TERM GRAZING PERMIT - PART 3 (Reference FSM 2230) BUSH CREEK ALLOTMENT	Page 6 of 13 Permittee Number 01-905 Permit Number 01038A

Base Property:

Base Property is land owned and used by the permittee for a farm or ranch operation and cannot be leased to another entity. Base property shall include basic livestock management facilities. The permittee will immediately notify the Forest Officer in charge of any change in control of base property. The following land parcel is recognized as base property for the permit:

Acreage	Legal Location (MDM)	Property Assessed to:
80 acres	N 1/2 NW ¼ of Section 14,Township 3 N, Range 31 E.	Jimmy S. Joy and/or Cassie R. Joy

ALLOTMENT MANAGEMENT PLAN

Forest Service regulations (36 CFR 222.2) allow Allotment Management Plans (AMPs) to be included in grazing permits consistent with the Federal Land Policy Management Act (FLMPA), as amended by the Public Rangelands Improvement Act (PRIA) of 1978. An AMP is defined in FLPMA and PRIA as a document prepared in consultation with permittees and outlining a specific program of action for livestock management. Included in the AMP is the authorized number of livestock, season of use, grazing strategy, a range improvement plan and all other management objectives identified in the environmental analysis process.

The Bush Creek Allotment AMP implements the content of the Decision Notice (DN) which was signed by the District Ranger, on April 29, 2009. The AMP is intended to guide the on-the-ground management of the Bush Creek Allotment for the next 10 years.

The DN incorporates Adaptive Management Strategies, and standards and guidelines from the Forest Plan. The DN and adjust allowable forage utilization guidelines based on resource condition monitoring. If necessary, permitted livestock numbers and season of use may also be adjusted, to meet resource condition objectives.

Description of the Allotment

The Bush Creek Allotment encompasses 312 acres which includes 16 acres of the private land. The allotment consists of 3 pastures - Mountain, Bush and Steeple. It is located approximately 15 miles south of Alpine, AZ near the Blue Range Primitive area. The elevation ranges from 6000 to 6300 feet. Mountain and Bush pastures are predominantly pinyon juniper forest type. Sections of Bush Creek and Steeple Creek lie within the allotment. Steeple pasture contains a riparian area with riparian obligate species along Steeple Creek. Major drainages include the Blue River, Bush Creek and Steeple Creek.

The dominant understory vegetation is curly mesquite. Other grass species include blue grama, sideoats grama, hairy grama, galleta, wolftail, and vine mesquite. Forbs include globemallow, lambsquarters, deer vetch, peavine, and herbaceous sage. Shrubs include rabbit brush, shrubby buckwheat, Fendler ceanothus, gray oak, catclaw, mountain mahogany, skunk bush and pricklypear. The dominant trees are Pinyon and Juniper. Some ponderosa are found scattered in drainage and hillside. Streambank vegetation includes narrowleaf cottonwood, alder, pinyon/juniper seedlings, and scattered sideoats grama. The stream bottom of Bush Creek lacks significant riparian vegetation.

Goals and Objectives

The Apache-Sitgreaves National Forest Land and Resource Management Plan (Forest Plan) contains several standards, guidelines and goals that pertain to the rangeland resource. A selection of pertinent ones follows:

- Management direction for the rangeland resource is stated: "Provide a program of range management that emphasizes high quality range forage and improvements. Benefits are improved watershed conditions, improved range forage production, improved wildlife habitat, and enhanced visual quality" (pg.15).
- "Continue livestock grazing with increased emphasis on recreation, wildlife and fishery resources, while maintaining basic soil and water values" (pg. 75).
- "Determine grazing capability for livestock in each riparian area. The objectives for each riparian area should include livestock use when consistent with other resource objectives and riparian recovery goals" (pg. 160).

Desired Conditions

- Riparian Condition: Some riparian areas rated in *unsatisfactory* condition on Bush Creek Allotment. Desired condition is for all riparian areas on the allotment to be rated in satisfactory condition where potential exists.
- Bare Soil: In some areas of the allotment, the amount of bare soil is higher than desired. Desired condition is for minimum or better ground cover by soil type to keep erosion rates below threshold levels on the allotment.
- Vegetative Species Composition: In some areas of the allotment, an appropriate mix of cool and warm season species is lacking. A more natural distribution of cool and warm season species in the plant composition is desired within the allotment.

Management Authorization

The following design criteria and specific actions will be implemented to maintain desired conditions, or to continue movement toward the desired conditions:

1. A management guideline of conservative use of 30-40% in the uplands as measured at the end of the grazing season will be employed to improve vegetative and soil conditions.
2. The length of the grazing period within each pasture will consider and manage for the desired conditions. Generally, the livestock grazing season is expected to run between November and April for a total of approximately 141 days.
3. Grazing will occur through a system which allows for plant growth and recovery. A deferred rotation system during the dormant season is expected to meet desired conditions.
4. Permitted livestock numbers will vary between 11 and 27 AUMs annually. The maximum number of 27 AUMs would be supported during times of favorable climatic conditions, having abundant vegetative growth, and/or when desired conditions are met.
5. Annual authorized livestock numbers will be based on existing conditions, available water and forage, and predicted forage production for the year. Adjustments to the annual authorized livestock numbers (not to exceed 27 AUMs) may occur during the grazing year, based on favorable conditions or may be adjusted downward if conditions are not favorable, such as in the case of drought, insects or other environmental factors.
6. Livestock grazing in the riparian area of the Bush pasture will be deferred until the existing dike along Bush Creek is addressed. Work on the existing dike, other than normal maintenance, would require separate NEPA analysis.
7. Erosion control measures will be added on the trailing area within the allotment.
8. Maintain the health and vigor of riparian obligate species in Steeple Creek in order to develop woody debris.

Recommended Best Management Practices for livestock grazing are:

- Diligent herd riding to locate livestock to areas where actual use is less than the utilization standard.
- Salt blocks, mineral concentrates or other supplements will be strategically placed to help distribute livestock away from water sources, improvements, riparian areas, high use recreation sites and trails, and roads. Actual placement will be at least ¼ mile from riparian areas or live water, unless otherwise approved by the Forest Officer in charge. Supplements are a tool to enhance overall livestock distribution and utilization patterns.
- Frequent riding of fence-lines to ensure gates remain closed and fences remain serviceable.

Adaptive Management Options

The following adaptive management option may be implemented if monitoring indicates that the authorized management described above for the Bush Creek Allotment is not meeting desired conditions.

1. Construct a Trick Tank on upper elevation of the Mountain Pasture.

Resource Protection Measures for the Allotment

The proposed action is designed to comply with Forest Plan standards and guidelines, as amended. Authorization and adaptive management options are incorporated into the project to protect forest resources of soil, water, wildlife, riparian and aquatic habitat. Best management practices from various sources have been incorporated into the authorization, monitoring, adaptive management options and mitigation measures for the proposal. These sources include Arizona Department of Environmental Quality, Apache-Sitgreaves Land Management Plan, Forest Service Handbook 2509.22 (R3 Soil and Watershed Conservation Practices Handbook), and other sources listed in the Specialist Report for Watershed, Hydrology, Riparian and Soils.

Mitigation Measures

- Necessary techniques will be used to achieve proper distribution or lessen the impact on sensitive areas. Practices include herding and salting. Utilize herding to encourage cattle to move out of the riparian areas to light use areas on the uplands. Place salt and supplements in uplands away from water and riparian areas. Move salt or mineral block to areas of light use or move them frequently.

- All proposed range facilities will be surveyed for threatened, endangered or sensitive species prior to any ground-disturbing activities. Facilities will be designed and constructed to have no adverse effect on listed species. Any new or reconstructed water developments will include wildlife access and escape ramps.

- All proposed range facilities will be surveyed for heritage resources prior to any ground-disturbing activities. Facilities will be built or modified to avoid impacts to sites. Range facilities will be located so as to avoid concentrations of livestock on identified heritage resource sites. If unrecorded sites are discovered during the course of project implementation, activities will cease and the Forest Archeologist will be notified. No salting will occur within or adjacent to identified heritage sites.

Monitoring and Evaluation

Implementation Monitoring -- Objective: Insure that the action(s) described in the Decision Document (Environmental Assessment) are implemented accordingly, as scheduled and are in compliance with the Forest Plan standards and guidelines.

A. Ocular Inspection – The main objective is to determine whether plants are physiologically capable of being grazed and trampled without causing long term damage to the vegetation or soils. Dormant season grazing will occur on the allotment, therefore the concept of range readiness does not apply. However, an ocular inspection of the allotment will be conducted to assess the conditions of the vegetation and soil (ground cover, erosion), and structural improvements.

B. Annual monitoring to adjust or evaluate the timing, intensity, frequency and season of use, and livestock numbers will be conducted during the grazing season (seasonal) and/or at the end of the growing season. This practices adaptive management and makes necessary management changes needed for plant development and recovery. The methods to be used may include, but are not limited to:

1. Other methods for utilization and age class of riparian woody browse species are more appropriate measures for flashy woody and rock dominated riparian systems. Stubble Height measurement would not be applicable to dormant season grazing. Thus, livestock will not graze Steeple Creek due to the steep and narrow canyon and the decision requires grazing be removed from Bush Creek until the dike issue is resolved. However, Stubble Height measurement may be necessary when the riparian areas are grazed. The purpose of stubble height is to monitor riparian vegetation in critical areas to have adequate stubble height at the end of the growing season in order to protect soil from high spring runoff and snowmelt. A recommended minimum of 6 inches of stubble height of Carex species in satisfactory riparian condition (in PFC) and 8 inches of stubble height of Carex species in unsatisfactory riparian condition (FAR or NF) at the end of the growing season is expected to meet the desired condition.
2. Utilization (Height Weight, Landscape Appearance, Grazed Class etc.) - To assure that conservative maximum use levels of 30%-40% in key areas are being met. Along with actual use and climate data, these methods measure short-term effects of grazing activities and are used as a basis for adjusting grazing use. Utilization measurements will be taken on key livestock forage plants (key species). Key forage species is defined as:
   - Forage species (plants) whose use serves as an indicator to the degree of use of associated species. In many cases, key species include indicator species and species traditionally referenced as increaser, decreasers, desirables, or intermediates.
   - Those species (plants) which must, because of their importance, be considered in the management program (Forest Service Region 3 Rangeland and Analysis Management Guide, June 1997).
3. Compliance with Annual Operating Instructions (AOI) - The AOI includes pasture rotations, numbers to be grazed, pasture entry and exit dates, improvement maintenance and construction, and general annual allotment operating procedures.
4. Actual Use Information (Number of livestock and Season of Use). The permittee will keep an accurate record of the number of livestock run on the allotment and entry and exit dates of each pasture grazed.

Effectiveness Monitoring -- Objective: Effectiveness monitoring is intended to determine whether management is successful at moving rangeland resources towards desired conditions. The long-term health of upland and riparian resources will be monitored in key areas or critical areas on the allotment using one or more of the following methods as needed, but not limited to:

A. Ecological Status and/or Range and Soil Condition Trend - Range clusters and areas suitable for determining long-term trend in vegetation and soil should be read at 10th year. Emphasis on monitoring ecological status will be made.

1. Ecological Status (Cover Frequency/Similarity)
2. Parker 3 Steps
3. Paced Transect

B. Cover – The percent of an area that is covered by vegetation, rocks and litter. Ground cover is important to intercept raindrops impact before reaching the soil. An increase in vegetation and litter cover from baseline measures is considered as moving toward Desired Conditions (DC), a decrease is considered as not accomplishing DC.

1. Point Cover
2. Cover Frequency
3. Parker 3 Steps
4. Paced Transect

C. Forage Production – Forage production surveys for the allotments will validate capacity estimates and may result in further adjustments in stocking rates and season of use at 10th year. Forage production survey will facilitate capacity determination if the rangeland is found to support more AUMs than the current high end or less than the current low end.

1. Production/Utilization surveys
2. Ocular Estimates

D. Noxious Weeds - The location of any noxious weeds should be noted in the utilization-monitoring write up. During this monitoring any noxious weeds shall be grubbed out or treated and documented regarding the location. Noxious weeds can be tracked from the same data used to collect plant composition and density.

E. Proper Functioning Condition (PFC) – An assessment of riparian (lotic) and wetland (lentic) areas. The following tracks the effectiveness in improving or maintaining riparian condition.

1. Full PFC assessments of lentic or lotic areas.
2. Assessment of key elements needing improvement.

Monitoring Plan: Watershed Hydrology, Riparian, Soils, Wildlife and Fisheries.

Monitoring described above for range will meet the needs of watershed, riparian, soils, wildlife and fisheries.

Monitoring will be used to adjust or amend previously described actions in the decision document or AMP. Information on monitoring should be shared with the permittee and others concerned with the decision. If the monitoring data is not achieving or moving toward the Desired Conditions, Forest Service personnel must analyze the problem and decide on a course of action. If necessary, an ID Team may be instituted to determine if the goals and objectives are correct or need to be adjusted. Re-initiation of NEPA may not be necessary if the action is still within the scope of the original decision.

Range Improvements

Range Improvement Maintenance Standards. All assigned range improvements will be maintained by the permittee. When the annual grazing application is approved, in whole or in part, livestock will not be placed on an allotment or move into pastures if permit requirements concerning range improvement maintenance are not met. Proper maintenance of the range improvements will ensure that the condition of improvements is adequate to hold livestock in a pasture and will extend the useful life of the improvements. Forest officers periodically will inspect assigned improvements for compliance with maintenance standards prior to livestock entry or movement dates.

TERM GRAZING PERMIT - PART 3 (Reference FSM 2230) BUSH CREEK ALLOTMENT	Page 11 of 13 Permittee Number 01-905 Permit Number 01038A

A permit modification will be prepared for approved range improvement projects each year. Permittees will sign a permit modification form for the project and will sign for materials furnished by the Forest. Range improvements not specifically listed in the improvement program schedule and all ground disturbing activities will not be initiated by the permittee until proper clearances have been approved. Normal maintenance of improvements does not require approval.

A. Fences: Many existing fences are very old and in need of major reconstruction. The permittee will identify these fences for the District Ranger. All fences in need of reconstruction will be inventoried and prioritized by the District for reconstruction. The following will be implemented to ensure fence maintenance objectives are met:

1. All allotment boundary fences are to be maintained to standard prior to livestock entering National Forest lands. Livestock will not be permitted to enter the Forest until fences have been properly maintained to ensure fences are adequate to hold the livestock.
2. Each permittee is responsible for the maintenance of all or a portion of his allotment boundary fences.
3. Pasture fences will be maintained before moving livestock to a new pasture.
4. Old wire and steel fence posts will be removed from the Forest.
5. Broken wire will be spliced with good quality double strand, 12 gauge barbed or smooth wire.
6. Wire spacing. The top wire height will not exceed 42". The bottom wire will be smooth wire and will be at least 16" from the ground.
7. Wire will not be over tightened and will be stretched to remove slack.
8. Broken posts or rotten wood pots will be replaced with a steel post or a juniper or treated wood post greater than 5" diameter.
9. Brace posts will be maintained in tight and serviceable condition.
10. Steel posts which have settled may need to be jacked up and possibly moved. Leaning steel posts will be straightened.
11. Gates will be maintained so they can be opened easily. Gate sticks will be 2-3" diameter. Use smooth wire for gate loops.
12. At least 90% of fence stays will be sound. Replacement stays will be of good quality wood 1-1/2" by 3" diameter. The bottom of each stay will rest on the ground. Galvanized stay wire will be used for tying stays.
13. Missing staples and fence clips will be replaced.
14. All trees which have fallen across the fence line will be cut and removed from the fence right-of-way.

B. Water: Stock water is important for proper livestock distribution. Water must be used to demonstrate beneficial use and is necessary in order to maintain water rights. If natural water is not available, the permittee will be asked to haul water to properly use forage on the allotment. The following will be done:

1. Springs:
   a. Fences to protect springs will be maintained to standard.
   b. Collection boxes and inlet pipes will be clean of sediment and debris.
   c. Unserviceable pipe will be repaired or replaced. Material not usable will be removed from the Forest.
   d. Troughs that leak will be repaired. Troughs should be level. Overflow pipes should be placed to avoid creating a boggy area at the trough.
   e. Float valves will be cleaned and set to prevent overflow.

2. Stock Tanks:
   a. Check stock tanks for seepage.
   b. Spillways will be flat and will have a minimum height of three feet and width of ten feet. They will be free of debris and obstructions. Eroded portions will be repaired.
   c. Tanks will be cleaned to their original capacity. Special care will be taken during cleaning to prevent future water loss. The work will be coordinated with the District Ranger.

TERM GRAZING PERMIT - PART 3 (Reference FSM 2230) BUSH CREEK ALLOTMENT	Page 12 of 13 Permittee Number 01-905 Permit Number 01038A

Maintenance Responsibility and Range Improvements

The maintenance responsibilities are shown on the attached map and on the rangeland improvement inventory list below:

INFRA NUMBER	Name	UNITS	RESPONSIBILITY
002114	Wiltbank Holding Pasture Fence	**0.4 mi.**	**Red Hill Permittee**
002036 segment 002036A	BC Mountain/Red Hill Fence	**0.75 mi.**	**Bush Creek Permittee**
002036 segment 002036B	BC Steeple/Red Hill Fence	**0.5 mi.**	**Bush Creek Permittee**
002037 segment 002037A	Cow Flat Red Hill Fence	**0.5 mi.**	**Bush Creek Permittee**
002037 segment 002037B	Cow Flat/Bush Creek Fence	**0.2 mi.**	**Bush Creek Permittee**
002238 segment 002238 EAST	Mountain/Bush Division Fence	**0.9 mi.**	**Bush Creek Permittee**
002238 segment 002238 WEST	Bush/Mountain Division Fence	**0.2 mi.**	**Bush Creek Permittee**

Permittee Review

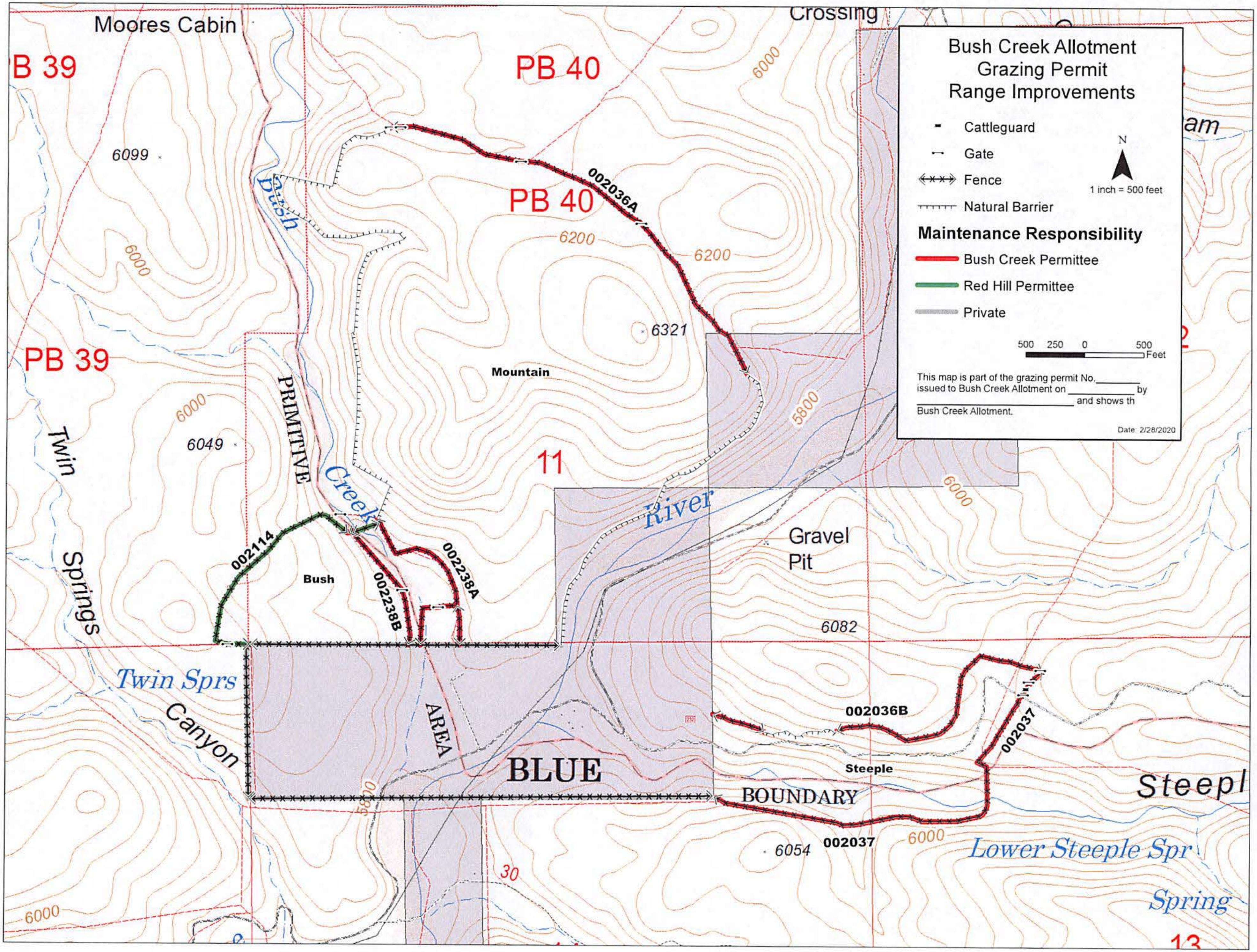
"I have reviewed the provisions of the term grazing permit, the standards and guidelines, and management required by the Forest Management Plan applicable to the Bush Creek Allotment with the grazing Permittee."

_____ _____

District Rangeland Management Specialist Date

TERM GRAZING PERMIT - PART 3 (Reference FSM 2230) BUSH CREEK ALLOTMENT	Page 13 of 13
	Permittee Number 01-905
	Permit Number 01038A

Bush Creek Allotment Map goes here on page 13


Bush Creek Allotment
Grazing Permit
Range Improvements
Cattleguard
Gate
Fence
Natural Barrier
N
1 inch = 500 feet
Maintenance Responsibility
Bush Creek Permittee
Red Hill Permittee
Private
500 250 0 500
Feet
This map is part of the grazing permit No.________ issued to Bush Creek Allotment on ____________ by ______________________ and shows th Bush Creek Allotment.
Date: 2/28/2020
Moores Cabin
Crossing
PB 39
PB 40
PB 40
PB 39
6099
6000
6200
6200
6321
Mountain
6049
6000
Twin
Springs
Bush
Creek
PRIMITIVE
11
River
5800
6000
Gravel
Pit
002036A
002114
Bush
002238B
002238A
6082
Twin Sprs
Canyon
AREA
BLUE
002036B
002037
Steeple
BOUNDARY
Steepl
002037
6054
6000
Lower Steeple Spr
Spring
5800
30
6000
13