

DECISION RECORD

EA LOG No. OR-010-2003-02

Project Name: Coleman Rim Bighorn Sheep

Applicant: Lakeview BLM

Address: 1301 South G. Street
Lakeview, OR 97630

County: Lake

BLM Office: Lakeview District

Phone: 541/947-2177

Decision Record

Decision: The following is the decision of the Bureau:

To conduct prescribed burns, and habitat improvements along Coleman Rim for bighorn sheep habitat, watershed functions, improved ecosystem function and reduction of fuel loading along the rim, as described in EA # OR-010-2003-02, alternative 1. Western juniper trees will be mechanically or hand felled, limbed and/or girdled along several of the small intermittent stream drainages and around four springs. In addition to these areas juniper would be treated on several benches, shallow slopes and ridgetops along the rim.

Prescribed fire would be applied to some of these areas after the initial juniper cutting has been implemented and evaluated by an interdisciplinary team.

Implementation of the project will be initiated over the next ten years with areas being treated by priority designated by project leads and the IDT. The implementation will be completed during the time of year with the least amount of disturbance to wildlife and plants.

Rationale:

Implementation of Alternative 1, would be the best opportunity to reinstate fire as an ecological process within the Coleman Rim area. A reduction in the relatively high coverage of juniper is anticipated to result in a relative increase in native forbs, and grasses. The increase in native forbs, combined with the expected mosaic burn pattern, should result in more productivity and greater biodiversity in the rim area.

The other three alternatives considered were no action, cutting only and extensive mechanical and prescribed fire treatments. The cutting only alternative and extensive

mechanical and prescribed fire treatments were both eliminated during project evaluation, because they did not meet all the project objectives.

Identified mitigating measures which are included as a part of this decision address cultural resources and sensitive wildlife and plants. Mitigation will include avoidance of cultural resource areas, and avoiding areas with sensitive wildlife and plants if they will not respond positively to fire of juniper treatment.

This project is in conformance with applicable land use plans. The need to improve bighorn sheep habitat is consistent with the Warner Lakes Management Framework Plan 1983, Lakeview Proposed Resource Management Plan 2003, and Oregon Bighorn Sheep Management Plan 1992-1997. Watershed and ecosystem function improvement is supported by the Warner Lakes Management Framework Plan, Watershed Health Management Goal 1, and the Lakeview Proposed RMP, water resources/watershed health management goal 1, wildlife/wildlife habitat management goals 1 and 2, and forest and woodlands management goal 2.



Thomas E. Rasmunssen, Manager
Lakeview Resource Area

9/17/03
Date

Finding of No Significant Impact (FONSI)

For

Coleman Rim Bighorn Sheep

Environmental Assessment Number OR-010-2003-02

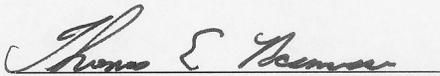
Lakeview District, Bureau of Land Management

The Bureau of Land Management proposes to conduct habitat restoration for bighorn sheep along Coleman Rim over a ten year timeframe. The purpose of this project is to provide improved habitat to bighorn sheep, restore watershed function, improve ecosystem function and reduce hazardous fuels along the rim.

Four alternatives were considered under the attached Environmental Assessment (EA). The Preferred Alternative, would involve a combination of mechanical and prescribed fire treatment to Western juniper to increase habitat, watershed and ecosystem function, and reduce fuel loadings along the rim. Under the No Action Alternative, no change in current management would occur, letting juniper continue to expand. Two other alternatives were considered and eliminated because they did not meet all the requirements of the purpose and need for action.

There would be no impacts to Research Natural Areas, prime and unique farmlands, flood plains, solid or hazardous waste, drinking or ground water quality concerns, wetlands, wild or scenic rivers, lands, energy or minerals, aquatic or fish communities, wilderness study areas, and ACEC's, low income or minority populations. Impacts to other resource values are discussed within the EA.

On the basis of the analysis contained in the attached EA and all other available information, it is my determination that none of the alternatives analyzed constitute a major federal action that would adversely impact the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared.



Thomas E. Rasmussen, Manager

Lakeview Resource Area

7/25/03

Date

Environmental Assessment
For
Coleman Rim Bighorn Sheep Habitat
EA No. OR-010-2003-02

SECTION 1. PURPOSE AND NEED FOR ACTION

Introduction:

This Environmental Assessment (EA) analyzes the effect of habitat restoration by reducing fuel loads within Bighorn Sheep habitat on Coleman Rim over the next ten years. Coleman Rim lies south of Highway 140, 15 miles southeast of Adel, Oregon. The project runs from Highway 140 in the north, south along the base of the rim to the Nevada border, east 3 miles to the top of the rim and north 8 miles back to Highway 140 at the top of the rim (See Map).

The proposed project area is comprised of broken rims and benches, with juniper, sagebrush and perennial grasses. The aspect of the rim is generally to the west while there are some smaller slopes that have north and south aspects. Elevations range from 4,480 feet in the valley to 6,800 feet at the highest points along the rim.

The project area is situated mostly on Bureau of Land Management (BLM) land with some private lands on the top of the rim. Willing private landowners within the project area boundary could be included in this project. The project area consists of 12,700 acres, of which 2,300 acres are juniper. There are 8 sixth-field watersheds within the project area making up 8,800 acres.

This EA will cover the following described legal locations: Township 40s, Range 25e, sections 13-15, 22-27, 34-36 and Township 41s, Range 25e, sections 1-3, 10-15, and 22-24.

Background:

In the mid-1800's, bighorn sheep (*Ovis c. californiana*) were one of the most abundant big game species in Oregon. Between 1.5 and 2 million animals roamed the mountains and desert rims. By 1915, bighorn sheep had been extirpated from southeastern Oregon, with the last known wild sheep in the Steen's Mountains. It is not clear how many bighorn sheep once inhabited Coleman Rim or exactly when they were extirpated, but they were once a common sight and probably existed in good numbers along the length of the rim. Present populations are the result of reintroductions and occupy only a small percentage of the historic range. Much of Oregon's historic bighorn habitat is not currently suitable because of long-term land use changes. For example, fire suppression

activities over the last 50-60 years have allowed conifers to encroach upon once “open” habitat, decreasing the suitability for bighorns (ODFW 1992). Highways have been constructed, and springs that were available in the past have dried up. These modifications have changed the way bighorns use the landscape in most areas. Bighorn sheep prefer rugged, open habitats which allow them high visual contact with their surroundings. Their survival is positively correlated with increasing amounts of cliffrock, rimrock and rocky outcroppings (ODFW 1992).

Bighorn sheep reintroduction in Oregon began on Hart Mountain in 1954. Bighorn sheep were reintroduced on Coleman Rim in 1991, with a successful transplant of 20 animals. Today there are roughly 60 sheep that inhabit Coleman Rim splitting their time between Nevada and Oregon. Coleman Rim was determined to be historic bighorn sheep habitat in the 1986 Oregon Bighorn Sheep Management Plan, compiled by Oregon Department of Fish and Wildlife (ODFW). Coleman Rim was also identified in the 2003 Oregon Bighorn Sheep Management Plan, to have supplemental release for genetic variation among the population in future years.

Juniper historically occurred on Coleman Rim. However, past management practices have contributed to expansion and stand densities (Eddleman 1991). The ICBEMP Implementation Strategy also supports the expansion of western juniper. The strategy says that historically .69% of juniper existed in upland woodland communities and the current area is now 2.35% (Quigley 1997). These changes are of concern because of loss of ground cover and forage, loss of biodiversity, increase in erosion, changes in hydrology, increasing intense wildfire risk and spread of invasive plants.

Water, food and adequate habitat do exist for sheep over most of the rim. Water is an essential requirement of bighorn sheep and in some cases could limit their distribution. Habitat improvements, such as spring development or guzzler installations have made some historic habitats suitable for bighorn reintroductions. Grasses are a staple of the bighorn’s diet throughout most of the year. Forbs and shrubs are of seasonal importance depending on type and availability. Within plant communities, fire can be used to remove dead, unpalatable remains and renew the growth and vigor of such plants, improving forage quality and quantity (ODFW 1992).

The expansion of western juniper and increasing tree densities have adversely impacted watershed function along Coleman Rim. As western juniper densities increase, less water is available to the watershed, biomass of understory vegetation is significantly reduced, and the diversity of wildlife and plant species declines (Wall et al. 2001). The decline of understory shrubs and grasses reduces water infiltration and increases erosion for the soil. This reduces the storage and release of precipitation.

Purpose and Need:

The purpose of the proposed action is to provide; improved habitat for bighorn sheep, restoration of watershed function, improved ecosystem function and reduce some of the fuel loading along the rim.

Plan Conformance

The need to improve bighorn sheep habitat is consistent with the Warner Lakes Management Framework Plan, wildlife goal 6, to improve and maintain bighorn sheep habitat and is also consistent with the Lakeview Proposed Resource Management Plan (RMP BLM 2003) Wildlife management goal 1, in which California bighorn sheep are listed as a special status species by the BLM. It is also consistent with the Oregon Bighorn Sheep Management Plan 1992-1997 compiled by ODFW, which states Coleman Rim as historic bighorn sheep habitat.

The BLM is responsible for land management and use such that biological, physical, and cultural resources are protected or improved over time (Taylor Grazing Act of 1934, Federal Land Policy and Management Act of 1976 (FLPMA), and Public Range Land Improvement Act of 1978). This proposed action is in conformance with the following land use plans: Warner Lakes Management Framework Plan (MFP) as amended (1983 and 1990), Lakeview Grazing Management FEIS and ROD (1982), and ICBEMP Implementation Strategy.

The need to improve watershed and ecosystem function is consistent with the Warner Lakes Watershed Management Plan, Watershed Health Management Goal 1 to protect or restore watershed function and processes which determine the appropriate rates of precipitation capture, storage and release. These are also consistent with the Lakeview Proposed RMP, Watershed Health Goal 1, in which the BLM will protect or restore watershed function and processes.

The need to reduce fuel loading along the face of the rim is consistent with the Lakeview Proposed RMP, Fire Management goal 3, in which the BLM will restore and maintain ecosystem consistent with land uses and historic fire regimes through wildland fire use, prescribed fire and other methods.

SECTION 2. PROPOSED ACTION AND ALTERNATIVES CONSIDERED

Alternatives Considered in Detail

Alternative 1 – Preferred Alternative

Selective Mechanical and Prescribed Fire Treatment

Under this alternative, western juniper would be hand felled, limbed and/or girdled along seven small intermittent streams or drainages and around four springs. In addition, western juniper would also be hand felled, limbed or girdled from several benches, shallow slopes and ridgetops along the rim. Most work would be accomplished on foot with hand tools and chainsaws, but mechanical cutting with machinery could be used in some places on gentle slopes away from springs, streams and other soil compaction zones. Work would only be completed on dry or frozen soils. Most of these areas would be along the top of the rim. No machinery would be allowed near streams or springs except to cross streams at points designated by the contract administrator. Junipers near springs and drainages would be felled away from the spring or drainage to keep them from clogging the stream channel. Juniper near springs and lower gradient vegetated channels would be felled into the habitat to protect the vegetation and stream channel and to provide additional sediment trapping capability.

All junipers would be cut in these areas except ones occurring on rocky outcrops and old growth trees which will be identified based on characteristic growth forms. Some trees could be left on the ground or standing for wildlife habitat and erosion control.

Prescribed fire would be applied into some of these areas after the initial juniper cutting has been implemented and evaluated by an interdisciplinary team (IDT). Benefits to intermittent drainages and springs from burning would be evaluated by this IDT and specific burn projects will be designed based on IDT recommendations. This includes any improvements in the riparian shrub community and channel processes. Seeding of native grasses, forbs, and shrubs would be undertaken if necessary, due to lack of natural seed source, after prescribed fire.

Areas with aspen or woody riparian shrubs would be excluded from livestock or wildlife grazing if necessary for recovery after fire. Current exclosures would be evaluated for effectiveness in protecting resource values after burning. Adjustment to exclosures would be made, if necessary for resource protection.

A small road located in Township 41S Range 25E section 15 is currently impassable. The road would be cleared with minimum mechanical work for use with this project. There are existing roads to each spring and through the valley that would be used, so no new roads would be constructed, although some improvements to the existing roads could be made.

Fire control lines would be constructed by hand or with the use of equipment where possible. Prescribed fire would be applied following current BLM policy and as described in this EA. Techniques for applying fire would include modifying ignition patterns to achieve a mosaic effect. Burning in a mosaic pattern would increase vegetative diversity, increasing both annual and perennial grass density while reducing the quantity of juniper. Cutting, girdling and limbing would allow managers to manipulate onsite fuels, ensure juniper mortality, and create favorable fuel conditions by allowing junipers to cure. Juniper would be cut selectively to facilitate meeting objectives.

Wildlife, cultural and sensitive plant clearances would be completed for each area prior to treatment. If cultural resources, sensitive wildlife or plants are found, those areas will be avoided or mitigating measures undertaken in order to avoid disturbance of those sites.

Alternative 2 – No Action:

Under this alternative, no change in current management activities would occur. Invasive western juniper would not be treated and continue to expand over the next decade along Coleman Rim. Fuel loads and risk of catastrophic wildfires would continue to increase.

Alternatives Considered and Eliminated

Cutting Only:

Under this alternative, junipers would be cut and left on the ground. There would be no prescribed burning completed at any time. This alternative was eliminated because it did not meet all of the criteria of the purpose and need. Leaving junipers could increase the chances of catastrophic wildfire in the future and would not improve erosion and soils as quickly as the proposed action. For bighorn sheep the downed and dead junipers might inhibit the use of the area more due to less open spaces and more cover for predators.

Extensive Mechanical and Prescribed Fire Treatment:

This alternative would include cutting and burning the majority of the rim. Under this alternative, patches would not be left for wildlife or soils. Plant communities would have to re-establish from existing seed sources, which could cause the spread of unwanted weeds, and the establishment of more juniper. This alternative was eliminated because it did not meet all the criteria established in the purpose and need for the project.

SECTION 3. AFFECTED ENVIRONMENT

Soil and Water and Riparian Resources

Soil Resources:

There is a variety of soils in the project area and they are derived from extensively interbedded basalt and tuff flows and in lesser amounts, volcanic ash. Coleman Rim is the result of the last major fault episode that resulted in fault-block mountain ranges. The parent material for the soil is derived from these flows. The climate in the project area has been cyclic during the past 15,000 years with wetter and drier cycles. This resulted in erosion and deposition of soil material and is evident in today's soil. In the project area the present climate is characterized by mesic or frigid soil temperature and aquatic, aridic, or xeric soil moisture regime.

The main characteristics of the soils in the project area (Table 1) which implementation of the project has the potential to affect, are susceptibility to erosion by water or wind, and permeability. Soils with a severe rating to water erosion would have higher rates of soil movement after ground disturbance including high intensity burns. Ground cover (vegetation and organic matter) and micro topography would decrease the distance soil moves down slope when soil movement occurs. Soils with slow permeability have higher surface runoff after snow melt. This combined with severe hazard of erosion by water rating increases the risk of surface erosion.

The following soil characteristics should be considered when planning the project: low available water capacity, low precipitation zone, cold soil temperatures, short growing season limiting the period of plant growth, site productivity and seedling survival. Soils with shallow depth class restrict rooting. Soils with high clay content expand when wet and contract when dry, which can rip and tear plant roots.

Water Resources:

The watersheds that drain off the western side of Coleman Rim encompass the project area. Within these small watersheds precipitation moves across the surface, infiltrates into the soils and some moves into the groundwater. The plant communities, soil types and geology determine how water moves through the system. The health of these watersheds has been changed due to an increase in western juniper (Eddleman 1991).

Precipitation is the main input of water to intermittent drainage channels and intermittent and perennial springs. The climate record for the area was recorded in Adel, Oregon. This area has cold winters and short warm summers with December, January and February having the lowest average daily minimums (22.0 to 24.6 degrees Fahrenheit) and July and August having the highest average daily maximum (86.4 to 87.9 degrees Fahrenheit). Average annual precipitation is 10.24 inches with snow making up about half of that. Thunderstorms can occur during the summer.

The surface drainages are steep debris torrent intermittent creeks. These channels have a large size range of bed material from boulders to fine sand. There is evidence that these channels have been reworked by multiple debris torrent events. These channels have relatively small watersheds that currently produce seasonal flows except for short distances which are fed by perennial springs.

The springs in the Coleman Rim area are fed by groundwater coming through the layered volcanic rocks. Some of the springs have seasonally intermittent flow which ranges from dry to a few gallons per minute. Five of these springs were part of an improvement project with the State of Oregon in the late sixties. At that time some were described as intermittent and the purpose of the project was to provide water for a longer period of time. In the case of Chuckar Spring there was no surface flow at the time of inspection in the late sixties. At the time, it was predicted the improvements would provide available water for about 5 to 8 months, February to August. At a site visit in May 2003 Chuckar Spring was flowing and the tank was full.

Riparian Resources:

The riparian vegetation which, is dependent on more water, is found along the channels and at springs. The channels support disturbance dependent species like alder, willows and other deciduous riparian shrubs. In channels with lower gradients there has been enough deposition to support some riparian grasses and grass-like species. Aspen stands are found in patches along the channels. The springs support more obligate wetland species including sedges, carex and rushes. These are associated with soils that are wet most of the year.

General Vegetation

The project area is dominated by Coleman Rim, a high west facing fault rising an average of 2,500 feet above the Coleman Valley. The upper slopes of the rim are dominated by high cliffs, talus slopes, and table areas. Vegetation on the upper slopes is sparse, with

perennial and annual grasses, low sage (*Artemisia arbuscula*), mountain big sage (*Artemisia tridentata vaseyana*) and juniper being the most common. On the upper ridges and slopes the primary vegetation is low sage. In the mid slopes in the deeper soils there is mountain big sagebrush along with junipers. The slopes have bluebunch wheatgrass (*Pseudoroegneria spicata*), needlegrass (*Stipa spp.*), and squirreltail (*Elymus elymoides*). Vegetation on the lower slopes of the rim is dominated by Wyoming big sage and at the very lowest parts, and in the flats is salt desert shrub habitat with some cheat grass (*Bromus tectorum*). In drainages there is Great Basin wildrye (*Leymus cinereus*), Chokecherry (*Prunus virginiana*), Aspen (*Populus tremuloides*), Alder (*Alnus incana*) Willow (*Salix spp.*), Gooseberry (*Ribes spp.*), Elderberry (*Sambucus spp.*), Squaw or Wax Current (*Ribes cereum*), and Wild Plum (*Prunus spp.*) Snowberry (*Symphoricarpos spp.*).

There are six different plant communities within the project area. These plant communities consist of 2,000 acres of Wyoming big sagebrush with an understory of cheat grass, 300 acres of shadscale with and understory of cheat grass, 1,400 acres of mountain big sagebrush with an understory of native perennial grasses, 4,200 acres are Wyoming big sagebrush with native perennial grasses, and 4,400 acres are low sagebrush with perennial grasses and 400 acres of rock outcrops (See Map).

Threatened, Endangered, and Sensitive Plants

There are no threatened or endangered plants within the project area. The project area has long-flowered snowberry (*Symphoricarpos longiflorusis*) in Township 40S Range 25E Section 34. Long-flowered snowberry is on the Bureau Assessment list and on the Oregon Natural Heritage Program List 2.

Noxious Weeds

Currently, no noxious weeds are known to occur in the project area. However, there are well established populations of Canada thistle (*Cirsium ravenis*), and halogeton, (*Halogeton glomeratus*) immediately west of the project area. Mediterranean sage (*Salvia aethiops*), Russian knapweed (*Acroptilon repens*), and white top (*Cardaria spp.*) immediately east of the project area.

Wildlife and Fish

Threatened/Endangered and Bureau Sensitive Species

Birds

Within the project area there is no nesting habitat for bald eagle (*Haliaeetus leucocephalus*) a federally threatened species. Bald eagles do however occasionally visit the area especially in the winter, and while foraging on road kill from Highway 140. The project area does have some habitat for peregrine falcon (*Falco peregrinus*), burrowing owl (*Speotyto cunicularia hypugaea*), and the ferruginous hawk (*Buteo regalis*) all Bureau Sensitive species. In 1999 there was a survey done for peregrine falcons, in

which none were located. There is marginal nesting habitat on cliffs for peregrines and they are occasionally spotted in the Warner Valley foraging. Burrowing owl habitat exists above the rim and none have been observed within the project area. Forage and nesting areas that do exist in the project are for ferruginous hawks, but none have been observed. Greater sage-grouse (*Centrocercus urophasianus phaios*) are a Bureau Assessment species. There is sage-grouse habitat on the rim consisting of low sagebrush for wintering and foraging, and mountain big sagebrush on the rim for nesting and brood rearing.

Mammals

Habitat for kit fox (*Vulpes macrotis*), a State Threatened species, exists within the project area. Pygmy rabbits (*Brachylagus idahoensis*), a Bureau Assessment species, have marginal habitat in the project area. Very little potential habitat exists because of the steep rocky terrain. No pygmy rabbits have been observed within the project area, but they have been observed adjacent to the project. California bighorn sheep are a special status species on the Bureau Tracking list.

General Wildlife

Coleman Rim supports a wide diversity of terrestrial wildlife including resident, migratory, and sensitive species. Numerous species of birds nest along the cliffs of the rim, including golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), great horned owl (*Bubo virginianus*), cliff swallows (*Petrochelidon pyrrhonota*), canyon wrens (*Catherpes mexicanus*), and rock wrens (*Salpinctes obsoletus*). Several species of ground and shrub nesters including greater sage grouse (*Centrocercus urophasianus*), chuckar (*Alectoris chukar*), sage thrasher (*Oreoscoptes montanus*), loggerhead shrike (*Lanius ludovicianus*), sage sparrow (*Amphispiza belli*), Brewer's sparrow (*Spizella breweri*), western meadowlark (*Sturnella neglecta*), horned lark (*Eremophila alpestris*), green-tailed towhee (*Pipilo chlorurus*), Brewer's blackbird (*Euphagus cyanocephalus*), brown-headed cowbird (*Molothrus ater*), black-billed magpie (*Pica pica*), and scrub jays (*Aphelocoma californica*).

Several species of mammals inhabit the rim. Some of these are pika (*Ochotona princeps*), black-tailed jackrabbits (*Lepus californicus*), Nuttall's cottontail (*Sylvilagus nuttallii*), coyote (*Canis latrans*), bobcat (*Felis rufus*), cougar (*Felis concolor*), badger (*Taxidea taxus*), long tailed weasel (*Mustela frenata*), mule deer (*Odocoileus hemionus*), and bighorn sheep. Several species of small mammals also inhabit the rim. These include several species of ground squirrels (*Spermophilus spp.*), voles (*Microtus spp.*), deer mice (*Peromyscus spp.*), kangaroo rats (*Dipodomys spp.*), and jumping mice (*Zapus spp.*).

The aspen stands and small riparian zones are a key habitat type for many species including cavity nesting birds and species that prefer deciduous forests.

Range Administration

There are three grazing allotments within the project boundaries. They are Chuckar Springs #214, Burro Springs #213, and Hill Camp #215. Allotment #214 Chuckar Springs is 1,887 acres of public land all of those acres falling within the project area. Chuckar springs is on a spring grazing system with 52 animal unit months (AUM's) available for livestock grazing. Allotment #213 Burro springs is 7,500 acres of public land with 1,973 acres falling within the project area. Burro springs is on a spring grazing system and has 279 AUM's available. Allotment #215 Hill camp is 30,790 public lands and 2,710 in other lands. It is made up of four pastures, two of which fall partially into the project area consisting of 8,682 acres. This allotment has a rest-rotation grazing system with 3,932 total AUM's for grazing. Rest-rotation seasons are spring, summer and fall.

Cultural Resources

The Coleman Rim area is within the historic territory of the Northern Paiute Tribes. The specific group which most probably used the area would be the Fort Bidwell Band of the Northern Paiute.

There are numerous known archaeological sites in the area including lithic scatters, campsites, village sites, rock art sites, stone ring sites, rock alignments, stone walls, rock cairns and burials.

Visual Resource Management

This project area falls into Visual Resource Management Class III. The objectives of class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

SECTION 4. ENVIRONMENTAL IMPACTS

Introduction

The following elements are either not present or would not be significantly affected by any of the alternatives being considered. They are: Research Natural Areas, prime and unique farmlands, flood plains, solid or hazardous waste, drinking and ground water quality, wetlands, wild and scenic rivers, lands and minerals, aquatic or fish communities, wilderness study areas, and ACEC's. There would be no impact to low income or minority populations.

ALTERNATIVE 1 - Preferred Alternative

Soil, Water and Riparian Resources

By eliminating some of the juniper along the rim basin water yield, soil surface cover, and infiltration could all increase. The removal of juniper would free up the onset and rate of transpiration for other plant communities that could potentially occupy sites that are presently juniper-dominated. Without junipers on a site other plant communities and soil would not have to compete as much for precipitation and light and nutrients (Eddleman 1991).

General Vegetation

Under this alternative, juniper and shrubs would be decreased. Upland grasses and forbs would increase without competition from juniper and woody shrubs. Riparian vegetation and riparian hardwood communities would increase due to lack of competition with juniper and increased water yield.

Threatened, Endangered, and Sensitive Plants

For this alternative, impacts to long-flowered snowberry would be minimized by mitigation or avoidance.

Noxious Weeds

Under this alternative, the potential for weeds to spread into the project area would increase. The existing weed populations immediately outside the project area are along roads. As vehicles move about to access work sites they could pick up seed from these roadside populations and spread weeds into the project area.

To reduce the risk of spreading weeds, existing sites along travel routes which access the project area would be treated and monitored. If possible, vehicles would be encouraged to access the project area via routes that are weed free. All equipment and vehicles would be washed prior to entering the project area. Any reseeding that occurs would be with certified weed free seed that has undergone an all states test.

Threatened/Endangered and Bureau Sensitive Species

There would be no negative impacts to any threatened, endangered or Bureau sensitive wildlife do to this project. Positive impacts would occur for bighorn sheep by reducing cover for predator and increasing available forage and water.

Wildlife

A mosaic burn pattern would provide increased edge effect for all wildlife habitat and would provide attritional forage for bighorn sheep, mule deer, pronghorn antelope through the release of understory forbs and grasses. The proposed project would lessen the impact of future wildfires and allow management to exploit the variables associated

with prescribed fire. The release of understory cool-season grasses and forbs would provide wintering deer with needed early spring green forage. Consultation was completed with the Oregon Department of Fish and Wildlife to minimize negative impacts to wintering mule deer and greater sage-grouse. Loss of some sagebrush habitat would impact sage-grouse in the short term, but long-term reduction in juniper density would provide a positive benefit to sage-grouse habitat. The prescribed burn would occur in the fall or late winter, which would avoid affecting nesting birds.

Species that prefer deciduous tree, riparian habitats and cavity nesters would benefit from this alternative. Species that prefer shrub habitats are going to decline in the short-term due to a reduction in shrubs. In the long-term, more shrubs would be available due to less competition with juniper. This would increase habitat for shrub-nesting species over the long-term. Habitat for many species of cliff nesting birds would not be impacted.

Most species of small mammals would be positively impacted by a reduction of western juniper due to an increase in available grasses and forbs.

The potential increase in water from this project would benefit many species in the dry desert environment. Some of the expected increase in ground cover would be from forbs and would improve diversity and edge effect for wildlife.

Range Administration

Under this alternative, each allotment or pasture that falls within the project area would be rested a minimum of two growing seasons after burning. All allotments within the project area would not be burnt at the same time. No reduction in AUM's would occur due to implementation of this project.

Cultural Resources

Cultural resource sites could be impacted by the felling of trees and the movement of people through the site area. Movement of equipment over sites could cause impacts to the sites. Areas with known cultural resources would be avoided.

Visual Resource Management

This alternative would cause moderate changes to the landscape characteristics and would partially retain the existing character of the landscape. This would meet VRM Class III objectives.

ALTERNATIVE 2 - No Action

Soil and Water

The physiological characteristics of individual juniper trees and the structural characteristics of juniper stands may cause decreased basin water yield, decreased soil

surface cover, and decreased infiltration. The onset and rate of transpiration in juniper stands may be early and high, especially relative to other plant communities that could potentially occupy sites that are presently juniper-dominated. Additionally, fast growth rates, dense canopies, and extensive root systems allow juniper to efficiently intercept precipitation and compete for light and nutrients (Eddleman 1991).

General Vegetation

Under this alternative, juniper would increase in number and density. Shrubs would decrease as juniper increases. Upland grasses and forbs would decrease with competition from juniper and woody shrubs. Riparian vegetation and riparian hardwood communities would not increase. As juniper density increases the risk of catastrophic wildfire would also increase. Intense summer wildfires would have greater impacts to vegetation than prescribed fire.

Threatened, Endangered, and Sensitive Plants

No threatened, endangered or sensitive plants would be affected by this alternative.

Noxious Weeds

Under this alternative, the potential for weeds to spread into the project area would remain the same as it is today. The existing weed populations immediately outside the project area are along roads. As vehicles travel the roads they could pick up seed from these populations and spread weeds into the project area.

Threatened/Endangered and Bureau Sensitive Species

There would be no impacts to any threatened, endangered or Bureau sensitive wildlife do to this project.

Wildlife and Fish

As juniper density continues to increase habitat for bighorn sheep, mule deer and pronghorn would continue to decline due to loss of forage. Loss of sagebrush habitat would continue impacting sage-grouse for both the short term and long term.

Species that prefer deciduous tree, riparian habitats and cavity nesters would not benefit from this alternative. Species that prefer shrub habitats would decline in both short-term and long-term due to a reduction in shrubs. Habitat for many species of cliff nesting birds would not be impacted.

Most species of small mammals would be negatively impacted as western juniper increases due to a decrease in availability in grasses and forbs.

There would be gradual decline in habitat diversity including loss of aspen, understory, forbs and grasses, and an increase of juniper and sagebrush. As juniper canopy closes,

aspen would be out-competed and die. Riparian areas would lose diversity as juniper out-competes it for resources. Those species that prefer aspen and riparian types would be adversely impacted and these scarce communities could be lost.

Range Administration

Under this alternative, no changes in current management practices would occur. Livestock forage would decline as juniper expands and out competes grasses, forbs, and shrub understory.

Cultural Resources

Under this alternative, there would not be any impact upon cultural resources.

Visual Resource Management

Under this alternative, the visual management class would not be affected.

Secondary, Indirect and Cumulative Impacts

No secondary, or indirect impacts are expected to occur from either of the alternatives listed above. If the no action alternative is selected, a cumulative impact from juniper expanding its range would occur over more than half of the bighorn sheep habitat on the Lakeview District.

SECTION 5. CONSULTATION AND PUBLIC INPUT

Public / Interagency Involvement

Oregon Department of Fish and Wildlife
Surprise Valley Field Office, BLM
Steve Beverlynn Salmon Field Office, BLM
The Klamath Tribes
Northern Paiute of Fort Bidwell

SECTION 6. PARTICIPATING INTERDISCIPLINARY STAFF

Ken Kestner	Supervisory Natural Resource Specialist
Bill Cannon	Archaeologist

		Community						
231G	Felcher	Bluebunch wheatgrass, antelope bitterbrush	Severe or very severe	Brown, very cobbly, clay loam	20 to 40 inches to bedrock	Well drained	Moderate, slow	4.0
162B and 163B	Mesman	Basin big sagebrush, Indian ricegrass, black greasewood, Basin wildrye, spiny hopsage	Slight, by wind moderate	Dark brown, fine, sandy loam	More than 60 inches to bedrock, or 20 to 40 inches to consolidate, compacted sediment	Well drained	Slow	2.0
158F	McConnel	Bluebunch wheatgrass, Thurber-needlegrass, Wyoming big sagebrush, epherdra	Severe	Dark yellowish brown, very gravely, sandy loam	Very deep, more than 60 inches to bedrock	Somewhat excessively drained	Moderately rapid over very rapid	2.0
185C	Old Camp	Thurber-needlegrass, Wyoming big sagebrush, Indian ricegrass, bottlebrush squirreltail, bluebunch wheatgrass	Moderate	Dark brown, very cobbly, loam	Shallow, 10 to 12 inches to bedrock	Well drained	Moderately slow	2.0
266E	Windhill	Shadscale, bud sagebrush, Indian ricegrass, bottlebrush squirreltail	Moderate or severe	Brown, very stony, loam	Moderately deep, 20 to 40 inches to bedrock	Well drained	Moderately slow	3.0
187C	Oreneva	Thurber-needlegrass, Sanberg bluegrass, Wyoming big sagebrush	Slight or moderate	Dark brown, very gravely, loam	Moderately deep, 20 to 40 inches to bedrock	Well drained	Moderately slow	3.0
91F	Westbutte	Idaho fescue, bluebunch wheatgrass,	Severe	Very dark grayish brown,	Very deep,	Well	Moderate	3.0

		mountain big sagebrush, Basin wildrye		extremely stony, loam	more than 60 inches to bedrock	drained		
Map Unit	ESI Soil Series	Dominant Vegetation in Potential Plant Community	Hazard of Erosion by Water	Surface Profile	Depth Class (inches)	Drainage Class	Permeability	SRI Available Water Capacity (inches)
9C	Blizzard	Idaho fescue, low sagebrush, bluebunch wheatgrass	Moderate	Dark brown, cobbly, loam	Shallow, 10 to 12 inches to bedrock, or very shallow, 1 to 4 inches to claypan	Well drained	Slow	2.0
96C	Frexnik	Sanberg bluegrass, low sagebrush	Moderate	Dark yellowish brown clay	Moderately deep, 20 to 40 inches to bedrock, or very shallow, 1 to 4 inches to claypan	Well drained	Upper 3 inches moderate, below 3 inches slow	5.0
173A	Swalesilver	Silver sagebrush, Nevada bluegrass, creeping wildrye	Slight	Very dark gray, loam	Very deep, more than 60 inches to bedrock, or very shallow, 1 to 10 inches to claypan	Somewhat poorly drained	Upper 9 inches moderate, 9 to 24 inches very slow	5.0
263F	Ninemile	Idaho fescue, low sagebrush, bluebunch wheatgrass	Severe	Dark brown, very cobbly, loam	Shallow, 10 to 12 inches to bedrock, or very shallow, 3 to 7 inches to claypan	Well drained	Very slow	2.0
104E	Harcany	Idaho fescue, Thurber-needlegrass, mountain big sagebrush, mountain big sagebrush, bluebunch	Severe	Very dark brown, very cobbly,	Very deep to bedrock	Well drained	Moderate	4.0

		wheatgrass		loam				
68C	Diaz	Indian ricegrass, Thurber- needlegrass, needleandthread, Wyoming big sagebrush	Moderate	Dark brown, very cobbly, loam	Moderately deep, 20 to 40 inches to bedrock	Well drained	Slow	4.0
	Rock outcrop- Rubble land							

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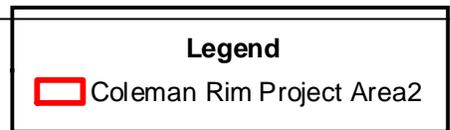
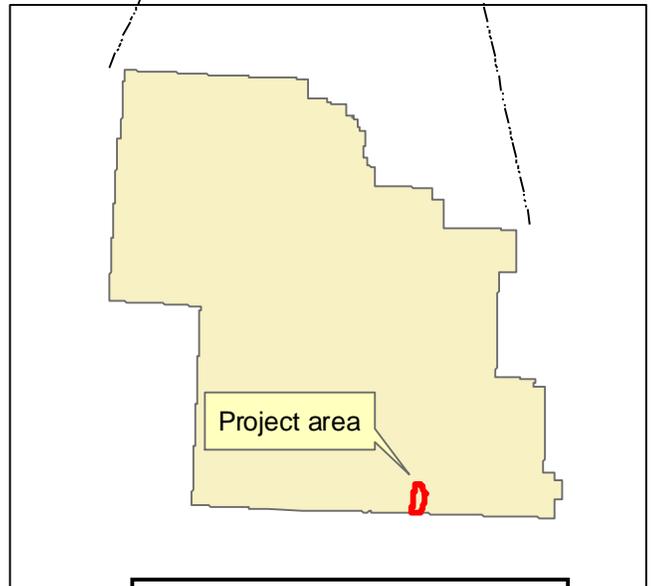
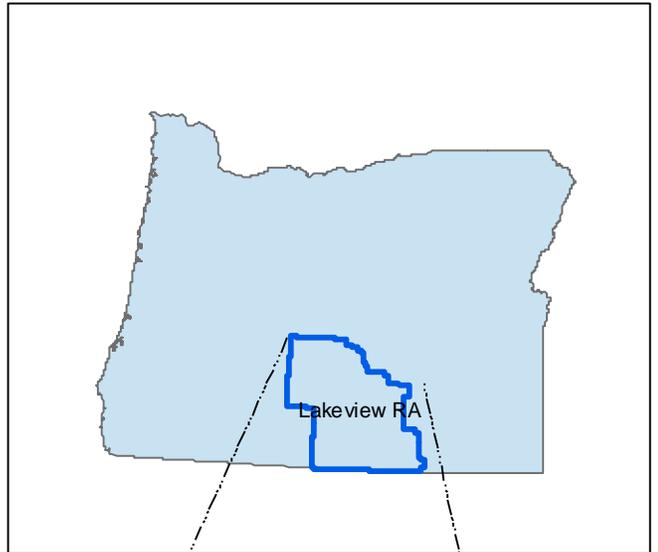
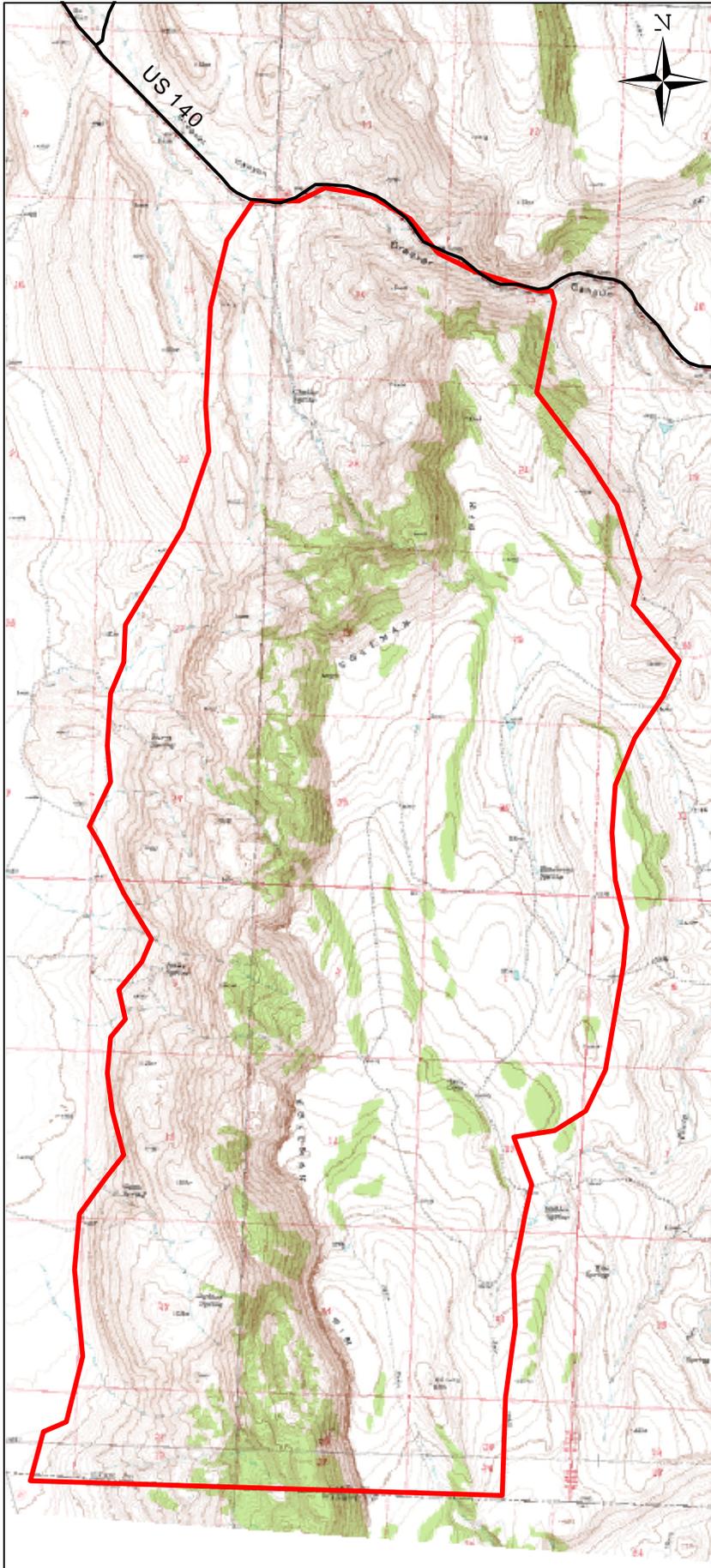
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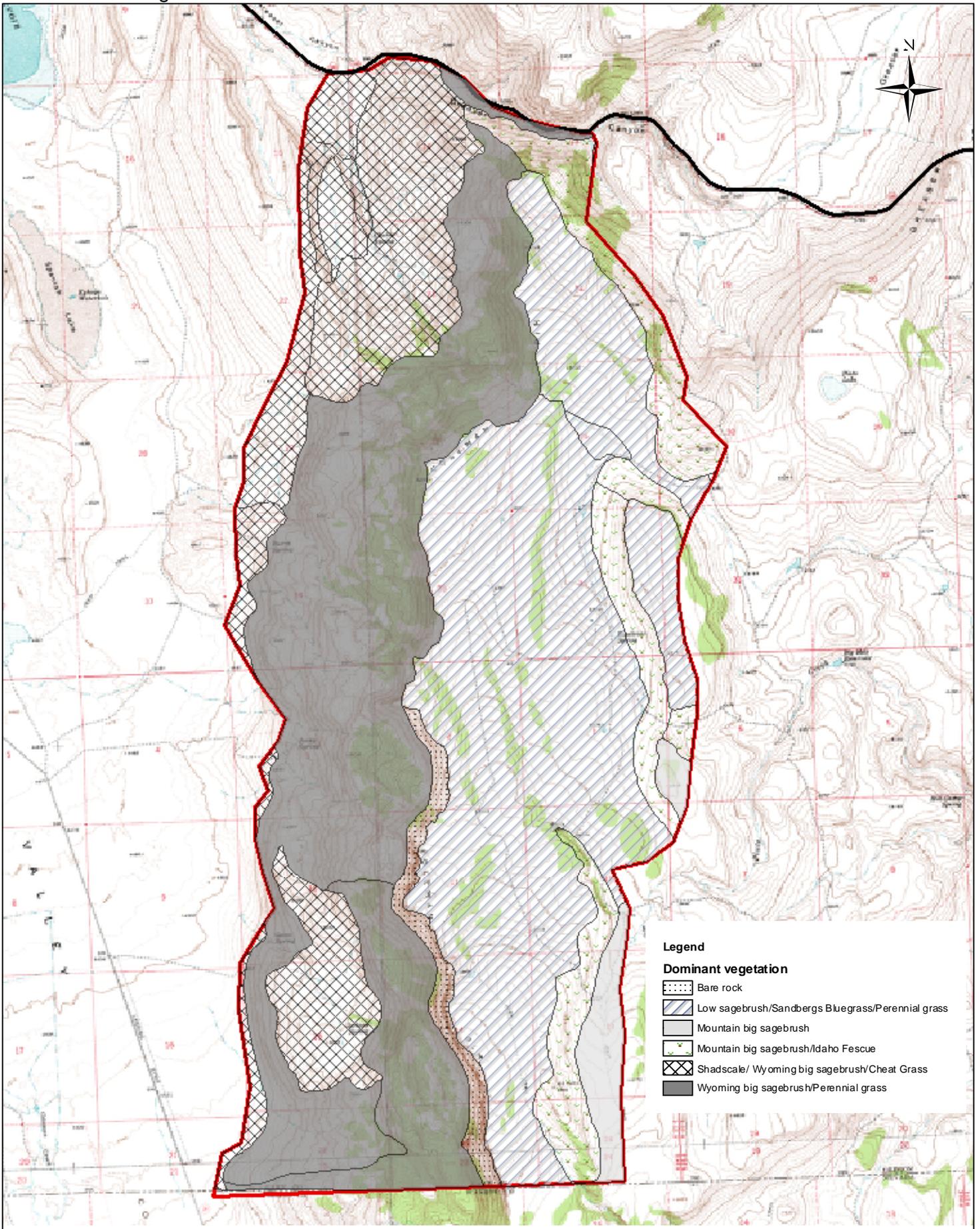
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Coleman Rim Bighorn Sheep Project



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Coleman Rim Vegetation



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