BLM

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

Environmental Assessment

Pass Creek Allotment TPR

February, 2015

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
Pass Creek Allotment TPR

DOI-BLM-CO-F02-2015-0014 EA

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

February, 2015

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1.1. Identifying Information:

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

Pass Creek Allotment TPR

1.1.2. Location of Proposed Action:

[Give either/or a legal description or narrative description of the project location.]

Pass Creek Allotment: T49N, R7E, S. 2, 3, 11 – 14. T49N, R8E, S. 7 & 18. Chaffee County 6th PM

Public Land Acres: 3,436 Acres

1.1.3. Name and Location of Preparing Office:

Lead Office: Royal Gorge Field Office, Canon City, CO

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

Grazing Record No. 0505722 Scanga Ranch

Grazing Record No. 0505721 Sharpe, Richard

[Enter appropriate tracking number here.]

Case file number

1.1.5. Applicant Name:

Scanga Ranch / Sharpe, Richard

1.2. Introduction and Background

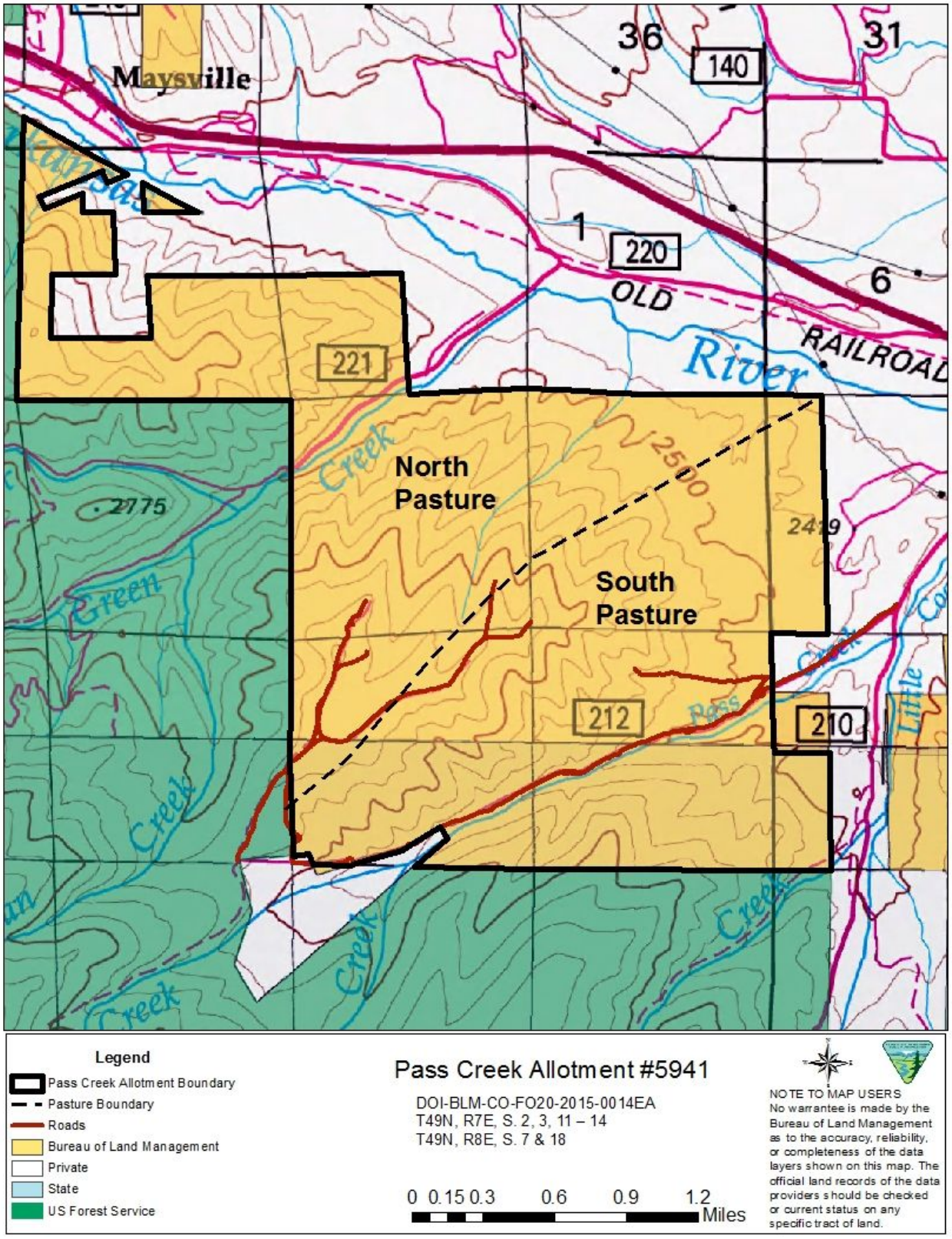
BACKGROUND:

This EA has been prepared by the BLM to analyze the term grazing permit renewal for the Pass Creek Allotment #5941 and update the current Allotment Management Plan.

The Pass Creek allotment currently has an Allotment Management Plan (AMP) in place that was last updated and approved in 1982. An AMP is a grazing activity plan that contains specific grazing use management criteria to meet resource objectives related to condition, sustained yield, multiple use, economic and other objectives. The objectives for the current Pass Creek AMP is improved livestock production, reduction in operator costs while grazing public lands,

improve production of cool season grasses, improve the quantity and quality of forage for elk winter range and improve fishery production on Pass Creek. A number of range improvement projects have been done on the allotment since completion of the AMP that consisted of pasture fences and livestock water sources.

The allotment has been in non-use between 2003 through 2012 due to mechanical issues with the existing livestock water system on the allotment. The water system was partially repaired in 2013 and limited grazing use occurred on the allotment during 2013 and 2014.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River
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North
Pasture
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2419
South
Pasture
212
210
Creek
Green
Pass
Little
Legend
Pass Creek Allotment Boundary
Pasture Boundary
Roads
Bureau of Land Management
Private
State
US Forest Service
Pass Creek Allotment #5941
DOI-BLM-CO-FO20-2015-0014EA
T49N, R7E, S. 2, 3, 11 – 14
T49N, R8E, S. 7 & 18
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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.

Figure 1.1.

Pass Creek Allotment Current Grazing Schedule

Table 1.1.

Allotment	Number/Kind	Grazing Period Begin — End	% Public Land	Type Use	AUMs
Pass Creek	100 Cattle	June 1 — July 15	100%	Improve	148

Current Terms & Conditions:

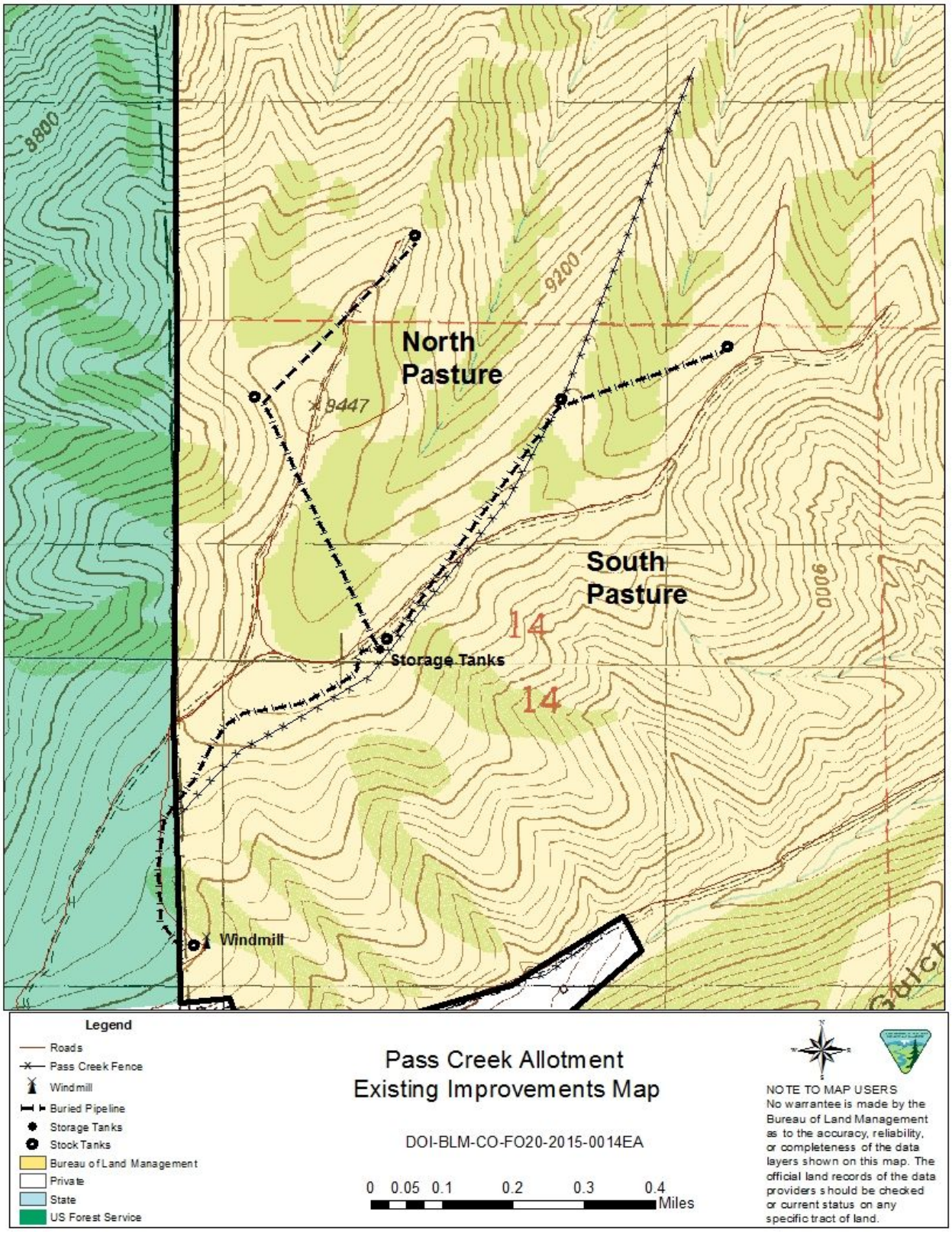
1. Maximum utilization levels on upland grass plants will be 60% of the current year's forage growth. Maximum utilization levels on riparian grass and sedges will be limited to 60% of the current year's growth. Maximum utilization levels on willows and cottonwoods will be limited to 60% of the current year's leader growth. Utilization levels on aspen will be limited to 40% of the current year's annual leader growth. If grazing use reaches these levels, livestock will be removed.

2. Grazing use will be consistent with the grazing schedule and flexibility set in the Pass Creek AMP.

The Pass Creek AMP outlined a two pasture rest rotation system where only one pasture would be grazed during active grazing years. Grazing use on each pasture would be alternated from one active year to another. The allotment would be completely rested from grazing every third year. The AMP also included flexibility to this schedule by allowing for use every year as long as utilization was not exceeded. The grazing schedule as described in the AMP is very complicated to follow for both the operator and BLM.

Livestock water sources on the allotment consist of Pass Creek, Greens Creek and a water system that was developed in the early 90's. The existing water system consists of a windmill, 2.6 miles of buried pipeline, water storage tanks and five stock troughs (see Existing Improvements Map). The water system supplies livestock water to the main upland portion of the allotment. Sometime prior to 2000, the windmill on this system was vandalized to a point where major repairs were required. In 2010, the system was evaluated and determined that replacing the windmill was not cost effective due to the potential for future vandalism. It was determined at that time there was enough water pressure to bypass the windmill and still feed water to the storage tanks. In 2013, the water system was partially repaired resulting in limited livestock use on the allotment during the spring of 2013 and 2014. More work is required to completely repair the existing water system.

The Pass Creek and Greens Creek drainages are part of the allotment but grazing use has historically been discouraged from these areas due to resource concerns and livestock distribution issues. Both drainages receive a high amount of public use in terms of picnicking and camping where the potential for negative conflict between livestock and recreation users is higher in these areas. While on the upland portion of the allotment livestock would typically not travel down into Greens Creek from the top due to the steep topography. However livestock could easily navigate down to Pass Creek from the top by following the existing road (CR212). During 2013 and 2014 use, the permittee was successful in keeping livestock out of Pass Creek by having livestock water available in the existing water system and keeping salt supplements on the upland portion of the allotment. Further development of a cattle guard and drift fence may be required in the future to keep livestock use off Pass Creek. Even though grazing is discouraged in Pass Creek, cattle are typically trailed along the CR212 road to access the allotment. This practice would probably continue in the future.



Past Monitoring: The allotment consists of one Daubenmire trend study that was read several times between 1982 and 1997. There was an upward trend between 1982 and 1990 and then a

slight downward trend between 1994 and 1997. The plot has not been read since 1997. Public Land Health Assessments were conducted on this allotment in 2012 and issues were identified with forest health. There were 310 acres within the allotment rated as not meeting due to poor forest health; overstocked small diameter trees, moderate to high natural fuel accumulations, limited herbaceous production in the understory, an increase in bark beetle activity and a lack of large old growth trees. All other standards were being met.

AUM Summary

Table 1.2.

Pasture	Public Land Acres	AUMs
North	1,249	116
South	1,534	119
Unsuitable	652	17
Total	3,436	252

1.3. Purpose and Need

1. This analysis is needed to consider the impacts of livestock grazing use on public lands within the respective allotment in relation to Standards for Public Land Health and 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.

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

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 Pass Creek Allotment and update the Allotment Management Plan. 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: 05/13/1996

Decision Number/Page: 2–2, 2–3, 2–4, 2–7, 2–15, 2–18, C-30, C-31, C-33, C-38, C-41, C-42, C-43, C-44

Decision Language:

2–2: Season of use and stocking rates will continue based on the grazing EIS and vegetation monitoring.

2–3: Livestock grazing will be prioritized based on IAP resolution of conflicts with riparian and critical wildlife habitat.

2–4: Grazing is authorized on 35 allotments.

2–7: Allotments are catogorized as 13 Improve.

2–15: Conflicts between wildlife habitat and other uses will be resolved in favor of achieving vegetation management goals.

2–18: Big game critical winter habitat with identified conflicts with grazing will be addressed through cooperative efforts. i.e. HPP.

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

C-31: Authorize adjustments in the actual AUMs when warranted by weather and other conditions.

C-33: Continue with or establish monitoring studies depending on management category.

C-38: Continue to construct range improvement projects on an as needed basis. Complete NEPA documentation on each project as needed.

C-41: Adjustments in grazing use will be made by allotment on a case by case basis. Changes in number of livestock, season of use, duration of use, and class of livestock can be made based on monitoring studies and inventory data.

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 dormant season grazing will be 80% annual production on grass species and 60% of annual production on shrub species.

C-44: On single pasture allotments with season long spring-summer grazing, utilization will be held to the 40 – 60% 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 impracticable 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 Royal Gorge Field Office NEPA website, was the primary mechanism used by the BLM to initially identify issues. In addition to the website, agencies from the Colorado Parks and Wildlife were consulted.

Issues Identified: No issues were brought forward.

2.1. Description of Proposed Action and Alternatives

Proposed Action

The Proposed Action:

1. Modifies the grazing schedule for the allotment by:
    a. Reducing the number of cattle from 100 to 50 for the same period of time.
    b. Authorizes grazing use every year under a two pasture deferred rotation.
    c. New terms & conditions
2. Restricts grazing use to the central portion of the allotment and excludes grazing use in Greens and Pass Creek.
3. Replaces the existing AMP and includes new resource objectives and monitoring criteria.
4. Includes Adaptive Management Measures
5. Issues a new grazing permit for ten years

Pass Creek Allotment Resource Objectives:

- Promote quality and quantity forage for elk winter range.
- Maintain the diversity of upland cool and warm season grasses and promote stable soil conditions based on the ecological site potential.
- Promote healthy riparian habitat in Greens and Pass Creek.
- Continue to meet Standards for Public Land Health.

Grazing Management Plan:

The grazing system will be a two pasture deferred rotation where grazing use occurs every year between June 1 and July 15. In year one, the North pasture would be grazed for the first half of the season and then the South pasture is grazed during the second half of the season. In year two, the sequence is reversed where the South pasture is grazed first and then the North pasture is grazed last. The cycle repeats itself during the third year and etc. Each pasture would be limited to 23 days of grazing use regardless if utilization is reached or not. This system will promote deferment of grazing use on both cool and warm season grasses during critical plant growing stages. Livestock will be removed from the allotment by July 15 to allow for forage regrowth on elk winter range.

Grazing use would not be promoted in the riparian areas of Greens and Pass Creek and instead use would be concentrated on the upland portion of this allotment between the two major drainages. Even though grazing use is excluded on the creek bottoms, occasional drift is likely to occur on Pass Creek. The permittee should make a reasonable attempt to keep livestock out of the riparian areas. Occasional use would be considered not more than 10% utilization of the wetland vegetation in total. If control of livestock becomes a problem, then further fencing would be required. Livestock would continue to be trailed along the CR212 road to access the allotment.

The Pass Creek allotment would be scheduled as follows:

Table 2.1.

Allotment	Number / Kind	Grazing Period	% Public Land	Type Use	AUMs
Pass Creek	100 Cattle	June 1 — July 15	100 %	Improve	148

Proposed Terms & Conditions included in the new permit:

1. Utilization on upland grass forage will be limited to 60%. Utilization on aspen and Winterfat will be limited to 40% of the current year's annual leader growth.

2. The pasture sequence will be alternated every year and the period of use in each pasture will not exceed 23 days even if maximum utilization is not reached.

3. Grazing use will be excluded on Greens and Pass Creek, except for occasional drift and trailing. The permittee will make a reasonable attempt to remove livestock from these areas.

4. Salting and supplements will be placed at least ¼ mile away from water sources.

5. The permittee is required to perform annual maintenance on range improvements in accordance with signed Cooperative Agreements/Section 4 Permits prior to livestock turn-out.

6. 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.

7. 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.

Allotment Summary AUMs

Table 2.2.

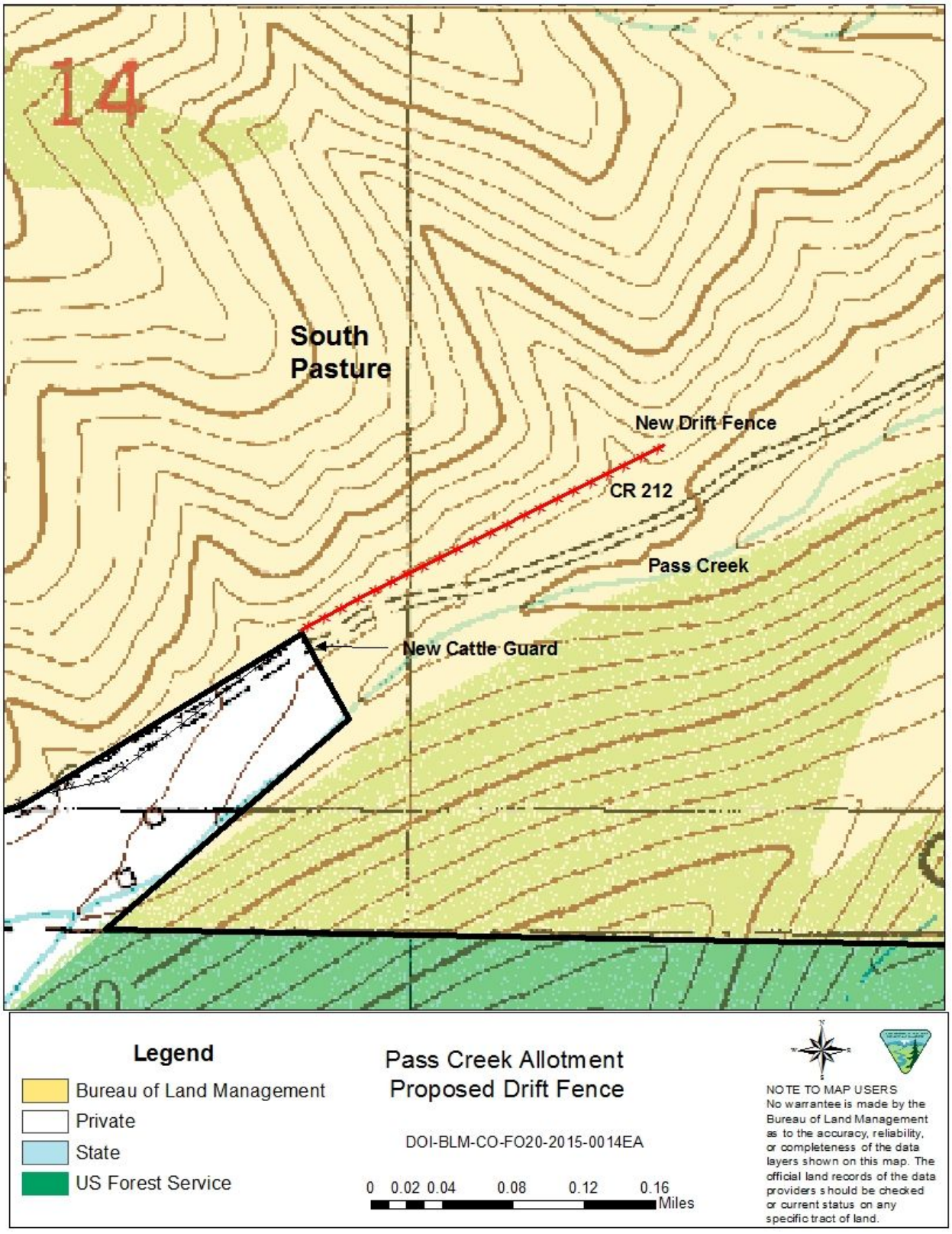
Active AUMs		Total Grazing Preference
148		148

Range Improvements:

The existing water system would need to be fully functional to meet the objectives of this plan. Some sections of existing pipeline may require replacement by uncovering the existing line and replacing with new. Existing stock tanks that are rusted out may be replaced with tire tanks. All replacement work including pipeline and tanks would occur within the existing disturbed footprint. Any new ground disturbing activities outside the existing footprint will require cultural clearance. Repairing the water system will require travel off designated roads and new routes created by this work will be signed with road closures.

A new drift fence and cattle guard may be required if problems are encountered keeping livestock out of Pass Creek. The map below provides an approximate location of the fence and cattle guard. The new cattle guard would be located on CR212 where the drift fence would start and travel east on contour approximately 1,500 feet. The fence would be four strand barbwire and meet BLM fence construction specifications. Coordination with Chaffee County Road & Bridge and the adjacent landowner would occur prior to fence construction.

Future annual maintenance of all range improvements including water systems and existing fences are required by the permittee to comply with the terms & conditions of this permit. Some maintenance work will require limited motorized use off designated roads and trails.



Pass Creek Allotment Monitoring:

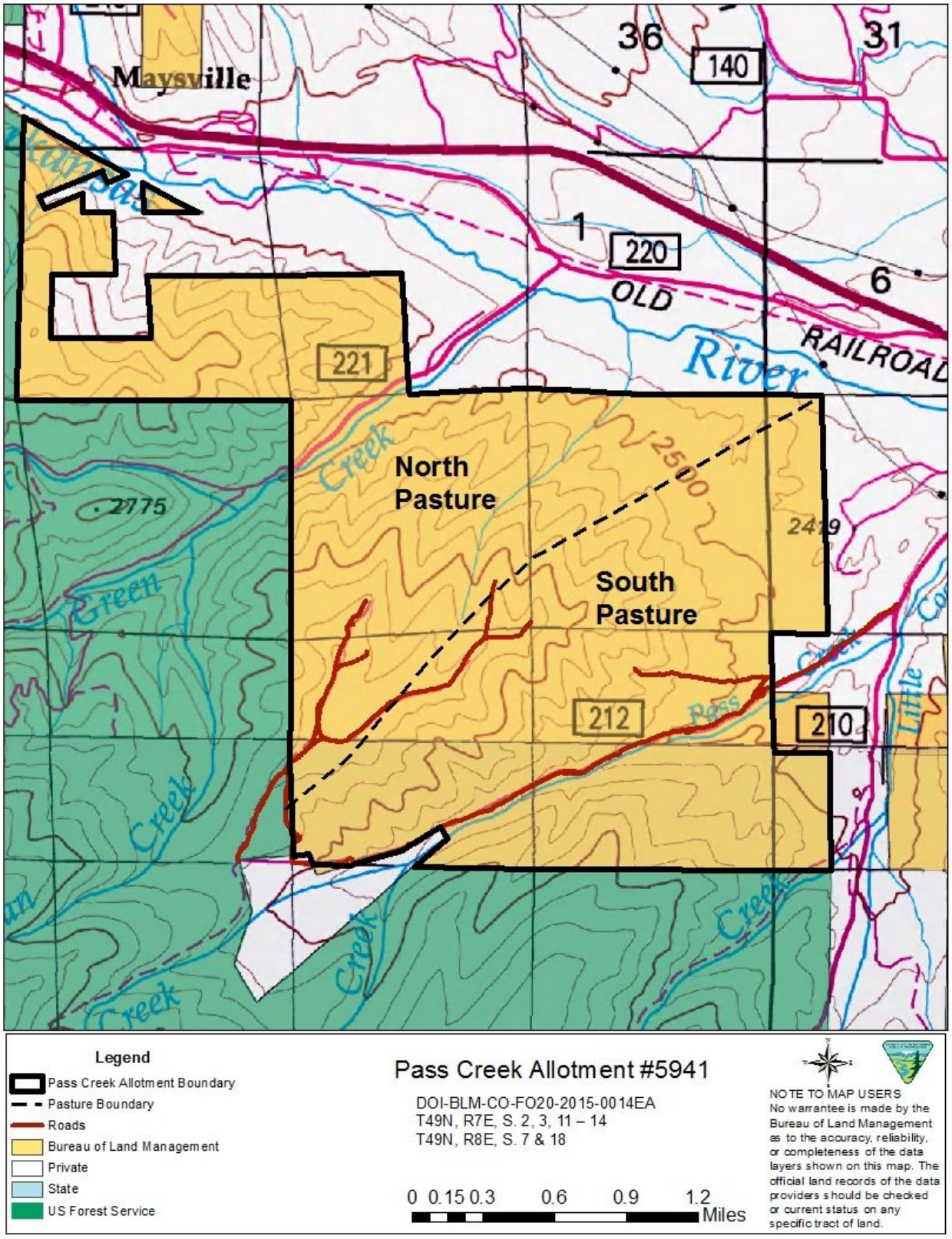
Monitoring will be part of this plan to ensure grazing use is consistent with the allotment management objectives and scope of the permit. Utilization would be conducted at the end of the grazing season at least every two years or when time allows. Actual Use studies will be done on an annual basis reflecting livestock numbers and number of days utilized in each pasture. Changes in vegetation composition, cover and soil stability would be monitored through the existing Daubenmire trend study or by establishing a new study using the AIM strategy. In either case, these studies would be done during the first year of implementation and then every five to ten years thereafter. Long term trend data will be evaluated prior to the next permit renewal to determine if the vegetation and soil objectives are being met for this allotment.

Adaptive Management Measures:

Adaptive management is defined as a process where land managers implement management practices that are designed to achieve an acceptable resource condition in a timely manner. Adaptive management may be triggered when monitoring identifies declining resource condition in response to current management. In addition, practices could be implemented when unforeseen circumstances occur such as drought and/or fire. Activation of these tools must be consistent within the framework of the allotment resource objectives and strive to meet these objectives. All adaptive 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 Adaptive Grazing Management Actions that can be applied as necessary:

Table 2.3.

Adaptive Grazing Management Actions Tool Box
1. Change season of use – do not exceed permitted AUMs
2. Change animal numbers- do not exceed permitted AUMs
3. Change animal class - do not exceed permitted AUMs
4. Adjust permitted AUMs based on appropriate monitoring averaged over three years
5. Defer livestock turn-on/off date
6. Rest from livestock grazing for one or more seasons
7. Construction of permanent fencing to control livestock distribution patterns, or exclude livestock from areas of concern (riparian, wetlands, springs)
8. Construct electric temporary fencing to control livestock distribution patterns
9. Remove permanent fencing and temporary fencing
10. Construct livestock water developments (springs, infiltrators, pipelines, tanks, windmill, sediment traps, wells, stock dams, submersible pumps, solar)
11. Remove existing water developments (springs, infiltrators, pipelines, tanks, windmill, sediment traps, wells, stock dams, submersible pumps, solar)
12. Trailing of livestock across the allotment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Legend
Pass Creek Allotment Boundary
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2.2. Alternatives Analyzed in Detail

2.2.1. No Change Alternative

This alternative renews the permit as currently scheduled for ten years. There would be no changes in the grazing schedule and grazing use would continue to follow the existing AMP. The Adaptive Management measures would not be included under this alternative. The existing water system would be repaired and fully functional. No other range improvements are proposed.

2.2.2. No Grazing Alternative

Under this alternative the permit for the Pass Creek allotment would not be renewed and authorized grazing use would be cancelled. Existing range improvements including pasture fences and all water infrastructure would be removed from the allotment.

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3.1. Affected Environments and Effects

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, 2/9/2015	The proposed action would not impact current air quality.
Geology/Minerals Stephanie Carter, Melissa Smeins	MJS, 3/10/ 2015	The proposed action would not impact geology or minerals.
Soils Jeff Williams	JW, 2/2/2015	See Analysis
Water Quality Surface and Ground Jeff Williams	JW 4/6/15	Water quality on the allotment is currently meeting standards. The proposed grazing and range improvements would have immeasurable impacts to water quality at the utilization levels and rotation described.
Invasive Plants John Lamman	JL, 2/24/2014	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.
T&E and Sensitive Species Matt Rustand	MR, 3/4/2015	There are no known records of BLM sensitive plant species in the area. No effects are anticipated to TES Species.
Vegetation Jeff Williams, Chris Cloninger, John Lamman	JW, 2/2/2015	See Analysis
Wetlands and Riparian Dave Gilbert	DG 3/16/15	See Analysis
Wildlife Aquatic Dave Gilbert	DG 3/16/15	See Analysis
Wildlife Terrestrial Matt Rustand	MR, 3/4/2015	See Analysis
Migratory Birds Matt Rustand	MR, 3/4/2015	See Analysis
Cultural Resources Monica Weimer, Michael Troyer	MDT, 2/4/15	See analysis
Native American Religious Concerns Monica Weimer, Michael Troyer	MDT, 2/4/15	See analysis

Resource	Initial and date	Comment or Reason for Dismissal from Analysis
Economics	mw, 4/7/15	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 thegrazing permit not be granted.
Paleontology Melissa Smeins, Stephanie Carter	MJS, 3/10/ 2015	See analysis
Visual Resources Linda Skinner	LS 2/2/2015	The proposed use allotment is approximately one mile from the highway so is visible for the casual observer. The use is consistent with the character of the landscape so would not have an impact.
Environmental Justice Martin Weimer	mw, 4/7/15	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	MJS, 3/10/ 2015	It is assumed that conditions associated with the proposed project site are currently clean and that no contamination is evident.
Recreation Linda Skinner	LS 2/2/2015	The proposed action area is not an area where recreation use occurs.
Farmlands Prime and Unique Jeff Williams, Chris Cloninger, John Lamman	JW, 2/2/2015	Not Present
Lands and Realty Rich Rotte	RAR, 2/5/2015	The proposed action would not impact current rights-of-way.
Wilderness, WSAs, ACECs, Wild & Scenic Rivers Linda Skinner	LS 2/2/2015	Not Present
Wilderness Characteristics Linda Skinner	LS 2/2/2015	Not Present
Range Management Jeff Williams, Chris Cloninger, John Lamman	JW, 2/2/2015	See Analysis
Forest Management Ken Reed	KR, 2/2/15	The proposed action will not effect on-going or future forest management. The grazing regulations prohibit cutting or removal of forest products without BLM authorization.
Cadastral Survey Jeff Covington	N/A	
Noise Martin Weimer	mw, 4/7/15	This action will not result in any significant impacts due to noise or result in any increased noise levels.
Fire Ty Webb		The proposed action would not impact fire suppression activities.
Law Enforcement Steve Cunningham	N/A	

The affected resources brought forward for analysis include:

- Soils
- Vegetation
- Wetlands and Riparian Zones
- Wildlife Aquatic
- Wildlife Terrestrial
- Migratory Birds
- Cultural Resources
- Native American Religious Concerns
- Range Management
- Paleontological Resources

3.2. Physical Resources

3.2.1. Soils

Affected Environment:

There are two dominant soils on this allotment and include the Cabin gravelly sandy loam and Rough broken lands. The Cabin gravelly sandy loam occurs on the higher elevation of the allotment and typically consists of 9 to 20% slopes. Surface runoff is medium and the hazard of soil erosion is moderate. The Rough broken lands occur on the lower elevation and consists of gentle to steep slopes. Surface runoff is rapid and the hazard for soil erosion is high.

Due to the high erosion hazards on the associated soils, having sufficient and desirable vegetative cover to protect the soil surface during precipitation events and to slow and allow infiltration of runoff is critical.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: The proposed grazing management will allow for sufficient vegetative cover to protect the soil surface during precipitation events and to slow and allow infiltration of runoff. The action will help achieve standards for upland soil health.

Protective/Mitigation Measures: None.

Cumulative Impacts: See Cumulative Impact Summary.

No Action Alternative:

Direct and Indirect Impacts: The No Change Alternative will also allow for sufficient vegetative cover to protect the soil surface during precipitation events and to slow and allow infiltration of runoff. The action will help achieve standards for upland soil health.

Protective/Mitigation Measures: None.

No Grazing Alternative:

Direct and Indirect Impacts: This alternative removes livestock grazing from the allotment. Livestock grazing, when managed properly, tend 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. The effect of livestock hooves also tend 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 these areas will result in an eventual decrease in plant vigor, and the amount of vegetative and litter cover. Furthermore there are no known areas on this allotment where current livestock grazing use is preventing public land from meeting Standards for Public Land Health. Land Health Assessments indicate that livestock grazing does not appear to be preventing public land from meeting applicable land health standards.

Protective/Mitigation Measures: Monitor for livestock trespass.

Cumulative Impacts: None.

Finding on the Public Land Health Standard for Upland Soils:

The recent upland Land Health Assessment identified the allotment as currently Meeting Public Land Health Standards for soil resources. The Proposed Action should continue to promote healthy soil resources on this allotment.

3.3. Biological Resources

3.3.1. Vegetation

Affected Environment:

The elevation for the Pass Creek allotment ranges between 7,800 and 9,500 feet. The climate is semi-arid with precipitation averaging 12 to 18 inches annually. Winter snow cover and moisture retention is typically low due to the wind swept slopes. Optimal precipitation events that favor vegetative growth occur during the early spring and the mid-summer montane monsoons. The optimum growing season for native vegetation in the area is 70 to 90 days with a mean annual temperature of 37 to 40 degrees F.

At the higher elevation the allotment is dominated by open grassland parks interspersed with pockets of spruce, fir and aspen. The dominant grass vegetation includes Arizona and Idaho Fescue, Western Wheatgrass, Needle-and-Thread, Mountain Muhly, Junegrass, Squirreltail and native Bluegrass. Forbs found on the site include Phlox, Mat Penstemon, Buckwheat, Pussytoes, Yarrow, Aster, Daisy and Geranium. Shrubs include Fringe Sage, Winterfat, Rabbitbrush, Big

Sagebrush, Currant and Potentilla. The average annual forage production for this area is 800 – 1,000 lbs per acre per year. Poor grazing management on this site will promote an increase in shrubs and bare ground resulting in a significant decrease in total annual forage production.

The lower elevation of the allotment is dominated by a Pinyon Pine and grass aspect. The associated grass consists of Blue Grama, Indian Rice Grass, Sand Dropseed and Pine Dropseed. Shrubs include Fringe Sage, Mountain Mahogany, Rabbitbrush, Yucca and Currant. The average annual forage production is 150 – 200 pounds per acre and is dependent largely on the density of the Pinyon overstory.

Public Land Health Assessments were conducted on this allotment in 2012 and issues were identified with forest health. The assessment identified 310 acres within the allotment rated as not meeting due to poor forest health; overstocked small diameter trees, moderate to high natural fuel accumulations, limited herbaceous production in the understory, an increase in bark beetle activity and a lack of large old growth trees. No other vegetation issues were documented during this assessment. The allotment also consists of one Daubenmire trend study that was read several times between 1982 and 1997. There was an upward trend between 1982 and 1990 and then a slight downward trend between 1994 and 1997. The plot has not been read since 1997.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: The Proposed Action describes a two pasture deferred rotation between June 1 and July 15. This type of use will promote rest from grazing during critical growing periods on cool and warm season vegetation every other year. It also favors opportunity for complete regrowth of vegetation during the late summer and provides the ability to disperse new seed sources for new plant recruitment. The action also utilizes monitoring and Adaptive Management Measures to allow for flexibility of management in response to declining vegetation condition and environmental changes. The grazing schedule and associated terms and conditions of the Proposed Action will meet Colorado Livestock Grazing Management Guidelines and will help the allotment continue to meet upland vegetation health standards.

Protective/Mitigation Measures: None.

Cumulative Impacts: See Cumulative Impact Summary

No Change Alternative:

Direct and Indirect Impacts: This alternative basically renews the permit as currently scheduled. The existing AMP outlines a similar grazing schedule with the addition of complete rest from grazing every other year. This type of management would promote healthy vegetation communities. However the Adaptive Management Measures are not included in this alternative resulting in a lack in flexibility to adjust management when monitoring or environmental conditions warrant a change. The grazing schedule and associated terms and conditions of the No Change alternative will meet Colorado Livestock Grazing Management Guidelines and will help the allotment continue to meet upland vegetation health standards.

Protective/Mitigation Measures:

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.

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

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

3.3.2. Wetlands and Riparian Zones

Affected Environment: Two high public value riparian areas are within the area of the Proposed Action and Alternatives; Green Creek and Pass Creek. Both areas are in very good condition, and have been little used by livestock for some time, and when so, only incidentally as described. Public use is common with higher amounts in Pass Creek by way of camping, fishing, hunting, with some of the draw stemming from local proximity to nearby Salida and a host of community events that take place there. The area riparian areas underwent recovery from historical grazing impacts many years ago and have greatly improved. Beaver are common particularly in Pass Creek and the riparian area is heavily ponded supporting a more advanced riparian community with more wetlands present than is typical in much of the region; especially at the somewhat lower elevations of these two streams.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: There is really only a direct impact to Pass Creek riparian area because livestock don't generally ever get to Green Creek due to topography, and Pass Creek that is not the area targeted for grazing. Pass Creek sustains direct impact through trailing to the upper grazing areas, and incidental

drift when livestock were to come off or drift downhill from upper pastures by way of some grazing of wetland plant. This analysis assumes this drift and trailing will occur, but use will still be deemed incidental and not to a level where a targets for utilization need to be developed with an associated rigorous monitoring effort. If grazing affects beyond incidental develop, this Proposed Actions allows for a fence to be constructed to eliminate the grazing. It is further assumed that no livestock grazing would occur after July 15, so there is approximately two full months at that elevation for plant regrowth after any light grazing. Therefore, given some light use, in an area that is very functional, no long term negative impact will occur that would reverse the trend of an advancing ecological condition for either of these two watersheds' riparian areas. Multiple use objectives can be achieved on this allotment causing only short term, but measurable, use of riparian vegetation. If the ID team or the Range Conservations Specialists notices problems related to recreation interaction conflicts, or erosion, or plant succession issues, then the separation fence would be constructed to further restrict livestock use, and only just the associated trailing would occur. For clarification, incidental grazing would be < 10% of the wetland plants, in total, would be grazed during the period, and utilization of those plants would be < 50% (per specialist discussions). Grazing beyond that amount would trigger further evaluation. For comparison, grazing in functional riparian areas regionally exceeds this utilization and succession still moves forward.

Protective/Mitigation Measures: None required beyond what is detailed in the Proposed Action with the possible future fence and sustaining upland water sources to minimize riparian utilization.

Cumulative Impacts: Many streams in the region at this elevation are grazed whether private or public. Rested environments tend to be higher in elevation, or adjacent to larger roads where grazing is difficult. Grazing here is planned to be all but non existent (allowing for incidental grazing only) so that the cumulative affect of also grazing this allotment under the Proposed Action is similar to the present situation. The No Action Alternative would eliminate approximately 2 miles of stream grazing.

No Action Alternative:

Direct and Indirect Impacts: This Alternative basically renews the permit as currently scheduled. The existing AMP outlines a similar grazing schedule with the addition of complete rest from grazing every other year. This type of management would similarly promote healthy riparian vegetation if the drift assumptions in the Proposed Action are similar.

Protective/Mitigation Measures: Same as the Proposed Action, but no fence is allowed for if drift becomes excessive, so increased monitoring of utilization is necessary under this Alternative.

Cumulative Impacts: Similar to the proposed Action.

No Grazing Alternative:

Direct and Indirect Impacts: Not Grazing this riparian area as no Direct Affect upon the riparian area, and given it is grazed on occasion by large numbers of

other grazing animals, the riparian vegetation whould still be on occasion cleared of some decadent vegetation in dryer years when snowpack, ice, and high moisture content down in the riparian area doesn't decay decadent grasses.

Protective/Mitigation Measures: None

Cumulative Impacts: None

Finding on the Public Land Health Standard for Riparian Systems: These riparian areas are currently meeting BLM Land Health Standards and would continue to do so under any of the Alternatives.

3.3.3. Wildlife Aquatic

Affected Environment: See also Wetlands and Riparian zones section, but these two streams are quality brook trout fisheries and in addition have substantial off channel standing open water habitat due to beaver pond flooding. Aquatic habitat quality is very good, in similar to native state conditions, however both have well used roads in close proximity.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: There is really only a direct impact to Pass Creek, because livestock don't generally ever get to Green Creek due to topography, and Pass Creek that is not the area targeted for grazing. Pass Creek sustains direct impact through trailing to the upper grazing areas, and incidental drift when livestock were to come off upper pastures by way of some grazing of wetland plant. Some direct impact to aquatic habitat is possible from the slight modification to vegetation, as well as when livestock drink and trample select areas of bank while doing so, or cross the stream and wetland areas. This analysis assumes this drift and trailing will occur, but use will still be deemed incidental and not at ranges too far different than what a heavy game use year may cause, and the situation stays within that range. If grazing affects beyond incidental develop, this Proposed Actions allows for a fence to be constructed to eliminate the grazing. It is further assumed that no livestock grazing would occur after July 15, so there is approximately two full months at that elevation for plant regrowth after any light grazing and to recover stream bank trampling. Therefore, given some light use, in an area that is very functional, no long term negative impact will occur that would reverse the trend of an advancing ecological condition for either of these two watersheds' riparian areas. Multiple use objectives can be achieved on this allotment causing only short term, but measurable, use of riparian vegetation. If the ID team or the Range Conservations Specialists notices problems related to recreation interaction conflicts, or erosion, or plant succession issues, then the separation fence would be constructed to further restrict livestock use to just associated with that of trailing. For clarification, incidental grazing would be < 10% of the wetland plants, in total, would be grazed during the period, and utilization of those plants would be < 50% (per specialist discussions). Grazing beyond that amount would trigger further evaluation. For comparison, grazing in functional riparian areas regionally does exceeds this utilization without reversing succession. Disease risk of the Proposed Action is similar to the existing situation,

or a not grazing at all because of proximity to other waters that are know to be whirling disease positive currently and no other disease risk is elevated.

Protective/Mitigation Measures: None required beyond what is detailed in the Proposed Action with the possible future fence and sustaining upland water sources to minimize riparian utilization.

Cumulative Impacts: Many streams in the region at this elevation are grazed whether private or public. Rested environments tend to be higher in elevation, or adjacent to larger roads where grazing is difficult. Grazing here is planned to be all but non existing (allowing for incidental grazing only) so that the cumulative affect of also grazing this allotment under the Proposed Action is similar to the present situation. The No Action Alternative would eliminate approximately 2 miles of stream grazing.

No Action Alternative:

Direct and Indirect Impacts: This Alternative basically renews the permit as currently scheduled. The existing AMP outlines a similar grazing schedule with the addition of complete rest from grazing every other year. This type of management would similarly promote healthy riparian vegetation if the drift assumptions in the Proposed Action are similar and quality aquatic habitat would be sustained.

Protective/Mitigation Measures: Same as the Proposed Action, but no fence is allowed for if drift becomes excessive, so increased monitoring of utilization is necessary under this Alternative.

Cumulative Impacts: Similar to the proposed Action.

Other Alternative:

Direct and Indirect Impacts: Not Grazing this riparian area as no Direct Affect upon the riparian area or aquatic habitat, and given it is grazed on occasion by large numbers of other grazing animals, the riparian vegetation would still be on occasion cleared of some decadent vegetation in dryer years when snowpack, ice, and high moisture content down in the riparian area doesn't decay decadent grasses.

Protective/Mitigation Measures: None

Cumulative Impacts: None

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

During the recent Land Health Assessment the allotment was identified as meeting standards for Plant & Animal communities.

3.3.4. Wildlife Terrestrial

Affected Environment:

See the vegetation section for a description of the available habitat. The local area is used year around by deer and elk, however, does serve as important winter range for these species as well. A variety of raptor species occur in the planning area including: golden eagle, prairie falcon,

red-tailed hawk, Coopers hawk, sharp-shinned hawk, and kestrel. Other species that may occur in smaller numbers include: ferruginous hawk, rough-legged hawk, Swainson's hawk, harrier, osprey and goshawk. In addition, a wide variety of small mammals and migratory birds are found throughout the allotment common to the shortgrass prairie environment.

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. However, the deferred grazing schedule will alleviate some of this competition.

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 measurable 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 to 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 immeasurable 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 herd.

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 Change Alternative:

Direct and Indirect Impacts: Similar to proposed action.

Protective/Mitigation Measures: Similar to proposed action

No Grazing Alternative:

Direct and Indirect Impacts: 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. 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.

Protective/Mitigation Measures: None.

Cumulative Impacts: Similar to proposed action.

Finding on the Public Land Health Standard for Plant and Animal Communities: The allotment has been evaluated for Public Land Health Standards. The assessment indicated that, under current management, livestock grazing does not appear to be preventing public land from meeting applicable land health standards on this allotment.

3.3.5. Migratory Birds

Affected Environment:

The Colorado Bird Conservation Plan identifies 13 vegetation habitat types important to birds in Colorado. The habitat classifications and assignment of bird species to the habitats were developed by Colorado Bird Observatory (CBO) staff along with individuals who contributed to early development of the conservation prioritization scheme. Bird species were assigned to specific habitats based on their restriction to, or strong representation within, that habitat type. Of these 13 habitat categories, four are described for this allotment (aspen, mountain grassland, riparian, and spruce-fir). Bird species typically found in these habitats are described for each habitat type.

Aspen provides habitat for a variety of wildlife species from large ungulates to small non-game birds and mammals. Because aspen is considered early-seral vegetation to and is usually mixed with adjacent conifer types, the importance of aspen dominated woodlands to birds and other wildlife far exceeds the aerial extent of the stands themselves. Approximately 134 species of birds are reported to use aspen-dominated habitats. This list includes 34 cavity nesters, 7 canopy nesters, 10 shrub nesters, and 10 ground nesters. Few species are limited to aspen, but some reach their highest breeding densities within this habitat type. Bird communities within aspen

stands are often composites of aspen-associated species along with many species found in the surrounding conifer habitats. However, the exact species mix depends on the relative amounts of aspen and conifer in the stand.

Perhaps the most important contribution of aspen-dominated woodlands to avian nesting habitat is as a structural substrate for primary cavity excavators and secondary cavity nesters. False tinder rot is a major source of heartwood decay in live aspens; it produces a hard sapwood shell surrounding a soft interior that is ideal for cavity excavation. Habitat preferences of primary cavity excavators and the decay characteristics of aspen combine to produce much higher cavity densities in aspen than in surrounding conifer habitats. Species that are typically found in aspen habitats include broad-tailed hummingbird, house wren, Lincoln's sparrow, white-crowned sparrow, dark-eyed junco, violet-green swallow, purple martin, mountain bluebird, Cooper's hawk, western wood-pewee, warbling vireo, red-naped sapsucker, mountain chickadee, pygmy and white-breasted nuthatches, and western bluebirds.

Grasslands provide habitat for many species. The severity of the semi-arid climate produces contrasts in vegetation. Grassland birds thus evolved in a shifting landscape mosaic, with access to patches of vegetation in a variety of successional stages and conditions. Species that are typically found in the grassland habitat in the planning area are ferruginous hawk, prairie falcon, upland sandpiper, burrowing owl, Cassin's sparrow, lark bunting, grasshopper sparrow, McCown's longspur, western meadowlark, great-horned owl, golden eagle, common raven, mourning dove and American kestrel.

These large patch grasslands are intermixed with matrix stands of spruce-fir, lodgepole, ponderosa pine, mixed conifer, and aspen forests. In limited circumstances they form the "matrix" of high-elevation plateaus. Montane and subalpine grasslands are generally interspersed in forest communities as park-like openings that vary in size from a few to several hundred acres.

Species most commonly found in the subalpine riparian shrubland habitats are broad-tailed hummingbird, dusky flycatcher, yellow warbler, MacGillivray's warbler, Wilson's warbler, Lincoln's sparrow, song sparrow, white-crowned sparrow, and fox sparrow. 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. In coniferous systems, Cordilleran flycatcher is the most frequently detected species, followed by broad-tailed hummingbird, ruby-crowned kinglet, American robin, golden-crowned kinglet, Swainson's thrush, mountain chickadee, yellow-rumped warbler, and western tanager.

Spruce-fir forests are present at 9,000-12,000 feet in elevation. Engelmann spruce and subalpine fir are the dominant tree species. Engelmann spruce is found without subalpine fir at the lower elevations, but only on cool, sheltered sites. Lodgepole pine and aspen are often mixed in at lower and middle elevations, and limber pine and bristlecone pine are present at middle and higher elevations. Understory vegetation can vary from sparse to quite dense, perhaps the densest of the conifer forests in this region with the exception of dense Gambel oak under ponderosa pine. Blueberry, shrubby cinquefoil, and Colorado currant are common components.

The avian community in this area has a comparatively large number of seed-eating birds, a reflection of the abundant cone crops available here. Compared to eastern spruce forests, fewer birds of this region are of conservation concern. Birds commonly found in this forest type include the Gray Jay, Mountain Chickadee, Red-breasted Nuthatch, Ruby-Crowned Kinglet, Hermit Thrush, Pine Grosbeak, and Pine Siskin.

The following birds are listed on the U.S. Fish and Wildlife Service Birds of Conservation Concern (BCC) – 2002 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, but 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, apparently 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.

Northern harriers reside throughout Colorado, with highest densities on the eastern plains, mountain parks, and western valleys. These hawks feed on small mammals, birds, reptiles, and amphibians. They hunt by flying low over wetlands, grasslands, shrublands, and croplands.

Prairie falcons nest in scattered locations throughout the state where they inhabit the grassland and cliff/rock habitat types. These falcons breed on cliffs and rock outcrops, and their diet during the breeding season is a mix of passerines and small mammals.

Williamson's sapsuckers breed in forested regions and in Colorado populations are concentrated along the eastern edge of the Rockies. Williamson's sapsuckers nest primarily in ponderosa pine and in aspen components of mixed-conifer. They often place nest cavities in aspen trees, and often choose nest trees in aspen stands adjacent to open ponderosa pine or mixed-conifer forest.

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.

Monitoring is of great importance to ensure adequate nesting substrate and cover is available during the nesting and brood rearing seasons.

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 Change Alternative:

Direct and Indirect Impacts: Similar to the proposed action.

Protective/Mitigation Measures: Similar to the 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. 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 negative response. Reasons for a negative response include, but are not limited to a reduction in nesting cover and 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: Similar to the proposed action.

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 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.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: No concerns at present

Protective/Mitigation Measures: None at present

Cumulative Impacts: None

No Action Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Other 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 site distribution is extremely low in density and not coincident with livestock concentration areas. 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 consulted with 17 tribes regarding the proposed grazing permit renewal. 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, Pawnee Nation of Oklahoma, 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

Other Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: None

3.4.3. Paleontological Resources

Affected Environment:

The proposed project area is located within the Dry Union Formation. The Dry Union formation is a Miocene geologic formation (about 10 million years old) that has a high potential for producing vertebrate fossils including horses, camels, and rodents. This is ranked as a class 5 formation and probability for finding significant fossils is high. A pre work survey is required prior to any ground disturbing activity and on-site monitoring may be required during construction activities.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts:

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.

Protective/Mitigation Measures:

A pre-work survey must be conducted prior to any new ground disturbing activity such as fence installation. This doesn't include maintenance of existing pipelines or water tanks where digging has already occurred to install these features. In order to prevent potential impacts to paleontologic resources, a stipulation will be attached to the permit that directs the holder to notify the BLM RGFO immediately if any vertebrate fossils or their traces are discovered during operations within this allotment. Operations may continue as long as the fossil specimen would not be damaged or destroyed by the activity. Within 5 working days of notification, the BLM RGFO shall evaluate or have evaluated such discoveries and shall notify the operator what action shall be taken with respect to such discoveries.

Cumulative Impacts:

Although the project area does not contain any known fossil resources, there is a possibility that ground disturbing work in the area may uncover fossil resources. Adverse significant impacts to paleontological resources can be reduced to a negligible level through mitigation of ground disturbing activities. It is possible that the proposed project would have the beneficial impact that ground disturbance activities might result in the discovery of important fossil resources.

No Action Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: Same as Proposed Action

Other Alternative:

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

Cumulative Impacts: Same as Proposed Action

3.5. Land Resources

3.5.1. Range Management

Affected Environment: See Background Section.

Environmental Effects

Proposed Action:

Direct and Indirect Impacts: The proposed action as scheduled for the allotment meets the Standards for Public Land Health and Guidelines for Livestock Grazing in Colorado. The grazing schedule provides for vegetation deferment during most of the growing season and utilization restrictions that will allow for soil stability and plant health. Repairing the existing water system will promote even

and dispersed livestock use on the allotment and open new areas to grazing that typically would not be grazed. Adaptive management gives the BLM and permittee the flexibility to implement a number of tools to meet desired conditions on the ground and adapt to environmental changes that may occur on an annual basis.

Protective/Mitigation Measures: None.

Cumulative Impacts: See Cumulative Impact Summary

No Change Alternative:

Direct and Indirect Impacts: Renews the grazing permit without any changes. This alternative would promote Standards for Public Land Health and Guidelines for Livestock Grazing in Colorado. As stated in the Background section, current management is difficult for both the operator and BLM to follow due to the complexity. Also, this alternative does not allow for adaptive management. As conditions change on the ground adjustments to management to meet these changes become more difficult.

Protective/Mitigation Measures: None.

No Grazing Alternative:

Direct and Indirect Impacts: Under this alternative, grazing use would not be authorized on the allotment. There are negative economic impacts inherited by both the applicant and the BLM under this alternative. There is extensive livestock management infrastructure on the allotment that would need to be removed including windmills, storage tanks, stock traughs, buried pipeline and interior fences. BLM would be responsible to bear the costs to remove these items. Also, the permittee would be required to replace the lost AUMs associated with this alternative at a cost of $18 to $20 per AUM per year.

Protective/Mitigation Measures: Monitor for livestock trespass.

Cumulative Impacts: The Pass Creek Allotment has been permitted for grazing use under public jurisdiction since the Taylor Grazing Act was implemented. During the last 15 years many of the private ranches in the area are experiencing severe development due to the popularity of living in the area. As development occurs grazing lands are converted to rural housing communities and sub divisions. Not authorizing grazing on this allotment would be a cumulative negative impact to both the economy and ranching heritage found in the area.

3.6. Cumulative Impact Summary

The geographic scope of cumulative impacts is the area described as the Collegiate / Sangre Sub-region in the Royal Gorge Resource Area Resource Management Plan. Within this area, BLM manages approximately 56,369 acres of public land. The area also consists of approximately 92,135 acres of private and 13,832 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, and local drought conditions. These impacts could have direct and indirect impacts to these public lands.

There is extensive grazing in the region on private, public, and state lands. Grazing this pasture (and allotment) is cumulative to all other grazing. Because this is the headwater pasture, grazing affects do not occur outside of agency control above this pasture so the prescription set annually for when to graze this pasture is the primary impact to this segment of stream. Regionally, because of the harsh weather, most grazing on riparian areas nearby is also during the growing season so time allotted for regrowth here is important where that may not be considered so much regionally.

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.

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4.1. List of Preparers and Participants

SEE ID Team Review Chapter 3

4.2. Tribes, Individuals, Organizations or Agencies Consulted

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, Pawnee Nation of Oklahoma, Rosebud Sioux Tribe, Eastern Shoshone Tribe, Southern Ute Tribe, Standing Rock Sioux Tribe, Ute Tribe, and the Ute Mountain Ute Tribe.

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Chapter 5 References

Bock, C. E., V. A. Sabb, T. D. Rich, and D. S. Dobkin. 1993. Effects of livestock grazing on neotropical migratory landbirds in western North America. General Technical Report RM-229. Fort Collins, Colorado: Rocky Mountain Forest and Range Experiment Station, United States Department 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: 291–301.

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.

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6.1. Finding of no Significant Impact

DOI-BLM-CO-F020-2015-0014 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:

Based on the analysis of potential environmental impacts (per Environmental Assessment), I have determined that the proposed action with the mitigation measures described below will not have any significant impacts on the environment and an environmental impact statement is not required.

6.2. Rationale:

Context:

The Pass Creek allotment is located in Chaffee County, Colorado and lies west of Poncha Springs. It encompasses the uplands between Pass Creek and Greens Creek drainages which flow into the South Arkansas river.

The Proposed Action alternative analyzes a change in grazing management on the Pass Creek allotment. This action modifies the existing grazing schedule, replaces the existing AMP with new resource objectives and monitoring criteria and implements adaptive management measures to help mitigate potential future impacts. A new permit is issued for ten years.

Intensity:

I have considered the potential intensity/severity of the impacts anticipated from the Pass Creek Allotment Modification 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 allotment 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 short period thereby allowing for plant rest and recovery. Utilization restrictions are in place to protect the soil resources and provide forage and cover for wildlife. Adaptive management practices 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 allotment proposed for grazing authorization is meeting BLM Land Health Standards.

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.

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, Areas of Critical Environmental Concern or designated wilderness areas or wilderness study areas were present.

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, or sensitive species known to inhabit this location. The proposed action will not result in any significant impacts to threatened and endangered or sensitive species.

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.

6.3. Signatures:

NAME OF PREPARER: Jeff Williams

SUPERVISORY REVIEW: Melissa K.S. Garcia

NAME OF ENVIRONMENTAL COORDINATOR: /s/ Martin Weimer

DATE: 8/10/15

SIGNATURE OF AUTHORIZED OFFICIAL: /s/ Keith E. Berger

Keith E. Berger, Field Manager

DATE SIGNED: 9/22/15