, additional livestock exclosures, temporary pipelines and water troughs, reconstruction of existing spring improvements and construction of new improvements such as spring boxes and water gaps.

Rangeland Improvement Program

Construction of New Range Improvements:

Construction of the following new structural improvements that have been developed to address resource concerns and are intended to aid in the achievement or maintenance of desired resource conditions by improving livestock distribution have been approved. Upland water developments will provide livestock water away from riparian areas and allow for achievement of riparian

management objectives. Monitoring may indicate that some of these improvements are not necessary; however, if some or all of these improvements are not implemented, the upper limit of permitted livestock numbers may not be achievable on a sustained basis. Different types of water developments may be employed depending on the location, and could include a catchment apron and storage tank ("trick tank") with pipeline to water troughs, or pipelines to water troughs from existing spring developments or wells. There are 7 new water developments planned, and the development of a spring and additional pipeline added to an existing well development. The new developments will occur in the following pastures, with one development often providing water to more than one pasture.

- Big Pasture: Construction of a water development north of Ross Spring; development of Purebred Spring. Cultural resources survey has been completed.
- Horse Pasture: Construction of two new water developments: one north and one south of Steamboat Spring; placement of two troughs from pipelines in southwest pasture; construction of drift fence to divide pasture. The cultural resources survey has been completed for the fence and pipelines.
- Cherry Pasture: Construction of three water developments, one is shared with Paxton and Horse Pastures. Cultural resources surveys have been completed.
- Paxton Pasture: Construction of three water developments: one shared with Knight Pasture, one shared with Cherry and Horse Pastures, and one on the McCallister Range. Cultural resources survey need to be completed prior to construction.
- Knight Pasture: Construction of one water development (shared with Paxton Pasture) and fence along forest boundary. Cultural resources survey need to be completed prior to construction.

Gully Stabilization

Proposed gully stabilization would occur at Indian Springs and in the Knight Pasture. Practices would be designed to minimize further gully expansion, alleviate further dewatering of the soils profile, and promote soil stabilization as a means to decrease sedimentation. The following soil conservation practices may be implemented for gully stabilization.

- Ripping and/or scarifying soils
- Re-contouring the landscape associated with gullies
- Contour furrowing or pitting the landscape influencing the gullies
- Seeding, mulching, water bars, installing wattles, mycorrhizae inoculation, and/or fertilization.
- Constructing erosion control structures, check dams, revetments, and or water spreaders using materials such as gabions, rocks/boulders, wattles, silt fence, wire mesh fence material, erosion blanket, concrete, rebar, etc.
- Incidental trees, shrubs, or other vegetation may be removed in order to accomplish the preceding stabilization activities.

Maintenance Responsibility

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.

Damage resulting from big game, wind, other acts of nature, or human caused actions, must be repaired in a timely manner so as to ensure the integrity of the structures.

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).*

AOI will identify range improvements in need of maintenance. Existing improvements may be replaced when their conditions warrant.

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.

Annual authorization for actions implementing management direction in the AMP will be included in the AOI , such as a description of the anticipated level of cross- county travel, travel needed for improvement maintenance, new improvement construction, or reconstruction of existing improvements.

All authorizations for cross-country motorized travel are subject to existing regulations intended to protect natural and/or heritage resources. Cross-country travel is not allowed when such travel would cause unacceptable resource damage.

Drought Management

Perennial grasses and major browse species need deferment/rest in order to provide time to recover from drought induced stress. Even when rested or deferred, if adequate precipitation is not received, recovery may not be adequate for livestock use.

Move cattle to the next scheduled pasture when utilization in pastures is met. If complete 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

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 the permit, AMP, and AOI 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.

The key area concept is based on the premise that no range of appreciable size will be grazed uniformly (Holechek, Pieper and Herbel, 1998). When key areas are "properly" used there may

be substantial areas that are used more or less than the key areas, including some that will not be used at all. Forest Service personnel can work with the permittee in selecting these areas.

(Monitoring of allowable use on key forage species in key areas is the joint responsibility of the Forest Service and the permittee. Although the Forest Service will make every effort to assist the permittee in ensuring compliance with standards, the permittee has the ultimate responsibility for ensuring that the allowable use standards are met).

Periodic field checks will be conducted by the Forest Officer to assess vegetation health and trends as well as soil function to identify needed adjustments in season of use and/or livestock numbers.

Field Checks will include informal inspections, formal inspections, and permittee compliance monitoring.

Informal Inspections

Informal inspections conducted by the Forest Officer will be made as the opportunity arises, such as when the Forest Officer is working in the area or is passing through the allotment.

The permittee will be notified by telephone of any significant observations needing immediate attention. Significant observations will be documented in writing by the Forest Officer and a copy of the inspection notes will be sent to the permittee in a timely manner.

Formal Inspections

Formal inspections conducted by the Forest Officer will be made as time and competing duties allow with an attempt to inspect each of the pastures.

The permittee will be requested to accompany the Forest Officer during the inspections. Significant findings from these inspections will be documented in a letter or inspection report sent to the permittee in a timely manner.

Permittee Compliance Monitoring

The permittee will:

- Monitor the allotment continuously throughout the grazing season to determine current resource conditions and to ensure the terms of the permit are being met.
- Document all findings through notes, photographs, or other means decipherable by the Forest Officer
- Share monitoring information with the Forest Officer, and
- Coordinate with the Forest Officer to resolve any problems that arise.

Effectiveness Monitoring

The permittee is encouraged to participate in any effectiveness (e.g. long term condition and trend) monitoring and evaluation conducted on the allotment. This type of monitoring evaluates the success of management in achieving the desired objectives within key and critical areas or on permanent transects at an interval of 10 years or less. Effectiveness monitoring may also be conducted if data and observations from implementation monitoring indicate a need.

Both qualitative and quantitative monitoring methods will be used in accordance with Interagency Technical References, the Region 3 Rangeland Analysis and Management Training Guide, and the Region 3 Allotment Analysis Handbook.

The following Key areas have been identified as needing improvement in order to meet desired resource conditions. These sites will be monitored to gauge progress toward those desired conditions. For further details see EA pages 14-16.

Upland Key Sites:

Bain Pasture, key soil map unit TEUI 370
Cellar Basin, Big Pasture and Horse Pasture, key soil map unit TEUI 363
Knight & South Paxton Pastures, key soil map unit TEUI 363
Southwestern Paxton Unit, key soil map unit TEUI 360

Riparian Area Management:

Bain Pasture, Blind Indian Creek
Big Pasture, Blind Indian Creek
Paxton Pasture, Minnehaha Creek
Paxton Pasture, Cherry Creek

Permittee Review / Agreement

Reviewed by/ agreed to _____ Date 2/25/14
Permittee

Forest Officer Approval

Approved By James Gilsdorf Date 2/26/14
James Gilsdorf, Bradshaw District Ranger