

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

Update for  
Sandy Seeding Allotment (#00218)

September 2018

## Background

The Sandy Seeding Allotment (#00218) is located approximately 30 miles east of Lakeview, Oregon (see map 1) north of Hwy 140. The allotment, totaling 5,082 acres<sup>1</sup>, is all one pasture and has one permittee. Within this pasture is 1,400 acres of crested wheatgrass (*Agropyron cristatum*) seeding from 1966, the remaining 3,682 acres is native range. The entire allotment is managed by the Bureau of Land Management (BLM); there is no private or state land within the allotment.

There are 600 Animal Unit Month's (AUM) authorized for cattle forage during the spring (March – May). Over the past 20 years the average use has been 384 AUM's, primarily on the allotment area seeded with crested wheatgrass. Water for livestock is provided by a well and a pipeline system with troughs, and waterholes which can be dry during years of low precipitation.

There are two long-term photograph trend plots on the allotment. Since the crested wheatgrass seeding in 1966, both trend plots appear stable. Vegetation cover varies year to year depending on levels of precipitation and/or years with heavy utilization. Not all utilization is due to livestock foraging, some years there has been heavy utilization by grasshoppers and rabbits, as indicated in the previous allotment assessment (2002).

A Sandy Seeding Allotment Rangeland Health Assessment (RHA) was originally completed in 2002. Standards 1, 3, and 5 were met; while standards 2 and 4 were not applicable due to a lack of streams and 303d listed water bodies. This assessment is an update to the original RHA. Presented in Table 1 is a summary of both the original 2002 and updated assessments.

The same Ecological Site Inventory (ESI) data was used in both RHA's; however, since the ESI data was first collected, the data has had refinements, which were finalized in 2005 for the Lakeview District. Therefore, the ESI data between the previous RHA and the current RHA differ slightly.

**Table 1. Summary of Rangeland Health Assessments for the Sandy Seeding Allotment (#00218)**

Standard	2018 Assessment	Comments 2018	2002 Assessment	Comments 2002
<b>1. Watershed Functional – Uplands</b>	Met	Since 2002 when the standard was met, there has been no change in the soil or vegetation conditions, therefore standard 1 is still being met. Most of the grazing use in the pasture is in the crested wheatgrass seeding, which occupies about 28% of the allotment. The trend plots in the crested wheatgrass seeding indicate a stable trend since 2002. Therefore both the crested wheatgrass community and the native vegetation has the	Met	Majority of soil (99%) is rated as having stable to slight erosion potential and having a stable to upward ecological trend. Vegetation community and range condition data were consistent with plant composition for the identified soils and climate.

		cover and production necessary to promote infiltration, permeability rates and moisture storage appropriate to soil found in the allotment		
<b>2. Watershed Function – Riparian/ Wetland Areas</b>	Not Applicable	No perennial or major intermittent streams, riparian habitat, or wetlands exist in the allotment.	Not Applicable	The standard is not applicable to this allotment since there are no riparian areas or 303d listed water bodies found within the Sandy Seeding allotment.
<b>3. Ecological Processes</b>	Met	Since 2002 when the standard was met, vegetation trend plots indicate the ecological conditions have remained at mid-seral stage with good plant vigor. There is adequate vegetation cover, litter, and community structure to indicate ecological processes of nutrient cycling, energy flow and the hydrologic cycle are all functioning properly. Therefore standard 3 is still being met.	Met	The allotment is managed under a grazing system maintaining plant health and current vegetative communities appropriate to these soils and climate. Current grazing management is maintaining sufficient vegetation cover and litter for nutrient cycling.
<b>4. Water Quality</b>	Not Applicable	No perennial or major intermittent streams, riparian habitat, or wetlands exist in the allotment.	Not Applicable	The standard is not applicable to this allotment since there are no 303d listed water bodies within the allotment.
<b>5. Native, T/E, And Locally Important Species</b>	Met	In the 2002 RHA, this standard was met and is currently being met. Greater Sage-Grouse ( <i>Centrocercus urophasianus</i> ) have been observed using the allotment, but livestock grazing appears to have no significant impact on their populations or habitat. Currently no leks are on the Sandy Seeding Allotment, although adjacent allotments have Sage-Grouse leks and habitat. There are a variety wildlife species found but no major resource conflicts are present. The allotment is sustainably providing adequate forage for ungulate populations to coexist with the livestock. No special status plants occur within the Sandy Seeding Allotment.	Met	The diversity of plant and wildlife species are consistent with productive sagebrush steppe communities. No known special status species plants occur within the allotment. While the allotment is adjacent to allotments with sage grouse leks and habitat, currently no leks are on the Sandy Seeding Allotment.

**Standard 1. Watershed Function-Uplands: Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.**

In the previous RHA in 2002, this standard was met. Ecological Site Index (ESI) transect data, such as Soil Surface Factor (SSF) were used to indicate erosion potential. The allotment had 1,608 acres (32%) rated as stable and 3,380 acres (67%) rated as having a slight erosion potential. The SSF factor for the remaining 94 acres were classified as 20 acres (< 1%) of rock-land and 74 acres (< 1%) as unknown. Unknown classification is due to vegetation communities within transition areas, which were too small to be mapped separately. Additionally, Potential Natural Community (PNC) data were used to determine the percent of the allotment in each of its seral stages. Early-seral stage consisting of 666 acres (13%) was located around the edges of the seeded area that burned, but was still dominated by cheatgrass. These areas are in rougher terrain with light utilization, thus grazing has little impact on these areas. Most of the allotment is classified as mid-seral stage with 2,093 acres (41%) or late-seral stage with 1,997 acres (39%). The remaining acres are rock-land or unknown, as stated earlier.

This standard is currently being met. The Sandy Seeding Allotment has two photograph trend plots (see map 2), SS-01 and SS-02, indicating stable trends (Appendix A - Monitoring Summaries). Both plots lie within an ESI Geographic Information System (GIS) polygon<sup>2</sup> (polygons are derived from ESI transect data) with a vegetation and soil community (see maps 3&4) dominated by crested wheatgrass (Table 2a-d). This ESI polygon represents the crested wheatgrass seeding completed in 1966, currently comprising 1184 acres (23%) of crested wheatgrass within the allotment. The remaining ESI polygons with no plot data accounts for 3,898 acres (77%), primarily composed of big sagebrush communities; of which, 690 acres (14%) was unknown. Overall, photographs for plots SS-01 and SS-02 show grasses and shrubs are maintaining vigor and appear consistent with the crested wheatgrass ESI data.

Current SSF ratings (Table 2b) for the allotment show 1,370 acres (27%) were classified as being stable, 2,966 acres (58%) as having slight erosion potential, and the remaining 747 acres (15%) are unknown. Ratings for Observed Apparent Trend (OAT) (Table 2c) indicated 726 acres (14%) were trending upward, with a static rating for 2,664 acres (52%), a downward trend for 946 acres (19%), and the remaining 747 acres (15%) are unknown. The area with a downward trend rating is around the edge of the old burn and the seeding, on very rocky terrain that were not seeded and is currently dominated by shrubs and cheatgrass with scattered perennial grass. This area has been grazed slight to light every year for the last 10 years (Utilization Pattern Maps, Lakeview office) and currently appears to have a stable trend. Based on the plot data available, there is adequate vegetation cover, litter, and community structure to facilitate infiltration, moisture storage, and soil stability appropriate for the soils found on the Sandy Seeding Allotment in conjunction with the climate regime for this region.

**Standard 2. Watershed Function-Riparian/Wetland: Areas are in properly functioning physical condition appropriate to soil, climate, and landform.**

The standard is not applicable to this allotment since there are no riparian areas or wetlands found within the Sandy Seeding 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.**

In 2002, this standard was met. Using OAT data, from the ESI transects, classified 3,271 acres (64%) as static, 679 acres (13%) were downward trending and 789 acres (16%) were upward trending. The remaining acres were classified as rock-land and unknown. Downward trend areas were associated with the same areas designated as Early Seral stage in Standard 1. Two photo trend plots show plot SS-01 is stable, while plot SS-02 has an upward trend. Utilization has been high (50-55%) during three years of the last ten years. When high utilization occurs in the spring, it is early enough in the season that the crested wheatgrass recovers.

**Wildlife**

In 2002, this standard was met. The allotment provided for terrestrial wildlife species, such as, mule deer (*Odocoileus hemionus*) and pronghorn (*Antilocapra americana*). No major competition between wildlife and livestock existed.

This standard is currently met from the aspect of natural wildlife populations, diversity, and sustainability with current environmental conditions. The majority of habitats within the allotment are in functional condition and support natural ecological processes typically found within sagebrush-steppe communities in the northern Great Basin. Habitat quality and population levels fluctuate over time, and generally represent natural trends in the ecosystem; however, some species may show erratic or negative trends. These trends are determined through monitoring of habitat and animal composition and community structure. This allotment provides adequate habitat for mule deer, pronghorn, California bighorn sheep (*Ovis canadensis californiana*), and golden eagles (*Aquila chrysaetos*). There are 30 AUMs allocated for wildlife. Portions of the allotment lie within ODFW Warner Big Game Management Unit for mule deer and pronghorn.

**Vegetation**

This standard is being met for vegetation. The majority of the Sandy Seeding Allotment is composed of a big sagebrush (*Artemisia tridentata*) community including greasewood (*Sarcobatus vermiculatus*) and shadescale saltbush (*Atriplex confertifolia*) shrubs. Perennial grasses include crested wheatgrass, which dominates the seeding area in the center of the allotment; along with bluebunch wheatgrass (*Pseudoroegneria spicata*), Sandberg's bluegrass (*Poa secunda*), and squirreltail (*Elymus elymoides*) along the slopes of the allotment. Cheatgrass (*Bromus tectorum*) is spread throughout the allotment.

Ecological Site Index seral stage data (Table 2d), indicated late-seral stage was 1,570 acres (31%), mid-seral stage was 2,007 acres (39%), early-seral stage was 759 acres (15%), and 747 acres (15%) were unknown. Photographs from plots SS-01 and SS-02 show the site appears to be at mid-seral stage with good plant vigor. There is adequate vegetation cover, litter, and community structure appropriate for the soils, climate and landform found on the Sandy Seeding Allotment to indicate ecological processes of nutrient cycling, energy flow and the hydrologic cycle are all functioning properly.

### Actual use and utilization

Actual use has been collected since 1992, while utilization data has been collected since 1987 except for a few years (Table 3). Since 1992, the allotment has been rested 3 times and only during 1999 was the AUM's exceeded. The overall AUM average between the years 1992 to 2016 was 402 AUM's.

Utilization of greater than 50% was exceeded 9 years (1988, 1989, 1990, 1991, 1992, 1999, 2008, 2010, and 2013); however only three years since the last RHA in 2002. Since this is a spring pasture and the majority of the grasses grazed were crested wheatgrass, the trend remained stable.

### Weeds

As stated earlier, cheatgrass is spread throughout the allotment. Currently, cheatgrass does not out compete native vegetation. Mediterranean sage (*Salvia aethiopsis*) has been treated in the past as noted in the 2002 assessment and is no longer found within the allotment. Saltover (*Halogeton glomeratus*), which was estimated to cover 37 acres along roadways within the allotment, has been treated and temporarily removed.

### **Standard 4. Water Quality: Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.**

The standard is not applicable to this allotment since there are no 303d listed water bodies within the Sandy Seeding Allotment.

### **Standard 5. Native, T&E, and Locally Important Species: Habitats support healthy, productive and diverse population and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate and landform.**

### Wildlife

In the 2002 RHA, this standard was met and is currently being met. Greater sage-grouse (*Centrocercus urophasianus*) have been observed using the allotment, but livestock grazing appears to have no significant impact on their populations or habitat. Currently no leks are on the Sandy Seeding Allotment, although adjacent allotments have sage-grouse leks and habitat. Several raptors have been observed using the allotment, such as peregrine falcons (*Falco peregrinus*) and bald eagles (*Haliaeetus leucocephalus*) in the winter.

Migratory birds use a variety of habitats within the allotment for nesting, foraging, and resting as they make their yearly migrations. Formal surveys have not been conducted for monitoring of migratory birds within the allotment. There are no known conflicts to have occurred for these species.

Special status wildlife species and/or their habitats that are present within this allotment include: bald eagle, and golden eagle (*Aquila chrysaetos*). There are also species of high public interest, which include: mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*), and California bighorn sheep (*Ovis canadensis californiana*).

There is one known golden eagle nest located within the allotment and several other nests that border the allotment boundary. Bald and golden eagle foraging does occur throughout the allotment. Golden Eagles have been observed foraging within the allotment. Peregrine falcons are infrequent within the allotment. No formal surveys have been conducted to determine populations of sensitive birds of prey within the allotment. Foraging habitat exists throughout the majority of the allotment.

No special status species of bats are known to occur throughout the Sandy Seeding Allotment. There are no known caves within the allotment. There is a low potential for roosting/resting habitat within the allotment. Habitat use for these species is likely to be limited to foraging use.

Mule deer inhabit a large portion of the allotment for wintering habitat use. The entire allotment is identified as mule deer winter range habitat. Conflicts between livestock and mule deer do not generally occur. Limiting early spring and fall livestock grazing reduces impacts to wintering mule deer and associated habitats.

Pronghorn occur throughout the allotment and all but the southern-most portion of the allotment is identified as winter habitat. There is approximately 4,009 acres of mapped pronghorn habitat within the allotment. Winter range habitat is critical for pronghorn (McInnis and Vavra 1987). Pronghorn use occurs in areas of low sagebrush or shorter Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*).

Bighorn sheep can occur throughout the majority of the allotment, but tend to be more confined to rim features or areas with adequate escape terrain. There are approximately 4,052 acres of mapped bighorn sheep habitat. Although some competition for forage grasses may occur between cattle and bighorn sheep, it is likely insignificant. Direct conflict with livestock are unlikely to occur at lambing sites because ewes tend to choose rugged steep terrain for parturition sites (Smith et al. 2015). These microsites used for lambing are unlikely to be frequented by cattle.

Sandy Seeding Allotment provides habitat capable of supporting varying mammal species, which include: coyotes (*Canis latrans*), jackrabbits (*Lepus* spp.), cottontails (*Sylvilagus* spp.), ground squirrels (*Urocitellus* spp.), American badgers (*Taxidea taxus*), and other shrub-steppe mammal species, as well as, reptiles such as: sagebrush lizard (*Sceloporus graciosus*), Northern alligator lizard (*Elgaria coerulea*), Great Basin gopher snake (*Pituophis catenifer deserticola*), and Great Basin rattlesnake (*Crotalus viridis lutosus*).

It is determined that the Sandy Seeding Allotment meets Standard 5 for the above mentioned wildlife and no major resource conflicts are present which may affect that conclusion. The allotment supports multiple successfully breeding pairs of golden eagles which require a healthy prey base to sustain them year after year. The allotment is sustainably providing adequate forage for ungulate populations to coexist with the livestock.

### **Greater Sage-Grouse**

Greater sage-grouse do not occur throughout the majority of the Sandy Seeding Allotment, there are no leks within the allotment boundary. Within the allotment there are two management zones: Priority

Habitat Management Area (PHMA) in a Sagebrush Focal Area (SFA) and a General Habitat Management Area (GHMA). The allotment contains 219 acres of PHMA-SFA ( $\approx 4\%$  of allotment), which falls within the Beaty Priority Area of Conversation (PAC). This area is confined to the land above the rim feature on the eastern edge of the allotment (Map 5). There are 4,831 acres ( $\approx 95\%$  of allotment) of GHMA outside of any identified PAC, the remaining 32 acres do not fall into a habitat management category. There are no leks within 1.2 miles of the allotment, there are two occupied, pending leks within 4 miles of the allotment.

Sage-grouse are generally traditional in their seasonal movement patterns and select seasonal habitats within their respective home ranges, which include: breeding, summer/late brood-rearing, and winter habitat. BLM field offices that manage sage-grouse habitat are required to incorporate the use of mid-, fine-, and site-scale indicators (Table 2-2 of ARMPA) and the habitat suitability rating process provided by the Sage-Grouse Habitat Assessment Framework (HAF; Technical Reference 6710-1, Stiver et al. 2015) when assessing habitat for a population or subpopulation or other biologically relevant area. The BLM Habitat Assessment Summary Report (BLM 2018) describes habitat suitability at the mid-scale (2<sup>nd</sup> Order), fine-scale (3<sup>rd</sup> Order) and site-scale (4<sup>th</sup> Order). The mid-scale is comprised of 11.7 million acres and represents sage-grouse subpopulations and PACs. Areas with potential to provide habitat are identified and seasonal habitats and landscape indicators are mapped (BLM 2018). The Beaty Butte fine-scale assessment, in which the Sandy Seeding Allotment is located, comprised of 1,839,452 acres and represents lek clusters and leks. Seasonal use areas and connectivity between use areas are identified, and human disturbances are assessed (BLM 2018). The fine-scale analysis area is comprised of land cover types that provide existing or potential seasonal habitats for sage grouse. Sage-grouse require large tracts of connected habitat for viability. There is a high degree of connectivity (70%) within the fine-scale area among winter, breeding, and summer habitat, which extends well beyond the Sandy Seeding allotment itself. Both mid and fine-scale areas were rated as suitable by an interdisciplinary (ID) team (BLM 2018).

Site-scale data is collected through the Habitat Assessment Framework (HAF) and Assessment, Inventory, and Monitoring (AIM) surveys. Site-scale habitat suitability assessments are summarized as a proportion of surveyed plots within the seasonal habitat range for two of the five seasonal habitat types, lek habitat and riparian summer/late brood-rearing habitat. The Sandy Seeding Allotment had no site-scale data collected within the allotment boundaries due to its lack of mapped PHMA and being largely outside of a PAC. For the other three seasonal habitat types; breeding habitat, upland summer/late brood-rearing habitat, and winter habitat, suitability assessments are summarized as a proportion of the seasonal habitat area within a known area of inference, calculated using sample design weights. The assessments are based on a total of 64 AIM plots measured in the first and second years (2016 and 2017) of the five-year sample design across the fine-scale assessment area. Based on the assessment the Sandy Seeding allotment contains approximately 3 acres ( $<0.001\%$  of allotment) of mapped breeding habitat, 71 acres ( $<0.02\%$  of allotment) of mapped upland summer/late brood-rearing habitat, and no acres of mapped winter habitats (BLM 2018). The small acreages identified as seasonal habitat are confined to the eastern edge of the allotment, above the rim feature (Map 5). There are



portions of the allotment that do not support sage-grouse seasonal habitat due to plant structure characteristics. Currently, there are no known resource conflicts for this species.

### **Special Status Plants**

No special status plants occur within the Sandy Seeding Allotment. A database survey was conducted on July 30, 2018 using three analysis tools:

1. Using the GeoBob layer identifying any sensitive plants in the area.
2. Using the ORBIC (Oregon Rare Species Locations) layer
3. Determining potential species habitat using the intersect feature including: ECO Site ID, Lak Soil Taxonomy Classification, Lak Hydrological Group, ESI Lak Veg Merge layer. Based on this analysis, I found no potential habitat for sensitive species that are found in the area.

### **Fish/Fish Habitat**

No fish habitat, perennial or major intermittent streams, riparian habitat, or wetlands exist in the allotment. A BLM evaluation completed in 1995 concluded that grazing in the allotment would have no effect on Warner Sucker.

### **2018 Team Members**

<b>Name</b>	<b>Title</b>
Josef Porter	Wildlife Biologist
John Klock	Botanist
Grace Haskins	Weed Management Specialist
Joe Chigbrow	Interdisciplinary Biologist
James Leal	Fisheries Biologist
Les Boothe	Assistant Field Manager
Paul Whitman	Planning and Environmental Coordinator

### **Recommendations**

Provide periodic season long (1 out of 5 Years) rest for the seeding.

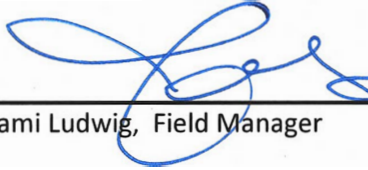
Maintain the crested wheatgrass seeding by mowing, burning or chemical treatment.

### **Determination**

**Determination**

Existing grazing management practices on the Sandy Seeding Allotment promote achievement of, or significant progress towards the Oregon Standards for Rangeland Health and conform with the applicable Guidelines for Livestock Grazing Management.

Existing grazing management practices on the Sandy Seeding 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 applicable Guidelines for Livestock Grazing Management.



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Jami Ludwig, Field Manager

9/28/18  
Date

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<sup>1</sup>All acreages within allotment derived from GIS layers located on G:\corp\BLMReplication\ORWA\_rep\_gdb\ and within the mxd file located at G:\lak\lvra\_local\Resource\_Area\_projects\range\Chigbrow\LX\_Ranch\_AllotmentInfo2017

<sup>2</sup> ESI polygon data based on current Oregon/Washington BLM GIS "slk\_veg" layer located on G:\corp\BLMReplication\ORWA\_rep\_gdb\ and within the mxd file located at G:\lak\lvra\_local\Resource\_Area\_projects\range\Chigbrow\ LX\_Ranch\_AllotmentInfo2017

## Appendix A – Monitoring Summaries

Table 2a. ESI dominant vegetation communities in Sandy Seeding Allotment

Vegetation Community		
Plant Code	Scientific Name	Common Name
AGCR	<i>Agropyron cristatum</i>	crested wheatgrass
ARTR2	<i>Artemisia tridentata</i>	big sagebrush
ARTR2-PSSPS	<i>Artemisia tridentata-Pseudoroegneria spicata</i>	big sagebrush-bluebunch wheatgrass
ARTR2-BRTE	<i>Artemisia tridentata-Bromus tectorum</i>	big sagebrush-cheatgrass
ARTR2-POSE	<i>Artemisia tridentata-Poa secunda</i>	big sagebrush-Sandberg bluegrass
ARTR2-ELEL5	<i>Artemisia tridentata-Elymus elymoides</i>	big sagebrush-squirreltail
ARTR2-ACTH7	<i>Artemisia tridentata-Achnatherum thurberianum</i>	big sagebrush-Thurber's needlegrass
ATCO-BRTE	<i>Atriplex confertifolia-Bromus tectorum</i>	shadscale saltbush-cheatgrass
ATCO-ELEL5	<i>Atriplex confertifolia-Elymus elymoides</i>	shadscale saltbushsquirreltail
BRTE	<i>Bromus tectorum</i>	cheatgrass
SAVE4	<i>Sarcobatus vermiculatus</i>	greasewood
Rockland	N/A	N/A
Unknown*	N/A	N/A

\* "Unknown" combines dominate vegetation labeled as "Incomplete" along with the remaining allotment acres with no classified vegetation communities.

Highlighted row indicates ESI polygons which had plot data

**Table 2b. ESI dominant vegetation communities in Sandy Seeding Allotment: Soil Surface Factor Acres**

Vegetation Community Plant Code	Acres	% of total acres	SSF Acres					
			Stable	Slight	Moderate	Critical	Severe	Unknown
<b>AGCR</b>	<b>1184</b>	<b>23%</b>	<b>1184</b>	-	-	-	-	-
ARTR2	37	1%	-	15	-	-	-	22
ARTR2-PSSPS	323	6%	-	323	-	-	-	-
ARTR2-BRTE	1287	25%	-	1288	-	-	-	-
ARTR2-POSE	985	19%	-	985	-	-	-	-
ARTR2-ELEL5	56	1%	-	56	-	-	-	-
ARTR2-ACTH7	< 1	< 1%	-	< 1	-	-	-	-
ATCO-BRTE	134	3%	-	134	-	-	-	-
ATCO-ELEL5	7	< 1%	-	7	-	-	-	-
BRTE	344	7%	186	158	-	-	-	-
SAVE4	14	< 1%	-	-	-	-	-	14
Rockland	21	< 1%	-	-	-	-	-	21
Unknown*	690	14%	-	-	-	-	-	690

\* "Unknown" combines dominate vegetation labeled as "Incomplete" along with the remaining allotment acres with no classified vegetation communities.

Highlighted row indicates ESI polygons which had plot data

**Table 2c. ESI dominant vegetation communities in Sandy Seeding Allotment: Observed Apparent Trend Acres**

Vegetation Community	Acres	% of total acres	OAT Acres			
Plant Code			Upward	Static	Down	Unknown
<b>AGCR</b>	<b>1184</b>	<b>23%</b>	-	<b>1184</b>	-	-
ARTR2	37	1%	-	-	15	22
ARTR2-PSSPS	323	6%	-	323	-	-
ARTR2-BRTE	1287	25%	670	415	203	-
ARTR2-POSE	985	19%	-	549	436	-
ARTR2-ELEL5	56	1%	56	-	-	-
ARTR2-ACTH7	< 1	< 1%	< 1	-	-	-
ATCO-BRTE	134	3%	-	-	134	-
ATCO-ELEL5	7	< 1%	-	7	-	-
BRTE	344	7%	-	186	158	-
SAVE4	14	< 1%	-	-	-	14
Rockland	21	< 1%	-	-	-	21
Unknown*	690	14%	-	-	-	690

\* "Unknown" combines dominate vegetation labeled as "Incomplete" along with the remaining allotment acres with no classified vegetation communities.  
 Highlighted row indicates ESI polygons which had plot data

**Table 2d. ESI dominant vegetation communities in Sandy Seeding Allotment: Acres within Seral Stage**

Vegetation Community Plant Code	Acres	% of total acres	Acres within Seral Stage				
			PNC	Late	Mid	Early	Unknown
<b>AGCR</b>	<b>1184</b>	<b>23%</b>	-	<b>1184</b>	-	-	-
ARTR2	37	1%	-	-	15	-	22
ARTR2-PSSPS	323	6%	-	323	-	-	-
ARTR2-BRTE	1287	25%	-	-	873	415	-
ARTR2-POSE	985	19%	-	-	985	-	-
ARTR2-ELEL5	56	1%	-	56	-	-	-
ARTR2-ACTH7	< 1	< 1%	-	< 1	-	-	-
ATCO-BRTE	134	3%	-	-	134	-	-
ATCO-ELEL5	7	< 1%	-	7	-	-	-
BRTE	344	7%	-	-	-	344	-
SAVE4	14	< 1%	-	-	-	-	14
Rockland	21	< 1%	-	-	-	-	21
<b>Unknown*</b>	<b>690</b>	<b>14%</b>	-	-	-	-	<b>690</b>

\* "Unknown" combines dominate vegetation labeled as "Incomplete" along with the remaining allotment acres with no classified vegetation communities.

Highlighted row indicates ESI polygons which had plot data

## **Crested wheatgrass dominant vegetation community**

### #SS-01 (Photo)

Years of recorded data: 1966, 1969, 1970, 1971, 1972, 1973, 1975, 1976, 1977, 1981, 1987, 1994, 2000, 2005, 2009, 2014, 2016

Vegetation includes crested wheatgrass and a few shrubs, maintaining vigor. Photographs indicate some changes in vegetation community through the years, most likely due to varying precipitation. Vegetation community and soil are consistent for this landform and this region's climate regime; trend is stable.

### #SS-02 (Photo)

Years of recorded data: 1966, 1969, 1970, 1972, 1974, 1975, 1977, 1987, 1994, 200, 2005, 2009, 2014, 2016

Vegetation includes crested wheatgrass and scattered saltbush shrubs, maintaining vigor. Photographs indicate some changes in vegetation community through the years, most likely due to varying precipitation. Vegetation community and soil are consistent for this landform and this region's climate regime; trend is stable.

**Table 3. Sandy Seeding Allotment (#00218) Actual Use and Utilization Data by Year**

<b>Year</b>	<b>Sandy Seeding AUM's</b>	<b>% Utilization Sandy Seeding</b>
2018	586	39
2017	651	37
2016	Rested	-
2015	165	41
2014	404	50
2013	465	55
2012	326	43
2011	391	34
2010	70	52
2009	328	27
2008	289	58
2007	437	50
2006	524	39
2005	362	-
2004	Rested	-
2003	Rested	-
2002	212	28
2001	486	-
2000	570	47
1999	699	52
1998	413	-
1997	383	46
1996	560	49
1995	511	31
1994	596	50
1993	358	-
1992	289	58
1991*	-	66
1990*	-	63
1989*	-	58
1988*	-	66
1987*	-	41
Overall Average	402	45

\* No actual use reported



## Appendix B: References

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