

Standards for Rangeland Health
and
Guidelines for Livestock Grazing Management
for
Public Lands in Oregon and Washington

Rangeland Health Assessment Update
for the
Rim Allotment #00210

March 2016
Signed 11/7/2016

The Rim Allotment (#00210) is located approximately 6 miles south of Adel, Oregon, on the west side of County Road 3-14, on the east-facing slope of South Warner Rim. The Rim allotment contains about 1,550 acres of public land and 706 acre of private land for a total of 2,256 acres. The allotment is categorized as an “M” or Maintain allotment.

The allotment consists of one pasture with a total of 39 AUMs of authorized forage use on public lands grazed under one permit. The current management is spring (April-May) grazing use.

The original Rim Allotment Rangeland Health Assessment (RHA) was conducted in 2002. The allotment met all 5 standards. There are three long term trend study plots located in the allotment. A summary of the 2002 rangeland health assessment (RHA) and an updated assessment is shown in Table 1.

Table 1. Summary of Rangeland Health Assessments for Rim Allotment

Standard	2002	2016	Comments
<p>1. Watershed Function – Uplands</p> <p>Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform</p>	Met	Met	<p>The 2002 RHA found upland soils in the allotment exhibited infiltration and permeability rates, moisture storage, and stability appropriate for soil, climate, and land form. Root occupancy for the soil was appropriate.</p> <p>In 2016 an analysis of the existing data including the Ecological Site Inventory (ESI), use supervision visits, and Trend Plot Photos determined Standard 1 was still being met.</p>
<p>2. Watershed Function Riparian/ Wetland Areas</p> <p>Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.</p>	N/A	N/A	<p>There are no perennial streams in the allotment. In addition, there are no intermittent streams that support riparian vegetation on BLM-administered lands in this allotment. This standard is currently not applicable to the allotment.</p>

<p>3. Ecological Processes</p> <p>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.</p>	Met	Met	<p>The 2002 RHA found this standard was partially met. The upper slopes of the allotment contained healthy, productive and diverse plant and animal populations and communities that were supported by ecological processes of nutrient cycling, energy flow and the hydrologic cycle. The lower elevations of the allotment contained stands of introduced annual, cheatgrass. The ID team felt current livestock grazing was not the cause of this cheatgrass and it would take a major input of resources to reduce/eliminate cheatgrass from the area.</p> <p>In 2016 an analysis of the existing data including the Ecological Site Inventory (ESI), use supervision visits, and Trend Plot Photos were completed. It was determined Standard 3 is still being met on 94% of the allotment, with 6% of the allotment being a cheatgrass community (Table 2 and Map 2). The cheatgrass is the result of past grazing practices and current livestock grazing is a not a significant contributing factor to the failure to completely achieve the standard and conform with the guidelines.</p> <p>This standard is being met for wildlife habitat</p>
<p>4. Water Quality</p> <p>Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.</p>	N/A	N/A	<p>The standard was not found to be applicable due to the lack of perennial water on the allotment.</p>
<p>5. Native, Threatened and Endangered, and Locally Important Species</p> <p>Habitats support healthy, productive, and diverse populations and communities of native plants</p>	Met	Met	<p>In 2002 there were no known resource conflicts found between livestock grazing management activities and existing wildlife species (including special status species) or their habitat within the allotment and Standard 5 was met.</p> <p>In 2016 no known special status plant species occur within the allotment. .No sage-grouse leks occur within the allotment. The western half of the allotment falls within sage-grouse General Habitat Management Area (GHMA) but the allotment does not currently provide suitable sagegrouse habitat. Wildlife species with high public interest and special status species occur within the allotment and are healthy and diverse for the habitat provided.</p>

and animals (including special status species and species of local importance) appropriate to soil, climate, and landform.			
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STANDARD 1 - Upland Watershed -Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.

The indicators used to evaluate this standard were Soil Surface Factor (SSF), Observed Apparent Trend, plant community composition, grazing management, and existing vegetation monitoring (forage utilization and trend studies). Table 2 is a summary of the SSF, OAT and plant composition data compiled from the Ecological Site Inventory (ESI) in 1987.

The SSF data is an indicator used to document erosion class and soil susceptibility to accelerated erosion. The SSF rating for 73% of the land in the allotment was Slight, 3% is rockland and 23% unknown (Table 2). This rating of slight indicated the soils in the allotment are not susceptible to wind or water erosion and there is little evidence of gullies or rills.

The Observed Apparent Trend (OAT) is an indicator that estimates soil stability and erosion potential using ratings for litter, pedalisting and gullies. The OAT rating of static for 63% of the allotment and uptrend for 5% of the allotment (Table 2) indicates that the most of the soils in the allotment are stable and the erosion potential is minimal. The 5% of the allotment with a downward OAT rating is a strip of cheatgrass at the base of the rim partially on private land (Map 3). This piece of land along the edge of the valley was subjected to historical heavy grazing and the cheatgrass community has been present here for decades.

The current spring grazing encourages use of the cheatgrass when it is palatable and is a means of reducing seed production. This grazing of cheatgrass in the spring has limited the expansion of cheatgrass. Most of the perennial grasses on the slope are

grazed either slightly or not at all during the short spring grazing season authorized on this allotment.

The SSF and OAT ratings indicate there is still sufficient vegetation and litter cover to limit erosion and protect against development of rills and gullies as confirmed by trend plot photos and observations (Table 3).

In 2016 an analysis of the conditions (Table 3) observed at the 3 long term photo trend plots confirm that the soils are stable with no apparent wind or water erosion and no evidence of gullies or rills.

Another indicator of Upland Watershed condition is plant composition and structure. There are 8 different vegetative communities in the allotment (Table 2) with a diversity of grass, shrub, forb and tree species. Seven of those communities (92% of the rated acreage) are in the mid or late seral ecological stage with the necessary vegetative cover and plant composition to insure soil stability (Map 4). Only the cheatgrass community discussed earlier is in the early seral stage and in 2016 it is stable with no rills or gullies apparent.

Overall, vegetation communities are stable and current livestock grazing is not impacting site productivity and potential. Throughout the allotment plant cover and abundance indicate infiltration, moisture storage, and soil stability are appropriate for the soils found in this landform and climate regime. Based on these findings, this standard is being met.

STANDARD 2 -Riparian/Wetland-Riparian-wetland areas are in properly functioning physical (PFC) condition appropriate to soil, climate, and landform.

In 2002 the BLM used paper based National Wetland Inventory (NWI) maps as a source of riparian/wetland information for the allotment. However, the NWI mis-identified about 0.25 acres as palustrine wetlands on BLM-administered lands. Based on further review, this area is actually a constructed water development with no associated riparian zone. For this reason, this area is not a wetland and this standard is currently not applicable to the allotment.

STANDARD 3 -Ecological Processes-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 hydrologic cycle.

The Rim Allotment has multiple plant community types. Low sagebrush is dominant on the upper slopes and Wyoming big sagebrush dominant on the middle slopes with juniper invasion encroaching on the lower and middle slopes. The forbs are diverse with abundant native grasses including Sandberg's bluegrass, Idaho fescue, Thurber's needlegrass and bluebunch wheatgrass. The grasses are in good condition with no sign of over-utilization by livestock. Almost half of the allotment (49%) allotment is being encroached by juniper (Table 2).

The OAT (Table 2) was downward on about 5% (108 acres) of the allotment, static on 63% (1,405 acres) and upward on 5% (109 acre). There was 3% rockland and 24% was not rated or unknown. The downward trend was in the area dominated by cheatgrass near the base of the slope. The area dominated by cheatgrass is about 6% (128 acres) of the allotment (Table 2 and Map 2). As stated previously in Standard 1, the presence of cheatgrass was the result of historical heavy grazing in Warner Valley. The remaining 7 plant communities listed in Table 2 and shown on Map 4 are in either mid or late seral ecological condition and contain the appropriate plant cover and species composition needed to support the ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.

There are three photo trend plots in the allotment that were started in 1969 and were repeatedly photographed through the years. Trend Plot Photo #1 is lower elevation and until 1991 there was little grass present and livestock use in the area was season-long. In photos from 2002, more grass was present, especially cheatgrass, but there were some perennials showing up around the shrubs.

In 2016 the additional photos taken in 2007, 2010 and 2014 confirm the findings reached in 2002. Cheatgrass was still present but perennial grass is appearing and ground cover appears significantly increased from 1991.

Trend Plot Photo #2 near the top of the rim with photos starting in 1979 shows significant perennial grass cover and no apparent cheatgrass. In 2016 by examining the photos there appeared to be no noticeable change in the cover of perennial grass. In the photos the sagebrush appears to have grown larger during the past 30 years. There also appears to be an increase in the size of the juniper trees and a small increase in juniper density.

Trend Plot Photo #3 is located on the lower part of the slope in a site that was sprayed to reduce sagebrush in 1970. There had been a steady recruitment of sagebrush back into the site, but the density in 2002 was still lower than in 1970. There also appeared to be a significant increase in the size and density of juniper trees between 1970 and 1997. In 2016 examining recent photos (2007 and 2010) indicates the sagebrush density and cover is close to what it was prior to the time of treatment in 1970.

The utilization study in 1970 showed heavy use across the allotment, but by 1985 the use was light (30%) on most of the public land. Heavy use was restricted to the private land on the lower slopes near water sources. This pattern has continued from 1985 to 2016, as the grazing system was designed to encourage utilization of cheatgrass in the spring when it is green/palatable. This spring use provides rest for perennial grasses to grow during the summer. In addition, the allotment has been completely rested in 5 of the last ten years.

For these reasons, the current livestock grazing management is not substantially impacting ecological processes.

Weeds - In 2002 no noxious weeds were known to occur in the allotment. Scotch thistle, Canada thistle, bull thistle, and Mediterranean sage were known to occur on surrounding lands and the potential for weed movement into the allotment was high due to possible transport of weed seed and plant parts along the county road. In 2016, no noxious weeds are known to occur in the allotment, but the potential for weed movement into the allotment from surrounding lands remains high due to possible transport of weed seed and plant parts along the county road.

Wildlife- In 2002, the allotment was found to contain habitat capable of supporting the current and proposed mule deer and pronghorn antelope numbers identified by Oregon Department of Fish and Wildlife (ODFW) management plans. For this reason, Standard 3 was determined to be met. In 2016, the allotment continues to provide suitable habitat capable of supporting the big game species populations discussed in the 2002 RHA. In addition the current vegetation communities provide habitat for wildlife species common in the sagebrush steppe/juniper woodland communities. For this reason, Standard 3 continues to be met for wildlife habitat.

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

There are no perennial streams or other perennial water sources in this allotment which must comply with State water quality standards. For this reason, this standard is not applicable to the allotment.

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.

Vegetation

Standard 5 is being met for native, T&E, and locally important plant species in the allotment. The plant communities include plant species diversity, adequate age distribution, and adequate production for site potential.

Based on surveys completed to date, there are no known special status plants on the allotment.

Wildlife

Special status wildlife species present within the Rim Allotment include the Bald Eagle (*Haliaeetus leucocephalus*), and Peregrine Falcon (*Falco peregrinus*), Peregrine falcons had been seen within the allotment, probably associated with releases from the Crump Lake hack site, however, no nesting occurred within the allotment. Bald eagles were noted using the general area in winter feeding off carrion

A species with high public interest: mule deer (*Odocoileus hemionus*) are also present in the allotment.

The only update concerning species or their habitats within this allotment is for Greater Sage-Grouse. There are no known leks in the allotment however sage-grouse are known to occur in surrounding allotments. Currently, the western half of the allotment falls within sage-grouse General Habitat Management Area (GHMA). However, this area contains dense juniper cover throughout. Recent sage-grouse telemetry research in the general area has not documented any sage-grouse use within the allotment, indicating the allotment does not currently provide suitable sage-grouse habitat.

While invasive juniper has continued to encroach/expand into the allotment since 2002, there have been no substantial changes in wildlife habitat quality or populations during this timeframe. For these reasons, Standard 5 continues to be achieved.

Based on these findings this standard is being met on the allotment.

2016 Team Members

Name	Title	Signature/Date
Les Boothe	Rangeland Management Specialist	Les Boothe 8/12/2016
Jon Owens	Wildlife Biologist	Jon Owens 9/26/16
Theresa Romasko	Assistant Field Manager	Theresa Romasko 11/10/2016
Grace Haskins	Weed Management Specialist	Grace Haskins 9/14/16
Grace Haskins	Botany	Grace Haskins 9/14/16
Jimmy Leal	Fisheries Biologist	Jimmy Leal 9/12/16
Jami Ludwig	Assistant Field Manager	Jami Ludwig 9/16/16 - see comment p. 3
Paul Whitman	Planning and Environmental Coordinator	Paul Whitman 11/10/16

Table 2. Summary of Ecological Site Inventory (ESI) Data for Rim Allotment #00210

Vegetation Community	Acres	% of total acres	SSF*	OAT **Acres			Acres of Vegetative Community by Seral Stage		
			Slight	Down	Static	Up	Early	Mid	Late
BRTE Cheatgrass	128	6%	108	108			128		
ARAR/POSE Low sagebrush/Sandberg bluegrass	406	18%	406		406			406	
ARTR2/AGSP Big sagebrush/bluebunch wheatgrass	48	2%	48			48			48
JUOC/ARAR/POSE Western Juniper/ low sagebrush/Sandberg's bluegrass	96	4%	96		96			96	
JUOC/ARTR2/BRTE Western Juniper/ big sagebrush cheatgrass	860	39%	860		860			860	
JUOC/ARTR2/AGSP Western Juniper/ big sagebrush/bluebunch wheatgrass	22	1%	22			22		22	
JUOC/ARTR2/STTH Western Juniper/ big sagebrush/Thurber's needlegrass	43	2%	43		43				43
JUOC/ARTRV/FEID Western Juniper/big sagebrush/Idaho fescue	39	2%	39			39			39
TOTALS			1,622	108	1,405	109	128	1,384	
Percent of Allotment			73%	5%	63%	5%	6%	63%	
ROCKLAND	74	3%							
Out	189	9%							
Unknown	308	14%							
ALLOTMENT TOTAL	2213								

* The erosion condition classes are based on numeric scoring system which considers soil movement, surface litter, surface rock, pedestalling, flow patterns, rills and gullies.

**The Observed Apparent Trend (OAT) is a numerical rating which considers vigor, seedlings, surface litter, pedestals and gullies to estimate the trend of a particular site and SWA.

***Every Site Writeup Area (SWA) has a 10-15% portion of that area that is considered inclusions of different vegetation communities. The transect data for the SWA may not apply to these inclusion, therefore the acres in these inclusions are considered unknown.

up on 5%, static on 63%, down on 5% (with 3% rockland) and unknown on 24% of the allotment.

Recommendations.

The ID team recommends treating encroaching juniper on the allotment to improve wildlife habitat and other resource values.

2016 Determination

Existing grazing management practices in the allotment promote achievement of, or significant progress towards, meeting the Oregon Standards for Rangeland Health and conform with the applicable Guidelines for Livestock Grazing Management.

Existing grazing management practices in the allotment will require modification or change prior to the next grazing season to promote achievement of the Oregon Standards for Rangeland Health and conform with the Guidelines for Livestock Grazing Management.

Todd Forbes

11/7/16

Todd Forbes
Field Manager
Lakeview Resource Area

Date

Allotment Monitoring Summary 2015 (see Lakeview Resource Area Monitoring Files for Raw Data)

Table 3. Ecological Trend Based on Long-term Monitoring Photos and Plots in the Rim Allotment (00210)

Location	Monitoring plot#	Photo Trend Years Taken	Transect Method Years	Trend
Rim - southeast part of allotment	R-01	Photo 12 years 1969-2014 Since 2002 taken in 2007, 2010 & 2014	Photo	Photo trend; Upward 1991-2014 Static 1969-1979
Rim - southwest part of allotment	R-02	7 years 1969-2014 Since 2002 taken in 2007, 2010 & 2014	Photo	Photo trend static; except for increase in size and density of juniper trees
Rim - east center of allotment	R-03	10 years 1970-2010 Since 2002 taken in 2007, 2010	Photo	Photo trend; Sagebrush killed by spraying in 1969 mostly grass by 1979. Sagebrush present by 1990 and was close to pre-treatment cover by 2002.

Table 4. Actual Use in Rim Allotment

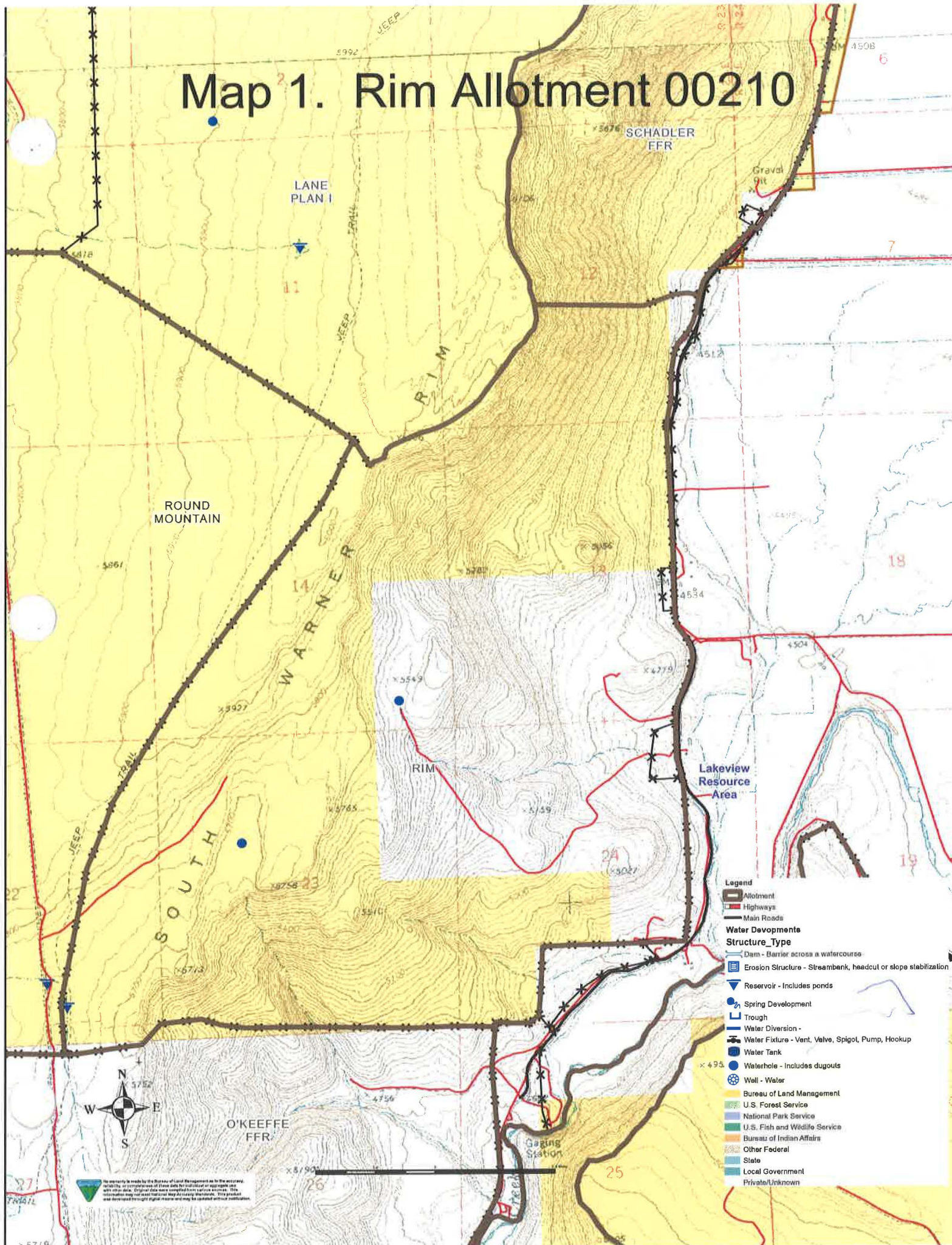
Year	AUMs
2016	NONUSE
2015	25
2014	NONUSE
2013	NONUSE
2012	32
2011	NONUSE
2010	NONUSE
2009	29
2008	31
2007	35
2006	11
2005	14
2004	18
Ave.	24

The actual use (AUMs) during the eight years when grazing occurred did not exceed the permitted AUMs (39) during any year. The average actual use from 2003-2015 was 24 AUMs. There were five years of complete rest during the last 13 years (Table 4).

There is no utilization data for the Rim Allotment. Use supervision in the allotment reported that almost all the use in the allotment is on the private land section on the lower slope and near the water source.

There are three trend plots in Allotment (Table 3).

Map 1. Rim Allotment 00210



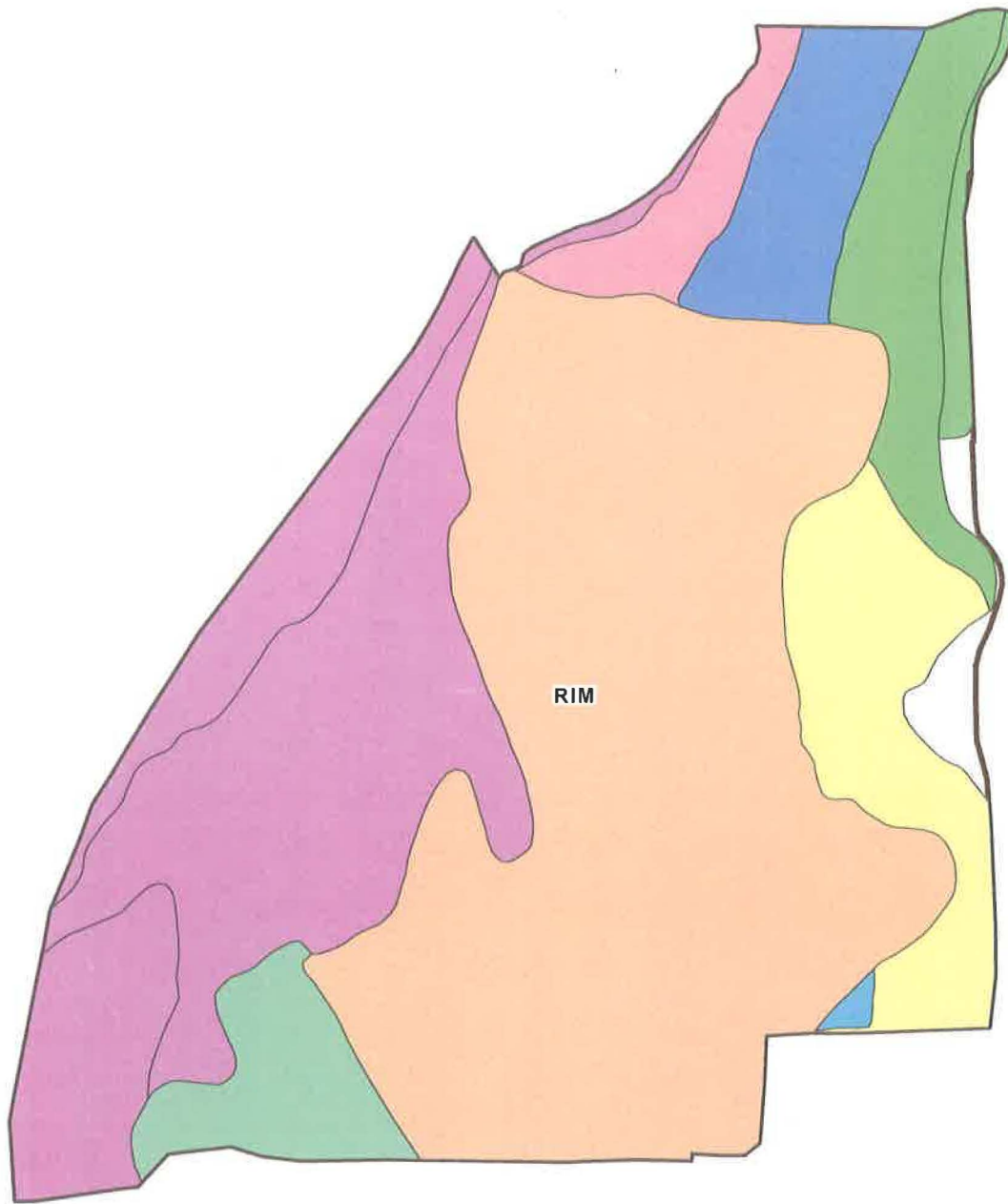
- Legend**
- Allotment
 - Highways
 - Main Roads
 - Water Developments**
 - Structure_Type**
 - Dam - Barrier across a watercourse
 - Erosion Structure - Streambank, headcut or slope stabilization
 - Reservoir - Includes ponds
 - Spring Development
 - Trough
 - Water Diversion -
 - Water Fixture - Vent, Valve, Spigot, Pump, Hookup
 - Water Tank
 - Waterhole - Includes dugouts
 - Well - Water
 - Bureau of Land Management
 - U.S. Forest Service
 - National Park Service
 - U.S. Fish and Wildlife Service
 - Bureau of Indian Affairs
 - Other Federal
 - State
 - Local Government
 - Private/Unknown










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x 5719

Map 2. Rim Allotment Vegetation types



Legend

-  <all other values>
- DOMVEG1**
-  ARAR8-POSE
-  ARTR2-AGSP
-  BRTE
-  INCOMPLETE
-  JUOC-ARTR2-BRTE
-  JUOC-ARTR2-STTH2
-  ROCKLAND
-  UNKNOWN
-  Allotment



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Map 3. Rim Allotment Observed Apparent Trend (OAT)

Legend

GTRN Roads

OwnerDesg

— County route

— Bureau of Land Management

— Other

OAT1

Out

Rockland

Downward

Static

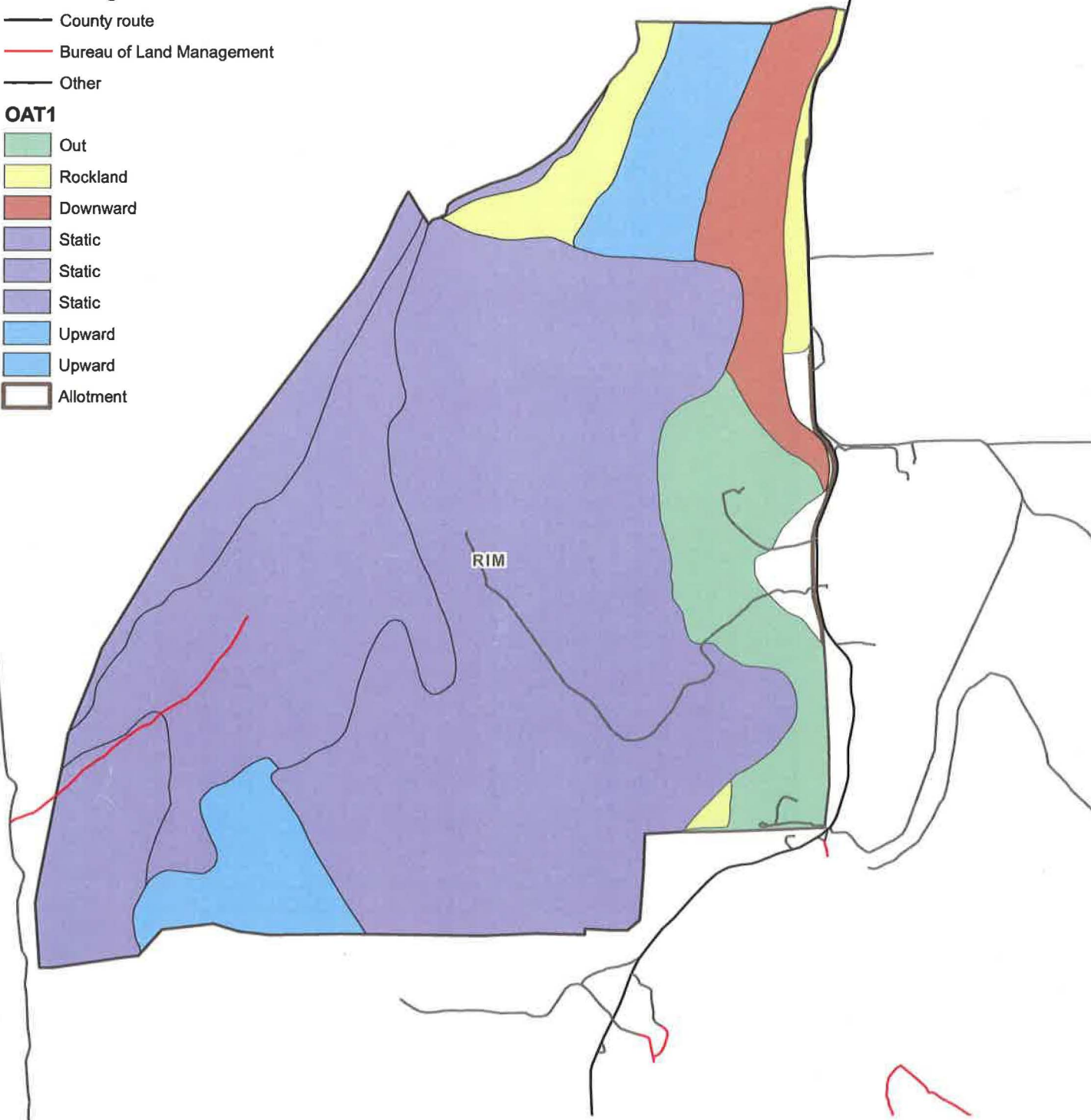
Static

Static

Upward

Upward

Allotment



0.3 0.15 0 0.3 Miles



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Map 4. Rim Allotment Ecological Condition Rating

Legend

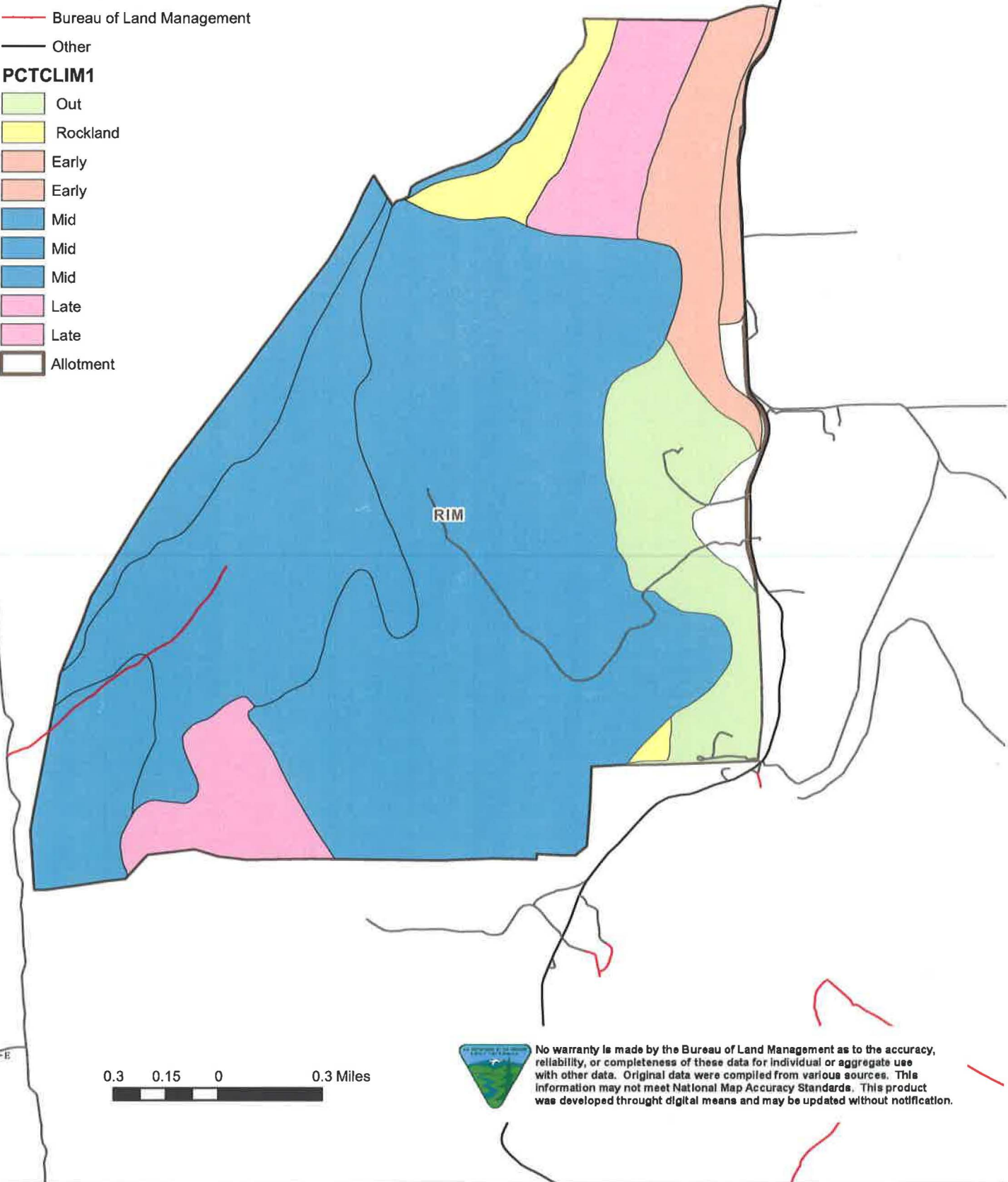
GTRN Roads

OwnerDesg

- County route
- Bureau of Land Management
- Other

PCTCLIM1

- Out
- Rockland
- Early
- Early
- Mid
- Mid
- Mid
- Late
- Late
- Allotment



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