

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: *Three Springs Ranch*, operates a nearly yearlong cattle ranch on various Bureau of Land Management (BLM) grazing allotments, with feeding of livestock on private lands near the ranch headquarters during a period of winter, approximately mid February to late March. Other than this feeding period, the ranch winters the livestock on the Massadona, Horse Draw, and Hall Draw allotments from approximately late December through mid May. At approximately the first part of May, the ranch begins moving the herd north of highway 40 onto the Wolf Creek allotment, where the livestock move through various pastures until approximately late December.

The tables below are an acreage breakdown (controlled acres) by land status of allotments permitted to Three Springs Ranch. The first table is broken down by pastures within the Wolf Creek allotment. The second table is all allotments permitted by Three Springs Ranch broken down by land status.

Breakdown of Acres Controlled within the Wolf Creek Allotment by Pasture				
Pastures of the Wolf Creek Allotment (06323)	BLM Acres	State Acres	Private Acres	Total Acres
Wolf Creek	8,078.0	332.8	1,141.6	9,552.4
Disappointment Draw	8,775.5	210.9	838.3	9,824.8
Bear Valley	4,791.8	441.8	5,922.3	11,155.9
Lower Sand Hills	7,859.4	584.9	569.3	9,013.6
Ruppe	1,036.8	0.0	1,531.2	2,568.0
Jack Spring	1,954.8	274.5	2,114.0	4,343.4
Upper Sandhills	1,273.5	365.4	0.8	1,639.7
Luxen	1,808.7	2.1	1,120.3	2,931.1
Skull Creek	8,262.7	642.9	0.0	8,905.7
Mud Spring	5,344.8	637.1	1,167.6	7,149.4
Johnson Draw	4,596.2	0.0	1,692.2	6,288.4
Chain Cow (Private land pasture, taken out of allotment)	0.0	N/A	N/A	N/A
Bull Pasture	202.0	6.8	1,811.3	2,020.1
Upper Ruppe	51.5	0.0	347.7	399.2
Three Springs	170.6	0.0	279.3	449.9
Peterson Draw	43.4	0.0	383.5	426.9
Totals:	54,249.7	3499.2	18,919.4	76,668.3

Breakdown of Acres Controlled in Three Springs Ranch's (0501447) Allotments					
	Wolf Creek (06323)	Hall Draw (06335)	Massadona (06324)	Horse Draw Horse Draw Pasture (06332)	Total:
BLM Acres	54,250	6,977	8,405	12,566	82,198
State Acres	3,499	0	638	888	5,025
Private Acres	18,919	0	1,689	0	20,608
Total Acres	76,668	6,977	10,732	13,454	107,831

Three Springs Ranch (cattle) and Villard Ranch (sheep) are both authorized on the Horse Draw allotment, with Three Springs Ranch permitted on the Horse Draw pasture and Villard Ranch permitted on the Baking Powder pasture. However, these two pastures of the Horse Draw allotment are not fenced from one another and are grazed by the two ranches under a Rangeline Agreement (see Figure 2, *Map of the Massadona, Horse Draw, and Hall Draw Allotments*). All citations within this document of the Horse Draw allotment will be in reference to the Horse Draw pasture of the Horse Draw allotment, unless otherwise noted.

Annual precipitation within the proposal area varies from approximately 11.5 inches in the lower elevation zone to approximately 20 inches in the high country on Blue Mountain. Snowfall, which accounts for about 45% of the annual precipitation, occurs from mid October to late April and accumulates on the ground from January through March. Within the North of Highway 40 elevation zone (see below), average precipitation is 13.49 inches at Three Springs Ranch (data from the National Weather Service weather station, Massadona 3E). The proposed action can be roughly divided into three elevation zones with dominant vegetative classifications as listed below:

- 1: South of Highway 40 – Salt desert shrub, pinyon/juniper, and sagebrush communities.
 - 5500 ft (Wolf Creek) through 6150 ft (Coal Ridge).
- 2: North of Highway 40 – Sagebrush and pinyon/juniper plant communities.
 - 5800 ft (Wolf Creek) through 7050 ft (Sandhills).
- 3: Blue Mountain – Mountain shrub and pinyon/juniper plant communities.
 - 6600 ft (Peterson Post Flat) through 8700 ft (Tanks Peak).

Grazing allotments within the White River Field Office (WRFO) have been placed in one of three management categories that define the intensity of management: (1) Improve, (2) Custodial and (3) Maintain. These categories broadly define rangeland management objectives in response to an analysis of an allotment's resource characteristics, potential, opportunities, and needs.

Allotment Categorization for allotments analyzed in this permit renewal:

- Wolf Creek – Improve
- Hall Draw – Custodial
- Horse Draw – Improve
- Massadona – Improve

A. Proposed Action: Renewal of Three Springs Ranch’s grazing permit (0501447) for a 10 year period as outlined in the Proposed Grazing Permit table below, with a Term and Condition on the permit to follow the prescribed rotation pattern as outlined in this environmental assessment (EA), which will also function as an allotment management plan (AMP), 2006 Three Springs AMP. A rest period (even/odd year) from livestock grazing during the critical growing period will be incorporated into this AMP.

The Rangeland Administration System (RAS) is limited to a single schedule which can not display a rotation on a grazing permit. Therefore, the below grazing schedule would be incorporated onto the grazing permit (0501447) under renewal, with the proposed rotational schedule added as a Term and Condition on the grazing permit which will state “grazing use will occur as outlined in the 2006 Three Springs AMP”. Active animal unit months (AUMs) have been adjusted to reflect carrying capacity of the rangelands as developed in conjunction with the BLM and submitted by the ranch’s *Grazing Application for Permit Renewal*. An AUM is the amount of forage necessary for the sustenance of 1 cow for a period of 1 month.

Proposed Grazing Permit (0501447) for Three Springs Ranch										
Allotment		Livestock		Date		% PL	BLM AUMs	Active AUMs	Susp. AUMs	Total AUMs
Name	No.	#	Kind	On	Off					
Wolf Creek	06323	800	Cattle	05/08	12/30	63%	3927	3928	399	4327
		5	Horses	06/01	08/01	14%	1			
Hall Draw	06335	210	Cattle	12/20	02/20	100%	435	435	194	629
Massadona*	06324	200	Cattle	12/20	02/07	76%	250	1140	335	1475
		800	Cattle	03/25	04/30	76%	740			
		400	Cattle	05/01	05/15	76%	150			
Horse Draw*	06332	200	Cattle	12/20	02/07	93%	306	1394	0	1394
		800	Cattle	03/25	04/30	93%	905			
		400	Cattle	05/01	05/15	93%	183			

*Grazing use during the spring period will be an every other year rotational system as outlined in this document.

The proposal is wintering 800 head of cattle from approximately late December with cattle split between the Hall Draw, Massadona, and Horse Draw allotments until early February. From approximately early February through late March the cattle would be fed on private lands. After this feeding period, the full 800 herd would be placed in late March in either the Massadona or the Horse Draw allotments dependent upon the rotational year (even/odd year) until mid May. After early/mid May, the 800 cows would be placed onto the Wolf Creek allotment where they would move through various pastures until late December (see tables below).

The proposed action was developed in conjunction with the grazing permittee (Minford Beard and Joel Tuck, Three Springs Ranch managers) and is outlined in the *Grazing Application for Permit Renewal* form signed by Mr. Beard and Mr. Tuck on 11/22/04.

Within the developed pasture schedule for the Wolf Creek allotment, the small Three Springs pasture (171 BLM acres) and Peterson Draw pasture (43 BLM acres) are encompassed within the Wolf Creek and Lower Sandhills pastures. The Gather and Sort pasture will be combined into

the Luxen pasture due to the old pasture division fence on private land that ran east to west between the pastures is no longer in use, and the area is currently used by cattle in conjunction with one another. During the critical growing season, an odd/even rotational system had been developed for the Wolf Creek and Lower Sandhills pastures of the Wolf Creek allotment, which will provide a rest, deferred turn on date, and/or reduced use levels dependent upon the year. Within the Wolf Creek allotment, pasture movement by 800 head of cattle and 95 yearlings will be as follows:

Proposed Grazing Schedule for the Wolf Creek Allotment by Pasture							
Name Wolf Creek	Number 06323	Livestock		Date		% PL	BLM AUMs
		#	Kind	On	Off		
Pasture:							
Wolf Creek (even year)		200	Cattle	05/01	05/15	80%	79
Lower Sandhills (even year)		200	Cattle	05/01	05/31	89%	181
Wolf Creek (even year)		600	Cattle	05/16	05/31	80%	252
Wolf Creek (odd year)		800	Cattle	05/16	05/31	80%	341
Bear Valley		665	Cattle	06/01	07/10	37%	324
Disappointment Draw		135	Cattle	06/01	07/10	85%	151
Ruppe / Upper Ruppe		800	Cattle	07/11	07/31	25%	138
Mud Spring		400	Cattle	08/01	09/30	70%	562
Johnson Draw		400	Cattle	08/01	09/30	71%	570
Off AMP (Chain Cow)		400	Cattle	10/01	10/31	0%	0
Bull Pasture		400	Cattle	10/01	10/31	11%	45
Luxen		700	Cattle	11/01	11/15	61%	211
Jack Spring		100	Cattle	11/01	11/15	43%	21
Skull Ck		500	Cattle	11/16	12/20	88%	506
Jack Spring		300	Cattle	11/16	12/20	43%	148
Lower Sandhills		95	Yearling	05/01	06/15	89%	128
Upper Sandhills		95	Yearling	06/16	09/25	76%	242
Lower Sandhills		95	Yearling	09/26	12/31	89%	270
Total (Even Year)--							3828
Total (Odd Year)--							3657

Within the Massadona, Horse Draw, and Hall Draw allotments, movement of 800 head of cattle will be as follows based upon an even year/odd year rotation to provide a critical growing season rest for plant communities to complete a full life cycle:

Proposed Grazing Schedule for Rotation on Winter/Spring Allotments - Three Springs Ranch, 800 Cows							
Allotment		Livestock		Date		% PL	BLM AUMs
Name	Number	#	Kind	On	Off		
<i>Even Year</i>							
Massadona	06324	50	Cattle	12/21	02/07	76%	61
Massadona	06324	800	Cattle	03/25	04/30	76%	740
Massadona	06324	400	Cattle	05/01	05/15	76%	150
Horse Draw	06332	540	Cattle	12/21	02/07	93%	809
Massadona Total:							951
Horse Draw Total:							809
Hall Draw	06335	210	Cattle	12/20	02/20	100%	435
<i>Odd Year</i>							
Massadona	06324	410	Cattle	12/21	02/07	76%	502
Horse Draw	06332	180	Cattle	12/21	02/07	93%	270
Horse Draw	06332	800	Cattle	03/25	05/15	93%	1272
Massadona Total:							502
Horse Draw Total:							1542
Hall Draw	06335	210	Cattle	12/20	02/20	100%	435
Massadona						2 Year AUM Average:	727
Horse Draw						2 Year AUM Average:	1176

The percent public land (% PL), which is the percentage of BLM (active) AUMs in relation to total AUMs (BLM, private, and state AUMs), was recalculated for all allotments and pastures, including pastures within the Wolf Creek (see tables: Proposed Grazing Permit and/or Proposed Grazing Schedule for the Wolf Creek Allotment by Pasture). The current billing system and grazing permit for the Wolf Creek allotment's % PL is not subdivided by pastures. The proposed adjustment of the % PL on the Wolf Creek allotment was made due to the facts that: 1) The Chain Cow pasture of the Wolf Creek allotment and its associated private AUMs will be removed from the allotment, as this pasture is entirely private land. 2) Associated with the current % PL on the Wolf Creek allotment are AUMs attached to Dinosaur National Monument, which the ranch no longer controls. 3) A more accurate forage allocation among land ownerships was able to be determined due to technological advancements (i.e. computer calculations by ArcView GIS 3.3 and excel spreadsheets) since 1982 when the % PL was originally determined.

Plan of Operation:

Each spring, 30 days prior to turnout in the Wolf Creek allotment, the permittee will submit a plan of operation (grazing application) for the grazing year to the BLM for approval. The plan of operation will include the anticipated turnout dates, numbers of animals, and the sequence that the allotments and/or pastures will be used for the year.

Limits of Flexibility:

The permittee will be provided flexibility during the grazing year from the submitted plan of operation for which does not require prior approval from BLM. This flexibility will be limited to on or off dates and number of animals to adjust to changing climatic changes, forage variability, and operational needs. This flexibility will be limited to 10 days either side of the on or off dates provided total days of use do not exceed 10 days from the schedule approved in the annual plan of operations. However, this flexibility does not apply to extending beyond the off date (05/15) during the spring use period within the Horse Draw and Massadona allotments unless pre-approved by the BLM. The permittee will also be able to adjust number of animals by 10% (+/-) from the annual plan of operation provided the total AUMs of use do not exceed the AUMs scheduled.

Flexibilities that require approval by the BLM are adjustments made beyond the above criteria. BLM approved flexibilities and/or changes to this plan may be required due to such factors as forage influences from grazing, drought, fire, and/or water availability. The BLM, in conjunction with the grazing permittee, may also adjust this Allotment Management Plan (AMP) if a situation develops in order to meet Public Land Health Standards.

Rangeland Improvements Necessary to Implement the Grazing System:

No rangeland improvements (RI) are proposed to implement the grazing system. Future evaluations of allotment conditions may identify improvements that would aid in achieving objectives. In which case, a separate Environmental Assessment (EA) would be compiled to approve any such new RI on a site specific basis.

Monitoring and Evaluation:

Trend sites within allotments assigned to Three Springs Ranch were mostly established in 1981 and last read in 2004. These trends sites include a permanent, repeatable photo plot and a permanent, repeatable Daubenmire transect line to measure ground cover and frequency. The study sites were established in key areas to monitor livestock grazing use. All study sites were established under protocol developed in the *Grazing Allotment Monitoring Plan for the White River Resource Area*. The next cycle for reading all trend studies will be in 4-5 years (2008, 2009) and then read again in 9-10 years from now (2013, 2014), prior to the future renewal of the grazing permit for Three Springs Ranch. Future readings of trend studies by BLM staff are partially dependent upon future workload capabilities and priorities.

Within the Wolf Creek allotment there are 14 established trend plots. However, 2 of these sites have been destroyed since their original establishment, one by a fenceline and the other by a hunter road. The remaining 12 trend sites were read in 2004, of these 4 were new Daubenmire transects established off existing photo plots.

Within the Massadona allotment there are 3 trend sites established. The Horse Draw allotment contains 4 trend sites, and 4 trend sites are located in the Hall Draw allotment.

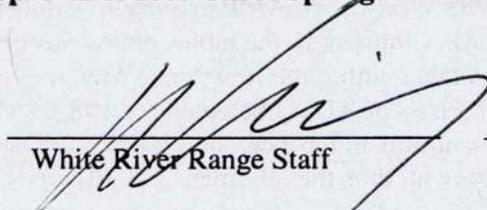
Grazing Permit Terms and Conditions:

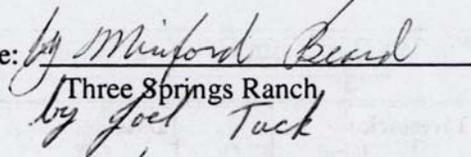
The following terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

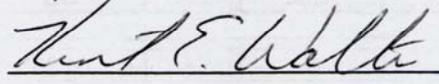
1. Grazing fees are due upon issuance of a billing notice which will be based upon a submitted Actual Use form (after-the-fact-billing). Actual Use will be due twice during the grazing year and split between the Wolf Creek allotment and the southern/winter allotments (Massadona, Horse Draw, and Hall Draw). Actual use will be due within 15 days after completing the annual grazing use period within the Wolf Creek allotment and within 15 days after completing the annual grazing use period within the southern/winter allotments.
2. Each spring, 30 days prior to turnout, the permittee will submit a plan of operation (grazing application) for the grazing year to the BLM for approval. The plan of operation will include the anticipated turnout dates, numbers of animals, and the sequence that the allotments and/or pastures will be used.
3. The permittee or lessee must provide reasonable administrative access across private and leased lands to the BLM for the orderly management and protection of the public lands, as outlined 43 CFR 4130.3-2(h).
4. Grazing use will occur as outlined in the 2006 Three Springs AMP schedule (EA# CO-110-04-049ea).
5. It is unlawful for the permittee, agents or employees to knowingly disturb or collect cultural, historical or paleontological materials on public lands. If cultural, historical or paleontological materials are found, including human remains, funerary items or objects of cultural patrimony. The permittee is to stop activities that might disturb such materials, and notify the authorized officer immediately.
6. No grazing use can be authorized under this grazing permit/lease during any period of delinquency in the payment of amounts due in settlement for unauthorized grazing use.
7. Grazing use authorized under this grazing permit/lessee may be suspended, in whole or in part, for violation by the permittee/lessee of any of the provisions of the rules or regulations now or hereafter approved by the Secretary of the Interior.
8. This grazing permit/lease is subject to cancellation, in whole or in part, at any time because of:
 - a. Noncompliance by the permittee/lessee with rules and regulations now or hereafter approved by the Secretary of the Interior.
 - b. Loss of control by the permittee/lessee of all or a part of the property upon which it is based.
 - c. A transfer of grazing preference by the permittee/lessee to another party.

- d. A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described herein.
 - e. Repeated willful unauthorized grazing use
9. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1965, as amended, which sets forth nondiscrimination clauses.
 10. The permittee/lessee must own or control and be responsible for the management of the livestock authorized to graze under this grazing permit/lease.
 11. The authorized officer may require counting and/or additional/special marking or tagging of the livestock authorized to graze under this grazing permit/lease.
 12. The permittee's/lessee's grazing case file is available for public inspection as required by the Freedom of Information Act.
 13. In order to improve livestock distribution on the public lands, all salt blocks and/or mineral supplements will not be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated though a written agreement or decision in accordance with 43 CFR 4130.3-2(c).
 14. In accordance with 43 CFR 4130.8-1(F): Failure to pay grazing bills within 15 days of the due date specified in the bill shall result in a late fee assessment. Payment made later than 15 days after the due date, shall include the appropriate late fee assessment. Failure to make payment within 30 days may be a violation of 43 CFR Sec. 4140.1(b) (1) and shall result in action by the authorized officer under 43 CFR Secs. 4150.1 and 4160.1-2 (Trespass).

Acceptance and Approval of 2005 Three Springs Ranch Allotment Management Plan (AMP):

Prepared by:  2-1-06
 White River Range Staff Date

Grazing Permittee:  2/1/06
 Three Springs Ranch Date
 by Joel Tuck

Approved:  03/13/06
 White River Field Office Manager Date

B. Continuation of Current Management Alternative: Re-issuance of Three Springs Ranch's current grazing permit (no changes) for a 10 year period as outlined below.

Current Grazing Permit 0501447 – Three Springs Ranch										
Allot. #	Allot. Name	Livestock		Begin	End	% PL	AUMs	Active AUMs	Susp AUMs	Total AUMs
		#	Kind							
06323	Wolf Creek	800	Cattle	03/01	01/09	54	4474	4474	532	5006
		5	Horse	06/01	08/01	14	1			
06324	Massadona	415	Cattle	03/01	04/30	75	624	1171	446	1617
		650	Cattle	12/01	01/03	75	545			
06335	Hall Draw	200	Cattle	12/24	03/08	100	500	500	258	758
06332	Horse Draw	350	Cattle	03/01	04/30	95	667	1547	0	1547
		503	Cattle	01/04	02/28	95	880			

Three Springs Ranch has the Wolf Creek Allotment Management Plan (AMP) in place, which was written in September of 1982. Associated with this AMP were proposed projects and vegetative treatments to execute the AMP. However, these projects / treatments were never fully implemented by the BLM and/or the grazing permittee. Also, the 1982 AMP was written before the ranch acquired the Massadona and Horse Draw allotments (1987). An alternate year grazing schedule for these two allotments were added into the AMP, however the existing schedule for the Wolf Creek allotment was never modified to reflect the addition of the Massadona and Horse Draw allotments. Therefore, since the inception of the 1982 Wolf Creek AMP, it was never fully implemented by the BLM or followed by the ranch. The 1982 AMP is essentially a nonfunctional document with little credence in its current and/or past state. Also, as shown by actual use submitted by the permittee, the ranch has not followed this plan because the AMP is antiquated and is not a feasible cattle management plan for reasons outlined above (see Actual Use table below).

See tables below for the existing 1982 Wolf Creek AMP grazing schedules between year 1 and year 2. The % PL for the Wolf Creek Allotment in the tables below has been modified based upon the Acres & AUM Breakdown table within the Rangeland Management Section of this document for a more accurate comparison of AUMs between the 1982 AMP and the proposed action. Historically, the Wolf Creek allotment has been billed and calculated at 54% PL for all pastures within the Wolf Creek allotment, thus the allotment's % PL was not previously subdivided by pastures.

Wolf Creek AMP's (1982) Interim Grazing System – Year 1						
Wolf Creek Allot. 06323	Livestock		Date		% PL	BLM AUMs
	#	Kind	On	Off		
Pasture:						
A - Wolf Creek, Sandhills	800	C	03/01	04/30	83%	1332
F - Bear Valley / Disappointment	800	C	05/01	06/30	37%	594
C - Tanks Peak (Johnson Draw,	600	C	07/01	10/15	59%	1245

Wolf Creek AMP's (1982) Interim Grazing System – Year 1							
Wolf Creek Allot. 06323		Livestock		Date		% PL	BLM AUMs
		#	Kind	On	Off		
Mud Spring, Ruppe)							
D - Jack Spring		200	C	07/01	09/07	43%	195
E - Luxen / Skull Ck		200	C	09/08	10/15	79%	197
C & E - Tanks Peak & Luxen / Skull Ck		100	C	10/16	11/14	65%	64
Off AMP		700	C	10/16	11/15	0%	
F - Bear Valley / Disappointment		700	C	11/16	01/14	37%	511
A - Wolf Ck, Sandhills		100	C	11/15	01/14	83%	166
Total--							4304
Massadona	06324	300	C	12/01	12/09	75%	67
		625	C	12/10	02/15	75%	1048
Horse Draw	06332	625	C	02/16	04/30	95%	1464
Massadona Total:							1115
Horse Draw Total:							1464

Wolf Creek AMP's (1982) Interim Grazing System – Year 2							
Wolf Creek Allot. 06323		Livestock		Date		% PL	BLM AUMs
		#	Kind	On	Off		
Pasture:							
A - Wolf Creek, Sandhills		800	C	03/01	04/30	83%	1332
F - Bear Valley / Disappointment		800	C	05/01	06/30	37%	594
C - Tanks Peak (Johnson Draw, Mud Spring, Ruppe)		600	C	07/01	10/15	59%	1245
D - Jack Spring		200	C	07/01	09/07	43%	195
E - Luxen / Skull Ck		200	C	09/08	10/15	79%	197
C & E - Tanks Peak & Luxen / Skull Ck		100	C	10/16	11/14	65%	64
Off AMP		700	C	10/16	11/15	0%	
F - Bear Valley / Disappointment		700	C	11/16	01/14	37%	511
A - Wolf Ck, Sandhills		100	C	11/15	01/14	83%	166

Wolf Creek AMP's (1982) Interim Grazing System – Year 2							
Wolf Creek Allot. 06323		Livestock		Date		% PL	BLM AUMs
		#	Kind	On	Off		
Totals--						4304	
Massadona	06324	300	C	12/01	12/09	75%	67
		625	C	12/10	12/15	75%	92
		625	C	03/08	04/30	75%	832
Horse Draw	06332	625	C	12/16	03/07	95%	1620
Massadona Total:						991	
Horse Draw Total:						1620	
Massadona 2 Year Average:						1053	
Horse Draw 2 Year Average:						1542	

The below table reflects actual use as submitted by the Three Springs Ranch for the 2001/2002 grazing seasons. In 2001/2002, the ranch ran 600 head due to drought conditions that limited forage production. These drought conditions did somewhat affect the dates of cattle movement within the pasture and/or allotments. In the table below, the 600 head of cows the ranch actually ran was changed to 800 cows to more accurately reflect a normal forage year and to reflect the 800 cows that are authorized in the current grazing permit. Pasture / allotment movement dates were not changed and are as submitted in the 2001/2002 actual use forms. Also, the % PL for the Wolf Creek allotment in the tables below has been modified based upon the proposed action's % PL for a more accurate comparison of AUMs between Actual Use and the proposed action. Historically, the Wolf Creek allotment has been billed and calculated at 54% PL for all pastures within the Wolf Creek allotment, thus the allotment's % PL was not previously subdivided by pastures.

Actual Use (2001/2002 Schedule), 800 Cows							
Allotment		Livestock		Date		% PL	BLM AUMs
Name	No.	#	Kind	On	Off		
Wolf Creek- 06323							
Pasture:							
Wolf Creek		800	Cattle	05/01	05/30	80%	631
Bear Valley		665	Cattle	06/01	06/30	37%	243
Disappointment		135	Cattle	06/01	06/30	85%	113
Ruppe		800	Cattle	07/01	07/31	25%	204
Mud Spring		135	Cattle	08/01	09/30	70%	190
Johnson Draw		135	Cattle	08/01	09/30	71%	192
Jack Spring		265	Cattle	08/01	09/30	43%	229
Luxen		265	Cattle	08/01	09/30	61%	324

Actual Use (2001/2002 Schedule), 800 Cows							
Allotment		Livestock		Date		% PL	BLM AUMs
Name	No.	#	Kind	On	Off		
Off AMP		800	Cattle	10/01	10/30	0%	0
Luxen		400	Cattle	11/01	12/20	61%	401
Skull Ck		400	Cattle	11/01	12/20	88%	579
Lower Sandhills		95	Yearling	05/01	06/01	89%	89
Upper Sandhills		95	Yearling	06/02	10/20	76%	335
Lower Sandhills		95	Yearling	10/20	12/30	89%	200
Total:							3730
Massadona		300	Cattle	12/16	02/15	75%	459
Horse Draw		300	Cattle	12/16	02/15	93%	569
Massadona		400	Cattle	03/16	05/01	75%	464
Horse Draw		400	Cattle	03/16	05/01	93%	575
Hall Draw		200	Cattle	12/16	02/15	100%	408
Massadona Total:							923
Horse Draw Total:							1144

C. No Grazing Alternative: No livestock will be authorized on the current permitted allotments. Therefore, the grazing permit (0501447) will not be renewed to Three Springs Ranch.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: The BLM grazing permit (0501447) held by Three Springs Ranch that authorizes livestock grazing on the Wolf Creek, Massadona, Horse Draw, and Hall Draw allotments originally expired on 02/28/05 and was reissued under an Appropriations Rider by way of the authority of Section 114 of Public Law 107-67 in accordance with House Joint Resolution 111 of October 2002. The rationale for issuing the permit under the rider was due to workload priorities as no work had been completed in accordance to the National Environmental Policy Act (NEPA) at the time of permit expiration. Therefore, the Environmental Assessment (EA) of this document will serve in meeting NEPA requirements which will analyze the environmental impacts of the proposed grazing permit.

Grazing permits are subject to renewal or transfer at the discretion of the Secretary of the Interior for a period of up to 10 years. The BLM has the authority to renew the livestock grazing permit/lease consistent with the provision of the *Taylor Grazing Act*, *Public Rangelands Improvement Act*, *Federal Land Policy and Management Act*, and the *White River Resource*

Area Resource Management Plan (RMP). This Plan has been amended by the Standards for Public Land Health in Colorado.

In order to graze livestock on public land, the livestock permittee must hold a valid grazing permit. The grazing permittee has a preference right to receive the permit, if grazing is to continue. The RMP allows for grazing to continue on these allotments.

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: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: 2-10, 2-22 through 2-26

Decision Language: “Sustain a landscape composed of plant community mosaics that represent successional stages and distribution patterns that are consistent with natural and regeneration regimes, and compatible with the goals identified in Standard Three of the Standards for Public Land Health” (2-10). Also, as stated on page 2-10, the objective of the livestock management program is to improve the rangeland forage resources by managing toward or at a desired plant community (potential natural plant community).

“Maintain or enhance a healthy rangeland vegetative composition and species diversity, capable of supplying forage at a sustained yield to meet the demand for livestock grazing. Provide for adequate forage plant growth and/or regrowth opportunity necessary to : 1) replenish the plants food reserves; and 2) produce sufficient seed to meet the reproduction needs necessary to maintain an ecological presence in the plant community ” (2-22 through 2-23).

COMPLIANCE WITH SECTION 302 OF FLPMA RELATIVE TO THE COMB WASH GRAZING DECISION: A review of applicable planning documents and a thoughtful consideration of the new issues and new demands for the use of the public lands involved with these allotments have been made. This analysis concludes that the current multiple use allocation of resources is appropriate.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered

species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Causative Factors	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Acres Achieving or Moving Towards Achieving	Acres Not Achieving
#1-Upland Soils							
Wolf Ck. 06323	52955	1295	Historical grazing practices, cattle use near water, feeding practices, excessive erosion. (Altered ground cover - cheatgrass etc.)	53095	1155	53130	1120
Hall Draw 06335	6402	575	Historical grazing practices, drought, excessive erosion. (Altered ground cover – cheatgrass, headcuts)	6447	530	6472	505
Massadona 06324	7685	720	Historical grazing practices, lowland drainages w/ cheatgrass, historical feeding practices, use near water, excessive erosion. (Altered ground cover – cheatgrass, headcuts)	7770	635	7815	590
Horse Draw 06332	11223	1343	Historical grazing practices, lowland drainages w/ cheatgrass, trailing use (Victory Trail), use near water, excessive erosion. (Altered ground cover – cheatgrass, headcuts)	11333	1233	11373	1193
#2-Riparian Systems							
Wolf Ck. 06323	3.4 miles	0.9 miles	Flood event, grazing practices, small headcuts.	4.1 miles	0.2 miles	4.1 miles	0.2 miles
Hall Draw 06335	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Massadona 06324	1.4 miles	0	N/A	1.4 miles	0	1.4 miles	0

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Causative Factors	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Acres Achieving or Moving Towards Achieving	Acres Not Achieving
Horse Draw 06332	7	0	N/A	7	0	7	0
#3-Plant Communities							
Wolf Ck. 06323	52955	1295	Historical grazing practices, cattle use near water, feeding practices (Undesirable plant communities, cheatgrass etc.)	53095	1155	53130	1120
Hall Draw 06335	6402	575	Historical grazing practices, drought. (Cheatgrass dominance)	6447	530	6472	505
Massadona 06324	7685	720	Historical grazing practices, lowland drainages w/ cheatgrass, historical feeding practices, use near water. (Cheatgrass dominance)	7770	635	7815	590
Horse Draw 06332	11223	1343	Historical grazing practices, lowland drainages w/ cheatgrass, trailing use (Victory Trail), use near water. (Cheatgrass dominance)	11333	1233	11373	1193
#3-Animal Communities							
Wolf Ck. 06323	52955	1295	Same as above	53095	1155	53130	1120
Hall Draw 06335	6402	575		6447	530	6472	505
Massadona 06324	7685	720		7770	635	7815	590
Horse Draw 06332	11223	1343		11333	1233	11373	1193
#4-Special Status, T&E Species							
Wolf Ck. 06323	52955	1295	Annual dominated ranges have no apparent influence on habitat utility for prairie dogs and associates; annual dominated understories detract from potential forage and cover properties for sage-grouse, but these nest and brood ranges serve limited role in maintaining local	53095	1155	53130	1120

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Causative Factors	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Acres Achieving or Moving Towards Achieving	Acres Not Achieving
			population				
Hall Draw 06335	6402	575		6447	530	6472	505
Massadona 06324	7685	720		7770	635	7815	590
Horse Draw 06332	11223	1343		11333	1233	11373	1193
#5-Water Quality (stream miles)							
Wolf Ck. 06323	27.2	0	N/A	27.2	0	27.2	0
Hall Draw 06335	12.6	0	N/A	12.6	0	12.6	0
Massadona 06324	10.2	0	N/A	10.2	0	10.2	0
Horse Draw 06332	34.2	0	N/A	34.2	0	34.2	0

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The entire White River RA has been designated as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II.

Environmental Consequences of the Proposed Action: The grazing management plan would not affect air quality. Impacts to air quality from livestock grazing are not anticipated.

Environmental Consequences of continuation of Current Management: Impacts are not anticipated from the current management alternative.

Environmental Consequences of the No Grazing Alternative: None

Mitigation: None

CULTURAL RESOURCES

Affected Environment: The largest concentrations of cultural resource sites are found in the Skull Creek and Bear Valley pastures, located in the Wolf Creek allotment. Site locations in Bear Valley are primarily on private ground. Skull Creek Basin is second only to Dinosaur National Monument in importance for the depiction of prehistoric use of the landscape. It is a highly significant cultural resource area for the following reasons.

- There is evidence of human occupation for 10,000 plus years.
- The contained nature of the environment in which the resources are found makes the area rich for problem-oriented research.
- The area contains highly significant individual sites.
- There is strong evidence depicting use by Fremont groups.
- There is an extensive archaic horizon that has never been studied.
- There is extensive/intensive Shoshone use that is completely unstudied.
- There is classic marginal homesteading typical of a broad historic event in the American Great Basin.
- All major sites have been subject to vandalism but they will still yield important information about prehistoric use and occupation.

Environmental Consequences of the Proposed Action: Pasture rotation has the potential to impact as yet undiscovered, unrecorded sites in an area rich, dense and varied in types of cultural sites. The majority of known recorded sites are not in the path of pasture rotation making damage unlikely.

Environmental Consequences of the Continuation of Current Management Alternative: Since current management is being improved that change will likely mitigate the possibility of damage to known sites.

Environmental Consequences of the No Grazing Alternative: The risk of known and unknown sites being damaged would be minimized.

Mitigation: Surveying for unrecorded sites will continue throughout the life of the renewed permit. If damage should inadvertently be discovered by permittee to any site known or unknown, permittee should report the damage to the BLM Archaeologist immediately. A policy of more frequent monitoring will be put into practice in an effort to reduce vandalism if determined necessary.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Noxious weeds known to occur in the permit renewal area are Russian knapweed (*Acroptilon repens*), musk thistle (*Carduus nutans*), and perennial pepperweed (*Lepidium latifolium*, Tall Whitetop). These species all occur within the Wolf Creek allotment and musk thistle, bull thistle (*Cirsium vulgare*), perennial pepperweed also occur on the Massadona allotment. Within the Horse Draw allotment, Perennial pepperweed is found in

the Horse Draw allotments within the Wolf Creek drainage and a Russian knapweed patch occurs along BLM road 1506.

Russian knapweed occurs at two known locations adjacent to county roads on the Wolf Creek allotment. One location is along Moffat County (MC) road 16 from the west boundary of the Wolf Creek allotment for about 3/8 miles east. This infestation has been treated multiple times over the past ten years and has been reduced to less than 0.2 acres. The other location occurs adjacent to Mantle Ranch road (MC Rd 95) in T5N, R100W, SENW Sec 4. This infestation has been treated several times and is less than 0.1 acres. On the Wolf Creek allotment, musk thistle is not known to occur on any BLM lands, although it does occur on private lands in Bear Valley (T5N R101W Sec 2).

Within the Horse Draw allotment, a small patch of less than 0.1 acres of Russian knapweed occurs within the disturbance of BLM road 1506 (T3N, R99W, Sec. 18, SE). This small infestation was discovered in 2005 and was sequentially treated.

Perennial pepperweed occurs around and below Peterson Draw Reservoir #1 (#0821) (T4N, R100W NWSE Sec 23), down the draw to its confluence with Wolf Creek, and down the Wolf Creek drainage. The estimated acreage of infestation is 10 acres. Also, perennial pepperweed occurs on the Massadona allotment at Divide Creek Detention Dam (#1151) (T3N, R100W SESW Sec 13). This small infection (less than 1 acre) was treated in the past for several years to an insignificant plant population level.

The invasive alien cheatgrass (*Bromus tectorum*) occurs on a variety of ecological sites throughout the permit renewal area. In general its occurrence and distribution is a consequence of historical livestock grazing practices and un-revegetated soil disturbance associated with roads and mechanical equipment. Cheatgrass has the greatest influence within the lower elevation allotments of Massadona, Horse Draw, and Hall Draw (see Vegetation section for a greater analysis).

For all alternatives on allotments associated with this permit renewal, the early seral rangelands on which cheatgrass is a dominant component of the plant composition are essentially frozen in time and without a man induced disturbance, such as fire or herbicidal treatment to remove cheatgrass dominance, accompanied by chemical treatment and/or seeding of adapted perennial grasses to preempt the return to cheatgrass dominance, these sites will remain relatively unchanged in the future. These areas will likely continue to not meet the Colorado Standard under the Proposed Action, the No Grazing, or the Continuation of Current Management Alternatives.

Environmental Consequences of the Proposed Action: In reference to the relatively small known occurrences of noxious weeds on the Wolf Creek allotment, the proposed action, an integrated allotment management plan wherein different allotments and pastures are provided with periodic growing season rest on a rotational basis, offers the best potential to maximize vigor of the grass component of the various ecological sites involved. These sites will necessarily be more resilient to invasion by such undesirable species. While noxious weeds readily invade rangelands at all seral stages, the rate and extent of invasion would be much less

for mid and late seral rangelands with a vigorous, competitive compliment of perennial grasses and forbs. The location and distribution of perennial pepperweed in the Wolf Creek riparian area is not a function of current or recent past grazing use but is a reflection of aggressiveness and competitive nature of the plant species within the confined habitat of Wolf Creek.

On the Wolf Creek allotment (06323), of the 1295 acres listed as not meeting the Standards, approximately 984 acres or 76%, have sufficient cheatgrass in the plant composition and insufficient desirable perennial species that it is concluded that these sites have crossed a threshold of cheatgrass domination. For the other allotments in this permit renewal, Hall Draw, Massadona and Horse Draw, the acreages listed as not meeting the Standards for those respective allotments (575, 720 and 1343 acres) are predominantly sites where cheatgrass is a dominant component of the plant composition.

Three Springs Ranch (grazing permittee) is an essential participant in the detection and eradication of noxious weeds on BLM and private lands within allotments associated with the proposed action. The ranch is typically the first line of defense in the long-term endeavor of controlling noxious weeds.

Environmental Consequences of the Continuation of Current Management Alternative: Impacts resulting from adoption of this alternative would be very similar to those described for the proposed action; however, the potentially affected ecological sites would be relatively less resistant to invasion and proliferation of noxious weeds. The stewardship provided by Three Springs Ranch, detection and eradication of noxious weed problems, would be essentially the same as that for the proposed action.

Environmental Consequences of the No Grazing Alternative: The impact of adopting this alternative would generally be similar to that of the proposed action with respect to the occurrence and proliferation of noxious weeds; however, with no grazing the BLM would lose a substantial permittee commitment to aggressive noxious weed management on both public and private lands. This sort of stewardship is one of the key reasons why there are few noxious weed infestations on the allotments permitted to the Three Springs Ranch, as the ranch eradicates noxious weeds before they can become permanently established.

Mitigation: For controlling/limiting cheatgrass populations, compliance with Standards for Public Land Health through managed grazing, aggressive rehabilitation including aerial and drill seeding with adapted species immediately following wildfire events, and aggressive revegetation of all earthen disturbances will all aid in limiting the extent of cheatgrass. To limit the spread and establishment of noxious and invasive species, all earthen disturbances will be revegetated with adapted grass species.

MIGRATORY BIRDS

Affected Environment: This extensive permit area spans an array of elevations and vegetation communities that support a wide variety of migratory birds during the nesting season (early May through mid July). Four lower elevation pastures (Wolf Creek, Massadona, Horse

Draw, Hall Draw) are represented primarily by salt desert communities dominated by prostrate forms of saltbush (~10,250 acres), sagebrush-shadscale (~14,000 acres), and greasewood-basin big sagebrush (~2,900 acres) shrublands. Birds of higher conservation interest (i.e., Partners in Flight program) associated with these habitats and well represented in the permit area include: Brewer's sparrow, sage sparrow, horned lark, and loggerhead shrike. Loggerhead shrike are regular, but low density breeding species that nest in greasewood and basin big sagebrush stands, especially in the broad incised drainages throughout the lower Wolf Creek basin. The sparrows are widely distributed and abundant throughout the arid sagebrush and saltbush communities, whereas the lark is common and found on barren annual bottomlands or mat saltbush ridges. Although several of these birds arrive very early in the spring (i.e., early March: sage sparrow, sage thrasher), most birds do not appear until early April and delay actual nesting functions until late April to mid May. About 15,000 acres of pinyon-juniper and juniper-dominated woodlands are widely distributed in the northeast (Disappointment and Bear Valley), central (Skull Creek Basin and Rim), and southern margin (Hall Draw) of the permit area. With the exception of the Skull Creek Basin (Skull Creek pasture), these lower elevation woodlands do not occur as extensive tracts and much has been subjected to wildfire and mechanical treatments (Bear Valley 1950s vintage chainings). Due to site characteristics, these woodlands are generally stunted, possess poorly developed understories, and typically do not support the full complement or abundance of woodland associates found south of the White River. Higher conservation species represented in the permit area include: gray flycatcher, pinyon jay, juniper titmouse, and black-throated gray warbler. It is likely that gray vireo, a rather narrowly distributed species in northwest Colorado, appears at least sparingly in juniper habitats in the Skull Creek Basin and on Coal Ridge. These areas are well north of core distributions south of the White River near Rangely. Gray vireos have only been recorded once (1991) on a Breeding Bird Survey route that bisects much of the permit area north of Highway 40. The majority of habitats north of Highway 40 consist of extensive big sagebrush (higher elevation Wyoming and mountain subspecies) and mixed shrub (primarily antelope bitterbrush and Utah serviceberry) shrublands (~42,300 acres). Birds of higher conservation interest associated with these extensive higher-elevation sage-steppe habitats, Brewer's sparrow and green-tailed towhee, are abundant and widespread on these ranges.

Environmental Consequences of the Proposed Action: Proposed grazing periods would not coincide with and would have no potential to directly influence migratory bird nesting activities in 6 of the permit's pastures (Skull Creek, Hall Draw, Jack Springs/Luxen, and Mud Springs/Johnson). Livestock removal by late February allows for essentially unaffected development of herbaceous growth prior to and during the nesting season.

Cattle grazing practices are typically dispersed and low intensity and, where coincident with nesting, only incidental disruption of nests in ground or low shrub situations would be expected. Substantial reductions in effective ground cover (height and lateral density) may indirectly affect nesting outcomes by increasing the susceptibility of incubating or brooding hens and their clutches to predation or extremes in temperature or moisture. This impact would be most pronounced for ground nesting species (e.g., meadowlark, vesper sparrow) associated with open shrubland and grassland habitats. Species that are more closely associated with sage-steppe shrub canopies (e.g., sage thrasher, sage and Brewer's sparrow) are less apt to be influenced by reductions in herbaceous ground cover, though heavy reductions in ground cover would also tend

to reduce the availability and variety of forage or forage substrate for breeding birds and may be expected to reduce the nutritional status of nestlings or fledglings.

Proposed use of the Ruppe pastures would defer the onset of grazing influences from early July to mid-July. Progressive declines in ground cover, although rapid, would occur after most broods have fledged and would be expected to have little effect on nest or fledging success. Similarly, use of the Upper Sandhill pasture is proposed to be reduced by 28% and deferred from early to mid-June. Use by yearling cattle tends to be more dispersed, such that understory reductions would occur as a slow, progressive thinning that would not be substantive until well after broods have fledged.

Effective use of the Bear Valley and Disappointment pastures would have the same influence on migratory bird nesting as current regimens. Grazing use would continue to be coincident with the nesting season (June) and is proposed for extension to mid July. Use levels would remain light through June (~30%), with increased utilization levels attributable to the July extension that would occur after most broods have fledged and would be expected to have little further affect on nest or fledging success.

Proposed grazing use of the Lower Sandhills pasture would continue to coincide with early portions of the nesting season (May) and would increase and prolong growing season effects to accommodate use reductions in the Wolf Creek pasture. Out-year grazing would involve nominal increases (~5%) in current utilization that would be attributable to the proposed 2-week extension to mid-June. Since current use is essentially incidental (<10%), extending a period of dispersed use by yearling cattle would remain inconsequential to nest habitat utility. In alternate years, it is proposed to elevate growing season use to light levels (~30%) by adding 200 cow-calf pairs in May. This level of use and the ensuing opportunity for 2-3 weeks of regrowth through June would continue to provide adequate levels of interstitial cover during the nest and early brood season and would have little affect on the availability of herbaceous forage and substrate as broods appear in June.

Although proposed growing season use of the Wolf Creek pasture would continue to coincide with early portions of the migratory bird nesting season (i.e., month of May), proposed use is specifically intended to enhance understory expression in the short and long term. The proposal calls for reducing relatively heavy overall use levels in May by 50% and deferring use in alternate years to mid-May. Alternate years of deferral are expected to improve herbaceous vigor and, ultimately, the density and diversity of perennial grasses and forbs as an improved cover and forage source for nesting birds and their broods.

The Horse Draw and Massadona allotments would be used in conjunction with one another, with complete growing season rest (i.e., removal of current March-April use) on alternate years. Rest seasons would allow full herbaceous expression and increase the effective height of ground cover by at least 20-30%. Following years of growing season rest, proposed increases in winter use would result in minor reductions in ground cover (e.g., current utilization increased 2-10%), with overall utilization levels during the dormant period approaching 30-40%. Out-years would see growing season use in these pastures extended 2 weeks into mid-May at intensities double that of current levels. This would increase current light levels of growing season use (e.g., 20-

30%) to moderate (e.g., 50-60%) more widely across the pastures. Although substantial and unlikely to contribute to enhancement of understory expression, proposed use in alternate years may slow, but would not be expected to detract from current improving trends in plant reproduction and community composition. It is expected that 40 to 50% of herbage would remain available for wildlife use, with 2 weeks of regrowth normally following livestock removal. During these years of spring use, limited vertical cover would remain—a situation perhaps not functionally dissimilar to the current situation (20-30 utilization can reduce effective vertical cover by up to 40-50%). Following out-year use, subsequent dormant season use would be reduced by 50-90% (resultant use levels incidental to very light) reserving practically all residual summer and fall regrowth into the next nesting season. In summary, green and residual forage and cover available for use by nesting migratory birds would increase substantially every other year in the Massadona and Horse Draw allotments. It would be expected that more generalized species such as western meadowlark and vesper sparrow would benefit under these circumstances. In alternate years, ground cover available as residual and current year's growth would decline, but the functional effects of increased use would likely have little influence on the nesting activities of salt-desert obligates. Although considered an important source of supplemental nest cover for certain sage-steppe species (e.g., sage-grouse), there is no evidence suggesting that salt-desert associates (e.g., sage and Brewer's sparrow, sage thrasher, loggerhead shrike) respond positively to increasing ground cover density or height. Functional changes in effective ground cover during the later brood period on these pastures would remain relatively unchanged.

In summary, those allotments and/or pastures with livestock grazing systems that are asynchronous with the migratory bird nesting season would continue to be compatible with migratory bird nesting by allowing annual herbaceous growth and expression unaffected by livestock grazing with the only outstanding influence being a reduction in the amount of residual remaining (dormant season use) as supplemental cover into the early weeks of the following nesting season. This issue would tend to have minor influence on those more generalized ground-nesting species such as meadowlark, dark-eyed junco, and spotted towhee.

Grazing would be coincident with portions of the nesting season in the remaining pastures. In these cases, grazing would continue to be compatible with migratory bird nesting activity, but would likely result in minor suppression of nest density or optimal recruitment (progressive reductions in ground cover and cover, forage, or forage substrate). Compared to the current situation, 1-2 pastures would experience slight declines in nest habitat conditions in alternate years (i.e., increased or extended use in Lower Sandhills, Massadona, Horse Draw) and 3 pastures would benefit from minor enhancements in nest conditions every year (i.e., deferment or reduced use in Upper Sandhills, Massadona, Horse Draw, Wolf Creek). Nest habitat would remain static on 3-4 pastures every year (i.e., Lower Sandhills, Massadona, Horse Draw, Bear Valley, and Disappointment).

This alternative is consistent with plant growth requirements and continued improving trends in ground cover composition and plant vigor, but would probably have little short-term influence on understory conditions across those 3,900 acres of early-seral bottomland and lower elevation sagebrush/saltbush stands where annual weeds exert strong competitive influences (about 5% of permit area or 13% of similar shrubland types associated with permit renewal). Without

significant intervention, these habitats would continue to serve in a limited capacity for migratory bird breeding activities regardless of the grazing management option employed.

Environmental Consequences of the Continuation of Current Management Alternative: The current grazing regimen influences migratory bird nesting functions in a manner similar to that discussed in the proposed action.

The same 4 pastures would be subjected to livestock grazing use outside the nesting season. Winter grazing use would remain essentially unchanged in the Hall Draw and Skull Creek pastures, which comprise about 30% of the permit area's pinyon-juniper and low-elevation sagebrush and shadscale habitats. Similarly, the Jack Springs/Luxen Draw and Mud Springs/Johnson Draw pastures are grazed in late summer/early fall. The use of these pastures is considered to be compatible with migratory bird nesting by allowing herbaceous growth and expression unaffected by livestock grazing during the growing season with the only outstanding influence being a reduction in the amount of residual remaining as supplemental cover into the early weeks of the following nesting season.

Herbaceous cover remaining after the use period (approximate 55-70% utilization levels) is likely limited on the Skull Creek and Hall Draw pastures, although herbaceous cover is typically sparse and unlikely a determinant factor in habitat utility for breeding birds on these lower elevation woodland and shrubland habitats. Present grazing use of the Mud Springs/Johnson Draw pasture is slight to light (about 20%) and likely has little influence on nesting activity during the subsequent breeding season (about 45% of deciduous shrub and 6% of sagebrush steppe habitats in permit area). The Jack Springs/Luxen Draw pasture currently sustains 70-80% utilization levels. This level of understory reduction in higher elevation shrub-steppe habitats (about 25% of sagebrush and 6% deciduous shrub habitat in permit area) during the dormant season would be expected to affect the early availability of suitable nest sites and/or effect minor reductions in the nest densities of more generalized ground-nesting species (e.g., meadowlark, dark-eyed junco, vesper sparrow, and spotted towhee) during the following breeding season.

In a similar category, livestock use of the Massadona/Horse Draw and Ruppe pastures is generally asynchronous with the migratory bird nesting season. It is unlikely that light levels of winter and early spring use (20-30% use levels, ending in April) in the Massadona/Horse Draw pastures substantively influences nest site selection or nesting outcome across much of the permit area's lower elevation shrubland communities (i.e., 51% of low-elevation sagebrush/shadscale, 36% of greasewood and basin big sagebrush, 95% of prostrate saltbush types). The Ruppe pasture is used in July and undergoes rapid and strong reductions in herbaceous cover late in the nesting season. Primarily private (75%), this pasture contains about 1% of the pinyon-juniper woodlands, 4% of the higher-elevation sagebrush-steppe and 4% of the deciduous shrub habitats available in the permit area.

Grazing would be coincident with portions of the nesting season in the remaining pastures. In most instances, livestock grazing use has little influence on the suitability or utility of nest habitat in these pastures.

The Upper and Lower Sandhills pastures encompass about 34% of the higher elevation sagebrush-steppe available in the permit area, but these habitats are predominantly in a fire-induced early successional stage that are and will remain grassland in character through the permit period. The Lower Sandhill pasture receives slight (<10%) use in May and the Upper Sandhill pasture is subject to light use (<30%) through June and July. It is unlikely that light use levels and the slow incremental decline of ground cover in these pastures has a marked influence on the nest efforts of generalist species associated with early seral shrublands.

Wolf Creek is the permit area's only pasture that is subjected to substantial livestock use during the nesting season. Heavy use (70-80%) during the month of May removes much of the interstitial ground cover among shrub canopies, although nesting birds that rely on herbaceous ground cover on these lower elevation habitats is decidedly limited. Plant recovery is allowed to progress at least through mid-June, but in some, if not most, years, ground cover as foraging substrate, forage, or cover for nesting or brooding functions may be suppressed. This pasture involves about 14% of the pinyon-juniper woodlands, 20% of the lower elevation sagebrush/shadscale shrublands, and 39% of the greasewood and basin big sagebrush habitats available in the permit area.

In summary, it is believed that current livestock grazing management is predominantly compatible with the nesting activity of migratory birds associated with habitats available in each pasture, but progressive declines in ground cover, whether during the growing or dormant season, probably results in minor suppression of nest density or optimal recruitment.

Environmental Consequences of the No Grazing Alternative: Removal of cattle would be expected to have little effect on breeding bird abundance or reproductive/recruitment success in the permit area's ~15,000 acres of woodland types (about 2% of those in the White River Resource Area) or the ~24,250 acres classified as the Torriorthents soil complex (i.e., steep, sparsely vegetated or barren slopes with sparse woodland or shrub components). Low forage availability and more rugged terrain limits livestock use of these habitats; the birds associated with these lower elevation woodlands do not tend to respond positively to relatively minor increases in herbaceous expression.

Similarly, the relative effect of livestock grazing would not differ markedly from no cattle grazing in those pastures where use is generally asynchronous with the migratory bird nesting season or growing season (essentially dormant season use in Skull Creek, Hall Draw, Jack Springs/Luxen Draw, and Mud Springs/Johnson Draw). These grazing regimens would not have an influence on live ground cover expression nor would they be expected to have substantive influence on nest site selection or the density of nesting pairs. Any grazing-related effects would be confined to those more generalized species that use residual herbaceous cover during the earlier portion of the breeding season (e.g., western meadowlark, vesper sparrow). These pastures encompass about 28% of the lower elevation shrubland-steppe, 4% of the greasewood, 51% of the deciduous shrubland, and 31% of the higher elevation sagebrush steppe available within the permit area.

In those pastures where livestock grazing coincides with the nesting or growing season, the influence of alternate grazing schemes on many of the species associated with the desert shrub habitats are likely minor. Populations of birds associated with the lower elevation big sagebrush

and saltbush habitats that prefer open understories in the Wolf Creek and Massadona/Horse Draw pastures (e.g., sage sparrow, sage thrasher, horned lark, loggerhead shrike) would not be expected to change in response to livestock removal. This effect would apply to a substantial portion of these habitats in the permit area (72% of lower elevation sagebrush, 60 % of greasewood, 95% of basin big sagebrush, and 100% of the prostrate saltbush forms). Alternately, livestock removal may be expected to bolster populations of other species associated with these lower elevation sagebrush types (e.g., Brewer's and vesper sparrow, spotted and green-tailed towhee, Say's phoebe). This influence would likely be muted in the Massadona/Horse Draw allotments (i.e., currently light April use; proposed alternate year rest/moderate use levels with at least 2 weeks of regrowth opportunity) and more pronounced in the Wolf Creek pasture (current heavy May use, proposed moderate May use). Breeding birds associated with desert-scrub habitats in southern Arizona responded to the removal of heavy livestock use and subsequent increases in live herbaceous vegetation by remaining static or increasing in abundance by up to 35% within four years (Krueper et al, 2002). It is suspected that this latter group of birds may respond to livestock removal with nominal increases in the Massadona/Horse Draw allotments (51% of lower elevation sagebrush in permit area) and by increases of up to one-third in the Wolf Creek pasture (20% of lower elevation sagebrush in permitted areas).

Similar effects would extend to higher elevation big sagebrush and deciduous shrub habitats in the remaining pastures. Slight to light livestock use of the Upper and Lower Sandhills pastures, which are predominantly grassland in character, is having little influence on the density or composition of breeding bird populations (i.e., vesper sparrow, western meadowlark) and they would not be expected to change appreciably in response to livestock removal through the permit period. Removal of livestock use from the Bear/Disappointment (light use in June/mid-July) and Ruppe pastures (heavy to moderate use in July) would be expected prompt minor to more substantive (up to one-third) increases in the nest density of migratory birds associated with higher elevation sagebrush steppe (i.e., Brewer's and vesper sparrow, green-tailed towhee). Overall, livestock removal in these pastures may affect minor increases in breeding bird abundance on 42% of deciduous shrub types and 65% of the higher elevation sagebrush types within the permit area, and increases of up to one-third on 6-7% of these types, respectively.

Mitigation: Grazing system features accommodating migratory bird issues have been integrated with the proposed action.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: White-tailed prairie dogs and associated special status species: White-tailed prairie dogs, a BLM sensitive species, are distributed widely across lower elevation salt desert ranges that make up much of the permit area. These towns constitute about 20% of the prairie dog habitat administered by the White River Field Office. Prairie dogs occupy valleys and basins with low or sparse woody cover in greatest abundance, and are typically associated with vegetation types and range sites that are heavily represented by annual grasses (e.g., cheatgrass) and forbs. Prairie dog abundance is strongly influenced by disease (e.g., sylvatic

plague, tularemia) and populations tend to fluctuate dramatically. Over the last 30 years, prairie dogs have occupied up to 12,000 acres or nearly 50% of the permit's low elevation shrubland types. The heaviest concentrations of prairie dogs tend to coincide with range sites rated in early seral condition. Virtually all these prairie dog populations are monitored annually as part of black-footed ferret recovery efforts. Prairie dog population indices in this area remained relatively constant in 2003 and 2004, and nearly doubled in 2005. Current populations are about 70% of the highest recorded populations of 1993/94. Although prairie dogs can appear above ground sparingly during the winter months, most begin to emerge from hibernation by early March, with young appearing above ground by late May. Although intuitive that availability of higher quality and increased quantities of vegetation as forage would figure prominently in the ultimate survival and/or reproductive ability of white-tailed prairie dogs, there is little to suggest that the current forage base or the prevailing use of that forage by potential competitors is suppressing prairie dog abundance or reproductive capacity in the lower Wolf Creek basin.

Prairie dogs and their burrow systems are important habitat components of burrowing owl (a State threatened species), ferruginous hawks (BLM sensitive species) and reintroduced populations of black-footed ferret. Herbaceous growth and residuals (that herbaceous material remaining after the grazing period) serve as forage and/or a cover base for all breeding nongame and small game animals, non-hibernating small mammals (e.g., voles) and ground nesting birds (e.g., horned larks), all of which may serve as prey to special status populations of raptors and ferrets.

Under the auspices of a non-essential, experimental population rule, black-footed ferret recovery was initiated in northwest Colorado and northeast Utah in 1999. Since 2001, ferrets have been released annually in the designated Wolf Creek Ferret Management Area (WCMA) that straddles the US 40 corridor in lower Wolf Creek basin. Three allotment pastures are integral with the WCMA, including: Massadona South, Horse Draw, and Wolf Creek. Ferrets breed in February and March with parturition in mid- to late-May. Kits emerge from natal burrows in mid-July.

Burrowing owls are uncommon in this Resource Area. These birds return to occupy a prairie dog burrow system in early April and begin nesting soon afterward. Young birds are normally fledged by late July with family groups remaining together through September, when the birds leave for southern wintering grounds. BLM has a number of historical records of burrowing owl nests in the lower Wolf Creek basin.

Ferruginous hawks are uncommon breeding species and are closely associated with prairie dog distribution in this Resource Area. Nest sites are well distributed across the lower elevation shrublands north of the White River. Approximately 9 ferruginous hawk territories involving 44 natural and constructed platform nest sites are encompassed by this permit. These hawks return to these ranges in late February and begin nesting (egg-laying) by early to mid April. Incubation continues through late May with fledging of young by late July. Breeding populations of these hawks vary in direct relation to the prairie dog, cottontail, and jackrabbit prey base.

Bald eagle: Bald eagles forage extensively across these lower elevation shrublands during the winter months from roost sites along the lower White River. Their use of these areas is regular, but dispersed and opportunistic. The Hall Draw pasture encompasses a total of 0.5 mile of the

White River in 3 small reaches. With the exception of 0.15 mile, these parcels subtend cliff-like bluffs and are effectively isolated from livestock access. The remaining parcel is situated on a greasewood-dominated alluvial fan on the outside curve of a meander. The banks of this reach are vertically incised and bear no riparian expression. None of the parcels support cottonwood trees nor are they amenable to the development of a cottonwood gallery stand (i.e., widest floodplain width about 55 feet) that would be capable of serving eagle roost or nest functions.

Greater sage-grouse: The northern and western pastures of the Three Springs permit encompass about one-third sage-steppe habitats associated with the Blue Mountain greater sage-grouse population. Although this population is isolated from the expansive Moffat County populations, this population is the largest and most productive in the White River Resource Area. Most of the breeding and nest activities occur in the mid-elevation basins of Turner and Wolf Creeks on the western end of the permit area (about 62% privately owned). Eleven strutting grounds have been located within the permit, the largest and most significant (2) located on private lands in upper Wolf Creek. Broods gradually disperse and drift to higher elevations and, as a result, nearly all the higher elevation sagebrush habitats north and west of the Lower Sandhills pasture function as brood range (collectively about 65% privately owned). Blue Mountain's capacity for strong production and recruitment is largely attributable to an abundance of wet meadow habitats and higher elevation mountain big sagebrush communities with well developed herbaceous understories. Reports of large number of bird on windswept ridges on the south rim of the Yampa Canyon may account for a large share of wintering birds, but several hundreds appear to follow the Wolf Creek drainage and winter on the lower-elevation pastures within the permit. Sage-grouse begin nesting in mid-April with hatching taking place from late May through early July. Grouse locate nests beneath sagebrush canopies. Marked increases in nest success are attributable to nest sites where surrounding herbaceous growth provides supplemental cover of at least 7-inch height and 15% canopy. Chicks are able to travel immediately after hatch, fly strongly by 5 weeks (by early August), and become independent of the hen in 10-12 weeks (by early September). Invertebrates and select forbs form the important constituents of sage-grouse diets during the nest and brood periods.

A small number of greater sage-grouse strut, nest, and raise broods in the lower Wolf Creek basin. Although these arid salt-desert shrublands are not normally considered suitable sage-grouse summer habitat, a population of several 10's of birds persists nonetheless. These birds tend to congregate in the deep incised drainages of Wolf Creek later in the summer where, presumably, shade and succulent broadleaf vegetation and invertebrates are more easily procured. Most of the permit area's leks (8) occur at these lower elevations, many of these being abandoned or alternate lek locations. These leks typically hold less than 10 roosters. In contrast, several hundred sage-grouse winter in the Wolf Creek basin's scattered Wyoming big sagebrush habitats, the birds tending to concentrate from the mainstem of Wolf Creek east to Pinyon Ridge (encompassing the Horse Draw allotment). These birds apparently originate from the upper elevations of Wolf Creek on Blue Mountain, 10 and more miles upstream.

Environmental Consequences of the Proposed Action: White-tailed prairie dogs and associates: The proposed grazing plan would be expected to benefit understory conditions (i.e., increased availability and diversity of perennial herbaceous forage) in those lower elevation pastures inhabited by prairie dogs and their associates. Livestock grazing use of the Wolf Creek

pasture would be reduced by about 50% every year (allowing for the same period of regrowth), and the use period reduced from 4 to 2 weeks every other year. The Horse Draw and Massadona pastures would be used in conjunction with one another, with complete growing season rest (i.e., removal of March-April use) on alternate years following increased dormant season use that would increase utilization levels by 2 to 10%. Following reductions in dormant season use of 50-90% (resultant use levels incidental to very light), out-years would see growing season use in these pastures extended 2 weeks into mid-May at intensities double that of current levels. This would increase overall use levels during the growing season from light (e.g., 20-30%) to moderate (e.g., 50-60%) more widely across the pastures. Although a substantial increase and unlikely to contribute to enhanced understory expression, increased utilization and more prolonged growing season use in alternate years would remain consistent with maintenance of plant vigor and community composition.

In practice, green and residual forage and cover available to prairie dogs and other herbivores would increase substantially every year in the Wolf Creek pasture and every other year in the Massadona and Horse Draw allotments. In alternate years, forage availability from April through mid-May would decline in the Massadona/Horse Draw pastures, but 40 to 50% of herbage would remain available for wildlife use, with 2 weeks of regrowth normally following livestock removal. During these years of spring use, limited vertical cover would remain—a situation perhaps not functionally dissimilar to the current situation (20-30 utilization can reduce effective vertical cover by up to 50%). Modest redevelopment of cover and forage for small and large herbivores would normally occur through May. In the short term, herbaceous ground cover and forage conditions on these lower elevation pastures would be expected to improve substantially across 60% of these 3 pastures every year. Incorporating proposed rest and use-reduction features may be expected to improve the vigor and, ultimately, the diversity and density of native bunchgrass and forbs in the understory and would build on the pastures' long-term forage capacity. Although adjustments in grazing use would not rapidly alter the preponderance of annuals in early seral parcels within these pastures, having a grazing system in place that is increasingly compatible with the development of perennial ground cover would be beneficial in ensuring that long-term gains in habitat utility and quality for herbivores and those relying on them as a prey and cover source are established. Long-term incremental improvements in the availability and diversity of herbaceous foodstuffs would enhance the nutrition base for white-tailed prairie dogs and other herbivores (e.g., cottontail rabbit, small mammals), which would translate to a more consistent and abundant prey source for species reliant on prairie dogs and their burrow systems (i.e., ferret, burrowing owl, and ferruginous hawk).

The proposed action would have no physically disruptive influence on the reproductive activities of ferret, prairie dog, burrowing owl, or ferruginous hawk in the permit area. Compared to current use, grazing use would coincide with and extend up to 2 weeks later into the reproductive season for these species (i.e., alternate year on Massadona/Horse Draw pastures). However, cattle use on these ranges is dispersed and low intensity and, in this Resource Area, has never been implicated in the disruption of these species' reproductive activities. The influence of herbaceous residual remaining from the previous growing season has little influence on these species' nesting outcomes or prey base.

Bald eagle: The proposed action would have no conceivable influence on breeding or wintering populations of bald eagle. That portion of the lower White River encompassed by the Hall Draw allotment abuts steep cliff-like slopes and has no floodplain or terraces accessible to livestock.

Greater sage-grouse: The Lower and Upper Sandhill pastures contain about 14% of the brood habitat range and 21% of the overall Blue Mountain sage grouse range within the permit area. These pastures are almost entirely in an early successional state following wildfire (i.e., herbaceous dominated), and are now used sparingly by grouse. Used by yearling cattle only, use by this class of livestock tends to be more dispersed and the progressive loss of herbaceous cover more gradual than is typical for cow-calf pairs. As these pastures regain sagebrush canopies and more substantive utility as sage-grouse habitat, proposed grazing use on the Upper Sandhill pasture (1,120 acres of brood range) would be increasingly compatible with ground cover management benefiting sage-grouse brood functions. Proposed use would be deferred for an additional 2 weeks (from 6/2 to 6/16) and grazing intensity reduced by 28%. This change would reduce utilization levels from 30% to 20% through the early brood period. Noticeable declines in ground cover would occur well after the majority of nest attempts and early brood functions are complete.

The proposed action would increase and prolong seasonal livestock use of the Lower Sandhills pasture (320 acres of brood range). Once sage-grouse habitat utility redevelops over the next decade or so, cattle use would cease and ground cover allowed to redevelop for 2-3 weeks prior to the appearance of broods. Since current use is nearly incidental (<10%), the proposed action would, on even years, elevate growing season use to light levels (about 30%) with declining intensity during June (removal of 200 cow-calf pairs); during alternate years use would remain slight (about 15%). These levels of use and ensuing regrowth through June would continue to provide adequate levels of interstitial cover during the early brood season and would have little affect on the availability of forb forage as broods appear in late June. Proposed dormant season use (October through December) would be expected to remove about 30-40 % of residual growth and would be functionally equivalent to current dormant season use.

The Bear Valley and Disappointment pastures encompass about 3840 acres of brood habitat, about 15% of which is administered by BLM. Proposed use of the Bear Valley and Disappointment pastures would extend current use (month of June) by 10 days. Use levels would remain light, increasing from about 30% to 40%. Functional changes in effective ground cover during the later brood period on these pastures would remain relatively unchanged.

The Ruppe pastures encompass about 1,700 acres of brood habitat (98% privately owned) that currently receive heavy use through the month of July. Under the proposed action, use would be deferred 2 weeks, the grazing period reduced by 50%, and grazing intensity reduced by a third to moderate levels (about 60%). Herbaceous ground cover, both as a forage and cover source for broods, would be expected to increase considerably, although herbaceous cover remaining between sagebrush canopies would continue to be sparse. An important aspect of proposed change is deferral, which would allow for a strong cover component through the earlier brood stages when chicks are most susceptible to exposure and predation. Although not classified as nesting habitat, deferral would also allow any nesting attempts to finalize prior to sudden reductions in ground cover.

The Johnson Draw, Mud Springs, Luxen, Bull Pasture, and Jack Springs pastures on the western end of the permit contain the largest proportion of sage grouse brood and nest habitat, collectively accounting for about 54% (12,221/22,620 acres) of the permit's nest and brood habitat. Under the proposed action, all five pastures would continue to be grazed during the dormant season (August through December) and an attempt made to better distribute use among the pastures. Use of Luxen/Jack Springs would be deferred from its current August-September grazing regime to a November-December period with a 25-35% reduction in use intensity. Overall use in these pastures would decline from current heavy use (70-80%) to more moderate levels (50-60%). Grazing use in Bull Pasture (October) would remain the same as current. Conversely, the Mud Springs/Johnson Draw pastures would continue to be grazed in August and September, but the use intensity would be increase from current light levels (about 20%) to those approaching 60%. In each of these pastures, direct influences on grouse nest and brood periods are largely avoided since attendant declines in ground cover begin in August (Mud Springs/Johnson) once broods are flighted and less dependent on herbaceous hiding cover. Deferral and moderation of heavy use in August and September (Luxen/Jack Springs) would be expected to increase the availability and persistence of broadleaf forage for broods. Moderating use levels during the dormant season would continue to leave little residual cover between sagebrush plants come spring, although residual grass beneath sagebrush canopies is expected to become increasingly available as early supplemental cover for grouse nesting. In contrast, ground cover remaining as residual nest cover would be reduced in the Mud Springs/Johnson pastures, though functional reductions in effective cover height would probably be modest. All five pastures would be allowed rest through the entire growing season, nest sequence, and the early brood period. In summary, the availability of residual herbaceous cover early in the nest period (e.g., earliest 2 weeks) on the Mud Springs/Johnson Draw pastures (4,300 acres, 61% BLM) would decline, offset in part by comparable improvement in these conditions on the Luxen/Jack Springs pastures (2,986 acres, 38% BLM). Herbaceous cover development would remain unaffected by livestock grazing in all pastures from the onset of nesting through at least the first 4 weeks of the brood period.

Overall, the proposed action would maintain adequate conditions (i.e., herbaceous understories ungrazed by livestock from January through July) on all available sage-grouse nest and early brood habitats (~8,900 acres) associated with the Blue Mountain sage-grouse population. Reduced use intensity and deferral would result in modest increases in residual growth as early nest cover and improve the availability of forb forage during the late summer/early fall months on about 3,000 acres of this total. Residual growth as early nest cover is expected to decline somewhat on 4,300 acres and remain equal (limited) to current conditions on 1,600 acres. Adequate brood cover and forage availability would be retained or remain functionally unchanged on 4,160 acres of brood habitat and deferral/reduced use intensity would enhance residual cover and forb availability on 2,820 acres of brood habitat.

The proposed grazing plan would be expected to benefit understory conditions in those lower elevation pastures associated with the lower Wolf Creek sage-grouse population. Although considered an important source of supplemental cover for nesting sage-grouse, the potential contribution of perennial grasses as residual cover on these arid ranges is likely limited. By reducing use during the first half of May by 75% and 100% every other year, late spring use in

the Wolf Creek pasture would be reduced every year by 50%. The Horse Draw and Massadona pastures would have complete growing season rest (i.e., removal of current March-April use) on alternate years following minor increases in (10-40%) dormant season use. Following reduced dormant season use of 50-90%, out years would see growing season use in these pastures extended 2 weeks into mid-May at intensities double that of current levels. This would increase overall use levels from light (e.g., 20-30%) to moderate (e.g., 50-60%) more widely across the pastures. In practice, herbaceous growth available as forage and cover would increase substantially every year in the Wolf Creek pasture and alternately every other year in the Massadona and Horse Draw allotments. Alternate years in the Massadona/Horse Draw pastures would likely see limited vertical cover remaining after the grazing period (20-30 utilization can reduce effective vertical cover by up to 50%)—a situation perhaps not functionally dissimilar to the current situation. However, 40 to 50% of herbage should remain available after livestock removal, with modest redevelopment of cover and forage normally occurring through the last 2 weeks of May. Adding these rest and use-reduction features to the current grazing regimens would be expected to maintain an improving trend in the vigor and, ultimately, the diversity and density of native bunchgrass and forbs in the understory.

Proposed grazing practices (in all pastures) would have no effective influence on sagebrush cover nor the utility of these habitats for winter sage-grouse use.

Environmental Consequences of the Continuation of Current Management Alternative: White-tailed prairie dogs and associates: There are no indications that current management has any deleterious effect on white-tailed prairie dogs populations, including their associates) or the utility or suitability of their habitats. The Horse Draw and Massadona pastures assume over 80% of the prairie dog habitats available in the permit area. Light annual use in March and April of each year in the Horse Draw and Massadona pastures (20 and 30%, respectively) is not thought to have any substantive influence on the availability or composition of herbaceous forage for prairie dog use. Herbaceous regrowth opportunities are ample once young prairie dogs emerge in late May.

Heavy current use during May in the Wolf Creek pasture (about 15% of habitat available in permit area) would ostensibly limit the quantity, and perhaps quality, of herbaceous forage available for prairie dog use. However, prairie dog population trends and habitat occupancy appear to be following similar trajectories in habitats north and south of Highway 40, so there is no clear indication that livestock grazing is suppressing prairie dog populations.

Bald eagle: Same as proposed action.

Greater Sage-grouse: As presently used, the Upper Sandhills pasture receives light use (30%) through June and July which likely has no substantive influence on herbaceous ground cover height or density through the nest and early brood periods. This use grows progressively heavy through late October and, in the future (once these habitats regain adequate sagebrush canopies), may affect overall nest site suitability by strongly reducing the early availability of residual cover for the following nest season. The Lower Sandhills pasture receives slight (<10%) use in May and, together with its winter grazing (November-December), cumulatively light use (<30%) by

the following nest season. This level and timing of livestock use probably has no detrimental aspects concerning sage-grouse nesting or brood-rearing functions.

Current use of the Bear Valley and Disappointment pastures occurs during the month of June. Grazing use levels are light (<30%) by the end of the grazing period, with slow, progressive declines in ground cover during the nest season, followed by at least modest herbaceous recovery by the early brood period.

Brood habitats associated with the Ruppe pastures receive heavy use through the month of July precipitating a rapid and strong reduction in herbaceous cover that coincides with the beginning of the brood period when chicks are most susceptible to exposure and predation. Profound reductions in herbaceous ground cover, both as a forage and cover source for broods, has likely marginalized the utility of this pasture for successful development of young birds, and likely forces movements to adjacent ranges with appropriate cover.

The Johnson Draw, Mud Springs, Luxen, Bull Pasture, and Jack Springs pastures are grazed during the dormant season (August through October). The Mud Springs/Johnson Draw pastures are used lightly (<20%) in August and September and progressive declines in herbaceous cover are incidental during the later brood period. The remaining pastures receive heavy use (70-80%), but progressive declines in herbaceous cover are deferred until well after the brood functions are complete (October in the Bull Pasture) or remain relatively light during the later stages of brood use (August). Arguably, the only influence current livestock grazing exerts on grouse nest and brood habitats in these pastures is the strong reduction in the availability of herbaceous residuals as supplemental cover for nest concealment early in the nest season.

Overall, current livestock grazing practices result in no effective reductions in herbaceous cover on all the permit area's nest and early brood habitats (~8,900 acres) and 32% (~3,317 acres) of the later brood habitats associated with the Blue Mountain sage-grouse population (i.e., Bull Pasture, Mud Springs/Johnson Draw, Jack Springs/Luxen Draw pastures). Minimal nest and brood habitat modification occurs on about 4,160 acres (40% of that available in permit area) of brood habitat in the Lower Sandhills and Bear Valley/Disappointment pastures, which are subject to slight to light reductions of herbaceous cover during the nesting season with progressive recovery of the herbaceous cover and forage base through the brood period. Although temporarily unsuited for grouse use, 1,120 acres of brood habitat within the Upper Sandhills pasture receives use that detracts little from its early brood functions, but continued use through October likely reduces utility (11% of available brood habitat in permit area) during the middle and later stages of brooding. Heavy livestock use of brood habitats in the Ruppe pastures (1,700 acres, 17% of brood habitat available in permit area) likely severely constrains brood use such that this pasture contributes little to Blue Mountain's suitable brood habitat base.

Although little nest and brood-rearing use is attributable to the 8,300 acres of sagebrush habitats encompassed by the lower Wolf Creek pastures (i.e., Wolf Creek, Massadona, Horse Draw), current livestock use of the Massadona and Horse Draw allotments is compatible with sage-grouse nest and brood functions. These pastures receive light grazing use through April with ample time for cover redevelopment through the nesting season. Conversely, ~3,300 acres of low-elevation sagebrush-shadscale habitats in the Wolf Creek pasture are subjected to heavy use

in May. Use intensity and timing allow only limited potential for substantive redevelopment of the herbaceous cover or forage base through the nest or brood periods, although herbaceous cover probably plays a lesser role in nest and brood concealment on these arid ranges.

Environmental Consequences of the No Grazing Alternative: White-tailed prairie dogs and associates: Because there is no clear indication that livestock grazing as practiced or proposed would cause direct or indirect competition for the prairie dog forage base, it is difficult to forecast how removing livestock would influence populations of prairie dogs and other special status species that depend on them. However, it is reasonable that heavy annual use in the Wolf Creek pasture has at least subtle nutritional effects on prairie dogs, which would presumably have negative consequences on reproductive performance and recruitment. Removal of livestock grazing in this pasture may eventually increase prairie dog abundance and lead to incremental increases in populations of burrowing owl, black-footed ferret, and ferruginous hawk. For example, and discounting confounding effects of disease, doubling average prairie dog density in this pasture would increase the prairie dog prey base by about 1.5% across the Resource Area.

Bald eagle: Same as proposed action.

Greater Sage-grouse: Removing livestock use from the permit area would allow full herbaceous cover and forage expression on all the permit area's sage-grouse nest and brood habitats associated with the Blue Mountain population, but would yield little to no benefits to herbaceous understory conditions on 100% of the nest habitat and 83% of the brood habitats available in the permit area.

Livestock removal would have no influence on live herbaceous expression as a source of sage-grouse forage and cover across the permit area's nest/early brood habitats (~8,900 acres, 100% of that available in permit area) and little effective influence (0-30% utilization) on about 3,300 acres of additional brood habitats (32% of those available in permit area) encompassed by the Bull Pasture, Mud Springs/Johnson Draw, Jack Springs/Luxen Draw pastures. Similarly, livestock removal would have little effective influence on the functional attributes of herbaceous ground cover on the Bear Valley/Disappointment and Lower Sandhill pastures (4,160 acres, 40% of that available in permit area), which would incur slight to light cattle use during the nesting season, but allowed opportunity for herbaceous redevelopment prior to and during the brood period. Although understories would not have a chance to redevelop from growing season use on the Lower Sandhills pasture, grazing-related influences on brood range (1,120 acres, 11% of that available in permit area) would remain slight to light during the brood period, and livestock removal would yield only marginal benefit to the birds. Herbaceous ground cover on brood habitats in the Ruppe pasture (1,700 acres, 17% of brood habitat available in permit area) would be strongly enhanced with livestock exclusion, but it is pertinent that 98% of these brood ranges are privately owned.

Removing livestock from the lower Wolf Creek pastures may markedly increase herbaceous expression on the Wolf Creek pasture and, in alternate years, the Massadona and/or Horse Draw

pastures, but the relative cover value derived from this action would probably have little effective influence on sage-grouse abundance and/or nesting outcomes on these marginal ranges. In nearly all pastures, cumulative livestock (as well as elk) use through the grazing periods sharply reduces the availability of herbaceous cover remaining into the subsequent nesting season. The importance of herbaceous residual in early nest concealment and maintaining favorable microclimatic conditions at the nest has been implicated in several studies, but its role under various conditions is debatable and remains undefined. Livestock removal would express itself most importantly in allowing for increasing development and accumulation of residual matter within and among sagebrush canopies. However, there is no means to predict the significance of increasing residual availability on sage-grouse nest success or, ultimately, increased recruitment into the population.

Mitigation: Grazing system features benefiting herbaceous community composition and vigor and herbaceous understory conditions as cover and forage for special status species, particularly nesting and brooding sage-grouse, have been integrated with the proposed action.

Finding on the Public Land Health Standard for Threatened & Endangered species:
White-tailed prairie dogs and associates: Public Land Health Standards for those special status species associated with white-tailed prairie dogs in the permit area, including black-footed ferret, ferruginous hawk, and burrowing owl, are currently being met. There is no evidence to suggest that proposed or current grazing practices would or are having an adverse influence on populations, available extent of suitable habitat, or the reproductive activities of these four species and would, therefore, have no influence on continued meeting of the land health standard. Small incremental gains in perennial grass cover and forage associated with the proposed and no action alternatives would be expected to bolster (on a diminutive scale) local populations of prairie dogs and cottontail rabbit and potentially benefit (directly or indirectly) individual burrowing owl, ferruginous hawk, and black-footed ferret.

Bald eagle: None of the alternatives would have any influence on continued meeting of the Public Land Health standards for bald eagle.

Greater sage-grouse: Greater sage-grouse habitats across the northwest quadrant of the project area generally meet the Public Land Health Standard. Normal successional processes (e.g., fire) have temporarily altered habitat utility across 1,440 acres of brood habitat, but these changes at this scale are considered necessary and beneficial to the long term maintenance and availability of suitable habitat conditions. Livestock and big game grazing use are considered compatible with ground cover conditions acceptable for grouse brood and nest functions on all available nest/early brood habitats and 83% of later brood habitats available in the permit area (i.e., those associated with the Blue Mountain population). The southeast quadrant of the project area represents marginal sage grouse nest and brood-rearing habitat. Recognizing the limited potential of the sites, these low-elevation saltbush communities meet the standard in this regard. Winter use is not contingent on herbaceous ground cover and big sagebrush cover is wholly adequate to meet the birds' needs at this time of year.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: A Colorado BLM sensitive plant species occurs near the project area of the Horse Draw pasture, the debris milkvetch (*Astragalus detritalis*). *Astragalus detritalis* is a rare milkvetch which occurs from near Meeker, into northeastern Utah. Populations are also known from the Rangely area. The plant flowers in May. There does not appear to be a geological substrate with which it is intimately associated, as it occurs on rocky or sandy soils on alluvial terraces with cobbles. The debris milkvetch occurs on some of the alluvial terraces that are within a mile wide corridor of US 40 between Massadona to the west and Wolf Creek to the east. Nearly all of the known populations of the debris milkvetch occur immediately south of US 40 on terraces and adjoining slopes covered with small cobbles. This plant occurs on steep west facing slope of School Gulch in an area of less than 40 acres and at elevation ranges from 5400-7200 ft.

Environmental Consequences of the Proposed Action: There are no impacts anticipated to this plant providing that the proposed grazing schedule and terms of the plan of development are followed. It is critical that no exceptions be made to allow the cattle to graze in the Horse Draw pasture beyond the May 15 date. The proposed action has the potential to improve the condition of the pasture by using an alternate year schedule and by reducing the usage of this pasture. The proposed action reduces the AUM's from the current management which would allow for improvement of the native vegetation by grazing at a lesser degree of intensity.

Environmental Consequences of the Continuation of Current Management Alternative: The current management of this allotment has not been followed by using the alternate year method although it was part of the grazing permit conditions. This trend could have an adverse effect on the condition and function of the debris milkvetch through grazing during the growing season each year on the Horse Draw pasture. Although the timing of the off dates could be early enough to promote growth of the debris milkvetch the intensity of grazing and the AUM's are increased as compared to the proposed action.

Environmental Consequences of the No Grazing Alternative: None

Mitigation: Concurrent with the proposed action.

Finding on the Public Land Health Standard for Threatened & Endangered species: There is no reasonable likelihood that the proposed action or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands.

Environmental Consequences of the Proposed Action: No hazardous wastes would be generated. Small quantities of solid wastes could potentially be generated by daily operations.

Environmental Consequences of the Continuation of Current Management Alternative: No hazardous wastes would be generated. Small quantities of solid wastes could be potentially be generated by daily operations.

Environmental Consequences of the No Grazing Alternative: None

Mitigation: The permittee shall be required to collect and properly dispose of any solid wastes generated by the proposed action.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: The table below identifies the drainages that occur within the allotment boundaries, the watershed the drainage is tributary to, corresponding amount of acres in each of the drainages, and the water quality stream segment each of the drainages fall into.

Major Drainages	Acres within Project Area	QW Stream Segment
White River Watershed		
Hall Draw	2,100	13a
Wolf Creek	75,400	
Red Wash	17,400	
White River	3,500	12
Yampa River Watershed		
Disappointment Draw	4,800	14
Johnson Canyon	2,516	
Bear Draw	560	
Hells Canyon	325	
Thanksgiving Gorge	1,200	
Yampa River	30	
Total Acres	107,831	

A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list and the Unified Watershed Assessment was one to see if any water quality concerns have been identified. The allotments fall within the White River and Yampa River watersheds. The State has classified these segments as a "Use Protected" reaches. They're designated beneficial uses are: Warm Aquatic Life 2, Recreation 2, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. For this reach, minimum standards for three parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0 and Fecal Coliform = 2000/100ml and 630/100 ml E. coli. In addition standards for inorganic and metals have also been listed and can be found in the table of stream classifications and water quality standards. This segment retained its Recreation Class 2 designation after sufficient evidence was received that a Recreation Class 1a use was unattainable.

The 3500 acres that are within the mainstem of the White River are classified as Warm Aquatic Life 1, Recreation 1a, Water Supply and Agriculture. The state has further defined water quality parameters with table values. These standards reflect the ambient water quality and define maximum allowable concentrations for the various water quality parameters. The anti-degradation rule applies to this segment meaning no further water quality degradation is allowable that would interfere with or become harmful to the designated uses.

Environmental Consequences of the Proposed Action: Employment of rest from grazing, pasture rotation and shortened grazing seasons would allow the vegetation condition to improve. Any improvement to vegetation cover would also help to reduce sediment transport, which is the major water quality contaminant for the watersheds of the White and Yampa Rivers.

Environmental Consequences of Continuation of Current Management: Current management of continual grazing during the growing season without any rest contributes to erosion and water quality problems. Typically, annual runoff is dynamic and dependent aspects we control, such as the amount of vegetation retained for watershed protection and vegetation density. Depleting the vegetation cover needed to protect watersheds from raindrop impact and runoff could cause long-term erosion and water quality problems for these tributaries of the White and Yampa Rivers.

Environmental Consequences of the No Grazing Alternative: By implementing the no grazing alternative, impacts to vegetation from livestock would not occur. With no impacts to vegetation, impacts to water quality would also not be expected.

Mitigation: Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*.

Finding on the Public Land Health Standard for water quality: Currently the White and Yampa Rivers meet the Public Land Health Standard and would continue to do so with the implementation of the proposed action. Many of the upper tributaries which are ephemeral and flow in direct response to storm events do not meet the standards during periods of flow. By improving the cover and distribution of livestock, the watershed cover would begin to improve causing these drainages to move towards meeting the standards.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: Massadona allotment: Within the Massadona allotment is located Divide Creek Dam (RI #1151), which supports a lentic (standing water) riparian community along the shoreline (9/10 mile, 5 acres). Dominant plant communities include bulrushes, cottonwoods (narrow leaf & Fremont), willows, tamarisks, Russian olives, and cattails. Limited to the northern portion of the reservoir are Canada thistles. Divide Creek Dam was inventoried for Proper Functioning Condition (PFC) in July of 2005. It has also been assessed in 2002, 2003, and 2004. This reservoir has been rated as Proper Functioning Condition for all inventory dates. Divide Creek Dam is fed by an underground source and is subject to low water levels and at times may go dry. A fenceline (R.I. #1078) surrounds the reservoir, but a lack of adequate

maintenance has allowed cattle to access the site. However, as shown by the rating, cattle are having no discernable effect on the functionality of the riparian system.

The Horse Draw well on BLM administered lands support a riparian community for approximately 1/2 mile below the source and is located in the north pasture of the Massadona allotment. This stretch of riparian zone was inventoried for PFC during May of 2005. The area supports a robust community of cattails, bulrushes, willows, and a few cottonwoods. The system was rated as Proper Functioning Condition. Concerns that arose during the inventory included vehicular traffic in the riparian system as some people have bypassed a partially washed out stretch of the two-track road, a few bull and musk thistles above the well, and willows have been heavily hedged from wildlife and livestock use. This flowing well has been developed (piped) and an old/abandoned steel water trough is located at the well site. The riparian community associated with Horse Draw well is an artificial community, as it is currently associated and obligated with human development (water well).

Horse Draw allotment: The Wolf Creek drainage traverses down the western portion of the allotment. This stretch was inventoried for PFC on August 1st of 2002 and delineated two segments of 2 miles and 5 miles, for a total of 7 miles. Riparian zones are intermittent within these segments, dependent upon surface and subsurface water availability. Influences by cattle on the functionality of the system are negligible, with some localized trampling near roads and fences.

The 2-mile segment was rated as Proper Functioning Condition with good vegetation on banks and point bars, including willows and cottonwoods that allow for vertical stability. Riparian vegetation includes obligate and facultative streambank vegetation.

The 5-mile segment was rated as Functional at Risk with an upward trend. The rating was related to the concern of perennial pepperweed (Tall Whitetop, noxious weed), local infestations of burdock, and the ephemeral system being entrenched. The perennial pepperweed infestation is related to flooding events that carry seeds from upstream sources. Positive aspects of the system include good deposition and vertical stability. In comparison to the above mentioned 2-mile stretch, there are fewer willows due to less water availability.

Hall Draw allotment: There are no known riparian plant communities that exist in this area.

Wolf Creek allotment: The bulk of riparian zones on the Wolf Creek allotment are associated with private land, as these areas were previously homesteaded. Known riparian communities on BLM administered lands are located in Peterson Draw (1/2 mile), Three Springs Draw/Yellow Cat Draw (1 1/2 miles), Peterson Draw Reservoir #2 (4/10 mile, 3 acres, #1111), Bear Canyon (9/10 mile, Bear Spring-#0278, Sandhills Spring-#0276), and a portion of Wolf Creek (1 mile). Little Red Wash was inventoried for PFC in September of 1995; however no riparian characteristics were identified within the drainage.

Within Peterson Draw (Wolf Creek Pasture), a riparian community on BLM administered lands was identified and inventoried for PFC during May of 2005. This riparian system is supported and obligated to the upstream development of flowing wells located in private land. Peterson

Draw Reservoir (#0821) is located within the drainage and is largely filled in with sediment, thus limiting its water holding capacity. The riparian zone is largely limited to the channel above the reservoir. Dominant riparian plants include cattails, limited willows, sedges, and bulrushes, with limited tamarisks and a couple of Russian olives. Sedges provide a nearly continuous cover throughout the system. Also, perennial pepperweed (tall whitetop), an invasive and noxious weed, is found within this drainage on a limited basis. The saturation zone of the channel is expanding laterally, as there are juniper trees within the channel that have recently died (over saturation). An apparent causative factor for this lateral expansion may be due to the reservoir being full of sediment, thus water is not accumulating within the reservoir and the water is being forced to saturate the soils upstream of this reservoir. Overall, this riparian section received a rating of Proper Functioning Condition with concern of the occurrence of perennial pepperweed which is present, not dominant, within the plant community.

The riparian zone within Three Springs Draw/Yellow Cat Draw (Wolf Creek Pasture) is similar to that of Peterson Draw (see above) and was inventoried for PFC in July of 2005. The riparian community on BLM administered lands is supported and obligated to upstream flowing water wells located on private land. Dominant riparian plants include sedges, rushes, cattails, and willows. Willows of all age classes are more dominant within this channel than that of Peterson Draw. The saturation zone of the channel is expanding laterally, as there are juniper trees within the channel that have recently died (over saturation). Overall, this riparian section is similar to that of Peterson Draw and was rated as Proper Functioning Condition.

Peterson Draw Reservoir #2 supports a lentic (standing water) riparian community along the shoreline (3 acres) in the Wolf Creek Pasture. Dominant plant communities include bulrushes and cattails. Peterson Draw Reservoir #2 was inventoried for PFC during July of 2005, 2004, and 2002. During all inventories, the area was rated as Proper Functioning Condition. This reservoir is fed by an underground source and is subject to low water levels and at times may go dry. A fence line (#1112) surrounds the reservoir, but a lack of adequate maintenance has allowed cattle to access the site. Cattle are typically entering the site for watering purposes at the dam location and then exiting the site using the same route. Outside of the dam, cattle make little use of the riparian system. As shown by the functional rating, cattle are having no discernable effect on the functionality of the riparian system.

The Wolf Creek drainage was inventoried for PFC in September of 1995. Four segments were delineated during this inventory, however only one segment for 1 mile (reach #1) had intermittent riparian characteristics, which has private land above and below the segment. The remainder of the drainage (reach #2-4) did not express riparian characteristics on BLM administered lands. Reach #1 was rated as Functional-At Risk with a Not Apparent trend due to a straight streambed within a slight gully.

The Bear Canyon drainage was inventoried for PFC in October of 2005 and September of 1995. Five segments were delineated during these inventories, however only one segment for 0.9 miles had riparian characteristics throughout much of the reach. The riparian zone is attributed to Bear Spring and Sandhill Spring within the upland drainage of the canyon. Riparian plant species within the reach include rushes, sedges, redtop, Kentucky bluegrass, and a few box elder trees. During the 1995 inventory of Bear Canyon, the riparian reach was rated as Functional-At-Risk

with a downward trend due to a recent thunderstorm flow event (the day before the inventory) that flattened and uprooted a portion of the riparian community and due to a headcut at the base of the reach which ends at a rock face. The 2005 inventory rated this reach as Functional-At-Risk with an upward trend. A few small nick points (drops of ½ ft. to 2 ft.) are present near the spring source in the channel, which are partially reinforced with bedrock and upstream riparian vegetation consisting primarily of sedges. The inventories classified the segment as having a riparian zone that has achieved its potential extent with a diverse composition of riparian vegetation that exhibit high vigor and present species indicate maintenance of riparian soil moisture. Each spring is developed with a short pipeline feeding a water trough located within the drainage. However, these spring developments are in a state of disrepair with non-functioning overflows, holes in troughs, etc. that detracts from the system. These two springs serve as the primary water source for the Upper Sandhills pasture. The riparian zones are confined to natural walled channels, have a rock bottom substrate, and a burn has greatly increased the upland forage availability for livestock and wildlife, thus reducing grazing pressure by livestock within the riparian channel.

A partial inventory in 2006 of several canyons, such as Box Canyon, within the Skull Creek pasture of the Wolf Creek allotment concluded the canyons support Box Elder trees, which grow within moist sites. However, limited water availability confines the establishment of actual riparian species within these drainages.

Environmental Consequences of the Proposed Action: Massadona allotment:

The Divide Creek Dam has been rated as Proper Functioning Condition for all inventory dates. Cattle are currently accessing the riparian zone, but are having no discernable influence on its health due to limited accessible points to cattle within the riparian area surrounding the reservoir. It is anticipated that the current rating of Proper Functioning Condition will continue.

The artificial riparian area associated with Horse Draw Well will continue in its functional state. It is expected that a slight improvement will occur due to the proposed grazing system that will achieve a complete growing season rest from grazing every other year. Also, feeding operations during winter months near the riparian system has been eliminated recently, thus allowing a greater opportunity for plant growth, particularly woody species such as willows. Anticipated minor improvements would include a greater growth of riparian vegetation that would aid to bank stabilization and sediment entrapment within the channel

Horse Draw allotment: Within the Wolf Creek drainage, the proposed action would have a positive benefit for the riparian system with grazing at a reduced level (AUM) and with grazing occurring only every other year during the growing season. This situation of reduced use will give the riparian plants a greater opportunity for plant growth and regrowth after grazing, with a complete growth period every other year. Thereby, the proposal will aid in plant vigor, extent of dominance, bank stabilization, and sediment trapment. Thus, the system will continue at a Functional at Risk rating due to the presence of perennial pepperweed, with an overall upward trend. This rating will remain Functional at Risk until a comprehensive effort is undertaken to rid the channel of perennial pepperweed using chemical pesticides.

Hall Draw allotment: Not applicable, as there are no known riparian zones located on this allotment.

Wolf Creek allotment: The riparian vegetation along the shoreline of Peterson Draw Reservoir has been inventoried as Proper Functioning Condition. Cattle are currently accessing the riparian zone, but are having no discernable influence on its health due to limited accessible points to cattle within the riparian area surrounding the reservoir. It appears that cattle are accessing the site for water near the dam, and then travel back to the uplands for forage. The proposed reduced use and shortened grazing season for the Wolf Creek pasture would provide a slight positive benefit for this riparian zone with an extended growing season without grazing that would allow for sufficient growth of riparian species. It is anticipated that the current rating of Proper Functioning Condition will continue.

Within Peterson Draw, Three Springs Draw, and Yellow Cat Draw the proposed action would have a positive benefit for the riparian system with a shortened grazing season in the Wolf Creek pasture at a reduced level (AUM). This situation will give the riparian plants a greater opportunity for plant growth and regrowth after grazing. Thereby, the proposal will aid in plant vigor, extent of dominance, bank stabilization, and sediment trapment. Thus, the systems will continue to function with an upward trend.

The Wolf Creek drainage that supports a riparian community on BLM lands is limited to the Wolf Creek pasture and the Disappointment pasture. This area was rated as Functional-At Risk due to a straight streambed. According to the PFC analysis, this system has an adequate riparian zone that has achieved its potential extent, it is maintaining riparian soil moisture, and riparian plants exhibit a high vigor. Therefore, grazing practices are not having a discernable influence on this system and are not contributing to the system's concern of a straight channel. The proposed grazing system will have achieve a benefit (upward trend) to the system with reduced grazing use and shortened grazing season for the area, thereby providing a greater opportunity for riparian plant growth.

The Bear Canyon drainage is located in the Upper and Lower Sandhills pastures. This segment was rated as Functional-At Risk with a downward trend in 1995 and an upward trend in 2005. The riparian zones are confined to a walled channel, thus limiting the lateral extent of the riparian community. Therefore, there are limited grazing opportunities within the channel itself, and a burn has greatly increased the upland forage in this area. Thus, cattle have limited their concentrated grazing use within these riparian areas. Small incised headcuts within the channel are of concern, yet the riparian zone has achieved it potential extent, it has a diverse composition of vegetation, and the present species indicate maintenance of riparian soil moisture. A reduced grazing season and grazing intensity (AUMs) for the Upper Sandhills pasture (location of springs) will have a net positive benefit for these riparian zones by providing a greater opportunity for regrowth. Thereby allowing for sufficient growth of riparian plants to protect stream banks, trap sediment, and hold water for a greater period. Thus, the proposal will continue an upward trend for the functionality of this riparian system. A small fenced enclosure around both spring sources would aid in the stability of the sites and increase the rate of recovery for riparian vegetation found within the channel.

Environmental Consequences of the Continuation of Current Management Alternative:

Massadona allotment: Riparian conditions for the Divide Creek Dam and Horse Draw well will be similar to those discussed within the proposed action alternative. Under current management, the area would be grazed every year during the growing season (actual use) or grazing at a higher intensity level (1982 AMP, current grazing permit). Therefore, the riparian system would have less potential for growth and replenishment of biomass. Divide Creek Dam would continue in a Proper Functioning Condition with a static trend. The artificial riparian area associated with Horse Draw Well will continue in its functional state with a static trend.

Horse Draw allotment: Under current management within Wolf Creek drainage, the area would be grazed every year during the growing season (actual use) or grazed at a higher intensity level (1982 AMP, current permit). Therefore, the system would have less potential for growth and replenishment of biomass that aid in bank stability, sediment trapment, and overall functionality of the system. The system would remain in the Functional at Risk rating due to the presence of perennial pepperweed, however the positive aspects of the upward trend would be less significant than that of the proposal. This rating will remain Functional at Risk until a comprehensive effort is undertaken to rid the channel of perennial pepperweed using chemical pesticides.

Hall Draw allotment: Not applicable, as there are no known riparian zones located on this allotment.

Wolf Creek allotment: Riparian conditions at Peterson Draw Reservoir #2 would be similar to those discussed within the proposed action alternative and would remain in a Proper Functioning Condition if grazed in a similar pattern as the past (actual use). However, if the 1982 AMP or the current grazing permit were implemented, grazing could commence as early as 03/01 (vs. 05/01) for the Wolf Creek pasture that contains the reservoir and the riparian system within Peterson Draw, Three Springs Draw, and Yellowcat Draw. Also, grazing would be at a higher intensity/grazing level by livestock; thereby, creating a situation that may cause a downward trend with increase grazing pressure in the riparian zones of the draws and also the reservoir if left with a nonfunctional fence.

Within the Wolf Creek drainage, the potential of riparian conditions would be underachieved then that of the proposed action alternative. A longer grazing period at a higher level (AUMs) would lessen the opportunity for the system to achieve its full potential. However, as noted in the proposed alternative, cattle are not having a discernable influence on the riparian system, as the concern is a straight channel. Overall, trend for PFC within the Wolf Creek drainage would be static under this alternative.

Riparian conditions in the Bear Canyon drainage would be at a higher level (AUMs) and longer period than the proposal. Therefore, increasing grazing pressure along the riparian channel would reduce the opportunity of plant regrowth and reduce sufficient growth for bank stabilization within the headcut areas and sidebanks. Thus, the Functional-At Risk condition would continue with a static or slightly downward trend.

Environmental Consequences of the No Grazing Alternative: Massadona allotment: The Divide Creek Dam riparian zone has been rated as Proper Functioning Condition and would continue under no grazing with an improvement in the assessable points to cattle. There would be no need for maintaining the existing fenceline that surrounds the reservoir, thus it could be removed.

The artificial riparian area connected to the Horse Draw Well is dependent upon the flowing well for its existence. Without the permittee maintenance on the well, the well may become nonfunctional over time and not run water down the drainage. The current riparian community could not exist without the well that is flowing water in the drainage.

Horse Draw allotment: With no grazing in the Wolf Creek drainage, it would provide an opportunity for improvement in channel vegetation that would aid to the channels stability. The upward trend improvement would be limited because of the established perennial pepperweed in the channel, which would cause the system to remain Functioning at Risk with an upward trend. This rating will remain Functional at Risk until a comprehensive effort is undertaken to rid the channel of perennial pepperweed using chemical pesticides.

Hall Draw allotments: Not applicable, as there are no known riparian zones located on this allotment.

Wolf Creek allotment: Riparian conditions at Peterson Draw Reservoir #2 would continue in its current state as Proper Functioning Condition with an improvement in the limited assessable points to cattle. There would be no need for maintaining the existing fenceline that surrounds the reservoir, thus it could be removed.

Within Peterson Draw, Three Springs Draw, and Yellow Cat draw no grazing would improve the riparian systems by allowing the plants to complete a full growth cycle without grazing by livestock. Thus the systems would remain functional with an upward trend. However, these riparian systems are dependent upon flowing water wells located on private land owned by the grazing permittee. Without grazing by the permittee, maintenance may not be performed on the wells which could stop the flow of water, thus eliminating the riparian system.

The Wolf Creek drainage would receive a slight improvement from its current functional state except its straight channel. No grazing would provide an opportunity for improvement in channel side vegetation, which over time would create an upward trend in functionality, thereby improving trend that would lead to achieving a functional system within a 10 year period. However, the concern of a straight channel would remain which would negatively influence the rating of the system.

Within the Bear Canyon drainage, no grazing would allow riparian vegetation the greatest opportunity for improvement as cattle would not be assessing the developed springs/troughs for watering. Therefore, allowing for improvement in the stream side vegetation below the springs that would create a situation of increase stability within the channel and healing of small headcuts. Thus the riparian condition would have an upward trend until achieving Proper Functioning Condition, which would likely occur with the 10 year renewal period.

Mitigation: An effort by the BLM to perform maintenance on Peterson Draw Reservoir #2 Fence (1112) and Divide Creek Dam Fence (1078), thus excluding cattle from these localities. If it is determined that riparian and/or wildlife objectives can be met without the fences then an effort by the BLM will be to remove them.

Finding on the Public Land Health Standard for riparian systems: There are 12.7 miles of riparian systems on BLM administered lands associated with the proposed action. Of these 12.7 miles, 6.8 miles are rated as Proper Functioning Condition, 5.9 miles rated as Functional at Risk with an upward trend. Under the proposal, a shortened season of use at a lower grazing intensity will enhance the ability of this stream stretch to have sufficient vegetative growth to provide bank stability. Therefore, the proposal will create an upward trend for the functionality of this system and all other systems in meeting standards.

WILDERNESS

Affected Environment: The Wolf Creek Allotment coincides with approximately 46% of the Skull Creek WSA and approximately 8% of the Willow Creek WSA. WSAs are typically described by four criteria: naturalness, solitude, primitive and unconfined recreation and special features. The following is a discussion of the previously identified criteria to describe the state of the Willow Creek WSA and the Skull Creek WSA:

Willow Creek WSA Willow Creek WSA is predominantly natural with negligible human imprints; minor imprints consist of several ways which are revegetating, one developed spring with a watering trough (Rim Spring No. 2 #0995 T4NR102W Section 13 NWNE ¼ is associated with the Wolf Creek Allotment) and a section of the Skull Creek gap fence (#000243 T4NR102W Section 24 NWNW). The diverse topography and dense vegetation provide outstanding opportunities for solitude and primitive and unconfined recreation. Special features include an interesting array of cultural history including significant archeological sites dating back 10,000 years. In addition, dendrochronological dating has identified that some Pinyon Pine within the WSA are some of the oldest known and may provide data as to local climatic conditions extending back 600 years. Significant paleontological resources have been found in the vicinity of Skull Creek WSA and likely occur within the WSA as well.

Skull Creek WSA Skull Creek WSA is predominantly natural with negligible human imprints; minor imprints include ways in the eastern third of the WSA as well as several short-range fences:

- 1) Lone Mountain Allotment Boundary Fence # 207259 T4NR101W Section 15 NWNE & E½NW (for reference see EA CO-017-92-122)
- 2) Skull Creek Gap Fences #000243 T4NR102W Section 24 NWNW & T3NR101 Section 6

The diverse topography and dense vegetation within the WSA provide outstanding opportunities for solitude and outstanding opportunities for primitive and unconfined recreation. Special features include an interesting array of cultural history including significant archeological sites

dating back 10,000 years. In addition, dendrochronological dating has identified that some Pinyon Pine trees within the WSA are some of the oldest known and may provide data as to local climatic conditions extending back 600 years. Significant paleontological resources have been found in the vicinity of Skull Creek WSA and likely occur within the WSA as well.

Environmental Consequences of the Proposed Action: Willow Creek WSA By decreasing the intensity of the grazing (the proposed action is expected to improve livestock distribution from the aspect of a reduction (not) in total AUMs used) a shorter grazing season, a reduction in AUMs used during the growing period, and a rest period every other year during the growing period a trend of increasing naturalness would be expected as native vegetation would be given a greater opportunity for seed production, replenishment of root reserves, biomass accumulation, and plant propagation. Periodic maintenance of spring development utilizing mechanized/motorized equipment (Rim Spring No. 2 #0995 T4NR102W Section 13 NWNE ¼) would temporarily impact the solitude (via noise and sight of equipment) and primitive recreation (equipment would be mechanized, not primitive) as this development was developed in May of 1957 with the use of a tractor and may continued to be maintained in the manner by which it was constructed. Rim Spring No. 2 #0995 is “existing” facility based on the definitions discussed in BLM Handbook H-8550-1, Interim Management Policy for Lands under Wilderness Review, the Interim Management Policy or IMP (IMP, Chapter I.A.7. & Chapter III.D.3a.). To date, the BLM has no record of maintenance on this existing facility. Although it was not addressed in the proposed action of the document, the moving of livestock from pasture to pasture within the WSA would impact both solitude and primitive recreation for the period that equipment was utilized.

Skull Creek WSA Similar consequences as discussed above for Willow Creek WSA with the exception of no motorized/mechanized equipment impacts. This is due to the fact that both fences were constructed without the aid of motorized equipment and therefore must be maintained by non-motorized equipment (IMP Chapter III.D.3c & Chapter III.D.4.c). Although it was not addressed in the proposed action of the document, the moving of livestock from pasture to pasture within the WSA would impact both solitude and primitive recreation for the period the equipment was utilized.

Environmental Consequences of the Continuation of Current Management Alternative: Similar consequences as discussed above for Skull Creek WSA.

Environmental Consequences of the No Grazing Alternative: An increasing trend in naturalness would be expected as native vegetation will be able to propagate and accumulate much more naturally without the introduction of livestock forage loss. No structures would be maintained (such as spring development and water troughs).

Mitigation: Permittee must provide notice 14 days prior to any use of motorized or mechanized equipment to maintain the Rim Spring No. 2 #0995 T4NR102W Section 13 NWNE ¼. This is needed to provide time to contact interested parties of pending actions. No other motorized or mechanized uses are permitted within either WSA. This requirement must be noted in the case file, in the stipulations, and the grazing permit (See IMP Chapter III.D.3c.)

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, or Wild and Scenic Rivers exist within the area affected by the proposed action. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: See tables in the Rangeland Management section of this document for a breakdown of soil units and associated ecological sites by BLM, private, and states acres within allotments that are broken down by pastures permitted to Three Springs Ranch. Figures 3 & 4 (Soil Maps) display soil unit polygons within allotments permitted to Three Springs Ranch.

Soils analyzed in this document have been covered either in the Rio Blanco County Soil Survey or the Moffat County Soil Survey. The soil surveys delineate individual soil unit polygons and associated ecological sites.

Soils that are occupied with plant communities rated as a mid seral, late seral or potential natural community (PNC) have sufficient cover of desirable plant species to produce adequate litter and ground cover to minimize runoff and provide for soil protection (refer to the Vegetation section below for ratings). These soils are meeting the Colorado Public Land Health Standard for upland soils. The following allotments have BLM acres achieving or moving towards achieving for Standards for Public Land Health: Wolf Creek-52955 acres (96%), Hall Draw-6402 acres (84%), Massadonna-7685 acres (89%), and Horse Draw-11223 acres (90%) (refer to the below Vegetation section of this document).

Soils that have sites rated as early seral plant communities not meeting public land health standards do not have sufficient diversity and/or cover of native plant species to provide effective ground cover to prevent overland flow, runoff, and general soil degradation. These soils are experiencing a certain degree of pedestaling, minor expression of rills, and some areas have active gully erosion. Erosion is most evident within the salt desert communities whose soils have high clay content (Massadonna, Horse Draw). These areas that are experiencing active erosion are typically found along major drainages (Divide Creek, Wolf Creek, Box Elder, Hall Draw, etc.) that have downcut in the distant past, which has caused the side drainages to downcut to the level of the major drainages to obtain equilibrium. The early seral sites not meeting health standards have soils that are typically within drainage bottoms and toe slopes that are found on ecological sites such as Clayey Slopes, Alkaline Slopes/None, Torrifluvents gullied, Clayey

Salt-desert/Clayey Salt-desert, foothill swale, salt-desert overflow, and rolling loam (Hall Draw allotment). The following allotments have BLM acres not achieving Standards for Public Land Health: Wolf Creek-1250 acres (4%), Hall Draw-575 acres (16%), Massadaona-720 acres (11%), and Horse Draw-1343 acres (10%) (Refer to the below Vegetation section of this document).

Environmental Consequences of the Proposed Action: On most mid seral sites and early seral sites related to fire, and some limited early seral rangelands not meeting standards, there would be an increase in surface litter accumulation, canopy cover, and ground cover due to the critical growing season rest and regrowth opportunities as provided by livestock management under the proposed action. Ground cover of native perennial plant species and litter are central in the protection and stabilization of soils.

On soils with late seral or PNC plant communities, little change from the current status is expected in regards to plant cover that provides soil protection. These sites are already at full potential and meeting health standards and will not be appreciably influenced by the proposal.

Soils with early seral plant communities not meeting public land health standards will mostly continue at their current state because they have crossed a threshold of annual plant domination and over domination by sagebrush. This situation is nearly irreversible regardless of the livestock management without some form of disturbing agent such as fire, chemical, or drill seeding. Historical grazing practices (spring use, over utilization, etc.) created the situation in which most of the early seral plant communities will not meet the rangeland health standards for soils.

Environmental Consequences of the Continuation of Current Management Alternative: A negative impact would occur in regards for achieving rangeland health standards if the 1982 AMP or the current grazing permit were implemented. Such impacts to soils may include a downward change in species composition, diversity, desired plant cover, and/or reduced production for many of the rangelands, which would mostly occur within mid seral sites and to a lesser degree within the late seral communities. These situations create a condition of reduced soil integrity and lessen vegetative protection of plant matter, thus increasing potential for excessive soil erosion. The PNC communities would most likely continue to meet health standards and the early seral communities not meeting standards would continue to not meet health standards.

Under the Current Management's actual use alternative, a slightly improving to static soil conditions on all seral classes are expected as no significant changes in plant cover and litter accumulation are anticipated that would influence soil health.

Environmental Consequences of the No Grazing Alternative: Under a no grazing by livestock alternative, most localities that are being grazed by cattle would experience a short-term increase in both perennial plant cover and soil surface litter accumulation. Ecological sites of mid seral and early seral related to fires would likely experience the greatest benefit of increased perennial plant cover. On early seral ecological sites such as the monocultures of sagebrush or greasewood and on salt desert rangelands dominated by cheatgrass, the majority of areas are not expected to change in perennial plant cover because they have crossed a threshold

of total sagebrush and/or annual plant domination. Soils associated with PNC ecological sites would continue to meet standards and experience minimal changes in plant species composition and diversity.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Soils that occupy early seral communities are mostly not meeting the Standards due to the lack of soil protection caused from a significant composition of cheatgrass, an invasive annual grass, and due to the mono-cultures in some greasewood and sagebrush communities. All other seral communities (Mid – PNC) are currently meeting standards and make up the bulk of acres on all allotments. Implementation of the proposed action will enhance the ability of the rangelands to meet and continue to meet Public Land Health Standards.

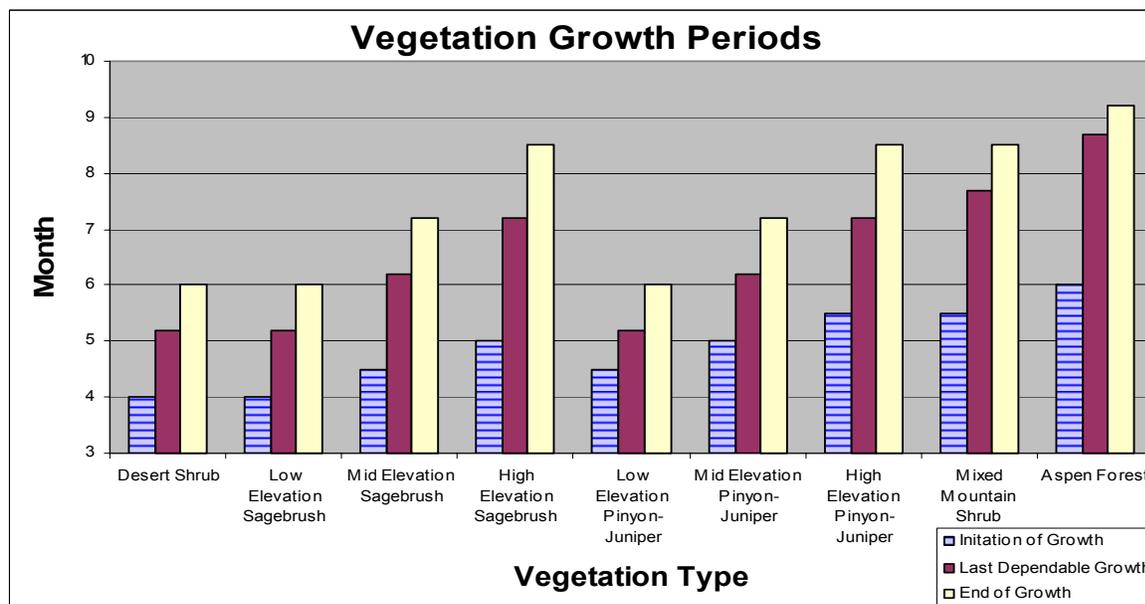
VEGETATION (includes a finding on Standard 3)

Affected Environment: The following table lists the plant community appearance for the Ecological sites or woodland types on allotments associated with the proposed action, along with the predominant plant species comprising the composition of each community. Forb species, though important to the diversity of a community and making up to 25 to 30% of the composition of several of the plant communities listed, are not presented in the following table because they generally are not contributors to the appearance or dominance of the community.

Ecological Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Alkaline Slopes	Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, wheat grasses, Indian rice grass, squirreltail
Brushy Loam	Deciduous Shrub/grass Shrubland	Serviceberry, oakbrush, snowberry, mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
Clayey Foothills	Grass/Open Shrub Shrubland	Western wheatgrass, mutton grass, Indian rice grass, squirreltail, June grass, Wyoming big sagebrush, black sagebrush
Clayey Salt-desert	Salt Desert Shrubland	Gardner saltbush, shadscale, mat saltbush, galleta, Salina wildrye, squirreltail, Indian rice grass
Clayey Slopes	Grassland	Salina wildrye, mutton grass, western wheatgrass, June grass, squirreltail, shadscale
Deep Clay Loam	Grass/Open Shrub Shrubland	Western wheatgrass, slender wheatgrass, mutton grass, squirreltail, June grass, Letterman and Columbia needle grasses, mountain big sagebrush
Deep Loam	Grassland	Bluebunch wheatgrass, muttongrass, needle-and-thread, western wheatgrass, slender wheatgrass, big sagebrush, serviceberry, snowberry.
Dry Exposure	Grassland	Beardless bluebunch wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, buckwheat
Foothill Swale	Grass/Open Shrub Shrubland	Basin wildrye, western wheatgrass, slender wheatgrass, streambank wheatgrass, Indian rice grass, Nevada bluegrass, basin big sagebrush, fourwing saltbush, rubber rabbitbrush
Loamy Salt-desert	Grass/Salt Desert Shrubland	Needle-and-thread, galleta, Sandberg bluegrass, squirreltail, Indian rice grass, Gardner saltbush, shadscale, winterfat, horsebrush
Loamy Slopes	Mix Shrub/grass Shrubland	Mountain mahogany, bitterbrush, serviceberry, mountain big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass
Mountain Loam	Grass/Open Shrub Shrubland	Mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses, mountain big sagebrush, bitterbrush, low rabbitbrush,

Ecological Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Mountain Swale	Grass/Open Shrub Shrubland	Basin wildrye, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses, sedges, rushes, mountain big sagebrush, rubber rabbitbrush, snowberry,
Rolling Loam	Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, horsebrush, bitterbrush, western wheat grass, Indian rice grass, squirreltail, June grass, Nevada and Sandberg bluegrass
Salt-desert Breaks	Salt Desert Shrubland	Galleta, salina wildrye, squirreltail, Indian rice grass, needle-and-thread, shadscale, winterfat
Salt-desert Overflow	Grassland	Alkali sacaton, galleta, Indian ricegrass, squirreltail, sand dropseed, fourwing saltbush, rubber rabbitbrush, greasewood.
Salt Meadow	Grassland	Inland salt grass, western wheatgrass, slender wheatgrass, fourwing saltbush, rubber rabbitbrush
Sandy Salt-desert	Grass/Salt Desert Shrubland	Needle-and-thread, Indian rice grass, sand dropseed, Sandberg bluegrass, squirreltail, galleta, shadscale, winterfat, horsebrush
Semidesert Clay Loam	Grass/Sagebrush Shrubland	Western wheatgrass, squirreltail, galleta, Salina wildrye, Indian rice grass, Wyoming big sagebrush, fourwing saltbush, shadscale
Semidesert Loam	Grass/Sagebrush Shrubland	Needle-and-thread, western wheatgrass, galleta, Sandberg bluegrass, squirreltail, Indian rice grass, sand dropseed, Wyoming big sagebrush, fourwing saltbush, winterfat
Stony Foothills	Grass/Open Shrub Shrubland	Beardless bluebunch wheatgrass, western wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, Wyoming big sagebrush, black sage, serviceberry, pinyon and juniper
Stoney Loam	Grass/Shrubland	Bluebunch wheatgrass, Indian ricegrass, needle grasses, muttongrass, western wheatgrass, serviceberry, bitterbrush, bog sagebrush, snowberry
Pinyon/Juniper	Pinyon/Juniper Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush, serviceberry, Wyoming big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass, mutton grass

The table below is a representation of the vegetation growth periods for different vegetation types found allotments associated with Three Springs Ranch. These dates are based upon estimated averages and can vary from year to year dependant upon climatic conditions.



The following table shows the seral rating used by the BLM to rate rangeland vegetation communities in comparison to the Potential Natural Plant Community (PNC) for a particular ecological site.

ECOLOGICAL SITE SIMILARITY RATINGS	
Seral Rating	% Similarity to the Potential Natural Plant Community (PNC)
Potential Natural community (PNC)	76-100% composition of species in the PNC
Late-Seral	51-75% composition of species in the PNC
Mid-Seral	26-50% composition of species in the PNC
Early-Seral	0-25% composition of species in the PNC

The following tables show an estimate of the public land acreage falling within one of the seral ratings for each ecological site on allotments associated with this permit renewal. These estimates are based upon professional judgments of the Rangeland Management Specialist trained in the use of the rating system. Nearly all ecological sites were visited during the 2004 field seasons for a plant community assessment of the Colorado Public Land Health Standards for each allotment. Historical grazing practices (spring use, over utilization, etc.) and prolonged drought conditions have created the situation of early seral plant communities not meeting the rangeland health standards. The early seral sites not meeting standards have crossed a threshold and are nearly irreversible regardless of the livestock management without some form of disturbing activity such as fire or chemicals. The early seral acres associated with wildfires are meeting land health standards for biotic/soil integrity.

Wolf Creek Allotment (06323)							
Ecological Site Similarity Rating							
Ecological Site	Total BLM ACRES	PNC	Late Seral	Mid Seral	Early Seral (Not Meeting Standards)	Early Seral (fire)	BLM Acres Classified
Clayey Foothills	568	374	118	58	18	0	568
Clayey Salt-desert/Clayey Salt-desert	463	26	124	305	8	0	463
Clayey Slopes	1425	244	312	621	248	0	1425
Clayey Slopes/Clayey Slopes	737	402	235	68	32	0	737
Clayey Slopes/Semidesert Loam	76	35	32	9	0	0	76
Deep Loam	2087	818	385	216	43	625	2087
Deep Loam, Dry Exposure	1499	1064	310	0	0	125	1499
Deep Loam/Deep Loam	1585	1021	310	185	69	200	1785
Dry Exposure/Stoney Loam	3240	2657	333	0	0	250	3240
Dry Mountain Loam/Dry Exposure	242	242	0	0	0	0	242
Foothill Swale	706	0	149	365	192	0	706
Juniper woodlands/Juniper woodlands	745	N/A	N/A	N/A	N/A	0	0
Loam 10-14	307	240	22	18	27	0	307
Mountain Loam	233	201	32	0	0	0	233
Mountain Loam/Deep Loam	102	75	27	0	0	0	102

Wolf Creek Allotment (06323)							
Ecological Site Similarity Rating							
Ecological Site	Total BLM ACRES	PNC	Late Seral	Mid Seral	Early Seral (Not Meeting Standards)	Early Seral (fire)	BLM Acres Classified
Mountain Loam/Dry Exposure	1751	1246	286	185	34	0	1751
Typic Natrargids	316	0	0	72	244	0	316
None (Rock outcrop, steep slopes, etc.)	10911	N/A	N/A	N/A	N/A	N/A	N/A
PJ woodlands/None	4770	N/A	N/A	N/A	N/A	N/A	N/A
PJ woodlands/PJ woodlands	1696	N/A	N/A	N/A	N/A	N/A	N/A
PJ woodlands/PJ woodlands /PJ woodlands	2739	N/A	N/A	N/A	N/A	N/A	N/A
PJ woodlands/Semidesert SL	407	N/A	N/A	N/A	N/A	N/A	N/A
Rolling Loam	2880	671	896	568	20	725	2880
Rolling Loam/Clayey Foothills/Sandy Juniper	283	35	112	132	4	0	283
Salt-desert Overflow	949	70	112	473	294	0	949
Sandy Foothills	138	125	13	0	0	25	163
Sandy Loam/Sandy Foothills	5152	3910	302	102	13	825	5152
Sandy Foothills/Sandy Foothills/Deep Loam	454	176	183	20	0	75	454
Stoney Foothills	7789	7013	691	81	4	625	8414
Total:	54250	20645	4984	3478	1250	3475	33832
% BLM Acres Classified:		61%	15%	10%	4%	10%	

Wolf Creek: As shown within the Wolf Creek allotment, 96% of the ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (early seral-fire, mid to PNC) as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and forage production to meet foraging demands. Many of the allotment's acres are within unclassifiable seral stages such as pinyon (*Pinus edulis*) / juniper (*Juniperus osteosperma*) (PJ) woodlands (10357 acres), and rock outcrops / steep slopes (10911 acres). These acres are generally within an acceptable land health standard status due to the low impact from livestock and/or wildlife use because of their state of lacking natural resources (i.e. forage).

Many acres of the mid/late seral communities have a higher composition of mountain big sagebrush (*Artemisia tridentate spp. vaseyana*) and encroaching PJ trees into the sagebrush communities which has resulted primarily from a lack of a natural fire regime and from grazing influences. In particular, a substantial amount of the rolling loam and deep loam ecological sites have an elevated PJ component which is approximately 6-10 feet tall and invading into sagebrush dominated landscapes. These communities have adequate production and cover of native species and are not presently at risk of degradation below the threshold of a healthy community nor are they at risk from invasion of non-native species. However, over time the PJ community will continue to invade the sagebrush communities and degrade these sites as the natural plant community shifts away from a sagebrush canopy dominated rangeland.

The early seral communities not meeting public land health standards in the Wolf Creek allotment are primarily valley bottom, valley toe-slope, and/or flats sites which have been degraded from the livestock grazing influences such as historic spring use, feeding practices, and historic bedding of sheep. Historically (prior to 1900), approximately 2,500 cows and /or 150,000 sheep grazed within the confines of the Wolf Creek allotment in any one year (1982 AMP), which caused many of the resource degradations (early seral communities) still apparent today. The majority (769 acres) of these early seral communities not meeting health standards lie within the Wolf Creek pasture, adjacent to the Wolf Creek and side drainages that have a presence of cheatgrass (*Bromus tectorum*) in the plant community. In this area, the causative factors for the early seral conditions are spring livestock use, water availability, and historic grazing intensity. Also, 215 acres in the Lower Sandhills pasture (mostly Bear Canyon) are within the early seral category that are not meeting standards are due to the presence of undesirable, invasive, annual plant species (i.e. cheatgrass, tumble mustards (*Thelypodopsis spp.*), Russian thistle (*Sisymbrium spp.*)). In this area, the causative factors for the early seral conditions are grazing intensity, lack of a successful fire reclamation, feeding practices, and water availability on adjacent private lands. Other areas, such as Mud Springs Draw, have early seral communities not meeting standards that are primarily basin big sagebrush (*Artemisia tridentata spp. tridentata*) and mountain big sagebrush drainage bottoms that lack plant diversity within the understory due to a lack of fire, over-domination by sagebrush, and grazing use. Overall, early seral communities not meeting the Colorado Public Land Health Standards are due to concerns/lack of species diversity, soil protection, and/or forage production. However, the majority of these early seral areas not meeting public land health standards have crossed a threshold of annual plant domination whose condition would not significantly change with or without livestock grazing.

Prescribed burns and wildfires have occurred on Blue Mountain within the Wolf Creek allotment that have shifted these burn areas from a mountain big sagebrush and PJ woodland dominated regions to a grass dominated area (early seral-fire). These burned sites offer a significant increase in available forage for wildlife (i.e. elk) and/or livestock. Dominant grasses in burned localities are native species such as needle-and-thread grass (most widespread/dominant) (*Stipa comata*), Indian ricegrass (*Oryzopsis hymenoides*), western wheatgrass (*Agropyron smithii*), and Sandberg bluegrass (*Poa secunda*). Within these burn areas, sagebrush is reestablishing itself within the grass community and will dominate once again over time. Known areas that have been appreciably impacted by fire include:

- The northern portion of the Skull Creek Pasture (below Skull Creek Rim), which burned PJ woodlands and shifted to a needle-and-thread and western wheatgrass community (Box Canyon fire - 1989).
- Johnson Draw and Serviceberry Draw of the Johnson Draw pasture, which burned a sagebrush community and shifted to a needle-and-thread grass community (Tank Fire-Z066, 2400 total acres, 1987).
- Bear Valley and ¼ mile north of Wasson Draw along MC road 95 of the Bear Valley Pasture (mostly private land burns), which burned a sagebrush area and shifted to a needle-and-thread grass community (Bear Valley-V990, 1100 total acres, 1988; Watson-Z014, 820 acres, 1988).

- Disappointment Draw and Badger Flat of the Disappointment Draw pasture, which burned a sagebrush community and shifted toward a needle-and-thread and western wheatgrass community.
- Sandhills of the Upper and Lower Sandhills pastures burned a sagebrush and bitterbrush (*Purshia tridentata*) community and shifted to a needle-and-thread and Indian ricegrass community (Bear Canyon fire-Z066, 1069 total acres, 1995).

Previous PJ chainings (range improvements (RI) 0911, 1177) that occurred in 1958 (1177) and 1967 (0911) have shifted back towards a PJ dominated region with trees approximately 6-10 feet tall. RI 0911 occurred within the Disappointment Draw, Wolf Creek, and Bear Valley pastures, and RI 1177 occurred within the Wolf Creek pasture. These areas are a PJ woodland ecological site and mostly have shallow/rocky soils that limit production (soil unit – Crago-Pensore-Grapit association, 6-75% slopes). The dominant understory is still the seeded crested wheatgrass (*Agropyron cristatum*), but has diminished its prevalence due to the dense PJ and native grass re-invasion.

As a result of beneficial precipitation levels and timing in 2005, vegetative production was favorable with such species as needle-and-thread grass producing abundant growth and seed production. This follows several years of drought and limited vegetation growth, seed production, and general vigor within the plant community.

Massadona: As shown within the Massadona allotment, 89% of the ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (mid to PNC) as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and forage production to meet various demands.

Massadona Allotment (06324)						
Ecological Site Similarity Rating						
Ecological Site	Total BLM ACRES	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Alkaline Slopes	26	3	9	14	0	26
Alkaline Slopes/None	581	61	132	278	110	581
Clayey Foothills	36	9	15	12	0	36
Clayey Saltdesert	910	573	158	119	60	910
Clayey Saltdesert/Clayey Saltdesert	1711	907	540	212	52	1711
Clayey Slopes	1302	117	635	265	285	1302
Clayey Slopes/Clayey Slopes	136	67	48	21	0	136
Clayey Slopes/Semidesert Loam	59	33	15	11	0	59
Claypan	113	68	30	15	0	113
Foothill Swale	206	34	91	72	9	206
None (Rock outcrop, Steep, etc.)	1306	N/A	N/A	N/A	N/A	N/A
Torrifluvents gullied, Typic Natrargids	608	43	240	222	103	608
PJ woodlands/None	188	N/A	N/A	N/A	N/A	N/A
PJ woodlands/PJ woodlands	756	N/A	N/A	N/A	N/A	N/A
Rolling Loam	150	30	29	15	76	150

Massadona Allotment (06324)						
Ecological Site Similarity Rating						
Ecological Site	Total BLM ACRES	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Saltdesert Overflow	196	6	27	138	25	196
Sandy Loam/Sandy Foothills	1	1	0	0	0	1
Semidesert Loam/Semidesert Loam/Clayey Slopes	46	6	21	19	0	46
Stoney Foothills	74	54	13	7	0	74
Total:	8405	2012	2003	1420	720	6155
% BLM Acres Classified:		33%	33%	23%	11%	

The mid seral to PNC communities are typically located on the hillslopes and ridgelines (clayey saltdesert ecological sites) and have a plant community that is tolerant to a high salt and clay content in the soil. These communities are dominated by shadscale (*Atriplex confertifolia*), garnder saltbush (*Atriplex gardneri*), mat saltbush (*Atriplex corrugate*), and Wyoming sagebrush (*Artemisia tridentate*) to a lesser extent. These salt desert shrublands have an understory comprising mostly of Colorado wildrye (*Elymus salina*), western wheatgrass, and bottlebrush squirreltail (*Sitanion hystrix*).

The early seral communities in the Massadona allotment are primarily valley bottom, valley toe-slope, and/or flats sites which have been degraded from livestock grazing influences such as spring use, historic feeding practices, previous grazing intensity, and historic bedding of sheep. In the south pasture, these early seral types are typically low precipitation salt desert shrub communities dominated by shrubs (shadscale, mat saltbush, Gardner saltbush, sagebrush, etc), with an understory of cheatgrass, western wheatgrass, bottlebrush squirreltail, and invasive forbs. They typically occur within the historic floodplains and the heavy soil terraces of Box Elder Creek and Divide Creek, and within general lowland localities. In the north pasture, the early seral communities (cheatgrass) are typically a sagebrush foothills community. The early seral areas in the north pasture are a result of historic feeding practices as evident from discarded bailing wire and a hayshed. Overall, the early seral communities do not meet the Colorado Public Land Health Standards for species diversity, soil protection, and/or forage production. However, the majority of these early seral areas have crossed a threshold of cheatgrass domination whose condition would not significantly change with or without livestock grazing.

This salt desert shrub community has been particularly impacted by recent drought which has caused extremely low vigor within the native Colorado wildrye and western wheatgrass communities, with approximately 50-85% of these grasses experiencing varying degrees of decadence with intermixed mortality in 2004. For example, the bunch grasses have experienced partial or complete die-off that left remnant soil pedestals.

Horse Draw: As shown within the Horse Draw allotment, 90% of the ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (mid to PNC) as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and forage production to meet foraging demands.

Horse Draw Allotment (06332) Ecological Site Similarity Rating						
Ecological Site	Total BLM ACRES	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Alkaline Slopes	74	0	5	27	42	74
Alkaline Slopes/None	48	0	1	1	46	48
Clayey Salt-desert	179	16	15	72	76	179
Clayey Salt-desert/Clayey Salt-desert	5467	2151	2397	651	268	5467
Clayey Slopes	3682	831	1946	612	293	3682
Clayey Slopes/Clayey Slopes	8	0	3	5	0	8
Clayey Slopes/Semidesert Loam	1089	327	311	425	26	1089
Foothill Swale	343	78	88	65	112	343
Torrifluvents gullied, Typic Natrargids	672	0	0	413	345	758
Salt-desert Breaks	17	0	0	5	12	17
Salt-desert Overflow	191	0	8	60	123	191
Semidesert Loam/Clayey Slopes	436	206	104	126	0	436
Stoney Foothills	361	184	132	45	0	361
Total:	12566	3793	5010	2507	1343	12653
% BLM Acres Classified:		30%	40%	20%	10%	

The mid seral to PNC communities are typically located on the hillslopes and ridgelines (clayey salt-desert ecological sites) and have a plant community that is tolerant to a high salt and clay content in the soil. These communities are dominated by shadscale, Gardner saltbush, mat saltbush, and sagebrush to a lesser extent. These salt desert shrublands have an understory comprising mostly of Colorado wildrye, western wheatgrass, and bottlebrush squirreltail.

The early seral communities in the Horse Draw allotment are primarily valley bottom, valley toe-slope, and/or flats sites which have been degraded from the influences from livestock grazing such as spring use, historic feeding practices, trailing of sheep, previous grazing intensity, and historic bedding of sheep. These early seral types are typically low precipitation salt desert shrub communities dominated by shrubs (shadscale, mat saltbush, Gardner saltbush, sagebrush, etc), with an understory of cheatgrass, western wheatgrass, bottlebrush squirreltail, and invasive forbs. They typically occur within the historic floodplains and the heavy soil terraces of Wolf Creek and the Middle Fork of Wolf Creek. Also, it appears that historic trailing of sheep along the Victory trail, which traverses along the northern boundary, has impacted the rangelands at potential watering and overnight localities. Overall, the early seral communities do not meet the Colorado Public Land Health Standards for species diversity, soil protection, and/or forage production. However, the majority of these early seral areas have crossed a threshold of cheatgrass domination whose condition would not significantly change with or without livestock grazing.

This salt desert shrub community has been particularly impacted by recent drought which has caused extremely low vigor within the native Colorado wildrye and western wheatgrass communities, with approximately 50-85% of these grasses experiencing varying degrees of

decadence with intermixed mortality in 2004. For example, the bunch grasses have experienced partial or complete die-off that left remnant soil pedestals.

Hall Draw: As shown within the Hall Draw allotment, 84% of the ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (mid to PNC) as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and forage production to meet foraging demands.

Hall Draw Allotment (06335)						
Ecological Site Similarity Rating						
Ecological Site	Total BLM ACRES	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Alkaline Slopes	737	48	234	187	268	737
Alkaline Slopes/None	1	0	1	0	0	1
Clayey Slopes	84	9	35	40	0	84
Loamy Saltdesert/Sandy Saltdesert	210	22	76	84	28	210
None (Rock Outcrop/Steep Slopes)	3293	N/A	N/A	N/A	N/A	N/A
Torrifluents, gullied	164	0	0	134	30	164
PJ woodland/Rolling Loam	1049	341	527	127	54	1049
PJ woodlands/PJ woodlands	70	N/A	N/A	N/A	N/A	N/A
Rolling Loam	503	0	292	23	188	503
Saltdesert Breaks	339	37	145	150	7	339
Sandy Saltdesert	2	0	0	2	0	2
Stoney Foothills	526	98	292	136	0	526
Total:	6978	555	1602	883	575	3615
% BLM Acres Classified:		15%	44%	25%	16%	

The mid seral communities have a higher composition of Wyoming big sagebrush which has resulted over time from grazing influences and lack of fire. These communities have adequate production and cover of native species and are not presently at risk of degradation below the threshold of a healthy community nor at risk from invasion of non-native species.

The early seral communities are primarily valley bottom, valley toe-slope, and/or flats sites which have been degraded from the historical influences from livestock grazing such as historic spring use, feeding practices, and bedding of sheep. A part of the early seral acres are associated with a wild fire that occurred south of Bob Cat Reservoir that has experienced limited success in establishment of desired plant communities. Also, the Hall Draw and Villard Flats areas have a Wyoming big sagebrush community whose understory is dominated by cheatgrass. In these areas, cheatgrass consist of approximately 60-90% of the grass component. The early seral communities do not meet the Colorado Public Land Health Standards for species diversity, soil protection, and/or forage production. However, these early seral areas have crossed a threshold of cheatgrass domination whose condition would not significantly change with or without livestock grazing.

This Hall Draw area has been particularly impacted by recent drought which has caused extremely low vigor within the sagebrush community. In 2004, there was approximately 60-75% of the sagebrush experiencing varying degrees of decadence with intermixed mortality in 2004. The timing and levels of precipitation were favorable in 2005, which produced re-growth and increased overall vegetative production.

Environmental Consequences of the Proposed Action: Under the proposed action with all allotments combined, livestock use during the critical growing season (04/15 – 05/15) in the Desert Shrub communities would be reduced by 25% and a more comprehensive rest period would be included in comparison to the Current Management alternative's 1982 AMP schedule. Thereby the proposed grazing schedule would obtain a more sustainable use level by livestock. It should be noted that the critical growing season will vary somewhat year to year dependent upon climatic patterns.

Grazing use under the proposed action would give plants within each allotment a complete rest every other year during this 04/15 – 05/15 period. Use would occur outside the critical growing period every year (05/16 – 05/31) within the Wolf Creek pasture of the Wolf Creek allotment, but at a reduced level and duration on odd years and reduced overall when compared to the Current Management alternative's actual use or the 1982 AMP.

When comparing the two-year average use of the grazing schedules in the proposal versus the Current Management alternative's 1982 AMP, grazing use during the critical growing season would increase within the Massadona and Horse Draw allotments and decrease within the Wolf Creek pasture. However, overall total AUMs used for the entire grazing season (winter/spring) would decrease by 31% in Massadona, 24% in Horse Draw, and 13% within the Wolf Creek allotment. The rationale for this change is to ensure a plant rest period from grazing for all allotments during this 04/15 – 05/15 growth period.

When comparing the grazing schedules in the proposal versus Actual Use, grazing use during the critical growing season would increase every other year and decrease the opposite years (even / odd year rotation) within the Massadona and Horse Draw allotments. Reasoning behind this is under Actual Use, grazing during the growing season occurs every year so cattle are spread out between both allotments, while under the proposal grazing during the growing season occurs every other year in one allotment or the other. Current grazing under Actual Use is at a light utilization level (21-40%) every year, which leaves a substantial level of plant biomass behind for soil stability and wildlife use. However, limited areas, such as near water sources and preferred foraging areas, are grazed at a higher moderate utilization level (41-60%) every year. Under the proposal, utilization rates would increase every other year from light to moderate, and decrease the opposite years from light (21-40%) to slight (0-20%) as grazing by livestock would not occur these opposite years (every other year) under the proposal. Overall, when comparing the two year averages (even/odd year), within Massadona grazing use (AUMs) will decrease during the spring by 4% and the total two year average will decrease by 21% (winter/spring), within Horse Draw grazing use will increase during the spring by 11% and the total two year average use will increase by 3% (winter/spring). All grazing will be within the rangeland's carrying capacity to meet Public Land Health Standards. Therefore, the proposal will give the

plant communities a greater opportunity to fully propagate and complete a full growth cycle every other year.

Proposed livestock use (AUMs) is within the livestock grazing capacity for each pasture and allotment for grazing at a moderate level. Within the Horse Draw and Massadona allotments, an alternate year rotational system has been developed to eliminate grazing during the vegetative community's critical growing season every other year, thereby aiding in plant growth and reproduction capabilities. The 2 year AUM average use for the Horse Draw (1176 AUMs) and Massadona (727 AUMs) allotments is well below the livestock grazing capacity (Horse Draw-1546 AUMs, Massadona-952 AUMs), thus allowing for full replenishment of plant loss during grazing over the 2 year rotational cycle.

As shown, the proposed action's AMP schedule would reduce total AUMs used on the Horse Draw, Massadona, and Wolf Creek allotments. Also, a shorter grazing period for the Wolf Creek allotment is being proposed with the earliest turn on date of 05/01 (even year) and ending 12/31. In contrast, under the current grazing permit and 1982 AMP the turn out of livestock may occur on 03/01 and end 01/14; however according to actual use turn out is typically 05/01. A turn out date of 05/01 versus 03/01 allows plant communities to have a greater opportunity for plant growth and reproduction with less grazing pressure during the critical growing season.

During the critical growing period (05/01 - 06/30) at the higher elevation sagebrush zone on the Bear Valley and Disappointment pastures (Wolf Creek Allotment) located on Blue Mountain, grazing use (AUMs) will be 40% lower than what the 1982 AMP allows. Also, the turn on date will be later (06/01 vs. 05/01). The proposed use is closer to Current Management's actual use, which is a closer reflection of the rangeland's carrying capacity.

The Hall Draw allotment's proposed grazing schedule and AUMs will have little to no negative impact on the vegetation's ability to meet, or not meet, standards for rangeland health, as the schedule is for winter use only (12/20 – 02/20) outside of the plant growing season. The proposed AUMs are within the rangeland's production capacity and meet resource objectives. It is apparent that the current early seral ecological sites within Hall Draw are a result of historic grazing use (spring use, high intensity) and current drought conditions which have hampered plant production of desirable species. Therefore, these situations have left an opportunity for cheatgrass establishment. The winter use period will have the greatest positive result within the mid seral sites giving the potential for increased perennial cover and litter accumulation.

A reduction in total AUMs used (reduced grazing intensity), a shorter grazing season, a reduction in AUMs used during the growing period, and a rest period every other year during the growing period that is incorporated into the proposed action would provide an opportunity for plants to complete a full and/or partial life cycle every other year on all allotments. Therefore, the proposed action would give the vegetation a greater opportunity for seed production, replenishment of root reserves, biomass accumulation, and plant propagation. This in turn would lead to an improvement of water holding capabilities of the soil (increase surface litter) and improve chances of seedling survival necessary to maintain a healthy, reproducing plant community. However, these occurrences would be less noticeable on the Horse Draw and Massadona allotments due to the heavier soils (high clay content).

The proposed grazing system would have a neutral to slightly positive impact on PNC and late seral ecological sites on all allotments, as they are already meeting or exceeding the standards for rangeland health. The greatest benefit of increase perennial cover and litter accumulation would occur on the mid seral sites because they have not crossed a threshold and have an opportunity for improvement. Within the Wolf Creek allotment, on the mid to late seral sagebrush communities that are being encroached upon by PJ trees will not experience a significant improvement without some form of influencing action such as fire. Also, most of the early seral sites would typically continue at their current state unless some influencing agent occurred such as fire, because most of these sites have crossed a threshold of cheatgrass domination and sagebrush stands that lack an adequate cover within the understory.

Environmental Consequences of the Continuation of Current Management Alternative:
Under this alternative's 1982 AMP, the Massadona and Horse Draw allotments would receive a growing season rest every other year but at a higher total AUMs authorized for the entire grazing season. In comparison to the proposal, total AUM use will be 31% higher within Massadona and 24% higher in the Horse Draw allotment. These AUMs that could be authorized within the Massadona and Horse Draw allotments are higher than the rangeland's carrying capacity. If the BLM authorized use at the full level (Massadona – 1115 AUMs, Horse Draw – 1620) as outlined on the 1982 AMP, use would be beyond management objectives and over utilization of the plants would occur. Therefore, resource degradation may occur such as the plant's reproduction capabilities may reduce with limited seed production, and a reduction in desirable ground cover may occur. This would lead for a greater opportunity for cheatgrass and other undesirable plants to establish and extend their presence on the landscape. However, actual use levels of AUMs in Massadona and Horse Draw have been within the rangeland's carrying capacity at a suitable level. Yet no rotation has taken place during the spring period, thus plants are grazed every growing period. This situation does not allow plants to complete a full life cycle without being grazed, particularly in areas near water sources and favored foraging areas by cattle. The mid and early seral sites receive the greatest impact under this situation.

Under the 1982 AMP, the Wolf Creek pasture of the Wolf Creek allotment would be grazed every year during the growing season, and grazing could be authorized as early as 03/01. The current grazing permit also has a begin date of 03/01. Also under the 1982 AMP, the Wolf Creek, Sandhills, Bear Valley, and Disappointment pastures would be grazed during the spring then grazed again during the fall/winter period. This season, timing, and intensity of use are not conducive for obtaining rangeland health standards, such as there would be little opportunity for plant growth and/or regrowth after being grazed. However, the actual use schedule for the Wolf Creek pasture typically begins near 05/01 every year and is not grazed again in the fall. Actual use AUMs in the Wolf Creek pasture are above the proposed AUMs and this pasture has the greatest amount of early seral ecological sites. This higher use does not allow the plant communities to fully grow, replenish their reserves, and/or accumulate litter.

Overall, a negative impact would occur in regards to achieving rangeland health standards if the 1982 AMP or current grazing permit were implemented and followed. Such impacts may include a downward change in species composition, diversity, desired plant cover, and/or reduced production for many of the rangelands, which would mostly occur within mid seral sites

and to a lesser degree within the late seral communities. The PNC communities would most likely continue to meet health standards and the early seral communities would not.

It should be noted that Three Springs Ranch has not been operating according to the 1982 AMP; therefore impacts associated with it have not been occurring. Three Springs Ranch has provided good stewardship of the rangelands such as reducing cattle numbers during years of drought to a sustainable level, hauling water, keeping cattle distributed, and grazing at an intensity that provides for improving production of nearly all ecological sites. Rangeland vegetation and health conditions of allotments authorized by Three Springs Ranch have continued to improve since the ranch acquired them.

Environmental Consequences of the No Grazing Alternative: Under a no grazing by livestock alternative, most localities that are being grazed by cattle would experience a short-term increase in both perennial plant cover and soil surface litter accumulation. Mid seral ecological sites would likely experience the greatest benefit of increased perennial plant cover. On early seral ecological sites such as the monocultures of sagebrush or greasewood (*Sarcobatus vermiculatus*) and on salt-desert rangelands dominated by cheatgrass, the majority of areas are not expected to change in perennial plant cover because they have crossed a threshold of total sagebrush and/or annual plant domination. The PNC ecological sites would continue to meet standards and experience minimal changes in plant species composition and diversity.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The early seral communities are mostly not meeting the Standards due to the significant composition of cheatgrass, an invasive annual grass, and due to the mono-cultures in some greasewood and sagebrush communities (1250 acres). All other seral communities (early seral-fire, Mid – PNC) are currently meeting standards and make up the bulk of classified acres on all allotments (32582 acres). Implementation of the proposed action will enhance the ability of the rangelands to meet the Standards in the future.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Higher order aquatic habitats potentially influenced by livestock within the permit area consist of several ephemeral stock ponds and two small perennial reservoirs (Divide Creek and Peterson Draw Reservoirs). The ephemeral impoundments support populations of tiger salamanders and less regularly, those with emergent vegetation or tamarisk, chorus frogs. Peterson Draw Reservoir is a small (1.25 acre) impoundment that has been stocked with rainbow trout for decades by the Colorado Division of Wildlife (CDOW) as put-and-take fisheries. Divide Creek Reservoir has gradually filled with sediment since its construction in the 1960's. This reservoir impounds about 4 surface acres of water, but maximum depths do not exceed about 4 feet. The CDOW historically stocked the pond with various fish, but it most recently held only bullheads. The pond winter-killed in 1989 has not supported a fishery since. Heavy emergent growth (i.e., American bulrush, cattail, coyote willow) around the perimeter of this impoundment support nesting primarily by (in descending order of abundance): American

coot, cinnamon teal, ruddy duck, and pied-billed grebe. Both of these impoundments are either partially or fully enclosed by barbed-wire fences. Although these fences are typically in need of repair from cattle and elk damage, early season use generally allows full vegetation expression from early May. Those fragments of the lower White River encompassed by the Hall Draw pasture generally abut steep cliff-like slopes and have no floodplain or terraces accessible to livestock.

Environmental Consequences of the Proposed Action: The condition of aquatic habitats available within the permit area would not be subject to substantive change under the proposed action. Fifty percent reductions in use intensity on the Wolf Creek pasture (i.e., Peterson Draw reservoir) and modifications to the duration of grazing use in the Massadona pasture (i.e., alternate years of a 2-week extension and full growing season rest) are not believed sufficient to influence the wetland or aquatic character of these sites. Current use in these lower Wolf Creek pastures have not detracted from continued occupation of these livestock management facilities by amphibians adapted to short and inconsistent availability of water and this situation would not change under the proposed action.

Environmental Consequences of the Continuation of Current Management Alternative: Same as the Proposed Action.

Environmental Consequences of the No Grazing Alternative: Because cattle use involves relatively small and early portions of the growing season available to the perennial reservoirs, removal of livestock would have little if any influence on these aquatic habitats. Although riparian and wetland vegetation would surely express itself more abundantly on ephemeral ponds in the absence of livestock grazing, the duration and frequency of impounded water would not change appreciably. Increased vegetation growth may also tend to accelerate the progression of pond succession and ultimately decrease the usable lifespan of these ponds for species requiring open water (e.g., salamanders).

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The public land health standard for aquatic wildlife communities is currently being met. Under the proposed action, the standard would continue to be met since there would be no substantive change in the use of livestock waters and the aquatic conditions which they provide. It is uncertain what influence no grazing would have on these features, but it would not detract from continued meeting of the standard through the term of the permit.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The permit area spans ranges used year-round by deer, elk, and pronghorn. The higher-elevation mixed shrub and mountain big sagebrush communities in the northwest corner of the permit area are occupied by mule deer and elk from April through December. The CDOW manages the encompassing big game management unit for trophy deer

and elk, which substantially limits the number of hunters and harvest occurring in the project area. Furthermore, the Three Springs Ranch participates in a Ranching for Wildlife program with the CDOW. This cooperative program provides incentives (e.g., stable source of marketable hunting licenses, longer hunting seasons) for the landowner to manage privately owned lands in a manner that benefits wildlife habitat and relieves the State of liability for wildlife damages on these ranches.

Elk populations are considerably above the State's desired herd objective and are the most conspicuous big game species in the project area. Based on CDOW modeling, deer populations are thought to approximate herd objectives, but observations by field staff indicate populations are substantially lower. This situation has likely been aggravated by years of serious drought, but is not convincingly attributable to forage conditions. Competitive use of the area's cover and forage resources by large numbers of elk may be adversely affecting deer's ability to make efficient use of mutually preferred cover and forage resources.

The project area's lower elevation salt-desert, big sagebrush, and juniper woodland ranges are used by deer and elk during the winter and early spring months (November through early May). Deer use is light and is associated primarily with seasonal movements in the salt desert components of the Wolf Creek, Massadona, and Horse Draw pastures. Interspersed woodland and sagebrush cover and rocky terrain features, particularly in the Skull Creek basin, MF Mountain, and along Coal Reef allow for the support of sustained winter deer use in the Skull Creek, Wolf Creek, and Hall Draw pastures. Heavy elk use, beginning in mid-December and involving in excess of 400 head, has become prevalent in Wolf Creek and along the White River over the past 15 years. Pronghorn use these ranges throughout the year, but lacking reliable water sources; summer use on these allotments is generally limited and dispersed. Although up to 150 pronghorn wintered in the lower Wolf Creek basin in the early 1990s, northwest Colorado has undergone unexplained declines in pronghorn populations, and today the area winters no more than half this number.

Breeding raptor use of project area is represented largely by cliff-nesting golden eagle and red-tailed hawk. Ferruginous hawk and burrowing owl are relegated to the salt-desert community in the project area's lower elevation saltbush associations (southern tier of pastures, see discussion in Status Species above). Juniper woodlands throughout the project area likely support a small number of breeding Cooper's hawk and long-eared owl. The abundance and variety of raptor use in the lower half of the project area remains high during the winter, with opportunistic foraging by golden and bald eagle, rough-legged and red-tailed hawk, and prairie falcon.

Nongame bird and small mammal populations associated with the project area are typically common and broadly distributed in extensive shrubland and woodland communities found throughout the Resource Area (as well as the Great Basin). The abundance and distribution of non-game bird populations, in particular, are believed to be appropriate with no notable lapses or inconsistencies in potential expression. Although 10% of the lower elevation pastures are dominated by introduced annual weeds, the generally patchy and discontinuous distribution of these sites does not detract appreciably from habitat extent and continuity at local landscape scales. Many of these early seral sites are inhabited by white-tailed prairie dogs, whose burrow

systems appear to successfully fulfill the habitat requirements for a number of small, fossorial mammals.

Environmental Consequences of the Proposed Action: The proposed action provides for a 10% reduction in overall permitted use, redistribution of livestock use that provides more equitable use of pastures (e.g., relief of localized instances of heavy seasonal use), and remedial management (e.g., reduced duration and intensity of use) on pastures with livestock use that interferes with various aspects of plant or community health. For example, substantial use reductions in the Wolf Creek pasture (spring use) are aimed at increasing herbaceous ground cover and enhancing plant vigor—effects that would increase the abundance and variety of ground cover and herbaceous forages for non-game and big game in the long term. These reductions have been accommodated by relatively minor alternate-year increases in the duration and intensity of use in the Lower Sandhills and Massadona/Horse Draw pastures, while remaining well within the appropriate grazing capacity of each pasture. Similarly, reduced overall grazing intensity and/or deferrals of livestock use during the growing season proposed for the Jack Springs/Luxen Draw, Ruppe, and Upper Sandhills pastures would be achieved by increasing use levels to a moderate range in those pastures presently receiving light or slight use (i.e., Bear Valley/Disappointment, Mud Springs/Johnson Draw).

The proposed action, by more widely distributing late summer and fall livestock use (August–November), is expected to alleviate instances of heavy seasonal use of Jack Springs/Luxen Draw, Ruppe, and Upper Sandhills pastures (about 24% of summer/fall ranges in permit area) without substantively affecting the availability and variety of favored big game forages in the Bear Valley/Disappointment, Mud Springs/Johnson Draw, and Lower Sandhills pastures. Substantial reductions in spring use of the Wolf Creek pasture and alternate years of increasing dormant season use of the lightly used Massadona and Horse Draw allotments would be expected to increase the variety and abundance of herbaceous forage, particularly for deer and pronghorn, on about 20% of the permit area’s lower elevation salt desert ranges (Wolf Creek pasture) and the availability of emerging bunchgrass growth on about half of these ranges (Massadona/Horse Draw pastures). Otherwise, the effects of proposed summer and winter season livestock use on big game use functions would be virtually identical to the proposed action.

The proposed action would continue to be compatible with non-game wildlife populations and habitat, including raptors (see also Migratory Bird and Threatened and Endangered Species sections above). Although increased livestock use across 75% of the permit area’s higher elevation shrub-steppe ranges may result in minor reductions in the current abundance and density of nongame species better suited to heavier ground cover expression, improved distribution and perhaps comparable offsets in the abundance of such species may be expected in response to improving forage and cover conditions on that ~10% of the permit area currently subject to heavy livestock use during the reproductive season and another 10% of the permit area presently receiving heavy use in late summer and fall.

Environmental Consequences of the Continuation of Current Management Alternative: There are no extensive or chronic big game-livestock forage competition issues known to occur on the permit area in spite of big game populations being near or above desired population

targets. Livestock use, as currently practiced by the permittee, is largely compatible with continued steady improvement in herbaceous composition, reproduction, and vigor. Direct influences on big game are limited to localized reductions in herbaceous forage availability attributable to heavy use of pastures during or prior to periods of coincident big game use.

Due to current livestock distribution, these instances of heavier use that may limit the quantity of forage available to big game are generally offset by light grazing pressure applied across more expansive parcels of like seasonal range. For example, heavy late summer/fall use of the Upper Sandhills, Jack Springs/Luxen, Ruppe, and Bull pastures which comprise about 24% of the fall ranges available to deer and elk in the permit area are offset by light overall use on the Lower Sandhills, Bear/Disappointment, Mud Springs/Johnson pastures that comprise ~44,000 acres or ~75% of fall range in permit area. Similarly, heavy spring livestock use in the Wolf Creek pasture (comprising about 19% of the spring range for all big game in the permit area) is countered against light winter/early spring use in the adjacent Massadona/Horse Draw pastures (~49% of spring range in permit area). Winter use of remaining spring ranges associated with the Hall Draw and Skull Creek pastures is substantial at 60-70 percent, but livestock use ceases by March and likely acts to precondition bunchgrass growth such that early green growth is more readily accessible to deer in the spring.

Summer cattle use in June and July tends to be confined to pastures that are composed primarily (60%) of private lands (Ruppe, Bear Valley), such that about 90% of important, higher-elevation big game summer ranges in the permit area remain ungrazed or subject to light use during the late spring/summer use period.

Current livestock management appears to be largely compatible with non-game wildlife populations and habitat, including raptors (see also Migratory Bird and Threatened and Endangered Species sections above). Heavy cattle use during the reproductive season (May through mid-July) that may be expected to reduce the availability of forage or cover sufficient to suppress breeding density and/or reproductive performance is limited to the Wolf Creek (heavy May use) and Ruppe (heavy July use) pastures. These pastures represent about 20% of the lower elevation and 5% of upper elevation pastures, respectively.

Environmental Consequences of the No Grazing Alternative: Removing livestock grazing from the permit area would have no effective influence on the continued support of elk, which presently exceed population objectives. Although elk grazing would continue to reduce previous-year accumulations of bunchgrass growth, the effect in terms of availing spring growth for deer and pronghorn would be significantly reduced, especially as elk populations are reduced to objective levels through hunting. Through the term of the permit, it is unlikely that livestock removal would have marked influence on understory expression in the permit area's more xeric woodland and lower elevation sagebrush and salt-desert communities (about 65% of the permit area). An exception would be Wolf Creek pasture, where livestock removal would accelerate improving trends in herbaceous composition and vigor (about 20% of spring range in permit area) relative to current use and, to a lesser extent, over that management applied to this pasture in the proposed action.

Livestock removal would have a dramatic influence on understory expression on the permit area's mountain shrub and higher elevation sagebrush communities. Accumulations of residual growth from the previous growing season would increase the continuity and density of ground cover, especially between shrub crowns, and would be expected to prompt strong shifts in nongame mammal composition--favoring those species adapted to well developed understories (e.g., voles) and reducing the prominence of those tolerating more open understories (e.g., deer mouse). However, reduced grazing intensity associated with this alternative would not be expected to enhance or detract from the viability of any non-game species population inhabiting the permit area (see also discussion in Migratory Bird section above).

Mitigation: Grazing system features benefiting herbaceous community composition and vigor and herbaceous understory conditions as cover and forage for big game and non-game wildlife have been integrated with the proposed action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The Public Land Health standard for terrestrial wildlife communities in the permit area is currently being met at the landscape scale. None of the alternative grazing schemes would be expected to significantly influence big game or non-game bird populations through the term of the permit. Although strong shifts in small mammal composition and abundance would occur on up to 35% of the permit area (higher elevation shrub-steppe) under the proposed action and no-grazing alternatives, the viability of any species inhabiting the permit area would not be jeopardized.

Consistent with the intent of the standards, proposed reductions in growing season use (as well as the no grazing alternative), particularly in the Wolf Creek pasture, would promote substantial gains in perennial ground cover (as residual and new growth) on ~20% of the lower elevation communities within the permit area, and would be expected to bolster (on a local scale) the nutritional planes and reproductive performance of local populations of big game and nongame wildlife. Reducing the grazing intensity on those pastures presently subjected to heavy seasonal use (about 25% of higher elevation pastures) would improve habitat function, especially for non-game mammal and bird populations without compromising the continued meeting of the standards on the remaining ranges.

Without intensive intervention, neither the no-action or proposed action alternatives would, in and of themselves, substantially reduce the extent of ranges not meeting the standard (preponderance of introduced annuals in ground cover composition).

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fire Management	X		
Forest Management			X
Geology and Minerals	X		
Hydrology/Water Rights			X
Law Enforcement		X	
Paleontology		X	
Rangeland Management			X
Realty Authorizations	X		
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

FOREST MANAGEMENT

Affected Environment: The following table lists the woodland community on allotments associated with the proposed action.

Allotment	Pinyon Juniper Acres	Percent of the allotment
Wolf Creek	10,357	19%
Massadona	8,405	11%
Horse Draw	0	0%
Hall Draw	1,749	16%

Within the current land use plan all of the pinyon/juniper (PJ) woodlands in the Wolf Creek/Red Wash Geographic Reference Area (GRA) are classified as non-commercial based on productivity and harvest suitability. These woodlands are not considered in the decadal harvest for the WRFO, and will not be managed for commercial firewood production. Woodlands in this GRA are available for harvest by private individuals. The majority of harvesting is for fuel wood and fence posts. These woodlands are available for manipulation to enhance other resource values.

The rangeland forage production practice of PJ chaining (Range Improvements (RI) 0911, 1177) that occurred in 1958 (1177) and 1967 (0911) are developing to a PJ dominated site with trees approximately 6-10 feet tall. The dominant understory is still the seeded crested wheatgrass (*Agropyron cristatum*), but has diminished its prevalence due to the dense cover of saplings and native grass re-invasion.

Environmental Consequences of the Proposed Action: Livestock grazing in general has not been shown to adversely impact existing PJ woodlands. Livestock grazing may play some role in increasing invasion of PJ woodlands on sagebrush sites by decreasing the competitive nature of native plant communities. Grazing also decreases fine fuel loading decreasing the intensity and frequency of fires which would kill seedling and sapling trees. Under this

alternative there would be an increase in the cover and composition of desired forage species which would compete with PJ seedlings, decreasing the rate of invasion of sagebrush sites. There would be an increase in the litter and fine fuels increasing the frequency of fires which would limit the encroachment of PJ woodlands into sagebrush types. The PJ chainings because of the debris from chaining, dense spacing of saplings and the seeded crested wheatgrass are expected to carry fire through these chainings converting these areas to a grassland type.

Environmental Consequences of the Continuation of Current Management Alternative: Invasion of pinyon/juniper into sagebrush associations would continue at the current rate. The lack of fire in sagebrush types would allow PJ woodlands to dominate these sites over extended periods of time. The PJ chainings are expected to burn at some time but these fires are expected to be of lower intensity and patchy.

Environmental Consequences of the No Grazing Alternative: There would be a rapid increase in fine fuel loadings in the sagebrush types. Fire frequencies would go up significantly with sagebrush communities burning regularly. These fires are expected to carry into the PJ associations creating stand-replacing fires. Over the long term PJ woodlands would be relegated to those areas that are fire resistant such as bluffs and areas containing rim-rock. The distribution of PJ would be the same as before European influence.

Mitigation: None

HYDROLOGY AND WATER RIGHTS

Affected Environment: The majority of the resource area was inventoried in 1983 and 1984 for springs. The following table lists springs which were identified in the WRFO Water Atlas for these allotments.

BLM Spring #	Location				Water Right Filing	SC	pH	Discharge in gpm	Date Measured
	Twp	Range	Sec#	Quarter					
110-04	3N	100W	3	SWNE	Horse Draw Well	372	7.4	14.12	28-Jun-83
111-02	5N	100W	31	SENE	AR72 ^{1/}	659	7.5	2.5	29-Jun-83
111-03	5N	100W	31	SWSE	AR72 ^{1/}	758	7.7	2.9	30-Jun-83
111-07	5N	101W	35	SWNW	85CW554	1690	7.9	--	29-Jun-83
111-08	4N	101W	11	SESW	Seasonal	3963	7.6	2	29-Jun-83
111-20	5N	100W	32	NWSW	85CW553	817	7.6	0.39	30-Jun-83
111-21	3N	100W	4	NWNW	85CW555	452	8.2	6.45	28-Jun-83
111-22	4N	100W	33	SWSW	85CW555	408	7.9	0.66	28-Jun-83
111-23	4N	101W	15	NWNW	85CW556	6472	8	3.9	29-Jun-83
112-03	4N	102W	13	NENW	85CW481	770	7.9	7	06-Jul-83
112-04	4N	102W	13	NWSE	85CW558	5082	7.5	0.25	06-Jul-83
119-43	3N	100W	23	SESE	Seasonal	19598	8.3	0.4	31-May-84

^{1/}Water right filing is a pre 1972

Currently three of the sources do not have water rights filed on them. Springs 111-07 and 119-43 are seasonal springs. Typically water rights are not granted on springs that do not maintain a perennial flow.

Environmental Consequences of the Proposed Action: Many of these springs are not developed and appear as small riparian areas in ephemeral drainages. Allowing rest and alternating pastures would be helpful in maintaining the obligate vegetation types that are necessary to anchor streambanks and reduce sediment production. Furthermore, development and use of these water rights will enable the BLM to retain its water right for continued multiple use management.

Environmental Consequences of the Continuation of Current Management Alternative: Under the current management alternative the impacts would be similar to the proposed action except for the number of AUMs allocated. This difference in AUMs would not impact the consumption of water allocated in the water right filings.

Environmental Consequences of the No Grazing Alternative: The State of Colorado requires holders of state water to use those water rights in order to retain them. A beneficial use identified by the BLM for retention of these water rights is livestock grazing. The no-grazing alternative would not provide the beneficial use needed for the state to ensure the BLM is adhering to their “use it or lose it” doctrine.

Mitigation: None

RANGELAND MANAGEMENT

Affected Environment: Three Springs Ranch (0501447) is the BLM authorized grazing permit holder on the Wolf Creek (06323), Hall Draw (06335), Horse Draw (06332), and Massadona (06324) allotments. The ranch operates a nearly year round cattle grazing system on these various allotments and associated pastures, with the exception of a feeding period on private lands during the winter.

The following table (Acres & AUM Breakdown) is a summarization of the individual Livestock Grazing Capacity tables, which are broken down by surface ownership (BLM, private, State of Colorado), soil units and Acres/AUM for each allotment and pasture. As stated earlier, an AUM is the amount of forage necessary for the sustenance of 1 cow for a period of 1 month. The Acres & AUM table shows an estimated carrying capacity (AUMs) of livestock for land ownership of all allotments and pastures associated with the proposed action. The Percent Public Land (% PL), which is the percentage of BLM AUMs in relation to total AUMs, was determined for all pastures within the Wolf Creek Allotment and all other allotments. Three Springs Ranch’s submitted *Grazing Application for Permit Renewal* that was developed with the BLM, and the Livestock Grazing Capacity (see tables below) analysis of forage production, were used to determine the rangeland’s available forage contribution (AUMs), even though in certain instances the estimated grazing capacity exceeds that within the *Grazing Application for Permit Renewal* and proposed action. Reasons for the higher livestock carrying capacity AUMs are that

the application and proposed action take into consideration such factors as available water distance from water to foraging areas, cattle distribution, and herding practices. For example, a lack of water within the Disappointment Draw pasture limits the available AUMs for cattle from the livestock carrying capacity AUMs. These factors can lower the available AUMs for livestock from the livestock carrying capacity AUMs in the tables below.

Also, these tables below are based upon a moderate stocking level that is generally less than the stocking rates recommended by the Natural Resources Conservation Service (NRCS) for the specific ecological sites. The reason for this is in consideration of a moderate stoking level that meets Public Land Health Standards in relation to the rangeland's carrying capacity and current rangeland conditions. Under management by Three Springs Ranch, these allotments have been stocked at a low to moderate level.

Acres & AUM Breakdown for Three Springs Ranch (Wolf Creek Allotment)									
Livestock Grazing Capacity									
Pastures of the Wolf Creek Allotment	BLM AUMs	State of CO. AUMs	Private AUMs	Tot AUMs: (BLM, St, Pvt)	% Public Land	BLM Acres	State of CO. Acres	Private Acres	Total Acres
Wolf Creek (1)	494	21	100	615	80%	8,078.0	332.8	1,141.6	9,552.3
Disappointment Draw (2)	583	14	87	684	85%	8,775.5	210.9	838.3	9,824.8
Bear Valley (3)	400	31	664	1,095	37%	4,791.8	441.8	5,922.3	11,155.9
Lower Sandhills (4)	607	35	37	679	89%	7,859.4	584.9	569.3	9,013.6
Ruppe / Upper Ruppe (5, 15)	141	0	416	557	25%	1,088.3	0.0	1,878.9	2,967.2
Jack Spring (6)	201	29	234	464	43%	1,954.8	274.5	2,114.0	4,343.4
Upper Sandhills (7)	226	73	0	299	76%	1,273.5	365.4	0.8	1,639.7
Luxen (8, 12)	192	0	123	315	61%	1,808.7	2.1	1,120.3	2,931.1
Skull Creek (9)	508	69	0	577	88%	8,262.7	642.9	0.0	8,905.7
Mud Spring(10)	569	78	163	810	70%	5,344.8	637.1	1,167.6	7,149.4
Johnson Draw (11)	576	0	238	814	71%	4,596.2	0.0	1,692.2	6,288.4
Chain Cow (13, Pvt. Pasture)	N/A	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A
Bull Pasture (14)	33	0	259	292	11%	202.0	6.8	1,811.3	2,020.1
Three Springs (16)	17	0	25	42	41%	170.6	0.0	279.3	449.9
Peterson Draw (17)	4	0	34	38	11%	43.4	0.0	383.5	426.9
Totals:	4,551	350	2,380	7,281	63%	54,249.7	3,499.2	18,919.4	76,668.5

Acres & AUM Breakdown for other Three Springs Ranch Allotments									
- Livestock Grazing Capacity									
Allotment	BLM AUMs	State of CO. AUMs	Private AUMs	Tot AUMs: (BLM, St, Pvt)	% Public Land	BLM Acres	State of CO. Acres	Private Acres	Total Acres
Hall Draw Allotment	435	0	0	435	100%	6977.2	0	0	6,977.2
Horse Draw Allotment	1546	107	0	1,653	93%	12566.3	887.8	0	13,454.1
Massadona Allotment	952	87	216	1,255	76%	8405.5	638.2	1,688.5	10,731.2

The following tables show an estimated livestock carrying capacity (AUMs) broken down by surface ownership (BLM, Private, and State of Colorado) for all allotments and pastures that are associated with the proposed action. The tables are broken down by acres within a soil unit polygon and acres/AUM for each soil unit, which determines AUMs when divided.

Wolf Creek Allotment by Pasture:

Wolf Creek Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	34.42	8	4
Bulkley silty clay,3-12%slopes	Clayey Foothills	102.53	9	11
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands/ PJ woodlands	120.98	20	6
Cushool fine sandy loam, 3-12%slopes	Rolling Loam	117.79	9	13
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	76.11	8	10
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	462.72	18	26
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	257.19	8	32
Forelle loam,3-12%slopes	Rolling Loam	0.29	7	0
Grieves-Yamo-Crestman assoc,3-45%slope	Rolling Loam/Clayey Foothills/Sandy Juniper	166.28	9	18
Kemmerer-Grapit Complex, 15-65%slopes	Juniper woodlands/Juniper woodlands	232.59	17	14
Kemmerer-Moyerson Silty Clay Loam,20-40%slope	Clayey Slopes/Clayey Slopes	737.2	10	73
Kemmerer-Yamo Complex, 5-30%slopes	Clayey Slopes	563.08	12	47
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	862.29	17	51
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	404.48	17	24
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	1184	28	41
Rock River sandy loam,3-12%slopes	Rolling Loam	166.58	9	19
Rock Outcrop-Torriorthents Complex, Very Steep	None	1272	35	36
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	445.66	28	16
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	149.7	11	14
Torriorthents-Rock Outcrop, Shale, Complex, Steep	Stoney Foothills	17.66	11	2
Torriorthents-Torripsamments complex, Mod Steep	None	230.24	28	8
Typic Natrargids, 0-5%slopes	None	315.88	30	11
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	158.28	9	18
		8078		494

Wolf Creek Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	Private Acres	Acres / AUM	Private AUMs
Rock Outcrop-Torriorthents Complex, Very	None	27.91	33	1
Rock Outcrop-Torriorthents Complex, Very	None	1.97	33	0
Rock Outcrop-Torriorthents Complex, Very	None	7.87	33	0
Rock Outcrop-Torriorthents Complex, Very	None	1.11	33	0
Grieves-Yamo-Crestman assoc,3-45%slope	Rolling Loam/Clayey Foothills/Sandy Juniper	0.15	9	0
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	86.82	9	10
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	252.05	8	31
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	82.79	11	8
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	76.56	9	9
Torriorthents-Torripsamments complex ,M Steep	None	5.08	25	0
Torriorthents-Torripsamments complex, M Steep	None	59.38	25	2
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	122.42	9	14
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	41.41	28	1
Rock River sandy loam,3-12%slopes	Rolling Loam	17.58	9	2
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.30	33	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	19.13	33	1
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	43.96	25	2
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	93.14	17	5

Wolf Creek Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	Private Acres	Acres / AUM	Private AUMs
Kemmerer-Yamo Complex, 5-30%slopes	Clayey Slopes	3.17	10	0
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Salt-desert/Clayey Salt-desert	85.77	17	5
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	52.86	17	3
Kemmerer-Grapit Complex, 15-65%slopes	Juniper woodlands / Juniper woodlands	6.14	17	0
Kemmerer-Grapit Complex, 15-65%slopes	Juniper woodlands / Juniper woodlands	14.01	17	1
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	0.09	17	0
Deaver-Avalon complex,5-45%slopes	Clayey Slopes / Semidesert Loam	21.68	8	3
Deaver-Avalon complex,5-45%slopes	Clayey Slopes / Semidesert Loam	18.22	8	2
		1141.57		100

Wolf Creek Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Rock Outcrop-Torriorthents Complex, Very Steep	None	8.42	33	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.03	33	0
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	2.42	9	0
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	7.01	8	1
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	19.99	8	3
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	0.56	9	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	13.20	33	0
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	43.58	25	2
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Salt-desert/Clayey Salt-desert	1.13	17	0
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Salt-desert/Clayey Salt-desert	0.05	17	0
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Salt-desert/Clayey Salt-desert	1.71	17	0
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	4.19	17	0
Typic Natrargids, 0-5%slopes	None	116.29	30	4
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	6.84	8	1
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	14.73	17	1
Kemmerer-Moyerson Silty Clay Loam,20-40%slope	Clayey Slopes/Clayey Slopes	4.46	10	0
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	54.26	8	7
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	33.94	17	2
		332.81		21

Disappointment Draw Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Almy loam,3-15%slopes	Rolling Loam	271.87	10	27
Brownsto-Castello complex,3-25%slopes	Loamy 10-14/Loamy 10-14	306.8	8	38
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands / PJ woodlands / PJ woodlands	1082.85	18	60
Cushool fine sandy loam, 3-12%slopes	Rolling Loam	64.11	8	8

Disappointment Draw Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Forelle loam,3-12%slopes	Rolling Loam	797.93	8	100
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	648.42	9	72
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	3.86	17	0
Ironsprings loamy sand,1-15%slopes	Sandy Foothills	18.42	7	3
Kemmerer-Grapit Complex, 15-65%slopes	Juniper woodlands/Juniper woodlands	511.91	15	34
Rock Outcrop-Torriorthents Complex, Very Steep	None	1050.32	45	23
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	3470.15	21	166
Torriorthents-Torripsammets complex ,M Steep	None	182.56	12	15
Yamo Loam, 3-5%slopes	Clayey Foothills	366.32	10	37
		8775.52		583

Disappointment Draw Pasture				
Livestock Grazing Capacity				
Soil Unit	Range Site	Pvt Acres	Acres / AUM	Pvt AUMs
Crago-Pensore-Grapit assoc, 6-75% slopes	PJ Woodland	0.90	18	0
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam	439.23	8	54
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	72.28	19	4
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam	0.68	8	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	0.71	19	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	43.56	19	2
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	0.36	19	0
Brownsto-Castello complex,3-25%slopes	Loam, 10-14	4.74	6	1
Kemmerer-Grapit Complex, 15-65%slopes	Juniper Woodland	9.01	15	1
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	66.23	19	3
Forelle loam,3-12%slopes	Rolling Loam	1.58	8	0
Forelle loam,3-12%slopes	(Rolling Loam	116.80	8	15
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	1.33	19	0
Kemmerer-Grapit Complex, 15-65%slopes	Juniper Woodland	8.50	15	1
Rock Outcrop,-Torriorthents Complex, Very Steep	Rock Outcrop	0.24	45	0
Torriorthents-Rock Outcrop, Sandstone Complex ,VS	Stoney Foothills	11.27	19	1
Kemmerer-Grapit Complex, 15-65%slopes	Juniper Woodland	29.60	15	2
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	4.08	19	0
Forelle loam,3-12%slopes	Rolling Loam	18.40	8	2
Kemmerer-Grapit Complex, 15-65%slopes	Juniper Woodland	8.64	15	1
Cushool fine sandy loam, 3-12%slopes	Rolling Loam	0.19	8	0
		838.33		87

Disappointment Draw Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	5.19	19	0
Forelle loam,3-12%slopes	Rolling Loam	40.50	8	5
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	24.30	19	1
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands / PJ woodlands / PJ woodlands	53.69	17	3
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	27.57	19	1
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	0.78	16	0
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	43.48	16	3
Torriorthents-Rock Outcrop, Sandstone Complex VS	Stoney Foothills	15.41	19	1

Disappointment Draw Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
		210.92		14

Bear Valley Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Almy loam,3-15%slopes	Rolling Loam	306.00	7	44
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands	1534.76	25	61
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	724.05	6	121
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	432.80	25	17
Holter-Detra variant complex,3-25%slopes,ExStoney	Mountain Loam/Deep Loam	39.64	6	7
Rock River sandy loam,3-12%slopes	Rolling Loam	239.66	7	34
Rock Outcrop-Torriorthents Complex, Very Steep	None	207.14	30	7
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	1307.74	12	109
		4791.79		400

Bear Valley Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Holter-Detra variant complex,3-25%slopes,Ex	Mountain Loam/Deep Loam	15.41	7	2
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands /PJ woodlands	0.03	25	0
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	2431.94	6	405
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands /PJ woodlands	2.64	26	0
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands /PJ woodlands	96.43	26	4
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands /PJ woodlands	519.94	26	20
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	23.14	6	4
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	7.65	6	1
Zillion-Barkelaw-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	5.81	8	1
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands /PJ woodlands	424.46	26	16
Kemmerer-Grapit Complex, 15-65%slopes	Juniper woodlands/Juniper woodlands	58.31	20	3
Torriorthents-Rock Outcrop ,Sandstone Complex, VS	Stoney Foothills	6.59	12	1
Rock Outcrop-Torriorthents Complex, Very Steep	None	65.65	35	2
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/ Mountain Loam	127.44	14	9
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	582.54	22	26
Torriorthents-Rock Outcrop ,Sandstone Complex	Stoney Foothills	98.67	12	8
Torriorthents-Rock Outcrop, Sandstone Complex	Stoney Foothills	3.08	12	0
Torriorthents-Rock Outcrop, Sandstone Complex	Stoney Foothills	24.31	12	2
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	209.67	7	30
Torriorthents-Rock Outcrop, Sandstone Complex	Stoney Foothills	662.69	12	55
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	13.38	6	2
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	32.64	6	5
Almy loam,3-15%slopes	Rolling Loam	4.84	7	1
Almy loam,3-15%slopes	Rolling Loam	10.92	7	2
Rock River sandy loam,3-12%slopes	Rolling Loam	318.15	8	40
Almy loam,3-15%slopes	Rolling Loam	157.52	7	23
Coyet-Crestman, moist, loamy sands,20-50%slopes	Sandy Foothills/Loamy Breaks	2.81	8	0
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	15.68	9	2
		5922.34		664

Bear Valley Pasture				
Livestock Grazing Capacity				

Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	65.56	7	9
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	45.73	12	4
Crago-Pensore-Graptit assoc,6-75%slopes	PJ woodlands/PJ woodlands /PJ woodlands	1.50	25	0
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	3.87	25	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	87.69	12	7
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	215.95	25	9
Torriorthents-Rock Outcrop ,Sandstone Complex ,VS	Stoney Foothills	21.39	12	2
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	0.07	12	0
		441.76		31

Lower Sandhills Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Almy loam,3-15%slopes	Rolling Loam	0.16	7	0
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	38.93	5	8
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	598.09	15	40
Rock River sandy loam,3-12%slopes	Rolling Loam	136.95	13	11
Rock Outcrop-Torriorthents Complex, Very Steep	None	1490.05	33	45
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	850.37	25	34
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/Semidesert SL	407.33	25	16
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	3811.53	9	422
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	277.62	15	19
Torriorthents-Torripsammets complex, M Steep	None	240.15	25	10
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	7.63	5	2
		7858.81		607

Lower Sandhills Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Rock Outcrop-Torriorthents Complex, Very Steep	None	29.71	33	1
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	145.41	15	10
Rock Outcrop-Torriorthents Complex, Very Steep	None	9.71	33	0
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	0.15	9	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	6.29	33	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	7.91	33	0
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	1.44	15	0
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	17.25	5	3
Rock River sandy loam,3-12%slopes	Rolling Loam	106.91	13	9
Schooner-Tricera loamy sands,5-25%slopes	PJ woodlands/Semidesert SL	27.23	25	1
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	12.59	15	1
Torriorthents-Torripsammets complex, M Steep	None	16.68	25	1
Rock River sandy loam,3-12%slopes	Rolling Loam	6.01	13	0
Rock River sandy loam,3-12%slopes	Rolling Loam	0.51	13	0
Rock River sandy loam,3-12%slopes	Rolling Loam	38.28	13	3
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	46.11	25	2
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	6.4	5	1
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	1.1	5	0
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	4	5	1
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	0.05	5	0
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	0.06	5	0
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	0.3	5	0
Torriorthents-Torripsammets complex, M Steep	None	10.14	25	0
Torriorthents-Torripsammets complex, M Steep	None	74.75	25	3

Lower Sandhills Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.26	33	0
		569.25		37

Lower Sandhills Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Eghelm loamy fine sand,0-3%slopes	SaltDesert Overflow	306.01	15	20
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	11.41	9	1
Rock Outcrop-Torriorthents Complex, Very Steep	None	56.05	33	2
Schooner-Tricera loamy sands,5-25%slopes	PJ woodlands/Semidesert SL	136.82	25	6
Eghelm loamy fine sand,0-3%slopes	SaltDesert Overflow	57.58	15	4
Youngston Sandy Loam, well drained,0-3%slopes	Foothill Swale	8.29	5	2
Rock River sandy loam,3-12%slopes	Rolling Loam	0.79	13	0
Schooner-Tricera loamy sands,5-25%slopes	PJ woodlands/Semidesert SL	7.97	25	0
		584.92		35

Ruppe Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands	0.26	17	0
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	65.44	4	16
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	64.52	17	4
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	340.63	7	49
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	415.90	9	46
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	150.08	8	19
		1036.83		134

Ruppe Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	33.35	7	5
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	1303.05	4	325
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	52.64	9	6
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands	47.00	17	3
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands	37.69	17	2
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	16.38	9	2
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	14.21	9	2
Grieves-Crestman-Complex,10-40%slopes	PJ woodlands/PJ woodlands	0.01	17	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	26.87	9	3
		1531.20		348

Upper Ruppe Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Emlin loam,1-12%slopes	Deep Loam	4.09	5	1

Upper Ruppe Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Holter-Detra variant complex,3-25%slopes,ExStoney	Mountain Loam/Deep Loam	1.65	5	0
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	18.43	7	3
Ustorthents, Frigid-Borolls Complex, steep	None	0.05	25	0
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	27.3	9	3
		51.52		7

Upper Ruppe Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	7.28	7	1
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	0.46	7	0
Ustorthents, Frigid-Borolls Complex, steep	None	1.15	25	0
Holter-Detra variant complex,3-25%slopes,ExStoney	Mountain Loam/Deep Loam	171.75	5	34
Crago-Pensore-Grapit assoc,6-75%slopes	PJ woodlands/PJ woodlands	2.29	17	0
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	94.22	4	24
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	60.80	9	7
Emlin loam,1-12%slopes	Deep Loam	9.53	5	2
Emlin loam,1-12%slopes	Deep Loam	0.17	5	0
		347.65		68

Jack Springs Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Almy loam,3-15%slopes	Rolling Loam	322.96	8	40
Berlake sandy loam,3-12%slopes	Sandy Foothills	111.5	6	19
Emlin loam,1-12%slopes	Deep Loam	0.06	5	0
Layoint- Moosed- Berlake Complex,1-20%slopes	Sandy Foothills/Sandy Foothills/ Deep Loam	3.38	5	1
Martinsdale-Boettcher Complex,1-15%slopes	Deep Loam, Dry Exposure	106.01	6	18
Pinelli loam, 3-12%slopes	Clayey Foothills	99.19	8	12
Rock River sandy loam,3-12%slopes	Rolling Loam	103.42	7	15
Rock Outcrop-Torriorhents Complex, Very Steep	None	96.15	33	3
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	366.36	10	37
Torriorhents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	458.75	13	35
Ustorthents, Frigid-Borolls Complex, steep	None	201.57	18	11
Weed sandy loam,1-12%slopes	Deep Loam	42.59	7	6
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	42.89	10	4
		1954.83		201

Jack Springs Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Emlin loam,1-12%slopes	Deep Loam	0.00	5	0
Emlin loam,1-12%slopes	Deep Loam	0.13	5	0
Torriorhents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	85.05	13	7
Almy loam,3-15%slopes	Rolling Loam	602.51	8	75
Berlake sandy loam,3-12%slopes	Sandy Foothills	82.60	6	14
Rock River sandy loam,3-12%slopes	Rolling Loam	123.84	7	18
Coyet-Crestman, moist, loamy sands,20-50%slopes	Sandy Foothills/Loamy Breaks	21.55	8	3

Jack Springs Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Rock River sandy loam,3-12%slopes	Rolling Loam	7.00	8	1
Rock River sandy loam,3-12%slopes	Rolling Loam	123.82	8	15
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	80.27	10	8
Ustorthents, Frigid-Borolls Complex, steep	None	217.33	18	12
Pinelli loam, 3-12%slopes	Clayey Foothills	245.29	8	31
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	125.42	13	10
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	29.28	13	2
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	0.17	10	0
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	190.99	10	19
Martinsdale-Boettcher Complex,1-15%slopes	Deep Loam, Dry Exposure	38.40	10	4
Pinelli loam, 3-12%slopes	Clayey Foothills	106.96	8	13
Rock Outcrop-Torriorthents Complex, Very Steep	None	14.95	33	0
Emlin loam,1-12%slopes	Deep Loam	0.33	5	0
Almy loam,3-15%slopes	Rolling Loam	18.13	8	2
		2114.02		234

Jack Springs Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Almy loam,3-15%slopes	Rolling Loam	135.04	8	16
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	6.10	10	1
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	0.41	10	0
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	3.20	10	0
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	0.77	10	0
Pinelli loam, 3-12%slopes	Clayey Foothills	68.15	8	9
Rock Outcrop-Torriorthents Complex, Very Steep	None	53.99	33	2
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	6.88	10	1
		274.54		29

Upper Sandhills Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	5.32	8	1
Rock River sandy loam,3-12%slopes	Rolling Loam	1.84	7	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	36.43	25	1
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	973.9	5	196
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	255.97	9	28
		1273.46		226

Upper Sandhills Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	362.91	5	73
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.22	33	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.01	33	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	2.30	33	0
		365.44		73

Luxen Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Emlin loam,1-12%slopes	Deep Loam	329.02	7	47
Layoint-Moosed-Berlake Complex,1-20%slopes	Sandy Foothills/Sandy Foothills/Deep Loam	437.59	7	62
Martinsdale-Boettcher Complex,1-15%slopes	Deep Loam, Dry Exposure	389.6	16	24
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/ Mountain Loam	167.11	10	17
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	0.02	8	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	0.66	9	0
Ustorthents, Frigid-Borolls Complex, steep	None	116.65	21	6
Weed sandy loam,1-12%slopes	Deep Loam	4.47	7	1
		1445.12		157

Luxen Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Layoint-Moosed-Berlake Complex,1-20%slopes	Sandy Foothills/Sandy Foothills/Deep Loam	141.00	7	20
Ustorthents, Frigid-Borolls Complex, steep	None	245.73	21	12
Emlin loam,1-12%slopes	Deep Loam	199.26	7	29
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/Mountain Loam	18.24	10	2
Weed sandy loam,1-12%slopes	Deep Loam	84.60	7	13
Ustorthents, Frigid-Borolls Complex, steep	None	7.96	21	0
Ustorthents, Frigid-Borolls Complex, steep	None	1.52	21	0
Layoint-Moosed-Berlake Complex,1-20%slopes	Sandy Foothills/Sandy Foothills /Deep Loam	77.23	8	10
Ustorthents, Frigid-Borolls Complex, steep	None	23.87	21	1
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/Mountain Loam	34.00	10	3
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/Mountain Loam	14.53	10	1
Martinsdale-Boettcher Complex,1-15%slopes	Deep Loam, Dry Exposure	6.40	16	0
Martinsdale-Boettcher Complex,1-15%slopes	Deep Loam, Dry Exposure	0.12	16	0
Emlin loam,1-12%slopes	Deep Loam	34.58	7	5
Emlin loam,1-12%slopes	Deep Loam	51.01	7	7
		940.05		103

Luxen Pasture (Former Gather & Sort Pasture) Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Emlin loam,1-12%slopes	Deep Loam	22.16	7	3
Haplaquolls, frequently flooded	None	1.86	0	0
Layoint-Moosed-Berlake Complex,1-20%slopes	Sandy Foothills/Sandy Foothills/Deep Loam	13.47	5	3
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	97.59	12	8
Ustorthents, Frigid-Borolls Complex, steep	None	182.75	20	9
Weed sandy loam,1-12%slopes	Deep Loam	45.76	4	12
		363.59		35

Luxen Pasture (Former Gather & Sort Pasture) Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Ustorthents, Frigid-Borolls Complex, steep	None	49.61	20	2
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	31.57	12	3

Luxen Pasture (Former Gather & Sort Pasture)				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Haplaquolls, frequently flooded	None	11.86	0	0
Weed sandy loam,1-12%slopes	Deep Loam	44.60	4	12
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	41.59	12	3
Layoint-Moosed-Berlake Complex,1-20%slopes	Sandy Foothills/Sandy Foothills/Deep Loam	0.01	5	0
Ustortheents, Frigid-Borolls Complex, steep	None	0.99	30	0
		180.23		20

Skull Creek Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Almy loam,3-15%slopes	Rolling Loam	307.90	6	51
Eghelm loamy fine sand,0-3%slopes	Salt-desert Overflow	88.64	6	15
Grieves-Yamo-Crestman assoc,3-45%slope	Rolling Loam/Clayey Foothills/Sandy Juniper	116.6	7	17
Martinsdale-Boettcher Complex,1-15%slopes	Deep Loam, Dry Exposure	1003.67	12	84
Rock Outcrop-Torriorthents Complex, Very Steep	None	2867	25	115
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	3473.86	18	192
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	406.06	12	34
		8263.73		508

Skull Creek Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Martinsdale-Boettcher Complex,1-15%slopes	Deep Loam, Dry Exposure	85.63	12	7
Rock Outcrop-Torriorthents Complex, Very Steep	None	24.53	25	1
Grieves-Yamo-Crestman assoc,3-45%slope	Rolling Loam/Clayey Foothills/Sandy Juniper	131.68	7	19
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	0.23	18	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.79	25	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.18	25	0
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	104.40	18	6
Almy loam,3-15%slopes	Rolling Loam	91.08	6	15
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	69.60	18	4
Almy loam,3-15%slopes	Rolling Loam	83.83	6	14
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	50.98	18	3
		642.93		69

Mud Springs Pasture				
Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Emlin loam,1-12%slopes	Deep Loam	282.78	7	40
Forelle, Alkaline-Emlin loams,1-12%slopes	Deep Loam/Deep Loam	147.61	4	37
Holter-Detra variant complex,3-25%slopes,Ex Stoney	Mountain Loam/Deep Loam	7.88	4	2
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/ Mountain Loam	74.09	9	8
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	1863.14	8	233
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	902.12	9	100
Ustortheents, Frigid-Borolls Complex, steep	None	1198.79	30	40
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	868.37	8	109

Mud Springs Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
		5344.78		569

Mud Springs Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Rencot-Duffymont Complex, 1-25% slopes	Dry Exposure/Stoney Loam	8.98	9	1
Ustorthents, Frigid-Borolls Complex, steep	None	19.00	30	1
Rencot-Duffymont Complex, 1-25% slopes	Dry Exposure/Stoney Loam	10.95	9	1
Emlin loam, 1-12% slopes	Deep Loam	123.65	7	18
Emlin loam, 1-12% slopes	Deep Loam	21.64	7	3
Emlin loam, 1-12% slopes	Deep Loam	1.23	7	0
Forelle, Alkaline-Emlin loams, 1-12% slopes	Deep Loam/Deep Loam	177.15	4	45
Ustorthents, Frigid-Borolls Complex, steep	None	63.89	30	2
Zillion-Barkelew-Grapit Complex, 25--65% slps	Mountain Loam/Dry Exposure	3.30	8	0
Zillion-Barkelew-Grapit Complex, 25--65% slps	Mountain Loam/Dry Exposure	0.37	8	0
Zillion-Barkelew-Grapit Complex, 25--65% slps	Mountain Loam/Dry Exposure	215.50	8	27
Emlin loam, 1-12% slopes	Deep Loam	218.59	7	32
Zillion-Barkelew-Grapit Complex, 25--65% slps	Mountain Loam/Dry Exposure	12.42	8	2
Niart-Crago-Garlips Complex, 15-45% slopes	Dry Mountain Loam/Dry Exposure/ Mountain Loam	27.56	9	3
Rencot-Duffymont Complex, 1-25% slopes	Dry Exposure/Stoney Loam	91.56	9	10
Niart-Crago-Garlips Complex, 15-45% slopes	Dry Mountain Loam/Dry Exposure/ Mountain Loam	22.08	9	2
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	74.25	9	8
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	75.43	9	8
		1167.55		163

Mud Springs Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Rencot-Duffymont Complex, 1-25% slopes	Dry Exposure/Stoney Loam	24.84	9	3
Emlin loam, 1-12% slopes	Deep Loam	119.39	7	18
Ustorthents, Frigid-Borolls Complex, steep	None	4.19	30	0
Zillion-Barkelew-Grapit Complex, 25--65% slps	Mountain Loam/Dry Exposure	66.97	8	8
Ustorthents, Frigid-Borolls Complex, steep	None	13.59	30	0
Niart-Crago-Garlips Complex, 15-45% slopes	Dry Mountain Loam/Dry Exposure/Mountain Loam	150.92	9	17
Emlin loam, 1-12% slopes	Deep Loam	9.43	7	1
Niart-Crago-Garlips Complex, 15-45% slopes	Dry Mountain Loam/Dry Exposure/Mountain Loam	29.53	9	3
Emlin loam, 1-12% slopes	Deep Loam	100.50	7	14
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	26.88	9	3
Zillion-Barkelew-Grapit Complex, 25--65% slps	Mountain Loam/Dry Exposure	57.29	8	7
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	33.56	9	4
		637.09		78

Johnson Draw Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs

Johnson Draw Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Clayburn loam,3-25%slopes	Mountain Loam	233.29	6	39
Emlin loam,1-12%slopes	Deep Loam	1296.41	5	260
Holter-Detra variant complex,3-25%slopes,ExStoney	Mountain Loam/Deep Loam	53.16	6	9
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/Mountain Loam	1.22	7	0
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	1017.5	8	127
Torriorthents-Rock Outcrop, Sandstone Complex,	Stoney Foothills	3.66	8	0
Ustortheents, Frigid-Borolls Complex, steep	None	1438.61	20	72
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	552.31	8	69
		4596.16		576

Johnson Draw Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Ustortheents, Frigid-Borolls Complex, steep	None	31.53	20	2
Ustortheents, Frigid-Borolls Complex, steep	None	37.34	20	2
Emlin loam,1-12%slopes	Deep Loam	813.76	5	162
Emlin loam,1-12%slopes	Deep Loam	34.79	5	7
Emlin loam,1-12%slopes	Deep Loam	70.04	5	14
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	1.21	8	0
Holter-Detra variant complex,3-25%slopes,ExStoney	Mountain Loam/Deep Loam	1.53	6	0
Ustortheents, Frigid-Borolls Complex, steep	None	370.11	20	19
Ustortheents, Frigid-Borolls Complex, steep	None	75.89	20	4
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	0.50	8	0
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	5.38	8	1
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/Mountain	77.11	7	11
Clayburn loam,3-25%slopes	Mountain Loam	30.98	6	5
Rencot-Duffymont Complex,1-25%slopes	Dry Exposure/Stoney Loam	37.97	8	5
Ustortheents, Frigid-Borolls Complex, steep	None	82.73	20	4
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	16.99	8	2
Haplaquolls, frequently flooded	None	4.37	0	
		1692.23		238

Bull Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Berlake sandy loam,3-12%slopes	Sandy Foothills	8.87	5	2
Emlin loam,1-12%slopes	Deep Loam	55.98	6	9
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	25.76	8	3
Ustortheents, Frigid-Borolls Complex, steep	None	1.38	0	0
Zillion-Barkelew-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	109.96	6	19
		201.95		33

Bull Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Emlin loam,1-12%slopes	Deep Loam	851.79	6	143
Torriorthents-Rock Outcrop, Sandstone Complex,	Stoney Foothills	7.05	13	1
Torriorthents-Rock Outcrop, Sandstone Complex,	Stoney Foothills	3.07	13	0

Bull Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Torriorthents-Rock Outcrop, Sandstone Complex,	Stoney Foothills	0.53	13	0
Torriorthents-Rock Outcrop, Sandstone Complex,	Stoney Foothills	0.43	13	0
Zillion-Barkeleyw-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	2.72	6	0
Zillion-Barkeleyw-Grapit Complex,25--65%slps	Mountain Loam/Dry Exposure	256.88	6	44
Berlake sandy loam,3-12%slopes	Sandy Foothills	59.54	5	12
Ustorhents, Frigid-Borolls Complex, steep	None	209.58	25	8
Emlin loam,1-12%slopes	Deep Loam	60.71	6	10
Emlin loam,1-12%slopes	Deep Loam	119.29	6	20
Rock River sandy loam,3-12%slopes	Rolling Loam	2.05	7	0
Niart-Crago-Garlips Complex,15-45%slopes	Dry Mountain Loam/Dry Exposure/ Mountain Loam	134.92	9	15
Emlin loam,1-12%slopes	Deep Loam	17.99	6	3
Torriorthents-Rock Outcrop, Sandstone Complex,	Stoney Foothills	18.98	13	1
Ustorhents, Frigid-Borolls Complex, steep	None	22.68	30	1
Ustorhents, Frigid-Borolls Complex, steep	None	40.86	30	1
Layoint-Moosed-Berlake Complex,1-20%slopes	Sandy Foothills/Sandy Foothills/Deep Loam	2.25	5	0
		1811.3		259

Horse Draw Allotment by Pasture

Horse Draw Pasture Livestock Carrying Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Billings-Torrifluents complex,gullied,0-5%slopes	Alkaline Slopes	47.87	8	6
Chipeta-Killpack silty clay loam,3-15%slopes	Clayey Saltdesert	179.29	11	16
Cliffdown-Cliffdown Variant complex,5-65%slopes	Saltdesert Breaks	16.55	8	2
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	1089.25	8	136
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	5466.73	9	607
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	191.15	5	38
Glenton sandy loam,1-6%slopes	Alkaline Slopes	5.11	8	1
Gullied land	None	142.49	33	4
Kemmerer-Moyerson Silty Clay Loam,20-40%slope	Clayey Slopes/Clayey Slopes	7.69	10	1
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	3681.66	7	526
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	342.93	5	69
Pavillion-Degater Complex,3-20%slopes	Semidesert Loam/Clayey Slopes	436.35	8	55
Torrifluents, gullied	None	250.43	20	13
Torriorthents-Rock Outcrop, Shale, Complex, Steep	Stoney Foothills	360.68	8	45
Typic Natrargids, 0-5%slopes	None	279.34	15	19
Uffens loam,0-5%slopes	Alkaline Slopes	68.81	9	8
		12566.33		1546

Horse Draw Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	32.14	5	6
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	78.97	7	11
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	87.76	8	11
Typic Natrargids, 0-5%slopes	None	28.97	15	2
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	17.85	7	3
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	16.43	7	2
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	12.10	7	2

Horse Draw Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	42.00	7	6
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltedser/Clayey Saltedser	1.96	9	0
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltedser/Clayey Saltedser	531.21	9	59
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	0.03	7	0
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	0.06	8	0
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	38.32	7	5
		887.8		107

Massadona Allotment by Pasture

South Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUMs	BLM AUMs
Avalon-Persayo-Degater complex,3-30%slopes	Semidesert Loam /Semidesert Loam /Clayey Slopes	46.41	6	8
Billings-Torrifluents complex,gullied,0-5%slopes	Alkaline Slopes	581.00	8	73
Chipeta-Killpack silty clay loam,3-15%slopes	Clayey Saltedser	909.70	9	101
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	59.00	7	8
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltedser/Clayey Saltedser	1707.35	7	244
Divide Creek Detention Dam	None	11.44	0	0
Eghelm loamy fine sand,0-3%slopes	Saltedser Overflow	149.18	5	30
Eghelm Loamy Sand,0-3%slopes	Saltedser Overflow	19.06	5	4
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	1189.21	7	170
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	199.00	5	40
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	109.27	12	9
Rock Outcrop	None	359.64	25	14
Rock Outcrop-Torriorthents Complex, Very Steep	None	254.46	30	8
Torrifluents, gullied	None	193.99	18	11
Turley fine sandy loam,3-8%slopes	Alkaline Slopes	14.28	8	2
Turley loam,Saline,1-8%slopes	Alkaline Slopes	11.89	8	1
	Totals:	5814.88		723

South Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Eghelm loamy fine sand,0-3%slopes	Saltedser Overflow	298.84	7	43
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	112.97	7	16
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltedser/Clayey Saltedser	93.54	8	12
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	88.83	8	11
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltedser/Clayey Saltedser	63.25	8	8
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	12.79	8	2
Eghelm loamy fine sand,0-3%slopes	Saltedser Overflow	100.92	6	17
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	1.48	6	0
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltedser/Clayey Saltedser	80.38	8	10
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	26.71	8	3
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltedser/Clayey Saltedser	235.74	8	29
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	167.62	8	21
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	126.31	8	16
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	23.56	8	3
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	0.37	9	0

South Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	71.36	8	9
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	3.25	8	0
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	44.01	10	4
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	7.61	6	1
		1559.54		205

South Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	State Acres	Acres / AUM	State AUMs
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	3.40	5	1
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	335.57	7	48
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	81.23	8	10
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	167.32	8	21
Rock Outcrop-Torriorthents Complex, Very Steep	None	2.93	30	0
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	12.44	8	2
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	22.76	8	3
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	6.76	8	1
Turley loam,Saline,1-8%slopes	Alkaline Slopes	5.77	8	1
		638.18		87

North Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
Abor silty clay loam,12-25%slopes	Claypan	112.49	8	14
Bulkley silty clay,3-12%slopes	Clayey Foothills	36.00	8	5
Deaver-Avalon complex,5-45%slopes	Clayey Slopes/Semidesert Loam	0.09	8	0
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	4.49	9	0
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	27.85	5	6
Kemmerer-Moyerson Silty Clay Loam,20-40%slope	Clayey Slopes/Clayey Slopes	136.12	7	19
Kemmerer-Yamo Complex, 5-30%slopes	Clayey Slopes	61.56	7	9
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	51.61	7	7
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	7.25	5	1
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	646.73	13	50
Rock River sandy loam,3-12%slopes	Rolling Loam	149.84	7	21
Rock Outcrop-Torriorthents Complex, Very Steep	None	651.89	17	38
Schooner-Rock outcrop Complex,5-45%slopes	PJ woodlands/None	187.61	15	13
Spool-Maybell Loamy fine Sands,5-40%slopes	Sandy Loam/Sandy Foothills	1.20	7	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	74.48	8	9
Torriorthents-Torripsammets complex, M Steep	None	441.43	12	37
		2590.64		229

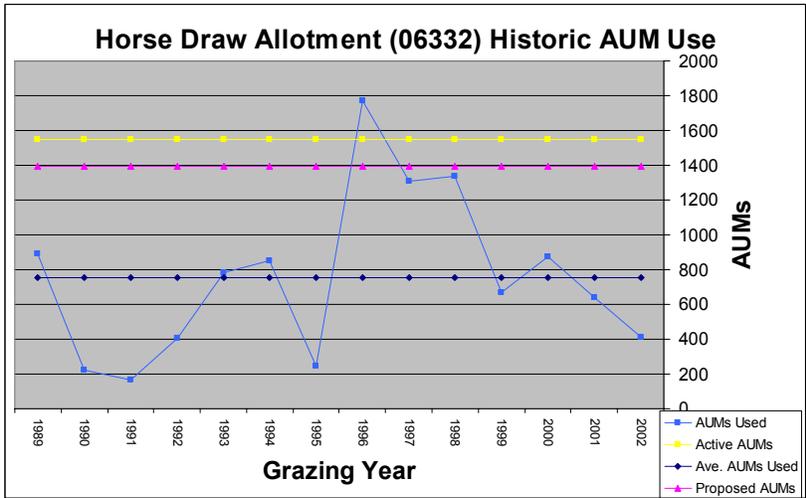
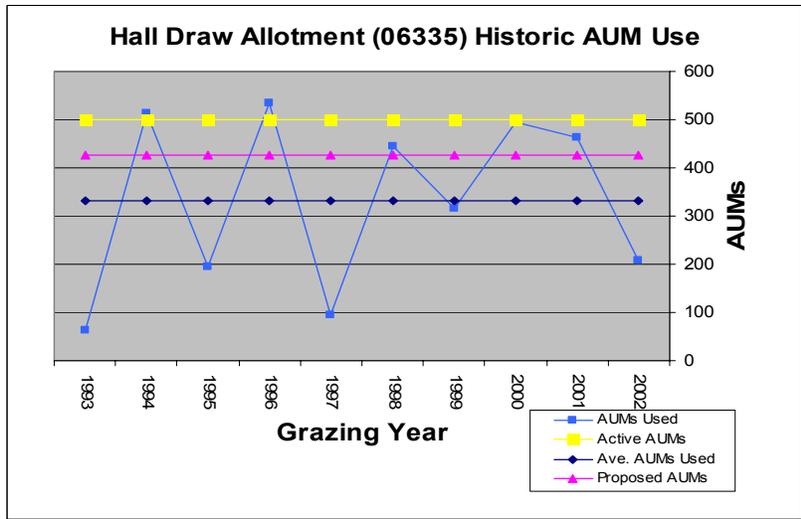
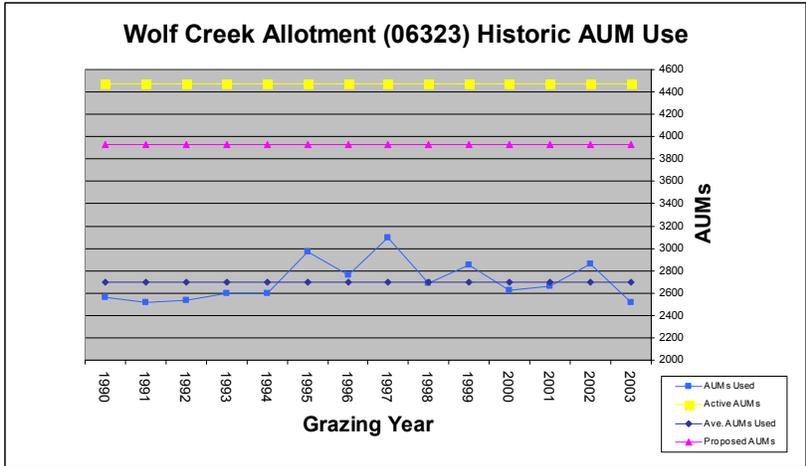
North Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Rock Outcrop-Torriorthents Complex, Very Steep	None	0.67	30	0
Torriorthents-Torripsammets complex, M Steep	None	0.88	15	0
Kemmerer-Moyerson Silty Clay Loam,20-40%slope	Clayey Slopes/Clayey Slopes	2.59	9	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	11.02	30	0

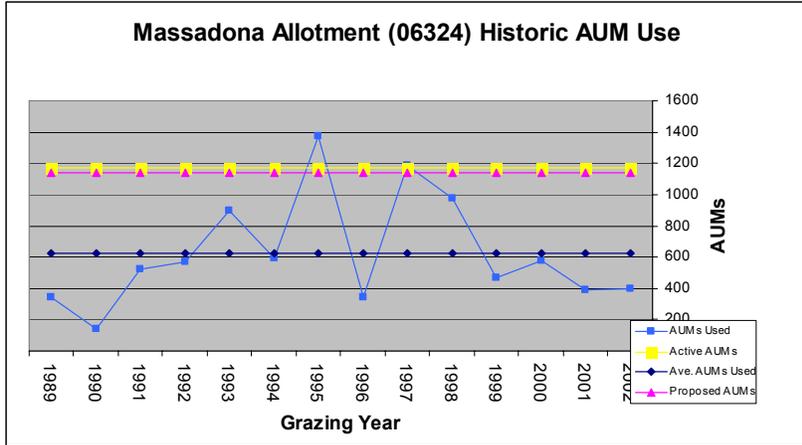
North Pasture Livestock Grazing Capacity				
Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	2.38	5	0
Eghelm loamy fine sand,0-3%slopes	Saltdesert Overflow	0.04	5	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	32.24	8	4
Massadona Silty Clay Loam,0-12%slopes	Clayey Slopes	13.30	9	1
Deaver-Chipeta silty clay loam,3-35%slopes	Clayey Saltdesert/Clayey Saltdesert	8.12	8	1
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	42.44	15	3
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	2.28	15	0
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	1.18	5	0
Massadona-Youngston loams,Moist,1-8%slopes	Foothill Swale	11.77	5	2
		128.91		11

Hall Draw Allotment

Hall Draw Allotment Livestock Grazing Capacity				
Soil Unit	Ecological Site	BLM Acres	Acres / AUMs	BLM AUMs
Billings silty clay loam,0-5%slopes	Alkaline Slopes	9.26	8	1
Billings-Torrifluents complex,gullied,0-5%slopes	Alkaline Slopes/None	1.37	0	
Cliffdown-Cliffdown Variant complex,5-65%slopes	Saltdesert Breaks	339.26	9	38
Colorow sandy loam	Sandy Saltdesert	2.07	7	0
Forelle loam, 3-8%slopes	Rolling Loam	198.84	13	15
Forelle loam, 8-15%slopes	Rolling Loam	87.55	13	7
Moyerson stony clay loam,15-65%slopes	Clayey Slopes	84.26	9	9
Piceance fine sandy loam,5-15%slopes	Rolling Loam	108.77	7	16
Potts-Begay fine sandy loams,2-7%slopes	Loamy Saltdesert / Sandy Saltdesert	189.84	14	14
Redcreek-Rentsac complex,5-30%slopes	PJ woodlands/PJ woodlands	70.02	18	4
Rentsac-Piceance complex,2-30%slopes	PJ woodland/Rolling Loam	1049.28	12	87
Rock Outcrop	None	3333.09	30	111
Torrifluents, gullied	None	162.92	14	12
Torriorthents-Rock Outcrop, complex,15-90%slopes	Stoney Foothills	525.99	10	53
Turley fine sandy loam,3-8%slopes	Alkaline Slopes	589.36	13	45
Uffens loam,0-5%slopes	Alkaline Slopes	113.58	11	10
N/A	None	3.51	0	
Yamac Loam,2-15%slope	Rolling Loam	108.21	8	14
		Totals:	6977.18	435

The tables below reflect AUMs used (billed AUMs based on actual use report), average AUMs used for the period, current active AUMs, and proposed active AUMs (Livestock Grazing Capacity) for allotments permitted to Three Springs Ranch. The grazing year begins March 1st and ends February 28th. As shown in the tables below, Three Springs Ranch has typically operated below the current active AUMs and proposed AUMs (Grazing Capacity). Thus the ranch has operated with proper stewardship of the rangelands by running at or below the estimated livestock grazing capacity, thereby aiding in plant growth and recovery.





Environmental Consequences of the Proposed Action: Refer to the Vegetation section of this document for an analysis of rangeland vegetation impacts. As shown in the Vegetation section, the proposed action is expected to improve livestock distribution from the aspect of a reduction in total AUMs used (reduced grazing intensity), a shorter grazing season, a reduction in AUMs used during the growing period, and a rest period every other year during the growing period. This would provide an opportunity for plants to complete a full and/or partial life cycle every other year on all allotments. A shorter grazing period helps to reduce repeated cattle grazing on an individual forage plant. Therefore, the proposed action would give the vegetation a greater opportunity for seed production, replenishment of root reserves, biomass accumulation, and plant propagation.

The rationale for the shortened/reduced grazing use within the Skull Creek pasture of the Wolf Creek allotment under the 1982 AMP, which was never implemented, in comparison to the proposed 2005 AMP, is that the pasture is lower in elevation under Skull Creek Rim and the entire herd, after grazing the Skull Creek pasture, had to then again graze pastures on Blue Mountain (higher elevation, above Skull Creek Rim). Therefore under the 1982 AMP, the cattle had to quickly graze the Skull Creek pasture before snow and weather conditions prevented them from grazing again the pastures on Blue Mountain in the fall/winter. Thus, grazing use in the Skull Creek pasture was not limited by AUMs (forage), but rather by limitation of inadequate grazing lands for fall/winter grazing which had to occur in the higher elevation zone. This situation was alleviated once the ranch acquired the Massadona and Horse Draw allotments (low elevation zone, salt desert shrub), which allowed the herd to leave the Skull Creek pasture and head directly to the Massadona and Horse Draw allotments, thus not grazing Blue Mountain for a second time. Also, the Skull Creek pasture was not able to be fully utilized due to cattle trespass concerns onto neighboring allotments. However, the construction of the Lone Mountain Allotment Boundary Fence (# 7259) in 1993 has aided in confining cattle within the pasture, thus enabling greater control of livestock within the pasture. As shown within the Rangeland Management section of this document, proposed use within the Skull Creek pasture is within the livestock carrying capacity and below historic actual use of this pasture.

Proposed livestock use (AUMs) is within the livestock grazing capacity for each pasture and allotment for grazing at a moderate level. Within the Horse Draw and Massadona allotments, an alternate year rotational system has been developed to eliminate grazing during the vegetative

community's critical growing season every other year, thereby aiding in plant growth and reproduction capabilities. The 2 year AUM average use for the Horse Draw (1176 AUMs) and Massadona (727 AUMs) allotments is well below the livestock grazing capacity (Horse Draw-1546 AUMs, Massadona-952 AUMs), thus allowing for full replenishment of plant loss during grazing over the 2 year rotational cycle.

A major factor in the improvement of cattle distribution is the permittees commitment to haul water to needed pastures. *Three Springs Ranch* is very active in hauling water, with an increase effort during time of limited water due to drought, on the Wolf Creek allotment during the summer/fall period from a private water source west of the Karren Place to various water troughs strategically located on assorted pastures. Therefore, this action of hauling water helps in the distribution of cattle by adding additional water sources within the uplands.

It is anticipated that the management of the rangelands by Three Springs Ranch will not be significantly impaired by implementation of the proposed action, as the ranch was instrumental in the development of this action. Also, implementation of the proposed action will further enhance the ability of the rangelands to meet the various Public Land Health Standards in the future.

Environmental Consequences of the Continuation of Current Management Alternative:
As shown from the Historic AUM Use tables above, Three Springs Ranch has historically grazed their permitted allotments below the current active AUM level, below estimated AUMs, and below the proposed AUM levels. A prolonged drought has accounted for part of this historical AUM level in which Three Springs Ranch reduced their herd size in relation to hampered forage production. This situation of grazing below the rangeland's carrying capacity has helped in the recovery of these allotments from historical grazing practices that lead to poor land health conditions in certain localities. Thereby, the ranch has created a situation of improving the rangeland health, particularly on the mid seral ecological sites. It is anticipated that this same trend will continue into the future, yet at a lesser rate than the proposed action.

If the 1982 AMP was implemented, it would place a greater burden on Three Springs Ranch with pasture movements that are not needed under the current situation of the acquisitions of additional allotments (Massadona, Horse Draw, and Hall Draw).

If grazing was commenced at full permitted AUM levels and season of use as outlined on the current grazing permit and/or the 1982 AMP, AUM use would exceed the livestock grazing capacity for many areas. For example, under the 1982 AMP the 2 year AUM average use for the Massadona and Horse Draw allotments would be above the livestock grazing capacity, thus not allowing for the full replenishment of plant loss during grazing over the 2 year rotational cycle.

These situations would result in a downward trend within plant communities due to grazing at a higher intensity and with increase use during the vegetative growing season. Therefore, the season of use, cattle numbers, and duration under the 1982 AMP and current grazing permit alternatives would hamper in meeting and improving public land health standards.

Environmental Consequences of the No Grazing Alternative: Under this alternative, Three Springs Ranch would not have the ability to authorize their existing grazing permit (0501447). Therefore, the ranch would not have a viable cattle operation as the private land and forage are open to BLM administered lands and it would not be economically or environmentally feasible to fence separate. Privately controlled forage by Three Springs Ranch that is available for livestock accounts for 37% of the total forage on the Wolf Creek allotment (many more on certain pastures), 24% for Massadona, and 7% on the Horse Draw allotment. Without the adjoining BLM grazing permits, Three Springs Ranch would not be able to utilize this privately held forage. Therefore, without the BLM allocated forage and/or private forage, it would place an economical burden on the ranch and it likely would not be able to continue in its current state as a cattle operation.

Mitigation: None

RECREATION

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The allotments have been delineated a Recreation Opportunity Spectrum (ROS) classes of Primitive (P) and Semi-Primitive Non-Motorized (SPNM) within Wilderness Study Areas and other small areas with limited public vehicular access, Semi-Primitive Motorized (SPM) throughout the majority of the allotments, Roaded Natural in areas adjacent to moderate to highly traveled (County roads and US Highways) and Rural (R) along Colorado State 64 corridor. A table of ROS classes with relative approximate acreage follows:

ROS Class	Acreage (approximate)
Primitive and Semi-Primitive Non-Motorized	10,300
Semi-Primitive Motorized	81,000
Roaded Natural	11,100
Rural	250

NOTE: Acreages depicted in the table above may differ from others within this document when summed as ROS class coverage did not differentiate between public and private lands. This in no way should be construed that the BLM will attempt to manage or in any way direct the methods in which the private lands within the ROS are described.

Environmental Consequences of the Proposed Action: Proposed action should not impact the custodial management of the current unstructured recreation activities and does not change the physical, social or managerial setting of recreation opportunities within the project area.

Environmental Consequences of the Continuation of Current Management Alternative: No change in current management should not impact the custodial management of the current unstructured recreation activities and does not change the physical, social or managerial setting of recreation opportunities within the project area.

Environmental Consequences of the No Grazing Alternative: No impacts.

Mitigation: None.

VISUAL RESOURCES

Affected Environment: The proposed action occurs within VRM classes I, II, III and IV. The objective of VRM class I is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. The objective of VRM class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. The objective of VRM class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. The objective of VRM class IV is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements. A table of approximate VRM acreages follows:

VRM Class	Acreage (approximate)
I	7,300
II	45,200
III	29,000
IV	3,400

Environmental Consequences of the Proposed Action: No actions are proposed that would modify the basic elements of form, line, color or texture. VRM class objectives would be met or retained in all VRM classes within the proposed project area.

Environmental Consequences of the Continuation of Current Management Alternative: No actions are proposed that would modify the basic elements of form, line, color or texture. VRM class objectives would be met or retained in all VRM classes within the proposed project area.

Environmental Consequences of the No Grazing Alternative: No impact to visual resources therefore VRM class objectives would continue to be met.

Mitigation: None.

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts from the proposed action would not exceed those discussed in the White River Resource Area RMP and/or White River Resource Area Grazing Management Environmental Impact Statement (EIS).

PERSONS / AGENCIES CONSULTED: A Public Notice of the NEPA action is posted on the WRFO Internet website at the Colorado BLM Home Page asking for public input on Grazing Permit renewals and the assessment of public land health standards within the WRFO area. Local notification is published in the Rio Blanco Herald Times newspaper located here in Meeker, Colorado on a monthly basis. The Grazing Advisory Board was notified of impending Grazing Permit renewals. Also, individual letters are sent to the lessees/permittees informing them that their lease is up for renewal and request any information they want included in or taken into consideration during the renewal process.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Carol Hollowed	Planning and Environmental Coordinator	Air Quality, Water Quality, Surface and Ground Hydrology and Water Rights
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Gabrielle Elliott	Archaeologist	Cultural Resources Paleontological Resources
Jed Carling	Rangeland Specialist	Invasive, Non-Native Species
Ed Hollowed	Wildlife Biologist	Migratory Birds
Ed Hollowed	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species
Bo Brown	Hazmat Collateral	Wastes, Hazardous or Solid
Jed Carling	Rangeland Specialist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Jed Carling	Rangeland Specialist	Soils, Vegetation, Rangeland Management
Ed Hollowed	Wildlife Biologist	Wildlife Terrestrial and Aquatic, Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Chris Ham	Outdoor Recreation Planner	Visual Resources

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2004-049-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to implement the proposed action to renew the grazing permit for Three Springs Ranch (#0501447) for a period of ten years for the Wolf Creek, Massadona, Horse Draw, and Hall Draw grazing allotments as described in the proposed action with the addition of the below mitigation.

MITIGATION MEASURES:

1. Surveying for unrecorded sites will continue throughout the life of the renewed permit. If damage should inadvertently be discovered by permittee to any site known or unknown, permittee should report the damage to the BLM Archaeologist immediately. A policy of more frequent monitoring will be put into practice in an effort to reduce vandalism if determined necessary.
2. For controlling/limiting cheatgrass populations, compliance with Standards for Public Land Health through managed grazing, aggressive rehabilitation including aerial and drill seeding with adapted species immediately following wildfire events, and aggressive revegetation of all earthen disturbances will all aid in limiting the extent of cheatgrass. To limit the spread and establishment of noxious and invasive species, all earthen disturbances will be revegetated with adapted grass species.
3. The permittee shall be required to collect and properly dispose of any solid wastes generated by the proposed action.
4. Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*.
5. An effort by the BLM to perform maintenance on Peterson Draw Reservoir #2 Fence (1112) and Divide Creek Dam Fence (1078), thus excluding cattle from these localities. If it is determined that riparian and/or wildlife objectives can be met without the fences then an effort by the BLM will be to remove them.

6. Permittee must provide notice 14 days prior to any use of motorized or mechanized equipment to maintain the Rim Spring No. 2 #0995 T4NR102W Section 13 NWNE ¼. This is needed to provide time to contact interested parties of pending actions. No other motorized or mechanized uses are permitted within either WSA. This requirement must be noted in the case file, in the stipulations, and the grazing permit (See IMP Chapter III.D.3c.)

COMPLIANCE/MONITORING: Refer to the Monitoring and Evaluation section within the proposed action of this document.

NAME OF PREPARER: Jed Carling

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: Kent E. Walter
Field Manager

DATE SIGNED: 01/19/06

ATTACHMENTS:

- Figure 1: Map of the Wolf Creek Allotment.
- Figure 2: Map of the Massadona, Horse Draw, and Hall Draw Allotments.
- Figure 3: Soil Map of the Wolf Creek Allotment.
- Figure 4: Soil Map of the Massadona, Horse Draw, and Hall Draw Allotments.
- Location Map of the Proposed Action

Figure 2: Map of the Massadona, Horse Draw, and Hall Draw Allotments:

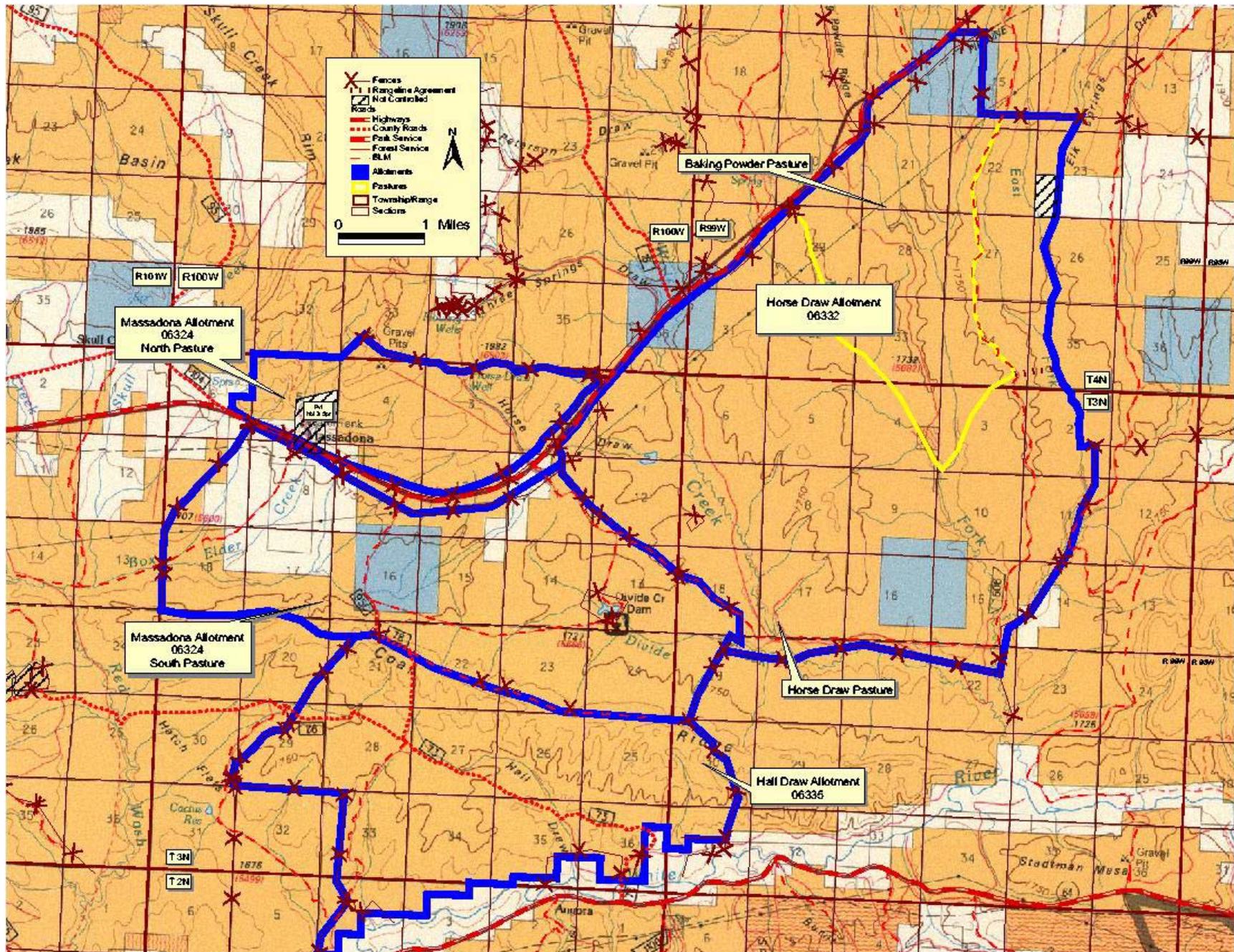
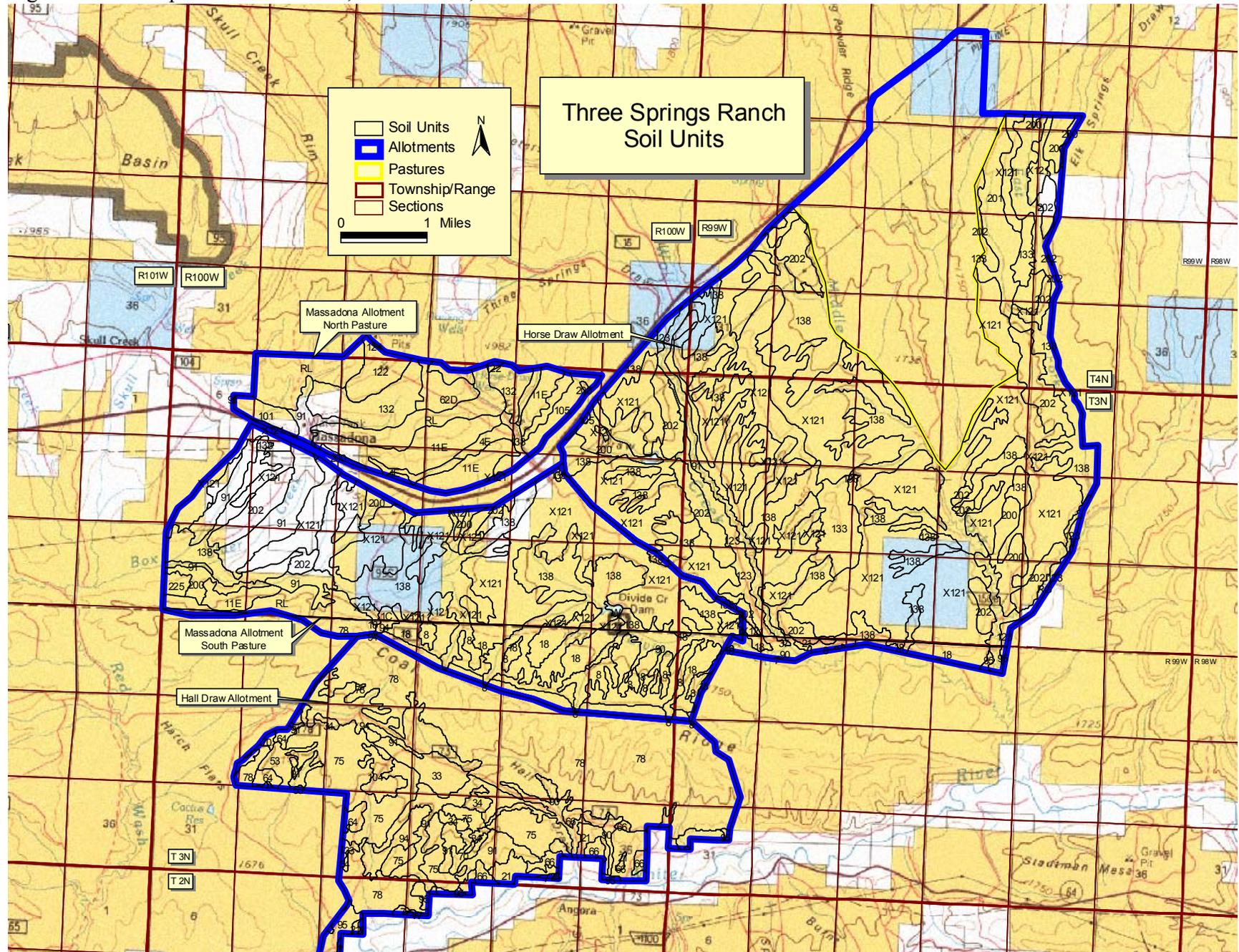


Figure 4: Soil Map of the Massadona, Horse Draw, and Hall Draw Allotments.



Location of Proposed Action CO-110-2004-049-EA

