11-21-00

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United States Department of the Interior

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In Reply Refer To:
(NV-22.15)
4120.2

NOV 2 1 2000

Dear Interested Public:

Please find enclosed the Draft Soldier Meadows/Paiute Meadows Allotment Re-Evaluation Summary. This document analyzed, interpreted and evaluated data for both allotments from 1994 through 1999.

Please review this document and submit comments by January 1, 2001. If you have any questions, feel free to contact Ron Pearson at (775) 623-1500.

Sincerely yours,

Dana Seidlitz

For Colin P. Christensen
Assistant Field Manager
Renewable Resources

RECEIVED
DEC 1 2 2000
DEPT OF ADMINISTRATION
DIRECTOR'S OFFICE

Enclosure

Subject: soldier meadows/paiute
Date: Fri, 12 Jan 2001 14:36:54 -0800
From: "Roy Leach" <rleach@phonewave.net>
To: "cathy ada barcomb" <mustangs@govmail.state.nv.us>

Cathy,

I tried to call you...same act.

I am trying to get comments on the draft allotment evaluations. This is bad. We protested and appealed the previous decisions. I am sure we wrote consent orders on both allotments.

Go to the appendix. You will find that both allotments have carrying capacities determined by weight averaging use pattern mapping data for slight (10%) against heavy (70%). The result is a doubling of carrying capacity.

Sonoma-Gerlach implemented a 20% utilization limit for wild horses that would be measured on July 15th. This was an effort to distinguish wild horse use over livestock use. You will find that this essential parameter was ignored. They claim that they never reached AML and therefore did not monitor. You might discover that they removed over 2,000 horses after the 1992 Paiute Decision and prior to the 1995 Soldier Meadows Decision. You might find that all the branding and tail bopping, age restructuring and other actions taken, were for not. I do not believe that they did any censuring over the past 6 years and that the population numbers or AUMs are just numbers they estimate on Sealy's gross assumptions.

The final word for horses might just be the 1992 AML with all other forage allocated to livestock.

It is disappointing that our efforts end up in this mess.

Roy

WINNEMUCCA

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Winnemucca Field Office

DRAFT

SOLDIER MEADOWS
PIAUTE MEADOWS

ALLOTMENT RE-EVALUATIONS

NOVEMBER 2000

The Paiute Meadows and Soldier Meadows Allotments are being re-evaluated together in the same document in accordance with the stipulated agreement between affected interests and the Bureau of Land Management (BLM). The two allotments share some of the same resource values since they border each other in the Black Rock Range.

The Allotments are located in the northwest portion of Humboldt County. Soldier Meadows Allotment is approximately forty miles northwest of Gerlach, Nevada and ranges from the valley floor of the Black Rock Desert to the higher terrain of the Calico and Black Rock Mountain Ranges. The Paiute Meadows Allotment is approximately 40 air miles southwest of Denio, Nevada and encompasses the east side of the Black Rock Range. The allotment boundary extends from the higher elevations in the Black Rock Range to the east arm of the Black Rock Desert.

Vegetative types in the allotments range from Greasewood and Saltgrass sites on the flats at elevations of 4,000' to sagebrush, bitterbrush, mountain mahogany and aspen sites in the higher elevations at 8,600'.

I. PURPOSE

This re-evaluation is necessary to determine if allotment objectives and standards for rangeland health are being met under present management identified in the Multiple Use Decisions (MUD) issued in January 1994 for Soldier Meadows and July 1995 for Paiute Meadows. The Soldier Meadows MUD was issued to R.C. Roberts who was the livestock permit holder at the time. The ranch was leased and then sold to Estill Ranches LLC in December 1997. The original Paiute Meadows MUD was issued on April of 1993 to Bill and Gail Phillips who controlled the livestock permit through a lease of the ranch base properties. The ranch was eventually sold to Irv and Sandy Brown in April 1994 and a subsequent MUD was issued to the Browns' in July of 1995.

This Re-evaluation will assess actual use, climatological, utilization, ecological site inventory, stream survey, wild horse/burro distribution and census, and wildlife habitat data to determine the effectiveness of the present management on the rangeland resources.

II. SUMMARY OF DATA

A. Current Stock Plan

The current stocking rate by treatment is as follows:

PAIUTE MEADOWS ALLOTMENT

1995 and 1996

NORTH PAIUTE PASTURE - Low Elevation

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 c	03/15 TO 05/31	100	1343

NORTH PAIUTE PASTURE - High Elevation

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 c	06/01 TO 08/17	100	1343

1997 until amended

NORTH PAIUTE PASTURE - Low Elevation

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 c	03/15 TO 05/15	100	1068

NORTH PAIUTE PASTURE - High Elevation

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 c	05/16 TO 07/17	100	1085

SOUTH PAIUTE PASTURE

The South Paiute Pasture was closed to livestock grazing in accordance with the 1993 MUD until site specific vegetative objectives were achieved. Livestock grazing resumed in the south use area in 1996 after range conditions had improved and monitoring indicated that these objectives were accomplished.

1999

N. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 c	03/15 TO 07/17	100	2153

S. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 C	07/18 TO 10/06	100	1395
50 c	01/15 TO 02/28	100	74*

* TEMPORARY NON-RENEWABLE AUMS **TOTAL = 3622**

1998

N. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 c	03/15 TO 07/17	100	2153

S. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 C	07/18 TO 10/06	100	1395
200 c	10/17 TO 01/17	100	612*

* TEMPORARY NON-RENEWABLE AUMS

TOTAL = 4160

1997

N. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
250 c	03/15 TO 04/08	100	205
375 c	04/09 TO 04/30	100	271

S. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
524 c	07/18 TO 10/06	100	1395
200 C	10/17 TO 01/17	100	612

TOTAL = 2483

1996

N. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
300 c	04/01 TO 08/17	100	1371

S. PAIUTE PASTURE

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
300 c	08/18 TO 10/06	100	493

TOTAL = 1864

1995

PAIUTE MEADOWS

LIVESTOCK #	DATES	% PUB. LAND	# AUMS
50 C	04/01 TO 04/07	100	12
110 C	04/08 TO 04/14	100	25
160 C	04/15 TO 04/21	100	37
213 C	04/22 TO 04/30	100	63
229 C	05/01 TO 05/02	100	15
274 C	05/03 TO 05/18	100	144
311 C	05/19 TO 05/22	100	41
354 C	05/23 TO 08/17	100	1013

356 C	08/18 TO 08/24	100	94

TOTAL = 1444

SOLDIER MEADOWS ALLOTMENT

The Soldier Meadows allotment grazing permit was controlled by R.C.Roberts from 1994 - 1996 and by the Estill Ranches LLC from 1997 to present (2000). The Soldier Meadows Allotment grazing system currently utilizes seven pastures or use areas as listed below:

Winter Pasture (1)	500 c 01/01 to 03/30
Spring Pastures (3)	1117 c 04/01 to 04/30
Summer Pastures (2)	1117 c 07/15 to 10/14
Fall Pasture (1)	1117 c 11/14 to 12/01

2000

#Livestock	Dates	% public land	# AUMs
500	01/01 to 03/30	100	1480
1117	04/01 to 04/30	100	1102
1117	07/15 to 10/14	100	3379
1117	11/16 to 12/31	100	1689

TOTAL 7650

1999

#Livestock	Dates	% public land	# AUMs
500	01/01 to 03/31	100	1480
1117	04/01 to 04/30	100	1102
1117	07/15 to 10/14	100	3379
1117	11/16 to 12/31	100	1689

TOTAL 7650

1998

#Livestock	Dates	% public land	# AUMs
500	01/01 to 03/30	100	1480
1117	04/01 to 04/30	100	1102
1117	07/15 to 10/14	100	3379
1117	11/16 to 12/31	100	1689

TOTAL 7650

1997

#Livestock	Dates	% public land	# AUMs
800	04/01 to 04/30	100	789
1000	07/15 to 10/14	100	3025
750	11/16 to 12/31	100	1134

TOTAL 4948

1996

#Livestock	Dates	% public land	# AUMs
500	01/01 to 03/30	100	1480
1117	04/01 to 04/30	100	1102
1117	07/15 to 10/14	100	3379
1117	11/16 to 12/31	100	1689

TOTAL 7650

1995

#Livestock	Dates	% public land	# AUMs
500	01/01 to 03/30	100	1480
1117	04/01 to 04/30	100	1102

1117	07/15 to 10/14	100	3379
1117	11/16 to 12/31	100	1689

TOTAL 7650

1994

#Livestock	Dates	% public land	# AUMs
500	01/01 to 03/30	100	1480
500	04/01 to 04/30	100	493
1117	07/15 to 10/14	100	3379
500	11/16 to 12/31	100	756

TOTAL 6108

B. WILD HORSE AND BURRO ACTUAL USE

The following tables outline the estimated wild horse and burro population, period of use and AUM demand for the Black Rock Range-East, Black Rock Range-West, Calico Mountains and Warm Springs Canyon Herd Management Areas (HMA). Population estimates and actual use are based on aerial census. Population estimates and AUM demand shown for the Calico Mountains are for that part of the HMA contained within the Soldier Meadows Allotment.

PAIUTE MEADOWS ALLOTMENT

Black Rock Range - East HMA

North of Paiute Creek

YEAR	NUMBER	AUMS
1994	68 H	816
1995	78 H	936
1996	89 H	805
	56 H	166
1997	73 H	876
1998	84 H	1008
1999	97 H	1164
2000	72 H	864

South of Paiute Creek

YEAR	NUMBER	AUMS
1994	261 H	3132
1995	298 H	3576
1996	340 H	3074
	112 H	331
1997	144 H	1728
1998	166 H	1992
1999	191 H	2292
2000	288 H	3456

SOLDIER MEADOWS ALLOTMENT

Black Rock Range - West HMA

North of Slumgullion Creek

YEAR	NUMBER	AUMS
1994	261 H	3132
1995	290 H	3480
1996	322 H	2911
	209 H	618
1997	267 H	3204
1998	307 H	3684
1999	353 H	4236
2000	443 H	5316

South of Slumgullion Creek

YEAR	NUMBER	AUMS
1994	82 H	984
1995	91 H	1092
1996	101 H	913
	42 H	124
1997	49 H	588
1998	56 H	672
1999	64 H	768
2000	51 H	612

Calico Mountains HMA

YEAR	NUMBER	AUMS
1994	167 H	2004
	3 B	36
1995	185 H	2220
	3 B	36
1996	205 H	2460
	158 H	307
	3 B	30
1997	207 H	2484
1998	238 H	2856
1999	274 H	3288
2000	320 H	3840

Warm Springs Canyon HMA

YEAR	NUMBER	AUMS
1994	476 H	5712
	27 B	324
1995	528 H	6336
	30 B	360
1996	586 H	5587
	362 H	893
	40 B	360
	22 B	54
1997	453 H	5436
	24 B	54
1998	521 H	6252
	28 B	336
1999	599 H	7188
	32 B	384
2000	749 H	8988
	22 B	264

C. WILDLIFE ESTIMATED USE

Both the Paiute Meadows and Soldier Meadows Allotments provide habitat for mule deer, pronghorn, bighorn sheep, sage grouse and chukars. In addition these allotments provide habitat for numerous species of small mammals, passerine birds, raptors, shorebirds and waterfowl.

Population Monitoring

All of Paiute Meadows Allotment is within the Nevada Division of Wildlife (NDOW) Hunt Unit (HU) 34. Approximately 50% of the Soldier Meadows Allotment is within HU 34 and the remainder of the allotment is in HU 12.

When NDOW computes its estimates for mule deer and pronghorn populations it combines Hunt Units for reporting purposes. It is difficult to determine exactly the population numbers for big game animals using these allotments but the trend in population and fawn mortality should be a good basis for habitat condition in the allotments in the hunt units. Population data collected by NDOW for mule deer, pronghorn and big horn sheep are as follows.

Mule Deer

Year	Unit(s)	Fall Estimated Population	Spring Fawns/100 Adults	Overwinter Fawn Loss (%)
1993-94	11-15,33	2730	7.2*	55*
	31,32,34, 35	3601	5.3**	57**
1994-95	11-15,33	2609	19.8*	47.9*
	31,32,34, 35	5111	27**	20**
1995-96	11-15,33	3197	34*	21*
	31,32,34, 35	4612	24**	32**
1996-97	11-15,33	4403	36*	17*
	31,32,34, 35	4087	29**	25**
1997-98	11-15,33	5516	39*	0*
	31,32,34, 35	4068	35**	31**
1998-99	11-14,33	4482	45*	13*
	31,32,34, 35	4344	51**	0**
1999-2000	11-13	142***	67	36

	34	177***	60	31

* Only HU 14
** Only HU 34
*** Actual count numbers, not a population estimate.

Pronghorn

Year	Unit(s)	Estimated Population	Summer Kids/100 Adults
1993-94	12,13,14	4454*	12
	32,34,35	1780	19***
1994-95	12,13,14	4182*	20
	32,34,35	1866	11***
1995-96	12,13,14	3640*	13
	32,34,35	1778	20***
1996-97	12,13,14	3367*	18
	32,34,35	1921	31***
1997-98	12,13,14	3013*	21
	32,34,35	1999	23***
1998-99	12,13,14	2573*	23
	31,32,34, 35	2825	32
1999-2000	12,13,14	654****	42
	32,34,35	645****	31

*Includes HU11 & HU15 data
**HU 32 data only
*** HU 34 data only
****Actual count numbers, not a population estimate

California Bighorn

Year	Unit(s)	Estimated Population	Fall Lambs/100 Adults
1993-94	14	80	27
	34	na	71
1994-95	14	83	23
	34	30	32
1995-96	14	90	26
	34	39	25
1996-97	14	103	35
	34	na	na
1997-98	14	88	34
	34	92	29
1998-99	14	60	51
	34	102	33
1999-2000	14	na	na
	34	32***	53

***Actual count numbers, not a population estimate

Big game populations on both allotments were in decline during the early 1990's due to the drought northwestern Nevada was experiencing at that time. The winter of 1992-93 was particularly severe on populations from the lack of quantity and quality of forage. There were extensive winter kills following that winter. Populations have rebounded through the middle and late 1990's due to adequate to above average water years. Populations have almost reached predrought levels.

PASSERINE BIRD INVESTIGATIONS

Point Counts

Under a cost-share contract with the U.S. Bureau of Land Management (BLM), three stations in the Black Rock Range within the Soldier Meadows and Paiute Meadows Allotments, were established between June 24 and July 9, 1999.

METHODS

Stations were located in cooperation with personnel from BLM's Winnemucca District Office, based

on data needs associated with the land use planning document review schedule. After selection, NDOW personnel conducted the point counts following protocol basically similar to Ralph (1993).

Point Location - Points were established at intervals spaced by 150 two-step paces (approximately 250 meters apart) along the desired transect line. Points were identified on topo maps as close to the actual spot as possible using microtopographical features. Notes were taken to describe the point location as closely as possible using distinctive terrain, vegetative, and manmade features as references. Site locations were also fixed using a handheld Geographical Positioning Systems (GPS) unit.

Point Counts - Counts were conducted at each point over a nine-minute period. Bird observations or bird songs were recorded in three-minute intervals for each nine-minute count. Time was kept using a battery-powered digital kitchen timer small enough to fit in a pocket. Data recorded for each point included date, time of day, and point number. For each bird observation, data recorded included species, number of individuals, distance estimated from point (<50m, >50-100m, >100m). Flyovers were recorded. Point counts were conducted between 0600 (± 10 minutes) and 1000 hours. No point counts occurred after 1000 hours. In addition to standardized counts, birds observed incidental to the surveys, either between points, or on site before or after the count were also recorded.

Vegetation Characteristics - On the return trip down the transect after point counts were conducted, vegetation characteristics were recorded using ocular estimate techniques. Data collected included general cover type, number and diameter class of trees within 11.3m, canopy height and coverage, canopy coverage by diameter class, canopy coverage of shrubs, "bushes", and grass/forbs, snag abundance, down log abundance, the occurrence of edge, riparian vegetation, or wet meadow within 100m, and occurrence of rock outcrops.

Station 21 - Mahogany Creek - Summer Camp Creek

Station 21 begins at the intersection of the Mahogany Creek and Summer Camp Creek roads at the section line between Sections 26 (public) and 27 (private) in Township 42N, Range 26E. It continues for 10 points up the road that parallels Summer Camp Creek, crosses the creek just past Point 4, and continues on the road as it climbs into Mahogany Creek basin. The station ends approximately 33 meters (20 paces) east of the first mountain mahogany stand intersecting the road (Latitude: 41.31.661; Longitude: 118.58.524).

Summer Camp Creek supports continuous mature aspen overstory from its confluence with Mahogany Creek well past the road crossing. When the road leaves Summer Camp Creek, it traverses alternating sites of big and low sage until it reaches a liberal scattering of aspen and mountain mahogany *(Cercocarpus ledifolius)* groves above and south of Mahogany Creek (Wood Canyon). Range conditions are excellent, with liberal coverage of perennial grasses among and between sagebrush plants. Hillsides were wet and seepy.

Station 22 - Bartlett Creek

Station 22 begins on public land in Township 41 N, Range 27E, Section 2 where a jeep trail crosses

Bartlett Creek en route to the Rough Canyon road. It extends upstream for 10 points, staying on public land following the road up the north fork of Bartlett Creek. Point 9 is situated at the intersection with a very short spur road which leads north from the main road, and point 10 is 250 meters (150 paces) west of that intersection (Latitude: 41.30.791; Longitude: 118.52.348).

The lower stretch of Station 22 supports a broad band of mature closed canopy riparian willow (stiff-branched *Salix scouleri* or comparable type, not coyote willow S. *exigua)* through Point 3. As the canyon constricts upstream, riparian vegetation quality diminishes steadily. A dilapidated home site with Lombardy poplars exists near Point 7, and riparian vegetation is next to nonexistent on the small north fork which the road follows above the home site. It should be noted that this north fork cannot be considered the main flow of Bartlett Creek, but confusion over the actual situation of private land in this area made following the north fork necessary.

Station 23 - North Pork of Battle Creek

Station 23 begins on top of the higher of two rocky knolls traversed by a jeep trail west and south of the creek channel in Township 41 N, Range 26E, Section 13 (Latitude: 41.27.203; Longitude: 118.56.907). It extends downstream for 10 points, leaves the Rough Canyon road between Points 7 and 8 and follows a jeep trail down the main stream, ending approximately 108 meters downslope of the jeep trail at the foot of a large granite stack (Latitude: 41.26.360; Longitude 118.56.200).

The North Fork of Battle Creek through Station 23 supports two long mature groves of aspen. Willow and alder exist as mid-story under the aspen overstory, and also exists as a fairly continuous mature riparian band from Point 6 on down. Above Point 3, mature riparian shrubs are intermittent and the basin is mostly open.

Mahogany Creek

The Mahogany Creek transect was surveyed June 24, 1999. Ten points were established. Thirty-two species were recorded during the survey, and two species were identified incidental to the survey. The most numerous species were American Robin (10 individuals), Yellow Warbler, (9), and House Wren (8). The species most frequently encountered included American Robin (7 points), Yellow Warbler and House Wren (6 apiece). Nevada PIF Priority Species encountered included Calliope Hummingbird, Gray Flycatcher, MacGillivray's Warbler, Orange-crowned Warbler, Sage Thrasher and Vesper Sparrow. Yellow Warbler was another species encountered of potential management interest.

Mahogany Creek and Summer Camp Creek through the station exhibit excellent riparian habitat condition. The aspen overstory is vigorous and is strongly supported by a regenerative layer of aspen in the midstory. Willow and alder in the midstory are vigorous and self-sustaining. The upland big and low sage (Points 7 through 10) habitats are in excellent condition with vigorous undergrowth of perennial grasses.

Bartlett Creek

The Bartlett Creek transect was surveyed July 2, 1999. Ten points were established. Seventeen species were recorded during the survey, and two additional species were observed incidental to the

survey. The most numerous species were Brewer's Blackbird (16 individuals), Western Meadowlark (13), Spotted Towhee (11), and Lark Sparrow (10)

Species most frequently encountered included Western Meadowlark (8 points), Spotted Towhee and Rock Wren (7 each). Nevada PIF Priority Species observed included Gray Flycatcher, MacGillivray's Warbler, and Yellow-breasted Chat. Other species of potential management interest included Chukar and Yellow Warbler.

The first three points of the Bartlett Creek station survey an extensive stand of broad-leaved willow (S. *scouleri* or similar) that covers most of the width of its primary floodplain below the canyon mouth. This willow stand provides excellent riparian songbird habitat and its quality is confirmed by the presence of Yellow-breasted Chat and Western Screech Owl in its diverse bird community. From the canyon mouth upstream, riparian habitat thins out quickly until it practically disappears above the old home site. Upland big sage condition varies from poor to good depending on the slope. Some steeper slopes exhibited heavy annual production, while flatter sites adjacent to the creek exhibited almost no understory and powdered soils.

Battle Creek North Fork

The Battle Creek North Fork transect was surveyed July 9, 1999. Ten points were established. Twenty-four species were identified during the survey, and three additional species were observed incidental to the survey. The most numerous species were American Robin (13 individuals), Lazuli Bunting and Yellow Warbler (10 each), . Species most frequently encountered included American Robin and Lazuli Bunting (8 points each) and Yellow Warbler (7 points). Nevada PIF Priority Species observed included Gray Flycatcher, MacGillivray's Warbler, Sage Thrasher, and Vesper Sparrow. Other species of potential management interest included Chukar, Fox Sparrow, and Yellow Warbler.

The North Fork of Battle Creek exhibits good riparian habitat condition through the station. Three mature stands of aspen occur through the stretch, connected by mature, structurally diverse willow habitat through most of the remainder of the station. Upland big and low sage sites are in good condition, exhibiting moderate undergrowth of perennial grasses.

DISCUSSION

Black Rock Range

Riparian habitat conditions were highest in the Mahogany-Summer Camp Creek watershed. The Mahogany/Summer Camp Creek survey yielded the highest species count of any 1999 survey, and presently rates as the highest species count of any survey conducted since the initiation of monitoring in 1997 (not counting incidental sightings). The North Fork of Battle Creek exhibited good riparian habitat conditions throughout its survey station. Bartlett exhibited a short stretch of excellent broad-leaved willow habitat with high bird species diversity, but the majority of the stretch through the station was in poor riparian habitat condition.

CONCLUSIONS

Major conclusions beyond the simplest distributional analyses cannot be drawn after only one performance of these surveys. Subsequent replications of the surveys would shed light on the relationships between bird abundance and distribution and habitat condition trends. Replications of the surveys were not planned until the next planned Allotment Review, but given recent findings suggesting that annual variability in riparian bird populations cannot be captured with less than five years' data, the BLM might wish to consider replicating the surveys as many years as possible between now and the next Allotment Review.

RECOMMENDATIONS

The excellent habitat quality of the Mahogany/Summer Camp watershed should be maintained at least at its present level to maximize this watershed's contribution to Nevada's songbird species diversity. Care should be exercised in the Bartlett Creek watershed to maintain the present healthy stands of broad-leaved willow. Opportunities to expand segments of high-quality riparian habitats up and downstream should be explored and initiated where feasible.

D. CLIMATOLOGICAL DATA

1994 - 1999

Three NOAA (National Oceanic and Atmospheric Administration) stations data was selected and presented due to the sites relatively close proximity to the allotments.

Leonard Creek Ranch Station
Precipitation (inches)

YEAR	GROWING SEASON	ANNUAL TOTAL
1999	2.97	6.65
1998	6.18	15.13
1997	4.18	8.96
1996	..... 5.84	M 13.71
1995	6.70	11.49
1994	2.15	8.31

Denio Station
Precipitation (inches)

YEAR	GROWING SEASON	ANNUAL TOTAL
1999	2.53	5.78
1998	7.61	14.12
1997	5.38	7.95
1996	..... 4.68	M 10.91
1995	5.78	M 11.11
1994	2.70	7.21

Gerlach Station
Precipitation (inches)

YEAR	GROWING SEASON	ANNUAL TOTAL
1999	1.96	4.52
1998	7.63	14.93
1997	3.34	7.70
1996	..... 4.54	M 11.98
1995	7.46	12.79
1994	2.66	M 6.70

Growing Season = March - August
M = Insufficient or partial data.

D. UTILIZATION DATA

The portions of the allotments or use areas monitored vary annually depending upon manpower, range conditions and accessibility.

The primary plant species monitored were:

AGCR	crested wheatgrass
AGSP	bluebunch wheatgrass
ARSP5	bud sagebrush
ATCO	shadscale
BRCA5	mountain brome
CAREX	sedge
EULA5	winterfat
FEID	Idaho fescue
JUNCU	rush
ORHY	Indian ricegrass
POSE	Sandberg bluegrass
SIHY	bottlebrush squirreltail
STCP4	needleandthread
STTH2	Thurber needlegrass
SALIX	Willow
PURSH	bitterbrush
POTRT	Quaking aspen

The utilization classes are defined as follows:

Slight Use	0 to 20%
Light Use	21 to 40%
Moderate Use	41 to 60%
Heavy Use	61 to 80%
Severe	81 to 100%

1. The following is a brief summary of the Use Pattern Maps.

PAIUTE MEADOWS ALLOTMENT

1995

NORTH PAIUTE USE AREA

Data Collected: July 6, 7 Low Elevation area

Light utilization with one small area of moderate use on Bartlett Creek.

Data Collected: August 31 High Elevation area

Utilization ranged primarily form slight to moderate use with some heavy use recorded in the vicinity of Burnt Spring and Butte Creek.

1996

Data Collected: May 8 High Elevation area

Slight utilization was recorded in the area north of Rough Canyon.

1997

Data Collected: Aug. 27, Sept. 25 & 30 High Elevation area

Utilization ranged primarily form slight to light use with some moderate to heavy use recorded in the vicinity of Paiute and Butte Creek.

SOUTH PAIUTE USE AREA

1996

Data Collected: Oct. 8 High Elevation area

Utilization ranged primarily form slight to light use with some moderate use recorded in the vicinity of the Paiute Seeding.

Data Collected: May 7 & 30 High Elevation area

Slight utilization was recorded in the vicinity of the Paiute Seeding and northwest of Cane Spring.

1997

Data Collected: Oct. 29 & 30 Low Elevation area

Slight to light utilization was recorded throughout the area.

Data Collected: April 2 & 3 High Elevation area

No use to light utilization was recorded throughout the area.

1998

Data Collected: September 5 Low Elevation area

Slight to light utilization was recorded throughout the area.

1999

Data Collected: October 20 Low Elevation area

Slight utilization was recorded throughout the area.

SOLDIER MEADOWS ALLOTMENT

1994

CALICO SPRING PASTURE

Data Collected: May 15,16 Fly Cyn./Chukar Gulch

Light utilization with small areas of moderate use associated with spring sources.

1994

WARM SPRINGS SUMMER PASTURE

Data Collected: October 26 Black Butte to Five Mile Flat

Utilization monitoring was conducted primarily on antelope bitterbrush in the northern portion of the pasture. Two transects were conducted in the vicinity of the Bear Buttes, less than five percent (5%) utilization was observed at both sites.

Data Collected: October 26 Black Butte to Five Mile Flat

Slight use was observed in the southern portion of the pasture with predominately light use in the northern area. There were three areas of moderate use observed at Rock and Trough Springs as well as Five Mile Flat. No use was observed on either bitterbrush site transects 1 and 5.

1995

WARM SPRINGS SUMMER PASTURE

Data Collected: October 5 Chukar Gulch/Five Mile

There was no use to heavy utilization observed throughout the pasture. Most of the use area received slight to light use except for moderate use in the Five Mile Flat area in the north portion of the pasture and heavy use at Clear and Rock Springs.

SUMMIT LAKE PASTURE

Data Collected: August 17 Summer Camp Creek-Riparian

The monitoring consists of nine photo sites and an occular utilization assessment. These sites were established in 1990 and have been monitored since then. There was no utilization, cattle or horse sign observed at any of the sites monitored. Based upon this data we are achieving riparian objectives.

1996

BLACK ROCK WINTER PASTURE

Data Collected: May 15 Clapper Cyn./Mud Reservoir

Light utilization within most of the pasture with slight use on the southern portion and some moderate use south of Mud Reservoir.

SOLDIER MEADOWS SPRING PASTURE

Data Collected: May 14 Clapper Cyn./Mud Reservoir

Slight utilization was mapped throughout the pasture

CALICO SPRING PASTURE

Data Collected: May 14 Fly Cyn./Chukar Gulch

Slight utilization was mapped throughout most of the pasture
with one area of light use near Antelope Spring and moderate use near Buck Spring.

1997

WARM SPRINGS SUMMER PASTURE

Data Collected: November 4 Chukar Gulch/Five Mile

There was no use to heavy utilization observed throughout the pasture. Most of the use area received slight to light use except for moderate use in the Five Mile Flat area in the north portion of the pasture and heavy use at Clear and Rock Springs.

SUMMIT LAKE PASTURE

Data Collected: July 31 Summer Camp Creek-Riparian

The riparian monitoring consists of fourteen photo sites and an ocular utilization assessment. These sites were established in 1990 and have been monitored since then. There was no utilization, cattle or horse sign observed at any of the sites monitored on Summer Camp Creek. There was however horse sign and heavy use observed at the sites monitored on Snow Creek spring sources. Based upon this data we are achieving riparian objectives on Summer Camp and NOT attaining the objectives on Snow Creek spring sources.

1999

WARM SPRINGS SUMMER PASTURE

Data Collected: October 7 Chukar Gulch/Five Mile

There was no use to heavy utilization observed throughout the pasture. Most of the use area received slight to light use except for moderate use in the Five Mile Flat area in the north portion of the pasture and heavy use at Clear and Rock Springs.

SOLDIER MEADOWS SPRING PASTURE

Data Collected: May 12 Slumgullion Creek

There was no use to slight utilization observed throughout the pasture. Most of the use area had received no use except for slight use along the Slumgullion Creek drainage. John Estill, the permittee, said since they only use the pasture for one month, they scattered the cattle out then have to start moving them off to the Wall Canyon Allotment.

SUMMIT LAKE PASTURE

Data Collected: October Snow and Coleman Creek-Riparian

There was heavy use observed at the sites monitored on Snow and Coleman Creeks spring sources. Based upon this data we are NOT attaining riparian utilization or stubble height objectives on these spring sources.

2000

Data Collected: January 12 Hot Springs Pasture-Riparian

There was heavy use observed at the spring sources and outlets north of Mud Springs Reservoir. Based upon this data we are NOT attaining riparian utilization or stubble height objectives on these spring sources.

SOLDIER MEADOWS ALLOTMENT

Key areas were never designated in this allotment. For this reason no formal studies were initiated. The following observations are the professional judgement of shrub form class and vegetation diversity within the allotment, by the range management specialist, wild horse specialist and wildlife biologist assigned to this allotment. Utilization studies were conducted and photo points were established at meadow sites.

Warm Springs Pasture

This pasture provides summer habitat for both pronghorn and mule deer. In 1994 and 1995 utilization on shrubs and in riparian areas was in the light to moderate category with some heavier use in the riparian areas in Warm Springs Canyon, Chukar Gulch and around Rock Spring.

When this pasture was monitored in September of 1996, the third year in a row it had been used for late season grazing without any rest, the pasture was showing decline in upland shrub and riparian habitat quality. There was heavy use on bitterbrush from Sand Basin to Rock Spring. There was moderate/heavy use on mountain mahogany from Sand Basin to the lower slopes of Bear Buttes. At T. 42 N., R. 24 E., sec. 24 SW NW there was heavy/severe use around the water catchment and moderate/heavy use on grasses on the adjacent uplands. Use at Rock Spring was heavy/severe on grass and grass likes, the one willow present had heavy use on the available leader growth, and livestock had used the bull thistle. Along the mid to upper part of the Warm Springs Canyon drainage there was heavy use on the narrow riparian zone. Moving south along the Warm Springs Canyon drainage, use on small meadows and the narrow riparian area was moderate. At Clear Spring there was heavy use in the vicinity of the spring that dropped off to slight/light use on the adjacent uplands. Use on the narrow riparian area between Clear Spring and the Chukar Gulch road

was moderate/heavy. Use north of Bear Buttes, from Five Mile Flat to Rock Spring appeared to be primarily by cattle, but horses were using the area as well. Use on Bear Buttes and the upper part of Warm Springs Canyon drainage was primarily by horses. Use at Clear Spring appeared to be primarily by cattle. Use from Clear Spring to the reservoir near the head of Chukar Gulch was a combination of cattle and horses. Use on the benches west of Chukar Gulch was by horses.

In 1997 a wildfire burned approximately 2500 acres within the Summit Lake Pasture. The fire started on the Summit Lake Paiute Tribe Reservation along Mahogany Creek and burned northeast into Idaho Canyon and onto the Sheldon NWR. Most of the habitat burned was in a late seral with very little loss of bitterbrush, snowberry and serviceberry.

In September of 2000 a fire burned approximately 12,255 acres in the Mahogany Creek, Summer Camp Creek, Pole Creek, Bartlett Creek, Center Creek, and Craine Creek drainages. Loss of riparian and upland habitat ranged from light to severe. The Wood Canyon section of Mahogany Creek and lower Pole Creek burned very hot.

The cage in the upland meadow at Dry Lake has shown slight to light use throughout the reevaluation period. The cage in the upland meadow at the headwaters of the North Fork of Coleman Creek has shown light to moderate utilization during the same time period. The cage in the upper reaches of Snow Creek has shown light to moderate utilization by the first of July and by September utilization ranges form moderate to heavy. Other than some trespass livestock this utilization has been by horses.

Aspen stands in the upper reaches of Coleman Creek, Summer Camp Creek and Mahogany Creek seem to be stable without any substantial losses within the clone. Aspen stands in the upper reaches of Snow Creek have shown a large die off within the last decade.

F. TREND

During the re-evaluation period no trend data has been collected on the Soldier Meadows or Paiute Meadows allotments.

G. ESI

An Ecological Status Inventory (ESI) inventory was completed on the Soldier Meadows Allotment in 1991. The ESI data was used to develop allotment wide Desired Plant Community (DPC) objectives reflected in the 1994 Multiple Use Decision. These DPC objectives are still applicable and will be used to evaluate allotment objectives in this document.

H. WILDLIFE/RIPARIAN INVENTORY

1. SAGE GROUSE

The Western States Sage Grouse Committee presented a comprehensive guide to habitat requirements for sage grouse in their 1974 Guidelines for Habitat Protection in Sage Grouse Range (Report). In this report, habitat conditions observed most frequently, and which resulted in the highest success for sage grouse strutting, nesting, brood rearing, and wintering ranges in the west are summarized.

The following parameters have been found to constitute optimum (good) conditions for sage grouse use :

1) Strutting Habitat

Low sagebrush or brush free areas for strutting, and nearby areas of sagebrush having 20-50% canopy cover for loafing.

Nesting Habitat

1. Sagebrush between seven (7) and 31 inches in height (optimum= 16 inches)
2. Sagebrush canopy coverage 15-30% (optimum = 27%)
3. 25-35% basal ground cover
4. Average understory height of 6-7 inches

Brood Rearing Habitat

Early Season

1. Sagebrush canopy cover 10-21% (optimum = 14%)

Late Season

1. Meadow areas that are in functioning condition
2. Residual meadow vegetation of no less than 3-6 inches in height

Winter Habitat

1. Greater than 20% sagebrush canopy cover

In addition NDOW personnel cited various literature sources which indicated the importance of good under story growth beneath and surrounding the nest bush. Under story cover helps to conceal the nests from predation from the air and creates a microclimate around the nest bush.

Data has not been collected to evaluate the condition and trend of sage grouse habitat in the Paiute Meadows Allotments.

In June of 2000 a sage grouse habitat study was initiated in the headwaters area of the East Fork of Coleman Creek in the Summit Lake pasture. Ground cover was 54.7%. The shrub component of the community was consisted entirely of big sagebrush (ARTRV) and made up 56.6% of the community. Grasses made up 39.6% of the community with Idaho fescue (FEID) the predominant grass species. Forbs made up 3.8% of the community. Average cover height was 1.33 feet.

Though some of the allotment has burned the principle sage grouse use areas have not been significantly impacted by fire. All crucial habitat types (strutting, nesting, brood rearing, and wintering) are present throughout the allotment. All habitats are estimated to be in good (visual observations) condition with the exception of brood rearing habitat, which is estimated as fair. Brood rearing habitat within the allotment is limited by available riparian meadow sources, upon which sage grouse broods become heavily dependent in mid-summer.

2. Stream Surveys

Stream parameter data was collected by the Bureau of Land Management (BLM), Nevada Division of Wildlife (NDOW) and the Summit Lake Paiute Tribe (SLPT) using similar techniques. NDOW and SLPT use the General Aquatic Wildlife Survey for analysis of this data. Winnemucca BLM uses protocols developed by the Winnemucca and Elko Field Offices for use in the interim until the new BLM stream survey manual is developed. While methods of raw data collection are the same there are slight difference in the analysis methods. All data analysis in this section was analyzed using the BLM method so there may be differences in parameter values in this report and those released by NDOW.

Below are stream survey parameters collected during the evaluation period for Mahogany Creek, Summer Camp Creek, Snow Creek, Coleman Creek, Donnelly Creek and Slumgullion Creek in the Soldier Meadows Allotment and Bartlett Creek, Battle Creek and Paiute Creek in the Paiute Meadows Allotment.

Stream survey parameters analyzed are Pool to Riffle Ratio (P/R), Pool Quality (PQ), Desirable Bottom Material (DBM), Bank Cover (BC), Bank Stability (BS), Riparian Condition Class (RCC), Percent of Habitat Optimum (%HO), Width to Depth Ratio (W/D), and Average Riparian Width (ARW).,

Soldier Meadows Allotment

Mahogany Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW

1994	86.6	16.7	61.2	78.4	91.6	85	66.9	32.8	7.3
1997	64.2	30.8	78.3	55.9	78.4	67.1	61.5	21.6	9.3

Summer Camp Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1994	55.6	11.1	73.3	80.0	95.8	87.9	63.2	23.5	6.83
1997	91.7	57.5	82.2	52.5	70.8	61.7	71.0	23.5	7

Snow Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1994	74.6	0	63.1	66.3	81.3	73.8	57	28.2	5
1997	91.1	44.1	74.3	58.1	85	71.6	70.5	23.0	5.25

Slumgullion Creek

ear	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1988	43.2	0	31.3	53.1	63.8	58.4	38.3	18.8	6.18
1990	78.7	0	16.5	77.2	70.8	74	48.6	14.4	3.07
1999	67.7	8.7	35.29	66.6	50.6	58.6	45.4	14.4	10.8

Coleman Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1997	88.9	48.0	66.6	55.8	69.8	62.8	65.8	19.4	2.71

Donnelly Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1995	88.6	46.0	57.8	69.1	74.5	71.8	67.2	21.0	4.64

North Fork Donnelly Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1995	98.7	32.2	38.1	68.3	70	69.2	61.5	24.2	.08

Paiute Meadows Allotment

Bartlett Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1994	50.1	24.8	74.5	72.0	68.4	70.2	58.0	20.5	4.5
1999	77.0	34.7	80.2	88.0	79.6	71.9	83.8	17.8	14.7

North Fork Battle Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1997	76.5	57.9	43.4	78.9	67.8	73.3	64.9	16.3	4.67

Paiute Creek

Year	P/R	PQ	DBM	BC	BS	RCC	%HO	W/D	ARW
1994	59.6	51.1	34.4	72.3	68.5	70.4	57.2	18.2	5.1
1999	54.3	6.0	25	68.8	66.0	44.0	67.4	20.7	19.2

In general, pool quality is a limiting factor in most streams in the Great Basin. The fisheries streams in these two allotments are no different and lack of quality pools is the greatest limiting factor. Desired bottom material in the streams in these allotments is the second greatest limiting factor. Pool/riffle ratios is, to a lesser extent, also a limiting factor.

Fisheries

The Soldier Meadow Allotment has four occupied fisheries streams. Mahogany Creek, Summer Camp Creek, Snow Creek and Coleman Creek. Mahogany Creek, Summer Camp Creek, and Snow Creek are tributaries of Summit Lake and are occupied by Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*)(LCT). LCT are presently listed by the U.S. Fish and Wildlife Service as a threatened species under the Endangered Species Act. Summit Lake and its tributaries are the only known self-sustaining lacustrine population of LCT. In addition to providing spawning habitat for the lake population, Mahogany Creek and Summer Camp Creek also support a fluvial population of LCT. LCT were also introduced into Coleman Creek in 1999.

Two other streams in the allotment have the potential to support fish populations. These are Donnelly Creek and Slumgullion Creek. At this time surveys of these streams by the Nevada Division of Wildlife(NDOW) indicate that they are barren. Donnelly Creek has been designated as recovery streams in the Recovery Plan for the Lahontan cutthroat trout and it is proposed to have LCT reintroduced into them.

The hot springs and their outflows to the south and west of the Soldier Meadows Ranch are the only known habitats for another federally listed threatened species of fish, the desert dace

(*Eremichthys acros*). Recent investigations of the hot springs in the area have also revealed the presence of several species of hydrobiid snails.

The Paiute Meadows Allotment has three fisheries streams, Paiute Creek, Bartlett Creek and Battle Creek. At this time only Bartlett Creek has been found to be supporting a fishery. The latest population sampling in Bartlett Creek found it was occupied by rainbow trout (*Oncorhynchus mykiss*). Earlier population sampling of this stream had found speckled dace *(Rhinichthys robustus)* and Tui chub *(Gila bicolor)* present. All three of these streams have been designated as recovery streams in the Recovery Plan for the Lahontan cutthroat trout and it is proposed to have LCT reintroduced into them.

3. Riparian Functionality - Proper Functioning Condition

Paiute Meadows Allotment

Battle Creek

Battle Creek was inventoried in mid June of 1998 by helicopter. The stream was divided into two reaches.

The south fork (#1) was approximately 3.5 miles in length. This reach was rated as functioning at risk with a downward trend due to the poor condition of riparian vegetation along the stream.

The north fork (#2) was approximately 11.3 miles in length. This reach was rated at functioning at risk with an upward trend due to the bank vegetation not being at potential.

Bartlett Creek

Bartlett Creek was inventoried in mid June of 1998 by helicopter. The stream was divided into two reaches.

The north fork (#1) was approximately 5.6 miles in length. This reach was rated as functioning at risk with a static trend due to the poor condition of riparian vegetation and stream bank instability.

The south fork (#2) was approximately 5.4 miles in length. This reach was rated at proper functioning condition.

Butte Creek

Butte Creek was inventoried in mid June of 1998 by helicopter. The entire stream was put into one reach.

The reach was approximately 3.3 miles in length. This reach was rated as functioning at risk with an upward trend due to the bank vegetation not being at potential.

Deer Creek

Deer Creek was inventoried in mid June of 1998 by helicopter. The entire stream was put into one reach.

The reach was approximately 1.2 miles in length. This reach was rated as functioning at risk with an upward trend due to the bank vegetation not being at potential.

Paiute Creek

Paiute Creek was inventoried in mid June of 1998 by helicopter. The stream was divided into two reaches.

The upper reach, from the headwaters to the uppermost private land holdings (#1) was approximately 1.1 miles in length. This reach was rated as functioning at risk with an upward trend due to the bank vegetation not being at potential.

The downstream reach (#2) was approximately 4.3 miles in length. This reach was rated at proper functioning condition.

Rough Canyon

Rough Canyon was inventoried in mid June of 1998 by helicopter. The stream was divided into two reaches.

The upper reach (#1) was approximately 3.8 miles in length and included the drainage from the headwaters to approximately a quarter mile above the falls in the canyon. This reach was rated as functioning at risk with an upward trend due to the banks being not fully vegetated.

The lower reach (#2) was approximately 1.1 miles in length and included the rest of the stream until it reaches the valley floor and goes subsurface. This reach was rated at proper functioning condition.

Soldier Meadows Allotment

Mahogany Creek

Mahogany Creek was inventoried in August of 1993 on foot. The stream was divided into three reaches.

The upper reach (#3) was approximately 2.1 miles in length and included the drainage from the headwaters to the road crossing above Wood Canyon. This reach was rated as proper

functioning.

The middle reach(#2) was approximately .66 miles in length and included the stream from the road crossing to Pole Cr. This reach was rated as proper functioning.

The lower reach (#1) was approximately 1.8 miles in length and included the rest of the stream until it reaches the confluence with Summer Camp Creek. This reach was rated as proper functioning condition.

Summer Camp Creek

Summer Camp Creek was inventoried in July of 1993 on foot. The stream was divided into three reaches.

The upper reach (#1) is approximately 1.1 miles in length and includes that part of the drainage from the headwaters to approximately half a mile above the Summer Camp cabin. This reach was rated at proper functioning condition.

The mid reach (#2) is approximately 3.0 miles in length and includes that part of the drainage from a half mile above the Summer Camp cabin to the confluence with Mahogany Creek..This reach was rated at proper functioning condition.

The lowest reach (#3) is approximately 1.2 miles in length and includes that part of the stream from the confluence with Mahogany Creek to the Summit Lake Paiute Reservation boundary. This reach was rated at proper functioning condition.

Snow Creek

Snow Creek was inventoried in July of 1993 on foot. The stream was inventoried as one reach from the headwaters to the Summit Lake Paiute Reservation boundary and is approximately 2.3 mile in length. The reach was rated as functioning at risk with a static trend. The major factor contributing to the rating was the bank damage and removal of bank cover by wild horses.

Coleman Creek

Coleman Creek was inventoried in June of 1998 by helicopter. The stream was divided into three reaches.

The upper most reach (#1) was approximately 1.3 miles in length and includes the drainage from the headwaters to approximately half a mile above the falls. The reach was rated as nonfunctional due to the headcuts and highly erosive channel.

The middle reach (#2) was approximately 4.0 miles in length and includes the public owned

part of the drainage from approximately half a mile above the falls to the farthest west private land in the canyon. The reach was rated as functioning at risk with no apparent trend due to highly erosive uplands and a lack of bank stability and cover in parts of the reach.

The lowest reach (#3) was approximately 4.9 miles in length and includes the part of the drainage between the private land in the canyon and the private land on the old lake bed. The reach was rated as proper functioning condition.

Slumgullion Creek

Slumgullion Creek was inventoried in June of 1998 by helicopter. The stream was divided into three reaches.

The upper most reach (#1) was approximately 8.3 miles in length and includes the drainage from the headwaters to the private land in the canyon, excluding a 1.1 mile portion of the drainage in the steep canyon southwest of Red Mountain. The reach was rated as functioning at risk with a downward trend due to the instability of the uplands from wild horse trailing.

The middle reach (#2) was approximately 1.1 miles in length and includes the portion of the drainage in the steep canyon southwest of Red Mountain. The reach was rated as proper functioning condition.

The lowest reach (#3) was approximately 3.7 miles in length and includes the part of the drainage between the private land in the canyon and mouth of the confluence with Soldier Creek. The reach was rated as proper functioning condition.

Cherry Creek

Cherry Creek was inventoried in June of 1998 by helicopter. The stream was divided into two reaches.

The upper reach (# 1) was approximately 3.0 miles in length and included the drainage from the headwaters down stream 3 miles. This reach was rated as functioning at risk with a downward trend due to the deep incised channel.

The lower reach (# 2) was approximately 1.7 miles in length and included the rest of the stream until it reaches the valley floor and goes subsurface. This reach was rated at proper functioning condition.

Donnelly Creek

Donnelly Creek was survey by helicopter in June of 1998. That portion of Donnelly Creek that flows through the Soldier Meadows Allotment was made up all or part of three reaches.

The headwaters of the north, middle and south forks of Donnelly Creek make up Reach #1 for approximately .9 within the Soldier Meadows Allotment. The reach was rated as functioning at risk with a static trend due to the braided, non-sinuous nature of the stream and the lack of vegetative cover along the stream banks.

The mid to lower portions of the various forks of Donnelly Cr. make up Reach #2 for approximately 4.2 miles within the Soldier Meadows Allotment. The reach was rated as proper functioning condition.

The main stem of Donnelly Creek makes up Reach #3 for approximately 3.4 mile all within the Soldier Meadows Allotment. The reach was rated as functioning at risk with a static trend due to the channelization and unstable banks on this portion of the stream.

Soldiers Creek

Soldiers Creek was inventoried in June of 1998 by helicopter. The stream was inventoried as only one reach of approximately 3.4 miles in length and includes the drainage from the headwaters to the confluence with Coleman Creek. The reach was rated as functioning at risk with a static trend the lack of vegetated and stable banks.

Willow Creek Meadow and Outlet

The Willow Creek Meadow and outlet was inventoried in June of 1998 by helicopter. The meadow is approximately 3 acres in size and was rated at proper functioning condition.

Riparian and Stream Condition Ratings

The Winnemucca BLM Field Office had Whitehorse Associates of Logan, Utah analyze some of the key watersheds on the district. A system was developed to rate the stream and riparian attributes of a watershed by rating each section of the watershed as being in one of 7 states. Each state had a numerical score attached to it from 0 to 100. A rating was then developed for each stream based on the number of valley bottom acres in each riparian state or the number of channel miles in each stream state. The results are shown in the following graph.

Watershed	*Riparian Rating*	*Class*	*Stream Rating*	*Class*
Bartlett Cr.	89	Good	83	Good
Battle Cr.	59	Fair	61	Fair
Paiute Cr.	77	Good	75	Fair
Mahogany Cr.	100	Good	100	Good
Summer Camp Cr.	78	Good	79	Good

Snow Cr.	82	Good	83	Good
Coleman Cr.	57	Fair	60	Fair
Donnelly Cr.	57	Fair	71	Fair

Soldier Meadows Water Quality Sampling

In 1999 water quality sampling was done at seven locations on spring outflows in the desert dace habitat areas of the Hot Spring Pasture. Monitoring sites were located at: **Site one** (T. 40 N. R. 24 E. SE¼SW¼ Section 23) was 143 meters downstream of the last large pool in a hot spring system that receives heavy camping and bathing usage. **Site two** (T. 40 N., R. 24 E. SW¼SW¼ Section 24) was in a diversion ditch 45 meters upstream from the lower exclosure. The distance was measured from the upstream edge of the fence line where it crossed the ditch. **Site three** (T. 40 N. R. 24 E. SW¼NW¼ Section 25) was in a natural channel between the two exclosures. The monitoring site was 33 meters downstream of the upstream exclosure. The distance was measured from the downstream edge of the fence where it crossed the ditch. There was little evidence of grazing in the area during sampling periods and the site apparently remained relatively undisturbed. Sites four through seven were located in the spring system immediately north of Mud Meadow Reservoir. A fenced exclosure has been established in order to keep cattle and other grazers out of one of the springs. **Site four** (T.40N.R.25E.,NW¼ NW¼ Section32)was downstream of an enclosed spring directly west of the exclosure. Site five was in the enclosed area. In this exclosure, ths spring was surrounded by an additional fence. The rnonitoring site was located one meter downstream of the spring fence where it crosses the channel. Site six was also in the exclosed area. The monitoring site was located 50 meters downstream of where the spring exclosure fence crosses the channel. **Sites five and six** had high densities of aquatic vegetation throughout the year, evidence that the fence was effective at keeping grazers excluded. The sampling crew noticed an abundance of birds and dragonflies at these two sites as compared to the other sites. Site seven was located 66 meters downstream of the large exclosure fence. This site was similar to site four in that it appeared to receive heavy use by cattle over the sampling period. The stream bank appeared to be significantly impacted by cattle.

The following physical, biological and chemical water quality parameters were measured at each site during the Memorial Day, Labor Day, and January sampling dates; temperature, discharge, turbidity, total dissolved solids (TDS), conductivity, ph. ammonia, total phosphorus. dissolved oxygen, and biological oxygen demand [BOD). The following measurements were done during the October date at sites one, two, three, and six: alkalinity (total as CaC03), bicarbonate (HCO3 as CaC03). boron. calcium, magnesium, potassium, sodium, aluminum, antimony, beryllium, chloride, fluoride. nickel, nitrate {N03 + H02 as N), sulfate. arsenic, barium, cadmium. chromium, copper, Iron, lead, manganese, mercury, selenium, silver, thallium, and zinc. Sampling was consistent with methodology described In the A3TIVI Annual Book of Standards,Part31,D3370-76["Standard Practices5 for Sampling Water").

Water quality appears to be have been good to excellent at the seven sites during the sampling period. This assessment is based on comparisons to established water quality criteria and comparisons to data collected from 40 random sites in streams and rivers in the Humboldt River basin in northern Nevada during 1998. A number of measurements were routinely below detection limits.

There are some trends. In the analyses of total dissolved solids, turbidity, and conductivity that may indicate some potential impacts of human use of the spring systems during the Memorial Day and Labor Day weekends. Measurements of TDS and conductivity were higher after each weekend than before in sites one, two, and three, which are all downstream of bathing pools in hot springs. The turbidity levels exhibited the same pattern for the Labor Day weekend, but not over the Memorial Day weekend. The Labor Day weekend most likely is a time period of heavy human usage of the springs because of the large number that visit the Black Rock region during the Burning Man festival. The differences before and after the weekends may have been induced by human activity such as bathing in the springs. The bathing pools have high levels of sediment in them that are readily mobilized during human activity. The effect of the increased levels of solutes and particulates are most likely not high enough to have an impact on desert dace populations: however the trend merits further attention. The dace have probably evolved in environmental conditions that have likely been relatively constant, so human changes to the environment may be particularly detrimental. Human use of the springs will certainly increase if Nevada's population growth continues and visitation to the Black Rock region continues to increase.

There were increases in certain parameters that may he associated with cattle activity. Site four, outside of the fence enclosure near Mud Meadow reservoir, had a strong spike in turbidity during the Labor Day weekend. Sites four and seven had high turbidity levels at all four Memorial Day and Labor Day sampling dates, compared to sites five and six . These differences are most likely explained by stream channel degradation by cattle since sites five and six are protected enclosures. Site seven had high phosphorous levels during the January sampling date, which may be associated with organic pollution from cattle. Human visitation probably is not significant at sites four through seven because the spnngs are not appealing enough for bathing.

The October samples revealed that all metals concentrations were below United States Environmental Protection Agency water quality criteria. The following measurements were below the detection limits: cadmium, chromium, lead, mercury, selenium, silver, thallium, ammonia, B0D, aluminum, beryllium, antimony, and nickel. Compared to other metals, levels of arsenic were relatively high at sites one. two and three. All of which are downstream of thermal springs. The United States Environmental Protection Agency drinking water limits 0.05 ppm, a level that is easily exceeded by sites one. two, and three. The current criteria of arsenic for aquatic health is not exceeded at these sites. Hot springs tend to have naturally high sources of arsenic, and most likely does not pose a threat to the desert dace populations, especially since there is evidence that organisms acclimate to arsenic.

The hardness values were relatively low compared to other freshwater systems including the Humboldt River basin.

I. WILD HORSE/BURRO DISTRIBUTION

a. SOLDIER/PAIUTE MEADOWS - Black Rock Range - East and West HMA's

During the winter wild horses were found at all elevations except the highest peaks and ridge tops. The majority were located on mid slopes. By late spring the majority of horses had moved to higher elevations. North of Slumgullion and Paiute Creeks, horses were concentrated in the vicinity of Burnt Spring, Coleman Creek, South Fork of Battle Creek and Slumgullion Creek. South of Slumgullion and Paiute Creeks, the majority of horses were found from Big Mountain north to Paiute Creek, on the high benches and plateau.

The distribution of horses in the summer was similar to late spring. North of Slumgullion and Paiute Creeks, horses were concentrated from Coleman Creek north to Summit Lake Mountain. It appeared that many of the horses found in the vicinity of Burnt Spring and the South Fork of Battle Creek during spring had moved to the Coleman Creek area. South of Slumgullion and Paiute Creeks, the majority of horses were found from Big Mountain north to Paiute Creek, on the high benches and plateau. The distribution of horses in the fall was nearly the same as spring and summer except that horses were found at all elevations, and the number of horses found in the vicinity of Burnt Spring, and the North and South Forks of Battle Creek had increased.

b. SOLDIER MEADOWS - Calico Mountains HMA

Wild horses within the Soldier Meadows Allotment portion of the HMA were widely distributed throughout the year. During the winter horses were primarily found along the toe slope and lower elevations. By late spring horses had moved to higher elevations and were concentrated between Donnelly Creek and Cherry Creek. The distribution of horses in the summer was nearly the same as late spring. There may be some movement to the Buffalo Hills Allotment portion of the HMA at this time, with the horses moving back during the fall. During fall the majority of horses were on mid and upper elevation areas between Donnelly Creek and Willow Canyon.

c. SOLDIER MEADOWS - Warm Springs Canyon HMA

During the winter horses were found primarily in the south and southeast area of the HMA along the toe slope and lower elevations. By late spring the majority had moved to higher elevations. At this time horse were found in large groups between Buck Spring and Black Buttes, and northwest of Bear Buttes. There were large areas

of the HMA where horses were not found. The distribution of horses in the summer was similar to late spring. Horses were concentrated from Buck Spring to Black Buttes, and from Trough Mountain north to the Sheldon National Wildlife Refuge. During fall horses scattered throughout the HMA and began moving south.

During the 1994 and 1996 removals all horses that were released back into the HMA were freeze branded on the left hip. After the removals, freeze branded horses were observed in the adjacent High Rock and Wall Canyon HMA's. These horses apparently are moving through holes in the C-2-N fence to the High Rock HMA at Mustang Spring and south of Buck Spring. Horses are moving to the Wall Canyon HMA through a hole in the C-2-N fence north of Black Buttes and west of Bear Buttes.

Burros are found primarily along the toe slope from Chukar Gulch south-southwest to Fly Canyon. However, a few burros have been observed in the vicinity of Buck Spring during the spring and summer, and the mouth of Warm Spring Canyon in the fall. There were a few burros found in the adjacent Calico Mountains HMA just south of Fly Canyon from 1993 through 1996. There have not been any burros found in the Calico Mountains HMA since the Warm Springs population was reduced to the appropriate management level.

WILD HORSE/BURRO REMOVAL

Removals were conducted in February of 1994 and November/December of 1996. Removal criteria required that only wild horses 5 years old and younger could be removed during the 1994 gather. In 1996, removal criteria allowed the removal of wild horses 9 years old and younger.

The number of wild horses and burros removed from the Black Rock Range-East, Black Rock Range-West, Calico Mountains, and Warm Springs Canyon HMAs are shown below. The number of wild horses shown for the Calico Mountains is for the entire HMA which includes part of the Buffalo Hills, and Leadville Allotments.

Black Rock-East		Black Rock-West		Calico Mountains		Warm Springs Cyn.	
Date	Number	Date	Number	Date	Number	Date	Number
Feb. 1994	139 H	Feb. 1994	231 H	Feb. 1994	313 H	Feb. 1994	175 H
Nov. 1996	236 H	Nov. 1996	236 H	Dec. 1996	430 H	Dec. 1996	243 H
							22 B

THREATENED & ENDANGERED SPECIES

Special Status Species

The Soldier Meadows Allotment has two federally listed threatened species, the Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*)(LCT) and the desert dace (*Eremichthys acros*). The last self sustaining lacustrine population of LCT is found in Summit Lake on the Summit Lake Paiute Reservation and they spawn in Mahogany Creek, Summer Camp Creek and Pole Creek on public lands within the allotment. LCT were also introduced into Colman Creek within the allotment.
Six populations of desert dace are found on public lands in the hot spring complexes in the Hot Springs Pasture of the allotment.

The Paiute Meadows Allotment had LCT introduced into the North Fork of Battle Creek in 1999..

The following sensitive species of plants and animals may occur in the Soldier Meadows and Paiute Meadows Allotments.

Pygmy rabbit	*Brachylagus idahoensis*
Spotted bat	*Euderma maculatum*
Small-footed myotis	Myotis ciliolabrum
Long-eared myotis	*Myotis evotis*
Fringed myotis	*Myotis thysanodes*
Long-legged myotis	*Myotis volans*
Pacific Townsend's big eared bat	*Corynorhinus townsendii pallescens*
Pale Townsend's big eared bat	*Corynorhinus townsendii townsendii*
Western burrowing owl	*Athene cunicularia hypugea*
Black Tern	*Chlidonias niger*
Sage grouse	Centrocercus urophasianus
Windloving buckwheat	*Eriogonum anemophilum*
Crosby's buckwheat	*Eriogonum crosbyae*
Grimy ivesia	*Ivesia rhypara* var. *rhypara*
Smooth stickleaf	*Mentzelia mollis*
Cordelia beardtongue	*Penstemon floribundus*
Soldier Meadows cinquefoil	*Potentilla basaltic*

The Western burrowing owl, Pygmy rabbit, and sage grouse are the most likely to occur on these allotments. They are also the most susceptible to impacts associated with livestock grazing.

Western burrowing owl - Individuals of this species have been observed in the lower elevations of the allotment. Potential impacts from livestock grazing which could affect this species are limited to destruction of burrow entrances by hoof action.
The potential effect of livestock grazing is highly improbable due to the fact that livestock

avoid stepping in and on open holes such as burrow entrances.

Pygmy rabbit - The Pygmy rabbit may be affected by livestock grazing if upland grassland species are heavily utilized. Alteration of the shrub component of their habitat may also affect this species.

Sage Grouse - Potentially timing and intensity of livestock and wild horse grazing may affect sage grouse nesting and brood rearing success. The peak of sage grouse hatch is the last week in May and the first week in June, depending on weather conditions. Livestock and wild horse grazing could directly compete with sage grouse for food (forbs and insects) and nesting cover during this time, or could physically disturb the nests. Fall grazing could remove residual cover needed the following spring for nest and brood cover. Also, persistent early spring and summer grazing could reduce plant vigor and cover of herbaceous species causing undesirable long-term changes in the vegetative composition.

Soldier Meadow Habitats

The hot springs complexes to the north, west and south of the Soldier Meadow Ranch provide the only known habitat for the desert dace (*Eremichthys acros*) a federally listed threatened species. The area is also one of only two known habitats for basalt cinquefoil *(Potentilla basaltica*) a federal species of concern and a Nevada BLM sensitive species. Several species of hydrobiid snails (Genus *Pyrgulopsis*) have also been identified residing in the hot springs complexes. This area is approximately 3600 acres in size and is entirely within the Hot Springs Pasture of the Soldier Meadows Allotment.

Population inventories conducted by the University of Nevada, Reno (UNR) in 1995 showed that the highest population densities of desert dace were in the farthest southeast hot springs complex. The lowest population densities were in the irrigation ditch.

Paired exclosures were constructed in 1997 on the original channel of the bathtub springs, the farthest southeast springs and the irrigation ditch to monitor impacts of livestock and wild equine grazing on dace. At this time no comparison monitoring on habitats and dace populations inside and outside of the exclosures has taken place.

Four transects for monitoring cover and density of basalt cinquefoil around the hot springs and the old cabin were established in 1998. The results are in the chart below.

Transect	Location	POBA % cover	POBA % comp.	POBA Density (#/frame)	POBA Freq. (# of frames present out of 20)

001	Cabin Corral	5.75	11	2	11
002	Spring Head	4.75	19	1	5
003	Bathtub	4.125	23	2	8
004	Alkali Flat	4.75	29	2	9

K. NOXIOUS WEEDS

A complete noxious weeds inventory has not been completed for the Soldier Meadows and Paiute Meadows Allotments. However, noxious weeds have been documented near springs and roadsides. Control measures will be implemented as manpower and funds are made available.

L. OTHER INFORMATION

1. RANGE IMPROVEMENT PROJECTS

In 1996 there were six (6) small vegetative corridor exclosures constructed along the stream channels in the Hot Springs Pasture of the Soldier Meadows Allotment. These projects were installed in 1996 to assist in determining the effects of ungulate grazing versus no grazing on the herbaceous streambank vegetation and Desert Dace habitat.

There were three (3) cattle guards, used as bridges, installed in 1997 at stream crossings on channels in the Hot Springs Pasture of the Soldier Meadows Allotment. These bridges prevent vehicles from driving through the streams which was degrading habitat and causing downstream sedimentation.

In 1995 there were five (5) culverts installed in the main road to Fly Canyon. The road base was also elevated and graveled through the wet area providing year round access.

2. WILDLAND FIRES

In August of 1997 the Summit Lake Fire burned a total of 3348 acres of public, tribal and private lands on the northwestern portion of the Black Rock Range in the vicinity of Idaho

Canyon. Since this area was already closed to livestock grazing in the 1994 allotment re-evaluation there was no decision issued to adjust livestock grazing.

In September of 2000 a wildland fire burned approximately 12,255 acres of public and private lands in the north end of the Black Rock Range. The fire burned through riparian areas in portions of Mahogany, Pole and Summer Camp Creeks in the Soldier Meadows Allotment and Bartlett Creek in Paiute Meadows Allotment. Mahogany, Pole and Summer Camp creeks are habitat for existing populations of Lahonton Cutthroat Trout (LCT). There have been several interagency coordination meetings, tours of the burned areas and a rehabilitation plan drafted. There are no reseedings planed for the burned areas within the Soldier and Paiute Meadows Allotments. The sites within the area burned have achieved late seral or potential natural community stages thereby ensuring and adequate seed source for natural recovery.

3. STANDARDS AND GUIDELINES OF RANGELAND HEALTH

The following are the standards of Rangeland Health as developed in consultation with the Sierra Front-Northwest Great Basin Resource Advisory Council, other interested publics, and approved by the Secretary of the Interior on February 12, 1997. The terms and conditions of the livestock grazing permit must be in conformance with these approved Standards and Guidelines.

A. Soil processes will be appropriate to soil type, climate and land form.

B. Riparian/wetland systems are n properly functioning condition.

C. Water quality criteria in Nevada or California State Law shall be achieved or maintained.

D. Populations and communities of native plant species and habitats for native animal species are healthy, productive and diverse.

E. Habitat conditions meet the life cycle requirements of special status species.

These standards will be addressed as to whether they are met or not met in the conclusion section.

4. CULTURAL RESOURCES

During the evaluation period there were several areas of heavy use recorded within the allotment which is documented in the monitoring section of this evaluation. There are no records indicating there are significant cultural

resources in any of these areas of heavy use. Proper livestock distribution through water development or other range improvements could alleviate grazing pressure where cultural resources exist. All range improvements (fences, water improvements, etc.) will be required to be examined on an individual basis. Project specific inventories and Section 106 compliance will be required prior to any disturbance or construction, as is the current policy.

III. CONCLUSIONS

SOLDIER MEADOWS ALLOTMENT

ALLOTMENT WIDE MULTIPLE USE OBJECTIVES

UTILIZATION OBJECTIVES

Riparian/Wet Meadows:

1. Do not exceed 30% utilization of current years growth on the key riparian trees and shrubs which includes: Aspen (Populus tremuloides) and Willows (Salix spp.). For Mahogany, Summer Camp, Snow Creeks, and the hot springs associated with the Desert Dace grasses and grass-like plants will have a minimum stubble height of 6 inches. A 4 inch stubble height will apply for Coleman, Slumgullion, and Donnelly Creeks when the cows leave the pasture for the following: Nevada Bluegrass (Poa nevadensis), Sedges (Carex spp.), Rushes (Juncus spp.), Intermediate Wheatgrass (Agropyron intermedium), and Tufted Hairgrass (Deschampsia cespitosa).

   This objective was accomplished except in 2000. Some sites associated with the Desert Dace hot springs north of Mud Meadow Reservoir, utilization levels were exceeded and stubble height was not maintained

2. The utilization levels for the wet meadows (not identified above), grass and grass-like species is 50%. If the utilization level is exceeding the 50% level by February 28 the carrying capacity will be evaluated to determine if a downward adjustment is required. The evaluation will include livestock and wild horse actual use, along with wildlife and climatic factors.

   This objective was accomplished with the exception of exceeding utilization levels in 1995, 1997 & 1999 at Rock and Clear Springs in the Warm Springs Pasture.

Upland Grass/Dry Meadows:

1. Livestock and wild horse vegetative utilization levels are not to exceed 50% at the end of the livestock use period (except for the Black Rock Pasture).

   This objective was not accomplished utilization levels were exceeded in 1995, 1997 & 1999 at Rock and Clear Springs in the Warm Springs Pasture.

2. The Black Rock Pasture combined vegetative utilization shall not exceed 60% by February 28 or the start of the new growing season.

   It is inconclusive as to if this objective was accomplished. Data collected in May of1996 documented slight to moderate use.

3. By February 28, or the start of the new grazing season, vegetative utilization shall not exceed 60% (utilization on these species from 50 to 60% will occur during the dormant season and should not have a detrimental impact to plant health and vigor).

   There has not been sufficient data collected to evaluated this objective.

4. The vegetative utilization level by wild horses, once the Appropriate Management Level (AML) is reached, shall not exceed 20% by July 15 (seed dissemination) in livestock rested pastures.

   Since AML has not been achieved during the reevaluation period this objective has not been measured.

5. For the Black Rock Pasture, once AML is reached, vegetative utilization level by wild horses shall not exceed 30% by December 31.

   Since AML has not been achieved during the reevaluation period this objective has not been measured.

Upland Browse:

1. Livestock vegetative utilization levels shall not exceed 50% by the end of the livestock grazing use period.

   This objective was not accomplished at Rock and Clear springs areas in the Warm Springs Pasture, utilization levels were exceeded in 1995, 1997 & 1999.

WATER QUALITY OBJECTIVES

1. Improve or maintain Mahogany Creek to Class A water standards.

There has not been sufficient data collected to evaluated this objective.

2. Improve or maintain the water quality of the following streams to the State criteria set for livestock drinking water, cold water aquatic life, water contact recreation (wading), and wildlife propagation:

   Summer Camp Creek
   Snow Creek
   Donnelly Creek
   Slumgullion Creek
   Soldiers Creek

   There has not been sufficient data collected to evaluated this objective.

3. Maintain water quality standards for Desert Dace habitat in the springs where they occur to the following:

temperature	32-38"C/90-100"F
nitrates	90 mg/L
turbidity	50 NTU
pH	6.5-9.0
D.O.	5.0 mg/L

   Water quality standards were met.

VEGETATION OBJECTIVES

A. Riparian Objectives:

1. Improve the riparian condition class on six (6) miles of Mahogany Creek to 70% (from 1992 baseline data of 68%) within the short term (2001) and maintain excellent riparian stream condition (70% of optimum or better) to the year 2017.

   Not met in 1997, stream survey analyzes indicated 67.1%.

2. Improve the riparian condition class on 2 miles of Summer Camp Creek to 70% (from 1990 baseline data of 60%) within the short term (by 2001) and maintain excellent riparian stream condition (70% of optimum or better) to the year 2017.

   Not met in 1997, stream survey analyzes indicated 61.7%.

3. Improve the riparian condition class on 3 miles of Snow Creek to 70% (from 1990

baseline data of 60%) within the short term (by 2001) and maintain excellent riparian stream condition (70% of optimum or better) to the year 2017.

Achieved, stream survey analyzes indicated 71.6%.

4. Improve the riparian condition class on 8 miles of Donnelly Creek to 62% (from baseline 1989 data of 52%) within the short term (by 2001) and achieve excellent riparian stream condition (70% of optimum or better) to the year 2017.

   Achieved, stream survey analyzes indicated 71.8%.

5. Improve the riparian condition class on 8 miles of Coleman Creek to 66% (from baseline 1991 data of 44%) within the short term (by 2001) and achieve excellent riparian stream habitat condition (70% of optimum or better) to the year 2017.

   Not met in 1997, stream survey analyzes indicated 62.8%.

6. Improve the riparian condition class on 8 miles of Slumgullion Creek to 63% (from baseline 1990 data of 48%) within the short term (by 2001) and achieve excellent riparian stream habitat condition (70% of optimum or better) to the year 2017.

   Achieved in 1990 (74%) and not achieved in 1999 stream survey analyzes indicated 58.6%.

B. Sage Grouse:

Protect known sage grouse strutting and nesting habitat and improve brooding habitat by: (WL-1.II)

1. Following Nevada Division Of Wildlife (NDOW) guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada.

   The Vegetal Control Program guideline identified by Nevada Division Of Wildlife (NDOW) has been met. There has been no vegetal manipulations as a result of new range improvement projects such as fencing, brush control, or pipelines.

2. Maintain sagebrush canopy at 30% in sage grouse nesting areas where sagebrush does not exceed three (3) feet in height.

   It is unclear whether the vegetative communities present in the allotment are capable of obtaining the recommended sagebrush canopy cover adjacent to strutting areas and for nesting and brood rearing habitat. Passe et al. (1982) in: "Relation Between Soil, Plant Communities, and Climate on Rangelands of the Intermountain West", while working in the Sagebrush Steppe ecoregion, found that total

vegetative canopy coverage under Potential Natural Community conditions, in Wyoming Big Sagebrush communities, ranged from 8% to 24% with an average plant cover of 17%. Sage grouse habitat condition is not dependent solely on the availability of sagebrush canopy cover. Several authors have verified this conclusion while working to determine the conditions best suited to sage grouse production. Factors such as understory nesting cover, abundance of herbaceous forage, height of the overstory canopy, and condition and utilization of meadows have been found to be equally important in determining sage grouse habitat condition. Based on this information, the current objective for sage grouse habitat is in need of requantification.

C. Desired Plant Community Objectives: (Refer to pages 72 - 86 which lists the DPC objectives)

Desired Plant Community Objectives (DPC) for this allotment were developed based upon Ecological Status Inventory (ESI) data. This ESI data indicates existing seral stages of each vegetative community (ecological site) and that sites' vegetative potential. These data were considered in conjunction with wildlife, wild horse, and livestock forage demands in developing site specific DPC objectives. The allotment short term utilization objectives will be used to determine progress each site is making toward it's desired stage. Key areas in all pastures will be established by an interdisciplinary team.

There have been no DPC key areas established or monitored during the evaluation period therefore these objectives will be revised and carried forward into the next evaluation period.

PAIUTE MEADOWS ALLOTMENT

ALLOTMENT WIDE MULTIPLE USE OBJECTIVES

UTILIZATION OBJECTIVES

1. Short Term

a) The objective for utilization of key streambank riparian plant species (CAREX, JUNCUS, SALIX, POTR5, ROWO, POA spp.) on Paiute, Battle and Bartlett Creeks is 30%. Utilization data will be collected at the end of the gazing period.

This objective was not achieved on Paiute Creek in 1994, Battle Creek in 1994, 1995 & 1997 and Bartlett Creek in 1995 & 1997.

b) The objective for utilization of key plant species (CAREX, JUNCUS and POA spp.) in wetland riparian habitats if 50%. Utilization data will be

collected at the end of the gazing period.

This objective was not achieved on those sites associated with Burnt Spring and Butte Creek in 1994, 1995 & 1997.

c) The objective for utilization of key plant species (STTH2, AGSP, FEID, ELCI, POA, ORHY, AMAL, PUTR, SYMPH, EPHEDRA, EULA) in upland habitats is 50%.Utilization data will be collected at the end of the grazing period.

This objective was not achieved on those sites associated with the Rough Canyon and Paiute seeding 1995 & 1997.

2. Long Term

a) Manage, maintain, or improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 1,838 AUMs for mule deer, 307 AUMs for pronghorn, and 180 AUMs for bighorn sheep.

This objective was achieved based upon estimated wildlife trend data.

1) Improve to or maintain 2,134 acres in Black Rock DY-13, 41,678 acres in Black Rock DW-10, and 45,856 acres in Black Rock DS-6 in good or excellent mule deer habitat condition.

There has not been sufficient trend data collected to evaluated this objective.

2) Improve to or maintain 45,965 acres in Black Rock PS-15 in good pronghorn habit condition. Improve to or maintain 35,274 acres in Black Rock PY-14, 2,623 acres in Leonard Creek PW-17, and 31,466 acres in Paiute Creek PW-16 in fair or good pronghorn habitat condition.

There has not been sufficient trend data collected to evaluated this objective.

3) Improve to or maintain 69,939 acres in Black Rock BY-15 in good to excellent bighorn sheep habitat condition.

There has not been sufficient trend data collected to evaluated this objective.

b) Improve public rangeland conditions to provide forage on a sustained yield

basis for livestock, with a stocking level of 7,827 AUMs.

This objective was achieved.

c) Improve range condition from poor to fair on 161,158 acres and from fair to good on 15,938 acres.

Inconclusive, no range condition survey data was collected during the evaluation period.

d) Maintain and improve the free-roaming behavior of wild horses by protection and enhancing their home ranges.

This objective was achieved.

1) Manage, maintain, or improve public rangeland conditions to provide 1116 AUMs of forage on a sustained yield basis for wild horses.

This objective was achieved.

2) Maintain and improve wild horse habitat by assuring free access to water.

This objective was achieved.

Ecological status will be used to redefine/quantify the following five objectives where applicable.

e) Improve to or maintain 86 acres of ceanothus habitat types in good condition.

Inconclusive, no Ecological Status Inventory data was collected during the evaluation period.

f) Improve to or maintain 345 acres of mahogany habitat types in good condition.

Inconclusive, no Ecological Status Inventory data was collected during the evaluation period.

g) Improve to or maintain 188 acres of aspen habitat types in good condition.

Inconclusive, no Ecological Status Inventory data was collected during the evaluation period.

h) Improve to or maintain 529 acres of riparian and meadow habitat types in good condition.

Inconclusive, no Ecological Status Inventory data was collected during the evaluation period.

i) Improve to or maintain 15 acres of serviceberry, 82 acres of bitterbrush, 55 acres of ephedra, and 112 acres of winterfat vegetation types in good condition.

Inconclusive, no Ecological Status Inventory data was collected during the evaluation period.

j) Improve to and maintain stream habitat conditions from the 1988 levels of 43% on Paiute Creek, 58% on North Fork of Battle creek, and 50% on Bartlett Creek to an overall optimum of 60% or above.

1) Streambank cover 60% or above.
2) Streambank stability 60% or above.
3) Maximum summer water temperatures below 70 degrees F.
4) Sedimentation below 10%.

This objective was achieved.

k) Protect sage grouse strutting grounds and brooding areas. Maintain the big sagebrush sites within two miles of active strutting grounds in mid to late seral stage with a minimum of 30% shrub composition by weight or 30% canopy cover.

The Vegetal Control Program guideline identified by Nevada Division Of Wildlife (NDOW) has been met. There has been no vegetal manipulations as a result of new range improvement projects such as fencing, brush control, or pipelines. It is unclear whether the vegetative communities present in the allotment are capable of obtaining the recommended sagebrush canopy cover adjacent to strutting areas and for nesting and brood rearing habitat. Passe et al. (1982) in: "Relation Between Soil, Plant Communities, and Climate on Rangelands of the Intermountain West", while working in the Sagebrush Steppe ecoregion, found that total vegetative canopy coverage under Potential Natural Community conditions, in Wyoming Big Sagebrush communities, ranged from 8% to 24% with an average plant cover of 17%. Sage grouse habitat condition is not dependent solely on the availability of sagebrush canopy cover. Several authors have verified this conclusion while working to determine the conditions best suited to sage grouse production. Factors such as understory nesting cover, abundance of herbaceous forage, height of the overstory canopy, and

condition and utilization of meadows have been found to be equally important in determining sage grouse habitat condition. Based on this information, the current objective for sage grouse habitat is in need of requantification.

l) Improve to and maintain the water quality of Paiute, Battle and Bartlett Creeks to the state criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wading (water contact recreation), and wildlife propagation.

There has not been sufficient data collected to evaluated this objective.

IV. TECHNICAL RECOMMENDATIONS

A. STOCKING RATE

The total carrying capacity was determined for the Soldier Meadows and Paiute Meadows Allotments using the potential stocking level calculation from BLM TR 4400-7 (See Appendix II). The potential stocking level is the level of use that could be achieved on a management unit, at the desired utilization figure, assuming utilization could be completely uniform. The potential stocking level calculation is:

$$\frac{\text{actual use}}{\text{average utilization}} = \frac{\text{potential actual use}}{\text{desired average utilization}}$$

Use area utilization was calculated by averaging use by year. The potential stocking level for each use area is as follows: See Appendix #1

B. ALTERNATIVES - LIVESTOCK MANAGEMENT

SOLDIER MEADOWS

ALTERNATIVE 1 - EXISTING SYSTEM

1. Grazing (AUMs)

	A.	Total	16070
	B.	Historical Suspended	3902
	C.	Permitted Use	12168
	D.	Authorized	7687
	E.	Not Scheduled	4481
		Season of Use:	01/01 to 04/30 & 07/15 to 12/31
2.		Kind and Class of Livestock	Cow/Calf
3.		Percent Federal Range	100%
4.		Grazing System	

YEARS 1 & 2

Livestock	Season of Use	Use Area	AUMs
500	01/01 to 03/31	Black Rock	1496
1117	04/01 to 04/30	Calico	1120
1117	05/01 to 07/14	**Wall Canyon**	**CA BLM**
1117	07/15 to 10/14	Warm Springs	3379
1117	10/15 to 11/15	**Soldier M. Ranch**	**PRIVATE**
1117	11/16 to 12/31	Hot Springs	1689

TOTAL 7684

YEARS 3 & 4

Livestock	Season of Use	Use Area	AUMs
500	01/01 to 03/31	B. Rock	1496
1117	04/01 to 04/30	Soldier M.	1120

1117	05/01 to 07/14	**Wall Canyon**	**CA BLM**
1117	07/15 to 10/14	Summit Lake	3379
1117	10/15 to 11/15	**Soldier M. Ranch**	**PRIVATE**
1117	11/16 to 12/31	Hot Springs	1726

TOTAL 7684

RATIONALE:

This existing grazing system utilizes six pastures or use areas with the spring and summer pastures rested two (2) years in a four (4) year rotation. The livestock are on public lands within the allotment for a total of eight and one half (8.5) months grazing a total of one thousand one hundred and seventeen (1117) head under the existing system. This system allows two years of rest from livestock grazing which provides the opportunity to increase plant vigor, food storage, forage production and establishment of seedlings.

ALTERNATIVE 2 - <u>ESTILL RANCHES</u>

This alternative would implement a two year clockwise rotational grazing system (2001 & 2002) followed by two years rotating counterclockwise (2003 & 2004) utilizing the entire allotment on an annual basis. The use areas would be grazed early for two years followed by late use the following two years. The proposed system would also activate a total of 4,481 livestock AUMs, currently shown as Not Scheduled on the permit. The activation of these AUMs would be implemented over a five year period (Phase 1,2&3) with a third or approximately 1,494 AUMs added to the grazing schedule in years one (2001), three (2003) and five (2005). These AUMs were identified as Not Scheduled in the 1994 Decision primarily due to the existing grazing system implemented by R.C. Roberts, prior owner of the Soldier Meadows Ranch. The existing system is currently used by Estill Ranches LLC.

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	9181
E.	Not Scheduled	2987
	Season of Use	02/01 to 12/31

2. Kind and Class of Livestock — Cow/Calf

3. Percent Federal Range 100%

4. Grazing System

PHASE #1 (2001 & 2002)

Livestock	Season of Use	Use Area	AUMs
838	01/01 to 03/31	B. Rock S.*	2479
838	04/01 to 05/31	Calico S.**	1681
838	06/01 to 07/15	Warm Springs	1240
838	08/01 to 08/31	Id. Canyon***	1267
838	09/01 to 09/30	Coleman/Slumgullion	827
838	10/01 to 11/30	Hot Springs	1681
			TOTAL 9181

* South of Wagner Spring

* * South of Cherry Creek

*** Livestock will be trailed around the reservation into Coleman/Slumgullion use area, no trailing will occur within the Stanley Camp Riparian Pasture.

YEARS 3 & 4 (2003 & 2004) PHASE 2 - CLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	10675
E.	Non Scheduled	1493

Season of Use: 01/01 to 11/30

2. Kind and Class of Livestock Cow/Calf

3. Percent Federal Range 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
975	01/01 to 03/31	B. Rock N.*	2885
975	04/01 to 05/31	Calico N**	1955
975	06/01 to 07/15	Coleman/Slumgullion	1442
	06/22 to 07/15	Riparian Pasture***	Trailing
975	07/16 to 08/30	Id. Canyon	1475
975	09/01 to 09/30	Warm Springs	962
975	10/01 to 11/30	Hot Springs	1955
			TOTAL 10675

* North of Wagner Spring
** North of Cherry Creek
*** Livestock trailing within the Stanley Camp Riparian Pasture will be within the Permit Terms and Conditions.

YEARS 5 & 6 (2005 & 2006) PHASE 3 - COUNTERCLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	12168
E.	Non Scheduled	0

Season of Use: 01/01 to 11/30

2. Kind and Class of Livestock: Cow/Calf

3. Percent Federal Range: 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs

1111	01/01 to 03/31	B. Rock S.*	3287
1111	04/01 to 05/31	Calico S.**	2228
1111	06/01 to 07/30	Warm Springs	1644
1111	08/01 to 08/31	Id. Canyon***	1680
1111	09/01 to 09/30	Coleman/Slumgullion	1096
1111	10/01 to 11/30	Hot Springs	2228
			TOTAL12168

* South of Wagner Spring

* * South of Cherry Creek

*** Livestock will be trailed around the reservation into Coleman/Slumgullion use area, no trailing will occur within the Stanley Camp Riparian Pasture.

RATIONALE:

This proposed grazing alternative utilizes smaller use areas for a shorter duration in a four year grazing cycle somewhat similar to the existing system. This proposal would extend the time that livestock are on public lands within the allotment, eleven (11) months under the proposed system versus eight and a half (8.5) months under the existing system. These phased in AUMs will result in approximately a nineteen percent (19%), a thirty-eight percent (38%) and fifty-eight percent (58%) increases in years 2001, 2003 & 2005 respectively. The livestock numbers in this proposed plan would be increased to 702, 838 and 975 head in years 2001, 2003 & 2005 respectively. The existing grazing system currently allows the grazing of one thousand one hundred and seventeen (1117) head.

The Idaho Canyon, Coleman Creek/Slumgullion Creek use areas would be grazed for short durations and the season of use would be at different times every two years. This herding effect of controlled short duration grazing should help to achieve and maintain allotment objectives. Any livestock movement through the Stanley Camp Riparian Pasture, once fire rehabilitation objectives are accomplished, will require herders to prevent cattle from damaging critical riparian areas. The intent is to trail livestock through the riparian pasture from the south (Coleman/Slumgullion) to the north (Idaho Canyon.) use areas in a counterclockwise rotation starting in years 3 & 4 (2003 & 2004). When following the proposed grazing system and moving in a counterclockwise rotation (early season) from the Coleman/Slumgullion use area to the Idaho Canyon pasture livestock would trail through the Stanley Camp Riparian Pasture sometime between June 22 - July 15th. Actual dates would be coordinated with BLM personnel prior to trailing and be dependent upon range readiness, soil moisture and location and extent of snowpack. The actual time allowed to move cattle from one pasture to another (south to north) trailing through the riparian pasture would be one week. The preferred trail route would be along the eastern boundary of the pasture above the creeks headwaters, moving north between the eastern section of the existing exclosure fence and

Horseshoe Bend into the Idaho Canyon Pasture. In the event that allotment objectives or Standards for Rangeland Health are not achieved or livestock trailing conditions are unfavorable livestock may be trailed around the reservation and into the Idaho Canyon use area. Until fences are constructed in the Idaho Canyon area, herders will be present to prevent livestock from drifting into the Stanley Camp Riparian Pasture or onto the areas burned in the 2000 wildland fire.

ALTERNATIVE 3

This grazing alternative would implement a rotational grazing system that utilizes the entire allotment on an annual basis. The livestock would graze use areas within the allomen in a counterclockwise rotation for two years (2001 & 2002) followed by two years of clockwise rotation (2003 & 2004). In the third year (2003), two years after implementing the new grazing system, if monitoring data indicates allotment objectives and Standards for Rangeland Health are being attained the activation of Non Scheduled AUMs would begin. These AUMs were identified as Not Scheduled in the 1994 Multiple Use Decision primarily due to the existing grazing system implemented by R.C. Roberts, prior owner of the Soldier Meadows Ranch. The existing system is currently used by Estill Ranches L.L.C..

This activation of 4,481 Non Scheduled AUMs would be implemented over a five year period (Phases 1,2 & 3) with a third or approximately 1,494 AUMs added to the grazing schedule in years three (2003), five (2005) and seven (2007).

YEARS 1 & 2 (2001 & 2002) - CLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	7687
E.	Not Scheduled	4481

Season of Use: 01/01 to 11/30

2. Kind and Class of Livestock — Cow/Calf

3. Percent Federal Range — 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
702	01/01 to 03/31	B. Rock S.*	2077
702	04/01 to 05/31	Calico S**	1408
702	06/01 to 07/30	W. Springs	1385
702	08/01 to 08/31	Id. Canyon***	715
702	09/01 to 09/30	Coleman/Slumgullion	692
702	10/01 to 11/30	Hot Springs	1408
			TOTAL 7687

* South of Wagner Spring
** South of Cherry Creek
*** Livestock will be trailed around the reservation into Coleman/Slumgullion use area, no trailing will occur within the Stanley Camp Pasture.

YEARS 3 & 4 (2003 & 2004) PHASE 1 - COUNTERCLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	9181
E.	Not Scheduled	2987
	Season of Use:	01/01 to 11/30

2. Kind and Class of Livestock — Cow/Calf

3. Percent Federal Range — 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
838	01/01 to 03/31	B. Rock N.*	2479
838	04/01 to 05/31	Calico N.**	1681
838	06/01 to 07/15	Coleman/Slumgullion	1240
	06/22 to 07/15	Riparian Pasture***	Trailing
838	07/16 to 08/30	Id. Canyon	1267
838	09/01 to 09/30	Warm Springs	827
838	10/01 to 11/30	Hot Springs	1681
			TOTAL 9181

* North of Wagner Spring
** North of Cherry Creek.
*** Livestock trailing within the Stanley Camp Riparian Pasture will be within the Permit Terms and Conditions.

YEARS 5 & 6 (2005 & 2006) PHASE 2 - CLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	10675
E.	Non Scheduled	1493

Season of Use: 01/01 to 11/30

2. Kind and Class of Livestock: Cow/Calf

3. Percent Federal Range: 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
975	01/01 to 03/31	B. Rock S.*	2885

975	04/01 to 05/31	Calico S**	1955
975	06/01 to 07/30	W. Springs	1442
975	08/01 to 08/31	Id. Canyon***	1475
975	09/01 to 09/30	Coleman/Slumgullion	962
975	10/01 to 11/30	Hot Springs	1955
			TOTAL 10675

* South of Wagner Spring
** South of Donnelly Creek
*** Livestock will be trailed around the reservation into Coleman/Slumgullion use area, no trailing will occur within the Stanley Camp Pasture.

YEARS 7 & 8 (2007 & 2008) PHASE 3 - COUNTERCLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	12168
E.	Non Scheduled	0
	Season of Use:	01/01 to 11/30

2. Kind and Class of Livestock — Cow/Calf

3. Percent Federal Range — 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
1111	01/01 to 03/31	B. Rock N.*	3287
1111	04/01 to 05/31	Calico N.**	2228
1111	06/01 to 07/15	Coleman/Slumgullion	1644
	06/22 to 07/15	Riparian Pasture***	Trailing

1111	07/16 to 08/30	Id. Canyon	1680
1111	09/01 to 09/30	Warm Springs	1096
1111	10/01 to 11/30	Hot Springs	2228
			TOTAL12168

* North of Wagner Spring
** North of Cherry Creek
*** Livestock trailing within the Stanley Camp Riparian Pasture will be within the Permit Terms and Conditions.

RATIONALE:

This proposed grazing alternative utilizes smaller use areas for a shorter duration in a four year grazing cycle somewhat similar to the existing system. This proposal would extend the time that livestock are on public lands within the allotment, eleven (11) months under the proposed system versus eight and a half (8.5) months under the existing system. These phased in AUMs will result in approximately a nineteen percent (19%), a thirty-eight percent (38%) and fifty-eight percent (58%) increases in years 2003, 2005 & 2007 respectively. The livestock numbers in this proposed plan would be increased to 702, 838 and 975 head in years 2003, 2005 & 2007 respectively. The existing grazing system currently allows the grazing of one thousand one hundred and seventeen (1117) head.

The Idaho Canyon, Coleman Creek/Slumgullion Creek use areas would be grazed for short durations and the season of use would be at different times every two years. This herding effect of controlled short duration grazing should help to achieve and maintain allotment objectives. Any livestock movement through the Stanley Camp Riparian Pasture, once fire rehabilitation objectives are accomplished, will require herders to prevent cattle from damaging critical riparian areas. The intent is to trail livestock through the riparian pasture from the south (Coleman/Slumgullion) to the north (Idaho Canyon.) use areas in a counterclockwise rotation starting in years 3 & 4 (2003 & 2004). When following the proposed grazing system and moving in a counterclockwise rotation (early season) from the Coleman/Slumgullion use area to the Idaho Canyon pasture livestock would trail through the Stanley Camp Riparian Pasture sometime between June 22 - July 15th. Actual dates would be coordinated with BLM personnel prior to trailing and be dependent upon range readiness, soil moisture and location and extent of snowpack. The actual time allowed to move cattle from one pasture to another (south to north) trailing through the riparian pasture would be one week? The preferred trail route would be along the eastern boundary of the pasture above the creeks headwaters, moving north between the eastern section of the existing exclosure fence and Horseshoe Bend into the Idaho Canyon Pasture. In the event that allotment objectives or Standards for Rangeland Health are not achieved or livestock trailing conditions are unfavorable livestock may be trailed around the reservation and into the Idaho Canyon use area. Until fences are constructed in the Idaho Canyon area, herders will be present to prevent

livestock from drifting into the Stanley Camp Riparian Pasture or onto the areas burned in the 2000 wildland fire.

ALTERNATIVE 4 - ESTILL RANCHES

This alternative would implement a two year counterclockwise rotational grazing system (2001 & 2002) followed by two years rotating clockwise (2003 & 2004) utilizing the entire allotment on an annual basis. The use areas would be grazed early for two years followed by late use the following two years. This proposed system would also activate a total of 4,481 livestock AUMs, currently showing as Not Scheduled on the permit. The activation of these AUMs would be totally implemented the first year (2001) and utilized every year on an annual basis. These AUMs were identified as Not Scheduled in the 1994 Decision primarily due to the existing grazing system implemented by R.C. Roberts, prior owner of the Soldier Meadows Ranch. The existing system is currently used by Estill Ranches LLC.

YEARS 1 & 2 (2001 & 2002) - CLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	12168
E.	Non Scheduled	0
	Season of Use:	01/01 to 11/30

2. Kind and Class of Livestock — Cow/Calf

3. Percent Federal Range — 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
1108	01/01 to 03/31	B. Rock S.*	3278
1108	04/01 to 05/31	Calico S.**	2222
1108	06/01 to 07/30	Warm Springs	2186
1108	08/01 to 08/31	Id. Canyon***	1129
1108	09/01 to 09/30	Coleman/Slumgullion	1093
1108	10/01 to 11/30	Hot Springs	2222

TOTAL12168

* South of Wagner Spring
* * South of Cherry Creek
*** Livestock will be trailed around the reservation into Coleman/Slumgullion use area, no trailing will occur within the Stanley Camp Pasture.

YEARS 3 & 4 (2003 & 2004) - COUNTERCLOCKWISE ROTATION

1. Grazing (AUMs)

A.	Total	16070
B.	Historical Suspended	3902
C.	Permitted Use	12168
D.	Authorized	12168
E.	Non Scheduled	0
	Season of Use:	01/01 to 11/30

2. Kind and Class of Livestock — Cow/Calf

3. Percent Federal Range — 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
1111	01/01 to 03/31	B. Rock N.*	3278
1111	04/01 to 05/31	Calico N.**	2222
1111	06/01 to 07/15	Coleman/Slumgullion	1639
	06/22 to 07/15	Riparian Pasture***	Trailing
1111	07/16 to 08/30	Id. Canyon	1676
1111	09/01 to 09/30	Warm Springs	1093
1111	10/01 to 11/30	Hot Springs	2222

TOTAL12130

* North of Wagner Spring
** North of Cherry Creek
*** Livestock trailing within the Stanley Camp Riparian Pasture will be within the Permit Terms and Conditions.

RATIONALE:

This proposed grazing alternative utilizes smaller use areas for a shorter duration in a four year grazing cycle somewhat similar to the existing system. This proposal would extend the time that livestock are on public lands within the allotment, eleven (11) months under the proposed system versus eight and a half (8.5) months under the existing system. These phased in AUMs will result in approximately a nineteen percent (19%), a thirty-eight percent (38%) and fifty-eight percent (58%) increases in years 2001, 2003 & 2005 respectively. The livestock numbers in this proposed plan would be increased to 702, 838 and 975 head in years 2001, 2003 & 2005 respectively. The existing grazing system currently allows the grazing of one thousand one hundred and seventeen (1117) head.

The Idaho Canyon, Coleman Creek/Slumgullion Creek use areas would be grazed for short durations and the season of use would be at different times every two years. This herding effect of controlled short duration grazing should help to achieve and maintain allotment objectives. Any livestock movement through the Stanley Camp Riparian Pasture, once fire rehabilitation objectives are accomplished, will require herders to prevent cattle from damaging critical riparian areas. The intent is to trail livestock through the riparian pasture from the south (Coleman/Slumgullion) to the north (Idaho Canyon.) use areas in a counterclockwise rotation starting in years 3 & 4 (2003 & 2004). When following the proposed grazing system and moving in a counterclockwise rotation (early season) from the Coleman/Slumgullion use area to the Idaho Canyon pasture livestock would trail through the Stanley Camp Riparian Pasture sometime between June 22 - July 15th. Actual dates would be coordinated with BLM personnel prior to trailing and be dependent upon range readiness, soil moisture and location and extent of snowpack. The actual time allowed to move cattle from one pasture to another (south to north) trailing through the riparian pasture would be one week? The preferred trail route would be along the eastern boundary of the pasture above the creeks headwaters, moving north between the eastern section of the existing exclosure fence and Horseshoe Bend into the Idaho Canyon Pasture. In the event that allotment objectives or Standards for Rangeland Health are not achieved or livestock trailing conditions are unfavorable livestock may be trailed around the reservation and into the Idaho Canyon use area. Until fences are constructed in the Idaho Canyon area, herders will be present to prevent livestock from drifting into the Stanley Camp Riparian Pasture or onto the areas burned in the 2000 wildland fire.

PAIUTE MEADOWS

ALTERNATIVE 1 - <u>EXISTING SYSTEM</u>

1. Grazing (AUMs)

A. Total 9932

B.	Historical Suspended	6382
C.	Permitted Use	3549
D.	Authorized	3549
	Season of Use	03/15 to 10/06
2.	Kind and Class of Livestock	Cow/Calf
3.	Percent Federal Range	100%
4.	Grazing System	

Livestock	Season of Use	Use Area	AUMs
524	03/15 to 05/15	North Low el*	1068
524	05/16 to 07/17	North High el.**	1086
524	07/18 to 10/06	South High el.***	1395
			TOTAL 3549

* North of Paiute Creek below 1550 meters in elevation.
** North of Paiute Creek above 1550 meters in elevation.
*** South of Paiute Creek above 1550 meters in elevation.

RATIONALE:

This existing grazing system utilizes three pastures or use areas within the allotment. Livestock use begins in the lower elevations east of the Leonard Creek Road. This area includes the lower foothills and alluvial fans along the eastern potion of the allotment north of Paiute Creek below 1550 meters in elevation. Season of use is March fifteenth through May fifteenth. Livestock use of the higher elevations will be deferred until after May first by salting and herding. The livestock are moved into the high elevation use area on May sixteenth and graze until July seventeenth. This use area includes the area north of Paiute Creek above the drift fence and those sites above 1550 meters in elevation. On July eighteenth the livestock are moved south of Paiute Creek on sites above 1550 meters in elevation and graze until October sixteenth when they are moved onto the private lands at Paiute Meadows Ranch.

ALTERNATIVE 2 - <u>IRV AND SANDY BROWN</u>

1. Grazing (AUMs)

A.	Total	9932
B.	Historical Suspended	5770
C.	Permitted Use	4161
D.	Authorized	4161
	Season of Use	03/15 to 10/06 11/15 to 01/15
2.	Kind and Class of Livestock	Cow/Calf
3.	Percent Federal Range	100%
4.	Grazing System	

Livestock	Season of Use	Use Area	AUMs
524	03/15 to 05/15	North Low el.*	1068
524	05/16 to 07/17	North High el.**	1086
524	07/18 to 10/06	South High el.***	1395
300	11/15 to 01/15	South Low el.****	612
			TOTAL 4161

* North of Paiute Creek below 1550 meters in elevation.
** North of Paiute Creek above 1550 meters in elevation.
*** South of Paiute Creek above 1550 meters in elevation.
**** South of Paiute Creek below 1550 meters in elevation.

RATIONALE:

This alternative maintains the same livestock numbers and use areas as the existing system with the exception that there is a proposed winter season of use within the South Paiute low elevation area. Temporary non use within this area has been granted since 1998. This area is outside of any Herd Management Area (HMA) and wildlife use areas. This alternative would extend the season of use within the allotment by approximately two months (11/15 to 01/15) to accommodate a winter grazing season and increase the Permitted Use an additional 612 AUMs, approximately a 17% increase.

ALTERNATIVE 3 - <u>IRV AND SANDY BROWN</u>

1. Grazing (AUMs)

A.	Total	9932
B.	Historical Suspended	4769
C.	Permitted Use	5164
D.	Authorized	5164
	Season of Use	03/15 to 02/28
2.	Kind and Class of Livestock	Cow/Calf
3.	Percent Federal Range	100%
4.	Grazing System	

Livestock	Season of Use	Use Area	AUMs
524	03/15 to 05/15	N. Paiute low el.*	1068
524	05/16 to 07/31	N. S. Fork Battle**	1327
524	08/01 to 10/31	S. S. Fork Battle***	1585
300	11/01 to 02/28	S. Paiute low el.****	1184

TOTAL 5164

* North of Paiute Creek below 1550 meters in elevation.
** North of South Fork of Battle Creek above1550 meters in elevation.
*** South of South Fork of Battle Creek above 550 meters in elevation.
**** South of Paiute Creek below 1550 meters in elevation.

RATIONALE:

This alternative proposes to change some of the areas of use, extend the season of use and increase the number of AUMs of Permitted use from the existing system. This proposal would use the South Fork of Battle Creek as the boundary between the north and south use areas instead of Paiute Creek as under the existing system. The lack of adequate water sources south of Paiute Creek and the excessive numbers of wild horses combined with livestock tend to concentrate use on those limited water sources and vegetation under the existing system. Changing the use areas and allowing livestock to graze the northern portion of the allotment for a longer season allows better distribution and more uniform vegetative utilization since there are more sources of water and more forage production in those higher elevation sites. This alternative would extend the season of use within the allotment by

approximately five months and increase the Permitted Use an additional 1615 AUMs, approximately a 45% increase.

ALTERNATIVE 4

1. Grazing (AUMs)

A.	Total	9932
B.	Historical Suspended	5789
C.	Permitted Use	4143
D.	Authorized	4143

Season of Use 03/15 to 10/06
11/15 to 01/15

2. Kind and Class of Livestock — Cow/Calf

3. Percent Federal Range — 100%

4. Grazing System

Livestock	Season of Use	Use Area	AUMs
524	03/15 to 05/15	N. Paiute low el.*	1068
524	05/16 to 07/17	N. S. Fork Battle**	1086
524	07/18 to 10/06	S.S. Fork Battle***	1395
300	11/15 to 01/15	S. Paiute low el.****	612

TOTAL 4143

* North of Paiute Creek below 1550 meters in elevation.
** North of South Fork of Battle Creek above1550 meters in elevation.
*** South of South Fork of Battle Creek above 1550 meters in elevation.
**** South of Paiute Creek below 1550 meters in elevation.

RATIONALE:

This alternative would maintain the same livestock numbers, seasons of use and areas as the

existing system with the exception that there is a proposed winter season of use for 300 head within the South Paiute low elevation area. Temporary non use within this winter use area has been granted since 1998. The winter use area is outside of any Herd Management Areas (HMAs) or identified wildlife use areas. This alternative would extend the season of use within the allotment by approximately two months (11/15 to 01/15) to accommodate the winter grazing season and increase the Permitted Use an additional 612 AUMs, approximately a 17% increase.

This alternative also proposes to change some of the areas of use by designating the South Fork of Battle Creek as the boundary between the north and south use areas instead of Paiute Creek as under the existing system. The lack of adequate water sources south of Paiute Creek and the combined numbers of wild horses and livestock tend to concentrate use on the limited water sources and vegetation under the existing system. Changing the use areas and allowing livestock to graze the northern portion of the allotment for a longer season allows better distribution and more uniform vegetative utilization since there are more sources of water and greater forage production in the higher elevation sites. Riding and herding is essential to ensure livestock are properly distributed within the appropriate use area north or south of the South Fork of Battle Creek during the authorized period of use.

TERMS AND CONDITIONS

The terms and conditions must be in conformance with the Standards and Guidelines for the Sierra Front - Northwestern Great Basin Resource Advisory Council, approved by the Secretary of the Interior on February 12, 1997.

1. Since the majority of the use areas are unfenced it is the responsibility of the permittees to incorporated riding and herding to insure livestock grazing occurs within the appropriate pasture in accordance with the permit schedules.

2. Livestock grazing within use areas that are habitat or potential habitat for the federally listed threatened Lahontan Cutthroat Trout (LCT) will be subject to the following restrictions. These standards would apply to Mahogany, Summer Camp, Snow, Coleman and Donnelly creeks in the Soldier Meadows Allotment and the South Fork of Battle creek and Paiute creek in Paiute Meadows Allotment.

   a. Maintain a minimum stubble height of six inches (6") in streambank herbaceous vegetative sites consisting of primarily: Sedges (Carex spp), Rushes (Juncus spp.), Intermediate Wheatgrass (Agropyron intermedium) and Tufted Hairgrass (Deschampsia cespitosa).

   b. The objective for utilization of key woody plant species is thirty percent (30%) : Aspen (Populus tremuloides) and Willows (Salix spp.).

c. Mechanical streambank damage such as livestock hoof action resulting in bank punching or shearing shall not exceed ten percent (10%) within use areas that are habitat or potential habitat for the federally listed threatened Lahontan Cutthroat Trout. This standard would apply to the following streams Mahogany, Summer Camp, Snow, Coleman and Donnelly creeks in the Soldier Meadows Allotment and the South Fork of Battle creek and Paiute creek in Paiute Meadows Allotment.

3. Maintain a minimum stubble height of six inches (6") on the grass and grass-like plants in those sites associated with the federally listed threatened Desert Dace.

4. "Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.4(c) and (d), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer."

5. The authorized officer may modify annual grazing authorization as long as the modification is consistent with management objectives and remains within the permitted season of use.

6. Salt and/or mineral blocks shall not be placed within one quarter (1/4) mile of springs, streams, riparian habitats or aspen stands.

7. The permittees are required to perform maintenance on range improvements as per their signed cooperative agreements and section 4 permits prior to livestock turnout.

8. The permittees certified actual use report, by pasture, is due 15 days after the end of the authorized grazing period.

9. The grazing authorization with the schedules of use outlined in this evaluation will be the only approved use and all other schedules, flexibilities and terms and conditions addressed in the Soldier Meadows or Paiute Meadows Allotment Multiple Use Decisions are suspended unless revised.

C. WILDLIFE

Adjustments to the wildlife populations are not warranted. Wildlife populations will remain at the reasonable numbers outlined in the Land Use Plan. Reasonable numbers of wildlife are as follows:

SOLDIER MEADOWS ALLOTMENT:

Mule Deer	786 AUMs
Bighorn Sheep	18 AUMs
Antelope	429 AUMs

PAIUTE MEADOWS ALLOTMENT:

Mule Deer	1838 AUMs
Bighorn Sheep	180 AUMs
Antelope	307 AUMs

RATIONALE

Analysis of the monitoring data determined that wildlife use did not contribute to the non-attainment of any of the objectives. Therefore, any changes in the existing wildlife populations or the existing wildlife management within the Soldier Meadows or Paiute Meadows Allotments is not warranted.

D. RANGE IMPROVEMENTS

1. Reconstruct the existing fence from Stanley Camp cabin to the Summit Lake Reservation fence.

   Rationale: To prevent livestock from entering the Stanley Camp Riparian Pasture and impacting LCT habitat.

2. Construct a small portion of fence from the existing Pine Forest Allotment fence to the Lahontan Cutthroat Trout exclosure fence.

   Rationale: To prevent livestock from entering the Stanley Camp Riparian Pasture and impacting LCT habitat.

E. REVISED OBJECTIVES

SOLDIER MEADOWS ALLOTMENT

A. Short Term:

1. Livestock grazing within use areas that are habitat or potential habitat for the federally listed threatened Lahontan Cutthroat Trout (LCT) will be subject to the following restrictions. These standards would apply to Mahogany, Summer Camp, Snow, Coleman and Donnelly Creeks.

   a. Maintain a minimum stubble height of six inches (6") in streambank herbaceous vegetative sites consisting of primarily: Sedges (Carex spp), Rushes (Juncus spp.), Intermediate Wheatgrass (Agropyron intermedium) and Tufted Hairgrass (Deschampsia cespitosa).

b. The objective for utilization of key woody plant species is thirty percent (30%) : Aspen (Populus tremuloides) and Willows (Salix spp.).

c. Mechanical streambank damage such as livestock hoof action resulting in bank punching or shearing shall not exceed ten percent (10%).

2. Maintain a minimum stubble height of six inches (6") on the grass and grass-like plants in those sites associated with the federally listed threatened Desert Dace.

3. The objective for utilization of key plant species in wetland riparian habitats is fifty percent (50%), (Carex, Juncus, Poa).

4. The objective for utilization of key plant species in upland habitats is fifty percent (50%)
on the following: AGSP, CELE3, DISP2, ELCI2, FEID, HOBR, JUBA, LUPIN, ORHY, POA++, PONE3, POSE, PUTR2, SIHY, STCO4 and STTH2.

B. Long Term:

WATER QUALITY OBJECTIVES

1. Improve and/or maintain Mahogany Creek to Class A water standards.

2. Improve and/or maintain the water quality of the following streams to the State criteria set for livestock drinking water, cold water aquatic life, water contact recreation (wading), and wildlife propagation:

Summer Camp Creek
Snow Creek
Donnelly Creek
Slumgullion Creek
Soldiers Creek

3. Improve and/or maintain water quality in occupied Desert Dace habitat to the following standards:

temperature	32-38"C/90-100"F
nitrates	90 mg/L
turbidity	50 NTU
pH	6.5-9.0
D.O.	5.0 mg/L

4. Improve and/or maintain riparian condition class on six (6) miles of Mahogany Creek, 2 miles of Summer Camp Creek, 3 miles of Snow Creek and 8 miles of Donnelly Creek to an overall optimum of 70% by achieving the following:

1) Streambank cover 60% or above.
2) Streambank stability 60% or above.
3) Maximum summer water temperatures below 68 degrees F.

5. Improve and/or maintain riparian condition class on 8 miles of Coleman Creek to an overall optimum of 66% by achieving the following:

1) Streambank cover 66% or above.
2) Streambank stability 66% or above.
3) Maximum summer water temperatures below 68 degrees F.

6. Improve and/or maintain riparian condition class on 8 miles of Slumgullion Creek to an overall optimum of 63% by achieving the following:

1) Streambank cover 63% or above.
2) Streambank stability 63% or above.
3) Maximum summer water temperatures below 68 degrees F.

7. Improve or maintain suitable sage grouse strutting, nesting, brood rearing, and/or wintering habitat in good condition within the ecological potential of the rangeland habitat.

The following parameters have been found to constitute optimum (good) conditions for sage grouse use :

Strutting Habitat

Low sagebrush or brush free areas for strutting and nearby areas of sagebrush having 20-50% canopy cover for loafing.

Nesting Habitat

1. Sagebrush between seven 7 and 31 inches in height (optimum= 16 inches).
2. Sagebrush canopy cover of 15-30% (optimum = 27%).
3. 25-35% basal ground cover.
4. Average understory height of 6-7 inches (grasses).

Brood Rearing Habitat

Early Season

1. Sagebrush canopy cover 10-21% (optimum = 14%).

Late Season

1. Meadow areas that are in functioning condition.
2. Residual meadow vegetation of no less than 3-6 inches in height.

Winter Habitat

1. Greater than 20% sagebrush canopy cover.

8. Manage, maintain, or improve rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 786 AUMs for mule deer, 429 AUMs for pronghorn, and 18 AUMs for bighorn sheep.

   a. Improve to or maintain good to excellent mule deer habitat conditions.

   b. Improve to or maintain fair to good pronghorn habitat conditions.

   c. Improve to or maintain good to excellent bighorn sheep habitat conditions.

9. Improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with a stocking level of 7,687 AUMs.

10. Maintain and improve the free-roaming behavior of wild horses by protection and enhancing their home ranges.

    a. Manage, maintain, or improve public rangeland conditions to provide 5,034 AUMs of forage on a sustained yield basis for wild horses.

    b. Maintain and improve wild horse habitat by assuring free access to water.

C. Desired Plant Community Objectives:

Desired Plant Community Objectives (DPC) for this allotment were developed based upon Ecological Status Inventory (ESI) data. This ESI data indicates existing seral stages of each vegetative community (ecological site) and that sites' vegetative potential. These data were considered in conjunction with wildlife, wild horse, and livestock forage demands in developing site specific DPC objectives. The allotment short term utilization objectives will be used to determine progress each site is making toward it's desired stage. Key areas in all pastures will be established by an interdisciplinary team.

The following is a list of the key species plant symbols used, there common name, and scientific

name:

Symbol	Common Name	Scientific Name
AGSP	Bluebunch wheatgrass	Agropyron spicatum
CELE3	Mountain mahogany	Cercocarpus ledifolius
DISP2	Inland saltgrass	Distichlis spicata stricta
ELCI2	Basin wildrye	Elymus cinereus
FEID	Idaho fescue	Festuca idahoensis
HOBR	Meadow barley	Hordeum brachyantherum
JUBA	Baltic rush	Juncus balticus
LUPIN	Lupine	Lupinus spp.
ORHY	Indian ricegrass	Oryzopsis hymenoides
POA++	Bluegrass	Poa spp.
PONE3	Nevada bluegrass	Poa nevadensis
POSE	Sandberg bluegrass	Poa secunda
PUTR2	Antelope bitterbrush	Purshia tridentata
SIHY	Bottlebrush squirreltail	Sitanion hystrix
STCO4	Needle & thread grass	Stipa comata
STTH2	Thurber needlegrass	Stipa thurberiana

Summit Lake Pasture

Resource Objectives

Key areas will be established by an interdisciplinary team in key Ecological Sites based on the desired plant community objective.

Objective 1 Short Term

Increase the composition by weight the overall percentage of the following perennial grasses: AGSP, FEID, STTH2, ELCI2, POA++, STCO4, and SIHY from 28% to 35% on Ecological Site 023XY007 (Loamy 14-16") in Site Write-up Area (SWA) U044 by the year 2010. The aggregate of ELCI2, POA++, SIHY, and STCO4 can only make up 10% of the total composition.

Long Term

Within Ecological Site 023XY007 (Loamy 14-16") manage for the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %

GRASSES	28%	45%	60%
FORBS	7%	10%	10%
SHRUBS	65%	45%	30%

This objective should be achieved by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer habitat as described in BLM's 6630 Manual.

Objective 2 Short Term

Maintain or increase perennial grasses at 45% composition by weight on Ecological Site 023XY017 (Claypan 14-16") in SWA U044 by the year 2010. These perennial grasses are FEID, AGSP, STTH2, POA++, SIHY, and ELCI2 with the aggregate of the latter three making up no more than 10% of the total composition.

Long Term

Within Ecological Site 023XY017 (Claypan 14-16") manage for a desired plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	45%	55%	65%
FORBS	11%	10%	10%
SHRUBS	44%	35%	25%

This objective should be accomplished by the year 2017.

Objective 3 Short Term

Increase FEID and AGSP each from 2% to 6% composition by weight on Ecological Site 023XY026 (Mahogany Savanna) in SWA U044 by the year 2010. Maintain PUTR2 above 10% and CELE3 at 22% composition by weight.

Long Term

Within Ecological Site 023XY026 (Mahogany Savanna) manage for a desired plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	23%	30%	40%
FORBS	Trace	8%	10%
SHRUBS	77%	62%*	50

At least 25% must be CELE3 and 10% PUTR2.

This objective should be accomplished by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer habitat as described in BLM's 6630 Manual.

Objective 4 **Short Term**

Maintain the existing plant community with 61% perennial grasses, 22% forbs, and 17% shrubs in Ecological Site 023XY013 (dry meadows) in SWA U044 by the year 2001.

Long Term

Within Ecological Site 023XY013 (dry meadows) in SWA U044 manage for the desired plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	61%	65%	80%
FORBS	22%	22%	20%
SHRUBS	17%	13%	0%

Decrease the percent composition by weight of JUBA by increasing the percent composition by weight of PONE3 and HOBR. This objective should be achieved by 2017.

Objective 5 **Short Term**

Maintain the existing plant community with 89% perennial grasses, 11% forbs, and 0% shrubs in Ecological Site 023XY025 (wet meadows) in SWA U202 by the year 2010.

Long Term

Within Ecological Site 023X025 (wet meadows) in SWA U202 manage for the desired plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	89%	85%	80%
FORBS	11%	15%	20%
SHRUBS	0%	0%	0%

Decrease the percent composition by weight of Carex by increasing the percent composition by weight of DECE.

This objective should be achieved by 2017.

Rationale: The Summit Lake Pasture has been identified as yearlong bighorn sheep range (BRBY-2, BRBY-4), mule deer summer range (BRDS-8), as well as a sage grouse strutting ground and brood use area. This area is also used by wild horses and cattle. By achieving these objectives the vegetative communities would be meeting the needs of the mentioned wildlife, wild horses, and livestock.

Warm Springs Pasture

Resource Objectives:

Key areas will be established by an interdisciplinary team in key Ecological Sites based on the desired plant community objective.

Objective 1 Short Term

Increase perennial grasses from 34% to 41% composition by weight on Ecological Site 023XY017 (Claypan 14-16") in SWA U125 by the year 2010. These perennial grasses are: AGSP, STTH2, POA++, SIHY, and FEID.

Long Term

Increase FEID from a trace to 7% composition by weight while managing for a desired plant community with the following percent composition by weight.

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	34%	50%	65%

FORBS	8%	10%	10%
SHRUBS	56%	40%	25%

This objective should be completed by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer habitat as described in BLM's 6630 Manual.

Objective 2 Short Term

Maintain the following perennial grasses: STTH2, SIHY, and POA++ at 46% composition by weight through the year 2001 on Ecological Site 023XY031 (Claypan 10-14") in SWA U174. Also try to get AGSP established on the site.

Long Term

Increase AGSP to 5% composition by weight, as it's potential on the site is 20 to 50% composition by weight. Establish a desired plant community consisting of the following vegetation:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	46%	55%	65%
FORBS	12%	12%	10%
SHRUBS	42%	33%	25%

This objective should be achieved by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer habitat as described in BLM's 6630 Manual.

Objective 3 Short Term

Increase AGSP from 9% to 13% and STTH2 from 8% to 12% composition by weight on Ecological Site 023XY039 (Loamy Slope 10-14") in SWA U125 by the year 2010.

Long Term

Manage for a desired plant community consisting of the following percent composition by weight within Ecological Site 023XY039 (Loamy Slope 10-14"):

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	35%	50%	65%
FORBS	6%	10%	10%
SHRUBS	52%	40%	25%

This objective should be reached by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer habitat as described in BLM's 6630 Manual.

Objective 4 Short Term

Increase AGSP, FEID, and STTH2 collectively, from 27% to 36% composition by weight on Ecological Site 023XY066 (Ashy Loam 12-14") in SWA U162 by the year 2010 while maintaining PUTR2 above 20% composition by weight.

Long Term

Within Ecological Site 023XY066 (Ashy Loam 12-14") manage for the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	33%	43%*	60%
FORBS	2%	8%	10%
SHRUBS	65%	49%**	30%

*Must be at least 20 % FEID.
** Must be at least 20% PUTR2.

This objective should be achieved by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer habitat as described in BLM's 6630 Manual.

Objective 5 Short Term

Maintain or increase FEID at 12% and increase AGSP from 2% to 5% composition by weight. Maintain PUTR2 at 9% composition; increase CELE3 from 3% to 6% composition by weight on Ecological Site 023XY026 (Mahogany Savanna) in SWA U161 by the year 2010.

Long Term

Manage for the following percent composition by weight on Ecological Site 023XY026 (Mahogany Savanna):

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	35%	40%*	40%
FORBS	3%	10%	10%
SHRUBS	54%	50%**	50%

* Must be at least 15% FEID, 10% AGSP.
** Must be at least 9% CELE3, and 9% PUTR2.

This objective should be achieved by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer habitat as described in BLM's 6630 Manual.

Objective 6 **Short Term**

Maintain PONE3 at 12% and increase composition by weight for forbs from 8% to 11% with LUPIN making up no more than 5% composition by weight of the forbs in SWA U199 on Ecological Site 023XY013 (dry meadows) by the year 2010.

Long Term

Within Ecological Site 023xy013 (dry meadows) in SWA U199 manage for the desired plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	92%	85%	80%
FORBS	8%	15%	20%
SHRUBS	0%	0%	0%

Increase composition by weight PONE3 from 12% to 15% in SWA U199 on Ecological Site 023XY013 (dry meadows) by the year 2017.

Rationale: This Warm Springs Pasture has been identified as pronghorn yearlong (BRPY-7) and summer range (BRPS-1, BRPS-8); mule deer yearlong (BRDY-3) and winter range (BRDW-4); and as a sage grouse brood use area. It is also used yearlong by wild horses/burros and by cows for three months a year.

Calico Pasture

Resource Objectives:

Key areas will be established by an interdisciplinary team in key Ecological Sites based on the desired plant community objective.

Objective 1 Short Term

Increase STTH2 from 9% to 12% composition by weight on Ecological Site 027XY079 (Gravelly Claypan 8-10") in SWA U063 by the year 2010.

Long Term

Within Ecological Site 027XY079 (Gravelly Claypan 8-10") manage for the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	25%	32%	45%
FORBS	8%	8%	5%
SHRUBS	67%	60%	50%

This objective should be achieved by the year 2017. The shrub component still maximizes the potential of the site to provide quality antelope habitat as described in BLM's 6630 Manual.

Objective 2 Short Term

Increase AGSP from 2% to 5% composition by weight on Ecological Site 023XY037 (Clay Slope 8-12") in SWA U109 by the year 2010.

Long Term

Manage for a desired plant community with the following percent composition by weight on Ecological Site 023XY037 (Clay Slope 8-12"):

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	26%	36%	70%

FORBS	25%	22%	10%
SHRUBS	41%	42%	20%

Perennial grasses may include: AGSP- must be at least 8%, STTH2, POA++, SIHY, FEID. This objective should be achieved by the year 2017. The shrub component still maximizes the potential of the site to provide quality antelope habitat as described in BLM's 6630 Manual.

Objective 3 Short Term

Increase FEID from 2% to 6% composition by weight while trying to establish AGSP on Ecological Site 023XY017 (Claypan 14-16") in SWA U042 by the year 2010.

Long Term

Manage for a desired plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	34%	46%	65%
FORBS	28%	20%	10%
SHRUBS	38%	34%	25%

Perennial grasses include FEID, AGSP, POA++, STTH2, SIHY and other perennial grasses. This objective should be accomplished by 2017. The shrub component still maximizes the potential of the site to provide quality antelope habitat as described in BLM's 6630 Manual.

Rationale: The Calico Pasture has been identified as pronghorn antelope winter range (BRPW-1). Wild horses use this pasture yearlong and cows use it for one month (April 1 - April 30) for two years and then rest it for two years.

Soldier Meadows Pasture

Resource Objectives:

Key areas will be established by an interdisciplinary team in key Ecological Sites based on the desired plant community objective.

Objective 1 Short Term

Increase composition by weight of AGSP from 31% to 36% on Ecological Site 023XY039 (loamy slope 10-14") in SWA U159 by the year 2010.

Long Term

Within Ecological Site 023XY039 (loamy slope 10-14") manage for the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	35%	44%	65%
FORBS	7%	10%	10%
SHRUBS	58%	46%	25%

This objective should be achieved by the year 2017. The shrub component still maximizes the potential of the site to provide quality mule deer and antelope habitat as described in BLM's 6630 Manual.

Objective 2 Short Term

Increase FEID and STTH2 collectively from 12% to 18% composition by weight on Ecological Site 023XY017 (claypan 14-16") in SWA U229 by the year 2010.

Long Term

Within Ecological Site 023XY017 (claypan 14-16") in SWA U229 manage for the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	23%	35%	65%
FORBS	8%	10%	10%
SHRUBS	69%	55%	25%

This objective should be achieved by the year 2017.

Objective 3 Short Term

Increase the composition by weight STTH2 from 1% to 6% on Ecological Site 024XY005

(loamy 8-10") in SWA U181 by the year 2010.

Long Term

Within Ecological Site 024XY005 (loamy 8-10") in SWA 181 manage for the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %*	DESIRED %	POTENTIAL %
GRASSES	7%	17%	55%
FORBS	3%	5%	5%
SHRUBS	87%	78%	40%

* The remaining 3% is comprised of BRTE.

This objective should be achieved by 2017.

Objective 4 Short Term

Maintain or increase by weight the perennial grasses at 40% or higher on Ecological Site 023XY039 (loamy slope 10-14") in SWA U117 by 2010. The perennial grasses include AGSP and SIHY.

Long Term

Within Ecological Site 023XY039 (loamy slope 10-14") in SWA U117 manage for the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %*	DESIRED %	POTENTIAL %
GRASSES	40%	45%	65%
FORBS	7%	10%	10%
SHRUBS	48%	45%	25%

* The remaining 5% is comprised of BRTE.

This objective should be achieved by 2017.

Objective 5 **Short Term**

Increase by weight the following perennial grasses: SIHY, STTH2, and POA++ collectively from 12% to 18% on Ecological Site 023XY037 (clay slope 8-12") in SWA U187 by 2010. Also try to establish AGSP on the site from the adjacent range sites.

Long Term

Within Ecological Site 023XY037 (clay slope 8-12") manage for the following Desired Plant Community while trying to establish AGSP on the site:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	12%	25%	70%
FORBS	2%	7%	10%
SHRUBS	86%	68%	20%

This objective should be achieved by 2017.

Objective 6 **Short Term**

Increase by weight the perennial grasses from 5% to 8% and increase ARSPS5 from 4% to 10% on Ecological Site 024XY025 (loamy slope 5-8") in SWA U114 manage for the following Desired Plant Community:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	5%	10%	20%
FORBS	Trace	5%	5%
SHRUBS	92%	85%	75%

* The remaining 3% is comprised of BRTE.

This objective should be achieved by 2017.

Objective 7 **Short Term**

Maintain the existing plant community with 61% perennial grasses, 22% forbs, and 17% shrubs in Ecological Site 023XY013 (dry meadows) in SWA U201 by the year 2010.

Long Term

Within Ecological Site 023XY013 (dry meadows) in SWA U201 manage for the desired plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	61%	65%	80%
FORBS	22%	22%	20%
SHRUBS	17%	13%	0%

Increase the percent by weight of the perennial grasses by 4%, while maintaining or decreasing the percent JUBA at 24%.

Rationale: The Soldier Meadows Pasture has been identified as pronghorn yearlong (BRPY-5) and winter (BRPW-6, BRPW-7); mule deer summer (BRDS-7, BRDS-5) and winter (BRDW-4); and bighorn sheep yearlong (BRBY-1, BRBY-2). It is also used yearlong by wild horses and burros and cows for one month a year (April 1- April 30).

Black Rock Pasture

Resource Objectives:

Key areas will be established by an interdisciplinary team in key Ecological Sites based on the desired plant community objective.

Objective 1 Short Term

Increase ORHY, SIHY, and STSP3 from a trace to 3% composition by weight on Ecological Site 027XY018 (Gravelly Loam 4-8") in SWA U005 by the year 2010.

Long Term

Manage for a desired plant community with the following percent composition by weight on Ecological Site 027XY018 (Gravelly Loam 4-8").

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	Trace	9%	25%
FORBS	Trace	3%	5%

SHRUBS	100%	88%	70%

The perennial grasses may include ORHY, POSE, SIHY,and STSP3. This objective should be achieved by 2017.

Objective 2 Short Term

Increase ORHY from 6% to 9% composition by weight on Ecological Site 027XY016 (Sodic Dunes) in SWA U004.

Long Term

Within Ecological Site 023XY016 (Sodic Dunes) manage for a plant community with the following percent composition by weight:

PERCENT COMPOSITION BY WEIGHT

	EXISTING %	DESIRED %	POTENTIAL %
GRASSES	16%	20%	35%
FORBS	Trace	3%	5%
SHRUBS	84%	77%	65%

Perennial grasses may include : ORHY- must be at least 12% composition, DISP3, ELCI2, and SIHY. This objective should be accomplished by the year 2017.

Rationale: The Black Rock Pasture has been identified as yearlong pronghorn antelope range (BRPY-5). It is used as a winter pasture by cattle (Jan. 1 - March 30) and it has wild horse use.

Hot Springs Pasture

Resource Objectives

Resource objectives, including livestock, wild horse and wildlife use will be addressed in the Soldier Meadows Activity Plan (SMAP).

D. Standards and Guidelines of Rangeland Health

1. Soil processes will be appropriate to soil type, climate and land form.

2. Riparian/wetland systems are n properly functioning condition.

3. Water quality criteria in Nevada or California State Law shall be achieved or maintained.

4. Populations and communities of native plant species and habitats for native animal species are healthy, productive and diverse.

5. Habitat conditions meet the life cycle requirements of special status species.

PAIUTE MEADOWS ALLOTMENT

A. Short Term Objectives:

1. Livestock grazing within use areas that are habitat or potential habitat for the federally listed threatened Lahontan Cutthroat Trout (LCT) will be subject to the following restrictions. These standards would apply the South Fork of Battle Creek and Paiute Creek.

   a. Maintain a minimum stubble height of six inches (6") in streambank herbaceous vegetative sites consisting of primarily: Sedges (Carex spp), Rushes (Juncus spp.), Intermediate Wheatgrass (Agropyron intermedium) and Tufted Hairgrass (Deschampsia cespitosa).

   b. The objective for utilization of key woody plant species is thirty percent (30%) : Aspen (Populus tremuloides) and Willows (Salix spp.).

   c. Mechanical streambank damage such as livestock hoof action resulting in bank punching or shearing shall not exceed ten percent (10%) within use areas that are habitat or potential habitat for the federally listed threatened Lahontan Cutthroat Trout. This standard would apply to the following streams the South Fork of Battle Creek and Paiute Creek.

3. The objective for utilization of key plant species in wetland riparian habitats is fifty percent (50%), (Carex, Juncus, Poa).

4. The objective for utilization of key plant species in upland habitats is fifty percent (50%)
   on the following: AGSP, ELCI2, FEID, ORHY, POA++, PUTR2, SIHY, STCO4, AMAL, SYMPH, EPHEDRA, EULA and STTH2.

5. The objective for utilization of key streambank riparian plant species on Bartlett Creek is thirty percent (30%), (CAREX, JUNCUS, SALIX, POTR5, ROWO, POA spp.).

A. Long Term Objectives:

1. Manage, maintain, or improve rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 1,838 AUMs for mule deer, 307 AUMs for pronghorn, and 180 AUMs for bighorn sheep.

   a. Improve to or maintain good to excellent mule deer habitat conditions.

   b. Improve to or maintain fair to good pronghorn habitat conditions.

   c. Improve to or maintain good to excellent bighorn sheep habitat conditions.

2. Improve or maintain suitable sage grouse strutting, nesting, brood rearing, and/or wintering habitat in good condition within the ecological potential of the rangeland habitat.

   The following parameters have been found to constitute optimum (good) conditions for sage grouse use :

   Strutting Habitat

   Low sagebrush or brush free areas for strutting and nearby areas of sagebrush having 20-50% canopy cover for loafing.

   Nesting Habitat

   1. Sagebrush between seven 7 and 31 inches in height (optimum= 16 inches).
   2. Sagebrush canopy cover of 15-30% (optimum = 27%).
   3. 25-35% basal ground cover.
   4. Average understory height of 6-7 inches (grasses).

   Brood Rearing Habitat

   Early Season

   1. Sagebrush canopy cover 10-21% (optimum = 14%).

   Late Season

   1. Meadow areas that are in functioning condition.
   2. Residual meadow vegetation of no less than 3-6 inches in height.

- Winter Habitat

1. Greater than 20% sagebrush canopy cover.

3. Improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with a stocking level of 3,549 AUMs.

5. Ecological status will be used to redefine/quantify the following five objectives where applicable.

   a. Improve to and/or maintain ceanothus habitat by allowing for successful reproduction and recruitment within the ecological potential of the site.

   b. Improve to and/or maintain mahogany habitat by allowing for successful reproduction and recruitment within the ecological potential of the site.

   c. Improve to and/or maintain aspen habitat by allowing for successful reproduction and recruitment within the ecological potential of the site.

   d. Improve to and/or maintain riparian and meadow habitat types to ensure species diversity and quality and to maximize reproduction and recruitment of woody riparian species.

   e. Improve to and/or maintain serviceberry, bitterbrush, ephedra and winterfat habitat by allowing for successful reproduction and recruitment within the ecological potential of the site.

6. Improve to and/or maintain Riparian Condition Class to an overall optimum of 60% or above on Paiute Creek, North Fork of Battle Creek and Bartlett Creek by achieving the following:

   1) Streambank cover 60% or above.
   2) Streambank stability 60% or above.
   3) Maximum summer water temperatures below 68 degrees F.

C. Standards and Guidelines of Rangeland Health

1. Soil processes will be appropriate to soil type, climate and land form.

2. Riparian/wetland systems are n properly functioning condition.

3. Water quality criteria in Nevada or California State Law shall be achieved or

maintained.

4. Populations and communities of native plant species and habitats for native animal species are healthy, productive and diverse.

5. Habitat conditions meet the life cycle requirements of special status species.

F. MONITORING

The following types of monitoring data will be used to make a determination of attainment of allotment objectives.

1. Utilization - Key Areas
2. Trend - Key Areas
3. Actual Use
4. Climatological
5. Stream Survey
6. Lotic/Lentic Riparian Functionality Assessments
7. Water Quality
8. Condition and Trend Assessment - Wildlife Habitat
9. Ecological Site Inventory

APPENDIX I

Utilization, Actual Use and Stocking Rate Calculations by Use Area for the Soldier Meadows and Paiute Meadows Allotments.

Data was analyzed and proper stocking levels calculated on a use area/pasture basis.

PAIUTE MEADOWS ALLOTMENT

North Paiute Use Area

1. **1995 - July 6, 7**

Weighted Average Utilization

$$\frac{(55153 \times .10) + (172 \times .50)}{55325} = .10$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
524	1343

Horses	**Total AUMs**
78	**936**

Stocking Rate Calculation

$$\frac{2279}{.10} = \frac{x}{.50} = \mathbf{11395\ AUMs}$$

2. **1995 - August 31**

Weighted Average Utilization

$$\frac{(39055 \times .10) + (1455 \times .30) + (4056 \times .50) + (865 \times .70)}{45431} = .15$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
524	1343

Horses	**Total AUMs**
78	**936**

Stocking Rate Calculation

$$\frac{2279}{.15} = \frac{x}{.50} = \mathbf{7596\ AUMs}$$

3. **1996 - May 8**

Weighted Average Utilization

$$\frac{(679 \times .10)}{679} = .10$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
300	1371

Horses*	**Total AUMs**
89	**805**

Horses*	**Total AUMs**
56	**166**

* Numbers vary due to horses gathered and removed from the allotment.

Stocking Rate Calculation

$$\frac{2342}{.10} = \frac{x}{.50} = \textbf{11710 AUMs}$$

4. **1997 - August 27, September 25 & 30**

Weighted Average Utilization

$$\frac{(49371 \times .10) + (1151 \times .30) + (391 \times .50) + (249 \times .70)}{51162} = .11$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
250 & 375	476

Horses	**Total AUMs**
73	**876**

Stocking Rate Calculation

$$\frac{1352}{.11} = \frac{x}{.50} = \textbf{6145 AUMs}$$

South Paiute Use Area

1. **1996 - October 8**

Weighted Average Utilization

$$\frac{(20089 \times .10) + (5683 \times .30) + (4164 \times .50)}{} = .19$$

5796

Livestock Actual Use (AUMs)

Cattle	Total AUMs
300	493

Horses*	**Total AUMs**
340	**3074**

Horses*	**Total AUMs**
112	**331**

* Numbers vary due to horses gathered and removed from the allotment.

Stocking Rate Calculation

$$\frac{3898}{.19} = \frac{x}{.50} = \mathbf{10258\ AUMs}$$

2. **1996 - May 7, 30**

Weighted Average Utilization

$$\frac{(438 \times .10)}{4375} = .10$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
300	493

Horses*	**Total AUMs**
340	**3074**

Horses*	**Total AUMs**
112	**331**

*** Numbers vary due to horses gathered and removed from the allotment.**

Stocking Rate Calculation

$$\frac{3898}{.10} = \frac{x}{.50} = \mathbf{19490\ AUMs}$$

3. **1997 - October 29, 30**

Weighted Average Utilization

$$\frac{(44676 \times .10) + (5819 \times .30)}{50495} = .12$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
524 & 200	2007

Horses	**Total AUMs**
144	**1728**

Stocking Rate Calculation

$$\frac{3735}{.12} = \frac{x}{.50} = \textbf{15563 AUMs}$$

4. **1997 - April 2**

Weighted Average Utilization

$$\frac{(9624 \times .10)}{9624} = .10$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
524 & 200	2007

Horses	**Total AUMs**
144	**1728**

Stocking Rate Calculation

$$\frac{3735}{.10} = \frac{x}{.50} = \textbf{18675 AUMs}$$

5. **1998 - September 5**

Weighted Average Utilization

$$\frac{(25242 \times .10) + (1643 \times .30)}{26885} = .11$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
524	1395

Horses	**Total AUMs**
166	**1992**

Stocking Rate Calculation

$\frac{1395}{.11} = \frac{x}{.50}$ = 3387 AUMs

6. **1999 - October 20**

Weighted Average Utilization

$$\frac{(30683 \times .10)}{30683} = .10$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
524	1395

Horses	**Total AUMs**
191	**2292**

Stocking Rate Calculation

$\frac{3687}{.10} = \frac{x}{.50}$ = 18435 AUMs

SOLDIER MEADOWS ALLOTMENT

1. **1994 - May 15, 16 - Calico Spring Pasture**

Weighted Average Utilization

$$\frac{(17710 \times .30) + (172 \times .50)}{17882} = .30$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
1117	1102

Horses	**Total AUMs**
167	**2004**

Burros	**Total AUMs**
3	**36**

Stocking Rate Calculation

$$\frac{3142}{.30} = \frac{x}{.50} = \mathbf{5236\ AUMs}$$

2. **1995 - October 5 - Warm Springs Summer Pasture**

Weighted Average Utilization

$$\frac{(23290 \times .10) + (7561 \times .30) + (6004 \times .50) + (568 \times .70)}{37423} = .21$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
1117	3379

Horses	**Total AUMs**
528	**6336**

Burros	**Total AUMs**
30	**360**

Stocking Rate Calculation

$$\frac{10075}{.21} = \frac{x}{.50} = \mathbf{23988\ AUMs}$$

3. **1996 - May 14 - Soldier Meadows Spring Pasture**

Weighted Average Utilization

$$\frac{(34681 \times .10) + (889 \times .30) + (420 \times .50)}{135990} = .11$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
1117	1102

Stocking Rate Calculation

$$\frac{1102}{.11} = \frac{x}{.50} = 5009 \text{ AUMs}$$

4. **1996 - May 15 - Black Rock Winter Pasture**

Weighted Average Utilization

$$\frac{(15123 \times .10) + (38857 \times .30) + (2047 \times .50)}{56027} = .25$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
500	1480

Stocking Rate Calculation

$$\frac{1480}{.25} = \frac{x}{.50} = 12960 \text{ AUMs}$$

5. **1997 - November 4 - Warm Springs Summer Pasture**

Weighted Average Utilization

$$\frac{(14455 \times .10) + (15258 \times .30) + (2261 \times .50) + (327 \times .70)}{32301} = .23$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
1000	3025

Horses	**Total AUMs**
453	**5436**

Burros	**Total AUMs**
24	**54**

Stocking Rate Calculation

$\frac{8515}{.23} = \frac{x}{.50} = 18510$ AUMs

6. **1998 - October 12 - Warm Springs Summer Pasture**

Weighted Average Utilization

$$\frac{(11367 \times .10) + (18545 \times .30) + (5511 \times .50) + (1919 \times .70)}{37342} = .29$$

Livestock Actual Use (AUMs)

Cattle	Total AUMs
1117	3379

Horses	**Total AUMs**
521	**6252**

Burros	**Total AUMs**
28	**336**

Stocking Rate Calculation

$\frac{9967}{.29} = \frac{x}{.50} = 17184$ AUMs

7. **1999 - October 7 - Warm Springs Summer Pasture**

Weighted Average Utilization

$$\frac{(9427 \times .10) + (22839 \times .30) + (3311 \times .50) + (696 \times .70)}{36273} = .27$$

Livestock Actual Use (AUMs)

Horses	**Total AUMs**

599 **7188**

Burros	**Total AUMs**
32	**384**

Cattle	Total AUMs
1117	3379

Stocking Rate Calculation

$$\frac{10951}{.27} = \frac{x}{.50} = \textbf{20279 AUMs}$$