Rangeland Health Standards Assessment

Allotment #508 FFR
Allotment #509 Cox Butte
Allotment #510 Orijana Rim

Allotment Overviews:

Allotment #508 FFR

Allotment boundaries: refer to attached map.
7.5 Minute Topographic Maps: Balls Lake, Orejana Canyon, Duhaime Flat West, and Clover Swale.
AUMs of Authorized Use: Active Preference is 9 AUMs.
Permitted Season: Spring 03/01-02/28 Custodial Grazing
Allotment Category: C

Allotment #508 FFR is located within the Orejana Rim allotment on the eastern edge of the Lakeview Resource Area. North of the Hart Mountain Antelope Refuge. This allotment (280 public acres) is primarily private property owed and managed by the Rock Creek Ranch. BLM portions of the allotment are primarily native range lands with the remaining private consisting of crested wheatgrass (Agropyron cristatum).
Forage production potential is moderate to high. Forage production rates in 1982 were estimated at 31.1 acres/AUM and the potential with proper management and development as high.
No serious conflicts or controversy exist.
Opportunity for additional forage development is possible, but would have to be correlated with private lands.
Present management is the only logical practice.

Allotment #509 Cox Butte

Allotment boundaries: refer to attached map
7.5 Minute Topographic Maps: Murphy Waterhole, Sixmile Draw.
AUMs of Authorized Use: Active Preference is 1196 AUMs.
Permitted Season: Spring, Summer, Fall 03/15-10/20.
Allotment category: I

Cox Butte Allotment is located on the eastern border of the Lakeview Resource Area between the Hart Mountain Antelope Refuge and the Burns Resource Area. The allotment consists of one large pasture (38,340 acres). No perimeter fence exists on the eastern allotment boundary separating the Lakeview and Burns Resource Areas.

Allotment #510 Orejana Rim

Allotment boundaries: refer to attached map
7.5 Minute Topographic Maps: Steam Boat Point, Orejana Canyon, Rock Camp Draw, Balls Lake, Clover Swale, and Duhaime Flat West.
AUMs of Authorized Use: Active Preference is 1088 AUMs for Rock Creek Ranch and 331 AUMs for Warren Laird.
Permitted Season: Spring, Summer, Fall. Rock Creek Ranch period of use 04/01 to 10/31 Warren Laird period of use 04/16 to 06/27.
Allotment category: I

The Orejana Rim Allotment is located in Harney County, just north of the Hart Mountain National Antelope Refuge and is on the eastern boundary of the Lakeview Resource Area. The allotment consists of one large pasture (57,280 acres) and is grazed in common by the Rock Creek Ranch and Warren Laird from April through October. Orejana Rim forms the western boundary of the allotment and two large canyons, Orejana and Buckhorn Canyons bisect the allotment. No fence exists along the eastern boundary of the allotment between the Burns and Lakeview Resource Areas. The Orejana Wilderness Study Area is located within the western third of the allotment.

STANDARD 1- Upland Watershed- Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and land form.

This standard is being met in all three allotments.

Indicators used to evaluate this standard are Soil Surface Factor (SSF), which documents erosion class and soil susceptibility to accelerated erosion; and plant community composition, which indicates the root capacity of the soil profile.

Soil Surface Factor is used to determine soil erosion condition. Soil Surface Factors used to in the rating process are: soil movement, surface litter, surface rock, pedestalling, flow patterns, rills and gullies. Each factor is allotted points according to erosion conditions and the points totaled. Erosion condition classes are assigned based on a 0-100 scale. The following classes where used:

Erosion condition class	Points
Stable	0-20
Slight	21-40
Moderate	41-60
Critical	61-80
Severe	81-100

The following tables summarize the Ecological Site Inventory (ESI) data rating the SSF by acre within each allotment.

Allotment #508 FFR (public and private acres combined)

Erosion Condition Class	Acres
Stable	0
Slight	686
Moderate	34
Critical	0
Severe	0
Unknown Inclusions within SWA	12
Not rated	13

Allotment #509 Cox Butte

Erosion Condition Class	Acres
Stable	4,967
Slight	23,367
Moderate	101
Critical	0
Severe	0
Unknown Inclusions within SWA	4,702
Not rated	5,203

Allotment #510 Orejana

Erosion Condition Class	Acres
Stable	26,730
Slight	19,555
Moderate	5,475
Critical	216
Severe	0
Unknown Inclusions within SWA	4,614
Not rated	690

The second factor used to evaluate Standard one is plant community composition, which indicates root occupancy of the soil profile.

Plant community composition by allotment:

Allotment #508 FFR
Public land within this allotment is primarily steep side slopes or rocky flats associated with the top of benches. Plant communities consist of native perennial grasses, shrubs, and forbs. Plant associations present within the allotment are primarily sagebrush/steppe; no juniper is present within the allotment. Species composition includes a variety of native deep rooted species well distributed throughout the allotment including Wyoming big sagebrush (Artemisia tridentate wyomingensis), Low sagebrush (Artemisia arbuscula), Green rabbitbrush (Chrysothamnus viscidiflorus), Basin wildrye (Leymus cinereus), Sandberg bluegrass (Poa secunda), Bluebunch wheatgrass (Pseudoroegneria spicata spicata), Idaho fescue (Festuca idahoensis), June grass (Koeleria cristata),and Thurber needlegrass (Stipa thurberiana). Cheatgrass (Bromus tectorum) is present in small amounts primarily at the base of steep slopes and associated bottomlands on private property.

Native forbs include: *Antennaria dimporpha, Astragalus* sp., *Balsamorhiza sagittata, Collinsia parviflora, Collomia* sp., *Crepis* sp., *Epilobium* sp., *Erigeron linearis, Eriogonum ovalifolium, Leptodactylon pungens, Lygodesmia spinosa, Lomatium* sp., *Lupinus* sp., *Mertensia* sp., *Penstemon* sp., *Phlox* sp., *Ranunculus glaberrimus* var. *glaberrimus*, and *Viola beckwithii.*

Noxious weeds: There are no known noxious weeds present in the allotment at this time.

Allotment #509 Cox Butte
This allotment consists of rolling hills and large flats dominated by sagebrush/steppe communities. Plant communities consist of native perennial grasses, shrubs, and forbs. No juniper is present within the allotment. Allotment 509 is vegetatively dominated by *Artemesia tridentata* with a sparse under story of *Sitanion hystrix*. The allotment is much drier than Allotment 510 resulting in a lower abundance of grasses within the under story. Dryer conditions coupled with continued fire exclusion has led to a static state within the allotment- sagebrush is mostly old and decadent with few native grasses present in the under story. Species composition includes Wyoming big sagebrush, Low sagebrush, Green rabbitbrush, Horsebrush (Tetradymia spinosa), Basin wildrye, sandberg bluegrass, Bluebunch wheatgrass, Thurber needlegrass, Bottlebrush squirreltail (Sitanion hystrix), Western wheatgrass (Pascopyrum smithii), Indian ricegrass (Oryzopsis hymenoides), junegrass (Koeleria pyramidata), Silver sagebrush (Artemisia cana), and Spiny hopsage (Grayia spinosa). Non-native plants noted include *Ranunculus testiculatus*, *Bromus tectorum, and Lepidium perfoliatum*

Native forbs include: *Allium* sp., *Camissonia tanacetifolia, Collinsia parviflora, Crepis* sp., *Delphinium* sp., *Epilobium* sp., *Erigeron linearis, Erigeron bloomeri, Eriogonum ovalifolium, Lomatium* sp., and *Penstemon* sp.

Noxious weeds: There are no known noxious weeds present in the allotment at this time.

Allotment #510 Orejana
This allotment consist of rolling hills and large flats bisected by deep canyons. Plant communities are primarily sagebrush/steppe. No juniper is present within the allotment. The plant community composition is diverse and thriving, with an exceptionally low level of non-native cheatgrass (*Bromus tectorum*). A few other non-native plants, such as *Ranunculus testiculatus* and *Lepidium perfoliatum,* are also present. Plant communities consist of native perennial grasses, shrubs, and forbs. Species composition includes a variety of native deep rooted species well distributed throughout the allotment including Wyoming big sagebrush, Low sagebrush, Currant (Ribes spp.), Basin wildrye, sandberg bluegrass, Bluebunch wheatgrass, Thurber needlegrass, Bottlebrush squirreltail, Western wheatgrass, Junegrass, Indian ricegrass, and Silver sagebrush.

Forbs include *Balsamorhiza* sp., *Camassonia tanacetifolia, Collomia parviflora, Crepis* sp., *Delphinium andersonii, Dodecatheon* sp., *Eriogonum ovalifolium, Hesperichiron californicus, Lomatium* ssp., *Lupinus* sp., *Phlox hoodii, Phoenicaulis cheiranthoides, Potentilla* sp., *Ranunculus glaberrimus* var. *ellipticus, Ranunculus glaberrimus* var. *glaberrimus,* and *Viola* sp. Shrubs include *Artemesia arbuscula, Artemesia cana, Artemesia tridentata, Chrysothamnus viscidiflorus.* Biological soil crusts are also present, which may be a good indicator of soil health.

Noxious weeds: There are no known noxious weeds present in the allotment at this time.

Grazing Management

Allotment #508 FFR
No Actual Use documents exist in file. Active Preference for allotment is 31 acres/AUM.

Allotment #509 Cox Butte
No fence exists along the entire east side of the allotment. Stocking rate is 32 acres/AUM. Grazing system consists of herding. Cattle are turned out in spring generally mid April to late June depending on green up and feed availability. Stock water is limiting and consists of waterholes dug in playas throughout the allotment. As forage reaches utilization levels or water sources dry up cattle are herded to different locations within the allotment to take advantage of ungrazed portions and water sources. Cattle are taken off allotment in mid to late October. Wild horse use has been increasing in recent years. Cox Butte is not in a designated Herd Management Area (HMA). Nineteen wild horses were observed at two different waterholes during the field tour for the Rangeland Health Standards Assessment. Up to 31 wild horses have been observed at one time within the allotment by permittee in the past year.

Allotment #510 Orejana
No fence exists along the entire east side of the allotment. Drift fences along the western side of the allotment at present are non-functioning and will be rebuilt in 2003. Stocking rate is 40 acres/AUM and grazing system consists of herding (refer to description of grazing Cox Butte Allotment).

STANDARD 2- Riparian-wetland areas are in properly functioning physical conditions appropriate to soil, climate, and landform.

This standard is being met in all three allotments.

No areas classified as riparian-wetland areas occur in allotment 508. Water sources are from wells or waterholes associated with playas. There are 334 acres of palustrine wetlands in allotment 509 (Cox Butte), all in Proper Functioning Condition, and 422 acres of palustrine wetlands in the Orejana Rim allotment in Proper Functioning Condition. Canyons within the Orejana allotment may also flow water for short periods of time during spring runoff, but no riparian vegetation is associated with these features.

STANDARD 3- Healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate, and landform are supported by ecological processes of nutrient cycling, energy flow and the hydrologic cycle.

This standard is being met in all three allotments.

Indicators used to evaluate this standard include vegetative composition (refer to plant community composition by allotment in Standard 1), ecological status, observed apparent trend (OAT), and current plant composition as compared to a defined Potential Natural Community (PNC) for the identified soil type and precipitation zone. This information is taken from EIS data Lak 1, Lak 2, and BNS 3. Acreage not listed in a seral stage is unknown and represents inclusions within vegetative communities, transition zones, and plant communities too small to be mapped.

Table #1 Ecological Status based on total percentage of climax species

Allotment	Acres of Allotment at seral stage				% of Allotment at seral stage			
	Early	Mid	Late	PNC	Early	Mid	Late	PNC
#508 FFR	0	538	194	0	0	73%	27%	0
#509 Cox Butte	9911	23215	0	0	25%	60%	0	0
#510 Orejana	2481	41497	8878	323	4%	72%	15%	.6%

Table #2 Observed Apparent Trend (acres)

Allotment	OAT		
	Downward	Static	Upward
#508 FFR	34	434	252
#509 Cox Butte	5584	27481	0
#510 Orejana	19709	25473	7783

Frequency data collected from established plots in both the Orejana and Cox Butte allotments show a static state within these plant communities over the past 18 years from 1985 to 2003. Ecological status indicates the majority of plant communities within the three allotments are in mid to late seral stage. Cox Butte and Orejana Allotment plant communities are dominated with Mountain Big Sagebrush. Most sagebrush is old and decadent due to lack of fire. As stands of sagebrush mature and fire exclusion is continued the native herbaceous under story will continue to decline, eventually reaching the point of total dominance by sage brush with little to no native grass in the under story. Much of the Cox Butte Allotment is presently in this condition- old decadent sagebrush with little to no herbaceous under story in contrast to the Orejana Allotment consisting of mature sagebrush with a healthy herbaceous under story. At some point in time wild fire will occur within these allotments and the affected plant communities could possibly be converted to cheat grass dominated range due to lack of native grass present to reclaim the site. As stated above the active preference for the Cox Butte Allotment is 32 acres/AUM, and 40 acres/AUM in the Orejana Allotment. Utilization in both the Cox Butte and Orejana Allotments indicates light to moderate use. No utilization data exists for Allotment #508. Wild horse use is also factor in the downward trend within the Cox Butte Allotment. Wild horse use in not managed and results in year around grazing primarily around water sources. As stated above 31 wild horses have been observed in the Cox Butte-Guano Lake area in the last year by the permittee.

I would propose some type of sagebrush manipulation in both the Orejana and Cox Butte Allotments. Manipulations of the sagebrush communities will diversify the age classes of sagebrush stands and release the native under story allowing new grasses and forbs to establish while maintaining the existing native herbaceous plant communities. At this point in time the Orejana Allotment has a sufficient under story of native grasses and forbs that would benefit from prescribed fire. Intervention at this point would have a high potential for success and positive returns. Within the Cox Butte Allotment wildfire would not be a preferred method of sagebrush control. Sagebrush has out competed the herbaceous under story to the point that native grasses would not be able to hold the site from noxious weed infestations, primarily cheat grass after burning. Other methods of

sagebrush manipulation such as brush beating might be successful within the Cox Butte Allotment.

STANDARD 4- Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.

This standard is not applicable to these allotments because there are no perennial stream areas that would be guided by State water quality standards.

STANDARD 5- Native, T&E, and locally important species. Habitats support healthy, productive and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate and landform.

This standard is being met in all three allotments.

The deer and pronghorn populations are healthy and increasing in number within the allotment. Habitat quantity and quality do not appear to be limiting population size or health. Coyote predation is thought to be depressing mule deer recruitment, however, deer and pronghorn populations continue to fluctuate at or slightly below ODFW's Management Objective for the unit.
The allotment also provides habitat for numerous small and nongame birds and mammals common to the Great Basin, as well as, sage grouse and California bighorn sheep habitat. There are 6 - 8 known sage grouse leks found within the Cox Butte allotment. Sage grouse populations like the rest of southeastern Oregon are stable. The allotment also provides habitat for raptors and some BLM and state sensitive wildlife species and federally listed species. No critical habitat or limitations have been identified for any of these species which include wintering bald eagles, and possibly pygmy rabbits and various sensitive bat species.

Allotment #508 FFR
Native Plant Species: *Agropyron spicatum (Pseudoroegneria spicata), Antennaria dimporpha, Artemesia arbuscula, Artemesia tridentata, Astragalus* sp., *Balsamorhiza sagittata, Chrysothamnus viscidiflorus, Collinsia parviflora, Collomia* sp., *Crepis* sp., *Elymus cinereus, Epilobium* sp., *Ericameria nauseosus, Erigeron linearis, Eriogonum ovalifolium, Koeleria cristata, Leptodactylon pungens, Lygodesmia spinosa, Lomatium* sp., *Lupinus* sp., *Mertensia* sp., *Penstemon* sp., *Phlox* sp., *Poa secunda, Ranunculus glaberrimus* var. *glaberrimus, Stipa thurberiana, Symphoricarpos* sp., and *Viola beckwithii.*
Special Status Plants: None found, none suspected.
Locally Important Plant Species: *Lomatium* sp., *Symphoricarpos* sp. are known to have cultural purposes.

Allotment 509 Cox Butte
Native Plant Species: *Agropyron spicatum*, *Allium* sp., Antennaria dimorpha, *Artemesia arbuscula*, *Artemesia tridentata*, *Astragalus* sp., *Atriplex spinosa*, *Camissonia tanacetifolia*, *Chyrothamnus viscidiflorus*, *Collinsia parviflora*, *Crepis* sp., *Delphinium* sp., *Epilobium* sp., *Erigeron linearis*, *Erigeron bloomeri*, *Eriogonum ovalifolium*, *Lomatium* sp., *Penstemon* sp., and *Tetradymia canescens*.
Special Status Plants: None found, none suspected.
Locally Important Plant Species: *Lomatium* sp.

Allotment #510 Orejana
Native Plant Species: *Agropyron smithii*, *Agropyron spicatum*, *Artemesia arbuscula*, *Artemesia cana*, *Artemesia tridentata*, *Balsamorhiza* sp., *Camassonia tanacetifolia*, *Chrysothamnus viscidiflorus*, *Collomia parviflora*, *Crepis sp.*, *Delphinium andersonii*, *Elymus cinereus*, *Eriogonum ovalifolium*, *Hesperichiron californicus*, *Lomatium* ssp., *Lupinus* sp., *Oryzopsis hymenoides*, *Phlox hoodii*, *Phoenicaulis cheiranthoides*, *Poa secunda*, *Potentilla* sp., *Ranunculus glaberrimus* var. *ellipticus*, *Ranunculus glaberrimus* var. *glaberrimus*, *Sitanion hystrix*, *Stipa thurberiana*, *Viola* sp.
Special Status Plants: None found, none suspected.
Locally Important Plant Species: Cultural plants found include *Lomatium* ssp.

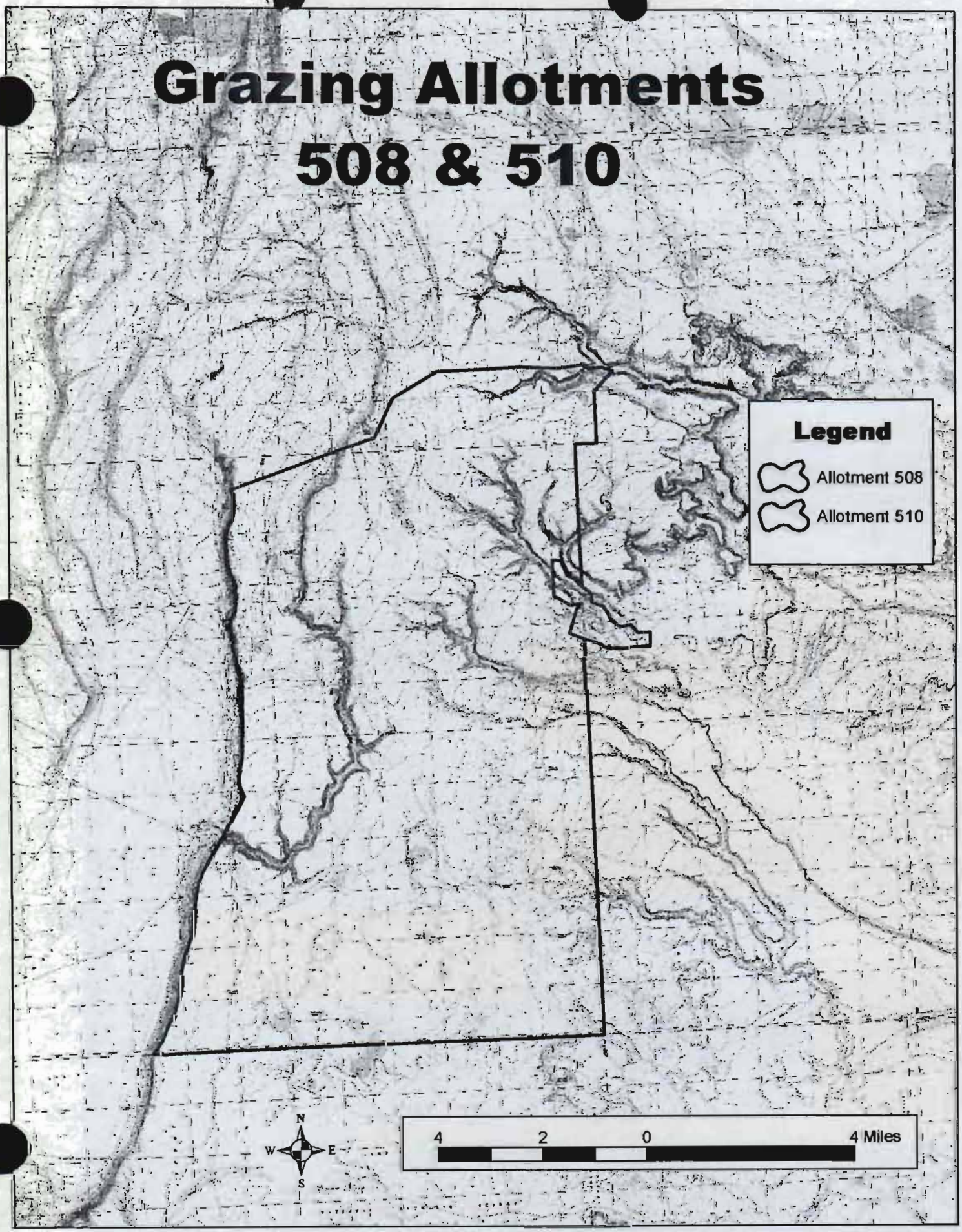
Team Members	**Title**
Lance Okeson	Rangeland Management Specialist
Vern Stofleth	Wildlife Biologist
Heather Partipilo	Botanist
Erin McConnell	Weed Management Specialist
Robert Hopper	Supervisory RMS
Ken Kestner	Supervisory NRS

Determination

(X) Existing grazing management practices or levels of grazing use on the 508,509, and 510 Allotments promote achievement of significant progress toward the Oregon Standards and Guidelines for Rangeland Health and conform with the Guidelines for Livestock grazing Management.

( ) Existing grazing management practices or levels of grazing use on the 508, 509, and 510 Allotments will require modification or change prior to the next grazing season to promote achievement of the Oregon standards and Guidelines for Livestock Grazing Management.

Field Manager, Lakeview Resource Area — Date 8/21/02


Grazing Allotments
508 & 510
Legend
Allotment 508
Allotment 510
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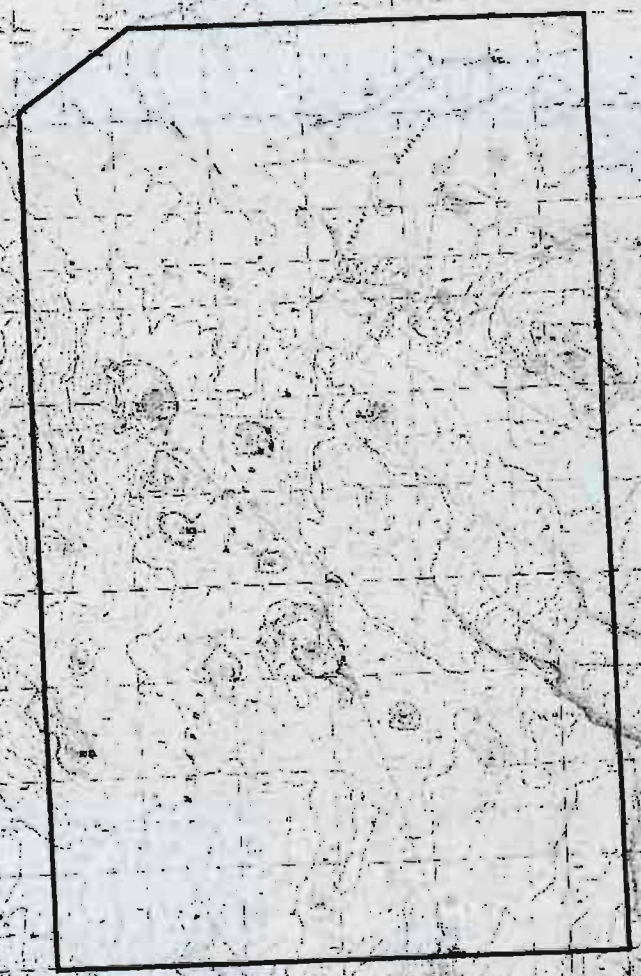
Grazing Allotment 509



Legend

Allotment 509

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