BLM

U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

2016 Grazing Term Permit Renewal and Allotment Management Plan

August 2016

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management
Royal Gorge Field Office
3028 E. Main Street
Canon City, CO 81212

Environmental Assessment
2016 Grazing Term Permit Renewal and Allotment Management Plan

DOI-BLM-CO-F02-2016-0004 EA

Prepared by
U.S. Department of the Interior
Bureau of Land Management
Royal Gorge Field Office
Canon City, CO

August 2016

This page intentionally
left blank

Table of Contents

1.1. Identifying Information:

1.1.1. Title, EA number, and type of project:

Term Grazing Permit Renewal and Allotment Management Plan for the Big Hole #15002, Green Mt. North #05116, McCoy Gulch #15049, Oak Creek #15028, Race Path #05238 and Sand Gulch #15007 Allotments

DOI-BLM-CO-FO20–2016–0004

1.1.2. Location of Proposed Action:

Big Hole Allotment: T18S, R73W, S. 7-10, 14-23, 26-35, T19S, R73W, S. 4-7, T49N, R73W, S. 23, 26, 27, 34, 35, T48N, R73W, S. 1-3, 10-15. Fremont County, CO. 19,857 Public Land Acres

Green Mountain North: T49N, R12E, S. 2 & 3, T50, R12E, S. 33 & 34. Fremont County, CO. 236 Public Land Acres

McCoy Gulch: T48N, R12E, S. 27 & 28. Fremont County, CO. 428 Public Land Acres

Oak Creek: T47N, R11E, S. 25, T47N, R12E, S. 19 & 30. Fremont County, CO. 884 Public Land Acres

Race Path: T48N, R12E, S. 13 & 14, 23, 24–27, 33-36, T47N, R12E, S. 1–3, 9–11, T19S, R73W, S. 18, 19, & 30. Fremont County, CO. 7,762 Public Land Acres

Sand Gulch: T48N, R12E, S. 28, 29, & 31 – 33, T47N, R12E, S. 4, 6–8, 17, 18. Fremont County, CO. 3,701 Public Land Acres

1.1.3. Name and Location of Preparing Office:

Lead Office - Royal Gorge Field Office CO-200

1.1.4. Identify the Subject Function Code, Lease, Serial, or Case File Number:

Case file number

GR# 0504364 Stagecoach Ranch

GR# 0505251 Warren Ross

GR# 0505380 Steve Oswald

GR# 0505326 Howard Eggleston

1.1.5. Applicant Name:

Stagecoach Ranch

Warren Ross

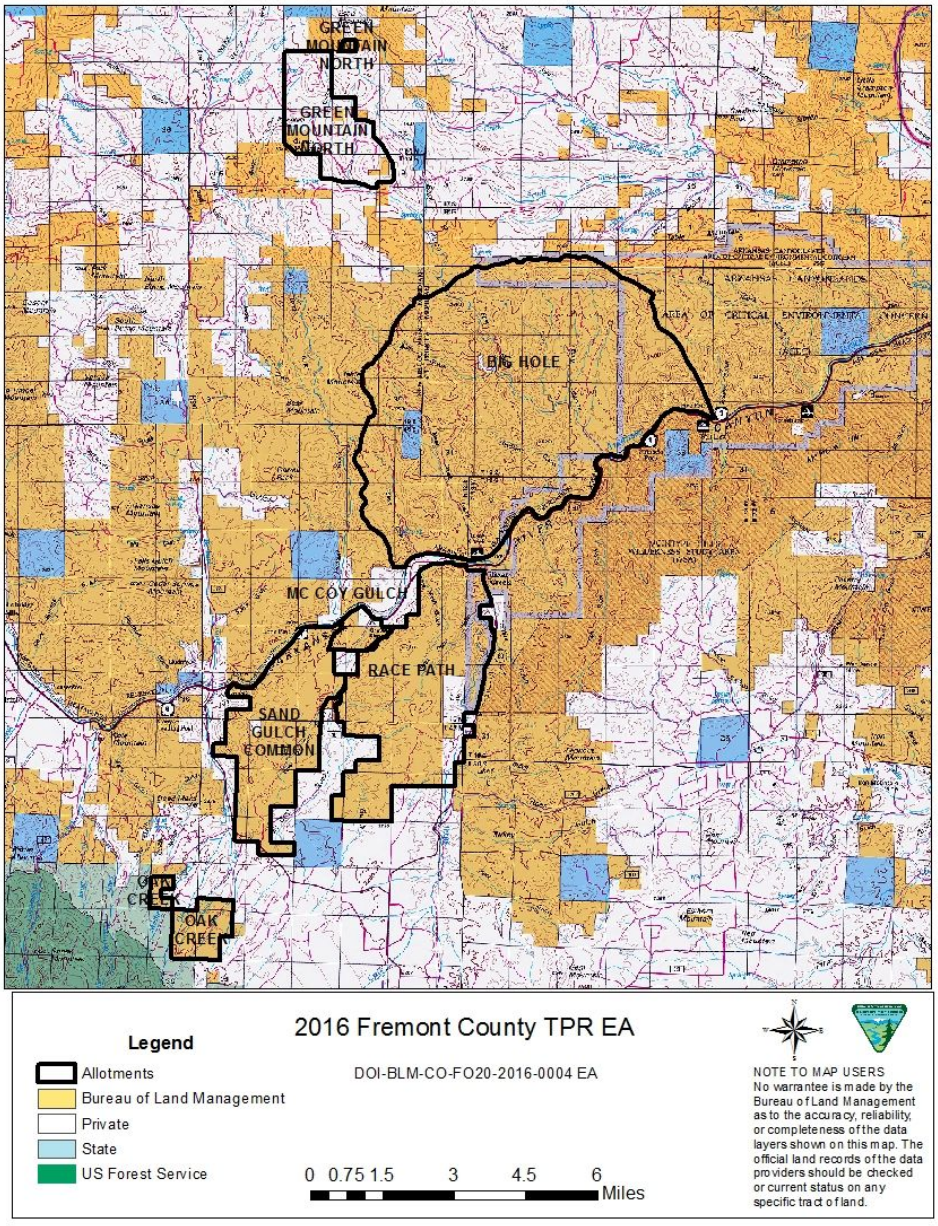
Steve Oswald

Howard Eggleston

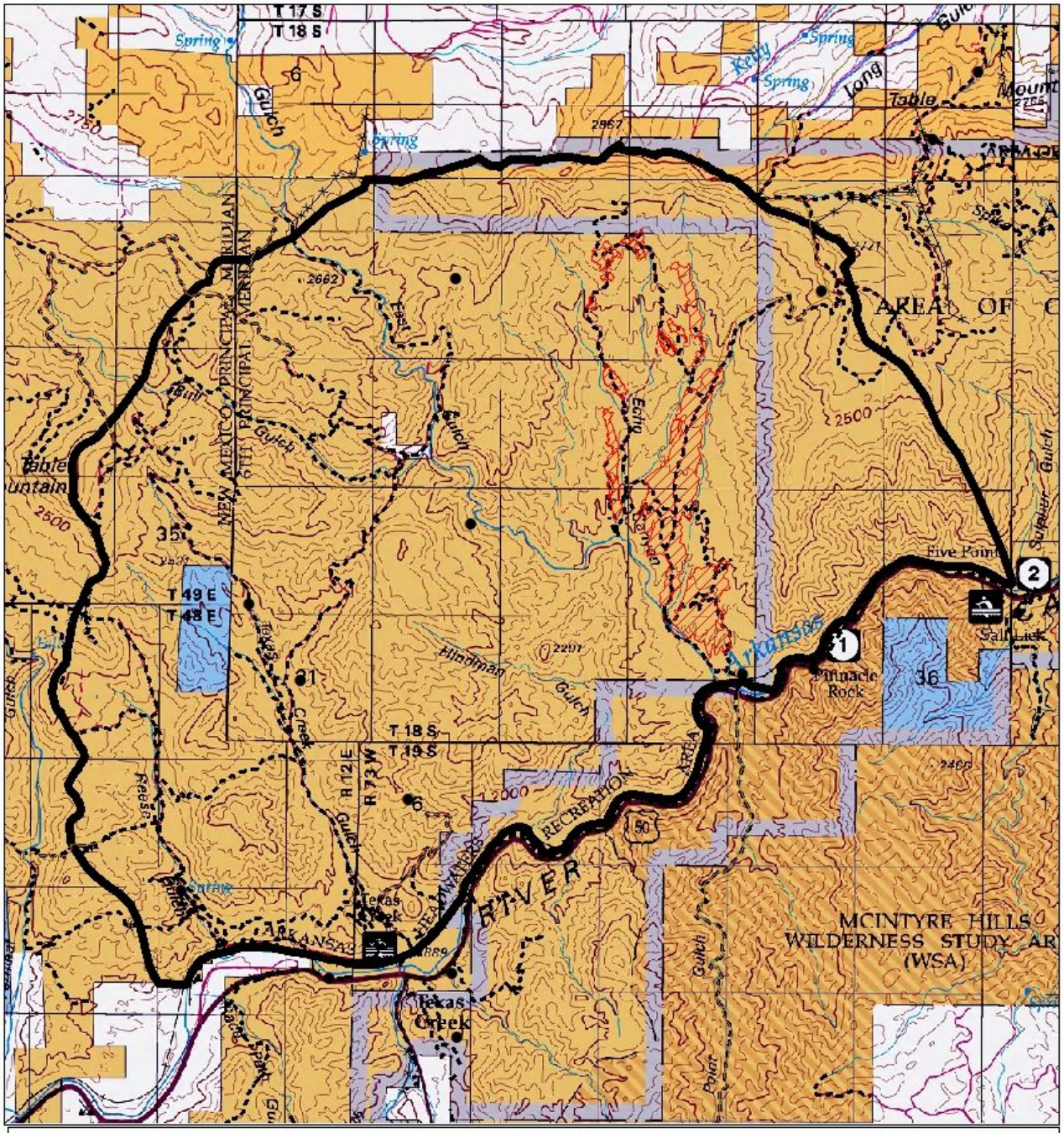
1.2. Introduction and Background

BACKGROUND:

This EA has been prepared by the BLM to analyze the term grazing permit renewal for the Big Hole, Green Mt. North, McCoy Gulch, Oak Creek, Race Path and Sand Gulch Allotments. Grazing use on the allotments is currently scheduled as follows:



Big Hole Allotment #15002



Legend

- Big Hole Allotment
- Water Developments
- 2002 Vegetation Treatment
- Primary Travel Routes
- Bureau of Land Management
- Private
- State
- US Forest Service

Big Hole Allotment #15002

DOI-BLM-CO-FO20-2016-0004 EA
T18S, R73W, S. 7-10, 14-23, 26-35
T19S, R73W, S. 4-7
T49N, R73W, S. 23, 26, 27, 34, 35
T48N, R73W, S. 1-3, 10-15

0 0.3 0.6 1.2 1.8 2.4 Miles

NOTE TO MAP USERS
No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

Table 1.1.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
Big Hole	178 Cattle	10/01 — 03/31	100%	Improve	1,068

Current Terms & Conditions:

1. The 1068 AUMs in Big Hole may be used as 177 cow/calf pairs with no yearlings.

2. Up to 75% of the total AUMs in Big Hole may be used as yearlings, with the remaining AUMs as cow/calf pairs.

3. Cow/calf pairs are converted to yearlings at the ratio of 1.6 yearlings to 1 pair, but a yearling must be considered a full animal unit for billing purposes because it is over 6 months of age.

4. Utilization will be limited to 80% of upland forage grass, 60% of riparian grass and grass like forage species, and 50% of the annual growth of woody riparian species.

5. The season of use may be extended to April 15th, if the total AUMs are not exceeded, if the forage plants are still mostly dormant and no other issues arise with other public land users.

6. Emergency feeding and supplemental feeding will be allowed if conditions warrant. Supplements may include weed free high protein hay.

Authorized Livestock Grazing

Table 1.2.

Total	Suspended	Active
1068	0	1068

Review of grazing use on this allotment included an assessment of the "health" of public land in relation to Standards for Public Land Health and conformance with Guidelines for Livestock Grazing Management in Colorado. These assessments were conducted in 2002 and again in 2011. It was determined in both assessments that the Big Hole allotment was meeting all standards applicable to livestock grazing under current management.

Existing livestock water resources on this allotment is limited to a few developed springs, creeks, the Arkansas River and in some cases cattle will utilize snow if available. Fencing is limited to the allotment boundaries where topography is not a driving factor. There are no pasture fences and livestock distribution is heavily relied on salt & mineral distribution as livestock use is typically promoted to the north end of the allotment and away from the Arkansas River. Use of the existing designated administrative routes in this allotment is critical to the distribution of salt & mineral.

In 2002, approximately 550 acres were roller-chopped in areas that had the capability to respond to an open canopy as far as grass production. Based on numerous observations, it appears the treatment was successful where the native grass species have become established.

Green Mountain North Allotment #05116

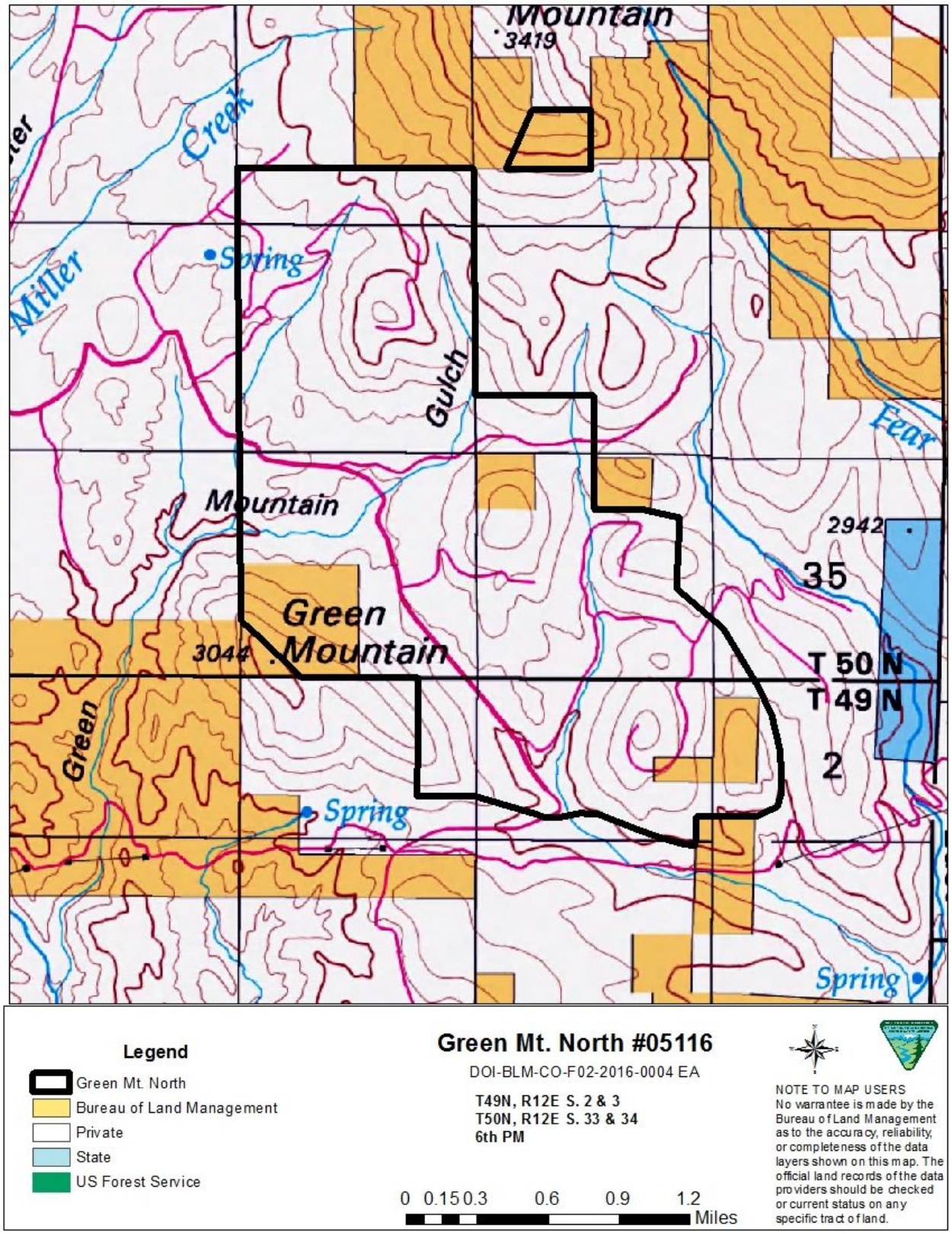

Mountain
3419
Creek
Miller
Spring
Gulch
Fear
Mountain
2942
35
Green
Mountain
3044
T 50 N
T 49 N
2
Green
Spring
Spring
Legend
Green Mt. North
Bureau of Land Management
Private
State
US Forest Service
Green Mt. North #05116
DOI-BLM-CO-F02-2016-0004 EA
T49N, R12E S. 2 & 3
T50N, R12E S. 33 & 34
6th PM
0 0.15 0.3 0.6 0.9 1.2
Miles
NOTE TO MAP USERS
No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

Table 1.3.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
Green Mt. North	2 Cattle	03/01 — 02/28	100%	Custodial	24

Current Terms & Conditions:

The authorized amount of grazing use on this allotment is the estimated carrying capacity of the allotment and is expected to result in utilization levels of 40% - 60% of the total annual forage production of key forage species. Utilization will be limited to 40% - 60% on grass forage species during the growing season and 80% of previous year's growth during the dormant season. Utilization on woody riparian species such as cottonwoods and willows will be limited to 60% of the current year's growth. Utilization levels on Aspen will be limited to 40% of the current or previous year's annual leader growth. If use reach's these levels, livestock will be removed from public land.

Authorized Livestock Grazing

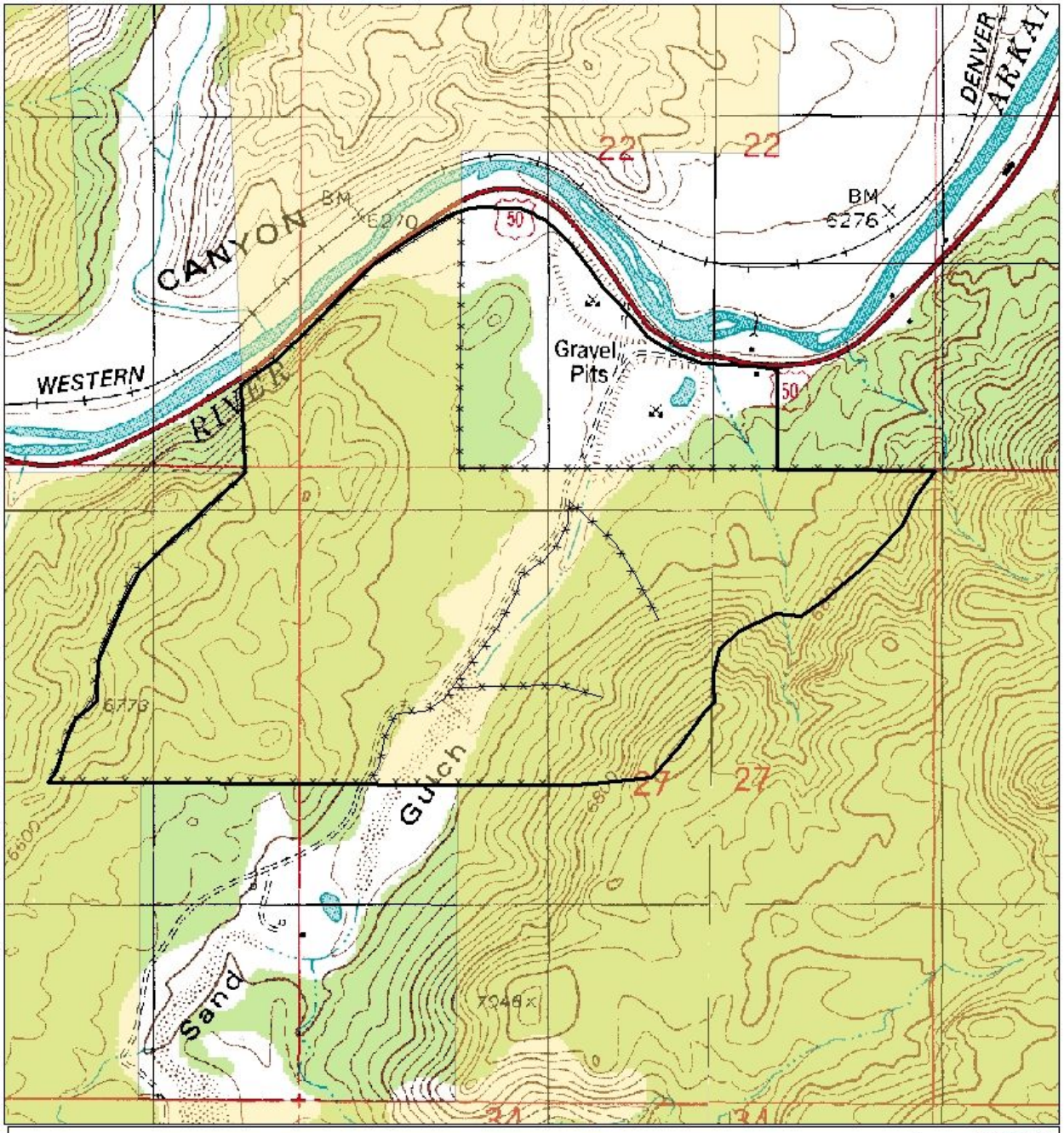
Table 1.4.

Total	Suspended	Active
24	0	24

Review of grazing use on this allotment included an assessment of the "health" of public land in relation to Standards for Public Land Health and conformance with Guidelines for Livestock Grazing Management in Colorado in 2007. It was determined the Green Mt. North allotment was meeting all standards applicable to livestock grazing under current management. The allotment is categorized as Custodial management and consists of several small public land parcels surrounded by unfenced private lands. Available livestock water is located on the private lands and the public lands portion receives limited actual grazing use.

Control of base property for this permit has changed from Howard Eggleston to Barry Barnes & Trinity Huffman. As a result there is a need to transfer the permit.

McCoy Gulch Allotment #15049



Legend

- McCoy Gulch
- fence
- Bureau of Land Management
- Private
- State
- US Forest Service

McCoy Gulch Allotment #15049

DOI-BLM-CO-FO20-2016-0004 EA

0 0.050.1 0.2 0.3 0.4 Miles

NOTE TO MAP USERS
No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

Table 1.5.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
McCoy Gulch	30 Cattle	01/01 — 03/31	100%	Improve	89

Current Terms & Conditions:

1. Utilization on woody riparian vegetation will be limited to 60% of the previous year's growth.

2. Utilization on grass forage species will be limited to 80% of the previous year's growth.

3. Feeding of weed-free hay will be allowed as a protein supplement throughout the allotment and as a reclamation tool on bare ground areas of the allotment.

4. Utilization of grass may exceed 80% in areas where hay is being fed for reclamation purposes.

5. Number of cattle may exceed 30, as along as 89 AUMs are not exceeded.

6. Prior to exceeding 89 AUMs or going outside of the normal grazing dates, an inspection will be conducted by BLM to determine utilization, plant phenology, soil moisture and other factors. Additional grazing use may be authorized by BLM if it is determined it will not cause plant or soil damage.

Table 1.6.

Total	Suspended	Active
89	0	89

Review of grazing use on this allotment included an assessment of the "health" of public land in relation to Standards for Public Land Health and conformance with Guidelines for Livestock Grazing Management in Colorado. These assessments were conducted in 2002 and again in 2011. It was determined in both assessments that the McCoy Gulch allotment was meeting all standards applicable to livestock grazing under current management.

Current management emphasizes grazing use as a reclamation tool on the riparian portion of Sand Gulch. The riparian is divided into three sub-pastures made up of fences along Sand Gulch to emphasize concentrated grazing use along the creek. Sand Gulch is typically dry and the sub pastures could not support livestock without water. The only available stock water on this allotment is located on the private land north and adjacent to the allotment. This grazing treatment is no longer desired due to changes in stream character and grazing use as a reclamation tool could eventually impede the recovery of the stream channel. Grazing management for this allotment is in need of updating based on current resource objectives.

Oak Creek Allotment #15028

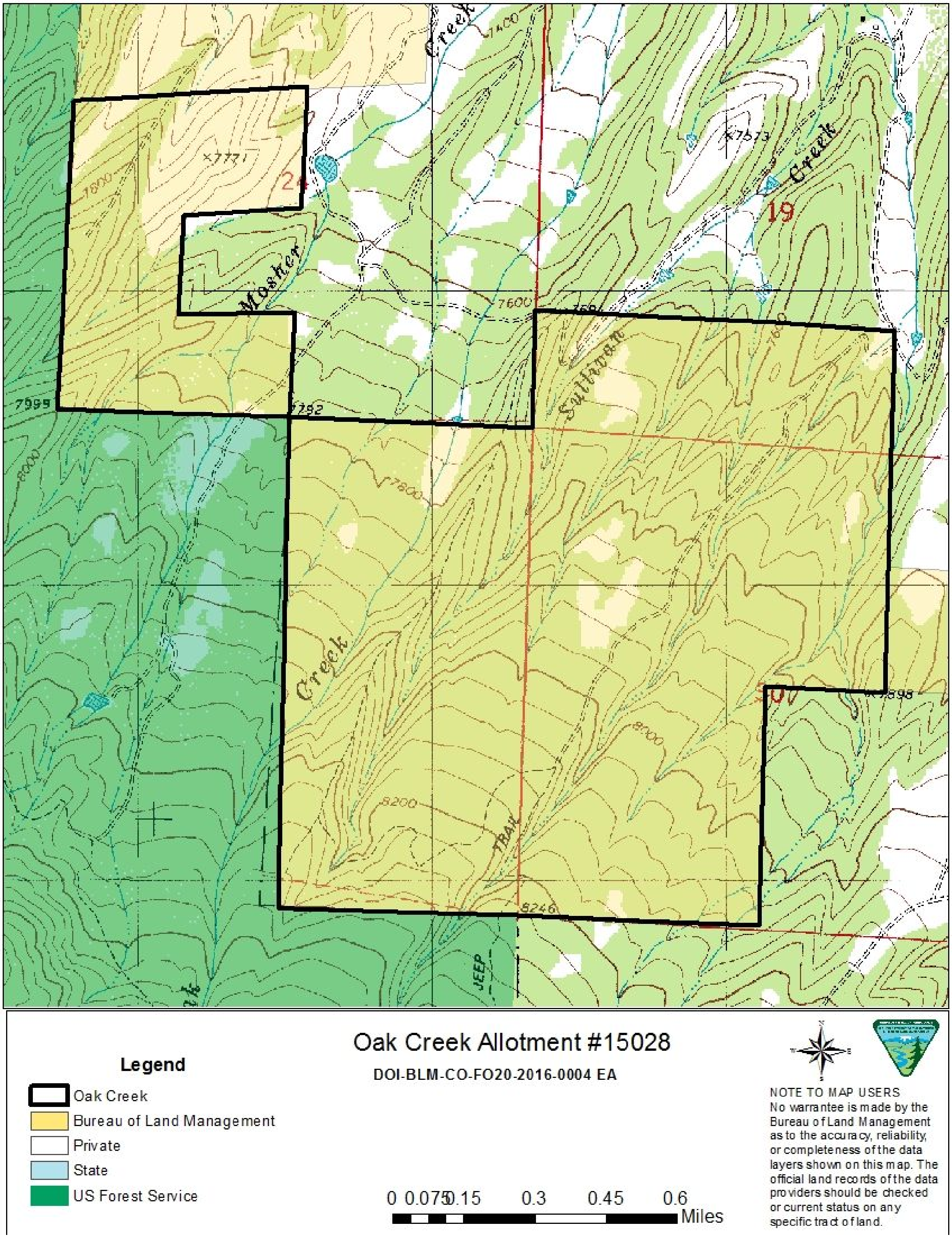

Oak Creek Allotment #15028
DOI-BLM-CO-FO20-2016-0004 EA
Legend
Oak Creek
Bureau of Land Management
Private
State
US Forest Service
0 0.0750.15 0.3 0.45 0.6
Miles
NOTE TO MAP USERS
No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.
Creek
Mosher
Creek
Sullivan
Creek
19
7600
7800
8000
8200
8246
7792
7999
7771
7573
JEEP
TRAIL

Table 1.7.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
Oak Creek	15 Cattle	06/01 — 09/30	100%	Improve	60

Current Terms & Conditions:

1. Grazing use on the allotment must not exceed 60% of the annual production of forage species.

2. Short-term, high intensity grazing may be used in lieu of the permitted grazing system on a temporary basis.

3. Grazing use may require adjustments in response to prescribed burning.

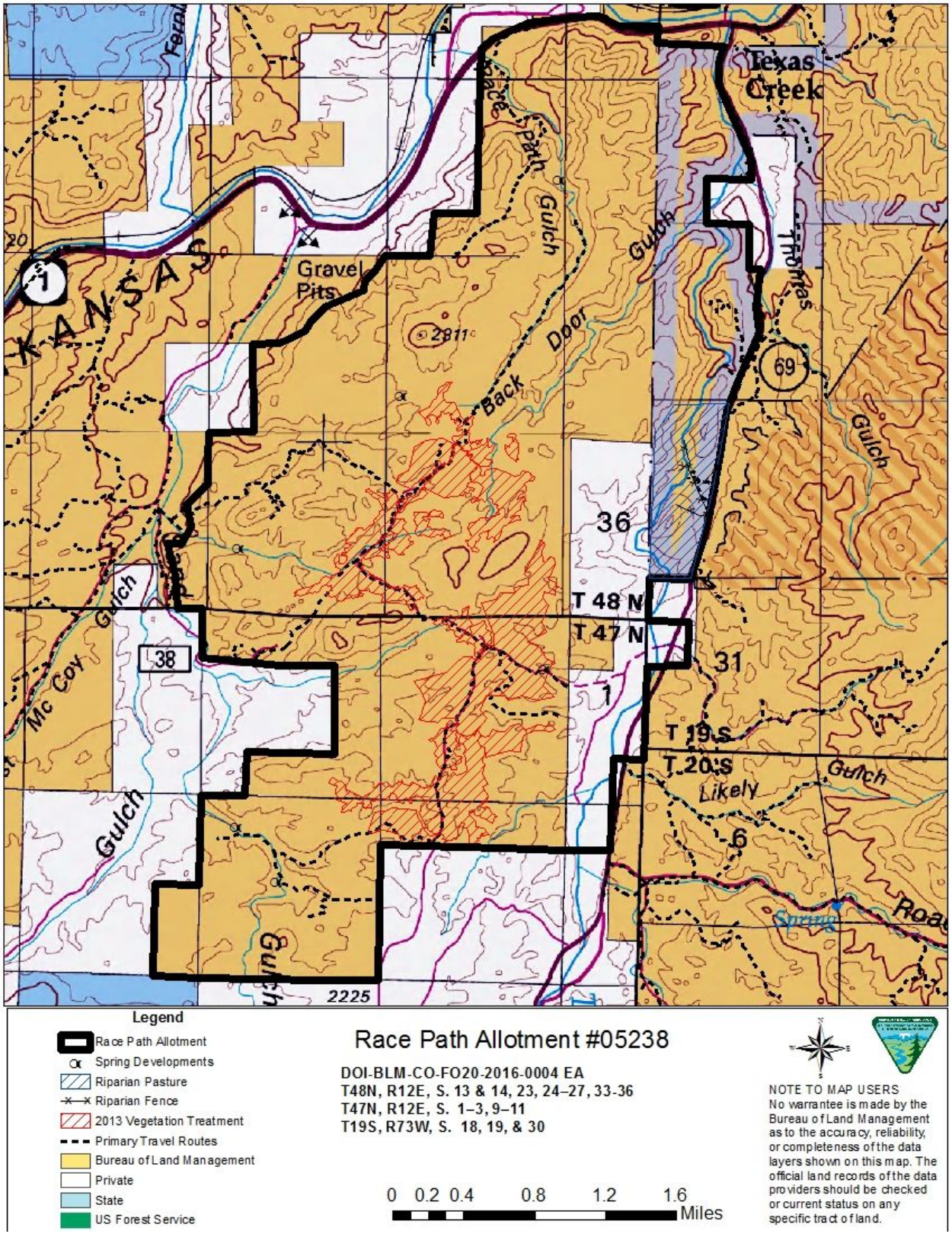
4. Temporary increases in AUMs may be allowed up to the 60% utilization level due to the increased forage production from the roller chopping project. Permanent increases in grazing use will only be made after actual use and utilization studies support the increase as sustainable.

Table 1.8.

Total	Suspended	Active
60	0	60

Review of grazing use on this allotment included an assessment of the "health" of public land in relation to Standards for Public Land Health and conformance with Guidelines for Livestock Grazing Management in Colorado in 2002. It was determined that the Oak Creek allotment was meeting all standards applicable to livestock grazing under current management. Allotment vegetation monitoring is included for this allotment and summarized in the Vegetation section. The permittee integrates use on this allotment with adjacent private land. As a result, livestock use is typically short duration within the authorized grazing period (6/1-9/30). While on the allotment livestock are rotated throughout the area by the movement of salt supplements. Available livestock water is limited to natural flowing streams and water located on the adjacent private lands. The oak brush on this allotment is dominant and limits the amount of grazing use that could occur. Efforts were conducted in early 2000 to reduce the oak canopy through a combination of mechanical and prescribed burning. These efforts were successful at the time, but the oak brush has regrown and beginning to out compete the available forage for livestock. The re-establishment of oak brush on the allotment is demonstrated in the monitoring summary.

Race Path Allotment #05238


Texas Creek
Race Path Gulch
Gravel Pits
2811
Back Door Gulch
Thomas Gulch
KANSAS
69
36
T 48 N
T 47 N
31
38
Mc Coy Gulch
1
T 19 S
T 20 S
Likely Gulch
6
Gulch
Spring
2225
Legend
Race Path Allotment
Spring Developments
Riparian Pasture
Riparian Fence
2013 Vegetation Treatment
Primary Travel Routes
Bureau of Land Management
Private
State
US Forest Service
Race Path Allotment #05238
DOI-BLM-CO-FO20-2016-0004 EA
T48N, R12E, S. 13 & 14, 23, 24–27, 33-36
T47N, R12E, S. 1–3, 9–11
T19S, R73W, S. 18, 19, & 30
0 0.2 0.4 0.8 1.2 1.6
Miles
NOTE TO MAP USERS
No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

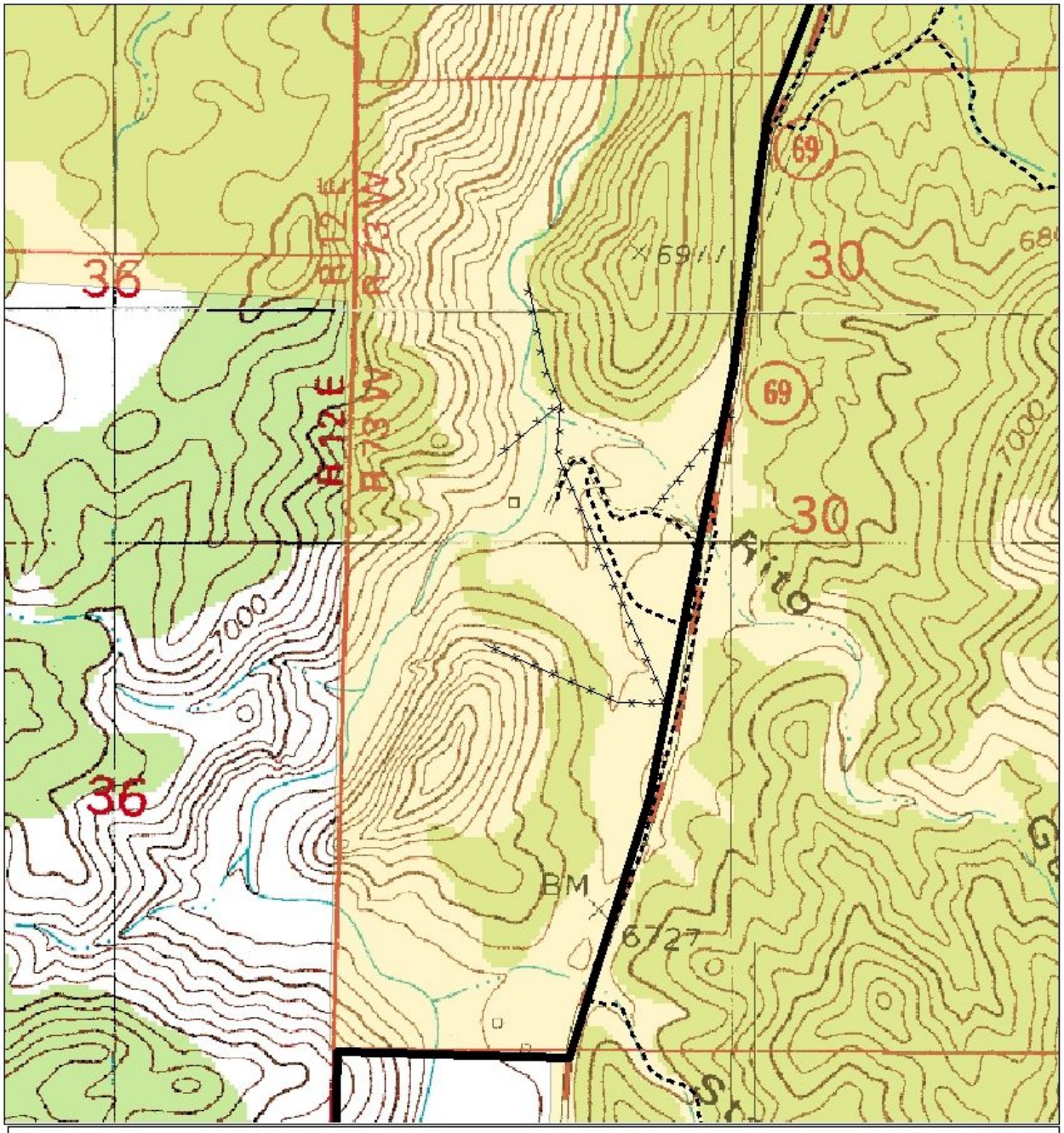

36
R12E
R73W
69
30
7000
Fito
BM
6727
Legend
Race Path Allotment
Riparian Fence
Primary Travel Routes
Bureau of Land Management
Private
State
US Forest Service
Race Path Allotment #05238
Riparian Pasture
DOI-BLM-CO-FO20-2016-0004 EA
T48N, R12E, S. 13 & 14, 23, 24–27, 33-36
T47N, R12E, S. 1–3, 9–11
T19S, R73W, S. 18, 19, & 30
0 0.040.08 0.16 0.24 0.32
Miles
NOTE TO MAP USERS
No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

Table 1.9.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
Race Path	82 Cattle	10/01 — 02/28	92%	Improve	375

Current Terms & Conditions:

1. Utilization will be limited to 80% of the annual production of grass forage species and 50% of the annual production of woody riparian vegetation along Texas Creek.
2. Cattle must be removed from the grazing exclosure on Texas Creek in a timely matter after notification from BLM.
3. Water hauling to temporary tanks, for the purpose of improved livestock distribution will be allowed in areas agreed to by BLM.
4. Emergency feeding and supplemental feeding will be allowed if conditions warrant. Supplements may include weed free high protein hay.

Table 1.10.

Total	Suspended	Active
483	105	378

Review of grazing use on this allotment included an assessment of the "health" of public land in relation to Standards for Public Land Health and conformance with Guidelines for Livestock Grazing Management in Colorado in 2002. It was determined that the Race Path allotment was meeting all standards applicable to livestock grazing under current management.

Existing range developments are limited to an allotment boundary fence and several developed springs that are typically dry throughout the year. There are no pasture fences and livestock distribution is heavily relied on salt & mineral distribution. The allotment is limited in livestock water sources on public land and primarily consists of available water located on the adjacent private ranch resulting in poor livestock distribution. The existing administrative routes within the allotment are critical to the distribution of salt & mineral and promotion of new developed water sources. In 2013, approximately 600 acres of pinyon-juniper were hydro-axed in this allotment improving the available forage for both wildlife and livestock. Long term vegetation monitoring within the treatment areas is in place to evaluate treatment success and any negative impacts from livestock grazing. This data is summarized in the Vegetation section. Colorado Parks & Wildlife have shown interest in cooperatively developing new water sources with the grazing permittee to enhance wildlife use within or adjacent to the treatment areas.

The area of Texas Creek Gulch contains a riparian pasture that is broken into sub pastures. Historically grazing was rotated through the pastures for a short period of time or left for rest. Today the riparian pasture is over grown in willows and changes in the creek morphology have resulted in very limited grazing use along the creek except for the adjacent uplands. Most of the fences that make up the riparian pasture are in disrepair and not needed. Emphasis should be placed on removing these fences. There is suitable grazing on the upland portion of the riparian pasture where grazing could occur, but new fencing along the highway right of way would be required to keep cattle off the highway.

Sand Gulch Allotment #15007

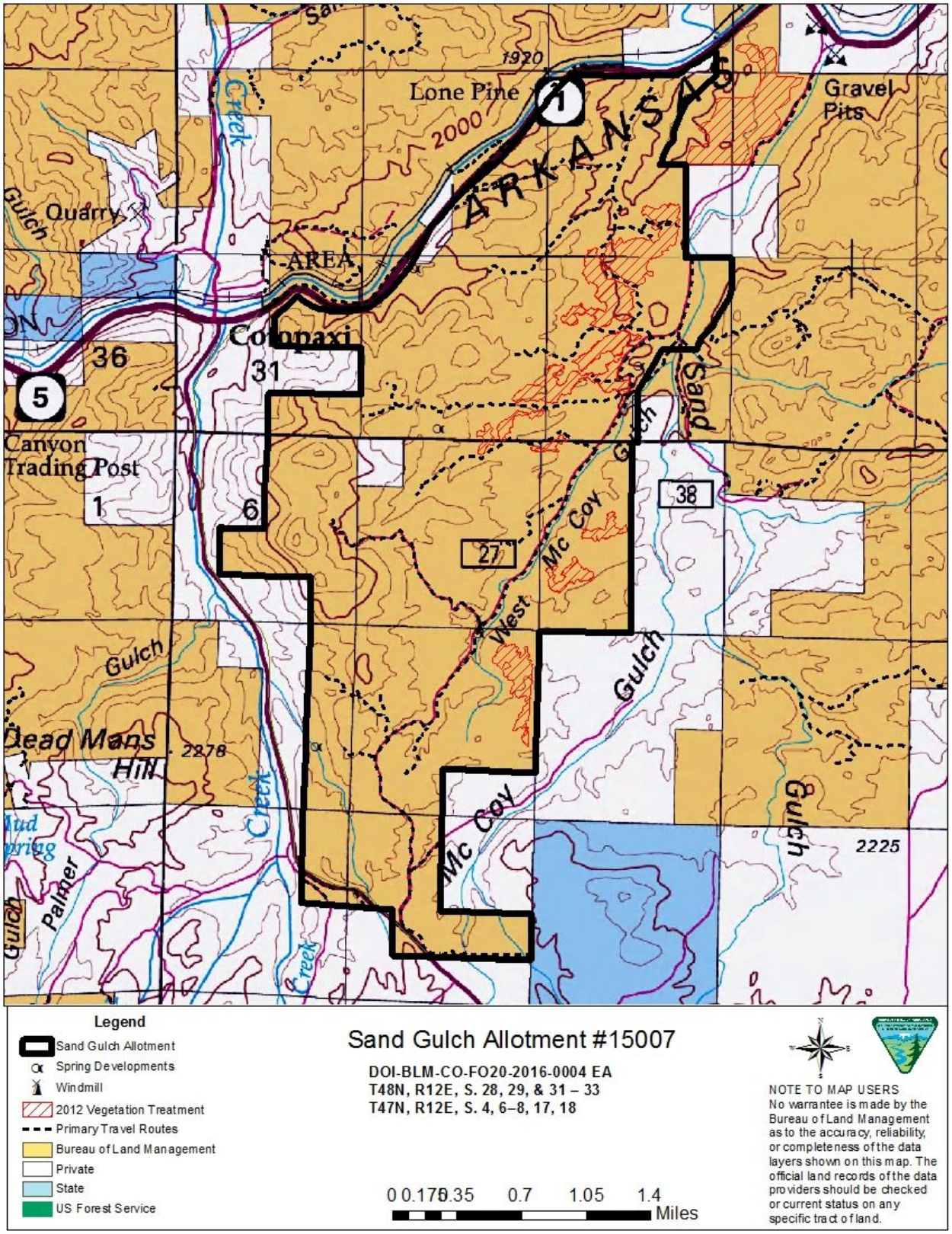

Lone Pine
1920
2000
ARKANSAS
Gravel Pits
Quarry
AREA
Colorado
36
31
5
Canyon Trading Post
1
6
38
27
Sand Gulch
Mc Coy
West Mc Coy Gulch
Gulch
Dead Mans Hill
2278
Creek
Palmer Gulch
2225
Legend
Sand Gulch Allotment
Spring Developments
Windmill
2012 Vegetation Treatment
Primary Travel Routes
Bureau of Land Management
Private
State
US Forest Service
Sand Gulch Allotment #15007
DOI-BLM-CO-FO20-2016-0004 EA
T48N, R12E, S. 28, 29, & 31 – 33
T47N, R12E, S. 4, 6–8, 17, 18
0 0.175 0.35 0.7 1.05 1.4
Miles
NOTE TO MAP USERS
No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

Table 1.11.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
Sand Gulch	168 Cattle	11/10 — 03/15	100%	Improve	696

Current Terms & Conditions:

1. Utilization of native perennial grasses may not exceed the 60 – 80% range. Utilization of Mountain Mahogany may not exceed 60% of annual growth.

2. Grazing use for 15 days before and 30 day after the authorized grazing period will be allowed, as long as total authorized AUMs are not exceeded, , the forage plants are still mostly dormant and no other issues arise with other public land users.

3. Emergency feeding and supplemental feeding will be allowed if conditions warrant. Supplements may include weed free high protein hay.

Table 1.12.

Total	Suspended	Active
696	0	696

Review of grazing use on this allotment included an assessment of the "health" of public land in relation to Standards for Public Land Health and conformance with Guidelines for Livestock Grazing Management in Colorado in 2002. It was determined that the Sand Gulch allotment was meeting all standards applicable to livestock grazing under current management. Vegetation monitoring is included for this allotment and summarized in the Vegetation section. The allotment is limited in water sources to a few developed springs and a windmill that is dry. The promotion of available livestock water on this allotment is needed. The hauling of water on this allotment is an option, but not desirable. Fences are limited to the allotment boundary fence. Most fences are private as they run along the private/BLM boundary line. There are no pasture fences and livestock distribution is heavily relied on salt & mineral distribution. The existing administrative routes within the allotment are critical to the distribution of salt & mineral. In 2012, approximately 230 acres of pinyon-juniper were hydro-axed in this allotment. Long term vegetation monitoring within the treatment areas is in place to evaluate treatment success and any negative impacts from livestock grazing. The monitoring data is available in the Vegetation section. Colorado Parks & Wildlife have shown interest in cooperatively developing new water sources with the grazing permittee to enhance wildlife use within or adjacent to the treatment areas.

1.3. Purpose and Need

This analysis is needed to consider the impacts of livestock grazing use on public lands within the respective allotments in relation to Standards for Public Land Health and Guidelines for Livestock Grazing in Colorado.

Secondly, this analysis is required to complete processing of renewal of the grazing permits in compliance with all applicable laws and regulations.

This analysis will update the existing Allotment Management Plan for the Big Hole, McCoy Gulch, Race Path and Sand Gulch Allotments

The need for the action is to ensure that all authorizations implement provisions of, and is in conformance with Title IV of the Federal Land Policy and Management Act of 1976, the Royal Gorge Resource Management Plan (5-13-1996), and in conformance with the Secretary Approved Rangeland Health Standards for Colorado. The action is needed to respond to the changes in grazing authorization and new developments on BLM land.

1. This analysis is needed to consider the impacts of livestock grazing use on public lands within the respective allotment to determine if they are meeting the Standards for Public Land Health and are within the Guidelines for Livestock Grazing in Colorado.

2. Secondly, the proposed action is needed to ensure that grazing use continues to help the allotment meet Standards for Public Land Health and future grazing use on the allotment is consistent with Guidelines for Livestock Grazing Management in Colorado.

1.4. Decision to be Made

The BLM will decide whether to implement the proposed Grazing Permit Renewal project based on the analysis contained in this Environmental Assessment (EA). This EA will analyze term grazing permit renewal for the respective allotments with minor changes. The BLM may choose to: a) implement the project as proposed, b) implement the project with modifications/mitigation, c) implement an alternative to the proposed action, or d) not implement the project at this time.

1.5. Plan Conformance Review

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Royal Gorge Resource Management Plan

Date Approved: 05/13/96

Decision Number/Page: 1-2, 1-4, 2-2, 2-4, 6-2, 6-4, C-30, C-31, C-42, C-43, C-44

Decision Language:

1-2, 2-2, and 6-2: Season of use and stocking rates will continue based on the Grazing EIS and vegetation monitoring.

1-4, 2-4, 6-4: Grazing is authorized on 62, 35, and 70 allotments respectively.

C-30: Base livestock grazing management on the 1981 Royal Gorge Area Grazing EIS.

C-31: Authorize adjustments in the actual AUMs.

C-42: The grazing treatment on Improve category allotments will require a rest standard to allow a time period for forage species to recover from the last grazing period before the plants are regrazed.

C-43: Maximum allowable utilization on allotments with rotational grazing or dormant season grazing will be 80% annual production on grass species and 60% of annual production on shrub species. These percentages may have to be adjusted

on specific allotments because of conflicts with wildlife, watershed condition, or riparian habitat.

C-44: On single pasture allotments with season long spring/summer grazing, utilization will be held to the 40 to 60 percent range on forage species in lieu of a rest standard. This requirement will be on high elevation allotments where deferment or dormant season use is impractical because of deep snow and fencing the allotment into smaller units is uneconomical.

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

1.6. Scoping, Public Involvement and Issues

NEPA regulations (40 CFR §1500-1508) require that the BLM use a scoping process to identify potential significant issues in preparation for impact analysis. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis.

Persons/Public/Agencies Consulted: Scoping, by posting this project on the National ePlanning website, was the primary mechanism used by the BLM to initially identify issues. In addition, the development of the Proposed Action was consulted, cooperated and coordinated with the affected grazing permittees' on the applicable allotments.

Issues Identified: No issues were brought forward.

This page intentionally
left blank

2.1. Description of the Proposed Action

2.2. Alternatives Analyzed in Detail

Proposed Action:

The proposed action would renew the grazing authorizations for ten years for the Big Hole, Green Mt. North, McCoy Gulch, Oak Creek, Race Path and Sand Gulch Allotments with some modifications in management. In addition, the proposed action includes a monitoring plan and Grazing Management Actions. The allotments would be renewed as follows:

Big Hole Allotment #15002

- Renew as currently managed with the same grazing schedule and terms & conditions.
- Include Grazing Management Actions into future management (See Grazing Management Actions below)

Green Mt. North Allotment #05116

- Renew as currently managed with the same grazing schedule and terms & conditions
- Authorize the permit transfer from Howard Eggleston to Barnes & Huffman

McCoy Gulch Allotment #15049

The grazing season would be extended to include the entire winter period and the terms & conditions would be modified to remove grazing use as a tool for reclamation. Existing interior fences on the allotment would be evaluated and removed if they do not enhance management. Grazing Management Actions would be incorporated into future management (See Grazing Management Actions below). The proposed Grazing Schedule and Terms & Conditions would be reflected as follows:

Table 2.1.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
McCoy Gulch	17 Cattle	11/01 — 03/31	100%	Improve	89

McCoy Gulch specific terms & conditions:

1. Utilization on woody riparian vegetation will be limited to 60% of the previous year's growth. Utilization on grass forage species will be limited to 80% of the previous year's growth.

2. Feeding of any hay will not be allowed on the public land portion of the allotment. Protein tubs may be used on public land, but must be located west of CR #27 and moved on a frequent basis.

3. Number of cattle may exceed 17, as along as 89 AUMs are not exceeded.

4. The permittee will have the flexibility to extend the grazing season to April 15 upon prior approval from BLM and 89 AUMs are not exceeded.

Oak Creek Allotment #15028

- Renew as currently managed with the same grazing schedule and terms & conditions
- Include Grazing Management Actions into future management (See Grazing Management Actions below)

Race Path Allotment #05238

The grazing season would be extended to include the entire winter period and the terms & conditions would be modified. The suspended AUMs (105) would be activated upon completion of new water sources that improves livestock distribution. Existing riparian fences along Texas Creek Gulch would be evaluated and removed if they do not enhance management. The construction of a new highway right-of-way fence in the area of the Texas Creek riparian pasture would be considered and planned in coordination between BLM, CDOT and permittee. The construction of new water sources on the allotment would be emphasized in or adjacent to the vegetation treatment areas. Supplemental NEPA would be conducted with site specific information pertaining to new construction of water sources and fences. Grazing Management Actions would be incorporated into future management (See Grazing Management Actions below).

The proposed grazing schedule and terms & conditions would be as follows:

Table 2.2.

Allotment	Livestock Number / Kind	Grazing Period	% Public Land	Management	AUMs
Race Path	80 Cattle	10/01 — 03/31	92%	Improve	483

Race Path specific terms & conditions:

1. Utilization on woody riparian vegetation will be limited to 60% of the previous year's growth. Utilization on grass forage species will be limited to 80% of the previous year's growth.

2. The suspended AUMs would be activated upon completion of new water sources on the allotment.

3. Number of cattle may exceed 80, as along as 483 AUMs are not exceeded.

Sand Gulch Allotment #15007

- Renew as currently managed with the same grazing schedule and terms & conditions
- Include Grazing Management Actions into future management (See Management Actions below)

The following terms and conditions are common to all allotments and would be incorporated into the new permits:

1. The grazing permittee may utilize all administrative routes within the allotment with motorized use for range improvement maintenance and placement of salt & mineral to promote better livestock distribution. When required, motorized access will be authorized off existing and closed routes to facilitate the same practices, and conducted in a manner that does not cause permanent resource damage and invite other users to the same route. Motorized use that occurs outside of permit administration such as recreation or personnel convenience will be restricted to the applicable travel management designation for that allotment.

2. The permittee and all persons associated with the allotment operations shall not damage, destroy, remove, move or disturb any objects or sites of cultural, paleontological or scientific value, such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils and artifacts. If in connection with allotment operations under this authorization any of the above resources are encountered, the permittee shall protect such resources and immediately notify the BLM authorized officer of the findings.

3. This Grazing Permit has been fully processed in accordance with all applicable laws and regulations. The grazing schedule complies with Guidelines for Grazing Management in Colorado and is designed to help public land achieve Standards for Public Land Health. **In the event that the proposed grazing schedule fails to help public land achieve Standards for Public Land Health, grazing use on any of these allotments may be revised at any time.**

Monitoring Common to all allotments:

Allotment monitoring would consist of actual use studies, utilization and long term vegetation studies using existing Daubenmire trend studies and/or AIM strategy. All monitoring would be limited to Improve category allotments and would be conducted as time allows.

Grazing Management Actions

Grazing Management Actions are specific management practices designed to improve resource conditions on an allotment in a timely manner. The Management Actions may be implemented on an allotment when:

- Determination that Land Health Standards are no longer being met
- Threat that Land Health Standards may not be met in the future under current management
- Long term monitoring identifies declining resource condition in response to current management
- Response to prescribed land treatments such as vegetation treatments and prescribed fire
- Response to unforeseen circumstances such as flooding, drought and wildfire

The actions are implemented through coordination with BLM Interdisciplinary resources, grazing permittee and any other affected parties. All actions will follow any applicable restrictions pertaining to wildlife, T&E, BLM sensitive, Paleotological and Archeological resources. All actions will be within the scope of effects in this document, or a supplemental NEPA document (DNA) will be prepared. The table below provides a list of potential Grazing Management Actions that can be applied as necessary:

Grazing Management Actions (Tool Box):

Table 2.3.

Change season of use – do not exceed permitted AUMs
Change animal numbers- do not exceed permitted AUMs
Change animal class - do not exceed permitted AUMs
Adjust permitted AUMs based on appropriate monitoring averaged over three years
Defer livestock turn-on/off date
Rest from livestock grazing for one or more seasons

Construction of permanent fencing to control livestock distribution patterns, or exclude livestock from areas of concern (riparian, wetlands, springs)
Construct electric temporary fencing to control livestock distribution patterns
Remove permanent fencing and temporary fencing
Construct livestock water developments (springs, infiltrators, pipelines, tanks, windmill, sediment traps, wells, stock dams, submersible pumps, solar)
Remove existing water developments (springs, infiltrators, pipelines, tanks, windmill, sediment traps, wells, stock dams, submersible pumps, solar)
Motorized access to administer construction, maintenance and removal of developments
Trailing of livestock across the allotment

2.2.1. No Action Alternative

This alternative renews the permits as currently scheduled for ten years. The same grazing schedule and terms & conditions would be carried forward. Management on the allotments would not change and there would be no emphasis to improve livestock distribution. The Grazing Management Actions would not be included under this alternative.

2.2.2. No Grazing Alternatives

Under this alternative the permits for all allotments in this document would not be renewed and authorized grazing use would be cancelled. Where applicable, BLM would construct new boundary fencing between public lands and the private ranch (See Range Management Section under No Grazing Alternative). Existing range improvements including pasture fences and all water infrastructures would be removed from the allotments.

2.3. Alternatives Considered

2.3.1. Alternatives Considered, but not Analyzed in Detail

3.1. Introduction

3.1.1. Interdisciplinary Team Review

The following table is provided as a mechanism for resource staff review, to identify those resource values with issues or potential impacts from the proposed action and/or alternatives. Those resources identified in the table as impacted or potentially impacted will be brought forward for analysis.

Resource	Initial and date	Comment or Reason for Dismissal from Analysis
Air Quality Ty Webb, Chad Meister, Forrest Cook	TW, 3/10/2016	The action will not result in significant impacts to air quality within the region.
Geology/Minerals Stephanie Carter, Melissa Smeins	SSC, 6/22/16	See affected environment.
Soils Negussie Tedela	NT 6/28/2016	See affected environment
Water Quality Surface and Ground Negussie Tedela	NT 6/28/2016	See affected environment
Invasive Plants John Lamman	JL, 04/19/2016	See affected environment
T&E and Sensitive Species Matt Rustand	MR, 7/1/2016	See affected environment
Vegetation Jeff Williams, Chris Cloninger, John Lamman	JW, 3/7/16	Carried forward for analysis
Wetlands and Riparian Dave Gilbert	DG, 3/30/16	See Affected Environment
Wildlife Aquatic Dave Gilbert	DG, 3/30/16	See Affected Environment
Wildlife Terrestrial Matt Rustand	MR, 7/1/2016	See affected environment
Migratory Birds Matt Rustand	MR, 7/1/2016	See affected environment
Cultural Resources Monica Weimer, Michael Troyer	MDT 3/10/16	The action will not affect historic properties— see Affected Environment
Native American Religious Concerns Monica Weimer, Michael Troyer	MDT 3/10/16	The action will not affect properties or sites of significance to Native Americans — see Affected Environment
Economics Martin Weimer	mw, 3/10/16	This action will not result in significant impacts to the socio economics of individuals or of the region. Economic repercussions could occur to the permittee should the grazing permit not be granted.

Resource	Initial and date	Comment or Reason for Dismissal from Analysis
Paleontology Melissa Smeins, Stephanie Carter	SSC, 6/22/16	The geology in this area is not likely to contain recognizable paleontological resources and therefore this project will not have an adverse impact.
Visual Resources Linda Skinner	LS, 7/1/2016	The proposed action is already occurring in these areas therefore no effect on visual resources.
Environmental Justice Martin Weimer	mw, 3/10/16	The proposed action affects areas that are rural in nature. The land adjacent to these parcels is open rangeland, as a result, there are no minority or low-income populations in or near the project area. As such, the proposal will not have a disproportionately high or adverse environmental effect on minority or low-income populations.
Wastes Hazardous or Solid Stephanie Carter, Melissa Smeins	SSC, 6/22/16	See affected environment.
Recreation Linda Skinner	LS, 7/1/2016	The proposed action is within areas with limited recreation and will not impact those resources.
Farmlands Prime and Unique Jeff Williams, Chris Cloninger, John Lamman	JW, 3/7/16	There are no prime or unique farmlands involved in the analysis area.
Lands and Realty Jeff Brown	JGB 7/11/2016	Should not create adverse impacts to existing ROWs or require new ROWs.
Wilderness, WSAs, ACECs, Wild & Scenic Rivers Linda Skinner	LS, 7/1/2016	The action occurs within two areas within the Arkansas Canyonlands ACEC, but does not affect the resource, since grazing has historically occurred in these areas. None of the special values for which the ACEC was designated are impacted by the continued grazing.
Wilderness Characteristics Linda Skinner	LS, 7/1/2016	The action occurs in areas identified as Land with Wilderness Characteristics but does not affect the naturalness of the area because grazing already occurs in the areas.
Range Management Jeff Williams, Chris Cloninger, John Lamman	JW, 3/7/16	Carried forward for analysis
Forest Management Jeremiah Moore	JLM 3/10/ 2016	This action will not result in any significant impacts to forest resources..
Cadastral Survey David Parker	DEP 3/24/ 2016	This action will not result in any significant impact to cadastral survey.
Noise Martin Weimer	mw, 3/10/16	This action will not result in any significant impacts due to noise or result in any increased noise levels.
Fire Ty Webb	TW, 3/10/2016	The action will not result in significant impacts to fire management in the region.
Law Enforcement Steve Cunningham	mw, for SC, 3/10/16	No law enforcement issues associated with this action

The affected resources brought forward for analysis include:

- Geology/Minerals
- Soils
- Water Quality
- Invasive Plants
- T&E and Sensitive Species
- Vegetation
- Wetland and Riparian
- Aquatic Wildlife
- Terrestrial Wildlife
- Migratory Birds
- Cultural Resources
- Native American Religious Concerns
- Wastes Hazardous or Solids
- Range Management

3.2. Physical Resources

3.2.1.

3.2.2. Geologic and Mineral Resources

Affected Environment: 1. There is a Bentonite Pit operation located in the Race Path Allotment. However, this site has co–existed with past use and resulted in no known issues. 2. There is a common use area for mineral materials located in the Sand Gulch Common Allotment. However, this has co-existed with past use and resulted in no known issues. In addition, the common use area is very steep terrain and probably not very conducive to grazing.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: The federal minerals in the proposed project area are open to mineral location, therefore requiring coordination between surface

uses as applicable. If there are unpatented mining claims that are active in the proposed project location, any associated claim markers encountered during project implementation cannot be disturbed.

Cumulative Impacts: None

No Action Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: The federal minerals in the proposed project area are open to mineral location, therefore requiring coordination between surface uses as applicable. If there are unpatented mining claims that are active in the proposed project location, any associated claim markers encountered during project implementation cannot be disturbed.

No Grazing Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: None

3.2.3. Soils

Affected Environment: The soils within the allotments is described in the BLM GIS Soil Survey Geographic (SSURGO) Data Base. There are various soils types within the Big Hole, McCoy Gulch, Race Path, and Sand Gulch Common allotments located mainly on moderate to extreme steep gradient (2 to 90 percent slopes). Ustic Torriorthents, bouldery-Rock outcrop complex and Coaldale very gravelly sandy loam soils, which cover more than 50 percent of the allotments. Major soils covering over 75 percent of these allotments are shown in Table 1. The parent materials are mainly colluvium derived from granite and gneiss, residuum weathered from gneiss and/or granite, and residuum weathered from metamorphic rock and/or granite. Most soils have gravelly sandy clay loam, gravely loam, and gravely sandy loam surface texture. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water and the values range from 0.02 to 0.69. Other factors affecting soil erosion being the same, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Based on erosion factor - K, these soils within all allotments have very low susceptibility to sheet and rill erosion by water (Table 1).

However, due to steep slope gradient, about 54% of the soils have severe to very severe soil erosion hazard rating. Depth to a restrictive feature is greater than 200 centimeters, except for some soils that have depth to the restrictive features ranging between 23 and 48 centimeters. The natural drainage class is well drained and depth to water table is greater than 200 centimeters for all soils on all allotments. Most soils within the allotment are not flooded and ponded. Organic matter content in the surface horizon of most soils ranges between 1.25 to 3 percent (Table 1). A Wind Erodibility Group (WEG) consists of soils that have similar properties in relation to their susceptibility to wind erosion. The soils within group 1 are the most susceptible to wind erosion and group 8 are the least susceptible. Hydrologic Soil Group for most soils is D. Group D soils, have very slow infiltration rate (high runoff potential) when thoroughly wet (Table 1).

Soils located within Green Mountain North and Oak Creek allotments are mainly Bushvalley cobbly loam (5 to 40 percent slopes) and Libeg extremely cobbly sandy loam (10 to 20 percent slopes), respectively. The parent material for Bushvalley cobbly loam soils is derived from residuum weathered from volcanic breccia and/or residuum weathered from tuff and the parent material Bushvalley cobbly loam soils is derived from glacial outwash. Mostly, these two soils located within Green Mountain North and Oak Creek allotments have the same soil properties as those soil types indicated above for the other four allotments.

Table 3.1. Description of soil properties for major soils within the allotments

Map Unit Symbol	Map Unit Description	Slope (%)	rface Surface texture	Erosion K- factor	Wind Erodibility Group (WEG)	Saturated Hydraulic Conductivity	Hydrologic Soil Group	Depth to Any Soil Restrictive Layer (cm)	Organic Matter (%)	***Percent areal coverage***
7	Boyle very gravelly sandy loam	10 to 40	Very gravelly sandy loam	0.05	6	0.05	D	43	3	3.3
9	Boyle-Rock outcrop complex	40 to 60	Very gravelly sandy loam	0.05	6	0.05	D	43	3	2.8
10	Bronell gravelly sandy loam	2 to 15	Gravelly sandy loam	0.1	5	0.1	A	>200	1.25	2.5
11	Bronell-Kerhayden complex	10 to 40	Very gravelly loam	0.1	6	0.1	B	>200	1.25	2.7
18	Casvare-Teaspoon complex	20 to 50	Very gravelly loam	0.1	8	0.1	D	43	2	4.1
22	Coaldale very gravelly sandy loam	20 to 45	Very gravelly sandy loam	0.1	6	0.1	D	46	2	13.7
31	Ess very gravelly sandy clay loam	20 to 45	Very gravelly sandy clay loam	0.05	7	0.05	C	>200	3	2.5
41	Haploborolls, very stony-Rock outcrop complex	40 to 90	Extremely gravelly sandy loam	0.05	6	0.05	D	30	2	7.1
120	Ustic Torriorthents, bouldery-Rock outcrop complex	35 to 90	Very bouldery sandy loam	0.05	6	0.05	D	46	1.5	36.5

Soil features such as rills, active gullies, pedestals, surface litter and plant cover are important indicators of Standard 1**.** Most of the soils are in properly functioning condition, meaning that soil productivity is being maintained**.** On most parts of allotment, no excessive sheet, rill, gulley erosion or soil compaction were observed that would adversely affect infiltration and permeability**.** Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, landform, and geologic processes**.** Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor and minimizes surface runoff.

The land health assessments identified a portion of the pinyon-juniper woodland range sites and some grassland sites as not meeting standards for upland soils health within the Big Hole, McCoy Gulch, Race Path and Sand Gulch allotments. Pinyon and juniper woodlands are steadily encroaching into naturally open grassland range sites and pinyon / juniper range site canopies have steadily grown increasingly dense. As this continues over time, many areas are characterized by decreasing amounts of herbaceous plant cover and higher amounts of bare ground. As a result, these areas begin to retain less moisture during precipitation events and allow higher levels of surface runoff and soil movement.

Environmental Effects

Proposed Action:

The proposed action would renew the grazing authorizations for ten years with some modifications including: removal of existing water developments and construction of new livestock water developments, construction of permanent and temporary fencing to control livestock distribution patterns, and change of grazing season and AUMS. In addition, Grazing Management Actions would be incorporated into future allotment management.

> Direct and Indirect Impacts: Livestock grazing affects soil health by altering plant cover and by the physical action of cattle hooves. Reductions in the vegetation cover may increase the impact of raindrops, decrease soil organic matter and soil aggregates, increase surface soil crusts, increase runoff, and decrease water infiltration rates. These effects may cause reduced soil water content, increased erosion, and fugitive dust emission. Intense, repeated hoof trampling in limited, confined areas may cause soil compaction of the surface layer and reduce the infiltration rate in the short term, as well as eliminate the basal vegetation cover. The grazing management would continue surface protection with little to no erosion occurring and suitable maintenance of surface organic matter. With most parts of the allotment meeting or moving toward desired conditions, those areas would remain in satisfactory condition. Since the grazing periods are short on the allotments, soils will have time to recover from some of the negative impacts that livestock have caused. In addition to grazing, range development activities as indicated above are proposed to improve livestock distribution on some of the allotments. These developments would improve livestock distribution in areas located long distances from existing water sources, which have received limited use by livestock in the past years. Improved livestock distribution would reduce soil impact and increase vegetation cover on the allotments. Furthermore, proper Grazing Management Actions indicated in chapter 2 would further minimize grazing impacts.

Protective/Mitigation Measures: Avoid salting in areas where soil health issues exist and eroded areas. Poor livestock distribution on allotments should be avoided. Immediate action should be taken to phase out livestock grazing or require livestock grazing management practices that will adequately protect soils and vegetation resources on the allotments where soil conditions severely limits plant productivity and compacted soils and/or unstable soils are particularly vulnerable to wind erosion. All soil disturbances are to be reclaimed with an appropriate forage seed mix, within the required time period. Monitoring of bare soil and litter indicators should be accomplished during periodic vegetation trend determination.

Cumulative Impacts: Cumulative impacts result from the combined effects of historic high livestock grazing, current livestock management, past and present road management, and recreation activities. These impacts display through some parts of the allotment. These disturbances include displacement and compaction, altered runoff and sediment regimes resulting from roadways, off road vehicle use, and livestock trailing. Most of these impacts occurred in the past and may continue in the future. However, these effects are minor and localized. Proper Grazing Management Actions and mitigation measures would be used to further reduce the impacts.

No Action Alternative: Under the No Action alternative, the current management practices will continue without any change. That means allotment AUMs and Livestock numbers will not change; all allotment improvement activities are not proposed; no change in season of use will occur.

Direct and Indirect Impacts: The same direct and indirect effects apply to the Proposed Action and the No Action alternative. However, the soil health impacts that would be created by the proposed action as a result of construction activities during water development projects will be avoided under the No Action alternative. Compared to No Action alternative, the proposed action would have reliable water sources due to proposed water development projects throughout the allotment that will allow for improved livestock distribution, less concentrated use and general improved soil health.

Protective/Mitigation Measures: The same protective/mitigation measures apply to the Proposed Action and the No Action alternatives.

No Grazing Alternative:

Under the No Grazing alternative no permits would be given to any other individual or permittee for other types of grazing. Range improvement structures would not be maintained.

Direct and Indirect Impacts: With no livestock grazing, the amount of vegetative ground cover would increase over current conditions. Soil health would improve under the no-grazing alternative. Wildlife grazing and browsing would continue. Erosion would be reduced as a variety of desirable plants establish on exposed sites. Returning litter to the soil is important to restoring soil cover, nutrients, reducing erosion, and conserving soil moisture. Improvement would occur mostly to those relatively few sites where conditions are currently less than satisfactory and would be more rapid than under any other alternative.

Protective/Mitigation Measures: None

Cumulative Impacts:

With the no grazing alternative, livestock would no longer be included in the cumulative effects and the effects should lessen. Some erosion and compaction generated by roads and off-road vehicles would continue. Grazing of wild animals and periodic concentrations may contribute to soil impacts. Recovery and improvements to upland soils and vegetation from impacts are expected to take many years. With Proposed Action and the No Action alternatives the overall cumulative impacts would not be expected to change in a measurable manner.

Finding on the Public Land Health Standard for Upland Soils:

On most parts of the allotments, upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, landform, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor and minimizes surface runoff. There are few excessively used areas with bare soils and inadequate vegetation cover where Land Health Standards are not being met but in general, standard 1 is being achieved for most parts of the allotments and there would be minimal anticipated impacts due to the proposed action and other alternatives.

3.2.4. Hydrology/Water Quality

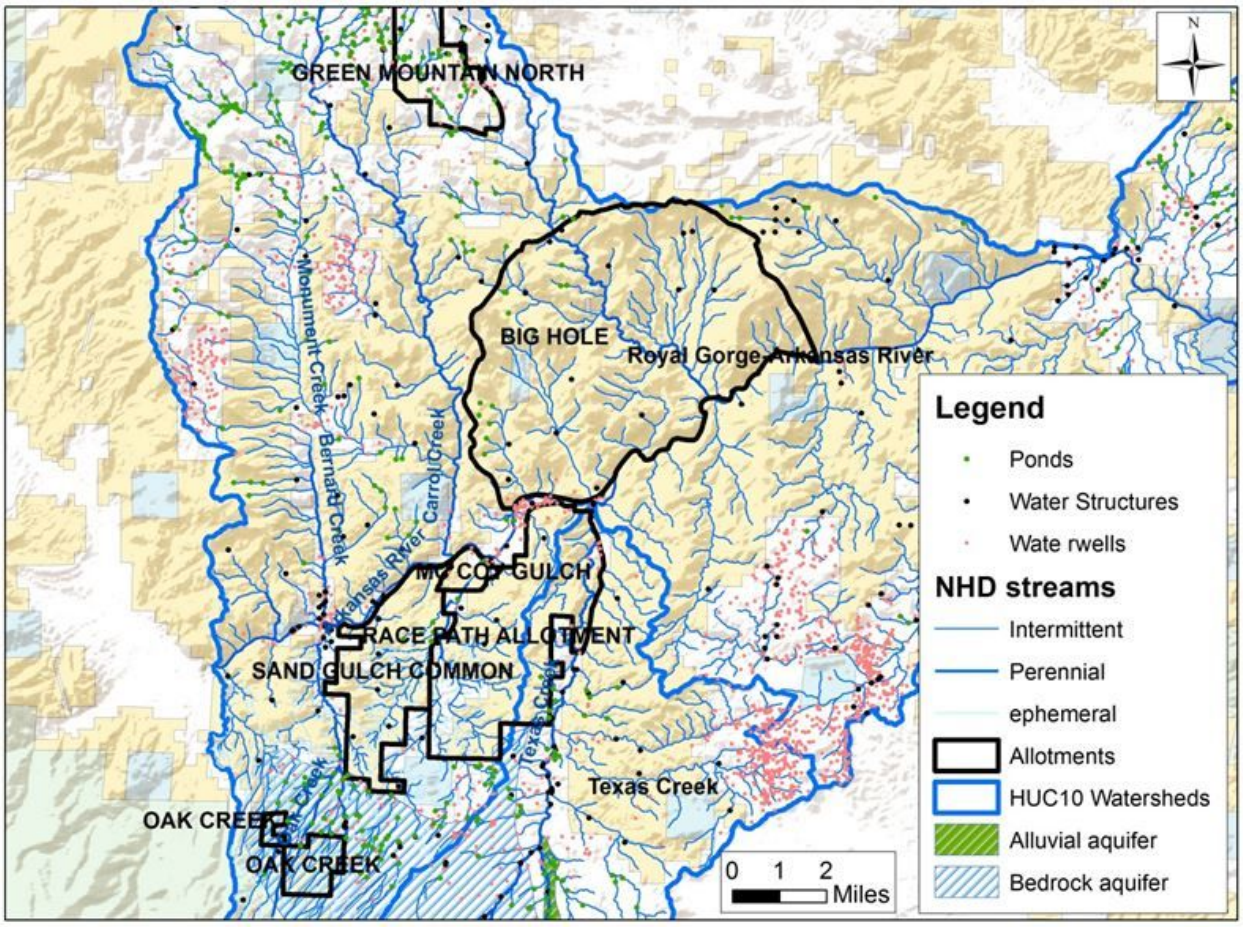
Surface, Groundwater, Floodplains

Affected Environment: The allotments are situated within two fifth-level Texas Creek and Royal Gorge-Arkansas River watersheds (Hydrologic Unit Code - HUC: 1102000110 and 1102000114). About 93 percent percent of the allotments are located within the Royal Gorge-Arkansas River watersheds. Only portion of Race Path allotment is located on the Texas Creek watershed and the rest of the allotments are located on the Royal Gorge-Arkansas River watersheds. Elevation within these watersheds ranges from approximately 6,000 feet in the northeast of Royal Gorge-Arkansas River watershed to over 13,000 feet in south part of the Texas Creek watersheds. Precipitation varies widely with elevation. Lower areas of the watersheds receive about 11 inches and higher mountain areas receive about 39 inches of precipitation, with most of the rainfall events occurring in July and August. The allotments receive between 11 and 19 inches of precipitation.

About 192 miles of perennial streams are located within the two watersheds. Arkansas River, Carrol Creek, Bernard Creek, Oak Creek, Texas Creek, Lake Creek, Mosher Creek, and some other unnamed creeks are perennial streams located within the watersheds (Figure 1). From theses perennial streams, Texas Creek, Oak Creek, Mosher Creek, and some other unnamed streams are located within the allotments. The total length of perennial streams crossing the allotments is about 15 miles. All streams located within the watersheds drain into Arkansas River. There are several intermittent and ephemeral streams that are located within the allotments and any sediment from the allotments could reach to the nearest streams.

About 7,845 acres and 30,559 acres of bedrock are located underneath the Royal Gorge-Arkansas River and Texas Creek watersheds, respectively. About 5,033 acres of alluvial aquifers are located on the Texas Creek watershed. Oak Creek allotment is located on the bedrock aquifer and the rest of the allotments lay outside the boundary of these aquifers. There are wells, ponds, and spring sources within the watersheds and allotment (Figure 1). Several water structures divert water from springs, wells, diches, reservoirs, and pipes for various uses. Diversions, water structures, and wells locally alter surface and groundwater hydrology. The Clean Water Act (CWA) requires that chemical, physical, and biological integrity of all waters, stream channels, and wetlands be

protected. About 33.5 miles segment of Arkansas River within Royal Gorge-Arkansas River watersheds are currently in the 303(d) listing due to high level of copper. In addition, mainstems of Texas Creek and its tributaries located within Texas Creek watershed are currently in the 303(d) listing due to high level of Arsenic.



Hydrology map of the analysis area

Environmental Effects

Proposed Action: The proposed action would renew the grazing authorizations for ten years with some modifications including: removal of existing water developments and construction of livestock water developments, construction of permanent and electric temporary fencing to control livestock distribution patterns, change of grazing season and AUMS. In addition, Grazing Management Actions would be incorporated into future allotment management.

> Direct and Indirect Impacts: There are perennial/intermittent streams within the allotment. Livestock grazing affects hydrologic functioning and watershed properties by altering plant cover and by the physical action of cattle hooves. Reductions in the vegetation cover may increase the impact of raindrops and decrease water infiltration rates. These effects may cause increased runoff, reduced soil water content, and increased erosion. The proposed action would have local, short-term, negligible, adverse impacts on hydrologic processes and water quality due to disturbance from the proposed action during water and range development

activities related to sediment load to ephemeral/intermittent drainage located near by the development sites. The primary sources of water pollution from these activities are sediment-laden runoff from project site. Reduction of soil permeability due to compaction on the project sites would lead to increase in runoff rate and amount on the ephemeral/intermittent channels and accelerate sediment transport and hence affect water quality, if reaches to any perennial/intermittent streams. The Proposed Action will not make measurable changes in stream health, water quality, and watershed condition. Roads are probably the largest contributor of sediment to streams on BLM administered public lands. These impacts have minimal effects on watershed condition, but do not appear to have noticeable effects on stream channels and ground and surface water quality.

Protective/Mitigation Measures: Increasing litter and plant cover ensures that material is available for trapping and retaining the sediment in runoff and overland-flow events. Some other mitigation measures indicated in the soils section that reduce soil erosion and sediment transport should be applied here to reduce impacts on water quality.

Cumulative Impacts: Other past activities that affect stream health on the analysis area include historical cattle grazing, road construction, off-road vehicle use, and recreation activities. The proposed action and alternatives are not expected to have a measurable cumulative effect when added to the other stressors in these watersheds. Mitigation measures would be used to prevent impacts on water quality from disturbances caused by the past and present activities. In addition, proper Grazing Management Actions indicated in chapter 2 would further minimize grazing impacts.

No Action Alternative: Under the No Action alternative, the current management practices will continue without any change. That means allotment AUMs and Livestock numbers will not change; range improvement and water development are not proposed; no change in season of use will occur.

Direct and Indirect Impacts: The same direct and indirect effects apply to the Proposed Action and the No Action alternative. However, the soil health impacts that would be created by the proposed action as a result of range improvement and water development will be avoided under the No Action alternative. Compared to No Action alternative, the proposed action would have reliable water sources due to proposed water development projects throughout the allotment that will allow for improved livestock distribution, less concentrated use and general improved soil health. Grazing impacts related to soil compaction, vegetation cover, erosion and sediment transport resulted from the No Action alternative would be higher compared to the Proposed Action due to improved livestock distribution as a result of the proposed plan to distribute watering sites.

Protective/Mitigation Measures: The same protective/mitigation measures apply to the Proposed Action and the No Action alternatives.

No Grazing Alternative:

Under the No Grazing alternative no permits would be given to any other individual or permittee for grazing. Range improvement and water development structures would not be maintained.

Direct and Indirect Impacts: Under the No Grazing alternative, no impacts to watershed or stream health would result because of livestock grazing. Vegetation impacted due to livestock grazing in the past would continue to recover over time. Keeping the allotment vacant would eliminate all potential livestock-grazing impacts on watershed health. There would be an increase in forage production, improved plant vigor and diversity, a decrease in bare soil, and increased amounts of litter and decaying organic material. The increase in vegetative cover will continue to reduce the potential for soil erosion and subsequent sedimentation and nutrient deposition into water-bodies. Mechanical impacts associated with livestock grazing, trampling, and trailing would continue to be eliminated with this alternative.

Protective/Mitigation Measures: Protective/mitigation measures are not required.

Cumulative Impacts: See Proposed Action

Finding on the Public Land Health Standard for Water Quality: A change to surface or ground water quality is not anticipated due to the proposed action or other alternatives and Standard 5 is being achieved.

3.3. Biological Resources

3.3.1. Invasive Plants

Affected Environment: Invasive plants known to occur within seven miles of the project area include but are not limited to: Canada, musk, bull, and Scotch thistles, Yellow toadflax, leafy spurge, tamarisk, and Russian knapweed.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: The impacts from the type of grazing proposed in this alternative would not result in the type of soil disturbance needed to increase the risk of invasive plant invasion. Any soil disturbing activities associated with installation of range improvement projects have potential to spread and or introduce invasive plants.

Protective/Mitigation Measures: Equipment used to implement range improvement project installation should be washed prior to entering the project area to remove any plant materials, soil, or grease. Areas disturbed by project implementation should be monitored for the presence of weeds on the Colorado State Noxious Weed list. Identified noxious weeds will be treated.

Cumulative Impacts: None

No Action Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

No Grazing Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: *None*

*Invasive plants are plants that are not part of (if exotic), or are a minor component of (if native), the original plant community or communities that have the potential to become a dominant or co-dominant species on the site if their future establishment and growth are not actively controlled by management interventions, or are classified as exotic or noxious plants under state or federal law. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants.

3.3.2. Threatened, Endangered and Sensitive Species

Affected Environment:

There are two Bureau sensitive species that may be impacted by the proposed action. *Mentzelia densa* occupies dry open areas in washes, roadsides, naturally disturbed sites, and steep rocky slopes. Plants grow in gravel, scree, or on cliffs formed from Precambrian granodiorite and gneiss. The species occurs in pinyon-juniper woodland and lower montane shrubland communities with a poorly developed understory and an open canopy. It may dominate in very open, disturbed sites such as sandy washes. It occurs as scattered individuals generally occupying 5% or less of the total vegetative canopy. There is a known population along the northeaster edge of Race Path Gulch Allotment.

The peregrine falcon has rebounded from a population of 4 nesting pairs in Colorado in 1977 to 68 pairs nesting in 1985 (Kingery 1998). They have been removed from the federal endangered species list. Peregrine falcons prefer to nest on ledges of high cliffs and mate for life. Nests located in more assessable sites, such as dikes, have not withstood increasing human disturbance. Preferred habitats for the falcon include piñon-juniper or ponderosa pine forests, and are near water and plentiful prey. An ideal eyrie also is in an area with little disturbance (Kingery 1998). There is a known nest site at the northern boundary of the Bighole Allotment.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts:

Threats to *M. densa* are associated with recreational OHV use and highway construction and maintenance. Grazing is scheduled to occur in the winter months when the plant is dormant and only decadent material remains above the surface. Therefore, grazing is not deemed as a threat to the species at this time.

Grazing is not expected to impact peregrine falcon reproduction and/or survival

Protective/Mitigation Measures: None

Cumulative Impacts:

Grazing is present on adjacent private and public lands affecting forage, browse, and cover available to all terrestrial species. Within the last fifteen to twenty years, recreation and residential development has increased markedly resulting in increased road and trail densities. All of these factors result in impacts to wildlife habitat. It is important to ensure that BLM manages wildlife habitats to provide for the long-term viability of wildlife populations.

No Action Alternative:

Direct and Indirect Impacts: This alternative basically renews the permits as currently scheduled. The impacts under this alternative would be similar to the impacts of the proposed action.

Protective/Mitigation Measures: Same as proposed action.

No Grazing Alternative:

Direct and Indirect Impacts:

This alternative would remove grazing use on public land which in the short-term may result in an initial increase in plant vigor and litter production benefiting wildlife habitat.

Protective/Mitigation Measures: None

Cumulative Impacts: None

Finding on the Public Land Health Standard for Threatened & Endangered species:

Implementation of the proposed action will result in no change ot the health standard for threatened and endangered species.

3.3.3. Vegetation

Affected Environment: The elevation of the analysis area varies between 7,000 and 9,000 feet. Annual precipitation in the area is between 11 and 15 inches and the typical growing season for native vegetation is May through August.

The vegetation is described by the associated range site within each allotment. According to the Natural Resource Conservation Service (1995), a range site is an area of rangeland where climate, soil, and topography are sufficiently uniform to produce a distinct natural plant community. The following is a definition of the range sites found in each respective allotment:

Brushy Mountain Loam: Occurs on moderately steep to steep mountain slopes ranging from 25-40%. Typical appearance is large, open grass areas interspersed with somewhat smaller areas of shrubs on south and southwest facing slopes. Shrub growth is heavier near the tops and bottom of the slopes and near accumulation of talus material. Early cool season grasses and forbs generally begin their growth in April with later cool season grasses such as Mountain Muhly,

beginning their growth in May. Warm season grasses such as Blue Grama, begin their growth in mid-May but are dependent on summer rain showers for the majority of their growth. Shrub growth commences in early May. This shrub/grass dominated site is characterized by large open pastures of grass interspersed by heavy stands of brush species and forbs are abundant. The plant community is about 60% grass, 15% forbs, and 25% shrubs. Dominant grasses are Mountain Muhly, Bottlebrush Squirreltail, Needle-and-Thread, Indian Ricegrass, and Blue Grama. Dominant forbs include Louisiana Sage, Nuttal Sunflower, Sidebells Penstemon, and Yellow Eriogonum. Shrubs that dominate this site include Mountain Mahogany, Gambel Oak, Rock Spirea, and Mountain Snowberry. There are minor amounts of Piñon Pine and Rocky Mountain Juniper. The average total annual production is 1200lbs/acre.

Gravelly Foothills: Occurs on gently rolling and sloping uplands and slopes range from 5 to 20%. If moisture is sufficient, cool season grasses such as Needle-and-Thread and Western Wheat, have their optimum growth in early April through June. Warm season grasses have their optimum growing season in July and August. About 60% of the annual precipitation falls as rain during the frost free season. The plant community is about 85% grasses, 10% forbs and 5% shrubs. The dominant grasses are Little Bluestem, Needle-and-Thread, Prairie Sandreed, Sideoats Grama, Blue Grama, Thickspike Wheatgrass, and Western Wheatgrass. Dominant forbs are Dotted Gayfeather, Drummond Milkvetch, Geyer Larkspur, and Slimflower Scurfpea. Shrubs that are most noticeable on the this site are Fringed Sage and Spreading Eriogonum. With continued ecological destruction, plants such as Sleepygrass, Ring Muhly, Cheatgrass, Kochia, and Russian Thistle will invade this site. The average total annual production is 850lbs/acre.

Loamy Foothills: Topography varies from narrow valleys to large open flats to rolling hills. Slopes vary from nearly level to 20% and elevation ranges from 5,000 to 7,000 feet. The average annual precipitation is 12 to 16 inches, of which 60 to 70% falls during the growing season. Optimum growing season for native plants is from March to September and the frost free period ranges from 130 to 150 days. This site has a grassland aspect with mainly Western Wheatgrass and needle grasses dominating. Other prominent grasses are Blue Grama, Junegrass, native bluegrass, and Bluebunch Wheatgrass. Dominant forbs are Drummond's Milkvetch and Fringed Sage. Wormwood is also present. Optimum groundcover is 30%. Species most likely to invade this site are Sleepygrass, Ring Muhly, Buffalo Grass, Pingue, Gambel's Oak, Rocky Mountain Juniper, Piñon Pine, Cholla, Tall Rabbitbrush, and New Mexico Locust. The average annual production is 1200lbs/acre.

Loamy Glacial Outwash: Occurs on fan terraces consisting of deep, well drained soils and slopes range from 10-20%. Dominant grasses are mainly Arizona Fescue, Muttongrass, Western Wheatgrass, Mountain Muhly, and Blue Grama. Some Elk Sedge and Lupine are present along with some Gambel Oak. Average annual production is approximately 800lbs/acre.

Loamy Park: Occurs on alluvial slopes, fans, and terraces, narrow mountain valleys, and alluvial/colluvial footslopes with slopes ranging from 3 to 12%. Mountain bunchgrasses give a characteristic grassy park appearance to this site. Dominant grasses are usually Arizona Fescue, Mountain Muhly, Parry Oatgrass, Western Wheatgrass, Slender Wheatgrass, Bearded Wheatgrass, Needle-and-Thread, and Junegrass. A variety of forbs can be present but do not make up more than 15% of the annual yield. Trees are absent except for an occasional stray from an adjacent woodland. Approximate ground cover is 40%. Species most likely to invade this site are Kentucky Bluegrass, Sleepygrass, Knotweed, Trailing Fleabane, Pussytoes, Mullein, Mat Muhly, Slimstem Muhly, and Rubber Rabbitbrush. The average total annual production is 1500lbs/acre.

Mountain Loam 13-18": Occurs on low hills, fans, terraces, and uplands in deep alluvium, colluvium, or eolium materials. The plant community is about 80% grass, 5% forbs, and 10% shrubs. Dominant grasses are Needle-and-Thread, Western Wheatgrass, Mountain Muhly, Blue Grama, and Arizona Fescue. Dominant forbs include Oregon Fleabane, Sulfur Buckwheat, Nebraska Lupine, and Short's Milkvetch. Shrubs and half shrubs present are Rubber Rabbitbrush, Spreading Eriogonum, Gray Horsebrush, Wax Currant, Snowball Cactus, Plains Pricklypear, Yucca, and Broom Snakeweed. The average annual production is 880lbs/acre.

Piñon /Juniper: This woodland occurs at the lowest elevations of the coniferous woodland types in Colorado. It is the transition zone between grasslands and the montane forests. This site ranges from 5,000 to 7,500 feet in elevation and receives an average of 12 to 15 inches of annual precipitation. At the lower limits, the type may consist of scattered to almost pure stands of Utah Juniper on the Western slope, and One-seeded Juniper on the Eastern slope. As the type blends into the Ponderosa Pine or Oak brush types, Piñon Pine and Rocky Mountain Juniper become the dominant species. Between the extremes Piñon and the various junipers constitute a true plant association. The understory can consist mainly of Pine Dropseed, Sand Dropseed, Indian ricegrass, Muttongrass, Western Wheatgrass, Blue Grama, Needle-and-Thread, sedges, Prairie Junegrass, Big Sagebrush (West slope), currant, rabbitbrush, Serviceberry, and some Gambel's Oak. Invader species can include Cheatgrass, Sleepy Grass, and Russian Thistle.

Sandy Foothills: The range site consists of gently sloping to rolling slopes that range from nearly level to 10%. The site is dominated by a mixture of warm and cool season grasses. Blue Grama, Side Oats Grama, Needle-and-Thread, Western Wheat, Indian Ricegrass, and Junegrass are the dominant grasses. Sedge, Prairie Clover, and Bush Buckwheat are also present. Optimum ground cover is 35%. Species most likely to invade this site are Sleepygrass, Cheatgrass, Six-weeks Fescue, and Snakeweed. The average annual production is approximately 1300lbs/acre.

Shallow Loam: The range site occurs on steep mountainous terrain, mostly on south and west exposures with slopes up to 40%. It may occur on rolling outwash fans, stream terraces, and old lava flows with gentle to moderate slopes. This site supports a community of Gambel Oak with open parks of sagebrush, rabbitbrush, and a variety of grasses. Dominant grasses are Arizona Fescue, Mountain Muhly, Junegrass, Parry Oatgrass, Pine Dropseed, Western Wheatgrass, Nodding Brome, Bottlebrush Squirreltail, needle grasses, native bluegrasses, Sheep Fescue, Blue Grama, and sedges. Common forbs are yarrow, lupine, penstemon, American Vetch, Golden Pea, buckwheat, and Bluebell. Shrubs present include Gambel Oak, Mountain Mahogany, Snowberry, Skunkbush Sumac, currant, and Gooseberry. Tree species approximate ground cover is 40%. Invaders in a degraded site are Sleepygrass, Ring Muhly, Fendler's Three-awn, Fringed Sage, Scarlet Globemallow, Broom Snakeweed, and Pingue. The average annual production is 700lbs/acre.

Skeletal Loam: The range site occurs on steep mountain sides and of drainages which dissect broad outwash fans of the high intermountain parks. The elevation ranges from 8,700 to 9,700 feet and the slopes range from 10 to 60%. The plant community is about 85% grass, 10% forbs, and 5% shrubs. Parry Oatgrass and Arizona Fescue co-dominate this site with lesser amounts of Mountain Muhly, Elk Sedge, Prairie Junegrass, Sandberg Bluegrass, Bottlebrush Squirreltail, and Western Wheat. The major forbs present are Northwest Cinquefoil, Parry Geranium, Pacific Aster, and Sidebells Penstemon. The main shrubs that occur on this site are Small Rabbitbrush, Gray Horsebrush, Broom Snakeweed, and Fringed Sage. The approximate total annual production is 1,000lbs/acre.

Spruce/Fir: The Spruce/Fir Woodland Site has a sparse understory of Elk Sedge, Kentucky Bluegrass, Lupine, Gambel Oak, Common Juniper, Kinnikinnick, and Snowberry. The approximate total annual production is 50lbs/acre.

Big Hole Allotment The range sites identified are mainly Piñon/Juniper, some Gravelly Foothills, and minimal Brushy Mountain Loam. Very minimal portions of other range sites are also present.

2002 Big Hole Vegetation Treatment Photo October 14, 2015

Green Mountain North Allotment The range sites mainly consist of fairly equal portions of Skeletal Loam, Shallow Loam, and Loamy Park. Very minimal portions of other range sites are also present.

Oak Creek Allotment The range site is predominately Loamy Glacial Outwash. Spruce/Fir and Gravelly Foothills make up a minor portion of the range sites. Very minimal portions of other range sites are also present.

Monitoring summary

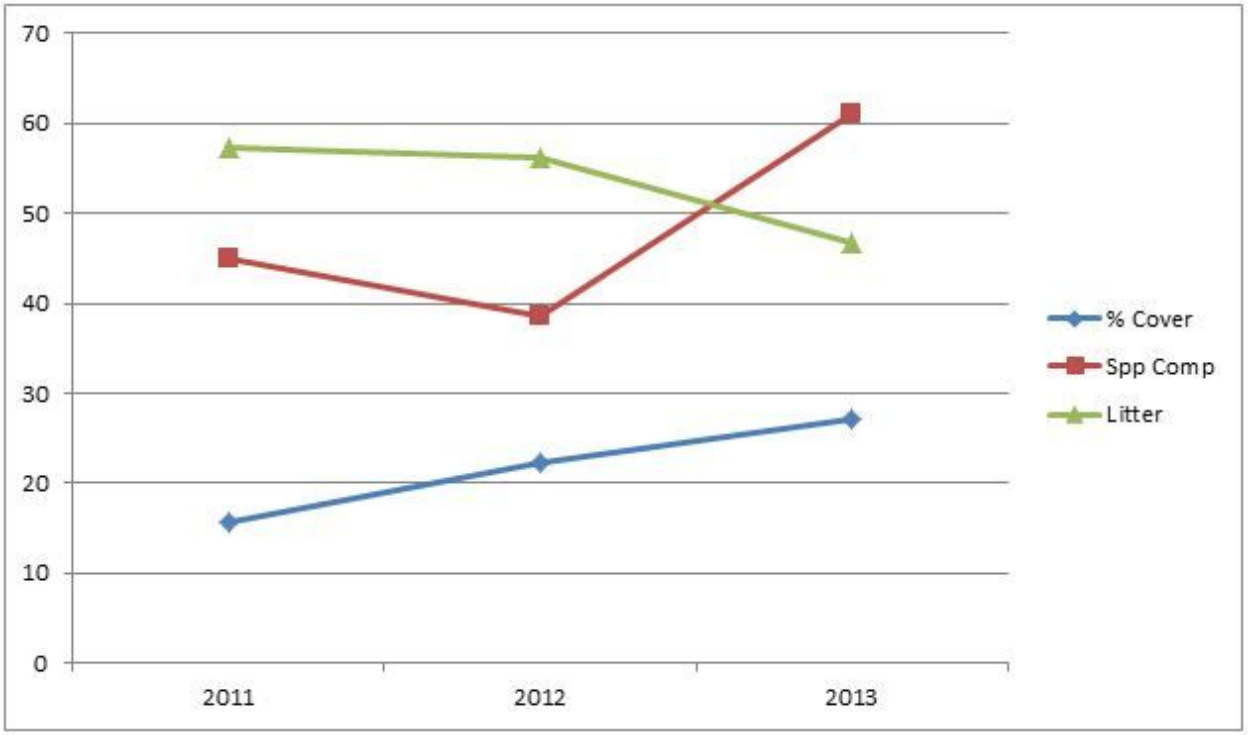
Race Path Allotment The range sites are predominately Piñon/Juniper with minimal amounts of Loamy Foothills and Mountain Loam 13-18". Very minimal portions of other range sites are also present.

Veg treatment monitoring summary

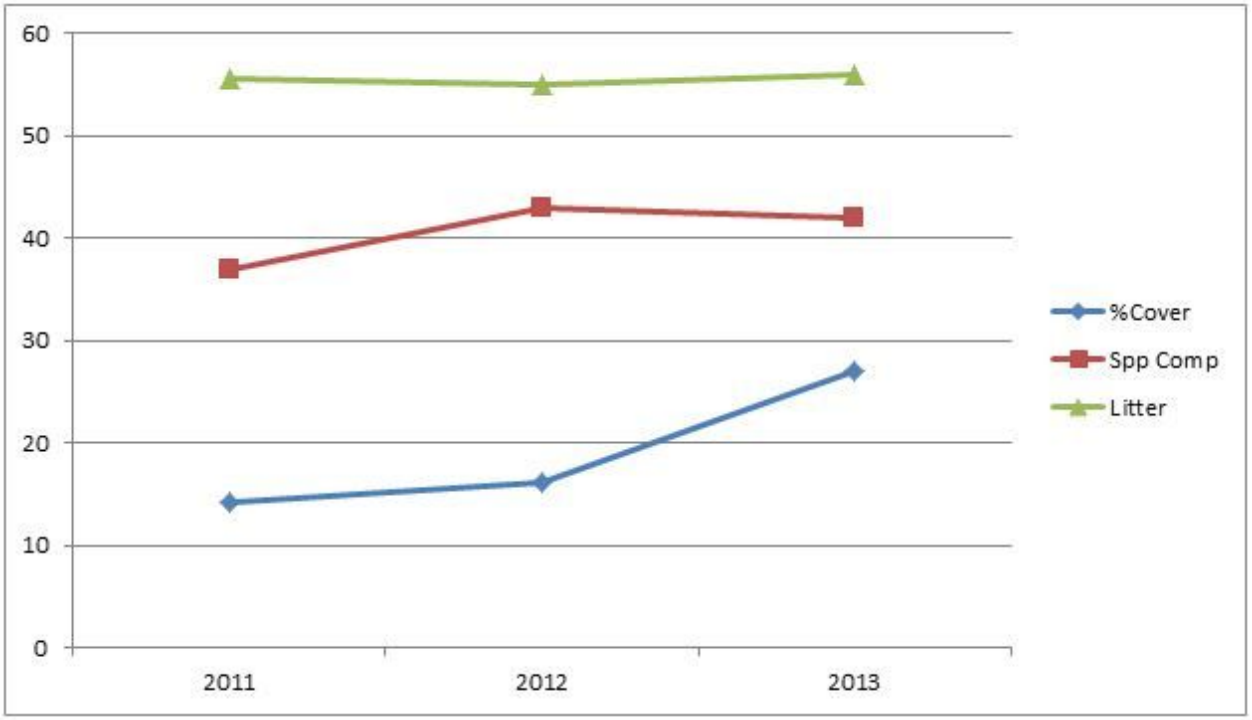
Sand Gulch Allotment The range site is mainly Piñon/Juniper. Loamy Foothills and Riverwash are present in minor portions. Very minimal portions of other range sites are also present.

range monitoring summary

Sand Gulch 2011 Vegetation Treatment Monitoring Summary 2011 — 2013 Plot #1



Sand Gulch 2011 Vegetation Treatment Monitoring Summary 2011 — 2013 Plot #2



Environmental Effects

Proposed Action:

Direct and Indirect Impacts: The management included in the Proposed Action meets the physiological needs of forage species on the allotments by providing for partial or even complete rest during the critical growing season. In cases where livestock grazing occurs during most of the growing season, there are utilization restrictions which determine the amount of forage that can be removed. Although this type of grazing management is not optimal, relatively low utilization levels (40% -60%) and partial deferment during the growing season will allow for seed dissemination and seedling establishment. The Proposed Action also supports proactive management to promote better livestock distribution through fencing and new water facilities. The Grazing Management Actions are designed to improve resource conditions and adjust to unforeseen situations on an allotment in a timely manner. Grazing management for all allotments under the Proposed Action will help promote Standards for Public Land Health and meets Colorado Livestock Grazing Management Guidelines.

Protective/Mitigation Measures: None

Cumulative Impacts: See Cumulative Impact Summary

No Action Alternative:

Direct and Indirect Impacts: Land Health Assessments were conducted that indicate, under current management, livestock grazing does not appear to be preventing public land from meeting applicable land health standards. The grazing schedules and associated terms and conditions under current management will

meet Colorado Livestock Grazing Management Guidelines. However management under this alternative restricts the ability to be flexible when conditions should go downward or an unforeseen event occurs on an allotment.

Protective/Mitigation Measures: None

No Grazing Alternative:

Direct and Indirect Impacts: Not authorizing grazing use as prescribed by this alternative would remove grazing use on vegetation on the public land. This in turn would result in an initial increase in plant vigor and litter production. However, precipitation in this area can be fairly low. Due to these dry conditions, decomposition of litter and "standing dead" plant material is relatively slow and the return of nutrients from these materials to the soil is therefore also slow. Livestock grazing, when managed properly, tends to harvest plant biomass and return a higher potion of the nutrients to the soil (and more quickly) than allowing the plant to decompose without grazing use. Furthermore, harvesting a portion of a plant's biomass, when done properly, tends to stimulate new growth and improve plant vigor resulting in more palatable forage for wildlife. The effect of livestock hooves also tends to break up soil crusts and improve the soil surface as a seed bed for plant reproduction. Therefore, a lack of periodic grazing use in the area could result in an eventual decrease in plant vigor, and the amount of vegetative and litter cover. This alternative could eventually result in movement away from applicable health standards.

Protective/Mitigation Measures: Monitor for livestock trespass

Cumulative Impacts:

Finding on the Public Land Health Standard for Plant and Animal Communities:

The allotments have been evaluated for Public Land Health Standards. The assessments indicate that, under current management, livestock grazing does not appear to be preventing public land from meeting applicable land health standards on this allotment.

3.3.4. Wetlands and Riparian Zones

Affected Environment: Primary wetland / riparian resources include Texas Creek in the Race Path allotment, and McCoy Gulch in that allotment and East Gulch in the Big Hole allotment. The Arkansas River bounds some allotments in places and others contain intermittent gulches, some spring environments, etc. however the areas of grazing and substantial resource overlap are just those first listed.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: Within Race Path, McCoy Gulch and Big Hole allotments wetland / riparian resources are meeting land health standards as described. Aged infrastructure however in Race Path and McCoy Gulch allotments sometimes can entrap livestock such that utilization risks are being exceeded. The old infrastructure also conflicts unnecessarily with some other forms of land

use (angling, hiking), and is unsightly and in disrepair. Certain fences logically should be removed and could be removed as discussed without changing resource conditions provided the other protective measures described are followed. Fencing the highway in Race Path is necessary as old riparian fences do not safely contain livestock from the highway if gates are left open or livestock challenge the fences. Implementing the proposed action will sustain resources to meet land health standards providing the protective measures are followed and monitoring is conducted as planned.

Protective/Mitigation Measures: No additional necessary. Intensified aquatic AIM Monitoring is hoped to be implemented on Texas Creek. Additional aquatic monitoring information could supplement the upland monitoring to assist determining if adaptive management is necessary over time, but based on the Land Health Assessments previously conducted and mentioned the proposed action can be implemented without further concern.

Cumulative Impacts: Grazing in these allotments is cumulative to grazing on nearly all surrounding lands that are public. The rugged nature of the public land can limit where livestock actively graze to gentler locations so those area can be sensitive to grazing if not closely managed. There are no known areas however that are excessively damaged on public land in the near region from livestock so grazing on these allotments has been compatible with other resource values.

No Action Alternative:

Direct and Indirect Impacts: This action is similar to the proposed action relative to its affects on riparian, however the removal of some illogical fencing makes riparian areas easier to manage, and better for other public users.

Protective/Mitigation Measures: None.

No Grazing Alternative:

Direct and Indirect Impacts: See also vegetation section, but within riparian areas within these allotments, not grazing the riparian areas does not drastically change the existing condition much over the long duration. Natural flood disturbance will occur and riparian areas are resilient to some modifications over time. No grazing over time will move riparian areas through succession from disturbance faster, but is not necessary to achieve riparian function.

Protective/Mitigation Measures: Fences should be removed in riparian areas as vegetation rapidly gets entangled in riparian and it would not be necessary if not grazed.

Cumulative Impacts: Similar to the other alternatives. Grazing activity is widespread and removal of grazing here is only small change on a larger scale.

Finding on the Public Land Health Standard for Riparian Systems: Either Alternative if implemented would allow for riparian resources to be sustained to meet BLM Land Health Standards.

3.3.5. Wildlife Aquatic

Affected Environment: Primary wetland / riparian /aquatic resources include Texas Creek in the Race Path allotment, and McCoy Gulch in that allotment and East Gulch in the Big Hole allotment. Texas Creek in the Race Path Allotment is a quality fishery with substantial beaver pond and backwater aquatic habitat. The Arkansas River bounds some allotments in places and others contain intermittent gulches, some spring environments, etc. however the areas of grazing and substantial resource overlap are just those first listed

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: Within Race Path, McCoy Gulch and Big Hole allotments wetland resources are meeting land health standards as described. Aged infrastructure however in Race Path and McCoy Gulch allotments sometimes can entrap livestock such that utilization risks are being exceeded. The old infrastructure also conflicts unnecessarily with some other forms of land use (angling, hiking), and is unsightly and in disrepair. Certain fences logically should be removed and could be removed as discussed without changing resource conditions provided the other protective measures described are followed. Fencing the highway in Race Path is necessary as old riparian fences do not safely contain livestock from the highway if gates are left open or livestock challenge the fences. Implementing the proposed action will sustain aquatic resources to meet land health standards providing the protective measures are followed and monitoring is conducted as planned. Sustaining the riparian resources in quality or functional condition helps maximise aquatic resource conditions while still allowing for other uses. Beaver ponds and other standing water adjacent habitats currently exist, and the proposed action will not change this situation for aquatic wildlife diversity to thrive.

Protective/Mitigation Measures: No additional necessary. Intensified aquatic AIM Monitoring is hoped to be implemented on Texas Creek. Additional aquatic monitoring would supplement the upland monitoring to assist determining if adaptive management is necessary over time, but based on the Land Health Assessments previously conducted and mentioned the proposed action can be implemented without further concern.

Cumulative Impacts: Grazing in these allotments is cumulative to grazing on nearly all surrounding lands that are public. The rugged nature of the public land can limit where livestock actively graze to gentler locations so those area can be sensitive to grazing if not closely managed. There are no known areas however that are excessively damaged on public land in the near region from livestock so grazing on these allotments has been compatible with other resource values.

No Action Alternative:

Direct and Indirect Impacts: This action is similar to the proposed relative to its affects on riparian and aquatic habitat, however the removal of some illogical fencing makes riparian areas easier to manage, and better for other public users especially anglers visiting Texas Creek, otherwise aquatic habitat remains similar.

Protective/Mitigation Measures: None

No Grazing Alternative:

Direct and Indirect Impacts: See also vegetation section, but within riparian areas that provide aquatic habitat within these allotments, not grazing the riparian areas does not drastically change the existing condition much over the long duration. Natural flood disturbance will occur and riparian areas are resilient to some modifications over time. No grazing over time will move riparian areas through succession from disturbance faster, but is not necessary to achieve riparian function and viable aquatic wildlife populations. At present aquatic habitat conditions are also good, so not grazing these resources has minimal change from the existing condition within aquatic habitat.

Protective/Mitigation Measures: Fences should be removed in riparian areas as they rapidly get entangled in riparian and it would not be necessary

Cumulative Impacts: Similar to the other alternatives. Grazing activity is widespread and removal of grazing here is only small change on a larger scale.

Finding on the Public Land Health Standard for Plant and Animal Communities: Either Alternative if implemented would allow for riparian resources to be sustained to meet BLM Land Health Standards.

3.3.6. Wildlife Terrestrial

Affected Environment:

See the migratory bird section for a description of available habitat. Mule deer and elk are likely present year round, however, of greater importance is the use of the area as winter range. A variety of small mammals and raptors are also likely to be present.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts:

The results of several studies debating grazing versus non-grazing impacts to wild ungulates remain contradictory. If grazing is managed correctly, long-term benefits may be an increase in plant species diversity, plant vigor, and reduction of excessive vegetation litter. However, grazing will reduce the available forage base for elk that are present periodically throughout the year. Studies have presented evidence that spatial competition between wild ungulate species and cattle may occur. Stewart et al. (2002) found that when cattle were present they would displace both deer and elk, forcing wild ungulates to less preferred feeding grounds. Generally, native ungulates focus on different plant species than cattle; however, when feed is scarce (late winter, early spring) these animals become generalist and compete for a common forage base.

The most noticeable impact of grazing will likely be to small mammal populations. Research notes a positive trend in small mammal populations and diversity when

grazing is removed from the landscape (Jones 2000). Reductions in herbaceous height, density and residual component, particularly in livestock concentration areas may suppress small mammal populations on a localized scale. Non-game populations associated with the upland communities, particularly dense mountain shrub basins that retain more fully developed understories, likely occur at densities that approach habitat potential. The proposed grazing system is not expected to have measureable influence on these habitats as livestock generally make limited use of these areas. The abundance of non-game animals associated with gentle gradient upland shrub types where the ecological status of herbaceous ground cover is classified as mid-seral are likely suppressed to some degree, and will likely remain suppressed under the proposed grazing system, however population viability probably remains relatively intact.

The proposed grazing schedule is not anticipated to have any direct influence on raptor nesting activities. Livestock generally make limited use of woodland habitats due to low forage availability and more rugged terrain. Reductions in understory height and density in addition to litter amount would be expected to some degree. This could lead to reductions in avian and small mammal prey populations at a local scale; however it would likely have little measureable influence on nest densities and overall nestling success of woodland raptors.

Protective/Mitigation Measures:

Monitoring is of greatest importance. Ensuring over-utilization does not occur on the riparian willow (an important browse species) wet meadow grasses, and uplands. Monitor grazing utilization to ensure adequate forage base remains for wintering elk and deer herds.

Cumulative Impacts:

Grazing is present on adjacent private and public lands affecting forage, browse, and cover available to all terrestrial species. Within the last fifteen to twenty years, recreation and residential development has increased markedly resulting in increased road and trail densities. All of these factors result in impacts to wildlife habitat. It is important to ensure that BLM manages wildlife habitats to provide for the long-term viability of wildlife populations.

No Action Alternative:

Direct and Indirect Impacts: This alternative basically renews the permits as currently scheduled. The impacts under this alternative would be similar to the impacts of the proposed action.

Protective/Mitigation Measures: Same as proposed action.

No Grazing Alternative:

Direct and Indirect Impacts: No grazing alternative.

This alternative would remove grazing use on the public land which in the short-term may result in an initial increase in plant vigor and litter production benefiting wildlife habitat. The results of several studies debating grazing versus non-grazing impacts to wild ungulates remain contradictory. If grazing is managed

correctly, long-term benefits may be an increase in plant species diversity, plant vigor, and reduction of excessive vegetation litter.

Protective/Mitigation Measures:

Studies have presented evidence that spatial competition between wild ungulate species and cattle may occur. Stewart et al. (2002) found that when cattle were present they would displace both deer and elk, forcing wild ungulates to less preferred feeding grounds. Generally, native ungulates focus on different plant species than cattle; however, when feed is scarce (late winter, early spring) these animals become generalists and compete for a common forage base.

Removal of livestock from the allotment would be expected to elicit the greatest response in small mammal species that typically benefit from increasing vegetative, forage and litter cover (shrews, voles). The allotment has been in a non-use state for some time and therefore it is suspected that small mammal densities are likely at or near potential. The most noticeable improvements would be in mid-seral communities.

Cumulative Impacts: None.

Jones, A. 2000. Effects of cattle grazing on North American arid ecosystems: A quantitative review. Western North American naturalist 60: 155-164.

Stewart, K. M., R. T. Bowyer, J. G. Kie, N. J. Cimon, and B. K. Johnson. 2002. Temporospatial distributions of elk, mule deer, and cattle: resource partitioning and competitive displacement. Journal of Mammalogy 83: 229-244.

Finding on the Public Land Health Standard for Plant and Animal Communities:

No anticipated changes in land health for terrestrial wildlife for these allotments. The proposed action will continue to improve wildlife habitat and associated vegetation.

3.3.7. Migratory Birds

Affected Environment:

Several habitat types are found within the area covered by this EA. At lower elevations the habitat types are primarily pinyon pine and juniper. Open areas of mountain grassland are interspersed throughout the area and mountain shrubs such as currant and mountain mahogany are abundant, especially on south slopes. Pinyon-juniper habitat supports the largest nesting bird species list of any upland vegetation type in the West. The richness of the pinyon-juniper vegetation type, however, is important due to its middle elevation. Survey tallies in pinyon-juniper are similar in species diversity to the best riparian. Several species are found in the pinyon-juniper habitat and include: black-chinned hummingbird, gray flycatcher, Cassin's kingbird, gray vireo, pinyon jay, juniper titmouse, black-throated gray warbler, Scott's oriole, ash-throated flycatcher, Bewick's wren, mountain chickadee, white-breasted nuthatch, and chipping sparrow.

Ponderosa pine, mixed conifer and mountain shrubland habitats are found at higher elevations in the project area. In Chaffee and Lake Counties these sites are very dry and warm areas, with less than 25 inches of precipitation annually. Mature ponderosa pine forests on dry sites are open, with mature trees achieving wide separation as they compete for limited soil moisture.

Grassy ground cover is maintained by frequent low-intensity fires. Ponderosa pines are the largest conifers in Colorado and Gambel oak is a common component of the understory, typically in a shrubby form. Other common understory shrubs include mountain mahogany and wax currant. Tree species some-times found mixed with ponderosa pine are junipers, pinyon pine, aspen, white fir, and Douglas-fir. Birds typical of these habitat types include Merriam's turkey, Williamson's sapsucker, pygmy nuthatch, western bluebird, band-tailed pigeon, Mexican spotted owl, Grace's warbler, flammulated owl, red-breasted nuthatch, violet-green swallow, western tanager, and chipping sparrow.

Foothills riparian forests are distributed along stream systems in the foothills, lower mountains and mountain parks. In some areas the riparian forest is dominated by a deciduous component, especially narrowleaf cottonwood, a variety of willow species, box elder, mountain alder and river birch. The understory of these systems is typically rich, with a wide variety of shrubs and herbaceous plants. The Colorado Breeding Bird Atlas reported that foothills riparian forests dominated by deciduous trees comprised nearly 85% of all foothills riparian forests, while conifer-dominated systems comprised just over 15%. These two systems also exhibited somewhat different avian communities. Riparian areas represent a transition zone between the aquatic ecosystem and the drier uplands. The riparian zones are well defined, unique, and highly productive areas which are sensitive to disturbance. In most western riparian systems, however, 75% of the bird species use riparian areas during some part of their life cycle. In deciduous foothills riparian systems, yellow warbler is the species most frequently detected, followed by American robin, northern flicker, house wren, warbling vireo, song sparrow, western wood-pewee, and broad-tailed hummingbird.

The following birds are listed on the US Fish and Wildlife Service Birds of Conservation Concern (BCC) – 2008 List for BCR 16-Southern Rockies/Colorado Plateau. These species have been identified as species that may be found in the project area, have declining populations and should be protected from habitat alterations.

The golden eagle is a bird of grasslands, shrublands, pinyon-juniper woodlands, and ponderosa pine forests, may occur in most other habitats occasionally, especially in winter. Nests are placed on cliffs and sometimes in trees in rugged areas, and breeding birds range widely over surrounding habitats.

Flammulated owls prefer old-growth or mature ponderosa pine, due to the presence of large broken-top and lightning-damaged snags and trees for nesting cavities, large cavities excavated by northern flickers and other woodpeckers, open structure of trees and understory for foraging, and high prey availability. They will utilize other habitats with similar structure, such as open mixed-conifer and aspen forests. Key habitat features seem to be the presence of large trees and snags, scattered clusters of shrubs or saplings, clearings, and a high abundance of nocturnal arthropod prey.

Gray vireos nest along the western tier of counties, with centers of abundance in Mesa, Montrose, and Montezuma counties. They also nest on the Eastern Slope in Las Animas County. Gray Vireos are pinyon-juniper woodland obligates. Gray vireos usually inhabit stands dominated by juniper or thin stands of pure juniper. They construct nests of dry grasses, plant fibers, stems, and hair, often camouflaging them with sagebrush leaves.

Pinyon jays range the semiarid lands of the West. The Colorado Breeding Bird Atlas map shows them south of a diagonal line drawn from the northwest corner to the southeast corner of the state. Pinyon jays are pinyon and juniper obligates in Colorado and nest commonly at the lower

elevations of pinyon-juniper woodlands, often where junipers dominate. A few nest in ponderosa pine. They prefer extensive stands far from high human activity.

Grace's warblers breed from southwestern Colorado and southern Utah, south through central Arizona, western New Mexico, and into north-central Mexico. Grace's warblers inhabit open ponderosa pine forests with pines 16 feet tall, especially with a shrubby understory, usually Gambel oak.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts:

The results of several studies debating grazing versus non-grazing impacts to migratory birds remains mixed. If grazing is managed correctly, long-term benefits may be an increase in plant species diversity, plant vigor, and reduction of excessive vegetation litter. Over grazing reduced cover of grasses, facilitating establishment of pinyon- juniper seedlings and simultaneously reducing ground fires that otherwise might eliminate woody vegetation. The change in herbaceous structure caused a change in migratory bird species occupancy by negatively affecting species dependent on herbaceous and shrubby cover or species that require open savannahs, but positively affecting species requiring closed canopy systems. Currently, BLM's standards for public land health do not allow for excessive grazing that would alter forest structure in the manner historical grazing regimes may have.

Grazing has a strong influence on abundance and species richness of migratory birds. Research evidence suggests that every type of North American grassland community includes a fauna of grazing-tolerant or grazing-dependent species, and another equally intolerant of grazing. Neotropical migratory birds fall into both groups. Therefore, while grazing may be a detriment to one species, it is beneficial to another. Riparian areas are of extreme importance for migratory birds in the arid southwest. The highest densities of breeding birds in all of North America have been reported from southwestern riparian woodlands. In these allotments, the riparian communities are generally in good condition, and will likely continue to meet standards. Grazing will not in itself create a "take" situation for migratory birds, meeting the requirements of the Migratory Bird Treaty Act. If grazing stipulations continue to be followed, implementing the Proposed Action will likely have no measurable effect on migratory bird species or their habitat.

Protective/Mitigation Measures: In order for BLM to be in compliance with the Migratory Bird Treaty Act, requiring that BLM avoid actions that "take" migratory birds, it is recommended that all vegetation disturbances be avoided from May 15 thru July 15. This is the breeding and brood rearing season for most Colorado migratory birds. Construction and maintenance of allotment infrastructure that may take migratory birds and/or nests should be completed outside the primary nesting season of May 15 thru July 15.

Cumulative Impacts: Grazing on the adjacent public and private lands is the largest impact. Overall, minimal acreage is rested, reducing available cover and nesting habitat for migratory birds.

No Action Alternative:

Direct and Indirect Impacts: This alternative basically renews the permits as currently scheduled. The impacts under this alternative would be similar to the impacts of the proposed action.

Protective/Mitigation Measures: Same as proposed action.

No Grazing Alternative:

Direct and Indirect Impacts: No Grazing Alternative.

This alternative would remove grazing use on public land which in the short-term may result in an initial increase in plant vigor and litter production benefiting wildlife habitat. Impacts of grazing on upland sandpipers indicated a reduction in nest density in grazed pastures; however, nesting success between grazed and non-grazed pastures remained unchanged (Bowen and Kruse 1993). Bock et al. (1993) conducted a literature review on avian responses to grazing in a multitude of habitats and found that bird species generally showed a positive response to no grazing. Reasons for a positive response include, but are not limited to an increase in nesting cover and less disturbance or destruction of nests by cattle. However, some bird species benefit from grazing such as the BLM sensitive mountain plover. Overall, migratory birds would likely show a net benefit from the no grazing alternative.

Protective/Mitigation Measures: None.

Cumulative Impacts: None.

Bock, Carl E.; Saab, Victoria A.; Rich, Terrell D.; Dobkin, David S. 1993. Effects of livestock grazing on neotropical migratory landbirds in western North America. In: Finch, Deborah M.; Stangel, Peter W. (eds.). Status and management of neotropical migratory birds: September 21-25, 1992, Estes Park, Colorado. Gen. Tech. Rep. RM-229. Fort Collins, Colo.: Rocky Mountain Forest and Range Experiment Station, U.S. Dept. of Agriculture, Forest Service: 296-309

Bowen, B. S. and A. D. Kruse. 1993. Effects of grazing on nesting by Upland Sandpipers in southcentral North Dakota. Journal of Wildlife Management 57(2):291-301

3.4. Heritage Resources and Human Environment

3.4.1. Cultural resources

Affected Environment: Pursuant to BLM Instruction Memorandum Number CO-2002-029, RGFO cultural resources staff conducted a literature review of previous inventories and sites recorded on the public land in the allotment areas [see Report CR-RG-16-069 R]. Based on the information collected during the literature review, it was determined that in order to assess the

potential for impacts to historic properties, additional inventory will be required on the Race Path allotment; the Big Hole, Green Mountain North, McCoy Gulch, Oak Creek, and Sand Gulch allotments have all been satisfactorily inventoried and the proposed action will not impact historic properties. The proposed action may proceed and the additional inventory will be phased over the life of the permit. At that time, if the inventories suggest that historic properties are present and may be impacted by range activities, cultural resource staff will work with range managers, in consultation with the SHPO and other interested parties, to identify applicable mitigation strategies.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: None

No Action Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

No Grazing Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: None

3.4.2. Native American Religious Concerns

Affected Environment: The literature review indicated that no traditional cultural properties have been recorded within the allotment boundaries. Native American Tribal consultation has been completed for these allotments. There is no other known evidence that suggests the project area holds special significance for Native Americans. Therefore, it is unlikely that any traditional cultural properties or other sites of concern to the tribes will be affected by grazing.

Environmental Effects BLM has consulted with 16 tribes regarding the proposed grazing allotments. Included were the Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Lakota Tribe, Comanche Tribe of Oklahoma, Crow Creek Sioux, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, Oglala Sioux Tribe, Rosebud Sioux Tribe, Eastern Shoshone Tribe, Southern Ute Tribe, Standing Rock Sioux Tribe, Ute Tribe, and the Ute Mountain Ute Tribe. BLM received no comments.

Proposed Action:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: None

No Action Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

No Grazing Alternative:

Direct and Indirect Impacts None:

Protective/Mitigation Measures: None

Cumulative Impacts: None

3.4.3. Wastes, Hazardous or Solid

Affected Environment:

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: 1. It is assumed that conditions associated with the proposed project site are currently clean and that no contamination is evident. No hazardous material, as defined by 42 U.S.C. 9601 (which includes materials regulated under CERCLA, RCRA and the Atomic Energy Act, but does not include petroleum or natural gas), will be used, produced, transported or stored during project implementation. 2. If the authorization involves any type of oil or fuel usage, transfer or storage, an adequate spill kit and shovels are required to be onsite during project implementation. The project proponent will be responsible for adhering to all applicable local, State and Federal regulations in the event of a spill, which includes following the proper notification procedures in BLM's Spill Contingency Plan. 3. If concrete is proposed as part of the project, all concrete washout water needs to be contained and properly disposed of at a permitted offsite disposal facility.

Cumulative Impacts: None

No Action Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures:

No Grazing Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures:

Cumulative Impacts:

3.5. Land Resources

3.5.1. Range Management

Affected Environment: The allotments include grazing dates and livestock numbers that comply with Guidelines for Livestock Grazing Management in Colorado and are designed to protect or improve existing resource conditions. The terms & conditions associated with each allotment under the Proposed Action contain desirable utilization standards to assure sufficient residual vegetation to protect soil from wind and water erosion and allow adequate seed dissemination and seedling establishment. Even when annual forage production may vary on a year to year basis, the utilization standards provide a visual and practical way of limiting grazing use to a desirable level.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: The Proposed Action renews the grazing permits with some modifications in management that helps these allotments continue to meet Standards for Public Land Health. This alternative emphasizes better livestock distribution and makes adjustments in management to better reflect what is occurring on the ground. The Grazing Management Actions provide BLM more flexibility in adjustments to management when grazing impedes resource condition or unforeseen events take place on an allotment. These actions help promote better management on an allotment with less resistance. Furthermore, these actions are conducted in a pro-active manner that keeps the grazing permittee involved within the allotment management plan.

Protective/Mitigation Measures: None

Cumulative Impacts: See Cumulative Impact Summary

No Change Alternative:

Direct and Indirect Impacts: The No Change alternative renews the permits as currently scheduled and does not allow for Grazing Management Actions. Not adjusting management on some of these allotments could have a negative impact by promoting an allotment towards not meeting Land Health Standards in the future. Eliminating the Grazing Management Actions from future management would make it more difficult to adjust management in a reasonable time frame when resource conditions are threatened or unforeseen circumstances occur on an allotment.

Protective/Mitigation Measures: None

No Grazing Alternative:

Direct and Indirect Impacts: Under this alternative, no grazing would be authorized on the allotments. Initially there would be a negative economic impact to both the grazing permittee and BLM. Since not all the public land is fenced separate from private land controlled by the permittee, the permittee and/or BLM would be responsible for surveying and fencing livestock off the public land portion

of the allotments. The cost per mile to survey and build new fence would be approximately $10,000. The amount of unfenced boundary and cost is described below:

Table 3.2.

Allotment	Miles of Unfenced Boundary	Cost to Survey and Fence
Big Hole	0	$0
Green Mt. North	3.25 miles	$32,500
McCoy Gulch	1 mile	$10,000
Oak Creek	4.5 miles	$47,500
Race Path	1.5 miles	$22,500
Sand Gulch	4.5 miles	$47,500
Total	**14.75 miles**	**$163,750**

In addition, economic impacts would be experienced by the permittee due to the loss of forage under this alternative. Based on the permittees' anticipated need to provide additional forage to make up for the loss of public land grazing use, the permittee could be expected to experience additional cost annually under this alternative. When compared to the estimated private land lease rate in Colorado of $15/AUM the additional annual cost to the permittee would be as follows:

Table 3.3.

Allotment	BLM AUMs	Annual Cost to Permittee
Big Hole	1,068	$16,020
Green Mt. North	24	$360
McCoy Gulch	89	$1,335
Oak Creek	60	$900
Race Path	483	$7,245
Sand Gulch	696	$10,440
Total	**2,420**	**$36,300 / Year**

The allotments contain multiple range developments used for livestock management consisting of interior fences, wells, spring developments, pipelines and tanks. BLM would need to determine whether to remove these structures which would result in a significant cost.

Protective/Mitigation Measures: Monitor livestock trespass

Cumulative Impacts: Many ranches in the analysis area are currently being sold and subdivided for economic benefit. This leads to a cumulative loss in prime irrigated farm/ranch lands, wildlife habitat and open space. Not authorizing grazing use under this alternative may promote further loss in prime irrigated farm/ranch lands, wildlife habitat and open space.

3.6. Cumulative Impact Summary

The geographic scope of cumulative impacts is the area described as the Collegiate / Sangre Sub-region and Arkansas River Sub-region in the Royal Gorge Resource Area Resource Management Plan. Within these areas, BLM manages approximately 181,256 acres of public land. The area also consists of approximately 218,435 acres of private and 23,773 acres of state

land. Livestock grazing has been a major component in this area since settlement and is integral to the local economy. Grazing management as prescribed on public lands is more intensive than management of the surrounding private and state lands and incorporates other resource values, such as wildlife, cultural, soils, vegetative and riparian on the public land into account to a greater degree. The proposed action includes protection for vegetative, soils, cultural and riparian values. These standards assure sufficient residual vegetation to protect soil from wind and water erosion and allow adequate seed dissemination and seedling establishment. Therefore, the impacts of the proposed action on the allotment in this assessment, together with those of other similar BLM actions within the sub-region, will be protection and improvement of the diversity and vigor of vegetative resources on public land in the sub-region over time. Other foreseeable impacts include private land development and fragmentation, recreation, road & trail development and local drought conditions. These impacts could have direct and indirect impacts to these public lands.

Grazing on the adjacent public and private lands is the largest impact to migratory birds. Overall, minimal acreage is rested, reducing available cover and nesting habitat for migratory birds.

Grazing is present on adjacent private and public lands affecting forage, browse, and cover available to all terrestrial species. Within the last fifteen to twenty years, recreation and residential development has increased markedly resulting in increased road and trail densities. All of these factors result in impacts to wildlife habitat. It is important to ensure that BLM manages wildlife habitats to provide for the long-term viability of wildlife populations.

Grazing in these allotments is cumulative to grazing on nearly all surrounding lands that are public. The rugged nature of the public land can limit where livestock actively graze. Livestock will naturally move to gentler locations and those areas can be sensitive to grazing if not closely managed. There are no known areas however that are excessively damaged on public land in the near region from livestock so grazing on these allotments has been compatible with other resource values.

This page intentionally
left blank

4.1. List of Preparers and Participants

Table 4.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Warren Ross Stagecoach Ranch Steve Oswald Howard Eggleston	Grazing Permittee Taylor Grazing Act of 1934	No issues
Enter Name		

Table 4.2. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Matt Rustand	Wildlife Biologist	Terrestrial Wildlife, T&E, Migratory Birds
Jeff Williams	Range Management Spec.	Range, Vegetation, Farmland
John Lamman	Range Management Spec.	Weeds
Dave Gilbert	Fisheries Biologist	Aquatic Wildlife, Riparian/Wetlands
Stephanie Carter	Geologist	Minerals, Paleontology
Melissa Smeins	Geologist	Minerals, Paleontology
Negussie Tedela	Hydrologist	Hydrology, Water Quality/Rights, Soils
Ty Webb	Prescribed Fire Specialist	Air Quality
Sean Hines'	Cadastral Surveyor	Cadastral Survey
Linda Skinner	Outdoor Recreation Planner	Recreation, Wilderness, Visual, ACEC, W&S Rivers
Jeremiah Moore	Forester	Forestry
Martin Weimer	NEPA Coordinator	Environmental Justice, Noise, SocioEconomics
Michael Troyer	Archaeologist	Cultural, Native American
Jeff Brown	Realty Specialist	Realty
Steve Cunningham	Law Enforcement Ranger	Law Enforcement

4.2. Tribes, Individuals, Organizations or Agencies Consulted

This page intentionally
left blank

Bureau of Land Management (BLM) 1996 Resource Management Plan Royal Gorge Field Office, Colorado

Jones, A. 2000. Effects of cattle grazing on North American arid ecosystems: A quantitative review. Western North American naturalist 60: 155-164.

Stewart, K. M., R. T. Bowyer, J. G. Kie, N. J. Cimon, and B. K. Johnson. 2002. Temporospatial distributions of elk, mule deer, and cattle: resource partitioning and competitive displacement. Journal of Mammalogy 83: 229-244.

Bock, Carl E.; Saab, Victoria A.; Rich, Terrell D.; Dobkin, David S. 1993. Effects of livestock grazing on neotropical migratory landbirds in western North America. In: Finch, Deborah M.; Stangel, Peter W. (eds.). Status and management of neotropical migratory birds: September 21-25, 1992, Estes Park, Colorado. Gen. Tech. Rep. RM-229. Fort Collins, Colo.: Rocky Mountain Forest and Range Experiment Station, U.S. Dept. of Agriculture, Forest Service: 296-309

Bowen, B. S. and A. D. Kruse. 1993. Effects of grazing on nesting by Upland Sandpipers in southcentral North Dakota. Journal of Wildlife Management 57(2):291-301

Finding Of No Significant Impact (FONSI)

DOI-BLM-CO-200-2016-0004 EA

Based on review of the EA and the supporting documents, I have determined that the project is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects from any alternative assessed or evaluated meet the definition of significance in context or intensity, as defined by 43 CFR 1508.27. Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below:

RATIONALE:

Context: The allotments analyzed in this document are located in Western Fremont County, Colorado along Highway 50 between Cotopaxi and Canon City.

The Proposed Action alternative analyzes minor modifications in grazing management and implements a new monitoring plan and management actions (tool box) that allow for adjustments when monitoring dictates a management change is required. A new permit is issued for ten years.

Intensity:
I have considered the potential intensity/severity of the impacts anticipated from the 2016 Grazing Term Permit Renewal and Allotment Management Plan Project decision relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

Impacts that may be beneficial and adverse: Through the environmental analysis, adverse impacts to the allotments and the environment can be managed and mitigated. The benefits of this analyses that are reflected in the proposed action consist of proper grazing management practices. Grazing use on the vegetation is limited to a period that promotes plant rest and recovery. Utilization restrictions are in place to protect the soil resources and provide forage and cover for wildlife. Management actions are used when resource conditions are at risk and tools are in place to remedy the situation in a timely manner. In addition, practices could be implemented when unforeseen circumstances occur such as drought and/or fire. The allotments proposed for grazing renewal are meeting BLM Land Health Standards.

Public health and safety: The proposed action reflects analyses and management practices that do the most to protect important water supplies by preventing erosion and sediment production. Due to the dry, upland nature of a portion of the allotment being analyzed, sediment production, from a water quality standpoint, is the biggest concern from grazing. The proposed action would leave sufficient ground cover present to protect the soils from eroding and downstream waters would not be affected from grazing on public lands.

Unique characteristics of the geographic area: The EA evaluated the area of the proposed action and determined that no unique geographic characteristics such as: wild and scenic rivers, prime or unique farmlands or designated wilderness areas or wilderness study areas were present. The action occurs within two areas within the Arkansas Canyonlands ACEC, but does not affect the resource, since grazing has historically occurred in these areas. None of the special values for which the ACEC was designated are impacted by the continued grazing.

Degree to which effects are likely to be highly controversial: Analysis for the renewal of grazing permits is a common action conducted under NEPA. Conditions and impacts will vary and be unique to each allotment. There is no disagreement or controversy among ID team members or reviewers over the nature of the effects of the action on resource values.

Degree to which effects are highly uncertain or involve unique or unknown risks: BLM has a long history of managing public lands for multiple-use. Grazing is one part of that multiple-use mandate. Given the BLM's institutional knowledge on this subject, all risks were considered in the EA and were found to be neither unique nor unknown.

Consideration of whether the action may establish a precedent for future actions with significant impacts: The proposed action does establish a standard of precedent for the permit renewal process, in that there is comprehensive review of all resource values and land health standards are either met or exceeded.

Consideration of whether the action is related to other actions with cumulatively significant impacts: In general, the allotment in this analysis area is adjacent to private and U.S. Forest Service lands. The continuation of livestock grazing on public lands will in part help promote or maintain ranching in the area and open space. In addition, the continuation of livestock grazing as described in the proposed action will not create any new cumulative impacts to the existing situation and given BLMs intense management practices, renewing the grazing could contribute to enhancing land health and productivity.

Scientific, cultural or historical resources, including those listed in or eligible for listing in the National Register of Historic Places: Pursuant to BLM Instruction Memorandum Number CO-2002-029, RGFO cultural resources staff conducted a literature review of previous inventories conducted (< 1% of the total public land acreage) and sites recorded on the public land in the allotment area. After consulting with the range staff to identify concentrations of livestock and potential damage, it was determined that in order to assess the potential for impacts to historic properties, additional inventory will be required on the Pass Creek Allotment. The proposed action may proceed and the additional inventory will be phased over fiscal year 2015 and conducted under the cultural resource project ID CR-RG-15-068. If the inventory suggests that historic properties are present and may be impacted by range activities, cultural resource staff will work with range managers, in consultation with the SHPO and other interested parties, to identify applicable mitigation strategies. If range improvements are required within the Pass Creek Allotment, those areas will need to be intensively surveyed for cultural resources, with any necessary mitigation strategies in place prior to construction.

Direct impacts to or destruction of fossils would occur from unmitigated activities conducted on formations with high potential for important scientific fossil resources. Indirect impacts would involve damage or loss of fossil resources due to the unauthorized collection of scientifically important fossils by workers or the public due to increased access to fossil localities in the Project Area. Adverse impacts to important fossil resources would be long-term and significant since fossils removed or destroyed would be lost to science.

Threatened and endangered species and their critical habitat: There are no known threatened and endangered species known to inhabit these locations. There are two Bureau sensitive species that may be impacted by the proposed action. They are the *Mentzelia densa* plant and Peregrine Falcon. Grazing is not deemed as a threat to either species at this time.

Any effects that threaten a violation of Federal, State or local law or requirements imposed for the protection of the environment: The proposed action conforms with the provisions of NEPA (U.S.C. 4321-4346) and FLPMA (43 U.S.C. 1701 et seq.) and is compliant with the Clean Water Act and The Clean Air Act, the National Historic Preservation Act, Migratory Bird Treaty Act (MBTA) and the Endangered Species Act.

NAME OF PREPARER: Jeff Williams

SUPERVISORY REVIEW: Kalem Lenard

NAME OF ENVIRONMENTAL COORDINATOR: /s/ Martin Weimer

DATE: 8/30/16

SIGNATURE OF AUTHORIZED OFFICIAL: _____/s/ Keith E. Berger_____
Keith E. Berger, Field Manager

DATE SIGNED: 8/31/16

APPENDICES:
ATTACHMENTS: