AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

AgendaTitle:
Certificate of Inclusion for the South Parcel of W Mountain Ranch

Action Requested: Board of County Commissioners' Signature

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:
The attached was provided by Jim Cochran for approval.

Fiscal Impact:

Submitted by: Katherine Haase **Submitter's Email Address:** khaase@gunnisoncounty.org

Finance Review: ○ Required ● Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ● Required ○ Not Required

Comments:

Reviewed by: GUNCOUNTY1\atrezise Discharge Date: 12/12/2014 Certificate of Insurance Required Yes ○ No ●

County Manager Review:

Comments:

Reviewed by: GUNCOUNTY1\mbirnie Discharge Date: 12/12/2014

○ Consent Agenda ● Regular Agenda ○ Worksession Time Allotted: 5

Agenda Date: 12/16/2014 Follow Up Agenda Date:

Revised April 2013

CERTIFICATE OF INCLUSION

for:

GUNNISON COUNTY
SOUTH PARCEL
CONTACT: COUNTY ATTORNEY'S OFFICE
200 EAST VIRGINIA AVENUE
GUNNISON, CO 81230
GUNNISON COUNTY, COLORADO

Under the
Candidate Conservation Agreement with Assurances
For the Gunnison Sage-grouse in Colorado
Between Colorado Parks and Wildlife and
The U.S. Fish and Wildlife Service

December 9, 2014

LEGAL CONVEYANCE OF ASSURANCES

This certifies that the enrolled property as described below and owned by the landowner listed below is included within the scope of the Enhancement of Survival Permit (Permit) No. TE-117730-0 issued on 23 October 2006 to the Colorado Division of Wildlife, now Colorado Parks and Wildlife (CPW), under the authority of Section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended, 16 U.S.C. 1539(a)(1)(B). Such Permit authorizes incidental take of the Gunnison sage-grouse (GUSG; *Centrocercus minimus*) as part of a Candidate Conservation Agreement with Assurances (CCAA). This incidental take is allowed due to conservation measures incorporated on the owner's property that will benefit GUSG and/or its habitat within its range in Colorado. These conservation measures are listed below. Pursuant to the Permit and this Certificate of Inclusion (CI), the holder of this CI is authorized to engage in any otherwise lawful activity on the property that may result in the incidental taking of GUSG subject to the terms and conditions of the Permit and the CCAA. Permit authorization is subject to carrying out the conservation measures described below, and the terms and conditions of the Permit and the CCAA. By signing this CI, the landowner agrees to carry out all of the conservation measures described herein.

Under the CCAA, the U.S. Fish and Wildlife Service (Service) provides CPW and the participating landowner enrolled through this CI with assurances that no additional conservation measures or additional land, water, or resource use restrictions, beyond those voluntarily agreed to and described in the "Conservation Measures" section of the CCAA and this CI, will be required should the GUSG become listed as a threatened or endangered species in the future. These assurances have been authorized with the issuance of Permit No. TE-117730-0 under section 10(a)(1)(A) of the Endangered Species Act.

During the life of this CI, changes in the understanding of GUSG management and sagebrush habitat community management are anticipated. Additionally, events that lead to changes in habitats or uses may occur. An additional assurance for the landowner is that modification of conservation measures for "changed circumstances <u>not</u> provided for in the CCAA" or "unforeseen circumstances" are not required (see the programmatic CCAA), but may occur through consultation and agreement between the landowner, CPW, and the Service.

Such circumstances may create a need to modify conservation measures if the circumstances show the measures to be ineffective or needing improvement to ensure the purpose of the CI. Events identified in the CCAA that may cause changed circumstances are wildfire, drought, West Nile Virus, and energy development activities. If one of these circumstances occurs, CPW and the Service will use adaptive management to determine how to provide the same or greater habitat quantity and quality agreed to in this CI through amendment of the CI.

PROPERTY OWNER

Gunnison County
Contact: David Baumgarten
County Attorney's Office
200 E. Virginia Ave.
Suite 262
Gunnison, CO 81230
Telephone: (970) 641-5300

LEGAL DESCRIPTION OF THE ENROLLED PROPERTY

The property consists of one parcel within Gunnison County (Appendix A, Map 1). A general legal description of the Gunnison County South Parcel CI property (hereafter CI property or Gunnison County South CI property) follows:

Gunnison County Parcel # 378700000100, all in Township 49 North, Range 1 West:
W ½ of the NE ¼, SE ¼ of the NE ¼, NE ¼ of the SE ¼, Section 14.

DESCRIPTION OF THE ENROLLED PROPERTY

The Gunnison County South CI property consists of approximately 142 acres, calculated using ArcMap Version 10.0 Geographic Information System (GIS) software. The land is primarily managed for agriculture using techniques compatible with the continued security and survival of Gunnison sage-grouse (GUSG).

The CI property is located south of Gunnison and represents the southwestern portion of a larger county-owned parcel which includes the Gunnison-Crested Butte Regional Airport and W Mountain Ranch. The CI property is exempted from Federal Aviation Administration (FAA) regulation. The property consists primarily of pastureland and sagebrush, with elevations ranging from about 7,636 feet in the northwest corner to 7,702 feet on the southeast edge.

The "Haul Road" delineates the northern boundary of the CI property. The property is bordered to the east by public lands managed by the Bureau of Land Management, to the north by the main portion of the Gunnison County property referred to as W Mountain Ranch, to the west by County Road 38, and to the south by private property (Appendix B, Maps 2–3). Uses of the property include agriculture, a celestial observatory, and in the past as a gravel pit. The gravel pit, haul road, and any associated disturbed areas were required to be reclaimed by June 2, 2003 using a herbaceous seed mix that would benefit GUSG as per Gunnison County Land Use Resolution, Section 5-415: Reclamation and Noxious Weed Control. Future property uses have not yet been determined; however, previous proposals have included affordable housing and apartments. No proposals are expected in the near future, current plans are to maintain the property in agriculture.

Land Cover Types

Land cover types were mapped using ESRI ArcMap (GIS), based on field observations, and interpretation of 2005 and 2011 natural color aerial photography. Land cover types and acres of the CI property are listed in Table 1. Appendix B illustrates land cover types along with property improvements, water features, and surrounding land ownership.

More than a third of the property is covered by sagebrush, which occurs in the central and southern areas on west- and northwest-facing slopes and is contiguous with sagebrush extending for many miles to the east and south. A reclaimed gravel pit is present on the east end of the property. The depression is lightly vegetated with grasses, forbs, and small shrubs. A wet meadow occurs on the north end of the reclaimed gravel pit where water is retained after surface water flows. Dryland pasture surrounds the reclaimed pit and extends throughout the central area, covering almost a third of the property. Sagebrush has been cleared from this area, and the site is dominated by herbaceous vegetation and low shrubs. The northern 12% of the property is dominated by hay/pasture land irrigated by a diversion from Tomichi Creek.

Table 1. Land cover types and acres on the Gunnison County South CI property.

Land Cover Type	**Acres**	**% of CI Property**
Sagebrush	49	34 %
Dryland Pasture	41	29 %
Irrigated Hay/Pasture	17	12 %
Reclaimed Gravel Pit	31	22 %
Wet Meadow	4	3 %
Total Property Acres	**142**	**100%**

Range Sites

Range sites have distinctive kinds of soils; in combination with unique environmental conditions, each range site has potential for producing different plant communities (Hunter and Spears 1975). These sites retain their ability to produce associated plant communities unless they are materially altered or affected by environmental changes. Rangeland Health Assessment (RHA) techniques were used to determine how closely the range sites on the CI property match their site potential.

The majority (132 acres or 93%) of the CI property consists of the Mountain Outwash range site; Dry Mountain Loam range site covers about 10 acres in the uplands on the eastern edge of the property. Maps of range sites depicting locations of RHAs and vegetation transects are illustrated in Appendix C (Map 4). Table 4 shows specific locations and results of the assessments.

CURRENT PROPERTY USES AND MANAGEMENT PRACTICES

The Gunnison County South CI property has typically been leased by the Gunnison County Board of County Commissioners for agricultural operations. This property is managed for livestock production with techniques that allow the continued security and survival of GUSG. A general description of grazing practices for this property follows: The property is managed as a flexible and diverse operation. The ranch has the forage availability to run upwards of 10 to 15 Animal Units as determined by Eric McPhail, Colorado State University Agricultural Extension agent. With the use of adjacent and other private properties, agricultural tenants can sustain operations of 30 to 40 Animal Units. This allows for an operation that can respond to market and climatic changes to meet the forage resources on hand.

No recreational use occurs on the property. The property has no other current uses, though proposals may be submitted to the Gunnison County Board of County Commissioners for consideration.

Improvements and Water Features

Improvements and water features are illustrated in Appendix B (Maps 2–3) and described below. Table 2 shows the total length of each type of feature within the CI property, and within only GUSG habitat on the property. Infrastructure identified in maps and described below is current as of February 2014. The landowner has the exclusive right and ability to perform necessary maintenance on the identified infrastructure. Construction of additional infrastructure must occur in consultation with CPW.

Fences. Fences are constructed of barbed wire on wood and metal posts. Fences more or less enclose the property, although not all fence lines follow CI property boundary lines. Cross fences separate the northern and southern portions of the property and surround the reclaimed gravel pit. Fencing surrounding the reclaimed gravel pit will be removed pending sufficient vegetative cover and if no longer needed to manage livestock. Adequate vegetative cover will be determined through mutual agreement between Gunnison County managers and CPW. Colorado Parks and Wildlife will facilitate removal of the fence by using local volunteers interested in enhancing wildlife habitat.

Roads. An improved access road ("Haul Road") runs northwest to southeast across the eastern edge of the property. No unimproved roads exist on the CI property.

Power line. An overhead electric distribution line crosses through the dryland pasture in the central portion of the property. This power line is close to a historic lek but does not cross through sage-grouse habitat.

Water Features. One irrigation ditch crosses the northwest corner of the CI property, and another runs along the interface between the dryland and irrigated pastures. Gold Basin Creek, a seasonally intermittent stream, follows a meandering channel from the south-central boundary to the northwestern boundary of the property. Water also collects in the depression of the reclaimed gravel pit periodically after storm events and sometimes from groundwater seepage.

Table 2. Length of improvements and water features within the entire 142-acre CI boundary (column 2), as well as within mapped GUSG habitat only (column 3). Lengths were calculated using GIS based on features mapped in or within 100 feet of the CI boundary, and in or within 100 feet of all GUSG seasonal habitats (breeding, summer-fall, and winter).

Improvement or Water Feature	Length on CI Property (feet)	Length within GUSG Habitat on CI Property (feet)
Fence	15,747	3,621
Improved Road	2,396	352
Power line	1,269	0
Irrigation Ditch	2,359	615
Stream	6,768	5,881

GUNNISON SAGE-GROUSE PRESENCE AND HABITAT ASSESSMENT

Gunnison Sage-grouse Presence

Gunnison sage-grouse appear to regularly occupy the CI property, as evidenced by large quantities of scat found in five locations during initial site visits in 2007 and one fresh scat found in 2012 (Appendix D, Maps 5–6). A habitat use study on W Mountain Ranch (encompassing the CI property and surrounding lands) documented use by grouse during summer in wet meadows, transitional habitat, and sagebrush uplands (Sewolt and Magee 2004). Sage-grouse use was concentrated along the east side of the property. Two historic leks occur on or partially on the property, and an active lek is about 2 miles distant.

Seasonal Habitats

The Gunnison Sage-grouse Rangewide Conservation Plan (RCP) differentiates GUSG seasonal habitats into breeding, summer-fall, and winter habitats (Gunnison Sage-grouse Rangewide Steering Committee 2005). The extent of GUSG seasonal habitats was mapped based on analysis of several factors including the GUSG Structural Habitat Guidelines from Appendix H of the RCP (Appendix G, Tables I–III), field observations, CPW Species Activity Maps including GUSG lek maps, and GIS analysis of land cover types and other features such as elevation and aspect. Gunnison Sage-grouse seasonal habitat maps are illustrated in Appendix D (Maps 5-6), and acreage totals are listed in Table 3.

Breeding habitat. Breeding habitat consists of leks and sagebrush-dominated areas within about four miles of leks which provide sufficient nesting and early brood-rearing resources. Two historic leks, Gold Basin 1 and Gold Basin 2, occur on and adjacent to the CI property. Gold Basin 1 lek is extremely close to Gold Basin road and an overhead powerline. An inactive lek, Tyler's, is about 1.6 miles east of the CI property. The Chance Gulch lek lies about 2.3 miles southeast of the property and is actively used by sage-grouse. All sagebrush on the property was mapped as breeding habitat because of the proximity to several leks (Map 5).

Summer-fall habitat. Summer-fall habitat was mapped on the CI property to include all wet meadows as important foraging areas; irrigated hay meadows/pastures within 150 feet of sagebrush or other shrublands that provide cover; and sagebrush cover within 660 feet of irrigated hay/pasture or wet meadow (Map 6).

Winter habitat. GUSG winter habitat consists of sagebrush-dominated areas on southeast to northwest aspects (facing between about 136 to 315 degrees). No winter habitat occurs on the CI property.

Table 3. Acres of GUSG seasonal habitats on the Gunnison County South CI property.

GUSG Seasonal Habitat	Acres*	% of CI Property**
Breeding: Lek	6	4 %
Breeding: Nesting and Early Brood Rearing	48	34 %
Summer-Fall	21	15 %
Winter	0	0 %
Total Seasonal Habitat	**75**	53%
Total Property Acres	**142**	

* *Acres of seasonal habitat are less than total property acres because GUSG habitats comprise less than 100% of the property.*

***Percentages do not add up to 100% because GUSG habitats comprise less than 100% of the property.*

Rangeland Health Assessment and Vegetation Transect Methods

Rangeland Health Assessment. Rangeland Health Assessment (RHA) techniques were used to measure how closely range sites on the CI property match their site potential following guidance in U.S. Department of Interior TR1734-6 (Pellant *et al.* 2000). Deviation from site potential was recorded for range sites on properties being considered for enrollment under a CI. Sites whose deviation from site potential ranks as "none to slight" or "slight to moderate" do not require improvements, though voluntary improvements may be implemented at the joint discretion of the landowner, CPW, and the Service. Sites being considered for a CI that rank "moderate" or "moderate to extreme" may require improvements if indicators that score as "moderate" are limiting function of important GUSG habitat. Sites that are ranked "extreme" require improvements to be enrolled in the CCAA program.

Habitat Vegetation Transects. In addition to RHAs, habitat vegetation transects were conducted. Transects approximately 100 feet in length were randomly selected by throwing a Robel pole over the observer's left shoulder within range sites on the property. A compass bearing was selected from a random number table, and the transect was run along that bearing. At each transect, canopy cover of sagebrush and other shrubs was measured using the line-intercept method. In addition, Daubenmire frames were used every 10 feet to measure grass and forb canopy cover. Grass, forb, and sagebrush height were also collected every ten feet. These measurements can be directly compared to GUSG habitat guidelines in Appendix H of the Gunnison Sage-grouse Rangewide Conservation Plan (Appendix G; Gunnison Sage-grouse

Rangewide Steering Committee 2005). The combination of RHA data and vegetation transect data will help provide direction on habitat conservation measures that may need to be implemented.

Photo Points. Representative photos were taken on all lands enrolled in the CI at the start of each RHA and vegetation transect in each cardinal direction. Photos taken, along with a list of photo point GPS coordinates, will be kept along with the CI in CPW and Service records. Table 5 lists all assessment locations, associated photo points, and .jpeg photo file names. Photos taken during baseline inventories in August 2012 are included in Appendix J.

Rangeland Health Assessment and Vegetation Transect Data

Rangeland Health Assessment. Range sites were determined from Natural Resources Conservation Service (NRCS) soils data and verified on site. Range sites on the Gunnison County South CI property are Dry Mountain Loam and Mountain Outwash. One RHA was completed in the Mountain Outwash range site on 24 August 2012 at the southern end of the property. The assessment site ratings for soil/site stability, hydrologic function, and biologic integrity all deviated from the site standard with moderate to extreme ratings. The location of the general assessment area (roughly 10 acres in size) is shown the range site map (Appendix C, Map 4). Table 4 summarizes the ratings determined for each assessment, and field data sheets are appended (Appendix E).

Table 4. Range Health Assessment summary, Gunnison County South CI property, 24 August 2012.

Site Name	UTM Coordinates*		Ecological Site or Range Site	Rating (Deviation from Standard)		
	Easting	Northing		Soil/Site Stability	Hydrologic Function	Biologic Integrity
RHA-1	331397	4263614	Mountain Outwash	Moderate to Extreme	Moderate to Extreme	Moderate to Extreme

**UTM coordinate projection is NAD 83, UTM Zone 13N*

Habitat Vegetation Transects. One habitat vegetation transect was completed on 24 August 2012 in GUSG breeding and summer-fall habitat on the northeastern end of the CI property (Appendix C, Map 4 and Appendix D, Maps 5–6). Table 5 shows the transect location coordinates and reference photo file names, and the appended transect data sheet shows measurement data (Appendix F).

The Gunnison County South CI property was considered an arid site overall (Gunnison Sage-grouse Rangewide Steering Committee 2005). Existing seasonal habitats from the vegetation transect sampled in August 2012 (Tables 6–7) were assessed against the GUSG habitat guidelines (Appendix G, Tables I–III) established in Appendix H of the RCP. Table 8 summarizes the number of transects for each seasonal habitat that met RCP guidelines.

Transect GCS-1 was located on a bench east of Gold Basin Creek. The area is dominated by a moderately dense stand of Wyoming big sagebrush (*Artemisia tridentata wyomingensis*). The area as a whole has been severely overgrazed. Perennial grasses measured along the transect were only located near the base of sagebrush plants, with mostly bare ground between sagebrush plants. Most of the grass present was grazed down to less than one inch in height. No forb species were measured in the transect, and very few were seen in the area. However, 2012 was an extreme drought year; many grasses were stunted, producing few seed heads. For perennial forbs, vegetative growth was limited and few flowers are being produced, and few annual forbs appeared during this summer.

Table 5. RHA and vegetation transect coordinates and reference photo names, Gunnison County South CI property.

Transect Number	**UTM Coordinates***		**Photo File Names**
	Easting	**Northing**	
RHA-1	331397	4263614	GCS_RHA_1N, GCS_RHA_1E, GCS_RHA_1S, GCS_RHA_1W
GCS-1	331533	4264284	GCS_Veg_1N, GCS_Veg_1E, GCS_Veg_1S, GCS_Veg_1W

**UTM coordinate projection is NAD83, UTM Zone 13N*

Breeding habitat. All sagebrush on the CI property was mapped as breeding habitat and generally met RCP guidelines for shrubs and sagebrush cover but not for herbaceous understory (Table 6). The CI property meets RCP guidelines for sagebrush cover and sagebrush height. While there was no non-sagebrush shrub cover in the transect, total shrub cover was still within the recommended range.

Summer-fall habitat. Sagebrush cover exceeds guidelines, but this cover compensates for the absence of other shrub types and allows the area to meet guidelines for total shrub cover (Table 7). Sagebrush height meets RCP guidelines. Grass and forb cover and height do not meet RCP guidelines.

Winter habitat. No winter habitat exists on the CI property.

Table 6. RCP habitat assessment for breeding habitat, 24 August 2012, Gunnison County South CI property.

Transect Number	GCS-1
Sagebrush cover (%)	**24.2**
Non-sagebrush shrub cover (%)	0.0
Total shrub cover (%)	**24.2**
Sagebrush height (inches)	**15.4**
Grass cover (%)	3.4
Forb cover (%)	0.0
Grass height (inches)	2.6
Forb height (inches)	0.0

Bold *values within RCP guidelines*
**Values greater than guidelines*

Table 7. RCP habitat assessment for summer-fall habitat, 24 August 2012, Gunnison County South CI property.

Transect Number	GCS-1
Sagebrush cover (%)	24.2*
Non-sagebrush shrub cover (%)	0.0
Total shrub cover (%)	**24.2**
Sagebrush height (inches)	**15.4**
Grass cover (%)	3.4
Forb cover (%)	0.0
Grass height (inches)	2.6
Forb height (inches)	0.0

Bold *values within RCP guidelines*
**Values greater than guidelines*

Table 8. Gunnison County South CI vegetation transect data compared to RCP habitat guidelines. Values indicate the number of transects that met RCP guidelines out of the total number of transects run within each habitat (breeding, summer-fall, and winter) relative to micro-site condition (arid or mesic) for each vegetation measurement. Measurements which either exceeded or fell below the range described in the RCP did not meet guidelines.

		Gunnison Sage-grouse Habitat		
		Breeding	**Summer-Fall**	**Winter**
Sagebrush Cover	*Arid*	1/1	0/1	0/0
	Mesic			
Non-Sagebrush Cover	*Arid*	0/1	0/1	N/A
	Mesic			
Total Shrub Cover	*Arid*	1/1	1/1	N/A
	Mesic			
Sagebrush Height	*Arid*	1/1	1/1	0/0
	Mesic			
Grass Cover	*Arid*	0/1	0/1	N/A
	Mesic			
Forb Cover	*Arid*	0/1	0/1	N/A
	Mesic			
Grass Height	*Arid*	0/1	0/1	N/A
	Mesic			
Forb Height	*Arid*	0/1	0/1	N/A
	Mesic			

CONSERVATION MEASURES TO BE IMPLEMENTED

No practices or activities associated with current management have been observed to cause incidental take of GUSG. However, grouse collisions with fencing and drowning in stock tanks are known causes of mortality in other grouse populations. Causes of mortality will be monitored and addressed on the Gunnison County South CI property over the life of this CI. Continuance of existing management will minimize take; however, for the life of the CI (until expiration of the CCAA in 2026), incidental take of one bird is anticipated. If the anticipated incidental take is exceeded, CPW and the Service will consult with the landowner to determine if changes are needed. Any known incidental take must be reported to CPW immediately.

No habitat improvements are required as discussed on page 9 of the CCAA (Colorado Division of Wildlife 2006), because none of the Rangeland Health Indicators demonstrated any deviation beyond moderate to extreme from the reference condition (Table 4); however, conservation actions may enhance rangeland health. The most important habitat feature of the Gunnison County South CI property is that it provides summer-fall habitat known to be used by GUSG. Protection of GUSG habitat under existing management is adequate to fulfill the landowner's obligation to provide conservation measures for GUSG for the CCAA.

Multiple conservation measures can be implemented by continuing existing management; however, further discussion with NRCS, CPW, and Gunnison County should continue for ways to possibly improve GUSG habitat and livestock forage. The sagebrush slopes on the property are relatively xeric, and drought has contributed to the generally poor herbaceous vegetation component. Management of the CI property for GUSG should focus on enhancing cover and height of perennial herbaceous vegetation.

Conservation measures that have been or may be implemented on the Gunnison County South CI property include:

1) Protect, enhance, and restore habitat linkages for interchange of sage-grouse between populations. Protect habitat from permanent loss by encouraging and obtaining conservation easements with sage-grouse management plans incorporated.
   The CI property maintains linkages for GUSG movement and reduces fragmentation of GUSG habitat in occupied range.

2) Reclaim disturbed areas with plants native to sagebrush communities.
   Gunnison County will consider re-seeding any identified disturbed areas with native vegetation, with the addition of non-native species that can potentially enhance wildlife habitat based on site- and species-specific recommendations. Additionally, the landowner agrees not to alter current native sagebrush communities by planting ornamental or fruit trees in sage-grouse habitat. Gunnison County plans to maintain current land cover types. The exception to this measure is planting native tree or shrub species, such as cottonwood or willow, to stabilize riparian systems or irrigation ditch banks.

3) Limit or avoid housing/structural development in sage-grouse habitat.

Gunnison County has not decided future land use on the parcel. Gunnison County agrees to discuss any future development plans on the property with CPW and the Service prior to initiating housing construction or placing of other structures in GUSG habitat.

4) Minimize placement of roads in important areas of sage-grouse habitat.

No new roads will be constructed. Improved roads do not fragment GUSG habitat. Seasonal use restrictions from 15 March to 30 June will be implemented, with access granted only for emergencies and necessary agricultural activities including but not limited to animal husbandry, ditch maintenance, and operation. The "Haul Road" is part of the county-wide spring road closures from 15 March to 15 May.

5) Place new fences outside of leks and/or other seasonal sage-grouse habitat, mark fences to reduce risk of GUSG collision, remove unused fences, and/or install anti-perching devices for deterring raptors.

Gunnison County will use wildlife friendly fence designs on any new fencing or when retro-fitting old fence needing maintenance. Gunnison County will consider marking fences to increase fence visibility and installing anti-perching devices because of the proximity of fences to GUSG leks. Fencing surrounding the reclaimed gravel pit will be removed pending sufficient vegetative cover and if no longer needed to manage livestock. Adequate vegetative cover will be determined through mutual agreement between Gunnison County managers and CPW. Colorado Parks and Wildlife will facilitate removal of the fence by using local volunteers interested in enhancing wildlife habitat.

6) Avoid or minimize power line placement near leks or other important habitats, or bury power lines to avoid GUSG collisions.

No new power lines are anticipated, but are not prohibited by this CI. Any new power or utility lines needed in the future should be buried, however if cost prohibited, new lines will be constructed/placed outside of mapped GUSG habitat along the existing utility line or within 300 feet of Gold Basin Road.

7) Develop and implement control measures for invasive weeds.

Gunnison County will control noxious weeds on the property. Common noxious and invasive weeds in the Gunnison Basin that should be controlled include: cheatgrass, Canada thistle, musk thistle, hoary cress, absinth wormwood, black henbane, spotted knapweed, Dalmation toadflax, and yellow toadflax. See Appendix H for the Colorado List of Noxious Weeds.

8) Reduce recreational impacts to sage-grouse populations and habitat.

No public access for recreation is allowed. Access is permitted on a case-by-case basis. Disturbance to GUSG from recreational activities is unlikely.

9) Reduce impacts of domestic pets on sage-grouse. The intent of this measure is not to limit the use of working ranch dogs on the property.

Working and domestic dogs must be supervised and under vocal command when allowed to roam free. The critical period when pets should be supervised is from March 15 – June 30 when GUSG display/breed, nest, and raise broods. During this timeframe pets should be excluded from the CI property or physically restrained (i.e., on-leash or kenneled).

10) Develop and maintain water sources for wildlife and livestock to reduce impacts to riparian, wetland, and wet meadow areas during drought; or adjust grazing management, prescriptive fire, and vegetation management to reduce additive impacts of drought.

The landowner maintains approximately 2,359 feet of irrigation ditch to sustain water for cattle and hay meadow/pastures. These waterways must be maintained in the customary manner using prescribed burns, livestock grazing, and mechanical treatments. Further development of water sources or wetland/riparian habitat on the property may occur as necessary to sustain and/or enhance the agricultural operation.

11) Implement habitat treatments to enhance, maintain, or restore GUSG habitat.

Gunnison County uses prescribed burns annually to clean out irrigation ditches and fence lines but does not burn sagebrush uplands. No other habitat treatments are currently used on the property; however, Gunnison County is willing to consider a variety of habitat treatment proposals.

12) Prescribe fire in small mosaic patterns to reduce encroachment of trees and shrubs; prevent catastrophic fire; rejuvenate sagebrush communities; and suppress wildfires where they may increase abundance of cheatgrass or other weeds.

Gunnison County currently uses prescribed burns annually to clean out irrigation ditches and fence lines but does not burn sagebrush uplands. The County will suppress wildfires and continue to implement prescribed burning as needed. Prescribed burns within sagebrush vegetation will be in consultation with CPW and outlined in a prescribed fire burn plan.

13) Manage livestock grazing using various techniques to meet habitat guidelines for GUSG habitat.

Gunnison County is working with Colorado State University Extension and the Natural Resources Conservation Service to develop a management plan that addresses livestock grazing on the property. This plan will be completed within 1-year of signing/completion of this CI.

14) Reduce impacts of hay mowing on GUSG.

Mowing hay fields will not occur prior to June 30th annually. Fields will be mowed in a manner that allows for the escape of GUSG chicks which may not be fully fledged. In most years haying does not begin until late July when most

GUSG chicks are flight capable and can move away from possible impacts from haying operations.

15) No importation of gallinaceous bird species (including but not limited to pheasants, chukar, and quail) shall occur because of associated disease risks and potential to compete with GUSG.

No importation of gallinaceous birds will occur on the Gunnison County South CI property.

16) Manage lek viewing by not allowing access for such viewing, or reduce lek viewing impacts by following CPW's lek viewing protocol.

No active leks occur on the Gunnison County South parcel. No public access will be granted for lek viewing without consensus agreement from the Gunnison Basin Sage-grouse Strategic Committee and/or CPW before-hand.

17) Provide access for research and lek counting efforts with a minimum 48 hours advance notice.

Where possible, Gunnison County will grant access for research with 48 hours prior notice.

18) Provide escape ramps in stock tanks to prevent drowning of grouse and small mammals (e.g. mice, bats).

No stock tanks currently exist on the CI property. However, if stock tanks are needed, Gunnison County will install escape ramps.

Current vegetative conditions are adequate for GUSG as determined by the RHA and vegetation transect. However, GUSG on the Gunnison County South CI property may benefit from habitat improvement. Various habitat improvement practices as defined and standardized by NRCS have been selected as potential measures to alter current vegetation structure/composition or to maintain current conditions on the CI property to benefit GUSG. These management practices include: Brush Management (314), Channel Stabilization (584), Early Successional Habitat Development/Management (647), Field Border (386), Forage Harvest Management (511), Grazing Land Mechanical Treatment (548), Irrigation Field Ditch (388), Irrigation Water Management (449), Pasture and Hay Planting (512), Pest Management (595), Prescribed Burning (338), Prescribed Grazing (528), Range Planting (550), Restoration and Management of Rare or Declining Habitats (643), Spring Development (574), Upland Wildlife Habitat Management (645), Shallow Water Development and Management for Wildlife (646), Surface Drainage, Field Ditch (607), Upland Wildlife Habitat Management (645), and Wetland Wildlife Habitat Management (644). Further description and definition of these practices may be found online in NRCS's electronic Field Operation Training Guide (eFOTG; Natural Resource Conservation Service 2013).

CONSERVATION BENEFITS

The Gunnison County South CI property is probably occupied regularly by GUSG. Sage-grouse are known to use the property, as evidenced by old and fresh scat. The CI property currently provides limited seasonal habitats to support GUSG. The strength of this CI property is that it provides breeding and summer-fall habitat for GUSG, and provides a buffer between residential development and BLM land more frequently used by GUSG. Continued management of the CI property in the manner described above should maintain GUSG use and may support higher numbers with additional habitat improvement. A management plan that addresses livestock grazing should significantly enhance herbaceous cover and livestock forage. Future habitat improvement projects will depend on funding availability and interest in participation by the landowner.

MONITORING

The landowner agrees to allow CPW and Service employees or their agents, with reasonable prior notice, to enter the enrolled property to complete monitoring activities necessary to maintain or enforce the CI.

Colorado Parks and Wildlife will annually review all documentation for this CI and will also contact the landowner to arrange an annual visit to evaluate compliance. New photos will be taken at each established photo point at least once every three years. Photos will be retaken at the start of each habitat transect used for the initial habitat assessment and from the same viewpoints that documented conditions on range sites on the property as taken during the initial habitat assessment. Photos may be required more frequently if conditions appear to be degrading.

Colorado Parks and Wildlife employees or agents will conduct range site monitoring on each inventoried range site within one year of signing this CI and at intervals of no greater than five years. Colorado Parks and Wildlife has committed to paying for necessary habitat improvements. Should rangeland health indicators change from current conditions to “extreme” deviation from the site standard, habitat improvement will be required, as stated in the programmatic CCAA (Colorado Division of Wildlife 2006).

If habitat treatments are needed to improve GUSG habitat, monitoring and photo points will be completed at intervals appropriate for the type of treatment being applied. Habitat monitoring methodology will use the same or similar techniques as the assessment methodology. For treatments expected to promote rapid habitat changes, monitoring and photo documentation may occur annually; while for treatments that require more time for changes to take effect, the frequency of monitoring and treatment documentation will be adjusted to appropriate frequencies. All monitoring and photo documentation will be arranged through contact with the landowner prior to any field work being conducted. A basic report, developed by CPW, will be provided to the landowner outlining the results of photo point and rangeland health monitoring every three to five years.

The landowner must report any known incidental take of individual GUSG to CPW, who will attempt to determine cause of mortality and provide the information to the Service in an annual report.

FUNDING

Colorado Parks and Wildlife will be responsible for acquiring funding for conservation implementation through use of their own money or through partnerships with the landowner, State and Federal agencies, County or City governments, and non-governmental organizations, or a combination of the above. Colorado Parks and Wildlife anticipates using funds from various sources if habitat treatment is applicable or warranted.

DURATION OF CERTIFICATE OF INCLUSION

This CI and the coverage of "take" under the Permit are effective from the date of the most recent signature below until expiration of the CCAA in 2026.

TERMINATION OF CI AND NOTIFICATION OF TAKE

As provided for in Part 8 of the Service's CCAA Policy (Colorado Division of Wildlife 2006), a landowner may terminate implementation of the CI's voluntary management actions prior to the CI's expiration date, even if the expected benefits have not been realized. However, the landowner will relinquish his or her take authority (if the species has become listed) and the assurances granted by Permit. The landowner agrees to give 60 days' written notice to CPW of his or her intent to terminate the CI. The landowner also must give CPW and the Service opportunity to relocate affected GUSG within 60 days, or as soon as known, if the landowner intends to conduct activities that could lead to take of GUSG through direct mortality, harm (through habitat destruction or modification), or harassment.

If CPW determines, pursuant to the monitoring activity described in Sections 11 and 12 of the CCAA or otherwise, that the landowner has failed to comply with or implement the conservation measures, monitoring, reporting, or other requirements specified in the CCAA or in the landowner's CI, the CPW may revoke the landowner's CI. Such revocation is effective upon receipt of written notice of revocation from CPW, and the landowner will no longer be covered under the provisions of the CI and the CCAA and relinquishes any take authority specified therein.

TRANSFER OF PROPERTY

The landowner agrees to give 30 days' notice to CPW of his or her intent to sell the enrolled property so CPW and the Service can offer the new owner the option of receiving CCAA assurances by signing a new CI. (For further information see the CCAA; Colorado Division of Wildlife 2006.)

SIGNATURES AND DATES

Gunnison County	Date
Colorado Parks and Wildlife	Date
U.S. Fish and Wildlife Service	Date

LITERATURE CITED:

Apa, A.D. 2004. Habitat use, movements, and survival of Gunnison Sage-grouse in southwestern Colorado. Unpublished report to the Colorado Division of Wildlife, Colorado, USA.

Canfield, R.H. 1941. Application of the line interception method in sampling range vegetation. Journal of Forestry 39: 388–394.

Colorado Division of Wildlife. 2006. Candidate Conservation Agreement with Assurances for Gunnison Sage-grouse (*Centrocercus minimus*) between the Colorado Division of Wildlife and the U.S. Fish and Wildlife Service. Tracking# TE117730-0, Colorado Division of Wildlife, Denver, Colorado, USA.

Commons, M.L. 1997. Movement and habitat use by Gunnison Sage-grouse (*Centrocercus minimus*) in southwestern Colorado. Thesis, University of Manitoba, Winnipeg, Manitoba, Canada.

Connelly, J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28: 967–985.

Connelly, J.W., K.P. Reese, and M.A. Schroeder. 2003. Monitoring of Greater Sage-grouse habitats and populations. Station Bulletin 80, University of Idaho, Moscow, USA.

Daubenmire, R. 1959. A canopy-coverage method of vegetational analysis. Northwest Science 33: 43–64.

Gunnison Sage-grouse Rangewide Steering Committee. 2005. Gunnison Sage-grouse Rangewide Conservation Plan. Colorado Division of Wildlife, Denver, Colorado, USA.

Hunter, W.R., and C.F. Spears. 1975. Soil survey of the Gunnison Area, Colorado, parts of Gunnison, Hinsdale and Saguache Counties. United States Department of Agriculture, Soil Conservation Service, in cooperation with Colorado Agricultural Experiment Station. 85pp.

Hupp, J.W. 1987. Sage-grouse resource exploitation and endogenous reserves in Colorado. Dissertation, Colorado State University, Fort Collins, Colorado, USA.

Natural Resources Conservation Service. 2013. Electronic Field Operation Training Guide (eFOTG). Available at: http://efotg.nrcs.usda.gov/treemenuFS.aspx. Accessed 6 December 2013.

Pellant, M., P. Shaver, D.A. Pyke, and J.E. Herric. 2000. T R1734-6 Interpreting Indicators of Rangeland Health, Version 3. United States Department of Interior, Bureau of Land Management. 118pp.

Sewolt, M. and P. Magee. 2004. Gunnison Sage-grouse Use of the W Mountain Ranch, Gunnison County. A Final Report to: The Board of County Commissioners, Sage Grouse Mitigation Fund Committee and Gunnison County Trails Commission. 15 January 2004.

Winward, A.H. 2004. Sagebrush of Colorado: taxonomy, distribution, ecology, and management. Colorado Division of Wildlife, Denver, Colorado, USA.

Woods, C.P., and C.E. Braun. 1995. Sage-grouse investigations Glade Park and Pinon Mesa, Mesa County, Colorado. Unpublished report to the Colorado Division of Wildlife, Colorado, USA.

Young, J.R. 1994. The influence of sexual selection on phenotypic and genetic divergence among sage-grouse populations. Dissertation, Purdue University, West Lafayette, Indiana, USA.

APPENDICES:

Appendix A: Property Location Map

Appendix B: Aerial and Topographic Maps of CI Property

Appendix C: Range Site Map

Appendix D: GUSG Seasonal Habitat Maps

Appendix E: Rangeland Health Assessment (RHA) Evaluation Sheet

Appendix F: Habitat Vegetation Transect Datasheet

Appendix G: GUSG Structural Habitat Guidelines (RCP 2005)

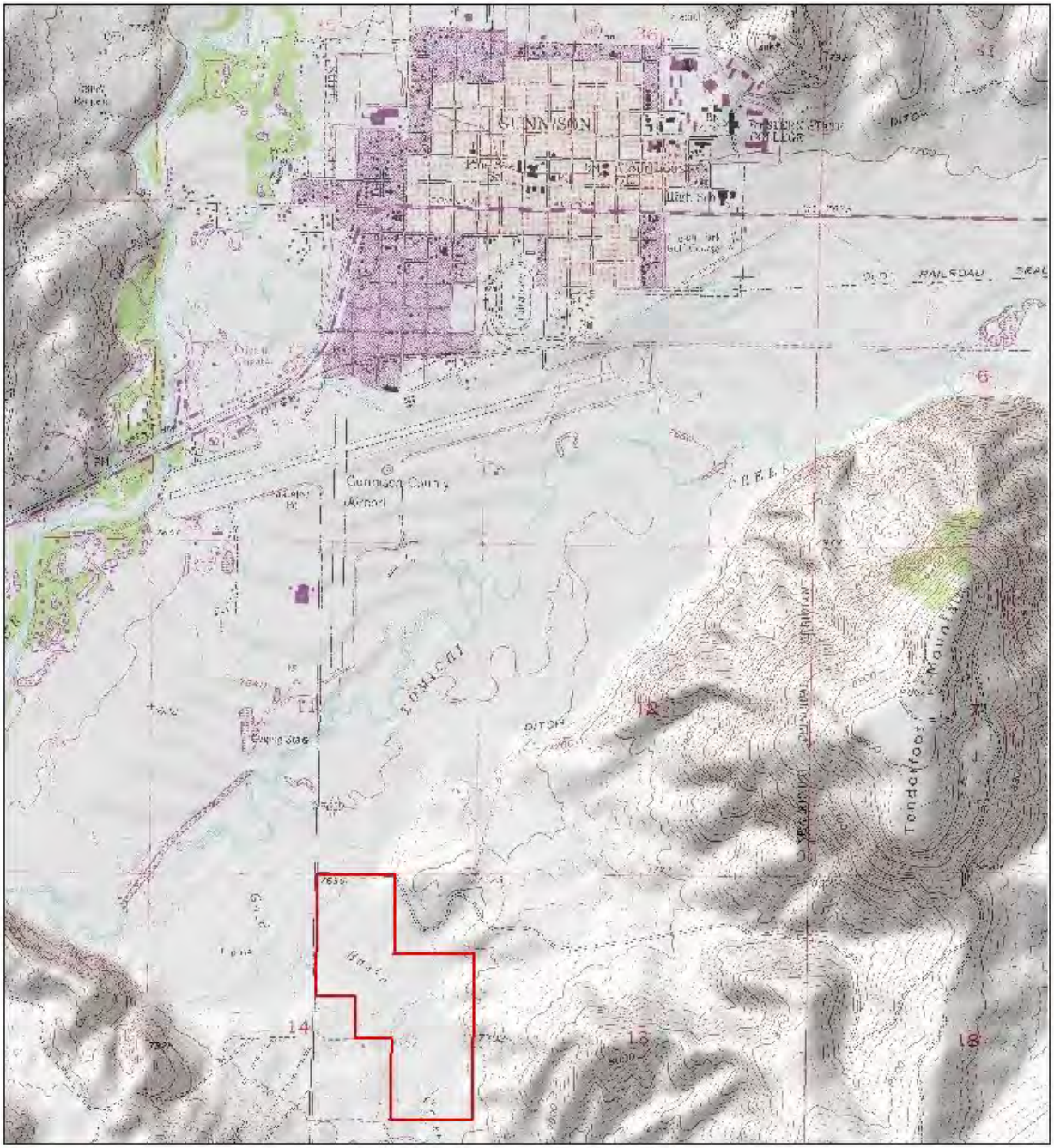
Appendix H: Colorado Noxious Weed List

Appendix I: Agricultural Lease

Appendix J: RHA and Habitat Vegetation Transect Photos

Appendix A: Property Location Map

Map 1. Location of Gunnison County South CI property



CI Property Boundary

Gunnison Sage-grouse CCAA
Gunnison County South Parcel
Gunnison County
Location Map

Revised 9 December 2013

N

1:25,000

0 500 1,000 2,000 3,000 4,000 Ft

Maps produced by Colorado Parks and Wildlife and the information depicted hereon is for reference purposes only and is compiled from the best available sources. Reasonable efforts have been made to ensure the accuracy of this map. Colorado Parks and Wildlife expressly disclaims responsibility for damages or liability that may arise from the use of this map.

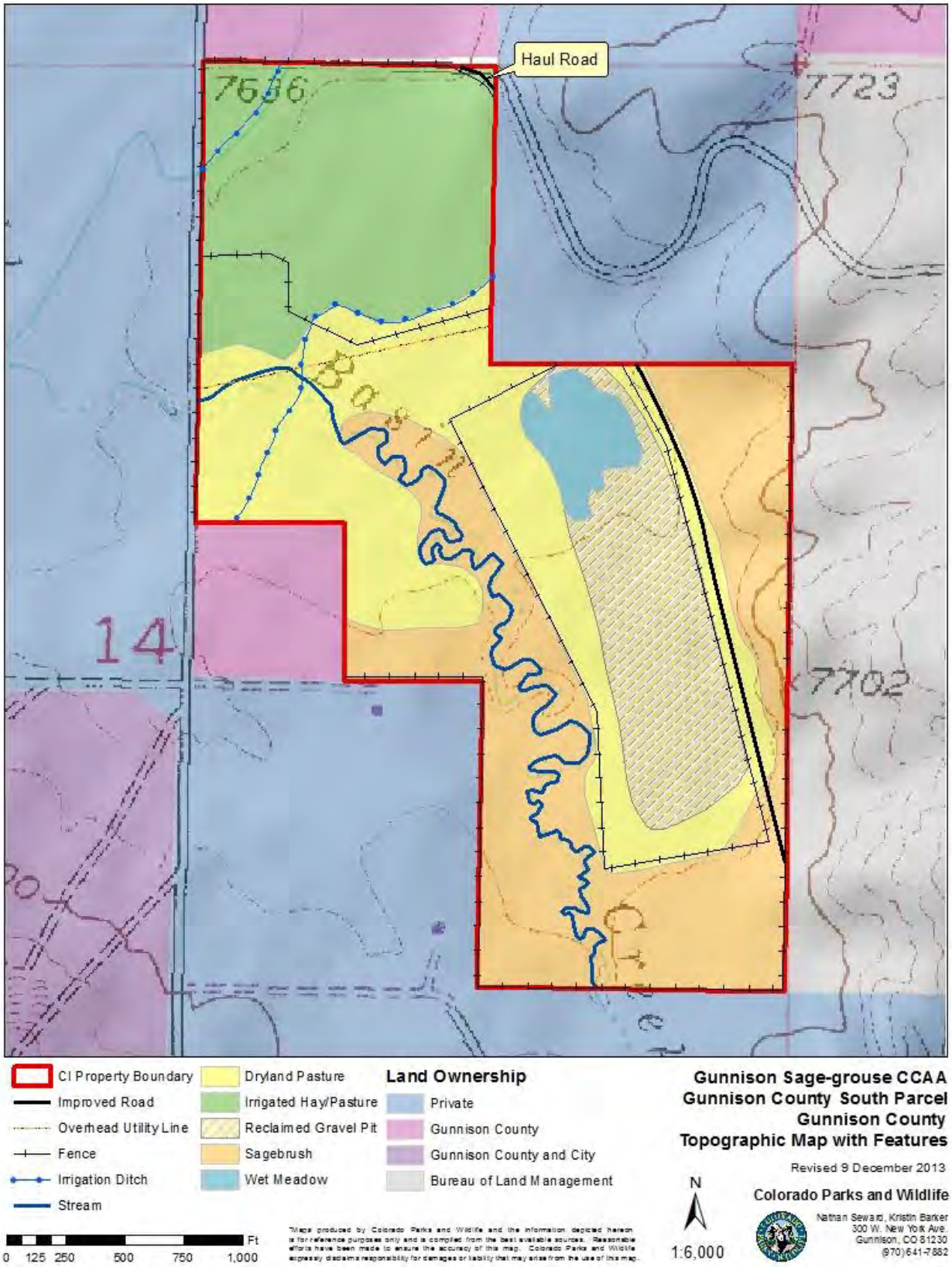
Colorado Parks and Wildlife

Nathan W. Seward, Kristin J. Barker
300 W. New York Ave.
Gunnison, CO 81230
(970) 641-7682

Appendix B: Aerial and Topographic Maps of CI Property

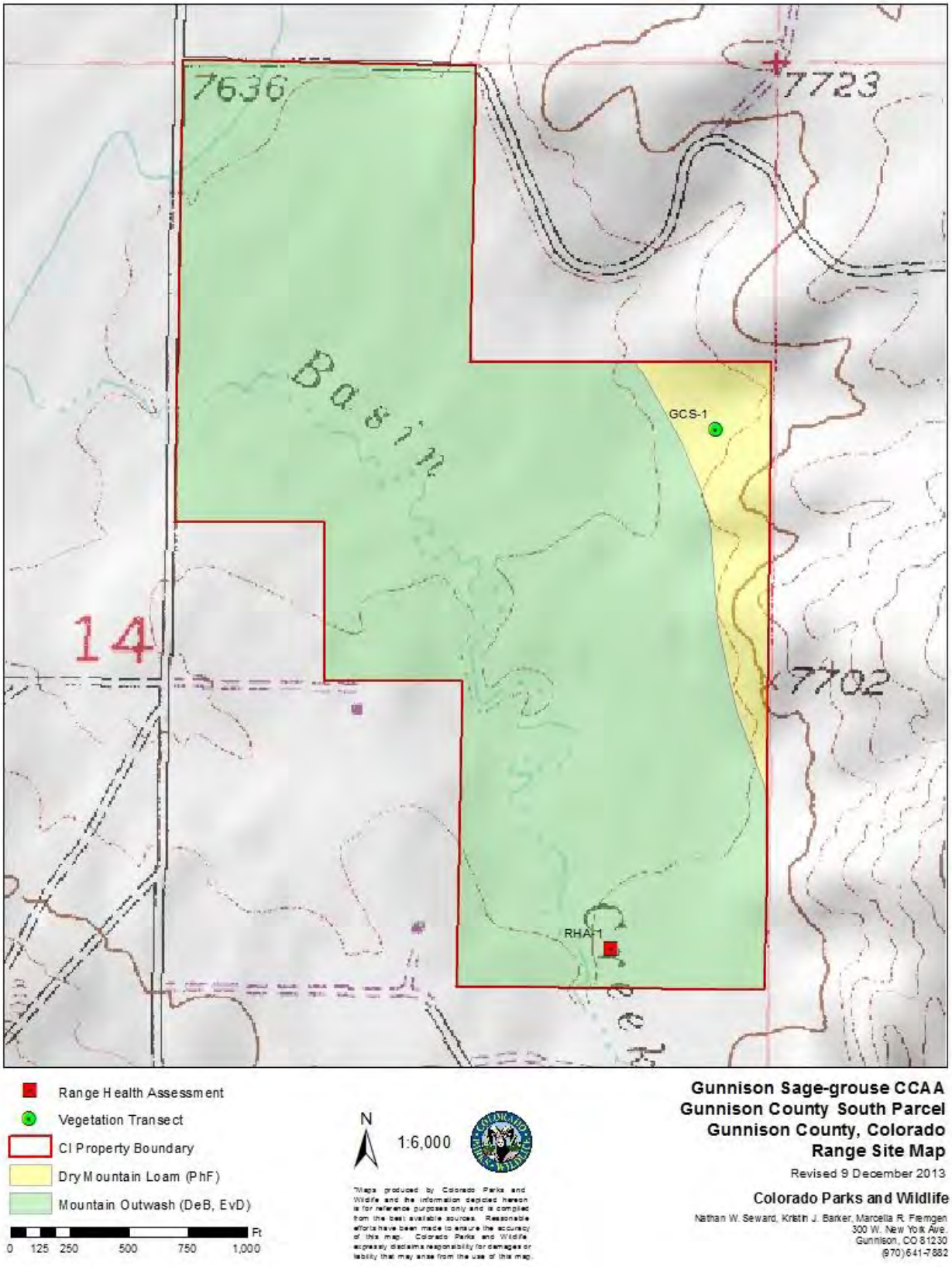
Map 2. Aerial map with features of Gunnison County South CI property

Map 3. Topographic map with features of Gunnison County South CI property



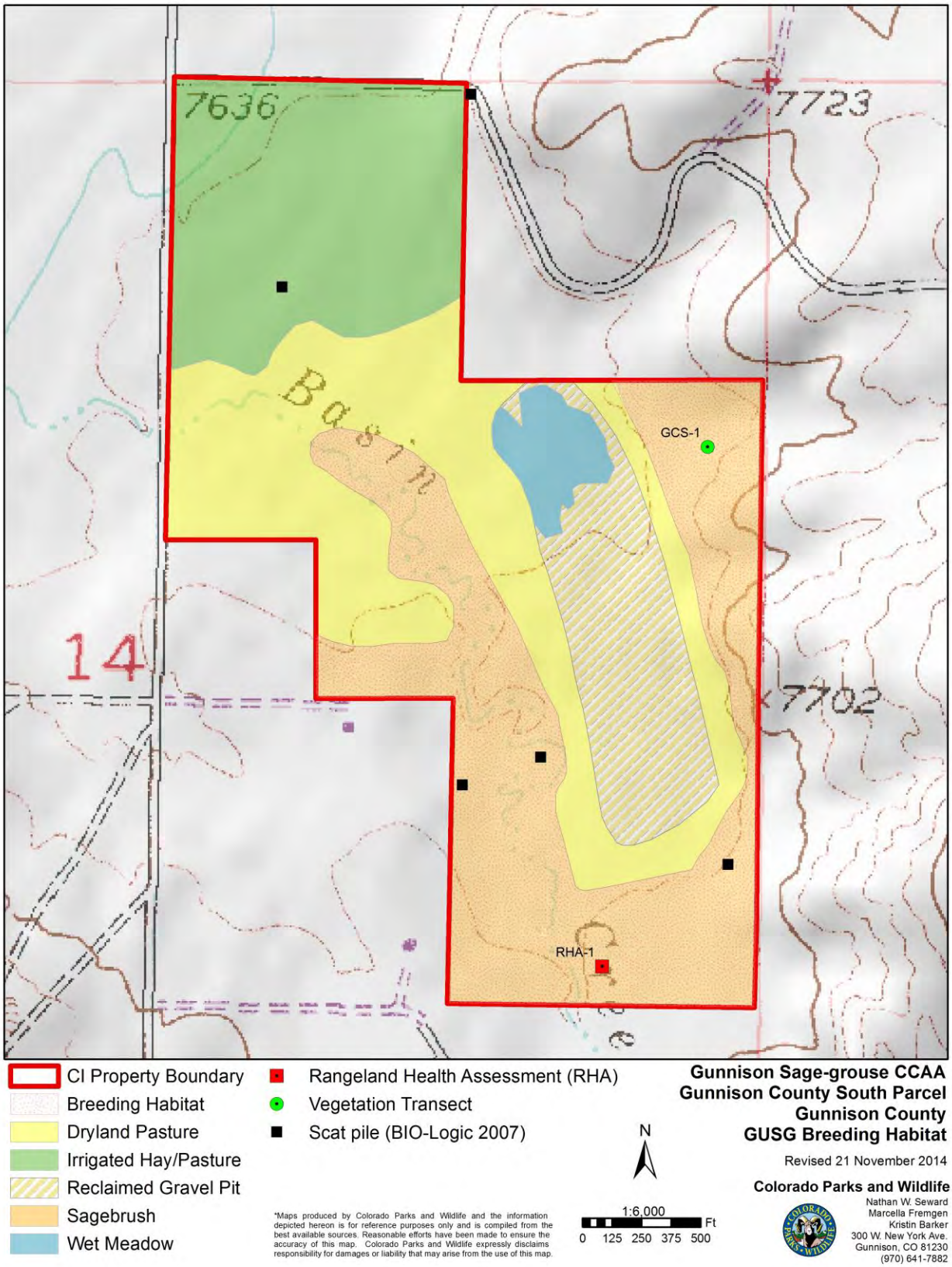
Appendix C: Range Site Map

Map 4. Range sites on Gunnison County South CI property

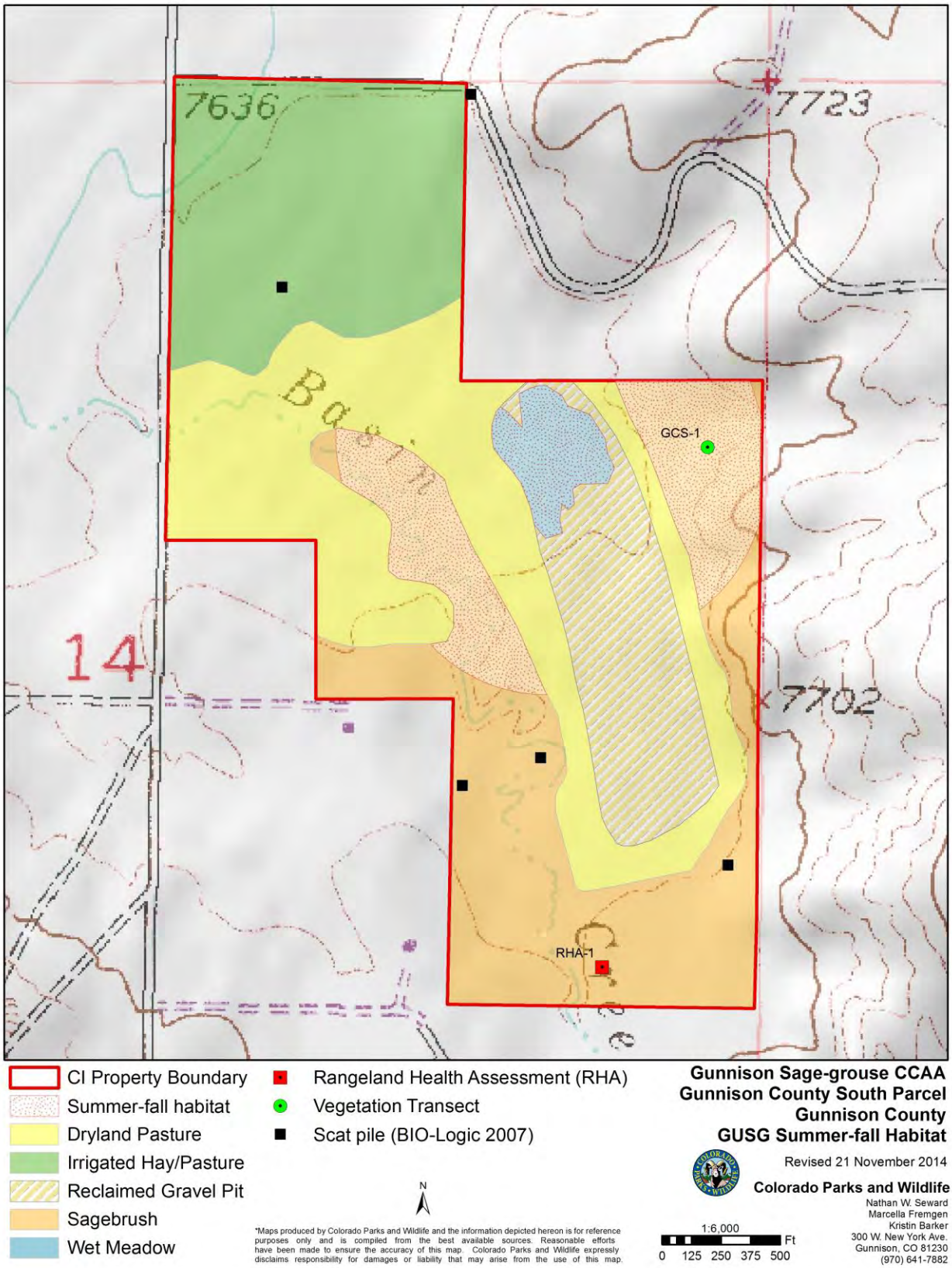


Appendix D: GUSG Seasonal Habitat Maps

Map 5. Breeding habitat on Gunnison County South CI property



Map 6. Summer-fall habitat on Gunnison County South CI property



Appendix E: Rangeland Health Assessment (RHA) Evaluation Sheet

Evaluation Sheet (Front)

Aerial Photo: _____

Management Unit: GC 5 (Allotment or pasture) State: CO Office: _____ Range/Ecol. Site Code: _____

Ecological Site Name: Mountain Outwash Soil Map Unit/Component Name: DeB = Decreville loam, 1-5 % slopes

Observers: J. Le Fevre Date: 8-24-2012

Location (description): Flat, valley bottom

T. ___ R. ___ or _____ N. Lat. Or UTM E 331397 m Position by GPS? (Y) / N UTM Zone 13, Datum NAD83

Sec. ___, ___ _____ W. Long. N 4263614 m Photos taken? (Y) / N

Size of evaluation area: 10 acres N: 117, E: 118, S: 119, W: 120

Composition (Indicators 10 and 12) based on: __Annual Production, __Cover Produced During Current Year or __Biomass

Soil/site verification:

Range/Ecol. Site Descr., Soil Surv., and/or Ecol. Ref. Area:
Surface texture Loam
Depth: very shallow __, shallow __, moderate __, deep X
Type and depth of diagnostic horizons:
1. A1 = 0-10" 3. C1ca = 22-45"
2. B2 = 10-22" 4. C2ca = 45-60"
Surf. Efferv.: none __, v. slight __, slight __, strong __, violent __
Parent material sandstone Rhyolite Slope 1 % Elevation 7680 ft.
Average annual precipitation ____ inches

Evaluation Area:
Surface texture Loam
Depth: very shallow __, shallow __, moderate __, deep __
Type and depth of diagnostic horizons:
1. _____ 3. _____
2. _____ 4. _____
Surf. Efferv.: none __, v. slight __, slight __, strong __, violent __
Topographic position Flat Aspect ALL
Seasonal distribution 1/2 winter, 1/2 summer

Recent weather (last 2 years) (1) drought ____, (2) normal ____, or (3) wet ____. 2011: very wet, cool / 2012: Severe drought

Wildlife use, livestock use (intensity and season of allotted use), and recent disturbances:
Elk and deer winter range; pronghorn year-round use.
Livestock grazing

Off-site influences on evaluation area:
A ditch has been constructed off of Basin Creek which cuts across the area.

Criteria used to select this particular evaluation area as REPRESENTATIVE (specific info. and factors considered; degree of "representativeness"):
Area representative based upon slope, aspect and vegetation community.

Other remarks (continue on back if necessary):
Even aged mountain sagebrush with young and seedling sage plants common. Eastern 3/4's mostly devoid of grass and forb. Western 1/4 contains more grass and forbs but dominant grass is smooth brome. Annual weeds common. Grazing in area should be ended.
Grouse scat in the area.

Reference: (1) Reference Sheet: Mountain Outwash ; Author: Murray et al ; Creation Date: 12-8-04
or (2) Other (e.g., name and date of ecological site description; locations of ecological reference area(s)) _____

Evaluation Sheet (Back)

Departure from Expected	Code
None to Slight	N-S
Slight to Moderate	S-M
Moderate	M
Moderate to Extreme	M-E
Extreme to Total	E-T

Instructions for Evaluation Sheet, Page 2

(1) Assign 17 indicator ratings. If indicator not present, rate None to Slight.
(2) In the three grids below, write the indicator number in the appropriate column for each indicator that is applicable to the attribute.
(3) Assign overall rating for each attribute based on preponderance of evidence.
(4) Justify each attribute rating in writing.

Indicator	Rating	Comments
1. Rills	S H / N-S	
2. Water-flow Patterns	S H / N-S	
3. Pedestals and/or terracettes	S H / N-S	
4. Bare ground 50+ %	S H / M-E	Eastern 3/4's of area mostly devoid of grass and forb.
5. Gullies	S H / N-S	
6. Wind-scoured, blowouts, and/or deposition areas	S / N-S	
7. Litter movement	S / N-S	
8. Soil surface resistance to erosion	S H B / M	Score 2.8, expected to be 4-6.
9. Soil surface loss or degradation	S H B / M	
10. Plant community composition and distribution relative to infiltration	H / M-E	A near complete absence of grass and forb in eastern 3/4's of the area.
11. Compaction layer	S H B / M	Surface layer is very hard, dense, not expected.
12. Functional/structional groups	B / M-E	Shrubs > rhizomatous grass > forbs
13. Plant mortality/decadence	B / N-S	
14. Litter amount	H B / N-S	
15. Annual production	B / M	Majority of production coming from sagebrush.
16. Invasive plants	B / M	Smooth brome dominates Western 1/3 of area; Canada thistle, wheatgrass
17. Reproductive capability of perennial plants	B / N-S	

Attribute Rating Justification
Soil & Site Stability:
Rating due to a fairly complete absence of grass and forbs in the area. Also, soil surface has the appearance of a hardpan.

E-T	M-E	M	S-M	N-S
				7
				6
				5
		11		3
		9		2
	4	8		1

S (10 indicators): Soil & Site Stability Rating: M-E

Attribute Rating Justification
Hydrologic Function:
Rating due lack of grass and forb and soil surface appearance that is similar to a hardpan.

E-T	M-E	M	S-M	N-S
				5
		11		3
	10	9		2
	4	8		1

H (10 indicators): Hydrologic Function Rating: M-E

Attribute Rating Justification
Biotic Integrity:
Rating due to extreme imbalance of vegetation functional/structural groups.

E-T	M-E	M	S-M	N-S
		16		
		15		
		11		17
		9		14
	12	8		13

B (9 indicators): Biotic Integrity Rating: M-E

Appendix F: Habitat Vegetation Transect Datasheet

BIO-Logic Environmental

Gunnison Sage-grouse CCAA Vegetation Transect Data

Transect #	GC_South_1
Date	8/24/12
Examiner	Jim Le Fevre

Notes. Severe drought year. Heavy amounts of leaf drop by sage. Bare ground averages 50%. Very little grass and what is here has been grazed heavily.

Photos: GC_South_1N, GC_South_1E, GC_South_1S, GC_South_1W

Cover	Enter:	0-5% 2.5	6-15% 10.5	16-25% 20.5	26-50% 38	51-75% 63	76-100% 88			
Plot #	1	2	3	4	5	6	7	8	9	10
Perennial Grasses:										
Unknown			2.5		2.5		10.5			
bottlebrush squirreltail (Elymus elymoides)				2.5	10.5			2.5	2.5	
Annual Grasses:										
Forbs:										
# of forb sp.	0	0	0	0	0	0	0	0	0	0
Other Plants:										

Height	Vegetation Height (to nearest inch)									
	1	2	3	4	5	6	7	8	9	10
Sage ht	20	25	11	11	12	10	22	13	14	16
Grass ht	0	0	2	4	8	0	1	7	4	0
Forb ht	0	0	0	0	0	0	0	0	0	0

*Note if sagebrush measured is a seedling or very young plant

Intercept	Foliar Intercept (to nearest 0.1 foot)									
Sagebrush	1.2	0.6	0.1	0.6	1.9	0.8	0.1	0.9	0.1	0.1
	1.3	0.2	0.8	0.1	0.1	0.2	0.3	0.1	0.2	0.2
	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.9	0.1	0.1
	0.1	1.1	0.3	0.1	0.1	1.8	1.6	0.2	0.1	0.1
	0.2	0.3	0.1	1.4	0.7	0.7	1.1	0.4	1.0	0.2
Other Shrub										

Sagebrush taxa	Wyoming big sagebrush (Artemisia tridentata var. wyomingensis)
Other shrub taxa	

Appendix G: GUSG Structural Habitat Guidelines (RCP 2005)

Table I. RCP GUSG Breeding Habitat Guidelines

BREEDING HABITAT [b]				
Vegetation Variable	**Gunnison sage-grouse**		**Connelly et al. (2000)**	
	Arid[c]	**Mesic[c]**	**Arid**	**Mesic**
Sagebrush Canopy [d] %	15 - 25	10 – 20	15 - 25	15 – 25
Non-sagebrush Canopy [d] %	5 - 15	5 – 15	-	-
Total Shrub Canopy [d] %	20 - 40	15 – 35	-	-
Sagebrush Height cm (inches)	25 – 50 (9.8 – 19.7)	30 – 50 (11.8 – 19.7)	30 – 80 (11.8 – 31.5)	40 – 80 (15.7 – 31.5)
Grass Cover [d] %	10 - 30	20 – 40	-	-
Forb Cover [e] %	5 - 15	20 – 40	≥ 15	≥ 25
Grass Height [f] cm (inches)	10 – 15 (3.9 – 5.9)	10 – 15 (3.9 – 5.9)	> 18 (> 7.1)	> 18 (> 7.1)
Forb Height [f] cm (inches)	5 – 10 (2.0 – 3.9)	5 – 15 (2.0 – 5.9)	-	-

[a] Breeding habitat guidelines were developed using data in GUSG studies by Young (1994) and Apa (2004).
[b] Breeding habitat is defined as sagebrush communities delineated within 4 miles of a lek (see "GUSG Disturbance Guidelines", Appendix I, for discussion. Breeding habitat includes lek, nesting and early brood-rearing habitat usually from mid-March through late-June.
[c] Arid or mesic communities are as defined by Winward (2004).
[d] Canopy cover measured according to Canfield (1941) and further described by Connelly et al. (2003).
[e] Understory cover measured according to Daubenmire (1959).
[f] Measured as "droop height"; the tallest portion of the naturally growing portion of the plant (Connelly et al. 2000).

Table II. RCP GUSG Summer-fall Habitat Guidelines

SUMMER - FALL HABITAT[b]				
	Gunnison sage-grouse		**Connelly et al. (2000)**	
Vegetation Variable	**Arid[c]**	**Mesic[c]**	**Arid**	**Mesic**
Sagebrush Canopy [d] (%)	5 – 15	5 – 20	10 – 25	10 – 25
Non-sagebrush Canopy [d] (%)	5 - 15	5 – 15	-	-
Total Shrub Canopy [d] (%)	10 - 30	10 – 35	-	-
Sagebrush Height cm (inches)	20 – 40 (7.9 - 15.7)	25 – 50 (9.8 – 19.7)	40 – 80 (15.7 – 31.5)	40 – 80 (15.7 – 31.5)
Grass Cover [e] (%)	10 - 25	10 – 35	-	-
Forb Cover [e] (%)	5 - 15	15 – 35	> 15	> 15
Grass Height [f] cm (inches)	10 – 15 (3.9 – 5.9)	10 – 15 (3.9 – 5.9)	variable	variable
Forb Height [f] cm (inches)	3 – 10 (1.2 - 3.9)	5 – 10 (2.0 - 5.9)	variable	variable

[a] Summer - fall habitat guidelines were developed using data in GUSG studies by Young (1994), Woods and Braun (1995), Commons (1997), and Apa (2004)
[b] Summer – fall habitat is defined as vegetation communities, including sagebrush, agricultural fields, and wet meadows (Connelly et al. 2000) that are within 4 miles (see "GUSG Disturbance Guidelines", Appendix I, for discussion) of an active strutting ground.
[c] Arid or mesic communities are as defined by Winward (2004).
[d] Canopy cover measured according to Canfield (1941) and further described by Connelly et al. (2003).
[e] Understory cover measured according to Daubenmire (1959).
[f] Measured as "droop height"; the tallest portion of the naturally growing portion of the plant (Connelly et al. 2000).

Table III. RCP GUSG Winter Habitat Guidelines

WINTER HABITAT[b]				
	Gunnison sage-grouse		**Connelly et al. (2000)**	
Vegetation Variable	**Arid[c]**	**Mesic[c]**	**Arid**	**Mesic**
Sagebrush Canopy [d]: %	30 – 40	-	10 – 30	10 – 30
Sagebrush Height [e]: cm (inches)	40 – 55 (15.8 – 21.7)	-	25 – 35 (9.8 – 13.8)	25 – 35 (9.8 – 13.8)

[a] Winter habitat guidelines were developed using GUSG data from Hupp (1987).
[b] Winter habitat is defined as sagebrush areas (Connelly et al. 2000) within currently occupied habitat that are available (i.e., not covered by snow) to sage-grouse in average winters.
[c] Arid or mesic communities are as defined by Winward (2004).
[d] Canopy cover measured according to Canfield (1941) and further described by Connelly et al. (2003).
[e] Measured from ground level to the tallest stem (excluding inflorescence) according to Hupp (1987).

Appendix H: Colorado Noxious Weed List

List A species in Colorado that are designated by the Commissioner for eradication:

African rue (*Peganum harmala*)
Bohemian knotweed (*Polygonum x bohemicum*)
Camelthorn (*Alhagi pseudalhagi*)
Common crupina (*Crupina vulgaris*)
Cypress spurge (*Euphorbia cyparissias*)
Dyer's woad (*Isatis tinctoria*)
Elongated mustard (*Brassica elongate*)
Giant knotweed (*Polygonum sachalinense*)
Giant reed (*Arundo donax*)
Giant salvinia (*Salvinia molesta*)
Hydrilla (*Hydrilla verticillata*)
Japanese knotweed (*Polygonum cuspidatum*)
Meadow knapweed (*Centaurea pratensis*)
Mediterranean sage (*Salvia aethiopis*)
Medusahead (*Taeniatherum caput-medusae*)
Myrtle spurge (*Euphorbia myrsinites*)
Orange hawkweed (*Hieracium aurantiacum*)
Purple loosestrife (*Lythrum salicaria*)
Rush skeletonweed (*Chondrilla juncea*)
Squarrose knapweed (*Centaurea virgata*)
Tansy ragwort (*Senecio jacobaea*)
Yellow starthistle (*Centaurea solstitialis*)

List B species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species:

Absinth wormwood (*Artemisia absinthium*)
Black henbane (*Hyoscyamus niger*)
Bouncingbet (*Saponaria officinalis*)
Bull thistle (*Cirsium vulgare*)
Canada thistle (*Cirsium arvense*)
Chinese clematis (*Clematis orientalis*)
Common tansy (*Tanacetum vulgare*)
Common teasel (*Dipsacus fullonum*)
Corn chamomile (*Anthemis arvensis*)
Cutleaf teasel (*Dipsacus laciniatus*)
Dalmatian toadflax- broad leaved (*Linaria dalmatica*)
Dalmatian toadflax- narrow leaved (*Linaria genistifolia*)
Dame's rocket (*Hesperis matronalis*)
Diffuse knapweed (*Centaurea diffusa*)
Eurasian watermilfoil (*Myriophyllum spicatum*)
Hoary cress (*Cardaria draba*)
Houndstongue (*Cynoglossum officinale*)
Leafy spurge (*Euphorbia esula*)
Mayweed chamomile (*Anthemis cotula*)

Moth mullein (*Verbascum blattaria*)
Musk thistle (*Carduus nutans*)
Oxeye daisy (*Chrysanthemum leucanthemum*)
Perennial pepperweed (*Lepidium latifolium*)
Plumeless thistle (*Carduus acanthoides*)
Quackgrass (*Elytrigia repens*)
Russian knapweed (*Acroptilon repens*)
Russian-olive (*Elaeagnus angustifolia*)
Salt cedar (*Tamarix chinensis*, *T. parviflora*, and *T. ramosissima*)
Scentless chamomile (*Matricaria perforate*)
Scotch thistle (*Onopordum acanthium*)
Scotch thistle (*Onoporfum tauricum*)
Spotted knapweed (*Centaurea maculosa*)
Spurred anoda (*Anoda cristata*)
Sulfur cinquefoil (*Potentilla recta*)
Venice mallow (*Hibiscus trionum*)
Wild caraway (*Carum carvi*)
Yellow nutsedge (*Cyperus esculentus*)
Yellow toadflax (*Linaria vulgaris*)

List C weed species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species.

Bulbous bluegrass (*Poa bulbosa*)
Chicory (*Cichorium intybus*)
Common burdock (*Arctium minus*)
Common mullein (*Verbascum Thapsus*)
Common St. Johnswort (*Hypericum perforatum*)
Downy brome (*Bromus tectorum*)
Field bindweed (*Convolvulus arvensis*)
Halogeton (*Halogeton glomeratus*)
Johnsongrass (*Sorghum halepense*)
Jointed goatgrass (*Aegilops cylindrical*)
Perennial sowthistle (*Sonchus arvensis*)
Poison hemlock (*Conium maculatum*)
Puncturevine (*Tribulus terrestris*)
Redstem filaree (*Erodium cicutarium*)
Velvetleaf (*Abutilon theophrasti*)
Wild proso millet (*Panicum miliaceum*)

Appendix I: Agricultural Lease

*(*Entire lease may be observed by double-clicking on image to open in Adobe Reader*)*

AGRICULTURAL LEASE

Field Cod

THIS AGRICULTURAL LEASE (the "Lease") is entered into this ___ day of _____, 2011, at Gunnison County, Colorado as follows:

1. **LANDLORD**. The Landlord is:

   BOARD OF COUNTY COMMISSIONERS OF GUNNISON COUNTY, COLORADO
   200 East Virginia Avenue
   Gunnison, Colorado 81230

2. **TENANT**. The Tenant is:

   JOE SCHULTHEIS
   38105 Hwy 50
   Gunnison, CO 81230.

3. **PROPERTY**. The real property and water rights (the "Property") that is the subject of this Lease is only that real property described in Attachment I to this Lease that is south of the "UMPTRA haul road", and only the water rights historically used on that real property, as identified on the plat as Parcel 2 which is attached to Attachment I; and EXCEPT for the 5.5 acres reserved for the observatory site in the southwest corner.

4. **LEASE**. Pursuant to the terms and conditions below, Landlord agrees to lease the Property to Tenant, and Tenant agrees to lease the Property from Landlord.

5. **TERM**.

   5.1 The "Lease Term" shall be from April 1, 2011 until March 31, 2014, unless sooner terminated, or unless extended, as set forth herein.

   5.2 On the last day of the Lease Term, Tenant shall quit and surrender the Property to Landlord and remove all of Tenants' personal property from the Property. There shall be no holding over after the expiration of the Lease Term. If Tenant, after the expiration of the Lease Term, fails to quit and surrender the Property to Landlord and remove all of Tenant's personal property from the Property, Tenant shall be subject to eviction and shall be additionally liable to Landlord for payment of five hundred dollars ($500.00) per day from the date of the expiration of the Lease Term.

6. **RENT**.

   6.1 Rent shall be the Property's fair market rental value which the parties agree is _$5.00 per AUM equivalent for fall pasture, $10.00 per AUM equivalent for summer pasture, plus $20.00 per ton of hay. An AUM shall be calculated as a cow, or a cow and nursing calf, one horse or one bull; a yearly is 2/3 of an AUM. Summer pasture shall be May 15th to August 31st of each year; fall pasture shall be September 1 to December 1 of each year. No AUM equivalent shall be collected during the remainder of the year.

   6.2No later than December 1 of each year, Tenant shall provide to the Landlord reasonable records of the Tenant's production on and use of the Property. Rent not paid within 15 days of the due date shall bear interest at the statutory rate from the due date until paid.

   6.3In addition, Tenant shall pay to Landlord the sum of metered utilities every month for the well; and shall pay all other utilities caused by their agricultural uses.

   6.4Tenant shall pay Rent on December 20th of each year of this contract.

7. **USES PERMITTED**.

   7.1Tenant may use the Property for agricultural operations in accordance with the historical and traditional usage of the Property.

   7.2Tenant shall have the right to use the agricultural structures on the Property as part of Tenant's agricultural use of the Property.

8. **ACCESS**. Tenant's primary access to the Property shall be from the Gold Basin Road. The gate will be locked at Landlord's discretion with a key given to Tenant.

9. **QUIET ENJOYMENT**.

   9.1At all times during the Lease Term, Tenant may peaceably and quietly hold and enjoy the Property free from disturbance from any person claiming by, through or under Landlord, subject to matters of record.

   9.2 Notwithstanding the provisions of paragraph 9.1, during the Lease Term, Tenant's right to use the Property shall be subject to:

   9.2.1 Landlord's right to fence the perimeter of the Gunnison County Airport (the "Airport"), and/or to use other portions of the Property to address safety issues, construction needs, or other concerns affecting Airport and/or County operations;

   9.2.2 Landlord's right to conduct ordinary Airport operations at the Airport;

   9.2.3 The right of Landlord and/or third persons owning interests in ditches diverting on the Property for reasonable access to use, maintain and/or replace such ditches and headgates

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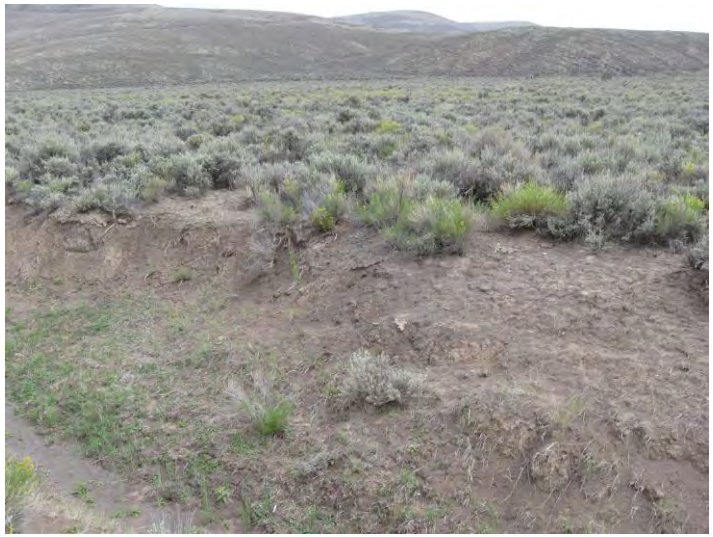
Appendix J: RHA and Habitat Vegetation Transect Photos

Reference photographs of rangelands, taken in each cardinal direction from vegetation transect origin and general RHA assessment area. Captions show the .jpg file name and the date the photograph was taken.



GCS_RHA_1E August 24, 2012

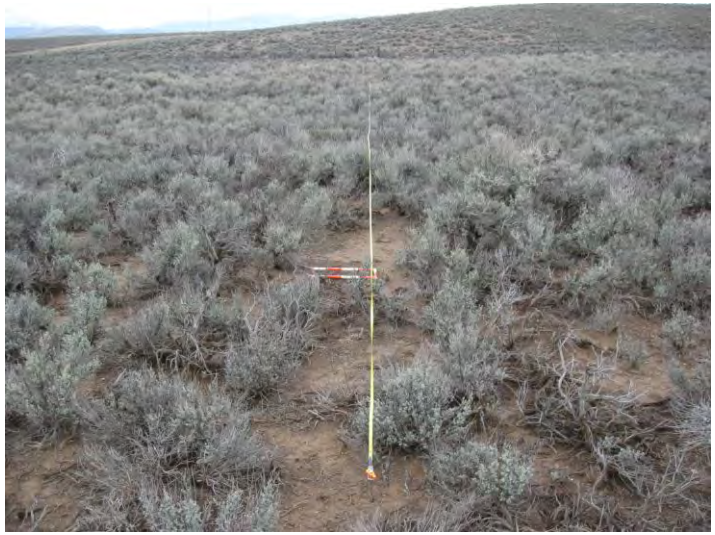
GCS_RHA_1N August 24, 2012

GCS_RHA_1S August 24, 2012

GCS_RHA_1W August 24, 2012

GCS_Veg_1E_2012 August 24, 2012

GCS_Veg_1S_2012 August 24, 2012



GCS_Veg_1N_2012 August 24, 2012

GCS_Veg_1W_2012 August 24, 2012