Standards for Land Health Evaluation

and

Guidelines for Livestock Grazing Management

for

Public Lands in Oregon and Washington

Update for

Schadler FFR Allotment (#00209)

June 2020

Background

The Schadler FFR Allotment (#00209) has three separate sections, which are not connected and have three different permittees, with different gazing plans. The allotment is classified as a Fenced Federal Range (FFR), which is based on the allotment sections containing mostly private land with some public land. This allotment is also categorized as a "Custodial" allotment defined as an allotment "where public lands produce less than 10 percent of the forage in the allotment or are less than 10 percent of the land area"[1]. The sections will be discussed separately, unless otherwise noted.

Schadler FFR 1 is located approximately 30 miles east of Lakeview, Oregon (maps 1 & 2) south of Hwy 140, along the Oregon-Nevada border. Section 1, has a total of 2,371 acres[2], with private ownership accounting for 1,895 acres (80%) and 476 acres (20%) as public land. There are three pastures in section 1 (Schadler FFR, Coleman Creek, and Nevada); both Coleman Creek and Nevada pastures extend south into Nevada. There are 11 Animal Unit Month's (AUM) authorized for cattle forage during the summer (July – September). There are no monitoring plots within section 1.

Schadler FFR 2 is located approximately 23 miles east of Lakeview, Oregon (maps 1 & 3) south of the town of Adel. Section 2, all one pasture, has a total of 971 acres, with private ownership accounting for only 16 acres (2%) while 955 acres (98%) is public land. This public land is along the eastern portion of the South Warner Rim constituting very steep sloped rangeland which cattle are not likely to forage. There are 30 AUMs authorized for cattle foraging during the spring and/or summer (April – August). There are no monitoring plots within section 2.

Schadler FFR 3 is located approximately 15 miles east of Lakeview, Oregon (maps 1 & 4) south of Hwy 140. Section 3, all one pasture, has a total of 2,754 acres, with private ownership accounting for 2,141 acres (78%) and 613 acres (22%) is public land. In previous assessments Schadler FFR 3 included what is now designated the Hickey FFR allotment, reducing the allotment by 530 acres to its current total. While section 3 has the most grazing of the three sections, there are only 16 AUM's due to the low percentage of public land within that section. Cattle foraging occurs during the summer and/or fall (July – October) primarily when the cattle are being moved onto Forest Service grazing allotments. There is one photograph plot within section 3 to monitor the Sage Hen (B4QX) fire.

A Schadler FFR Allotment Rangeland Health Assessment (RHA) was originally completed in 2002. Standards 1, 2, 3, and 5 were met for all three sections. Standard 4 was not applicable to this allotment since there are no 303d listed water bodies within the allotment. 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 the 2002 RHA and the current RHA; 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 Schadler FFR Allotment (#00209)

Standard	2020 Assessment	Comments 2020	2002 Assessment	Comments 2002
1. Watershed Functional – Uplands	Met	The three allotment sections have an SSF rating or erosion potential of 24% Stable, 31% Slight, 2% Moderate and 43% unknown. The vegetation composition and condition are sufficient to allow infiltration and permeability, store moisture and provide stability for the identified soils, climate and landform.	Met	For all three-allotment sections, 50% of soil is rated as having slight erosion potential, and 43% is unknown. Vegetation community and range condition data were consistent with plant composition for the identified soils and climate.
2. Watershed Function – Riparian/ Wetland Areas	Not Applicable	There are no perennial streams, major intermittent streams, riparian areas, or jurisdictional wetlands on BLM-administered lands within the allotment.	Met	Two acres of wetlands within the allotment were at Proper Functioning Condition (PFC). Livestock grazing did not appear to be affecting the wetlands.
3. Ecological Processes .	Met	Desirable perennial vegetation occupies 51% of allotment with 7% Rock-land, 7% with annual grasses and 35% unknown. About 19% of the allotment is late seral stage, 36% mid and 3% early. The trend rating (OAT) is up on 30%, static on 25% and only 3% is downward. The attributes indicate the vegetation is healthy, productive and diverse resulting in proper functioning ecological processes. Wildlife habitat and weeds are both meeting this standard.	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.
4. Water Quality	Not Applicable	There is no perennial water in the allotment.	Not Applicable	The standard is not applicable to this allotment since there are no 303d listed water bodies within the allotment.
5. Native, T/E, And Locally Important Species	Met	No habitat exists within the allotment for any native, T/E, or locally important aquatic species. Habitat exists within Priority Habitat Management Areas. Greater Sage-Grouse occupy large swaths of habitat within 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 Schadler FFR 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 on all three allotment sections. Ecological Site Index (ESI) transect data, such as Soil Surface Factor (SSF) and Potential Natural Community (PNC) attributes were used to make this determination. The SSF attributes were used to indicate soil erosion potential and PNC were used to compare vegetation composition to the Potential Natural Plant Community.

The Schadler FFR 1 had 55 acres (12%) rated as having slight erosion potential (SSF), with the remaining 421 acres (88%) of public land being classified as unknown. The 1,895 acres of private land is also classified as unknown. The unknown classification is due to vegetation communities within transition areas, which were too small to be mapped separately or was private land, which was not classified. The slight erosion potential was on public land along the edges of the allotment section where grazing has a minimum impact. The PNC data determined that 55 acres (12%) in the Schadler FFR 1 was in the Mid-seral stage, while the remaining acres are unknown, as stated earlier.

In 2020 the ESI data for public land (476 acres) in the Schadler FFR 1 was adjusted slightly and only 47 acres (approximately 10%) has a slight erosion potential (SSF) and the remaining 429 acres (85%) of public land are unknown and 1,895 acres of private land are unknown (Table 2b). In 2020 most of the grazing impacts continue to be on private land as the public land is long the edges of the allotment away from water sources. Supervision visits to the allotment verify no change has occurred in the vegetation composition or soil conditions in the allotment. Therefore Standard 1 continues to be met in Schadler FFR 1.

In 2002 Schadler FFR 2 had 390 acres (41%) with an SSF rating of slight erosion potential, 364 acres (37%) as rock-land, and 217 acres (22%) that are unknown. The entire section is steep, with the majority of the range greater than 50° slope, thus there is very little grazing in the pasture. According to PNC, 390 acres (41%) was determined to be in mid or late-seral stages, with the remaining acres rock-land or unknown as stated earlier.

In 2020 the adjusted acreage for the Soil Surface Factor Ratings (Table 3b) indicate 524 acres (54%) as having slight erosion potential, while the 283 acres (29%) are rock-land and the remaining 164 acres (17%) are unknown. The PNC acreage was also adjusted in 2020 (Table 3d) to include 409 acres in the mid or late seral stages and 127 acres in early seral, with 283 acres of rock-land and 153 acres unknown. The 127 acres in the early seral stage is a stable community of cheatgrass resulting from a fire in the 1980's and there is enough ground cover to protect the soil from wind or water erosion. In 2020 the Schadler FFR 2 is meeting Standard 1 with very limited grazing on this very steep allotment and almost no change on conditions since 2002.

Schadler FFR 3 is the largest of the three pastures and the 613 acres of public land are intermingled with 2,140 private acres (map 4) , so in 2002 the results of the ESI inventory included the entire pasture and was not broken down by ownership. The entire pasture including the private land had 2,576 acres (93%) with an SSF rating of slight erosion potential, 79 acres (3%) as moderate erosion potential, 30 acres (1%) as rock-land, and 69 acres (3%) as unknown. The Schadler FF3 3 had the most grazing of the three

pastures and is the largest of the allotment. There were 2,576 acres (93%) classified as mid-seral stage, 79 acres (3%) as late-seral stage, with the remaining acres classified as rock-land and unknown, as stated earlier.

In 2020 the adjusted acreage for Soil surface factor ratings (Table 4b) show 1,013 acres (37%) as stable, 736 acres (27%) as having slight erosion potential, 108 acres (4%) as having moderate erosion potential, and 896 acres (33%) as unknown. The adjusted acreage for the PNC rating include 630 acres (23%) in the late seral stage, 1,227 acres (45%) in the mid seral stage, and 896 acres (33%) of unknown. The Schadler FFR 3 pasture is meeting standard 1 as supervison visits verify there has been no significant change in the vegetation composition or the soils since 2002. There are only 16 AUMs authorized on public land in this pasture as most of the grazing occurs near Sage Hen Creek which is all on private land.

One photograph plot exists within Schadler FFR 3 to monitor the Sage Hen (B4QX) fire. The fire occurred in 2005, burning 569 acres, of which, 176 acres (31%) were within Schadler FFR 3. Photographs indicate the area is recovering from the fire, showing grasses have returned. It appears no significant soil erosion has occurred at the monitoring plot.

In 2020 this standard is being met for all three-allotment sections. There are no long-term trend monitoring plots on any of the three allotment sections, only ESI data (Appendix A – Monitoring Summaries). However, Schadler FFR 3 has one fire-monitoring plot with two years of data. Based on the ESI 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 Schadler FFR 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.

In 2002, this standard was met. Two acres of wetlands within the allotment were determined to be at PFC. Livestock grazing did not appear to be affecting the wetlands.

Field reconnaissance in 2017 found no perennial streams, major intermittent streams, riparian areas, or jurisdictional wetlands on BLM-administered lands within the allotment. Therefore, this standard is not applicable to the Schadler FFR 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.

Standard 3 was met in 2002 and is still is being met in 2020 for vegetation, weeds and wildlife habitat. The vegetation communities are healthy, productive and diverse, which allows the ecological processes such as nutrient cycling, energy flow and the hydrologic cycle to function properly.

Vegetation

This standard for vegetation was met in 2002. Observed Apparent Trend (OAT) data, Potential Natural Community (PNC) and field trips were used to make that determination.

In 2020 this Standard for vegetation is still being met as the vegetation communities present and functioning in 2002 are still present and functioning. These communities across all three sections of the Schadler FFR allotment are healthy, productive, diverse and are supporting the ecological processes of nutrient cycling, energy flow and the hydrologic cycle appropriate to the soil, climate and landform.

In 2002 the observed apparent trend ratings determined 55 acres of public land in the Schadler FFR 1 were static. Schadler FFR 2 had OAT ratings of 255 acres (26%) having an upward trend, 135 acres (14%) as static, 364 acres (37%) as rock-land, and 217 acres (21%) as unknown. Schadler FFR 3 had OAT ratings of 1,635 acres (59%) as trending upward, static land was at 1,020 acres (37%), with 30 acres (1%) as rock-land, and 69 acres (3%) as unknown. An Interdisciplinary Team (ID) toured the Schadler FFR 3 in 2002 and determined there was a diverse plant community and an upward trend. Along with seral stage data from Standard 1, ecological processes for all three Schadler FFR 1, 2 and 3 were considered functional.

In 2020 common vegetation found on all three allotment sections includes low sagebrush and big sagebrush communities including bud sagebrush (*Picrothamnus desertorum*), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), and greasewood (*Sarcobatus vermiculatus*) shrubs. Perennial grasses include bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), Sandberg's bluegrass (*Poa secunda*), Thurber's needlegrass (*Achnatherum thurberianum*), basin wildrye (Le*ymus cinerus*) and squireltail (*Elymus elymoides*). Cheatgrass (*Bromus tectorum*) is interspersed within the allotment sections. Western juniper is found on both Schadler FFR sections 2 and 3, while ponderosa pine is found in Schadler FFR 3 along ridgelines.

As explained previously the ESI data between the 2002 RHA and the current RHA differ slightly.

Schadler FFR 1 has five ESI Geographic Information System (GIS) polygons[3] (polygons are derived from ESI transect data) with limited vegetation and soil community data (maps 5 & 6); the vast majority of this section has no data because a large portion of Schadler FFR 1 is private land where no ESI data was collected. The known Schadler FFR 1 ESI data only accounts for 47 acres (10%) of greasewood (*Sarcobatus vermiculatus*) – saltgrass (*Distichlis spicata*) community, less than 1 acre (<1%) of low sagebrush (*Artemisia arbuscula*) community, and less than 1 acre (<1%) of big sagebrush (*Artemisia tridentate*) community. There are 26 acres (5%) classified as playa, with no associated vegetation, and the unknown portion of the public land is 403 acres (85%).

Schadler FFR 2 has nine ESI polygons with vegetation and soil community data (maps 7& 8). The big sagebrush communities are dominant with 352 acres (37%), other communities include 126 acres (13%) cheatgrass (*Bromus tectorum*), 85 acres (approximately 9%) western juniper (*Juniperus occidentalis*) – sagebrush communities, and 4 acres (<1%) low sagebrush community. The remaining acres are less than 1 acre (<1%) of lakebed, 283 acres (29%) designated rock-land, and 120 acres (12%) are unknown.

Schadler FFR 3 has eight ESI polygons with vegetation and soil community data (maps 9 &10). The low sagebrush communities are dominant with 1,146 acres (42%), other communities include 371 acres (14%) big sagebrush, and 327 acres (12%) ponderosa pine (*Pinus ponderosa*) – big sagebrush. The remaining 17 acres (1%) have been identified as rock-land, with 892 acres (32%) as unknown.

In 2020 the adjusted acreage for the Ecological Site Index seral stage data for Schadler FFR 1

In 2020 the adjusted acreage for the Schadler FFR 1 Ratings for Observed Apparent Trend (OAT) (Table 2c) on public land reveals 49 acres (approximately 10%) as static and the remaining acres unknown.

In 2020 in Schadler FFR2 the adjusted acres for OAT (Table 3c), 268 acres (28%) are in an upward trend, 141 acres (15%) are static, 115 acres (12%) are trending downward, 283 are rock-land and the remaining 164 acres unknown. The 115 acres in downward trend represents a cheatgrass dominated community that is the result of fire in 1980's and the lack of perennial grasses in this site is cause of the downward trend rating. Even though the site is stable and functioning as a permanent annual grass community. Current management is not making the site worst and no management change would make it better. It could only be improved with active rehabilitation efforts.

In the Schadler FFR3 the 2020 adjusted ratings for OAT (Table 4c) designate 1,001 acres (36%) as having an upward trend and 856 acres (31%) as static, with the remaining 896 acres unknown.

In 2020 the adjusted acreage for the Ecological Site Index seral stage data for Schadler FFR 1 (Table 2d), indicated mid-seral stage was 49 public land acres (2%), while 427 acres of public land and 1895 acres of private land were unknown. Schadler FFR 2 (Table 3d) has 183 acres (19%) in late-seral stage, 226 acres (23%) in mid-seral stage, 126 acres (13%) in early-seral stage, 283 rock-land (29%) and 153 acres (16%) listed as unknown. Schadler FFR 3 (Table 4d) has 630 acres (23%) designated as late-seral stage, with 1,227 acres (45%) at mid-seral stage, and 896 acres (33%) as unknown.

As mentioned in Standard 1, the Schadler FFR 3 fire-monitoring plot at the Sage Hen (B4QX) fire indicates the area is recovering from the fire, showing grasses have returned. Photographs show no significant soil erosion occurred at the monitoring plot. Reestablishment of shrub community will take time and its progress needs to be monitored.

Weeds

This standard was met in 2002 and is still being met in 2020 as there is an ongoing aggressive weed detection and treatment program with cooperation between BLM and private landowners.

In 2002 no noxious weeds were present in Schadler FFR 1, though potential was high due to its proximity to a well-traveled route. Schadler FFR 2 had a large infestation of Mediterranean sage (*Salvia aethiopis*) along the county road at the base of Warner Rim, with treatment being considered. Schadler FFR 3 also had Mediterranean sage sparsely scattered along roads and riparian areas downstream from the Schadler cabin on private land.

Weeds in 2020

In the Schadler FFR 1 a cooperative aerial survey took place in 2009 across both BLM and private lands. The survey documented 405 gross acres of perennial pepperweed (*Lepidium latifolium)* within the Schadler FFR 1 allotment. The majority of the perennial pepperweed sites were less than a tenth of an acre sites, however there were 432 separate sites documented during the survey. The perennial pepperweed infestations within the Schadler FFR 1 allotment area is extensive on the private lands. The private land is irrigated meadow and the pepperweed has have the ability to spread through the irrigation systems with ease. However, the perennial pepperweed is currently being contained to the private lands and since 2009; the private landowner has done extensive amounts of weed control.

The Schadler FFR 2 area has extensive Mediterranean sage (*Salvia aethiopis)* infestations within the allotment. The entire allotment area is infested with Mediterranean sage however the heaviest infestation is on the east side of the allotment near the valley floor. The BLM has performed all-encompassing weed control efforts to control the Mediterranean sage infestation including both aerial and ground treatment efforts. This area will continue to be a high priority for treatment efforts.

Schadler FFR 3 also had Mediterranean sage sparsely scattered along roads and riparian areas downstream from the Schadler cabin on private land. The BLM and the private landowners have been cooperatively working to control the infestations within the allotment.

Wildlife

In the 2002 Rangeland Health Assessment this standard was met. The allotment provided habitat for terrestrial wildlife species, such as California bighorn sheep (*Ovis canadensis californiana*), Rocky Mountain elk (*Cervus elaphus nelsoni*), mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*), and Greater Sage-Grouse (*Centrocercus urophasianus*). No major competition between wildlife and domestic livestock for forage existed.

This standard is currently being met from the aspect of native wildlife populations, diversity, and sustainability with current environmental conditions. 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. The allotment provides adequate habitat for populations of mule deer, pronghorn, California bighorn sheep, and Greater Sage-Grouse. Portions of the allotment lie within ODFW Warner Big Game Management Unit for mule deer, elk, and pronghorn. Current populations are moving in an upward trend, but still below management objectives. The allotment contains crucial over-wintering habitat for mule deer, elk, pronghorn, and California bighorn sheep.

Actual use

Actual use has been collected since 2003 (Table 5), while utilization has not been collected since the allotment is a fenced federal range under the “Custodial” management category. Schadler FFR sections 1 and 2 are not grazed as often as Schadler FFR 3. The overall AUM average for Schadler FFR 1, between

the years 2003 to 2016, was 11 AUM's, which is the authorized amount. The overall AUM average for Schadler FFR 2, between the years 2003 to 2016, was 27 AUM's, which is the authorized amount. The overall AUM average for Schadler FFR 3, between the years 2003 to 2016, was 19 AUM's, with the authorized AUM amount equaling 16 AUM's. The only time AUM's were exceeded occurred in 2006, with 39 AUM's, at Schadler FFR 3.

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 perennial waters in the 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.

This standard was met in 2002. Diversity of plant and wildlife species were consistent with productive sagebrush-steppe communities. Greater Sage-Grouse (hereafter sage-grouse) breeding sites have not been located within the Shadler FFR allotment; however, sage-grouse do occupy the allotment. Livestock grazing was not affecting sage-grouse use within the allotment sections. Peregrine falcons (*Falco peregrinus*) have been observed using the area; no nesting occurs in area. Bald eagles (*Haliaeetus leucocephalus*) use this area during winter. Golden eagles (*Aquila chrysaetos*) use the allotment for nesting and foraging habitat.

Special Status Plants

In 2020 there are no special status plants located in this allotment and this standard is being met.

Aquatic Species and Habitat

This standard is not applicable to this allotment as no native, T/E, or locally important aquatic species or habitat exists within the allotment.

Wildlife/Wildlife Habitat

In 2002, this standard was met and is currently being met in 2020. The diversity of wildlife species was consistent with productive sagebrush-steppe communities, which is an indication of health and productivity. Mule deer populations are healthy, while Rocky Mountain elk populations were expanding. The allotment was considered marginal habitat for bighorn sheep, with Schadler FFR 2 providing the majority of the available habitat (956-acres) in the allotment. Sage-grouse populations were stable to declining, with no known leks within the allotment boundary. There are two occupied leks within 1.2 miles of the allotment boundary. Additionally, Bald and Golden Eagles used the allotment, and various bat species.

Special status wildlife species and/or their habitats that are present within this allotment include Bald Eagle, Golden Eagle, Greater Sage-Grouse, gray wolf (*Canis lupus*), and western bumblebee (*Bombus occidentalis*). There are also species of high public interest or other special management designations, which include, but are not limited to mule deer, pronghorn, California bighorn sheep, and Ferruginous Hawk (*Buteo regalis*).

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.

The allotment wholly or partially supports two known Golden Eagle breeding areas (Warner Valley and South Warner Rim). Breeding pairs have been overserved in recent years (2012-2018) in both breeding areas, but nest success has not been documented during this time. Bald and Golden Eagle foraging does occur throughout the allotment. Foraging and nesting habitat for many raptor species, including Ferruginous Hawks, exists throughout the allotment. Peregrine Falcons have been observed in the allotment in the past, no known nesting has been documented.

Five Bureau Species of Concern have the potential to occur throughout the Schadler FFR Allotment, of which, are classified as either BLM-Sensitive and/or Oregon-Sensitive Vulnerable. All five species are bats and include pallid bat, hoary bat (*Lasiurus cinereus*), California myotis (*Myotis californicus*), Western small-footed myotis (*Myotis ciliolabrum*), and Yuma myotis (*Myotis yumanensis*). No known hibernacula are present on the allotment; however, bat roosting habitat is present in the form of rock outcrops and juniper tree bark.

Gray wolves are habitat generalists, provided abundant prey resources, especially elk and deer. Although gray wolves are known to disperse long distances and have traveled through much of the Lakeview Resource Area, the Schadler FFR Allotment is not within an Area of Known Wolf Activity (AKWA) designated by ODFW. The Schadler FFR Allotment is within the East Wolf Management Zone and wolves are still federally listed in this area. There is the potential for conflicts to occur as more gray wolves move in the Lakeview Resource Area.

Pygmy rabbit habitat has not been mapped with the Schadler FFR allotment. Rabbits have been documented east of the FFR 1 allotment and there is a potential for them to occur in the valley bottoms south of Coleman Lake.

Mapped elk habitat occurs on the eastern portion of the allotment, specifically the Schadler FFR 3 allotment. ODFW has identified approximately 1,730 acres (28% of the allotment) as crucial winter elk habitat. Although no other mapped elk habitat occurs in the other portions of the allotment, there is a potential for elk to occur throughout the allotment.

Mule deer occupy the entire allotment. There is 3,209-acres (53%) of the allotment that is identified by ODFW as winter range, this mapped deer habitat occurs in the western portions of the allotment (FFR 1 and 2). Conflicts between livestock and mule deer do not generally occur, due to the difference in diet.

Western juniper (*Juniperus occidentalis*) encroachment may hinder mule deer winter range conditions throughout the allotment.

Pronghorn have the potential to occur throughout the allotment. There are approximately 18 acres of mapped habitat available to pronghorn within the Schadler FFR Allotment. Pronghorn use occurs in areas of low sagebrush or shorter Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*). Increasing encroachment of western juniper could potentially decrease available habitats for pronghorn in low sagebrush habitats within the allotment. There are no major resource conflicts for this species. Diet overlap between cattle and pronghorn is low, ranging from only 8% in winter to 25% in spring (McInnis and Vavra 1987).

Bighorn sheep habitat is confined to the rim features located in the central section of the Schadler FFR Allotment. There are approximately 956-acres of identified bighorn sheep habitat. Although some competition for forage grasses may occur between cattle and bighorn sheep, it is likely insignificant. Direct conflict with livestock is 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.

Schadler FFR Allotment provides habitat capable of supporting varying mammal species, which include: gray wolves, coyotes (*Canis latrans*), jackrabbits (*Lepus* ssp.), cottontails (*Sylvilagus* ssp.), 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 Schadler FFR 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.

Sage-grouse have the potential to occur throughout the majority of the Schadler FFR Allotment. Of the 6,081 total acres that make up the allotment, approximately 3,054 acres are considered Priority Habitat Management Area (PHMA). The acres identified as PHMA fall within the Beaty and Warner Priority Areas of Conservation (PACs), no other portions of the allotment fall within any identified PACs. There are no known leks that occur within the allotment. There are two occupied leks within 1.2 miles of the allotment boundary and seven occupied leks within four miles of the boundary.

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. Bureau of Land Management 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 (2nd Order), fine-scale (3rd Order) and site-scale (4th Order). The mid-scale is comprised of 11.7 million acres and represents sage-grouse subpopulations and PACs (Map 11). Areas with potential to provide habitat are identified and seasonal habitats and landscape indicators are mapped (BLM 2018). The Warner fine-scale assessment, which the Schadler FFR Allotment is located, comprised of 1,327,944 acres and represents lek clusters and leks (Map 12). 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 (50-70%) within the fine-scale area among winter, breeding, and summer habitat, which extends well beyond the Schadler FFR allotment itself. The mid-scale area was rated as suitable by an interdisciplinary (ID) team (BLM 2018). The team concluded that the fine-scale area was rated marginal because there are areas in the north where connectivity is disjunct and anthropogenic features that can disrupt seasonal movements or cause mortality are present throughout the fine-scale (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 Schadler FFR Allotment had no site-scale data collected within the allotment boundaries. Being a custodial allotment, the majority of the ownership is private (4,052 acres or 66%) with the public land being situated along the steep, sloped edges of the allotment boundary. 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 77 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 Schadler FFR allotment contains approximately 2,786 acres (46% of allotment) of mapped breeding habitat, 2,603 acres (43%) of mapped upland summer/late brood-rearing habitat, and 1,479 acres (24%) of mapped winter habitats (BLM 2018). 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.

Team Members

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

Recommendations

Determination

(X) Existing grazing management practices on the Schadler FFR 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 Schadler FFR 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.

6/30/2020

Jami Ludwig, Field Manager — Date

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[1] "Allotment Categories", Bureau of Land Management, IM2009-018_att1, found at: https://www.blm.gov/style/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2009.Par.81970.File.dat/IM2009-018_att1.pdf

[2] 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

[3] 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 Schadler FFR 1

Vegetation Community		
Plant Code	Scientific Name	Common Name
ARAR8-POSE	*Artemisia arbuscula-Poa secunda*	low sagebrush-Sandberg bluegrass
ARTR2-POSE	*Artemisia tridentata -Poa secunda*	big sagebrush-Sandberg bluegrass
SAVE4-DISP	*Sarcobatus vermiculatus-Distichlis spicata*	greasewood-saltgrass
Playa	N/A	N/A
Unknown*	N/A	N/A

* "Unknown" combines dominate vegetation labeled as "Incomplete" + "Uknown" along with the remaining allotment acres with no classsified vegetation communities.

Table 2b. ESI dominant vegetation communities in Schadler FFR 1: Soil Surface Factor Acres

Vegetation Community	Acres	% of total acres	SSF Acres					
Plant Code			Stable	Slight	Moderate	Critical	Severe	Unknown
ARAR8-POSE	1	< 1%	-	1	-	-	-	-
ARTR2-POSE	1	< 1%	-	1	-	-	-	-
SAVE4-DISP	47	2%	-	47	-	-	-	-
Playa	26	1%	-	-	-	-	-	26
Unknown*	2296	97%	-	-	-	-	-	2296

* "Unknown" combines dominate vegetation labeled as "Incomplete" + "Uknown" along with the remaining allotment acres with no classsified vegetation communities.

Table 2c. ESI dominant vegetation communities in Schadler FFR 1: Observed Apparent Trend Acres

Vegetation Community	Acres	% of total acres	OAT Acres			
Plant Code			Upward	Static	Down	Unknown
ARAR8-POSE	1	< 1%	-	1	-	-
ARTR2-POSE	1	< 1%	-	1	-	-
SAVE4-DISP	47	2%	-	47	-	-
Playa	26	1%	-	-	-	26
Unknown*	2296	97%	-	-	-	2296

* "Unknown" combines dominate vegetation labeled as "Incomplete" + "Uknown" along with the remaining allotment acres with no classsified vegetation communities.

Table 2d. ESI dominant vegetation communities in Schadler FFR 1: Acres within Seral Stage

Vegetation Community	Acres	% of total acres	Acres within Seral Stage				
Plant Code			PNC	Late	Mid	Early	Unknown
ARAR8-POSE	1	< 1%	-	-	1	-	-
ARTR2-POSE	1	< 1%	-	-	1	-	-
SAVE4-DISP	47	2%	-	-	47	-	-
Playa	26	1%	-	-	-	-	26
Unknown*	2296	97%	-	-	-	-	2296

* "Unknown" combines dominate vegetation labeled as "Incomplete" + "Uknown" along with the remaining allotment acres with no classsified vegetation communities.

Table 3a. ESI dominant vegetation communities in Schadler FFR 2

Vegetation Community		
Plant Code	Scientific Name	Common Name
ARAR8-POSE	*Artemisia arbuscula-Poa secunda*	low sagebrush-Sandberg bluegrass
ARTR2-PSSPS	*Artemisia tridentata-Pseudoroegneria spicata*	big sagebrush-bluebunch wheatgrass
ARTR2-BRTE	*Artemisia tridentata-Bromus tectorum*	big sagebrush-cheatgrass
BRTE	*Bromus tectorum*	cheatgrass
JUOC-ARAR8-POSE	*Juniperus occidentalis-Artemisia arbuscula-Poa secunda*	western juniper-low sagebrush-Sandberg bluegrass
JUOC-ARTR2-PSSPS	*Juniperus occidentalis-Artemisia tridentata-Pseudoroegneria spicata*	western juniper-big sagebrush-bluebunch wheatgrass
Lakebed	N/A	N/A
Rockland	N/A	N/A
Unknown*	N/A	N/A

* "Unknown" is the remaining allotment acres with no classsified vegetation communities.

Table 3b. ESI dominant vegetation communities in Schadler FFR 2: Soil Surface Factor Acres

Vegetation Community	Acres	% of total	SSF Acres					
Plant Code		acres	Stable	Slight	Moderate	Critical	Severe	Unknown
ARAR8-POSE	4	< 1%	-	4	-	-	-	-
ARTR2-PSSPS	182	19%	-	182	-	-	-	-
ARTR2-BRTE	170	18%	-	137	-	-	-	33
BRTE	126	13%	-	115	-	-	-	11
JUOC-ARAR8-POSE	1	< 1%	-	1	-	-	-	-
JUOC-ARTR2-PSSPS	85	9%	-	85	-	-	-	-
Lakebed	< 1	< 1%	-	-	-	-	-	< 1
Rockland	283	29%	-	-	-	-	-	283
Unknown*	120	12%	-	-	-	-	-	120

* "Unknown" is the remaining allotment acres with no classsified vegetation communities.

Table 3c. ESI dominant vegetation communities in Schadler FFR 2: Observed Apparent Trend Acres

Vegetation Community	Acres	% of total	OAT Acres			
Plant Code		acres	Upward	Static	Down	Unknown
ARAR8-POSE	4	< 1%	-	4	-	-
ARTR2-PSSPS	182	19%	182	-	-	-
ARTR2-BRTE	170	18%	-	137	-	33
BRTE	126	13%	-	-	115	11
JUOC-ARAR8-POSE	1	< 1%	1	-	-	-
JUOC-ARTR2-PSSPS	85	9%	85	-	-	-
Lakebed	< 1	< 1%	-	-	-	< 1
Rockland	283	29%	-	-	-	283
Unknown*	120	12%	-	-	-	120

* "Unknown" is the remaining allotment acres with no classsified vegetation communities.

Table 3d. ESI dominant vegetation communities in Schadler FFR 2: Acres within Seral Stage

Vegetation Community	Acres	% of total	Acres within Seral Stage				
Plant Code		acres	PNC	Late	Mid	Early	Unknown
ARAR8-POSE	4	< 1%	-	-	4	-	-
ARTR2-PSSPS	182	19%	-	182	-	-	-
ARTR2-BRTE	170	18%	-	-	137	-	33
BRTE	126	13%	-	-	-	126	-
JUOC-ARAR8-POSE	1	< 1%	-	1	-	-	-
JUOC-ARTR2-PSSPS	85	9%	-	-	85	-	-
Lakebed	< 1	< 1%	-	-	-	< 1	-
Rockland	283	29%	-	-	-	-	283
Unknown*	120	12%	-	-	-	-	120

* "Unknown" is the remaining allotment acres with no classsified vegetation communities.

Table 4a. ESI dominant vegetation communities in Schadler FFR 3

Vegetation Community		
Plant Code	Scientific Name	Common Name
ARAR8-FEID	*Artemisia arbuscula-Festuca idahoensis*	low sagebrush-Idaho fescue
ARAR8-POSE	*Artemisia arbuscula-Poa secunda*	low sagebrush-Sandberg bluegrass
ARTRV-PSSPS	*Artemisia tridentata* ssp. *vaseyana-Pseudoroegneria spicata*	mountain big sagebrush-bluebunch wheatgrass
ARTRV-FEID	*Artemisia tridentata* ssp. *vaseyana-Festuca idahoensis*	mountain big sagebrush-Idaho fescue
ARTRV-POSE	*Artemisia tridentata* ssp. *vaseyana-Poa secunda*	mountain big sagebrush-Sandberg bluegrass
PIPO-ARTRV	*Pinus ponderosa-Artemisia tridentata* ssp. *vaseyana*	ponderosa pine-mountain big sagebrush
Rockland	N/A	N/A
Unknown*	N/A	N/A

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

Table 4b. ESI dominant vegetation communities in Schadler FFR 3: Soil Surface Factor Acres

Vegetation Community	Acres	% of total	SSF Acres					
Plant Code		acres	Stable	Slight	Moderate	Critical	Severe	Unknown
ARAR8-FEID	49	2%	-	44	-	-	-	5
ARAR8-POSE	1097	40%	1013	-	84	-	-	-
ARTRV-PSSPS	126	5%	-	126	-	-	-	-
ARTRV-FEID	30	1%	-	24	-	-	-	6
ARTRV-POSE	215	8%	-	215	-	-	-	-
PIPO-ARTRV	327	12%	-	327	-	-	-	-
Rockland	17	1%	-	-	-	-	-	17
Unknown*	892	32%	-	-	24	-	-	868

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

Table 4c. ESI dominant vegetation communities in Schadler FFR 3: Observed Apparent Trend Acres

Vegetation Community	Acres	% of total	OAT Acres			
Plant Code		acres	Upward	Static	Down	Unknown
ARAR8-FEID	49	2%	44	-	-	5
ARAR8-POSE	1097	40%	606	491	-	-
ARTRV-PSSPS	126	5%	-	126	-	-
ARTRV-FEID	30	1%	24	-	-	6
ARTRV-POSE	215	8%	-	215	-	-
PIPO-ARTRV	327	12%	327	-	-	-
Rockland	17	1%	-	-	-	17
Unknown*	892	32%	-	24	-	868

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

Table 4d. ESI dominant vegetation communities in Schadler FFR 3: Acres within Seral Stage

Vegetation Community Plant Code	Acres	% of total acres	Acres within Seral Stage				
			PNC	Late	Mid	Early	Unknown
ARAR8-FEID	49	2%	-	-	44	-	5
ARAR8-POSE	1097	40%	-	606	491	-	-
ARTRV-PSSPS	126	5%	-	-	126	-	-
ARTRV-FEID	30	1%	-	24	-	-	6
ARTRV-POSE	215	8%	-	-	215	-	-
PIPO-ARTRV	327	12%	-	-	327	-	-
Rockland	17	1%	-	-	-	-	17
Unknown*	892	32%	-	-	24	-	868

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

Schadler FFR fire monitoring plot Sage Hen Fire (B4QX)

Fire plot

Years of recorded data: 2006, 2008

Photographs indicate the area is recovering from the fire, showing grasses have returned. It appears no significant soil erosion has occurred at the monitoring plot. Another visit is needed to determine whether the shrub community is also returning.

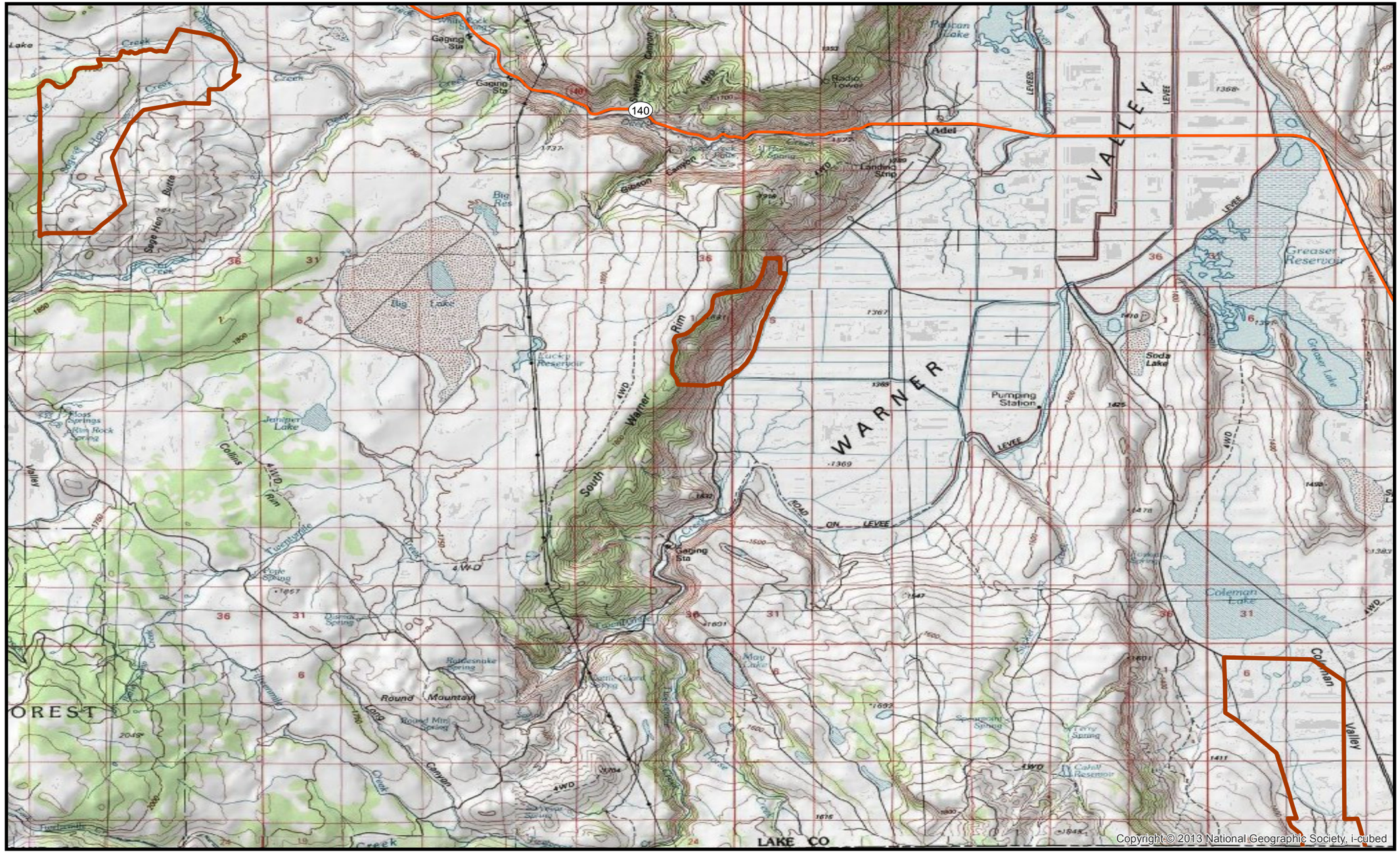
Table 5. Schadler FFR Allotment (#00209) Actual Use Data by Year

Year	Schadler FFR 1 AUM's	Schadler FFR 2 AUM's	Schadler FFR 3 AUM's	Total AUM's
2016	11	27	16	54
2015	10	15	16	41
2014	-	30	Rested	30
2013	-	-	Rested	0
2012	-	31	16	47
2011	-	-	16	16
2010	-	30	16	46
2009	11	-	16	27
2008	11	-	16	27
2007	11	-	16	27
2006	-	-	39	39
2005	-	-	-	0
2004	-	-	-	0
2003	10	-	-	10
Recent 10 year Average	11	27	16	32
Overall Average	11	27	19	26

"-" reflects years when no actual use reported

Note: Utilization not recorded for any of the Schadler FFR Allotment since the majority of the land is privately owned and the allotment has a "Custodial" categorization.

Appendix B. Maps



Legend

- Schadler FFR 1
- Schadler FFR 2
- Schadler FFR 3

Roads

- State Highway

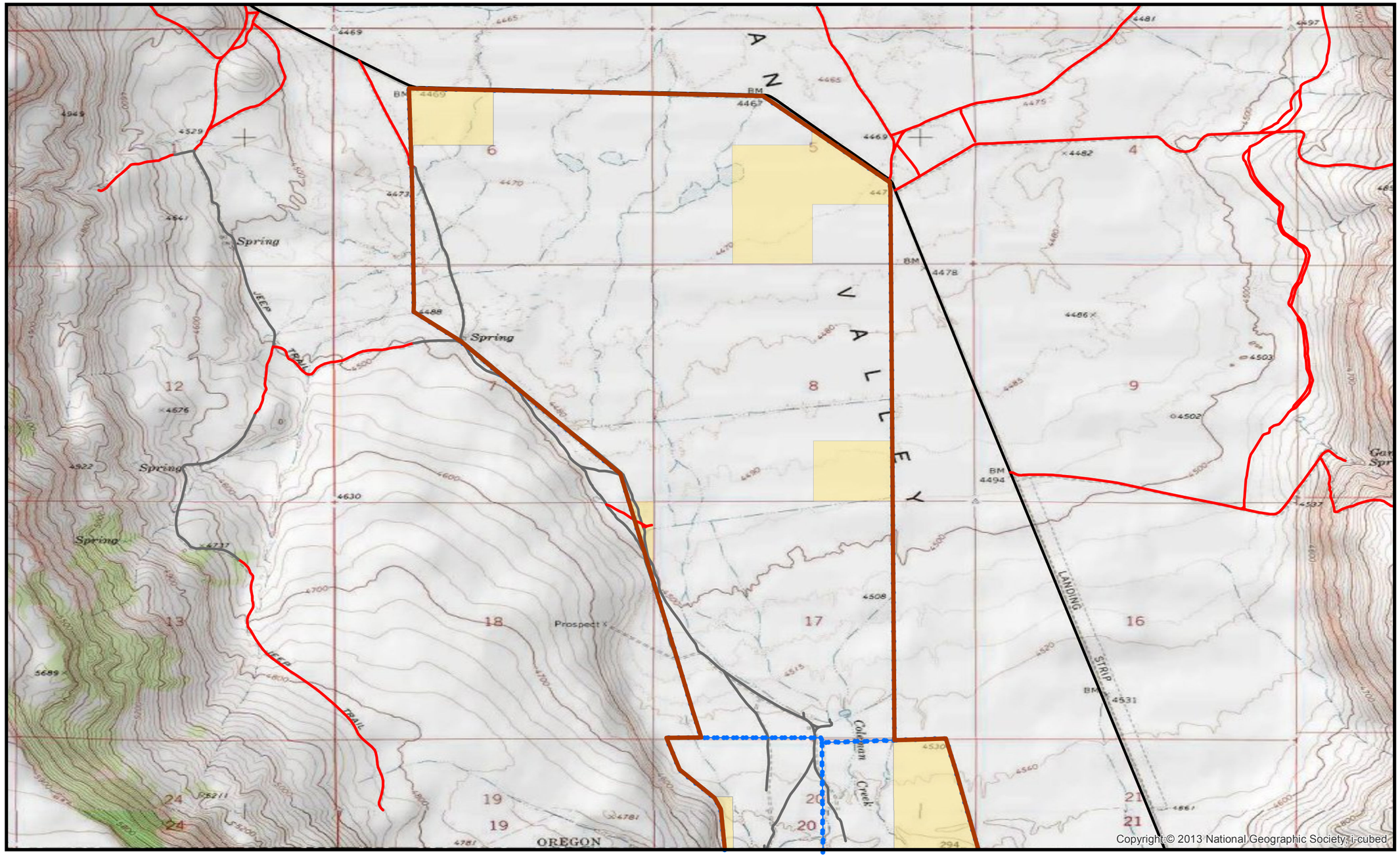
Schadler FFR Allotment

Map 1

1:108,589

1.5 0.75 0 1.5 3 4.5 Miles

2.5 1.25 0 2.5 5 7.5 Km



Legend

Schadler FFR 1

- Allotment
- Pastures

Land Ownership

- Bureau of Land Management
- Private

Roads

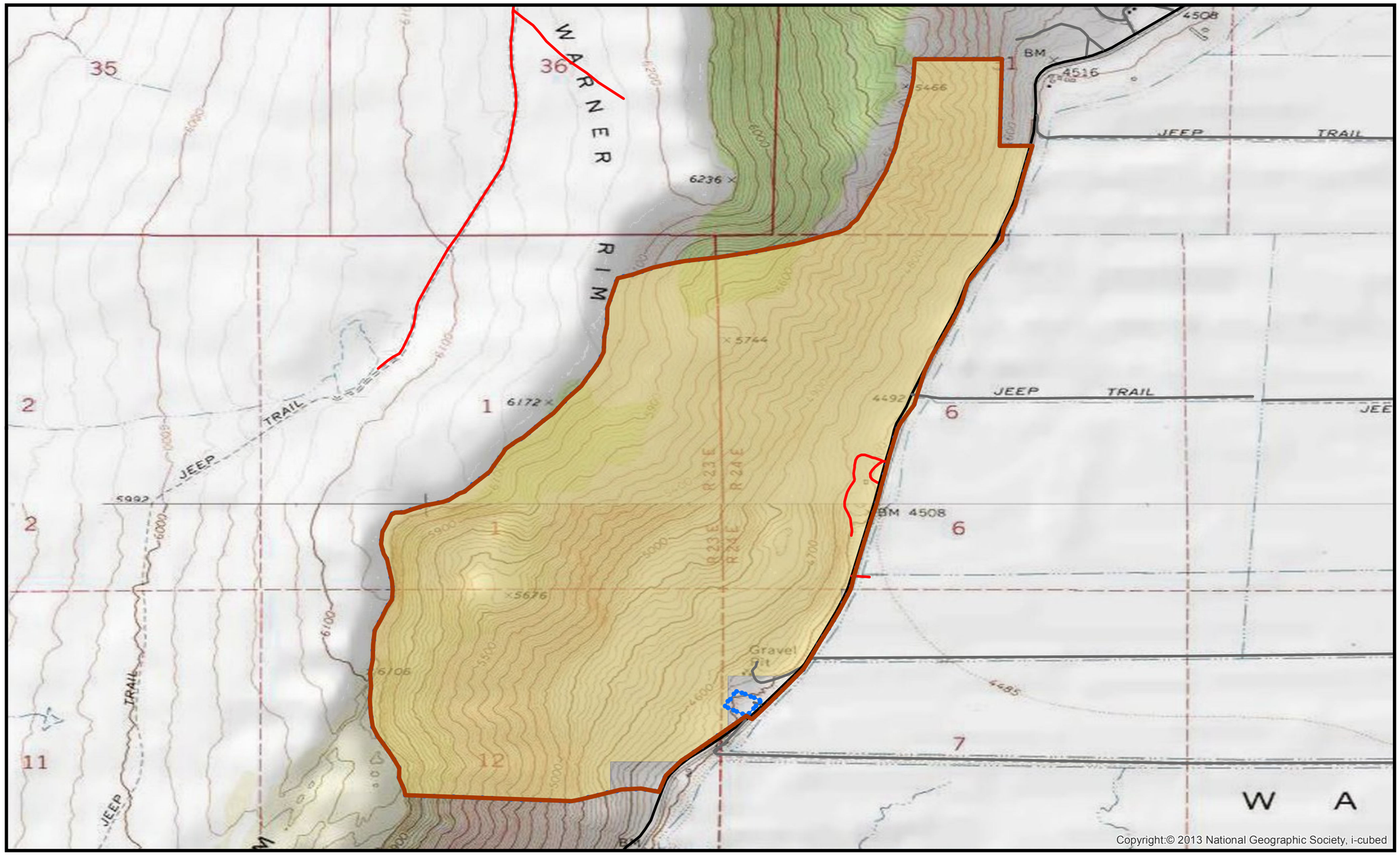
- County route
- Bureau of Land Management
- Other

Schadler FFR 1
Map 2

1:26,929

0.35 0.175 0 0.35 0.7 1.05 Miles

0.65 0.325 0 0.65 1.3 1.95 Km



Legend

Schadler FFR 2

- Allotment
- Pastures

Land Ownership

- Bureau of Land Management
- Private

Roads

- County route
- Bureau of Land Management
- Other

Schadler FFR 2
Map 3

1:18,635

0.25 0.125 0 0.25 0.5 0.75 Miles

0.45 0.225 0 0.45 0.9 1.35 Km

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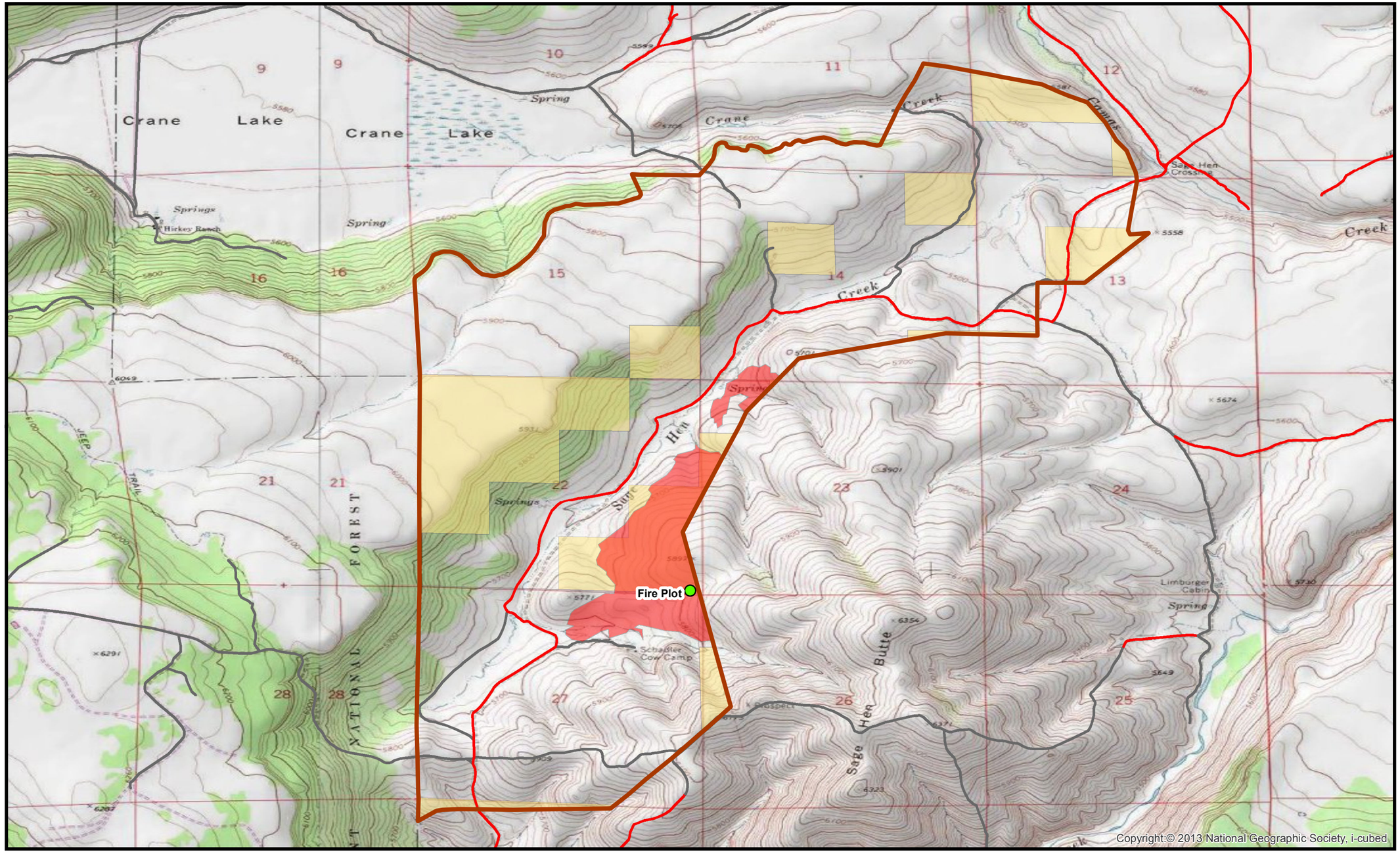
N W E S



Legend

Schadler FFR 3

- Allotment
- 2005 Fire

Land Ownership

- Bureau of Land Management
- Private

Monitoring Plot

- Fire Plot

Roads

- County route
- Bureau of Land Management
- Other

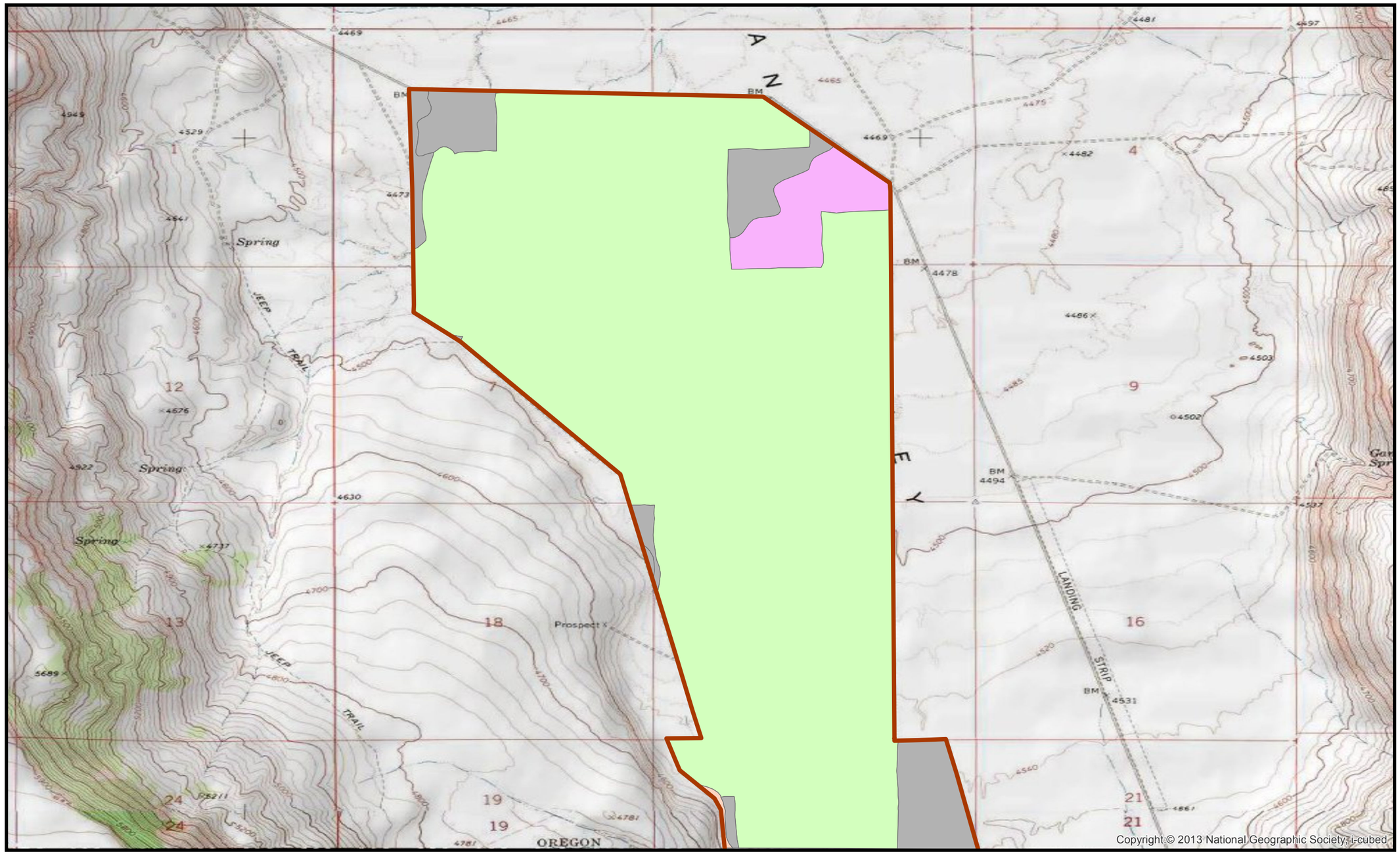
Schadler FFR 3

Map 4

1:29,655

0.4 0.2 0 0.4 0.8 1.2 Miles

0.75 0.375 0 0.75 1.5 2.25 Km



Legend

Dominant Vegetation

- ARAR8-POSE
- Incomplete
- SAVE4-DISP
- Unknown

Schadler FFR 1: Dominant Vegetation

Map 5

1:26,929

0.35 0.175 0 0.35 0.7 1.05 Miles

0.65 0.325 0 0.65 1.3 1.95 Km

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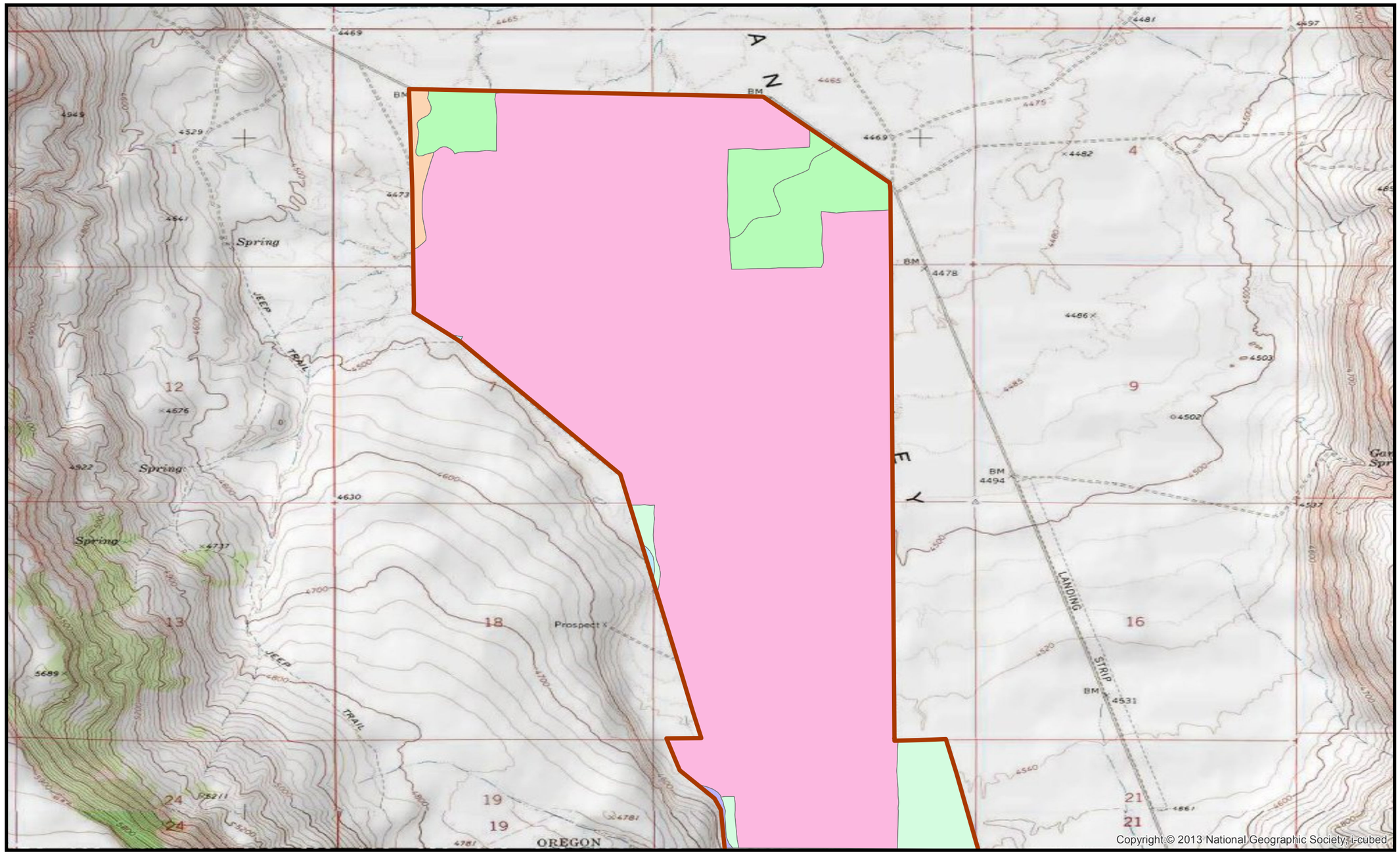
N W E S



Legend

Soils

- Unknown
- CLAYPAN 10-12
- LOW SODIC TERRACE
- SHALLOW LOAM 8-10
- SODIC BOTTOM
- SODIC BOTTOM 6-10

Schadler FFR 1: Soils

Map 6

1:26,929

0.35 0.175 0 0.35 0.7 1.05 Miles

0.65 0.325 0 0.65 1.3 1.95 Km

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N W E S

Legend

Dominant Vegetation

- ARAR8-POSE
- ARTR2-PSSPS
- ARTR2-BRTE
- BRTE
- Lakebed
- Rockland

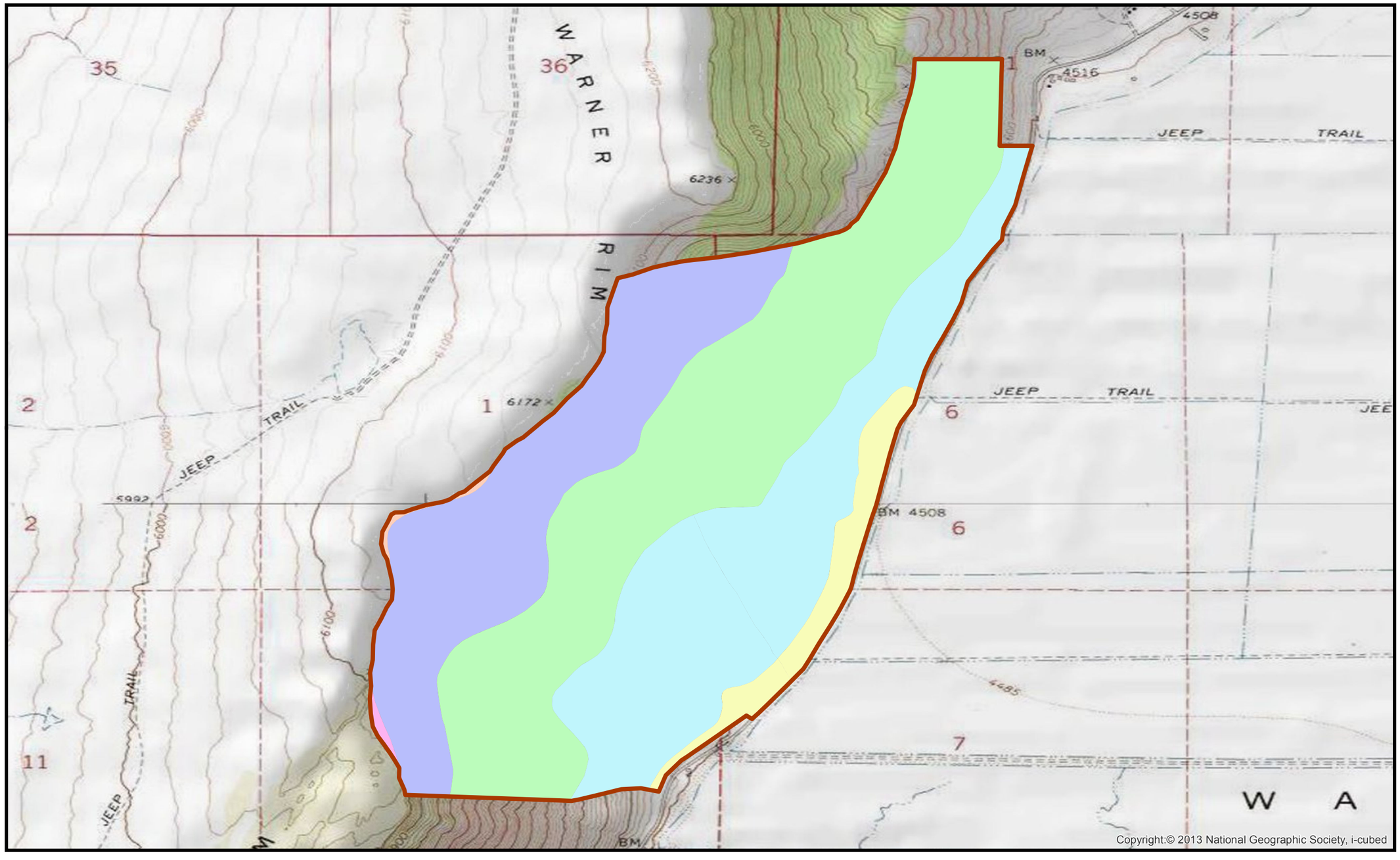
Schadler FFR 2: Dominant Vegetation

Map 7

1:18,635

0.25 0.125 0 0.25 0.5 0.75 Miles

0.45 0.225 0 0.45 0.9 1.35 Km



Legend

Soils

- CLAYPAN 10-12
- CLAYPAN 12-16
- Lakebed
- Misc
- SHALLOW LOAM 8-10
- SODIC TERRACE 6-10
- SOUTH SLOPES 14-18

Schadler FFR 2: Soils

Map 8

1:18,635

0.25 0.125 0 0.25 0.5 0.75 Miles

0.45 0.225 0 0.45 0.9 1.35 Km

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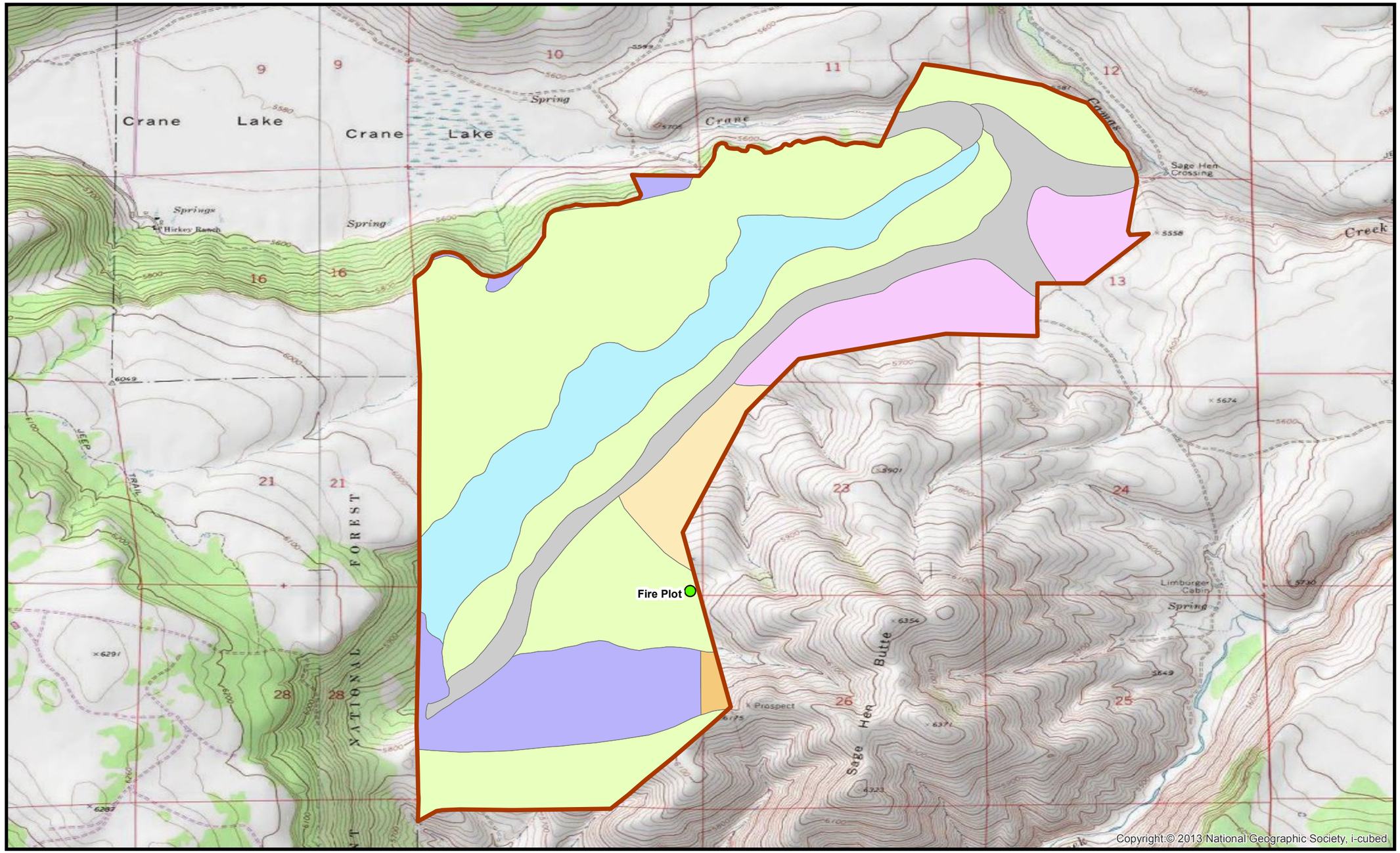
N W E S



Legend

Schadler FFR 3

- Allotment

Dominant Vegetation

- ARAR8-FEID
- ARAR8-POSE
- ARTRV-FEID
- ARTRV-POSE
- Incomplete
- PIPO-ARTRV
- Unknown

Monitoring Plot

- Fire Plot

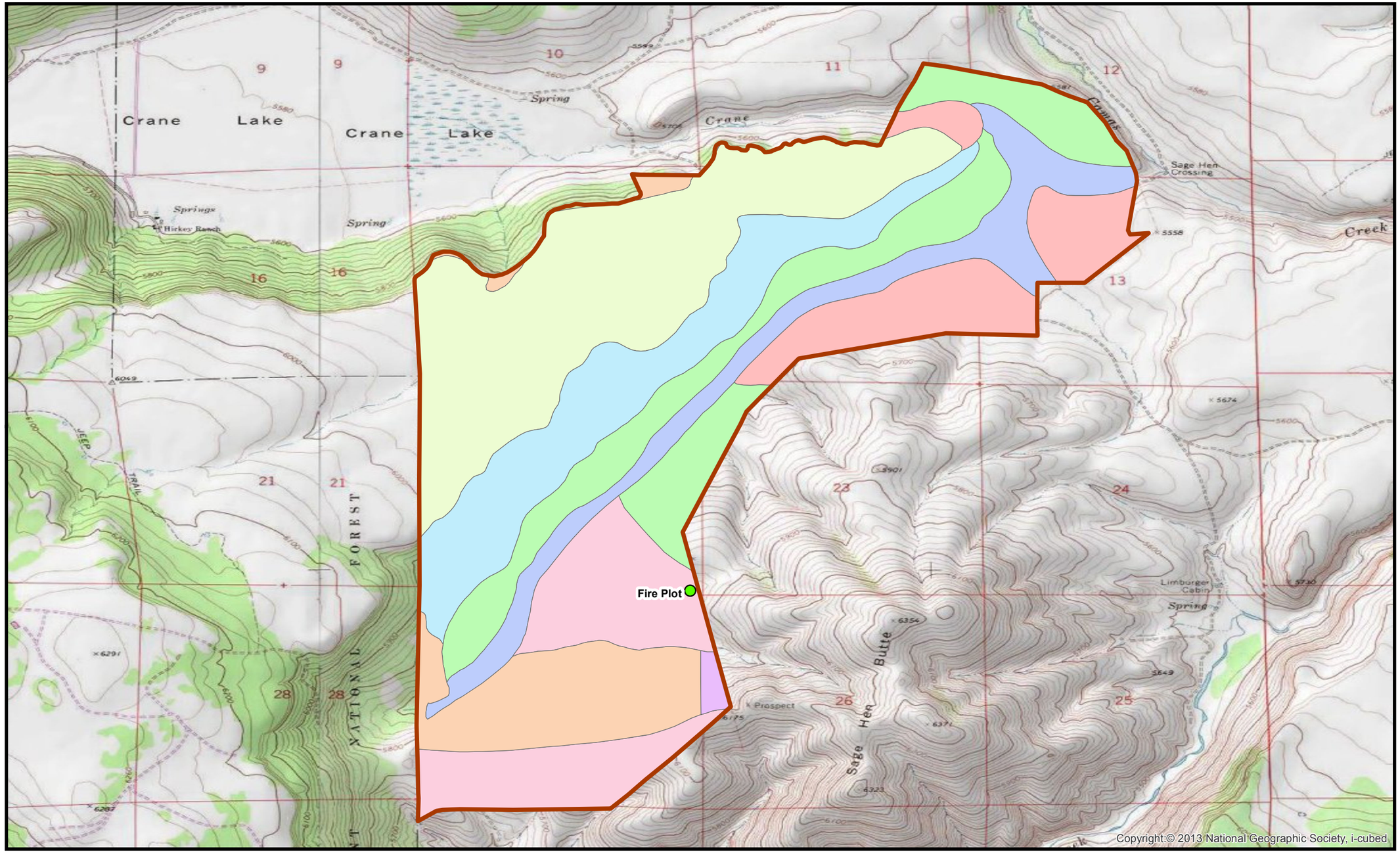
Schadler FFR 3: Dominant Vegetation

Map 9

1:29,655

0.4 0.2 0 0.4 0.8 1.2 Miles

0.75 0.375 0 0.75 1.5 2.25 Km



Legend

Schadler FFR 3

- Allotment

Soils

- Unknown
- CLAYPAN 12-16
- DRY MEADOW
- LOAMY 12-16
- NORTH SLOPES 12-16
- PIPO-WYMO
- SHALLOW NORTH 12-16
- STONY CLAYPAN 14-18

Monitoring Plot

- Fire Plot

Schadler FFR 3: Soils

Map 10

1:29,655

0.4 0.2 0 0.4 0.8 1.2 Miles

0.75 0.375 0 0.75 1.5 2.25 Km

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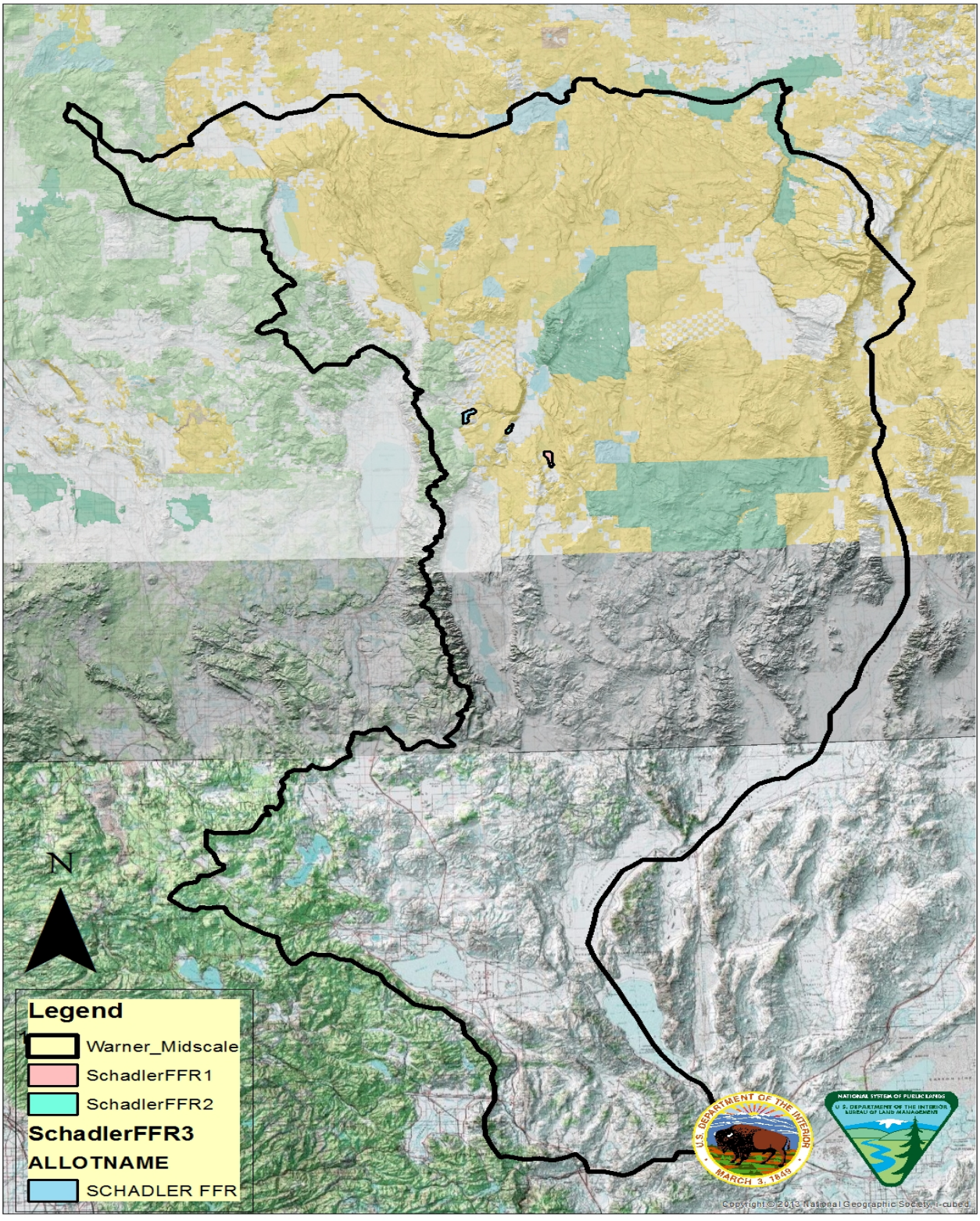
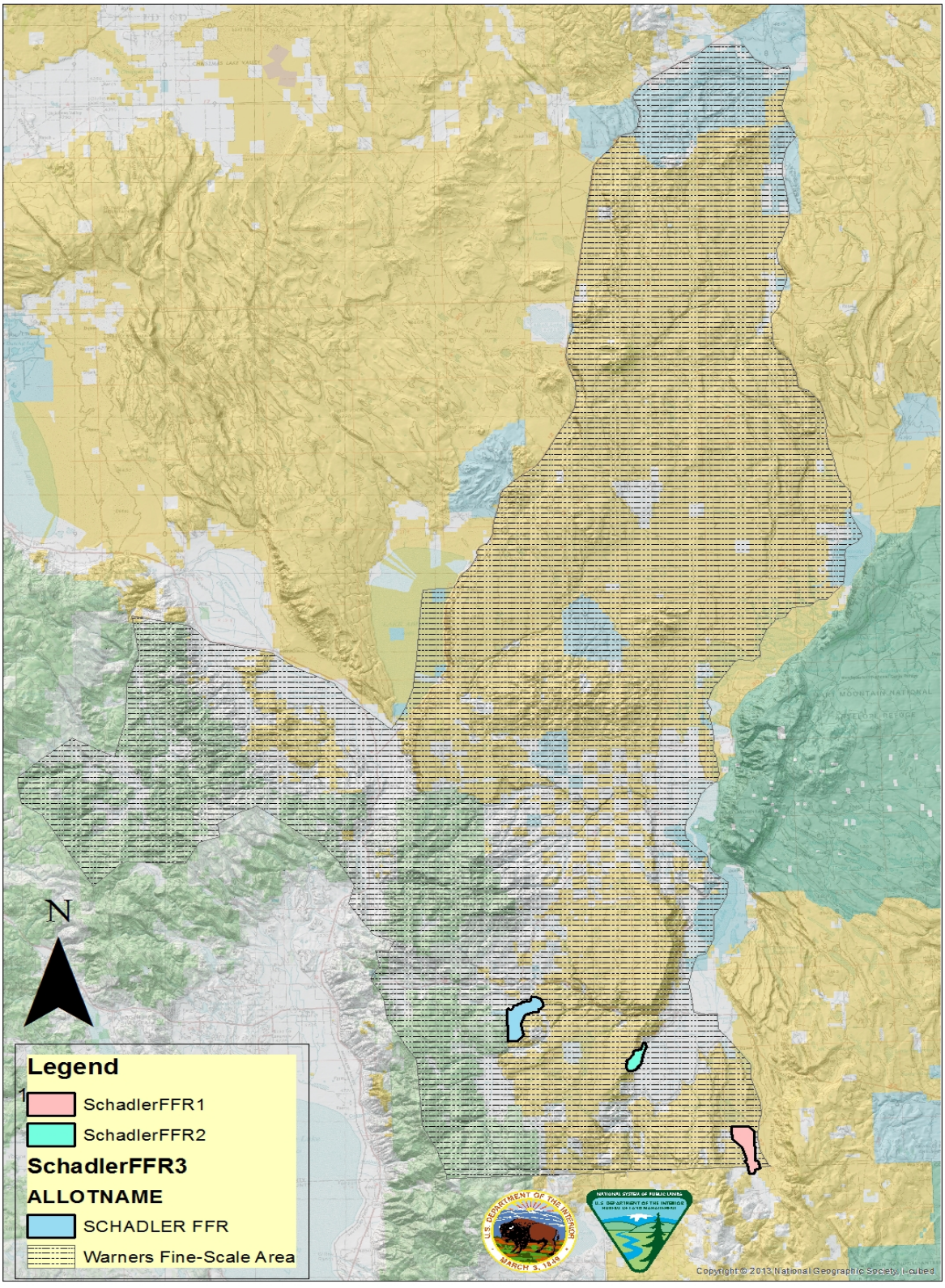
N W E S

No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of this data for individual or aggregate use with other data.

Map 11. HAF Mid-Scale Boundary and Schadler FFR Allotment



Map 12. HAF Fine-Scale Boundary and Schadler FFR Allotment


N
Legend
1
SchadlerFFR1
SchadlerFFR2
SchadlerFFR3
ALLOTNAME
SCHADLER FFR
Warners Fine-Scale Area
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Appendix C. Literature Cited

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