

From Final EA- Concerns Sheldon

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Portions of five federally administered grazing allotments are represented within the assessment area; these allotments are: Knott Creek, Pine Forest, Wall Canyon East, Leadville and Buffalo Hills. The assessment area also includes parts of the Sheldon Antelope Refuge and portions of the Black Rock Desert (BLM 2006a).

**Page 55 Transportation and Access** – Past and present actions within the assessment area are supported by a transportation system which includes a network of roads. The county road is graveled and transects the allotment from the Sheldon Antelope Refuge in the north, approximately through the center of the allotment, to highway 34 west of Gerlach. Many of the roads in the area are either private, unimproved roads or dirt roads and two-tracks on public lands. Most of these roads have their origin in mining exploration and ranching access and few are regularly maintained.

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**Long Term Objectives:**

1. Maintain or improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an eventual stocking level of 12,168 AUMs.
2. Maintain or improve public rangeland conditions to provide forage on a sustained yield basis for big game, with a forage demand of 786 AUMs for mule deer, 429 AUMs for pronghorn, and 264 AUMs for bighorn sheep.

Manage herd management areas (HMAs) to provide adequate food, water, and living space for the long-term maintenance of healthy wild horses and burros and maintain their free-roaming nature.

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Summer Camp Creek

Overall, this watershed is in excellent condition, which is primarily due to the recent wild horse gathers and the exclusion of livestock from the basin since 1990. Improvements in LCT habitat and riparian conditions are expected to continue for the Soldier Meadows Allotment with maintaining the exclusion of livestock from this drainage.

Overall, the Snow Creek watershed is in excellent condition, which is primarily due to the recent wild horse gather and the exclusion of livestock from the basin since 1990. Improvements in LCT habitat and riparian conditions are expected to continue for the Soldier Meadows Allotment with maintaining the exclusion of livestock from this drainage.

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The proposed change from the existing grazing system is that the Colman Use area would be divided, and approximately one third (1/3) of the existing Colman Use Area would be made into the Slumgullion Use Area. The Slumgullion Use Area would allow livestock grazing from October 1<sup>st</sup> to December 15<sup>th</sup> (see Maps 1 & 2). There is no LCT habitat within the Slumgullion Use Area. The boundary between Slumgullion and Colman Use areas is by topography, and not fenced. Livestock would use Slumgullion for 46 days (10/1 – 11/15) prior to moving into Colman on 11/16. It is not anticipated that livestock would drift into Colman prior to 11/16, but if this occurs the following mitigation measure would be implemented: construct a series of small drift fences along the Slumgullion Canyon Road to eliminate livestock drift into the Colman Use Area.

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Although there have been numerous studies of the thermal springs and outflow streams which comprise desert dace critical habitat (Hubbs and Miller 1948; La Rivers 1962; Nyquist 1963; Vinyard 1988, 1996), there has been no research specifically on the effects of livestock grazing in these areas.

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The BLM's 2004 Final Multiple Use Decision (MUD) for the Soldier Meadows allotment and the 2003 FWS Biological Opinion on the MUD also contain measures that are expected to eliminate potential threats from livestock grazing and wild horse use. These measures include fencing of the desert dace habitat and provisions for additional inventory and monitoring actions of the species and critical habitat. A plan is also being developed that would reduce the level of potential impacts to desert dace from recreation use in the area. This plan would emphasize the sensitivity of the area, direct camping and OHV use away from the desert dace habitats, provide educational and interpretation opportunities, and increase habitat monitoring in the area.

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#### Direct and Indirect Effects

The implementation of the proposed action includes the permanent closure of the desert dace habitat on public land within the Desert Dace Exclosure Fence, including critical habitat within Soldier Meadows Allotment, thereby eliminating trampling of spawning sites, grazing of riparian vegetation, degradation of water quality, and loss of hiding cover for fry and subadult desert dace. Although trailing is permitted to and from the Use Areas, (South/Calico and Hot Springs South) through the desert dace exclosure each year as needed, it is only permitted under the following conditions:

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The purpose of the Proposed Action, based upon a request by Kudrna Nevada LLC (Kudrna), is to modify the existing livestock grazing system and construct a range improvement (fence) on the Soldier Meadows Allotment (SMA).

The proposals presented in this EA would be implemented subject to the following regulatory authorities: FRWHBA

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Changes in livestock management will conform to regulations and land use plans, monitoring, field observations, ecological site inventories, or other BLM acceptable data will support management changes (GRAZ-1).

revision is necessary to conform to 43 CFR 4180 as What is this?

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The Proposed Action is to modify the existing SMA grazing system, construct a range improvement project and issue a ten year livestock grazing permit to Kudrna for the SMA.

The Proposed Action would authorize an initial livestock stocking level of 8,785 AUMs and activate approximately 845 of the remaining 3,383 non scheduled AUMs, every two years if allotment Objectives, Terms/Conditions and SRH are achieved. Incremental increases would occur until the Active Preference of 12,168 AUMs is activated. If monitoring data identifies that the allotment Objectives, Terms/Conditions and SRH are not achieved or progress is not being made toward achievement of the SRH, and existing grazing management is a major factor in the failure to achieve these goals, then appropriate actions would be initiated to adjust livestock numbers, season of use and/or AUMs.

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In order to fully implement the Proposed Action approximately one mile of fence would be constructed to separate the Idaho Canyon and Warm Springs Use Areas. Refer to Map 4. This proposed range improvement project would consist of approximately a mile of new fence construction that would extend from an existing fence on private land south to the Summit Lake Reservation fence. This new fence would consist of four barb wires and metal posts constructed to antelope specifications.

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Maintain or improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an eventual stocking level of 12,168 AUMs.

2. Maintain or improve public rangeland conditions to provide forage on a sustained yield basis for big game, with a forage demand of 786 AUMs for mule deer, 429 AUMs for pronghorn, and 264 AUMs for bighorn sheep.
3. Manage herd management areas (HMAs) to provide adequate food, water, and living space for the long-term maintenance of healthy wild horses and burros and maintain their free-roaming nature.

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#### 2.2.1 Temporary Non-renewable

Temporary non-renewable use, if granted, would be based on monitoring and actual forage production for the year, not to exceed 16,070 AUMs (Total Grazing Preference = 12,168 AUMs active use + 3,902 AUMs suspended use). The permittee would be required to meet the short term objectives and must meet or make progress towards long term objectives.

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Numbers of wild horses will be managed within the Appropriate Management Level (AML) range in the Black Rock Range West, Warm Springs Canyon and Calico Mountains Herd Management Areas (HMAs). Gathers will occur periodically as needed when monitoring reveals numbers are approaching or exceeding the AML range.

#### **Black Rock Range West**

Last Removed: December 2004  
Herd Management Acreage: 92,994  
Appropriate Management Level: 93 Horses  
Acres per Horse: 999  
Estimated Population as of 1/07: 79  
Habitat Status: - 7,596 acres

#### **Calico Mts**

Last Removed: December 2004  
Herd Management Acreage: 160,137  
Appropriate Management Level: 333 Horses  
Acres per Horse: 480  
Estimated Population as of 1/07: 276  
Habitat Status: + 2,971 Acres

#### **Warm Springs Canyon**

Last Removed: November 2004  
Herd Management Acreage: 91,707  
Appropriate Management Level: 175 Horses  
Acres per Horse: 524  
Estimated Population as of 7/07: 145

#### **BURROS**

AML- 24  
Estimated Population as of 7/07- 22

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A variety of laws, regulations, executive orders, and policy directives mandate that the effects of a Proposed Action and Alternatives on certain critical environmental elements be considered. Not all of the critical elements that require inclusion in this EA will be present, or if they are present, may not be affected by the Proposed Action and

Alternatives. Only those mandatory critical elements that are present and affected, or need to be considered, are described in this section.

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The recently constructed Desert Dace fence reduces or eliminates the potential impacts associated with livestock and wild horse/burro grazing to cultural resources within the enclosure.

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Prior to 2005, wild horse and burro population estimates were above AML. Ocular riparian stubble heights throughout the Warm Springs HMA ranged from 0.5 to 4 inches, but consistently averaged less than 2 inches in October 2003. Results show a marked reduction in stubble heights when both cattle and wild horses are present. Monitoring results prior to August reveal very little evidence of wild horse use on riparian forage. However, horses do utilize riparian forage in the late summer and fall after upland grasses have matured.

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Two HMAs and a portion of a third are included within the SMA. HMAs are established for the maintenance of wild horse and burro herds (43 CFR 4710.3-1). An AML is defined as the number of wild horses/burros determined to be consistent with the objective of achieving and maintaining a thriving, natural ecological balance and multiple-use relationship in a HMA.

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AMLs (Table 12) for the Black Rock West (NV-227), Calico Mountains (NV-222), and the Warm Springs Canyon (NV-226) HMAs were originally analyzed in the Sonoma-Gerlach Final Grazing Environmental Impact Statement and Sonoma Gerlach Management Framework Plan (MFP) Record of Decision (ROD), June 30, 1982. Additional analysis occurred in the allotment evaluation and 1994 Final Multiple Use Decision (FMUD) for the Soldier Meadows Allotment.

**Table 12. Established AMLs within the Allotment.**

HMA	Percent of HMA within SMA	AML Range	AUMs
Black Rock Range West	100	56-93 H	1,116
Calico Mountains*	29	49-65 H	780
Warm Springs Canyon	100	105-175 H; 14-24 B	2,388
<b>Totals</b>		<b>210-333 H; 14-24 B</b>	<b>4,284</b>

\* only the portion within Soldier Meadows allotment; H= horse, B=burro

Aerial counts completed within the past ten years reveal wild horse populations in excess of the established AML (Table 13) and recruitment rates in excess of 20%. However, wild horse gathers and selective removals of 1,809 head in December 2000 and 702 head in December 2004 have reduced current herd populations to AMLs (Table 14). Fertility control treatments are expected to reduce recruitment rates, improve animal health and body condition (deferral of reproduction/lactation costs), and extend the gather cycle from 3 years to 4-5 years. The next tentatively scheduled gather is set for late 2008 or early 2009.

**Table 13. Inventory (aerial) History.**

HMA/AML Range	Date	Count	Recruitment Rate foal/adult (%)
Black Rock Range West AML Range: 56-93	July 2001	108	33
	July 2000	416	19
	August 1997	316	26
Calico Mountains AML Range: 200-333	October 2004	722	18
	July 2000	1,148	23
	August 1997	840	28
Warm Springs Canyon AML Range: 105-175	October 2004*	384	15
	July 2000	749	20
	August 1997	453	25

\* partial count

**Table 14. Estimated Wild Horse and Burro Populations.**

HMA	Population Estimate February 2007 Soldier Meadows Allotment	Population Estimate February 2007 HMA
Black Rock Range West	76 H	76 H
Calico Mountains*	53 H	264 H
Warm Springs Canyon	139 H; 21 B	139 H; 21 B
<b>Totals</b>	<b>268 H; 21 B</b>	<b>479 H; 21 B</b>

\* only the portion within Soldier Meadows allotment; H= horse, B=burro

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#### Black Rock Range - West

The annual recruitment rate calculated at 26%. Twenty-three release mares were treated with a 2-year fertility control agent in December 2004. Genetic diversity is high. Herd color is primarily bay, black, brown, sorrel and buckskin.

#### Calico Mountains

The annual recruitment rate calculated at 12%. This is low compared to historical rates for this herd and might be a result of insufficient habitat (drought) and resultant horse health and body conditions. A 1-year fertility control agent was administered to 112 release mares in December 2000. Ninety-two release mares were treated with a 2-year fertility control agent in December 2004. In addition, release horses were selected to ensure a normal age structure and a 50:50 sex ratio. Genetic diversity is high. Calico horses are highly desired by adopters and make good ranch and performance horses.

Herds are colorful - buckskin, palomino, grulla, cremello, and overo pintos are common. Medicine hat, splashed white, and sabino patterns are also present.

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Big horn -Their diet is primarily grasses supplemented by forbs and limited browse.

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The proposed fence is not expected to impact any affected threatened and endangered species since the construction will not be within their habitat.

But it DOES impact the federally protected wild horses!

The proposed grazing in the Idaho Canyon pasture would likely result in impacts (as identified in the first paragraph) to the water quality of the 12 dispersed springs that are located in that pasture. Given the proposed annual hot season grazing for this area, these impacts would be unavoidable in the absence of constructed barriers.

The proposed fence is not expected to impact water quality since it will be constructed entirely within upland sagebrush sites away from any source of water.

The Idaho Canyon Use Area would be grazed from July 16 to October 31 each year under the Proposed Action. Hot season livestock grazing would occur every year in the Idaho Canyon Use Area. When combined with wild horse use, twelve springs and one seep may be heavily grazed each year.

Consistent hot season use would not improve riparian areas and conditions are likely to decline; however, implementation of monitoring and mitigation measures would result in attainment of the allotment objectives and SRH.

The proposed fence is not expected to impact any riparian areas since it will be constructed entirely within upland sagebrush sites away from any riparian (lentic or lotic) zones.

The Proposed Action does provide for a phased in increase in the Grazing Preference up to 12,168 AUMs, which will be activated over a ten year period based upon meeting the allotment Objectives, Terms/Conditions and SRH. The number of AUMs (12,168) that would be authorized in the Proposed Action is consistent with the 2004 FMUD.

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Based upon field observations of livestock use patterns, as much as 80% of the wilderness areas are rarely or never used by livestock due to distance from water, rocky conditions, and steep slopes. Implementation of the Proposed Action would not be expected to change this pattern or the intensity of livestock use in these areas.

BLM fails to address changes or impacts by wild horses due to implementation of the proposed action.

#### 4.1.9 Social Values and Economics

The Proposed Action would maintain or improve rangeland resources which would sustain the ranching operation. The Proposed Action would also activate the non scheduled AUMs resulting in a beneficial economic impact. There would be some economic impact to the ranch operations related to the costs associated with fence construction and maintaining range improvement projects. Other economic impacts of the Proposed Action would be the labor costs required to herd livestock within and between designated use areas throughout the allotment. Refer to wilderness and recreation sections for impacts to other social values.

The proposed fence action is not expected to impact social values and economics with the exception of reducing the labor cost with herding to keep the livestock in the proper use area.

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Hot season grazing could also affect nesting sage-grouse within the Warm Springs and Idaho Canyon use areas in odd years and Hot Springs (South) use areas in even years. Much of the sage-grouse incubation period occurs prior to the rapid growth period of bunch grasses and tall forbs that provide nest screening. Standing, residual vegetation from the previous growing season provides screening during much of the nesting period. Removal of grasses in the previous season by grazers may indirectly increase sage-grouse nest predation.

Hot season use would be made in the Warm Springs and Idaho Canyon Use Areas, which includes over 70 percent of the nesting and brood rearing habitats in the SMA. There are small meadows of the type preferred by brooding sage-grouse within these use areas. Livestock grazing would be limited to 30 percent utilization on the uplands and three inches of remaining stubble would be required on meadows at the end of the livestock grazing period. Additionally, the Warm Springs Use Area would be rested every other year. The combination of livestock grazing during the hot season and yearlong wild horse use may result in some meadows not producing the quantity or quality of forbs or insects important to sage-grouse broods.

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The following use areas are grazed outside the critical growth period: Idaho Canyon, Hot Springs North, and Coleman. This proposal allows key plant species to complete their life cycle increasing plant vigor, cover, productivity and diversity. Vegetation conditions processes should be improved.

This is incorrect – these areas ARE grazed by wild horses.

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#### 4.1.14 Wild Horses and Burros

**Grazing System** - Numerous studies identify high dietary overlap of preferred forage species and habitat preference between horses and cattle in the Great Basin ecosystems for all seasons (Ganskopp 1983; Ganskopp et al 1986, 1987; McInnis 1984; McInnis et al

1987; Smith 1986a, 1986b; Smith et al 1982; Vavra et al. 1978). A strong potential exists for exploitative competition between horses and cattle under conditions of limited forage (water, and space) availability (McInnis et al 1987). The potential for exploitative competition increases as livestock stocking rates and wild horse populations increase or as resource availability (forage, water, and space) are limited (production, access, drought, fire, fencing, etc). Water quantity and distribution is limited in much of the Calico Mountains, Warm Springs Canyon, and north Black Rock Range West HMAs.

The Proposed Action grazing system rotates a consistent number of livestock (800 head initially) in eight Use Areas. The rotation system and livestock use periods correspond directly with wild horse seasonal movements into summer and winter habitats. The potential for habitat competition is highest in the smaller Use Areas and where water is a known limiting factor. Competition would be expected to increase as animal densities increase (horses move toward high AML and cattle stocking rates increase). High numbers of concentrated livestock use in Hot Springs South Use Area during 4/15-7/15 (even years) may decrease forage availability for horses the following winter.

The Proposed Action grazing system rests the Calico and Warm Springs Use Areas from livestock grazing every other year. This system removes the potential for summer and winter habitat competition between cattle and horses during that time. Indirect impacts include a potential increase in wild horse/burro body condition and health in those areas. The livestock use period in the Warm Springs Use Area coincides with summer horse use and would have greater potential for water competition. Water availability is greater in the spring and early summer so the potential for water competition is lessened.

Stubble height monitoring data

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suggests riparian objectives may not be met when both cattle and horses are present. Cattle may exceed desired stubble height residuals before horses utilize riparian forage later in the year (after 7/15). However these areas will be rested from livestock in alternating years allowing vegetation to recover.

Indirect impacts to horses related to forage and/or water competition include a reduction in body condition, fecundity, lactation, and health of individual horses. Impacts would most affect lactating mares, foals, and horses in the younger and older age classes. Sustained competition would result in lower annual herd growth rates as reproductive success, foal survival, and animal health declines and mortality rates increase.

The Proposed Action grazing system requires gate closures in the Colman/County Road pasture fence during late fall (10/1-11/16) to keep cattle out of the Colman Use Area. This action would encumber horse movements off of summer habitat (Idaho Canyon and Warm Springs Use Areas) into historical winter habitat (Colman and Slungullion Use Areas). Monitoring in February 2007 revealed breach of the fence has already occurred and horse trailing suggests free-roaming behaviors have been altered as horses trail south along the fence. Gates have been found closed when they should have been open and visa versa. Sufficient winter habitat should be available west of the pasture fence (Hot Springs North Use Area) once horses become accustomed to the new use patterns.

Indirect impacts to horses regarding gate closures include temporary exclusion of horses from traditional seasonal use areas, encumbrance of their free-roaming behavior, and a change in traditional seasonal use areas as a result of long-term exclusion and behavior adaptation.

**Proposed Fence** - The proposed fence segment north of Summit Lake would effect seasonal horse movement to and from summer habitat in the Idaho Canyon area. The fence would present an entrapment hazard to horses in the Idaho Canyon area attempting to move out of high elevations in the winter. This area is currently fenced on all sides except for the west side. Recent fence additions in the Mahogany Creek Exclosure area removed access to the Idaho Canyon area from Black Rock West horses. However, Warm Springs Canyon horses do access and use this area as evidenced by the August 2004 removal of twenty-five horses (some branded) from the Mahogany Creek Exclosure. It is expected that horses would circumvent fences to access the highly preferred summer habitat.

Indirect impacts to horses from the proposed fence include temporary exclusion from traditional seasonal use area, encumbrance of their free-roaming behavior, entrapment and/or entanglement and a change in traditional seasonal use areas as a result of long-term exclusion and behavior adaptation.

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Indirect impacts to horses from the maintenance of existing allotment and pasture fences include exclusion from traditional seasonal use areas accessed through fence breaks, encumbrance of their free-roaming behavior, entrapment and/or entanglement, and a change in traditional seasonal use areas as a result of long-term exclusion and behavior adaptation. Less mixing of animals may reduce the genetic diversity among herds.

#### 4.2.5 Water Quality

Impacts to water resources (including quality) under this alternative would be similar to the Proposed Action, with the exceptions of the Idaho Canyon and Warm Springs Pastures. Under the No Action Alternative, the previously described impacts to the isolated springs in the Idaho Canyon pasture would be lessened because the intensity of grazing would be less (300 cows vs. 800 cows) and due to the fact that the hot season use would be spread over a much larger area by splitting the hot season use between Idaho Canyon and the Warm Springs pastures. But the impacts (albeit lessened) would be spread to additional isolated springs in the Warm Springs

#### 4.2.12 Vegetation

The No Action Alternative provides alternate yearly critical growth season rest in the Warm Springs and Idaho Canyon Use Areas. The remaining use areas are grazed before or after the critical growth period. Under the No Action Alternative, vegetation conditions would improve by increasing vigor, productivity, cover, and establishment of seedlings. The implementation of the No Action Alternative would maintain or improve vegetation conditions.

The No Action Alternative required construction of the Desert Dace Exclosure, Colman/County Road and Idaho Canyon Fences. The visual impacts of these projects were analyzed individually in project specific Environmental Assessments. Construction of these projects has been completed.

#### 4.2.14 Wild Horses and Burros

The potential for exploitative competition between livestock and wild horses/burros regarding habitat (forage, water, space) would be less than the Proposed Action, but the impacts would be the same.

The No Action Alternative grazing system rotates fewer livestock (300 head initially) numbers in two summer Use Areas and more livestock (1,037 initially) in three winter use areas. The rotation system and livestock use periods correspond directly with wild horse seasonal movements into summer and winter habitats. However, the potential for forage and water competition in summer habitat is much less than in the Proposed Action due to much lower livestock numbers and shorter periods of use. Use in winter habitat is more dispersed (larger use areas) and less limited by water availability, thus the potential for habitat competition is less than the Proposed Action even though livestock numbers are higher.

The no action grazing system rests the Warm Springs and Idaho Canyon Use Areas from livestock grazing during the critical growth period every other year. This system removes the potential for summer and winter habitat competition between cattle and horses during that time. Indirect impacts include a potential increase in wild horse/burro body condition and health in those areas.

Impacts of the No Action Alternative on the Colman/County Road gate closure and maintenance of existing range improvements would be the same as the Proposed Action.

There would be no new fence developments or associated impacts to wild horses/burros in the No Action Alternative.

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#### 4.3.3 Migratory Birds

Elimination of livestock grazing under the No Livestock Grazing Alternative may result in improving ecological condition, resulting in an increase of grasses, forbs and shrubs. These vegetative components provide the diversity and structure that are important components of migratory bird habitat.

**Lahontan Cutthroat Trout** - Elimination of livestock grazing under the No Livestock Grazing Alternative would have little effect on Mahogany, Summer Camp and Snow Creeks since livestock grazing has already been excluded, except for prescriptive grazing, which would also be eliminated by the No Livestock Grazing Alternative.

Colman Creek, which is within the Colman Use Area, currently allows one month of grazing which would be eliminated under the No Livestock Grazing Alternative. With this alternative, only beneficial impacts would be expected for Colman Creek. Stuber (1985) found that trout populations often increased in response to the reduction or elimination of grazing. Platts and Rinne (1985) found that 16 out of 16 studies demonstrated benefits to the riparian zone from the elimination of grazing and trout populations had also increased in 12 of the 16 study sites.

#### 4.3.5 Water Quality

Elimination of livestock grazing under the No Livestock Grazing Alternative would remove potential impacts to riparian areas resulting in water quality approaching its natural potential. There could potentially be a reduced effect on the physical (sediment and temperature), biologic (bacteria and pathogens) and chemical (mainly via nutrient enrichment) components of water quality.

#### 4.3.7 Wilderness

Elimination of livestock grazing under the No Livestock Grazing Alternative would enhance the naturalness, solitude and primitive recreation opportunities provided by the Wilderness Areas. Vegetative communities would not be subject to livestock grazing, although wild horses/burros would continue to graze some areas within HMAs. Impacts associated with the sights and sounds of the livestock operations would be eliminated, potentially enhancing visitors' wilderness experience.

#### 4.3.9 Social Values and Economics

The No Livestock Grazing Alternative would have a considerable impact on the SMA permit holder. There could be an impact to the local economies of Gerlach and Humboldt County since these communities are somewhat dependent upon ranching and agriculture.

#### 4.3.10 Soils

Under the No Livestock Grazing Alternative the potential for soil erosion would be reduced thereby improving soil processes. Reduction in grazing should eventually result in establishing more perennial native grasses thereby reducing non-native annual species. This may reduce the potential for wildfires and subsequent soil erosion potential. Soil biological crusts should increase with improvements in the vegetation conditions.

Implementing the No Livestock Grazing Alternative would eliminate potential livestock grazing-related impacts to any special status species or their habitats. Elimination of livestock should result in maintaining or improving vegetative ecological condition. This would be especially true in riparian areas. As ecological condition improves, the health, vigor and abundance of native grasses, forbs and shrubs should increase. The probable increase in ecological condition should enhance habitat quality for all special status species.

#### 4.3.14 Wild Horses and Burros

Implementing the No Livestock Grazing Alternative would eliminate any potential livestock competition with horses/burros for forage or water. Indirect impacts include a potential increase in wild horse/burro body conditions and health throughout the year. The elimination of livestock grazing would result in the discontinued maintenance of water projects by the permittee. These projects would eventually fall into disrepair and become non-functional unless some other party assumed the maintenance responsibilities. Indirect impacts due to the potential loss of water projects may result in the redistribution and concentration of wild horses/burros on available water at riparian areas. Lack of fence maintenance may decrease the restriction of horse movement but could also increase the risk of animal injuries due to entanglement hazards unless the fencing was removed.

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Page 55 **Transportation and Access** – Past and present actions within the assessment area are supported by a transportation system which includes a network of roads. The county road is graveled and transects the allotment from the Sheldon Antelope Refuge in the north, approximately through the center of the allotment, to highway 34 west of Gerlach. Many of the roads in the area are either private, unimproved roads or dirt roads and two-tracks on public lands. Most of these roads have their origin in mining exploration and ranching access and few are regularly maintained.

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**Wild Horses and Burros** - Prior to the Wild Horses and Burros Act of 1971, horses and burros were unprotected and populations were managed by local ranchers. The 1994 Final Multiple Use Decision established current AMLs within the SMA. BLM management since 1971 includes periodic aerial counts and removal of wild horses and/or burros in order to maintain AMLs.

Annual herd recruitment rates range between 14 and 28%. Herd populations could double within three years, although recent fertility control treatments have slightly decreased annual recruitment rates. Removals are largely dependent on factors such as: adoption success (short-term holding capacities), capture success, litigation orders, and annual funding. Past removals have not been effective in maintaining population numbers within established AML ranges.

**Wildlife** - Bighorn sheep were reintroduced into the Black Rock Range in the early 1990s and LCT were reintroduced into Colman Creek in 1999. Bighorn sheep and LCT populations were augmented within the analysis area in 2003 and 2001, respectively.

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**No Livestock Grazing Alternative**

There should be an incremental improvement in ecological condition over an extended period of time which would allow for a decrease in the rate of spread of invasive, non-native species.

**No Livestock Grazing Alternative**

There should be an incremental improvement in ecological condition over an extended period of time at a rate faster than the Proposed Action. Improving ecological condition implies improving habitat condition.

**No Livestock Grazing Alternative**

There should be an incremental improvement in ecological condition over an extended period of time at a faster rate than the Proposed Action.

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5.3.6.1 Impacts from Past and Present Actions

Historical livestock grazing contributed to the gradual deterioration of watershed health until the passage of the Taylor Grazing Act in 1934. Until the passage of the Endangered Species Act (ESA) of 1973, few livestock management actions addressed special status species, which subsequently led to the imperilment of numerous species. Although conditions have improved since the 1930s, portions of the analysis area continue to have cumulative impacts to water resources and watersheds. These impacts are due primarily to concentrated livestock use in riparian areas, which reduces habitat diversity and quality needed to sustain aquatic organisms by altering stream channel morphology, increasing sediment loads, and altering the natural water quality characteristics within riparian areas. Other impacts are associated with recreational bathing, which have impacted the aquatic biota of hot springs within the analysis area. The NCA RMP and other grazing management actions within the analysis area will ensure the attainment of the SRH, thereby allowing for the gradual improvement of overall watershed conditions. The construction of the Desert Dace Exclosure, Colman/County Road and Idaho Canyon Fences eliminated livestock and wild horse/burro impacts to LCT and Desert Dace habitats. These fenced areas also protect habitat for other special status species.

#### 5.3.8.1 Impacts from Past and Present Actions

Competition between herds and/or with cattle when resources are limited due to environmental conditions (drought, severe winter) or over-stocking (number of livestock, Use Area, period of use, above AML) has periodically occurred with associated temporal impacts to animal/herd health and sustainability. Alterations in habitat use and movement patterns have occurred with the implementation of fences (allotment and pasture boundaries) and to a lesser degree with wildlife habitat exclosures. However, animals are highly adaptable and adjust to new use patterns within available habitat. Water developments have increased water quality and distribution.

#### **Proposed Action**

Exploitative competition with cattle for limited habitat components may occur, especially during periods of severe winters or drought. Wild horse movement in the Idaho Canyon Use Area would be restricted on all four sides (currently three) by the addition of the proposed fence north of Summit Lake. Winter entrapment of wild horses at high elevations may occur. Minor increase of hazards/restrictions impacts would be expected due to increase in fencing. Other impacts would be the same as stated in sections 5.3.8.1&2.

#### **No Livestock Grazing Alternative**

No exploitative competition with cattle for limited habitat would occur under this alternative. Improving ecological conditions increase wild horse/burro individual and herd health. Water availability may decrease with lack of improvement maintenance. Hazard impacts may increase while restriction impacts may decrease with lack of fence maintenance (unless fences are removed). Impacts related to recreation and fence removals would be the same as those stated in sections 5.3.8.1&2.

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### **6.2 Recommended Mitigations**

- 1  Construct a series of small drift fences along the Slumgullion Canyon Road if livestock drift into the Colman Use Area prior to the scheduled season of use (11/16-12/15, Proposed Action).
- 2  Strategically place gates where horse trails intersect the proposed fence line; flag new fencing so wild horses can see the new barrier (Proposed Action).
- 3  Maintain approved water improvements and keep water available to wild horses seasonally (outside of livestock use periods, Proposed Action, No Action Alternative).
- 4  Lock and administer access (to permittee and BLM staff) to water development valves to ensure water remains available to wild horses/burros (Proposed Action, No Action Alternative).
- 5  Tie back (open) allotment and/or pasture gates when livestock are not present (or present in adjoining allotments) to minimize impacts on the free-roaming nature of wild horses and burros (Proposed Action, No Action Alternative).
- 6  Consider constructing barriers at dispersed springs if unacceptable impacts occur (Proposed Action, No Action Alternative).
- 7  Project sites would be inventoried for two years after construction of the project. If noxious weeds are observed at the project site they would be treated by the permittee following approval by the BLM.

- 1 □ There is a range improvement project proposed for the SMA which would require an archaeological survey. If the project does encounter cultural resources vulnerable to the effects of livestock grazing, these impacts would be considered by BLM under the protocol agreement with the State Historic Preservation Office. Effects from range improvements on National Register eligible archaeological sites would be mitigated by using any one or a combination of the following measures: avoidance, protection measures (e.g., fencing), testing, or data recovery.