

Appendix A

Appendix A contains the data summary tables for the Land Health Standards.

The five Land Health Standards are addressed in order. Each section begins with 1) a table showing instances where land health indicators exceed the standard, followed by 2) a table showing land health problems followed by 3) a table evaluating trends, then 4) a table showing development analysis findings for the Standard, and 5) a table with causal and contributing factors for the standard, and finally 6) a table with suggested remedies. The final table is an overall development analysis table that includes condition and compliance summaries.

A1. Standard 1 Soils Summary Tables:

Table A1.1 Soil indicators which exceed Standard 1. This table shows percentages of Land Health studies having better than average measures or scores for each of the soil indicators within different groups: grazing allotments, vegetation types, treatments, former Standard 1 status, and special management units. Blue shading indicates presence of noteworthy and likely widespread good conditions within a group (good conditions on more than 50% of studies in the group), and purple shading shows soil indicators which have isolated instances of good conditions (more than 10% of studies).

Group Name (number of Studies in Group)	Indicator Type					
	Active Erosion		Vulnerable to Erosion	Vegetation/Soil Imbalances		
	Flowpaths Minimal	Pedestals Minimal	Low Bare Soil Levels	High Basal Area	High BSC Cover	Approp Litter Cover
All Studies (94)	27%	35%	34%	31%	21%	33%
Grazing Allotments						
Adobe (2)	0%	50%	50%	100%	50%	50%
Adobe South (3)	33%	67%	33%	33%	0%	33%
Allen Reservoir (1)	0%	100%	100%	100%	0%	100%
Big Gulch (1)	0%	0%	0%	0%	0%	0%
Big Gulch-40 (1)	0%	0%	0%	0%	0%	0%
Big Pasture (1)	100%	100%	0%	100%	0%	0%
Black Bullet (1)	0%	100%	100%	100%	0%	100%
Black Cyn/Jones D (3)	67%	33%	67%	67%	33%	67%
Black Ridge (6)	0%	17%	17%	17%	33%	17%
Bostwick Park (1)	0%	0%	0%	100%	0%	100%
Brush Point (7)	29%	57%	14%	14%	43%	14%
Cedar Cr (1)	100%	100%	0%	0%	0%	0%
Cedar Point (2)	50%	50%	100%	0%	50%	50%
Collins (1)	0%	0%	0%	0%	0%	100%
Crawford Reservoir (1)	0%	100%	0%	0%	0%	0%
Dead Horse Com. (1)	100%	100%	100%	100%	0%	100%
Dedication Site (2)	50%	100%	50%	0%	50%	50%
Doug Cr (1)	0%	0%	0%	0%	0%	0%
East Gould Reservoir (2)	0%	0%	50%	100%	0%	50%
Fruitland Mesa (1)	0%	0%	100%	0%	100%	100%
Gould Reservoir (4)	50%	25%	50%	25%	0%	50%
Green Mountain (9)	22%	11%	44%	56%	22%	33%
Grizzly Gulch (1)	0%	0%	100%	0%	0%	100%
Iron Canyon (2)	0%	0%	50%	100%	0%	50%
Middle Peach Valley (5)	0%	40%	0%	0%	20%	20%
N Saddle Peak (1)	0%	0%	100%	100%	0%	0%
Needle Rock (1)	100%	100%	0%	0%	0%	0%
Onion Valley (1)	0%	0%	0%	0%	0%	0%
Pine Ridge (1)	0%	0%	0%	0%	0%	0%
Pinyon Springs (2)	0%	0%	50%	100%	0%	100%
Poison Spring (4)	50%	25%	25%	75%	0%	25%
Rabbit Gulch (2)	0%	0%	100%	0%	0%	50%
Rawhide/Coffee pot (2)	0%	0%	0%	0%	0%	0%
Red Canyon (1)	0%	0%	100%	0%	100%	100%
Rim Rock (1)	0%	0%	100%	100%	0%	100%
Selig Canal (2)	50%	50%	50%	0%	50%	50%
Shamrock (3)	67%	67%	0%	0%	67%	0%
Smith Fork Ind (1)	100%	100%	0%	0%	0%	0%

Smith Mtn (3)	0%	33%	0%	0%	0%	0%
Spring Gulch (1)	0%	0%	100%	0%	0%	100%
Sulphur Gulch (2)	0%	0%	50%	0%	0%	0%
Upper Peach Valley (3)	33%	33%	0%	0%	0%	0%
Unallotted Grass Bank (2)	100%	100%	0%	0%	50%	0%
Vegetation Types						
Aspen (1)	0%	0%	0%	0%	0%	0%
Grass-Forb (5)	40%	80%	0%	0%	0%	0%
Mountain Shrub (15)	20%	13%	40%	40%	0%	40%
Pinyon-Juniper (17)	29%	35%	35%	29%	29%	41%
Sagebrush (25)	24%	20%	52%	60%	24%	48%
Salt-desert Shrub (31)	29%	52%	23%	10%	29%	19%
Treatments						
Brushbeat (2)	50%	50%	50%	100%	0%	50%
PJ removal (2)	50%	0%	50%	100%	50%	0%
Plow & Seed (3)	0%	0%	33%	67%	33%	67%
Prescribed Fire (4)	50%	50%	50%	0%	0%	0%
Rollerchop (5)	20%	0%	0%	40%	20%	0%
Wildfire (4)	0%	25%	50%	50%	0%	75%
Untreated (74)	27%	39%	34%	24%	23%	34%
Former Land Health Status						
Std 1 Meets (54)	26%	33%	39%	41%	22%	37%
Std 1 Meets/problems (31)	23%	35%	26%	23%	19%	26%
Std 1 Unknown (9)	22%	33%	33%	11%	22%	33%
Special Areas						
Fairview ACEC (1)	100%	100%	0%	0%	100%	0%
Flat Top/Peach Valley SRMA (5)	20%	60%	20%	20%	40%	20%
GGNCA (49)	16%	27%	16%	6%	18%	10%
Gunnison Gorge Wilderness (4)	50%	25%	75%	25%	50%	50%
Gunnison River SRMA (12)	33%	50%	33%	0%	25%	17%
Gunnison Sage Grouse ACEC (21)	14%	19%	33%	48%	14%	29%
Native Plant ACEC (2)	0%	0%	0%	0%	0%	0%

Table A1.2. Land Health problems for Standard 1. Gunnison Gorge upland soil indicators that are not as good as typically found in the Uncompahgre Field Office. This table shows percentages of Land Health studies having poorer than average measures or scores for each of the soil indicators within different groups: grazing allotments, vegetation types, treatments, former Land Health status, and special management units. Red shading indicates presence of noteworthy and likely widespread problems within a group (problems on 50% or more studies in the group), and purple shading shows soil indicators that have more isolated problems within a group (more than 10% of studies).

Group Name (number of Studies in Group)	Indicator Type					
	Active Erosion		Vulnerable to Erosion	Vegetation/Soil Imbalances		
	Excessive Flowpaths	Excessive Pedestals	High Bare Soil Levels	Low Basal Area	Low BSC Cover	Litter Cover Concerns
All Studies (94)	9%	5%	16%	34%	43%	29%
Grazing Allotments						
Adobe (2)	0%	0%	0%	100%	50%	0%
Adobe South (3)	0%	0%	0%	0%	0%	0%
Allen Reservoir (1)	0%	0%	0%	0%	100%	0%
Big Gulch (1)	0%	0%	0%	0%	0%	0%
Big Gulch-40 (1)	0%	0%	0%	0%	0%	0%
Big Pasture (1)	0%	0%	0%	0%	100%	0%
Black Bullet (1)	0%	0%	0%	0%	0%	0%
Black Cyn/Jones D (3)	0%	33%	33%	0%	67%	33%
Black Ridge (6)	0%	0%	17%	50%	33%	50%
Bostwick Park (1)	0%	0%	0%	0%	100%	0%
Brush Point (7)	29%	14%	14%	29%	14%	29%
Cedar Cr (1)	0%	0%	0%	0%	100%	100%
Cedar Point (2)	50%	0%	0%	50%	50%	50%
Collins (1)	100%	0%	0%	0%	100%	0%
Crawford Reservoir (1)	0%	0%	100%	100%	100%	100%
Dead Horse Com. (1)	0%	0%	0%	0%	0%	0%
Dedication Site (2)	0%	0%	50%	100%	0%	50%
Doug Cr (1)	0%	0%	0%	0%	0%	0%
East Gould Reservoir (2)	50%	0%	0%	0%	100%	0%
Fruitland Mesa (1)	0%	0%	0%	0%	0%	0%
Gould Reservoir (4)	0%	0%	0%	25%	50%	0%
Green Mountain (9)	0%	11%	33%	22%	56%	0%
Grizzly Gulch (1)	0%	0%	0%	0%	0%	0%
Iron Canyon (2)	0%	0%	0%	0%	0%	0%
Middle Peach Valley (5)	0%	0%	0%	80%	80%	40%
N Saddle Peak (1)	0%	0%	0%	0%	0%	0%
Needle Rock (1)	0%	0%	0%	0%	100%	100%
Onion Valley (1)	0%	100%	0%	0%	0%	0%
Pine Ridge (1)	0%	0%	0%	0%	0%	0%
Pinyon Springs (2)	0%	0%	0%	0%	100%	0%
Poison Spring (4)	0%	0%	25%	0%	75%	0%
Rabbit Gulch (2)	0%	0%	0%	50%	100%	50%
Rawhide/Coffee pot (2)	0%	0%	0%	0%	0%	50%
Red Canyon (1)	0%	0%	0%	100%	0%	0%
Rim Rock (1)	100%	0%	0%	0%	0%	0%
Selig Canal (2)	50%	50%	50%	100%	0%	50%
Shamrock (3)	0%	0%	33%	100%	0%	100%
Smith Fork Ind (1)	0%	0%	0%	0%	0%	0%

Smith Mtn (3)	0%	0%	67%	100%	67%	67%
Spring Gulch (1)	0%	0%	0%	0%	0%	0%
Sulphur Gulch (2)	0%	0%	50%	50%	100%	100%
Upper Peach Valley (3)	33%	0%	0%	67%	67%	67%
Unallotted Grass Bank (2)	0%	0%	0%	100%	0%	100%
Vegetation Types						
Aspen (1)	0%	0%	0%	0%	0%	0%
Grass-Forb (5)	0%	0%	0%	40%	100%	100%
Mountain Shrub (15)	7%	13%	20%	20%	40%	0%
Pinyon-Juniper (17)	18%	0%	18%	41%	47%	12%
Sagebrush (25)	8%	4%	8%	8%	48%	12%
Salt-desert Shrub (31)	6%	6%	23%	58%	32%	55%
Vegetation Treatments						
Brushbeat (2)	0%	0%	0%	0%	100%	0%
PJ removal (2)	0%	0%	0%	0%	50%	0%
Plow & Seed (3)	0%	0%	0%	0%	67%	33%
Prescribed Fire (4)	0%	0%	50%	75%	50%	25%
Rollerchop (5)	0%	0%	20%	20%	33%	20%
Wildfire (4)	0%	25%	0%	25%	75%	25%
Untreated (74)	11%	5%	16%	36%	39%	31%
Former Land Health Status						
Std 1 Meets (54)	9%	6%	13%	26%	41%	24%
Std 1 Meets/problems (31)	10%	3%	23%	48%	52%	35%
Std 1 Unknown (9)	0%	11%	11%	33%	22%	33%
Special Management Area						
Fairview ACEC (1)	0%	0%	100%	0%	0%	0%
Flat Top/Peach Valley SRMA (5)	20%	20%	0%	20%	20%	40%
GGNCA (49)	4%	2%	12%	41%	31%	37%
Gunnison Gorge Wilderness (4)	0%	25%	25%	50%	25%	0%
Gunnison River SRMA (12)	0%	0%	33%	83%	50%	75%
Gunnison Sage Grouse ACEC (21)	0%	0%	24%	24%	42%	14%
Native Plant ACEC (2)	0%	0%	0%	50%	100%	50%

Table A1.3. Land Health trends for Standard 1. Trends in soil health indicators over the past 8-10 years. For each of the quantitatively measured soil indicators (top row), this table shows percentages of studies within each group (left column) having upward or downward trends. Static trends are not shown. Red shading indicates groups which show predominantly decreasing trend for a given soil indicator, while blue shading shows groups with predominantly increasing trend for an indicator. No shading shows types that have no clear trend. Trend more/less pairs are shaded for an indicator if one is higher than the other, and 50% or greater.

Group Name (number of Studies in Group)	Bare Soil		Plant Basal		Cryptogam (BSC) cover		Total Litter cover	
	% More	% Less	% More	% Less	% More	% Less	% More	% Less
All Studies (54)	19	46	44	24	15	26	37	19
Grazing Allotment								
Adobe (1)	100	0	0	0	0	100	0	100
Adobe South (2)	0	50	0	50	50	50	100	0
Allen Reservoir (1)	0	100	0	0	0	0	100	0
Big Pasture (1/1)	100	0	100	0	0	100	0	0
Black Cyn/Jones D (3)	33	67	33	33	33	33	33	33
Black Ridge (5)	40	20	60	0	0	20	20	0
Bostwick Park (1)	0	100	100	0	0	100	0	0
Brush Point (4)	0	100	75	0	25	25	75	0
Cedar Point (1)	0	100	100	0	0	0	0	100
Collins (1)	0	0	100	0	0	100	0	0
East Gould Reservoir (1)	0	0	0	0	0	0	0	0
Gould Reservoir (3)	0	67	33	33	0	0	0	33
Green Mountain (7)	43	29	57	14	14	0	0	29
Iron Canyon (1)	0	100	100	0	0	0	0	100
Middle Peach Valley (4)	0	75	50	50	0	25	100	0
Pinyon Springs (2)	50	50	50	0	50	50	0	50
Poison Spring (4)	0	50	25	25	0	50	25	0
Rawhide/Coffee pot (1)	100	0	0	0	0	0	0	100
Selig Canal (2)	0	50	50	50	50	50	100	0
Shamrock (3)	0	33	0	100	67	0	33	0
Smith Mtn (3)	0	0	0	33	0	0	33	33
Sulphur Gulch (2)	0	0	50	50	0	50	100	0
Upper Peach Valley (1)	0	100	100	0	0	0	100	0
Vegetation Type								
Grass-Forb (3)	0	100	33	33	0	33	100	0
Mountain Shrub (8)	50	38	63	13	0	13	0	63
Pinyon-Juniper (6)	33	50	50	0	0	67	0	0
Sagebrush (17)	18	41	47	18	18	24	12	18
Salt-desert Shrub (20)	5	45	35	40	25	25	75	10
Vegetation Treatment								
Brushbeat (2)	50	50	50	0	0	0	0	50
PJ removal (2)	0	100	0	50	50	50	0	0

Plow & Seed (3)	0	33	100	0	0	0	0	0
Prescribed Fire (3)	33	33	67	0	0	0	0	67
Rollerchop (5)	20	60	40	40	20	0	20	20
Wildfire (3)	67	33	67	0	0	33	33	67
Untreated (36)	14	44	39	28	17	33	50	0
Former Land Health Status								
Std 1 Meets (30)	20	43	37	27	20	23	27	23
Std 1 Meets/problems (18)	22	61	72	17	6	39	50	17
Std 1 Unknown (2)	0	50	0	100	50	0	100	0
Special Management Areas								
Flat Top/Peach Valley SRMA (3)	0	100	100	0	33	33	100	0
GGNCA (19)	11	47	53	21	11	21	58	5
Gunnison River SRMA (6)	0	0	17	50	17	17	50	17
Gunnison Sage Grouse ACEC (19)	26	32	47	16	5	11	11	16
Native Plant ACEC (1)	0	100	100	0	0	100	100	0

Table A1.4. Development concerns for Standard 1 soil indicators. Key indicators for soil health were evaluated in and immediately adjacent to selected developments, and problems were documented if levels of disturbance or impact were higher than expected. Red shading indicates development types with noteworthy problems (minor or major problems on a total of 40% or more samples in group), blue shading shows types that are performing well (problems on a total of 10% or less of samples in group.) No shading shows types that have low levels of problems. Abundance is shaded red for high, blue for low and none for moderate. Development type is shaded pink for types with overall minor negative influences on land health at the site level.

Development Type (number of sites evaluated)	Water Erosion		Wind Erosion		Groundcover		Abundance and total # documented in LHA Unit
	Minor	Major	Minor	Major	Minor	Major	
All Developments (99)	30%	1%	6%	0%	35%	2%	NA
Abandoned Mines (AML sites) (2)	50%	0%	0%	0%	50%	0%	low-6 sites
BLM Routes (22)	41%	0%	5%	0%	41%	0%	high-567 miles
Campsite (8)*	25%	0%	0%	0%	63%	0%	moderate-43
Cattleguards and Corrals (2)*	0%	0%	0%	0%	50%	0%	low-7
Communications Site (3)	33%	0%	0%	0%	33%	0%	low-4
Contour Furrows and Check Dams (5)	80%	20%	60%	0%	40%	20%	moderate-<20% of unit
Cultural Interpretation Sites (1)	0%	0%	0%	0%	0%	0%	low-1
Developed Rec Site (10)	30%	0%	10%	0%	30%	10%	moderate-34
Ditch ROWs (1)	0%	0%	0%	0%	0%	0%	low-3
Exclosure (2)	0%	0%	0%	0%	0%	0%	low-5
Fences (8)*	0%	0%	0%	0%	0%	0%	moderate-unknown
Gas Pipeline ROW (3)**	0%	0%	0%	0%	33%	0%	low-9
Gas Wells/Pads (2)	50%	0%	0%	0%	50%	0%	low-8
Mineral Developments (2)	50%	0%	50%	0%	100%	0%	low-2
Power/Telephone ROWs (6)	0%	0%	0%	0%	17%	0%	low-16
Reservoir (8)	20%	0%	0%	0%	38%	0%	moderate-63
Road and Highway ROW (10)	60%	0%	0%	0%	50%	0%	moderate->100 miles
Spring Developments, Guzzlers and Drinkers (3)	0%	0%	0%	0%	0%	0%	low-13

*Indicates development types with a potentially positive influence on land health at the landscape level.

**In the adobes, pipelines have a negative influence on land health due to the disturbance.

Table A1.5 Causal and contributing factor table for Standard 1. Each study site was searched for evidence of possible land uses or environmental factors that could affect land health at that site (left hand column). Evidence was assessed for degree of presence at each site (third row). This table shows percentages for each type of use at each degree of presence within two categories: studies which meet Standard 1, and studies which don't meet or have problems meeting Standard 1. Purple shading indicates land uses or environmental factors which were found at several or more study sites in the Gunnison Gorge unit and can therefore be considered to be noteworthy influences in the unit. Red shading shows types of use which occur at higher levels among studies that show land health problems, and therefore are likely causal factors for land health problems (combined increase of 20% or more in moderate and heavy categories). Blue shading indicates types of use which occur at lower levels among studies with land health problems, and therefore are likely positive influences on land health (combined decrease of 20% or more in moderate and heavy categories). Gray shading indicates likely site-specific contributing factors to soil health within each land health category (defined as types present at moderate or heavy levels within a land health category.) No shading indicates types of use that are not very evident or notable in the Gunnison Gorge unit.

Type of Use or Environmental Factor	Presence Across Upland Study Sites meeting Standard 1				Presence Across Upland Study Sites not meeting Standard 1 or meeting Standard 1 with problems			
	Degree of Presence							
	None	Low	Moderate	Heavy	None	Low	Moderate	Heavy
Cultivation-historic	99%	0%	0%	1%	94%	0%	0%	6%
Drought	42%	37%	20%	1%	22%	33%	39%	6%
Domestic sheep	59%	8%	12%	21%	35%	0%	0%	65%
Dumping	96%	4%	0%	0%	89%	6%	0%	0%
Erosion from uplands	93%	7%	0%	0%	89%	6%	0%	5%
Fire	80%	10%	5%	5%	78%	11%	0%	11%
Fire suppression	69%	21%	9%	1%	83%	6%	11%	0%
Irrigation tailwater	92%	3%	3%	2%	89%	11%	0%	0%
Livestock grazing-current*	27%	53%	20%	0%	33%	44%	22%	0%
Livestock grazing-historic	11%	36%	40%	13%	0%	33%	39%	28%
Mining	99%	1%	0%	0%	94%	0%	6%	0%
Nearby agricultural or residential land	64%	19%	17%	0%	67%	28%	5%	0%
Noxious/invasive weeds	31%	31%	33%	3%	11%	22%	33%	33%
OHV use	68%	27%	4%	1%	72%	11%	0%	11%
Pinyon-juniper invasion	63%	19%	12%	6%	72%	6%	17%	6%
Rec impacts (non-OHV)	91%	8%	1%	0%	89%	11%	0%	0%
Reservoir	95%	3%	1%	1%	100%	0%	0%	0%
Rights of way (not roads)	86%	9%	5%	0%	89%	6%	5%	0%
Roads/Routes (BLM)	63%	33%	4%	0%	50%	33%	6%	11%
Roads (ROWS)	81%	17%	1%	1%	89%	11%	0%	0%
Seral Stage issues	68%	18%	13%	1%	33%	22%	33%	11%
Unknown disturbance	96%	3%	0%	1%	89%	11%	0%	0%

Vegetation treatment-new	78%	5%	9%	8%	100%	0%	0%	0%
Vegetation treatment-old	88%	4%	4%	4%	94%	0%	0%	6%
Wildlife use-current*	0%	38%	53%	9%	6%	50%	44%	0%
Wildlife use-historic	3%	51%	44%	2%	11%	78%	11%	0%
Woodcuts	85%	11%	4%	0%	89%	11%	0%	0%

*Livestock grazing and current wildlife use data are being interpreted as contributing factors rather than as landscape level causal factors because of concerns about possible confusion between the two during data collection.

Table A1.6 Proposed remedies for Standard 1 problems. Remedies for landscape level causal factors leading to indicator problems are listed, as are priority areas for action.

Accelerated Erosion and Groundcover		
Causal and contributing factors	Remedy	Priority Areas
Domestic Sheep Allotments	<p>1A. Ensure livestock grazing permit terms include: appropriate seasonal utilization limits (or reduced limits where there are long standing problems), active growing season duration limits that minimize use of regrowth, a mechanism to incorporate rest, rest for vegetation treatments where needed to achieve health objectives, restricted spring and fall grazing of the same area within the same year unless it achieves other health objectives, and drought mitigation measures including reduced utilization limits. Sheep allotments need terms which control soil disturbing activities.</p> <p>1B. Improve compliance with grazing permit terms through increasing utilization monitoring. Additional data will help us take action when data shows we have a problem</p>	<p>Allotments: Black Canyon/Jones Draw, Brush Point, Cedar Point, Collins, East Gould Reservoir, Green Mountain, Onion Valley, Rim Rock, Selig Canal, Upper Peach Valley</p> <p>Vegetation Types: Mountain Shrub, Pinyon-Juniper</p> <p>Treatments: wildfire, untreated</p> <p>Special Areas: Peach Valley Flattop SRMA, GG Wilderness</p>
Drought	1C. Continue weather and climate monitoring to be better prepared for droughts and correspondingly modify management early in the drought	
Noxious / invasive weeds	<p>1D. Revegetate or restore areas that have been dominated by annual weeds or introduced species.</p> <p>1E. Increase level of weed management for those species which threaten soil health (Knapweeds, cheatgrass, alyssum, halogeton)</p>	
Seral stage	<p>1F. Reduce amounts of early and late-mid seral stages and areas with cryptogam cover problems which lead to soil loss</p> <p>1G. Manage fire to better simulate natural disturbance regime as much as possible- review and update UFO Fire Plan to incorporate this direction</p> <p>1H. Treat vegetation to simulate fire effects, promote use of managed fire, and achieve a more natural mosaic of seral stages</p> <p>1D. See above</p>	

Combined Developments	II. Improve monitoring of surface disturbance, both at the project level and cumulatively across the landscape.	GG LHA
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A2. Standard 2 Riparian Summary Tables

Table A2.1 Riparian indicators which exceed Standard 2. This table shows percentages of Land Health studies having better than average measures or scores for each of the riparian indicators within different groups: grazing allotments, streams, former Standard 2 status, and special management units. Blue shading indicates presence of noteworthy and likely widespread good conditions within a group (good conditions on more than 50% of studies in the group), and purple shading shows indicators which have isolated instances of good conditions (more than 10% of studies). Note that indicators from Proper Functioning Condition worksheet are not included, as they are not designed to show better than acceptable conditions.

Group Name (number of Studies in Group)	Greenline Study Indicators		
	Wetland Obligate Spp. %	Wetland Facultative %	Exotic Spp. %
All Studies (12)	67%	42%	17%
Allotments			
Black Ridge (1)	100%	0%	100%
Crawford Reservoir (1)	NA*	NA	NA
Dedication Site (1)	100%	100%	0%
Doug Creek (1)	NA	NA	NA
Iron Canyon (1)	NA	NA	NA
Rawhide/Coffeepot (1)	NA	NA	NA
Smith Mountain (1)	100%	0%	0%
Sulphur Gulch (1)	100%	100%	100%
Stream			
Doug Creek (1)	NA	NA	NA
Iron Canyon (1)	NA	NA	NA
Lower Gunnison River (2)	100%	50%	50%
Muddy Creek (1)	NA	NA	NA
North Fork Gunnison River (1)	100%	100%	0%
Rawhide Gulch (1)	NA	NA	NA
Smith Fork (1)	100%	0%	100%
Upper Gunnison River (4)	100%	75%	0%
Former LH Status			
Meeting (9)	78%	56%	11%
Not Meeting (2)	50%	0%	50%
Special Areas			
Gunnison Gorge NCA (8)	100%	63%	25%
Gunnison Gorge Wilderness (4)	100%	50%	25%
Gunnison River SRMA (3)	100%	67%	33%

*indicates that this type of data was not collected for this area

Table A2.2. Land Health problems for Standard 2. Gunnison Gorge riparian indicators that are not as good as typically found in the Uncompahgre Field Office. This table shows percentages of Land Health studies having poorer than average measures or scores for each of the water quality indicators within different groups: grazing allotments, streams, former Land Health status, and special management units. Red shading indicates presence of noteworthy and likely widespread problems within a group (problems on 50% or more studies in the group), and purple shading shows indicators that have more isolated problems within a group (more than 10% of studies).

Group Name (number of Studies in Group)	Indicator Type							
	Riparian Proper Functioning Condition Indicators					Greenline Study Indicators		
	Flooding	Channel Morph	Lateral Vertical Stability	Veg Age and Species Diversity	Protective Veg on Banks	Obligate Spp. %	Facult Spp. %	Exotic Spp. %
All Studies (12)	58%	42%	0%	17%	0%	0%	0%	17%
Allotments								
Black Ridge (1)	0%	0%	0%	0%	0%	0%	0%	0%
Crawford Reservoir (1)	100%	100%	0%	0%	0%	0%	0%	0%
Dedication Site (1)	100%	100%	0%	0%	0%	0%	0%	100%
Doug Creek (1)	0%	0%	0%	0%	0%	0%	0%	0%
Iron Canyon (1)	100%	0%	0%	0%	0%	0%	0%	0%
Rawhide/Coffeepot (1)	100%	0%	0%	100%	0%	0%	0%	0%
Smith Mountain (1)	0%	0%	0%	0%	0%	0%	0%	0%
Sulphur Gulch (1)	0%	0%	0%	0%	0%	0%	0%	0%
Stream								
Doug Creek (1)	0%	0%	0%	0%	0%	0%	0%	0%
Iron Canyon (1)	100%	0%	0%	0%	0%	0%	0%	0%
Lower Gunnison River (2)	0%	0%	0%	0%	0%	0%	0%	0%
Muddy Creek (1)	100%	100%	0%	0%	0%	0%	0%	0%
NF Gunnison (1)	0%	0%	0%	0%	0%	0%	0%	0%
Rawhide Glch (1)	100%	0%	0%	100%	0%	0%	0%	0%
Smith Fork (1)	0%	0%	0%	0%	0%	0%	0%	0%
Upper Gunnison River (4)	100%	100%	0%	25%	0%	0%	0%	50%
Former LH Status								
Meeting (9)	56%	44%	0%	22%	0%	0%	0%	22%
Not Meeting (2)	50%	50%	0%	0%	0%	0%	0%	0%
Special Areas								
Gunnison Gorge NCA (8)	50%	50%	0%	13%	0%	0%	0%	25%
Gunnison Gorge Wilderness (4)	75%	75%	0%	25%	0%	0%	0%	25%
Gunnison River SRMA (3)	0%	0%	0%	0%	0%	0%	0%	0%

Table A2.3. Land Health trends for Standard 2. Trends in riparian health indicators over the past 3-12 years. For each of the quantitatively measured riparian indicators (top row), this table shows percentages of studies within each group (left column) having upward or downward trends. Static trends are not shown. Red shading indicates groups which show predominantly decreasing trend for a given indicator, while blue shading shows groups with predominantly increasing trend for an indicator. No shading shows types that have no clear trend. Trend more/less pairs are shaded for an indicator if one is higher than the other, and 50% or greater.

Group Name (number of Studies in Group)	Riparian Width		Wetland Obligate Species %		Wetl. Facultative Species %		Introduced Species %		Riparian Shrubs %		Riparian Trees %		
	Trend	Increase	Decrease	More	Less	More	Less	More	Less	More	Less	More	Less
All Studies (5)		40%	20%	20%	20%	80%	0%	40%	20%	20%	60%	60%	0%
Allotments													
Dedication Site (1)		0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	100%	0%
Streams													
N Fk Gunnison River (1)		0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%
Upper Gunnison River (4)		50%	25%	25%	25%	100%	0%	50%	0%	25%	75%	75%	0%
Former LH Status													
Meeting (5)		40%	20%	20%	20%	80%	0%	60%	20%	20%	60%	60%	0%
Special Areas													
Gunnison Gorge NCA (5)		40%	20%	20%	20%	80%	0%	40%	20%	20%	60%	60%	0%
Gunnison Gorge Wilderness (3)		67%	33%	33%	33%	100%	0%	33%	0%	33%	67%	67%	0%
Gunnison River SRMA (1)		0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%

Table A2.4. Development concerns for Standard 2 riparian indicators. Key indicators for riparian health were evaluated in and immediately adjacent to selected developments, and problems were documented if levels of disturbance or impact were higher than expected. Red shading indicates development types with noteworthy problems (minor or major problems on a total of 40% or more samples in group), blue shading shows types that are performing well (problems on a total of 10% or less of samples in group.) No shading shows types that have low levels of problems. Abundance is shaded red for high, blue for low and none for moderate. Development type is shaded pink for types with overall minor negative influences on land health at the site level.

Development Type (number of sites evaluated)	Stream Hydrology		Riparian Vegetation		Channel Erosion and Sedimentation		Abundance and total number documented in East Paradox LHA Unit
	Minor	Major	Minor	Major	Minor	Major	
All Developments (99)	0%	0%	4%	0%	2%	0%	NA
Abandoned Mines (AML sites) (2)	0%	0%	0%	0%	0%	0%	low-6 sites
BLM Routes (22)	0%	0%	5%	0%	0%	0%	high-567 miles
Campsite (8)*	0%	0%	38%	0%	13%	0%	moderate-43
Cattleguards and Corrals (2)*	0%	0%	0%	0%	0%	0%	low-7
Communications Site (3)	0%	0%	0%	0%	0%	0%	low-4
Contour Furrows and Check Dams (5)	0%	0%	0%	0%	0%	0%	moderate-<20% of unit
Cultural Interpretation Sites (1)	0%	0%	0%	0%	0%	0%	low-1
Developed Rec Site (10)	0%	0%	0%	0%	10%	0%	moderate-34
Ditch ROWs (1)	0%	0%	0%	0%	0%	0%	low-3
Exclosure (2)	0%	0%	0%	0%	0%	0%	low-5
Fences (8)*	0%	0%	0%	0%	0%	0%	moderate-unknown
Gas Pipeline ROW (3)**	0%	0%	0%	0%	0%	0%	low-9
Gas Wells/Pads (2)	0%	0%	0%	0%	0%	0%	low-8
Mineral Developments (2)	0%	0%	0%	0%	0%	0%	low-2
Power/Telephone ROWs (6)	0%	0%	0%	0%	0%	0%	low-16
Reservoir (8)	0%	0%	0%	0%	0%	0%	moderate-63
Road and Highway ROW (10)	0%	0%	0%	0%	0%	0%	moderate->100 miles
Spring Developments, Guzzlers and Drinkers (3)	0%	0%	0%	0%	0%	0%	low-13

Table A2.5 Causal and contributing factor table for Standard 2. Each study site was searched for evidence of possible land uses or environmental factors that could affect land health at that site (left hand column). Evidence was assessed for degree of presence at each site (third row). This table shows percentages for each type of use at each degree of presence within two categories: studies which meet Standard 2, and studies which don't meet or have problems meeting Standard 2. Purple shading indicates land uses or environmental factors which were found at several or more study sites in the Gunnison Gorge unit and can therefore be considered to be noteworthy influences in the unit. Red shading shows types of use which occur at higher levels among studies that show land health problems, and therefore are likely causal factors for land health problems (combined increase of 20% or more in moderate and heavy categories). Blue shading indicates types of use which occur at lower levels among studies with land health problems, and therefore are likely positive influences on land health (combined decrease of 20% or more in moderate and heavy categories). Gray shading indicates likely site-specific contributing factors to riparian health within each land health category (defined as types present at moderate or heavy levels within a land health category.) No shading indicates types of use that are not very evident or notable in the Gunnison Gorge unit.

	Presence Across Riparian Study Sites meeting Standard 2				Presence Across Riparian Study Sites not meeting Standard 2 or meeting Standard 2 with problems			
	Degree of Presence							
Type of Use or Environmental Factor	None	Low	Moderate	Heavy	None	Low	Moderate	Heavy
Augmented flow	50%	0%	38%	13%	100%	0%	0%	0%
Beaver dam removal	100%	0%	0%	0%	100%	0%	0%	0%
Channelization	100%	0%	0%	0%	100%	0%	0%	0%
Drought	100%	0%	0%	0%	100%	0%	0%	0%
Fire	88%	12%	0%	0%	100%	0%	0%	0%
Flood deposition	62%	38%	0%	0%	50%	50%	0%	0%
Flow regulation-dams	25%	0%	50%	25%	0%	0%	0%	100%
Historic cultivation	100%	0%	0%	0%	100%	0%	0%	0%
Intermittent flow	62%	0%	38%	0%	100%	0%	0%	0%
Irrigation tailwater	25%	50%	25%	0%	0%	0%	0%	0%
Livestock grazing	38%	62%	0%	0%	100%	0%	0%	0%
Mining	100%	0%	0%	0%	100%	0%	0%	0%
Nearby agriculture, etc	0%	62%	38%	0%	100%	0%	0%	0%
Noxious/invasive weeds	12%	38%	50%	0%	0%	50%	50%	0%
OHV use	88%	12%	0%	0%	100%	0%	0%	0%
Others	100%	0%	0%	0%	100%	0%	0%	0%
Recreation impacts (not OHV)	63%	25%	12%	0%	75%	25%	0%	0%
stock pond nearby	100%	0%	0%	0%	100%	0%	0%	0%

ROWs (excluding roads)	50%	38%	12%	0%	100%	0%	0%	0%
Road crossings	88%	12%	0%	0%	100%	0%	0%	0%
Road encroachment	88%	12%	0%	0%	100%	0%	0%	0%
Upstream channel condition	63%	25%	12%	0%	100%	0%	0%	0%
Upstream water quality	71%	0%	29%	0%	100%	0%	0%	0%
Water Diversions	25%	12%	38%	25%	0%	0%	100%	0%
Watershed condition	75%	25%	0%	0%	100%	0%	0%	0%
Wildlife use	0%	12%	50%	38%	0%	100%	0%	0%

Table A2.6 Proposed remedies for Standard 2 problems. Remedies for specific causal and some contributing factors (uses or environmental factors present at moderate or heavy levels) leading to indicator problems are listed, as are priority areas for action.

Channel, Erosion, and Riparian Vegetation Indicators		
Causal and contributing factors	Remedy	Priority Areas
Flow regulations from dams	<p>2A. Work with the Bureau of Reclamation and attend Aspinall Management Meetings to show BLM support for flows that will best simulate the natural hydrograph.</p> <p>2B. If opportunities arise on management of other reservoirs, show BLM support for flows that will best simulate the natural hydrograph</p>	<p>Allotments: Crawford Reservoir, Dedication Site, Iron Canyon, Rawhide/Coffeepot Streams: Iron Canyon, Muddy Creek, Rawhide Gulch, Upper Gunnison River Special Areas: GGNCA, GG Wilderness</p>
Water diversions	Same as 2A, 2B.	
Noxious and invasive weeds	<p>Same as 2A, 2B.</p> <p>2C. Increase management of Colorado A and B list weeds along riparian areas.</p> <p>2D. Continue the weed treatments along the different branches of the Gunnison River (Russian knapweed, Russian olive, tamarisk, yellow toadflax) to keep weed cover a minimal part of the riparian community</p> <p>2E. Monitor effects of tamarisk beetle on tamarisk, and treat secondary weeds if they increase.</p> <p>2F. Continue active restoration of degraded riparian areas along the different branches of the Gunnison River</p>	

A3. Standard 3 Native Upland Plant and Animal Communities Summary Tables

Table A3.1 Community indicators which exceed Standard 3. This table shows percentages of Land Health studies having better than average measures or scores for each of the vegetation indicators within different groups: grazing allotments, vegetation types, former Land Health status, and special management units. Blue shading indicates presence of noteworthy and likely widespread good conditions within a group (good conditions on more than 50% of studies in the group), and purple shading shows vegetation indicators that have isolated good conditions within a group (more than 10% of studies). Woodland health was not evaluated for positive conditions in 2012.

Group Name (number of Studies in Group)	Indicator Type						
	High Cool SP Grass	High Warm SP Grass	High P Forbs	Low Exotics	High Diversity	Browse Health	Woodland Health
All Studies (94)	27%	1%	9%	16%	11%	34%	
Grazing Allotments							
Adobe (2)	0%	0%	0%	50%	0%	0%	
Adobe South (3)	67%	0%	0%	0%	0%	33%	
Allen Reservoir (1)	100%	0%	0%	0%	0%	100%	
Big Gulch (1)	0%	0%	0%	0%	0%	0%	
Big Gulch-40 (1)	0%	0%	0%	0%	0%	0%	
Big Pasture (1)	100%	0%	100%	0%	0%	100%	
Black Bullet (1)	0%	0%	0%	100%	0%	0%	
Black Cyn/Jones D (3)	67%	0%	0%	0%	0%	67%	
Black Ridge (6)	17%	0%	0%	17%	0%	33%	
Bostwick Park (1)	0%	0%	0%	0%	0%	0%	
Brush Point (7)	14%	0%	0%	0%	14%	71%	
Cedar Cr (1)	0%	0%	0%	0%	0%	0%	
Cedar Point (2)	50%	0%	100%	0%	0%	50%	
Collins (1)	0%	0%	0%	0%	0%	0%	
Crawford Reservoir (1)	0%	0%	0%	0%	0%	0%	
Dead Horse Com. (1)	0%	0%	0%	0%	100%	0%	
Dedication Site (2)	0%	0%	0%	0%	0%	0%	
Doug Cr (1)	0%	0%	0%	0%	0%	100%	
East Gould Reservoir (2)	50%	0%	50%	0%	50%	0%	
Fruitland Mesa (1)	0%	0%	0%	0%	0%	0%	
Gould Reservoir (4)	25%	0%	50%	25%	0%	50%	
Green Mountain (9)	44%	0%	11%	44%	33%	0%	
Grizzly Gulch (1)	100%	0%	0%	0%	100%	0%	
Iron Canyon (2)	100%	0%	0%	100%	0%	50%	
Middle Peach Valley (5)	20%	0%	0%	0%	0%	100%	
N Saddle Peak (1)	0%	0%	0%	0%	0%	0%	
Needle Rock (1)	0%	0%	0%	0%	0%	0%	
Onion Valley (1)	0%	0%	0%	0%	100%	0%	
Pine Ridge (1)	0%	0%	0%	0%	0%	0%	
Pinyon Springs (2)	50%	0%	50%	0%	0%	50%	
Poison Spring (4)	50%	0%	0%	0%	25%	50%	
Rabbit Gulch (2)	0%	0%	0%	0%	0%	0%	
Rawhide/Coffee pot (2)	0%	0%	0%	0%	0%	50%	
Red Canyon (1)	0%	0%	0%	0%	0%	0%	
Rim Rock (1)	0%	0%	0%	0%	0%	100%	
Selig Canal (2)	50%	0%	0%	100%	0%	50%	
Shamrock (3)	67%	33%	0%	0%	0%	67%	
Smith Fork Ind (1)	0%	0%	0%	0%	0%	0%	
Smith Mtn (3)	0%	0%	0%	33%	0%	33%	
Spring Gulch (1)	0%	0%	0%	0%	100%	0%	

Sulphur Gulch (2)	0%	0%	0%	0%	0%	50%	
Upper Peach Valley (3)	0%	0%	0%	0%	33%	0%	
Unallotted Grass Bank (2)	0%	0%	0%	0%	0%	50%	
Vegetation Type							
Aspen (1)	0%	0%	0%	0%	0%	0%	
Grass-Forb (5)	0%	0%	0%	0%	0%	60%	
Mountain Shrub (15)	20%	0%	13%	27%	40%	27%	
Pinyon-Juniper (17)	18%	0%	0%	24%	12%	24%	
Sagebrush (25)	44%	0%	24%	12%	8%	32%	
Salt-desert Shrub (31)	26%	3%	0%	13%	0%	42%	
Vegetation Treatment							
Brushbeat (2)	100%	0%	0%	0%	0%	50%	
PJ removal (2)	50%	0%	0%	50%	0%	0%	
Plow & Seed (3)	33%	0%	33%	0%	0%	0%	
Prescribed Fire (4)	0%	0%	25%	0%	25%	25%	
Rollerchop (5)	40%	0%	20%	20%	0%	20%	
Wildfire (4)	50%	0%	25%	0%	50%	50%	
Untreated (74)	23%	1%	5%	18%	9%	36%	
Former Land Health Status							
Std 3 Meets (26)	27%	0%	8%	8%	15%	23%	
Std 3 Meets/problems (50)	30%	0%	12%	22%	10%	42%	
Std 3 Not Meet (10)	20%	10%	0%	0%	0%	40%	
Special Management Areas							
Fairview ACEC (1)	0%	0%	0%	0%	0%	0%	
Flat Top/Peach Valley SRMA (5)	20%	0%	0%	0%	0%	60%	
GGNCA (49)	6%	2%	0%	12%	4%	29%	
Gunnison Gorge Wilderness (4)	25%	0%	0%	75%	50%	25%	
Gunnison River SRMA (12)	0%	8%	0%	8%	0%	33%	
Gunnison Sage Grouse ACEC (21)	48%	0%	14%	19%	14%	29%	
Native Plant ACEC (2)	0%	0%	0%	0%	0%	100%	

Table A3.2 Land Health problems for Standard 3. Gunnison Gorge upland vegetation and wildlife habitat indicators that are not as good as typically found in the Uncompahgre Field Office. This table shows percentages of Land Health studies having poorer than expected measures or scores for each of the vegetation indicators within different groups: grazing allotments, vegetation types, treatments, former Land Health status, and special management units. Red shading indicates presence of noteworthy and likely widespread problems within a group (problems on 50% or more studies in the group), and purple shading shows vegetation indicators which have more isolated problems within a group (more than 10% of studies).

Group Name (number of Studies in Group)	Indicator Type						
	Low Cool SP Grass	Low Warm SP Grass	Low P Forbs	High Exotics	Low Diversity	Browse Problems	Tree Problems
All Studies (94)	33%	24%	47%	49%	20%	39%	16%
Grazing Allotments							
Adobe (2)	0%	0%	0%	50%	50%	0%	0%
Adobe South (3)	0%	0%	67%	67%	0%	0%	0%
Allen Reservoir (1)	0%	0%	100%	0%	0%	0%	0%
Big Gulch (1)	0%	100%	0%	100%	0%	100%	0%
Big Gulch-40 (1)	100%	100%	0%	100%	0%	100%	0%
Big Pasture (1)	0%	0%	0%	100%	0%	0%	0%
Black Bullet (1)	100%	100%	0%	0%	0%	100%	100%
Black Cyn/Jones D (3)	0%	0%	67%	33%	0%	33%	33%
Black Ridge (6)	50%	33%	67%	50%	33%	50%	0%
Bostwick Park (1)	0%	0%	100%	0%	0%	100%	0%
Brush Point (7)	51%	29%	43%	57%	29%	0%	0%
Cedar Cr (1)	100%	0%	0%	100%	100%	100%	0%
Cedar Point (2)	50%	0%	0%	50%	50%	50%	0%
Collins (1)	0%	0%	0%	0%	0%	100%	100%
Crawford Reservoir (1)	100%	100%	0%	100%	100%	100%	100%
Dead Horse Com. (1)	100%	0%	0%	100%	0%	0%	0%
Dedication Site (2)	50%	50%	100%	100%	0%	0%	0%
Doug Cr (1)	0%	0%	0%	0%	0%	0%	0%
East Gould Reservoir (2)	0%	0%	0%	100%	0%	100%	0%
Fruitland Mesa (1)	0%	0%	0%	0%	0%	100%	0%
Gould Reservoir (4)	50%	25%	25%	0%	0%	50%	25%
Green Mountain (9)	22%	11%	33%	22%	11%	67%	11%
Grizzly Gulch (1)	0%	0%	100%	0%	0%	100%	0%
Iron Canyon (2)	0%	0%	100%	0%	0%	0%	0%
Middle Peach Valley (5)	40%	40%	80%	60%	20%	20%	20%
N Saddle Peak (1)	0%	0%	0%	0%	0%	0%	0%
Needle Rock (1)	0%	0%	0%	100%	100%	0%	0%
Onion Valley (1)	0%	0%	0%	0%	0%	100%	0%
Pine Ridge (1)	0%	0%	0%	0%	0%	0%	0%
Pinyon Springs (2)	0%	0%	0%	0%	0%	50%	50%
Poison Spring (4)	0%	0%	75%	0%	0%	50%	25%
Rabbit Gulch (2)	0%	0%	100%	100%	50%	100%	100%
Rawhide/Coffee pot (2)	0%	0%	0%	50%	0%	0%	0%
Red Canyon (1)	100%	100%	100%	0%	0%	100%	100%
Rim Rock (1)	100%	100%	100%	0%	100%	100%	0%
Selig Canal (2)	50%	50%	50%	0%	0%	0%	0%
Shamrock (3)	0%	33%	100%	67%	33%	0%	0%
Smith Fork Ind (1)	0%	0%	0%	100%	0%	100%	100%
Smith Mtn (3)	100%	67%	67%	100%	33%	33%	0%
Spring Gulch (1)	0%	0%	100%	0%	0%	0%	0%
Sulphur Gulch (2)	50%	50%	100%	100%	0%	0%	0%

Upper Peach Valley (3)	33%	33%	0%	67%	33%	33%	33%
Unallotted Grass Bank (2)	100%	50%	50%	100%	100%	50%	0%
Vegetation Type							
Aspen (1)	0%	0%	0%	0%	0%	0%	0%
Grass-Forb (5)	60%	20%	60%	100%	60%	20%	20%
Mountain Shrub (15)	33%	0%	47%	13%	0%	40%	0%
Pinyon-Juniper (17)	35%	29%	29%	35%	18%	53%	29%
Sagebrush (25)	16%	20%	36%	32%	12%	60%	28%
Salt-desert Shrub (31)	42%	39%	65%	81%	32%	19%	6%
Vegetation Treatment							
Brushbeat (2)	0%	0%	0%	0%	0%	100%	50%
PJ removal (2)	0%	0%	0%	0%	0%	100%	0%
Plow & Seed (3)	33%	67%	33%	100%	33%	100%	0%
Prescribed Fire (4)	50%	0%	25%	25%	0%	25%	0%
Rollerchop (5)	20%	20%	40%	40%	20%	20%	20%
Wildfire (4)	25%	0%	75%	25%	25%	50%	0%
Untreated (74)	35%	27%	38%	53%	22%	35%	18%
Former Land Health Status							
Std 3 Meets (26)	27%	27%	42%	50%	12%	46%	23%
Std 3 Meets/problems (50)	30%	16%	48%	44%	20%	34%	12%
Std 3 Not Meet (10)	60%	40%	60%	70%	40%	20%	0%
Special Management Areas							
Fairview ACEC (1)	100%	100%	100%	100%	100%	0%	0%
Flat Top/Peach Valley SRMA (5)	40%	20%	40%	67%	40%	0%	0%
GGNCA (49)	35%	24%	43%	47%	18%	20%	8%
Gunnison Gorge Wilderness (4)	25%	25%	50%	0%	0%	25%	0%
Gunnison River SRMA (12)	58%	42%	83%	92%	33%	33%	17%
Gunnison Sage Grouse ACEC (21)	29%	19%	52%	24%	14%	52%	14%
Native Plant ACEC (2)	50%	50%	50%	50%	50%	0%	50%

Table A3.3. Land Health trends for Standard 3. Trends in upland vegetation and wildlife habitat indicators over the past 8-10 years. For each of the quantitatively measured vegetation indicators (top row), this table shows percentages of studies within each group (left column) having upward or downward trends. Static trends are not shown. Red shading indicates groups which show predominantly decreasing trend for a given vegetation indicator, while blue shading shows groups with predominantly increasing trend for an indicator. No shading shows types that have no clear trend. Trend more/less pairs are shaded for an indicator if one is higher than the other, and 50% or greater.

Group Name (number of Studies in Group / # of browse studies)	Perennial cool grass		Perennial warm grass		Perennial forb		Shrub cover		Tree cover		Exotics		Natives		Low Browse vigor		Severe Browse hedging	
	% More	% Less	% More	% Less	% More	% Less	% More	% Less	% More	% Less	% More	% Less	% More	% Less	% More	% Less	% More	% Less
All Studies (54/46)	52	20	2	11	37	26	28	28	11	2	43	26	39	28	22	57	24	26
Allotments																		
Adobe (1/1)	0	0	0	0	0	100	0	0	0	0	100	0	0	0	100	0	0	0
Adobe South (2/1)	50	0	0	0	50	0	50	0	0	0	100	0	50	0	100	0	0	0
Allen Reservoir (1/1)	0	100	0	0	0	100	0	100	0	0	0	100	0	100	0	100	100	0
Big Pasture (1/1)	100	0	0	0	100	0	0	100	0	0	100	0	0	0	0	100	100	0
Black Cyn/Jones D (3/3)	33	33	0	0	67	33	33	0	33	0	33	67	67	0	0	67	0	33
Black Ridge (5/4)	0	50	0	0	20	20	40	0	20	20	20	60	20	40	25	25	25	25
Bostwick Park (1/1)	100	0	0	0	0	0	0	0	0	0	100	0	0	0	0	100	100	0
Brush Point (4/4)	50	0	0	25	0	50	0	50	0	0	50	0	25	50	25	50	25	25
Cedar Point (1/1)	100	0	0	0	100	0	100	0	0	0	0	100	100	0	100	0	0	0
Collins (1/1)	0	100	0	0	0	0	0	0	0	0	100	0	0	0	100	0	0	0
East Gould Reservoir (1/1)	100	0	0	0	100	0	0	100	0	0	100	0	100	0	0	0	100	0
Gould Reservoir (3/3)	0	67	0	0	67	0	33	67	33	0	0	33	67	33	0	100	33	33
Green Mountain (7/6)	71	14	0	0	57	43	57	14	0	0	14	43	57	14	50	0	17	33
Iron Canyon (1)	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle Peach Valley (4/4)	75	0	0	100	0	50	0	100	0	0	100	0	0	75	25	75	0	25
Pinyon Springs (2/2)	50	0	0	0	100	0	0	0	50	0	0	50	50	0	0	100	50	0
Poison Spring (4/4)	50	25	0	0	100	0	75	25	50	0	0	25	75	25	0	75	25	75
Rawhide/Coffee pot	0	100	100	0	100	0	100	0	0	0	100	0	100	0	0	100	0	100

(1/1)																		
Selig Canal (2/2)	100	0	0	0	0	0	0	50	0	0	0	50	0	50	0	100	0	0
Shamrock (3/1)	67	0	0	67	0	0	33	0	0	0	67	0	100	0	0	100	0	100
Smith Mtn (3/1)	67	0	33	33	0	33	0	33	0	0	33	0	0	33	0	100	0	0
Sulphur Gulch (2/1)	50	0	0	50	0	50	0	0	0	0	100	0	0	50	0	100	100	0
Upper Peach Valley (1/1)	0	0	0	100	0	100	0	0	0	0	100	0	0	100	0	100	0	0
Vegetation Type																		
Grass-Forb (3/2)	33	33	0	67	0	67	0	67	0	0	67	33	0	100	50	50	0	50
Mountain Shrub (8/7)	63	20	0	0	50	20	38	13	0	0	0	75	63	13	14	43	29	0
Pinyon-Juniper (6/6)	17	50	0	0	33	17	33	0	33	17	83	17	17	0	17	67	50	17
Sagebrush (17/17)	53	18	0	0	71	18	41	29	24	0	24	24	53	18	6	41	24	41
Salt-desert Shrub (20/14)	60	10	10	40	10	30	15	35	0	0	60	10	30	40	14	79	14	21
Vegetation Treatment																		
Brushbeat (2/2)	50	0	0	0	100	0	100	0	0	0	0	50	100	0	50	50	0	50
PJ removal (2/2)	100	0	0	0	50	50	50	50	50	0	0	0	50	0	50	50	100	0
Plow & Seed (3/3)	0	67	0	0	33	33	33	0	0	0	33	0	33	67	33	0	0	67
Prescribed Fire (3/3)	100	0	0	0	67	33	67	0	0	0	0	100	67	0	33	0	0	0
Rollerchop (5/4)	40	20	0	0	40	0	60	0	0	20	0	80	40	0	0	50	25	25
Wildfire (3/2)	33	33	0	0	33	67	0	0	0	0	0	100	67	33	0	50	50	0
Untreated (36/30)	53	19	6	28	31	25	17	39	14	0	64	8	31	33	20	70	23	27
Former Land Health Status																		
Std 3 Meets (13/12)	38	31	15	15	62	15	0	31	15	0	54	8	54	23	17	50	17	58
Std 3 Meets/problems (31/28)	62	13	0	16	39	29	0	29	13	3	32	35	32	19	21	57	29	14
Std 3 Not Meet (8/6)	25	38	0	38	0	38	0	25	0	0	20	20	37	63	17	67	17	17
Special Areas																		
Flat Top/Peach Valley SRMA (3/3)	67	0	0	33	0	33	0	67	0	0	33	0	33	67	33	33	0	33
GGNCA (19/15)	37	16	5	42	5	42	16	32	5	5	58	16	16	53	20	60	20	27
Gunnison River SRMA (6/3)	50	0	17	50	0	33	17	17			67	0	17	33	0	50	17	17
Gunnison Sage Grouse ACEC (19/16)	42	32	0	0	42	21	47	16	16	5	11	42	47	21	25	31	6	44
Native Plant ACEC (1/1)	100	0	0	100	0	50	0	100	0	0	100	0	0	100	0	100	0	0

Table A3.4. Development concerns for Standard 3 native plant and animal community indicators. Key indicators for native community health were evaluated in and immediately adjacent to selected developments, and problems were documented if levels of disturbance or impact were higher than expected. Red shading indicates development types with noteworthy problems (minor or major problems on a total of 40% or more samples in group), blue shading shows types that are performing well (problems on a total of 10% or less of samples in group.) No shading shows types that have low levels of problems. Abundance is shaded red for high, blue for low and none for moderate. . Development type is shaded pink for types with overall minor negative influences on land health at the site level.

Development Type (number of sites evaluated)	Native Vegetation		Weeds*		Wildlife		Connectivity Fragmentation		Abundance and total # documented in LHA Unit
	Minor	Major	Minor	Major	Minor	Major	Minor	Major	
All Developments (99)	31%	5%	52%	13%	12%	1%	8%	1%	NA
Abandoned Mines (AML sites) (2)	0%	50%	100%	0%	0%	0%	0%	0%	low-6 sites
BLM Routes (22)	36%	0%	50%	5%	0%	0%	0%	0%	high-567 mi
Campsite (8)*	38%	0%	63%	0%	0%	0%	0%	0%	moderate-43
Cattleguards and Corrals (2)*	100 %	0%	100 %	0%	50%	0%	50%	0%	low-7
Communications Site (3)	33%	0%	33%	0%	100%	0%	0%	0%	low-4
Contour Furrows and Check Dams (5)	0%	60%	80%	20%	60%	0%	20%	0%	mod.<20% of unit
Cultural Interpretation Sites (1)	0%	0%	100 %	0%	0%	0%	0%	0%	low-1
Developed Rec Site (10)	40%	0%	80%	10%	10%	0%	10%	0%	moderate-34
Ditch ROWs (1)	0%	50%	0%	50%	0%	0%	0%	0%	low-3
Exclosure (2)	0%	0%	50%	0%	0%	0%	50%	0%	low-5
Fences (8)*	0%	0%	13%	0%	13%	26%	13%	26%	mod-unk.
Gas Pipeline ROW (3)**	33%	0%	33%	33%	0%	0%	0%	0%	low-9
Gas Wells/Pads (2)	50%	0%	50%	0%	0%	0%	0%	0%	low-8
Mineral Developments (2)	100 %	0%	50%	50%	0%	0%	0%	0%	low-2
Power/Telephone ROWs (6)	17%	0%	34%	17%	0%	0%	17%	0%	low-16
Reservoir (8)	38%	0%	75%	25%	0%	0%	0%	0%	moderate-63
Road and Highway ROW (10)	40%	0%	50%	30%	20%	0%	10%	0%	moderate- >100 miles
Spring Developments, Guzzlers and Drinkers (3)	33%	0%	0%	33%	0%	0%	0%	0%	low-13

*Indicates development types with a potentially positive influence on land health at the landscape level.

**In the adobes, pipelines have a negative influence on land health due to the disturbance.

Table A3.5 Causal and contributing factor table for Standard 3. Each study site was searched for evidence of possible land uses or environmental factors that could affect land health at that site (left hand column). Evidence was assessed for degree of presence at each site (third row). This table shows percentages for each type of use at each degree of presence within two categories: studies which meet Standard 3, and studies which don't meet or have problems meeting Standard 3. Purple shading indicates land uses or environmental factors which were found at several or more study sites in the Gunnison Gorge unit and can therefore be considered to be noteworthy influences in the unit. Red shading shows types of use which occur at higher levels among studies that show land health problems, and therefore are likely causal factors for land health problems (combined increase of 20% or more in moderate and heavy categories). Blue shading indicates types of use which occur at lower levels among studies with land health problems, and therefore are likely positive influences on land health (combined decrease of 20% or more in moderate and heavy categories.) Gray shading indicates likely site-specific contributing factors to health status within each land health category (defined as types present at moderate or heavy levels within a land health category.) No shading indicates types of use that are not very evident or notable in the Gunnison Gorge unit.

Type of Use or Environmental Factor	Presence Across Upland Study Sites meeting Standard 3				Presence Across Upland Study Sites not meeting Standard 3 or meeting Standard 3 with problems			
	Degree of Presence							
	None	Low	Moderate	Heavy	None	Low	Moderate	Heavy
Cultivation-historic	100%	0%	0%	0%	96%	0%	0%	4%
Domestic sheep	73%	12%	9%	6%	43%	4%	10%	43%
Drought	38%	47%	15%	0%	38%	32%	28%	2%
Dumping	97%	3%	0%	0%	95%	5%	0%	0%
Erosion from uplands	94%	6%	0%	0%	91%	7%	0%	2%
Fire	76%	6%	9%	9%	81%	12%	2%	5%
Fire suppression	59%	26%	12%	3%	77%	14%	9%	0%
Irrigation tailwater	100%	0%	0%	0%	87%	7%	4%	2%
Livestock grazing-current*	18%	47%	35%	0%	35%	56%	9%	0%
Livestock grazing-historic	6%	50%	41%	3%	11%	28%	40%	21%
Mining	100%	0%	0%	0%	96%	2%	2%	0%
Nearby agricultural or residential land	67%	21%	12%	0%	61%	21%	18%	0%
Noxious/invasive weeds	38%	53%	9%	0%	21%	14%	49%	16%
OHV use	70%	30%	0%	0%	68%	21%	5%	5%
Pinyon-juniper invasion	61%	18%	9%	12%	64%	16%	16%	4%
Rec impacts (non-OHV)	91%	6%	3%	0%	89%	11%	0%	0%
Reservoir-stock pond	94%	3%	3%	0%	96%	2%	0%	2%
Rights of way (not roads)	94%	6%	0%	0%	82%	9%	9%	0%
Roads (BLM)	53%	44%	3%	0%	64%	25%	7%	4%
Roads (ROWS)	85%	15%	0%	0%	77%	19%	2%	2%
Seral Stage issues	61%	18%	18%	3%	62%	18%	16%	4%
Unknown disturbance	94%	6%	0%	0%	95%	3%	0%	2%

Vegetation treatment-new	70%	6%	15%	9%	87%	4%	4%	5%
Vegetation treatment-old	94%	6%	0%	0%	86%	2%	5%	7%
Wildlife use-current*	0%	32%	62%	6%	2%	45%	44%	9%
Wildlife use-historic	0%	47%	53%	0%	7%	59%	30%	4%
Woodcuts	82%	12%	6%	0%	87%	11%	2%	0%

*Livestock grazing and current wildlife use data are being interpreted as a contributing factors rather than as landscape level causal factors because of concerns about possible confusion between the two during data collection.

Table A3.6 Proposed remedies for Standard 3 problems. Remedies for specific landscape level causal factors leading to indicator problems are listed, as are priority areas for action.

Herbaceous Plant Community (perennial warm and cool season grasses and forbs)		
Causal and contributing factors	Remedy	Priority Areas
Noxious and invasive weeds	<p>3C Increase weed management efforts on A and B list species, and annual exotic plants like cheatgrass, jointed goatgrass, alyssum and halogeton</p> <p>3A Seed disturbances with desirable native species to prevent weeds from becoming established</p> <p>1D Revegetate or restore areas that have been dominated by annual weeds or introduced species</p>	<p>Allotments: Adobe, Adobe South, Allen Reservoir, Big Gulch, Big Gulch 40, Big Pasture, Black Bullet, Black Canyon/Jones Draw, Black Ridge, Bostwick Park, Brush Point, Cedar Creek, Cedar Point, Collins, Crawford Reservoir, Dead Horse Common, Dedication Site, East Gould Reservoir, Fruitland Mesa, Gould Reservoir, Green Mountain, Grizzly Gulch, Iron Canyon, Middle Peach Valley, Needle Rock, Onion Valley, Pinyon Springs, Poison Spring, Rabbit Gulch, Rawhide/Coffeepot, Red Canyon, Rim Rock, Selig Canal, Shamrock, Smith Fork Individual, Smith Mountain, Spring Gulch, Sulphur Gulch, Upper Peach Valley, and the grass bank</p> <p>Vegetation Types: Grass-forb, mountain shrub, pinyon-juniper, sagebrush, salt-desert shrub, vegetation treatments: brushbeat, PJ removal, Plow and seed, prescribed fire, rollerchop, wildfire, and untreated vegetation</p> <p>Special Areas: Fairview ACEC, Peach Valley Flattop SRMA, GGNCA, Gunnison Gorge Wilderness, Gunnison River SRMA, Gunnison Sage Grouse ACEC, and Native Plant ACEC</p>
Domestic sheep allotments	<p>1A Revise livestock grazing permit terms to include appropriate seasonal utilization limits, active growing season duration limits, incorporate rest, provide for rest of vegetation treatments, minimize use of spring and fall grazing of the same area within the same year, and drought mitigation measures</p> <p>1B Increase compliance monitoring and enforcement of grazing permit terms</p> <p>3B Reduce sheep concentration impacts by improving management of sheep camps, trailing, watering and bedding areas</p>	

A4. Standard 4 Special Status Species Summary Tables

Table A4.1 Land Health problems for Standard 4. Gunnison Gorge upland Special Status Species indicators. This table shows percentages of Land Health studies having poorer than expected measures or scores for each of the population or habitat indicators within different groups: grazing allotments, vegetation types, treatments, former Land Health status, and special management units. Red shading indicates presence of noteworthy and likely widespread problems within a group (problems on 50% or more studies in the group), and purple shading shows TES indicators which have more isolated problems within a group (more than 10% of studies). Note that other problems of plague/white tail prairie dog, cowbirds/invasive birds, and physical disturbance on plants did not affect enough studies to include in this analysis.

Group Name (number of Studies in Group)	Indicator Type									
	Bighorn/ domestic sheep conflict	Sage grouse habitat				Weeds degrade TES habitat	TES habitat lacking native plants	Aquatic TES Habitat		
		Low forb cover	Low grass cover	Low sagebrush cover	Low cover other shrubs			Warm water fish-flow regime	Warm water fish- water temp.	Gen TES aquatic- ripar. cond.
Terrestrial (94) / Aquatic 12)	20%	18%	7%	16%	11%	39%	17%	59%	50%	25%
Grazing Allotments										
Adobe (2)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Adobe South (3)	0%	0%	0%	0%	0%	33%	67%	NA	NA	NA
Allen Reservoir (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Big Gulch (1)	0%	0%	0%	0%	0%	100%	0%	NA	NA	NA
Big Gulch-40 (1)	100%	0%	0%	0%	0%	100%	100%	NA	NA	NA
Big Pasture (1)	0%	0%	0%	0%	0%	100%	0%	NA	NA	NA
Black Bullet (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Black Cyn/Jones D (3)	0%	33%	33%	0%	33%	33%	0%	NA	NA	NA
Black Ridge (6/1)	100%	67%	50%	50%	50%	0%	0%	0%	0%	0%
Bostwick Park (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Brush Point (7)	0%	0%	0%	0%	0%	57%	14%	NA	NA	NA
Cedar Cr (1)	0%	0%	0%	0%	0%	100%	100%	NA	NA	NA
Cedar Point (2)	0%	0%	0%	50%	0%	50%	0%	NA	NA	NA
Collins (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Crawford Reservoir (1/1)	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%
Dead Horse Com. (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Dedication Site (2/1)	0%	0%	0%	0%	0%	100%	0%	100%	100%	100%
Doug Cr (1/1)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
East Gould Reservoir (2)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Fruitland Mesa (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Gould Reservoir (4)	0%	25%	25%	0%	25%	0%	0%	NA	NA	NA

Green Mountain (9)	67%	56%	11%	67%	22%	0%	0%	NA	NA	NA
Grizzly Gulch (1)	0%	100%	0%	100%	0%	0%	0%	NA	NA	NA
Iron Canyon (2/1)	0%	100%	0%	0%	0%	100%	0%	100%	100%	0%
Middle Peach Valley (5)	60%	0%	0%	0%	0%	67%	20%	NA	NA	NA
N Saddle Peak (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Needle Rock (1)	0%	0%	0%	0%	0%	100%	100%	NA	NA	NA
Onion Valley (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Pine Ridge (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Pinyon Springs (2)	0%	100%	0%	0%	0%	0%	0%	NA	NA	NA
Poison Spring (4)	0%	0%	0%	50%	75%	25%	0%	NA	NA	NA
Rabbit Gulch (2)	0%	0%	0%	0%	0%	100%	50%	NA	NA	NA
Rawhide/Coffee pot (2/1)	0%	50%	50%	50%	0%	50%	0%	0%	0%	0%
Red Canyon (1)	0%	0%	0%	100%	0%	0%	0%	NA	NA	NA
Rim Rock (1)	0%	0%	0%	0%	0%	0%	100%	NA	NA	NA
Selig Canal (2)	0%	0%	0%	0%	0%	50%	0%	NA	NA	NA
Shamrock (3)	0%	0%	0%	0%	0%	67%	100%	NA	NA	NA
Smith Fork Ind (1)	0%	0%	0%	0%	0%	100%	0%	NA	NA	NA
Smith Mtn (3/1)	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%
Spring Gulch (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Sulphur Gulch (2/1)	0%	0%	0%	0%	0%	100%	50%	0%	0%	0%
Upper Peach Valley (3)	33%	0%	0%	0%	0%	67%	33%	NA	NA	NA
Unallotted Grass Bank (2)	100%	0%	0%	0%	0%	100%	100%	NA	NA	NA
Vegetation Type										
Aspen (1)	0%	0%	0%	0%	0%	0%	0%	NA	NA	NA
Grass-Forb (5)	40%	20%	20%	20%	0%	80%	67%	NA	NA	NA
Mountain Shrub (15)	27%	27%	13%	13%	7%	7%	0%	NA	NA	NA
Pinyon-Juniper (17)	35%	6%	6%	6%	6%	24%	0%	NA	NA	NA
Riparian (12)	NA	NA	NA	NA	NA	NA	NA	59%	50%	25%
Sagebrush (25)	12%	44%	12%	40%	32%	20%	4%	NA	NA	NA
Salt-desert Shrub (31)	13%	0%	0%	3%	0%	74%	39%	NA	NA	NA
Vegetation Treatment										
Brushbeat (2)	50%	50%	0%	100%	50%	0%	0%	NA	NA	NA
PJ removal (2)	0%	50%	0%	100%	100%	0%	0%	NA	NA	NA
Plow & Seed (3)	33%	100%	0%	67%	67%	0%	0%	NA	NA	NA
Prescribed Fire (4)	50%	25%	0%	25%	0%	25%	0%	NA	NA	NA
Rollerchop (5)	40%	60%	40%	40%	60%	40%	0%	NA	NA	NA
Wildfire (4)	25%	25%	25%	25%	0%	0%	0%	NA	NA	NA
Untreated (74)	16%	9%	5%	7%	3%	35%	22%	NA	NA	NA

Former Land Health Status										
Std 4 Meets (69)	14%	3%	3%	6%	1%	48%	23%	NA	NA	NA
Std 4 Meets/problems (24)	38%	63%	21%	46%	38%	13%	0%	NA	NA	NA
Std 4 Unknown (1)	0%	0%	0%	0%	0%	100%	0%	NA	NA	NA
Special Management Areas										
Fairview ACEC (1)	0%	0%	0%	0%	0%	100%	0%	NA	NA	NA
Flat Top/Peach Valley SRMA (5)	0%	0%	0%	0%	0%	67%	20%	NA	NA	NA
GGNCA (49/8)	29%	8%	6%	8%	6%	41%	16%	50%	63%	38%
Gunnison Gorge Wilderness (4/4)	75%	0%	0%	25%	0%	0%	0%	75%	75%	50%
Gunnison River SRMA (12/3)	17%	0%	0%	0%	0%	92%	42%	0%	33%	0%
Gunnison Sage Grouse ACEC (21)	43%	67%	19%	48%	33%	14%	0%	NA	NA	NA
Native Plant ACEC (2)	100%	0%	0%	0%	0%	50%	0%	NA	NA	NA
Streams										
Doug Creek (-/1)	NA	NA	NA	NA	NA	NA	NA	0%	0%	0%
Iron Canyon (-/1)	NA	NA	NA	NA	NA	NA	NA	100%	100%	0%
Lower Gunnison River (-/2)	NA	NA	NA	NA	NA	NA	NA	0%	0%	0%
Muddy Creek (-/1)	NA	NA	NA	NA	NA	NA	NA	100%	100%	0%
NF Gunnison (-/1)	NA	NA	NA	NA	NA	NA	NA	0%	100%	0%
Rawhide Glch (-/1)	NA	NA	NA	NA	NA	NA	NA	0%	0%	0%
Smith Fork (-/1)	NA	NA	NA	NA	NA	NA	NA	0%	0%	0%
Upper Gunnison River (-/4)	NA	NA	NA	NA	NA	NA	NA	100%	100%	75%

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Table A4.2. Land Health trends for Standard 4. Trends in Special Status Species (TES) health indicators over the past 8-10 years. For each of the quantitatively measured vegetation indicators (top row), this table shows percentages of studies within each group (left column) having upward or downward trends. Static trends are not shown. Red shading indicates groups which show predominantly decreasing trend for a given soil indicator, while blue shading shows groups with predominantly increasing trend for an indicator. No shading shows types that have no clear trend. Trend more/less pairs are shaded for an indicator if one is higher than the other, and 50% or greater.

Group Name (number of Studies in Group/ # studies in Sage Grouse ACEC)	Weeds degrade TES habitat		TES habitat lacking native plants		Sage Grouse Habitat Parameters (in Gunnison Sage Grouse ACEC)						
	Trend	% More	% Less	% More	% Less	Perennial (cool season) Grass Cover		Perennial Forb Cover		Sagebrush Cover	
		% More	% Less	% More	% Less	% More	% Less	% More	% Less	% More	% Less
All Studies (54/19)		43	26	39	28	42	32	47	21	26	21
Grazing Allotment											
Adobe (1)		100	0	0	0	0	0	0	0	0	0
Adobe South (2)		100	0	50	0	0	0	0	0	0	0
Allen Reservoir (1)		0	100	0	100	0	0	0	0	0	0
Big Pasture (1/1)		100	0	0	0	0	0	0	0	0	0
Black Cyn/Jones D (3)		33	67	67	0	0	0	0	0	0	0
Black Ridge (5/5)		20	60	20	40	0	60	20	20	20	20
Bostwick Park (1)		100	0	0	0	0	0	0	0	0	0
Brush Point (4)		50	0	25	50	0	0	0	0	0	0
Cedar Point (1)		0	100	100	0	0	0	0	0	0	0
Collins (1)		100	0	0	0	0	0	0	0	0	0
East Gould Reservoir (1)		100	0	100	0	0	0	0	0	0	0
Gould Reservoir (3/2)		0	33	67	33	50	50	50	0	0	50
Green Mountain (7/7)		14	43	57	14	71	14	57	43	29	14
Iron Canyon (1/1)		0	0	0	0	100	0	0	0	100	0
Middle Peach Valley (4)		100	0	0	75	0	0	0	0	0	0
Pinyon Springs (2)		0	50	50	0	0	0	0	0	0	0
Poison Spring (4/3)		0	25	75	25	33	33	100	0	33	33
Rawhide/Coffee pot (1)		100	0	100	0	0	0	0	0	0	0
Selig Canal (2)		0	50	0	50	0	0	0	0	0	0
Shamrock (3)		67	0	100	0	0	0	0	0	0	0
Smith Mtn (3)		33	0	0	33	0	0	0	0	0	0
Sulphur Gulch (2)		100	0	0	50	0	0	0	0	0	0
Upper Peach Valley (1)		100	0	0	100	0	0	0	0	0	0
Vegetation Type											
Grass-Forb (3/1)		67	33	0	100	0	100	0	100	0	0
Mountain Shrub (8/5)		0	75	63	13	50	20	40	20	40	0
Pinyon-Juniper (6/2)		83	17	17	0	0	50	50	0	50	0
Sagebrush (17/10)		24	24	53	18	24	30	60	20	20	40
Salt-desert Shrub (20)		60	10	30	40	0	0	0	0	0	0

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Vegetation Treatment										
Brushbeat (2/2)	0	50	100	0	50	0	100	0	50	0
PJ removal (2/1)	0	0	50	0	0	0	0	100	0	100
Plow & Seed (3/3)	33	0	33	67	0	67	33	33	33	0
Prescribed Fire (3/2)	0	100	67	0	0	0	50	50	50	0
Rollerchop (5/4)	0	80	40	0	0	25	25	0	25	25
Wildfire (3/1)	0	100	67	33	0	100	0	100	0	0
Untreated (36/5)	64	8	31	33	8	40	80	0	20	40
Former Land Health Status										
Std 4 Meets (34/0)	62	18	32	29	0	0	0	0	0	0
Std 4 Meets/problems (20/18)	10	44	56	28	44	33	50	22	28	22
Std 4 Unknown (0/0)	0	0	0	0	0	0	0	0	0	0
Special Management Area										
Flat Top/Peach Valley SRMA (3)	33	0	33	67	0	0	0	0	0	0
GGNCA (19/5)	58	16	16	53	0	60	20	20	20	20
Gunnison River SRMA (6)	67	0	17	33	0	0	0	0	0	0
Gunnison Sage Grouse ACEC (19/18)	11	42	47	21	44	33	50	22	28	22
Native Plant ACEC (1)	100	0	0	100	0	0	0	0	0	0

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Table A4.4 Development concerns for Standard 4 special status species indicators. Key indicators for special status species (TES) were evaluated in and immediately adjacent to selected developments, and problems were documented if levels of disturbance or impact were higher than expected. Red shading indicates development types with noteworthy problems (minor or major problems on a total of 40% or more samples in group), blue shading shows types that are performing well (problems on a total of 10% or less of samples in group.) No shading shows types that have low levels of problems. Abundance is shaded red for high, blue for low and none for moderate. Development type is shaded pink for types with overall minor negative influences on land health at the site level.

Development Type (number of sites evaluated)	TES Species		TES Habitat		Abundance and total # documented in LHA Unit
	Minor	Major	Minor	Major	
Degree of Problem					
All Developments (99)	4%	0%	9%	1%	NA
Abandoned Mines (AML sites) (2)	0%	0%	50%	0%	low-6 sites
BLM Routes (22)	5%	0%	14%	5%	high-567 mi
Campsite (8)*	0%	0%	0%	0%	moderate-43
Cattleguards and Corrals (2)*	0%	0%	0%	0%	low-7
Communications Site (3)	0%	0%	0%	0%	low-4
Contour Furrows and Check Dams (5)	0%	0%	0%	0%	mod.<20% of unit
Cultural Interpretation Sites (1)	0%	0%	0%	0%	low-1
Developed Rec Site (10)	0%	0%	10%	0%	moderate-34
Ditch ROWs (1)	0%	0%	0%	0%	low-3
Exclosure (2)	0%	0%	0%	0%	low-5
Fences (8)*	13%	0%	26%	0%	moderate-unk.
Gas Pipeline ROW (3)**	0%	0%	0%	0%	low-9
Gas Wells/Pads (2)	0%	0%	0%	0%	low-8
Mineral Developments (2)	0%	0%	0%	0%	low-2
Power/Telephone ROWs (6)	0%	0%	0%	0%	low-16
Reservoir (8)	0%	0%	0%	0%	moderate-63
Road and Highway ROW (10)	20%	0%	20%	0%	moderate->100 miles
Spring Developments, Guzzlers and Drinkers (3)	0%	0%	0%	0%	low-13

*Indicates development types with a potentially positive influence on land health at the landscape level.

**In the adobes, pipelines have a negative influence on land health due to the disturbance.

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Table A4.5 Causal and contributing factor table for Standard 4-upland transects. Each study site was searched for evidence of possible land uses or environmental factors that could affect land health at that site (left hand column). Evidence was assessed for degree of presence at each site (third row). This table shows percentages for each type of use at each degree of presence within two categories: studies which meet Standard 4, and studies which don't meet or have problems meeting Standard 4. Purple shading indicates land uses or environmental factors which were found at several or more study sites in the Gunnison Gorge unit and can therefore be considered to be noteworthy influences in the unit. Red shading shows types of use which occur at higher levels among studies that show land health problems, and therefore are likely causal factors for land health problems (combined increase of 20% or more in moderate and heavy categories). Blue shading indicates types of use which occur at lower levels among studies with land health problems, and therefore are likely positive influences on land health (combined decrease of 20% or more in moderate and heavy categories.) Gray shading indicates likely site-specific contributing factors to health status within each land health category (defined as types present at moderate or heavy levels within a land health category.) No shading indicates types of use that are not very evident or notable in the Gunnison Gorge unit.

Type of Use or Environmental Factor	Presence Across Upland Study Sites meeting Standard 4				Presence Across Upland Study Sites not meeting Standard 4 or meeting Standard 4 with problems			
	Degree of Presence							
	None	Low	Moderate	Heavy	None	Low	Moderate	Heavy
Cultivation-historic	100%	0%	0%	0%	97%	0%	0%	3%
Domestic sheep presence	84%	8%	0%	8%	43%	6%	14%	37%
Drought	40%	40%	20%	0%	38%	36%	24%	2%
Dumping	96%	0%	4%	0%	95%	5%	0%	0%
Erosion from uplands	92%	8%	0%	0%	92%	6%	0%	2%
Fire	80%	4%	4%	12%	78%	12%	5%	5%
Fire suppression	68%	16%	12%	4%	71%	20%	9%	0%
Irrigation tailwater	100%	0%	0%	0%	89%	6%	3%	2%
Livestock grazing-current*	24%	60%	16%	0%	30%	50%	20%	0%
Livestock grazing-historic	12%	56%	28%	4%	8%	29%	45%	18%
Mining	100%	0%	0%	0%	96%	2%	2%	0%
Nearby agricultural or residential land	60%	28%	12%	0%	65%	18%	17%	0%
Noxious/invasive weeds	48%	48%	4%	0%	20%	21%	45%	14%
OHV use	75%	25%	0%	0%	66%	24%	5%	5%
Pinyon-juniper invasion	68%	16%	8%	8%	62%	17%	15%	6%
Rec impacts (non-OHV)	92%	4%	4%	0%	89%	11%	0%	0%
Reservoir-stock pond	92%	4%	4%	0%	96%	2%	0%	2%
Rights of way (not roads)	88%	8%	4%	0%	86%	8%	6%	0%
Roads (BLM)	60%	36%	4%	0%	60%	32%	5%	3%
Roads (ROWS)	84%	16%	0%	0%	79%	17%	2%	2%
Seral Stage issues	64%	20%	16%	0%	61%	17%	17%	5%

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Unknown disturbance	92%	8%	0%	0%	95%	3%	0%	2%
Vegetation treatment-new	88%	4%	4%	4%	78%	5%	9%	8%
Vegetation treatment-old	96%	4%	0%	0%	86%	3%	5%	6%
Wildlife use-current*	0%	40%	60%	0%	2%	41%	46%	11%
Wildlife use-historic	0%	48%	52%	0%	6%	58%	33%	3%
Woodcuts	80%	16%	4%	0%	88%	9%	3%	0%

*Livestock grazing and current wildlife use data are being interpreted as contributing factors rather than as landscape level causal factors because of concerns about possible confusion between the two during data collection.

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Table A4.6 Causal and contributing factor table for Standard 4-riparian/aquatic transects. Each study site was searched for evidence of possible land uses or environmental factors that could affect land health at that site (left hand column). Evidence was assessed for degree of presence at each site (third row). This table shows percentages for each type of use at each degree of presence within two categories: studies which meet Standard 4, and studies which don't meet or have problems meeting Standard 4. Purple shading indicates land uses or environmental factors which were found at several or more study sites in the Gunnison Gorge unit and can therefore be considered to be noteworthy influences in the unit. Red shading shows types of use which occur at higher levels among studies that show land health problems, and therefore are likely causal factors for land health problems (combined increase of 20% or more in moderate and heavy categories). Blue shading indicates types of use which occur at lower levels among studies with land health problems, and therefore are likely positive influences on land health (combined decrease of 20% or more in moderate and heavy categories.) Gray shading indicates likely site-specific contributing factors to health status within each land health category (defined as types present at moderate or heavy levels within a land health category.) No shading indicates types of use that are not very evident or notable in the Gunnison Gorge unit.

Type of Use or Environmental Factor	Presence Across Riparian/aquatic Study Sites meeting Standard 4				Presence Across Riparian/aquatic Study Sites not meeting Standard 4 or meeting Standard 4 with problems			
	Degree of Presence							
	None	Low	Moderate	Heavy	None	Low	Moderate	Heavy
Augmented flow	57%	0%	29%	14%	80%	0%	20%	0%
Beaver dam removal	100%	0%	0%	0%	100%	0%	0%	0%
Channelization	100%	0%	0%	0%	100%	0%	0%	0%
Drought	100%	0%	0%	0%	100%	0%	0%	0%
Fire	86%	14%	0%	0%	100%	0%	0%	0%
Flood deposition	71%	29%	0%	0%	40%	60%	0%	0%
Flow regulation-dams	29%	0%	42%	29%	0%	0%	20%	80%
Historic cultivation	100%	0%	0%	0%	100%	0%	0%	0%
Intermittent flow	57%	0%	43%	0%	100%	0%	0%	0%
Irrigation tailwater	29%	57%	14%	0%	80%	0%	20%	0%
Livestock grazing	29%	71%	0%	0%	100%	0%	0%	0%
Mining	100%	0%	0%	0%	100%	0%	0%	0%
Nearby agriculture, etc	0%	57%	43%	0%	80%	20%	0%	0%
Noxious/invasive weeds	14%	43%	43%	0%	0%	40%	60%	0%
OHV use	86%	14%	0%	0%	100%	0%	0%	0%
Others	100%	0%	0%	0%	100%	0%	0%	0%
Recreation impacts (not OHV)	71%	29%	0%	0%	60%	20%	20%	0%
stock pond nearby	100%	0%	0%	0%	100%	0%	0%	0%
ROWs (excluding roads)	57%	29%	14%	0%	80%	20%	0%	0%
Road crossings	86%	14%	0%	0%	100%	0%	0%	0%

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Road encroachment	86%	14%	0%	0%	100%	0%	0%	0%
Upstream channel condition	71%	14%	14%	0%	80%	20%	0%	0%
Upstream water quality	67%	0%	33%	0%	100%	0%	0%	0%
Water Diversions	29%	0%	42%	29%	0%	20%	80%	0%
Watershed condition	86%	14%	0%	0%	80%	20%	0%	0%
Wildlife use	0%	14%	42%	42%	0%	80%	20%	0%

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Table A4.7 Proposed remedies for Standard 4 problems. Remedies for specific landscape level causal and some contributing factors leading to indicator problems are listed, as are priority areas for action.

Herbaceous Plant Community (perennial warm and cool season grasses and forbs)		
Causal and contributing factors	Remedy	Priority Areas
Noxious and invasive weeds	<p>2C Increase weed management efforts on A and B list species.</p> <p>3A Seed disturbances with desirable native species to prevent weeds from becoming established</p> <p>1D Revegetate or restore areas that have been dominated by annual weeds or introduced species</p> <p>4F Work with Uncompahgre Valley Water Users Association to more actively manage weeds along the AB Lateral Ditch which flows through the North Fairview ACEC</p> <p>4G. Work with grazing permittees to avoid known locations of federally threatened plant populations during trailing and bedding</p> <p>4A. Continue to survey for special status plants on Smith Mountain, Peach Valley area, and Native Plant ACEC.</p>	<p>Allotments: Adobe South, Big Gulch, Big Gulch 40, Big Pasture, Black Canyon/Jones Draw, Black Ridge, Brush Point, Cedar Creek, Cedar Point, Crawford Reservoir, Dedication Site, Gould Reservoir, Green Mountain, Grizzly Gulch, Iron Canyon, Middle Peach Valley, Needle Rock, Pinyon Springs, Poison Spring, Rabbit Gulch, Rawhide/Coffeepot, Red Canyon, Rim Rock, Selig Canal, Shamrock, Smith Fork Individual, Smith Mountain, Sulphur Gulch, Upper Peach Valley, and the grass bank</p> <p>Vegetation Types: Grass-forb, mountain shrub, pinyon-juniper, sagebrush, salt-desert shrub, vegetation treatments: brushbeat, PJ removal, Plow and seed, prescribed fire, rollerchop, wildfire, and untreated vegetation</p> <p>Special Areas: Fairview ACEC, Peach Valley Flattop SRMA, GGNCA, Gunnison Gorge Wilderness, Gunnison River</p>

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<p>Domestic sheep allotments</p>	<p>1A Revise livestock grazing permit terms to include appropriate seasonal utilization limits, active growing season duration limits, incorporate rest, provide for rest of vegetation treatments, and minimize use of spring and fall grazing of the same area within the same year, and drought mitigation measures</p> <p>1B Increase compliance monitoring and enforcement of grazing permit terms</p> <p>3B Reduce sheep concentration impacts by improving management of sheep camps, trailing, watering and bedding areas</p>	<p>SRMA, Gunnison Sage Grouse ACEC, and Native Plant ACEC Streams: Iron Canyon, Muddy Creek, North Fork of the Gunnison, Upper Gunnison</p>
<p>Historic Livestock Grazing</p>	<p>4E. Actively restore appropriate native forbs, shrubs and grasses to areas that were heavily grazed historically, focusing on TES habitat.</p> <p>Same as 1D.</p>	
<p>Flow regulation from dams</p>	<p>2A. Work with the Bureau of Reclamation and attend Aspinall Management Meetings to show BLM support for flows that will best simulate the natural hydrograph.</p> <p>2B. If opportunities arise on management of other reservoirs, show BLM support for flows that will best simulate the natural hydrograph</p>	

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<p>Current wildlife and livestock use</p>	<p>4B. Keep CPAW aware of browse stand condition and wildlife use levels</p> <p>4C. Incorporate mitigating measures when revegetating fires or otherwise treating vegetation to reduce damaging effects of elk, deer and prairie dog concentrations</p> <p>4D. Include appropriate species, ecotype, and regionally appropriate variety of sagebrush seed when revegetating sagebrush areas unless objective is to create an early seral community.</p> <p>4H. Conduct utilization studies after each domestic grazing rotation and again prior to lekking season to ascertain wildlife utilization levels</p> <p>4I. Work with CPAW to maintain wild ungulate levels at or below population objectives</p>	
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A5. Standard 5 Water Quality Summary Tables

Table A5.1 Water quality indicators which exceed Standard 5. This table shows percentages of Land Health studies having better than average measures or scores for each of the water quality indicators within different groups: grazing allotments, streams, former Standard 5 status, and special management units. Blue shading indicates presence of noteworthy and likely widespread good conditions within a group (good conditions on more than 50% of studies in the group), and purple shading shows indicators which have isolated instances of good conditions (more than 10% of studies).

Group Name (number of Studies in Group)	Indicator Type						
	Salts (conduc- tivity EC)	Selenium	Macros HBI	Macros EPT	Coliform	Upland Groundcover	Upland Road Density
All Studies (13)	0%	0%	23%	38%	0%	46%	15%
Stream							
Black Ridge (1)	0%	0%	0%	0%	0%	100%	0%
Crawford Reservoir (1)	0%	0%	0%	0%	0%	0%	0%
Dedication Site (1)	0%	0%	100%	100%	0%	100%	0%
Doug Creek (1)	0%	0%	0%	0%	0%	100%	0%
Iron Canyon (1)	0%	0%	0%	0%	0%	100%	0%
Rawhide/Coffeep ot (1)	0%	0%	0%	0%	0%	0%	0%
Smith Mountain (1)	0%	0%	100%	0%	0%	0%	0%
Sulphur Gulch (1)	0%	0%	100%	0%	0%	100%	0%
Former LH Status							
Doug Cr (1)	0%	0%	0%	0%	0%	100%	0%
Iron Cyn (1)	0%	0%	0%	0%	0%	100%	0%
L Gunnison (2)	0%	0%	100%	0%	0%	0%	0%
Muddy Cr (1)	0%	0%	0%	0%	0%	0%	0%
N Fk Gunnison (1)	0%	0%	0%	100%	0%	0%	0%
Rawhide G (1)	0%	0%	0%	0%	0%	0%	0%
Smith Fk (1)	0%	0%	0%	0%	0%	100%	0%
Sulphur G (1)	0%	0%	0%	0%	0%	100%	0%
U Gunnison R (4)	0%	0%	25%	100%	0%	50%	50%
Special Areas							
Meeting (10)	0%	0%	30%	40%	0%	40%	20%
Not Meeting (2)	0%	0%	0%	0%	0%	50%	0%
GGNCA (8)	0%	0%	38%	62%	0%	50%	25%
GG Wilderness (4)	0%	0%	0%	75%	0%	50%	50%
Gunnison River SRMA (3)	0%	0%	67%	33%	0%	33%	0%

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Table A5.2. Land Health problems for Standard 5. Gunnison Gorge water quality indicators that are not as good as typically found in the Uncompahgre Field Office. This table shows percentages of Land Health studies having poorer than average measures or scores for each of the water quality indicators within different groups: grazing allotments, streams, former Land Health status, and special management units. Red shading indicates presence of noteworthy and likely widespread problems within a group (problems on 50% or more studies in the group), and purple shading shows indicators that have more isolated problems within a group (more than 10% of studies).

Group Name (number of Studies in Group)	Indicator Type						
	Salts (conduc- tivity EC)	Selenium	Macros HBI	Macros EPT	Coliform	Upland Groundcover	Upland Road Density*
All Studies (13)	15%	8%	23%	8%	0%	0%	NA
Black Ridge							
Black Ridge (1)	100%	0%	0%	100%	0%	0%	NA
Crawford Reservoir (1)	0%	0%	0%	0%	0%	0%	NA
Dedication Site (1)	0%	0%	0%	0%	0%	0%	NA
Doug Creek (1)	0%	0%	0%	0%	0%	0%	NA
Iron Canyon (1)	0%	0%	0%	0%	0%	0%	NA
Rawhide/Coffeep ot (1)	0%	0%	0%	0%	0%	0%	NA
Smith Mountain (1)	0%	0%	0%	0%	0%	0%	NA
Sulphur Gulch (1)	100%	100%	0%	0%	0%	0%	NA
Stream							
Doug Cr (1)	0%	0%	0%	0%	0%	0%	NA
Iron Cyn (1)	0%	0%	0%	0%	0%	0%	NA
L Gunnison (2)	0%	0%	0%	0%	0%	0%	NA
Muddy Cr (1)	0%	0%	0%	0%	0%	0%	NA
N Fk Gunnison (1)	0%	0%	100%	0%	0%	0%	NA
Rawhide G (1)	0%	0%	0%	0%	0%	0%	NA
Smith Fk (1)	100%	0%	0%	100%	0%	0%	NA
Sulphur G (1)	100%	100%	0%	0%	0%	0%	NA
U Gunnison R (4)	0%	0%	50%	0%	0%	0%	NA
Former LH Status							
Meeting (10)	10%	10%	30%	0%	0%	0%	NA
Not Meeting (2)	50%	0%	0%	50%	0%	0%	NA
Special Areas							
GGNCA (8)	25%	13%	38%	13%	0%	0%	NA
GG Wilderness (4)	25%	0%	50%	25%	0%	0%	NA
Gunnison River SRMA (3)	33%	33%	33%	0%	0%	0%	NA

*Incomplete road mapping data made analysis of this parameter incomplete

Upland Biological Transect—Data Summary and Evaluation Sheet

Table A5.3 There is not sufficient water quality trend data to include a trend analysis table.

Upland Biological Transect—Data Summary and Evaluation Sheet

Table A5.4. Development concerns for Standard 5 water quality indicators. Key indicators for water quality were evaluated in and immediately adjacent to selected developments, and problems were documented if levels of disturbance or impact were higher than expected. Red shading indicates development types with noteworthy problems (minor or major problems on a total of 40% or more samples in group), blue shading shows types that are performing well (problems on a total of 10% or less of samples in group.) No shading shows types that have low levels of problems. Abundance is shaded red for high, blue for low and none for moderate. Development type is shaded pink for types with overall minor negative influences on land health at the site level.

Development Type (number of sites evaluated)	Pollutants		Sediment		Algae		Abundance and total # documented in LHA Unit
	Minor	Major	Minor	Major	Minor	Major	
Degree of Problem:	Minor	Major	Minor	Major	Minor	Major	
All Developments (99)	8%	0%	21%	2%	2%	0%	NA
Abandoned Mines (AML sites) (2)	50%	0%	50%	0%	0%	0%	low-6 sites
BLM Routes (22)	18%	0%	32%	0%	5%	0%	high-567 mi
Campsite (8)*	0%	0%	13%	0%	0%	0%	moderate-43
Cattleguards and Corrals (2)*	0%	0%	0%	0%	0%	0%	low-7
Communications Site (3)	0%	0%	0%	0%	0%	0%	low-4
Contour Furrows and Check Dams (5)	0%	0%	60%	20%	0%	0%	mod.<20% of unit
Cultural Interpretation Sites (1)	0%	0%	0%	0%	0%	0%	low-1
Developed Rec Site (10)	0%	0%	20%	0%	0%	0%	moderate-34
Ditch ROWs (1)	0%	0%	0%	0%	0%	0%	low-3
Exclosure (2)	0%	0%	0%	0%	0%	0%	low-5
Fences (8)*	0%	0%	0%	0%	0%	0%	mod-unk.
Gas Pipeline ROW (3)**	0%	0%	0%	0%	0%	0%	low-9
Gas Wells/Pads (2)	50%	0%	0%	0%	0%	0%	low-8
Mineral Developments (2)	0%	0%	0%	0%	0%	0%	low-2
Power/Telephone ROWs (6)	0%	0%	0%	0%	0%	0%	low-16
Reservoir (8)	0%	0%	13%	13%	13%	0%	moderate-63
Road and Highway ROW (10)	20%	0%	60%	0%	0%	0%	moderate->100 miles
Spring Developments, Guzzlers and Drinkers (3)	0%	0%	0%	0%	0%	0%	low-13

Upland Biological Transect—Data Summary and Evaluation Sheet

Table A5.5 Causal and contributing factor table for Standard 5. Each study site was searched for evidence of possible land uses or environmental factors that could affect land health at that site (left hand column). Evidence was assessed for degree of presence at each site (third row). This table shows percentages for each type of use at each degree of presence within two categories: studies which meet Standard 5, and studies which don't meet or have problems meeting Standard 5. Purple shading indicates land uses or environmental factors which were found at several or more study sites in the Gunnison Gorge unit and can therefore be considered to be noteworthy influences in the unit. Red shading shows types of use which occur at higher levels among studies that show land health problems, and therefore are likely causal factors for land health problems (combined increase of 20% or more in moderate and heavy categories). Blue shading indicates types of use which occur at lower levels among studies with land health problems, and therefore are likely positive influences on land health (combined decrease of 20% or more in moderate and heavy categories). Gray shading indicates likely site-specific contributing factors to riparian health within each land health category (defined as types present at moderate or heavy levels within a land health category.) No shading indicates types of use that are not very evident or notable in the Gunnison Gorge unit.

	Presence Across Water Study Sites meeting Standard 5				Presence Across Water Study Sites not meeting Standard 5 or meeting Standard 5 with problems			
	Degree of Presence							
Type of Use or Environmental Factor	None	Low	Moderate	Heavy	None	Low	Moderate	Heavy
Augmented flow	40%	0%	40%	20%	0%	0%	100%	0%
Beaver dam removal	100%	0%	0%	0%	100%	0%	0%	0%
Channelization	100%	0%	0%	0%	100%	0%	0%	0%
Drought	100%	0%	0%	0%	100%	0%	0%	0%
Fire	80%	20%	0%	0%	100%	0%	0%	0%
Flood deposition	60%	40%	0%	0%	100%	0%	0%	0%
Flow regulation-dams	40%	0%	40%	20%	100%	0%	0%	0%
Historic cultivation	100%	0%	0%	0%	100%	0%	0%	0%
Intermittent flow	40%	0%	60%	0%	0%	100%	0%	0%
Irrigation tailwater	40%	20%	40%	0%	0%	0%	0%	100%
Livestock grazing	40%	60%	0%	0%	0%	100%	0%	0%
Mining	100%	0%	0%	0%	0%	100%	0%	0%
Nearby agriculture, etc	0%	60%	40%	0%	0%	100%	0%	0%
Noxious/invasive weeds	0%	40%	60%	0%	0%	100%	0%	0%
OHV use	80%	20%	0%	0%	0%	100%	0%	0%
Others	100%	0%	0%	0%	100%	0%	0%	0%
Recreation impacts (not OHV)	80%	0%	20%	0%	100%	0%	0%	0%
stock pond nearby	100%	0%	0%	0%	100%	0%	0%	0%
ROWs (excluding roads)	40%	60%	0%	0%	100%	0%	0%	0%
Road crossings	80%	20%	0%	0%	0%	100%	0%	0%

Upland Biological Transect—Data Summary and Evaluation Sheet

Road encroachment	80%	20%	0%	0%	100%	0%	0%	0%
Upstream channel condition	60%	20%	20%	0%	100%	0%	0%	0%
Upstream water quality	75%	0%	25%	0%	0%	0%	100%	0%
Water Diversions	20%	20%	20%	40%	100%	0%	0%	0%
Watershed condition	60%	40%	0%	0%	100%	0%	0%	0%
Wildlife use	0%	20%	40%	40%	0%	100%	0%	0%

Upland Biological Transect—Data Summary and Evaluation Sheet

Table A5.6 Proposed remedies for Standard 5 problems. Remedies for specific causal and some contributing factors (uses or environmental factors present at moderate or heavy levels) leading to indicator problems are listed, as are priority areas for action.

Water Chemistry		
Causal and contributing factors	Remedy	Priority Areas
Augmented Flow	5A. Identify where both surface and groundwater from irrigation runoff is entering BLM stream channels 5B. Look at alternate drainages for tailwater return flow 5C. Coordinate with Bureau of Reclamation on remediation strategies for water quality and riparian replacement mitigation	Allotments: Black Ridge, Sulphur Gulch Streams: North Fork Gunnison, Smith Fork, Sulphur Gulch Special Areas: GGNCA, Gunnison Gorge Wilderness, Gunnison River SRMA, Gunnison River Watershed
Irrigation tailwater	5D. Continue involvement with Selenium Task Force	
Selenium, Sediment	5E. Complete road and route mapping for Gunnison Gorge LHA unit so that route densities can factor into future route designation activities (5E)	

Upland Biological Transect—Data Summary and Evaluation Sheet

Table A6.1 Development Summaries and Land Health. The first column shows development types color coded to show likely level of impact to land health in the Gunnison Gorge Landscape, and priority level for action: red for likely having land health impacts and high priority for action, purple for possible or occasional land health impacts, and blue for negligible land health impacts. Ratings are based on information from the second column onward, in which red shading denotes significant concerns (40% or more of sites within each type visited, high abundance or major negative influences), blue shading denotes notable absence of problems (10% or less of sites within each type visited, neutral-positive impacts), purple indicates minor problems (11-39% of sites within each type visited, moderate abundance, minor land health impacts and secondary priority for action). Development functionality and compliance with specifications and maintenance are also included.

Development Type	Abundance and Distribution			Site Level Influence on Land Health				Land-scape benefits	% w/ problems	
	Low	Moderate	High	Major Negative	Minor Negative	Neutral	Positive		Function	Compliance
Abandoned Mines (AML sites) (2)	X				X			no	50%	NA
BLM Routes (22)			X		X			no	12%	32%
Campsite (8)*		X			X			yes	12%	0%
Cattleguards and Corrals (2)*	X				X			yes	100%	50%
Communications Site (3)	X				X			no	0%	33%
Contour Furrows and Check Dams (5)		X		X				no	100%	NA
Cultural Interpretation Sites (1)	X					X		no	0%	0%
Developed Rec Site (10)		X			X			no	20%	44%
Ditch ROWs (1)	X				X			no	0%	50%
Exclosure (2)	X					X		no	0%	0%
Fences (8)*		X			X			yes	42%	43%
Gas Pipeline ROW (3)**	X					X		no	0%	50%
Gas Wells/Pads (2)	X				X			no	0%	50%
Mineral Developments (2)	X			X				no	0%	50%
Power/Telephone ROWs (6)	X				X			no	0%	50%
Reservoir (8)		X			X			no	75%	29%
Road and Highway ROW (10)		X			X			no	9%	36%
Spring Developments, Guzzlers, Drinkers (3)	X						X	yes	33%	33%

Gunnison Gorge Land Health Assessment

2011-2012

Appendix B

Appendix B contains the upland transect summary sheets for Standards 1, 3 and 4.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A03630P01D01	Big Gulch	Shallow Clay Loam PJ warm slope	Pinyon-Juniper	No past Determination	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
11/9/2011	2.2	4.4	13.3	58.9	5.0	5.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: No active erosion. Litter probably due to annuals-could be too high. Otherwise groundcover good.

.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
11/9/2011	30.2	0.7	5.0	-	19.3	6.8	31.8	30.2

Upland Biological Transect—Data Summary and Evaluation Sheet

E.S. avgs	-	-	-	-	-	-	-
	Land Health Scores (5=best 1=worst)			Browse		Trees	
Date Read	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
11/9/2011	3.0	2.0	5.0	42.1	0.0	12.0	12.0
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Unknown

Rationale: Warm season grass in area, not transect. Exotic annuals are too dominant on site, but most other parts of the community intact for Pinyon-juniper site. Low shrub vigor. Problem for big game winter range.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: Unknown

Rationale: Issues with cowbirds, potential habitat for several sensitive plants. White tail prairie dogs possible in area, but unlikely given site characteristics. Bald eagle winter foraging habitat. Exotic plant component troublesome for sensitive plants.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05001P01D05	Smith Mtn	Stony Salt Desert warm slope	Salt desert Shrub	1 meets, 3 meets/meets w prob, 4 meets	none documented	GGNCA Gunnison River SRMA



Site Photos
2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/11/2004	38.9	4.4	-	7.8	-	-
5/25/2011	44.4s	3.3d	0.0	6.7s	4.0	4.0
E.S. averages	33.4	7.9	1.6	12.3	4.1	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Downward

Rationale: Bare may be a little high given good spring precipitation and last year’s monsoon but probably not affecting soil health, basal too low, absence of cryptogam on transect, but present in protected areas. Litter low, although it can vary a lot and ES average is made up of annual infested sites as well as pristine sites. Litter may not be a significant component at this site for soil health. Very rocky site, increases armoring. Downward movement in basal contributed to downward trend rating.

.

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							
	Annuals	Pr Forbs	Pr Grasses	Pr Grasses	Shrubs	Trees	Natives	Exotics
			Cool	Warm				
8/11/2004	0.5	8.2	-	11.5	0.8	0	21.0	-
5/25/2011	0.3	4.3d	0.3i	5.5d	0s	0s	10.2d	0.3s
E.S. avgs	6.4	3.8	1.7	6.7	5.7	0.4	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
	5/25/2011	3.0	3.0	3.0	28.0	48.0	-
E.S. avgs	3.3	3.2	4.9	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems

Standard 3 Trend: Down

Rationale: Halogeton patchy in area, jeopardizes site, cool season grass too low. Very sparse shrubs—mainly shadscale, but high percent with severe hedging. Trend rated down because forbs (lost 3 species) and warms decreasing (cover and frequency), not quite offset by increase in cool season grasses.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems

Standard 4 Trend: Down

Rationale: Potential for sensitive plants, known occurrences of sclerocactus and buckwheat in area, but wrong ecological site type for buckwheat, potential for WT prairie dog, winter concentrations of bald eagles (along river), migratory birds, cowbirds and exotic birds. Issues with noxious weeds lead to ratings.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05001P01D09	Smith Mtn	Loamy Salt Desert flat	Salt desert Shrub	1 meets, 3 meets, 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2004 Photo

2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/11/2004	56.7	4.4	12.2	11.1	-	-
5/25/2011	48.3s	0.0d	4.5d	37.1i	3.0	4.0
E.S. averages	48.8	7.0	5.7	18.0	3.8	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Low basal not a concern because of flat site, and pedestals (pedestals may be wind caused) and flowpaths at acceptable levels. Decreasing cryptogams may reflect reader error. Otherwise increasing litter cover probably offsets decreasing basal in terms of soil protection. Picture shows basal is present.

.

Standard 3 Plants and Animals

Canopy Cover Percentages

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees	Natives	Exotics
8/11/2004	15.0	2.2	0.2	2.5	9.5	-	21.2	8.3
5/25/2011	7.8	0.3d	0.2s	3.2i	9.7s	-	13.8d	7.3s
E.S. avgs	6.7	2.0	1.1	10.9	12.1	0.5	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/11/2004	-	-	-	48.0	0.0	-	-
5/25/2011	3.0	3.0	3.0	0.0d	0.0s	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems

Standard 3 Trend: Static

Rationale: Noxious weeds were limited to halogeton which expresses strongly in high moisture years, but jeopardizes site. Low forbs and cool grasses justified rating. Annual and perennial forbs were part of drop in natives. Drop in forbs and natives offsets increase in warm grass and improvement in browse condition.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems

Standard 4 Trend: Static

Rationale: Known occurrence of sclerocactus and buckwheat in area (although not right ecological site for buckwheat), wt prairie dog, winter foraging for bald eagle, migratory birds, potential for sensitive plants.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05001P01D14	Smith Mtn	Stony Salt Desert cool slope	Salt Desert Shrub	1 meets 3 meets/ meets w prob 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/11/2004	48.9	3.3	-	31.1	-	-
5/10/2011	40.0s	0.0d	0.0	3.9d	5.0	4.0
E.S. averages	34.3	6.1	5.2	13.6	3.9	3.9

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: Downward

Rationale: Good pedestals and flowpaths. Early May reading and plants were not fully developed. Low basal and cryptogams and litter indicate vulnerability to erosion, substantiates the rating. Basal and litter show large enough declines to indicate overall declining trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/11/2004	8.8	1.0	0	13.3	23.0	-	47.5	0.2	
5/10/2011	4.5	0.5d	0.3i	2.8d	12.2d	-	15.8d	4.5i	
E.S. avgs	6.5	2.2	2.0	10.0	10.5	1.3	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/10/2011	2.0	3.0	3.0	0.0	0.0	-	-
E.S. avgs	3.5	3.6	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems Standard 3 Trend: downward

Rationale: Halogeton in limited areas. Halogeton jeopardizes site. Low forbs and cool season grasses (establishing on site). Lost half the forbs. Decline in natives largely due to decline in snakeweed. Warm season grasses (galleta) decline in cover and frequency. Appearance of cool season grasses does not offset overall decline. Former prairie dog colony along transect.

.

Standard 4 Special Status Species

Standard 4 Rating: Meeting with problems Standard 4 Trend: downward

Rationale: Known occurrence of sclerocactus, wt prairie dog, winter foraging for bald eagle, migratory birds, potential for sensitive plants. Prairie dog colony on site, evidently killed by plague. Plague an introduced pathogen, sign of disorder in ecosystem.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05002P01D01	Dedication Site	Stony Salt Desert cool slope	Salt desert Shrub	1 meets 3 meets 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/24/2011	53.9	0.0	4.5	10.1	5.0	4.0
E.S. averages	34.3	6.1	5.2	13.6	3.9	3.9

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meet with problems Standard 1 Trend: Unknown

Rationale: Good pedestals, flowpaths and cryptogams. Lack of basal a concern, but few signs of active erosion, therefore meeting with problems.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/24/2011	3.0	0.7	0	8.7	6.3	-	15.5	3.7	
E.S. avgs	6.5	2.2	2.0	10.0	10.5	1.3	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low	% Severely	% Low	% Young

Upland Biological Transect—Data Summary and Evaluation Sheet

				Vigor	Hedged	Vigor	Trees
8/24/2011	3.0	2.0	3.0	32.0	0.0	-	-
E.S. avgs	3.5	3.6	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Unknown

Rationale: Lack of cool season grass a major concern, although nearby on sandier soils were abundant needle and thread grasses. Halogeton and cheatgrass sparse but throughout entire community, with high frequency, jeopardizing site.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: Unknown

Rationale: Sclerocactus on site. Colorado River cutthroat, occurrences of sensitive plants, bighorn sheep, winter concentration of bald eagles (river), migratory birds. No exotic birds or cowbirds. Known occurrence of Lewis woodpecker. Determination rated with problems due to presence of cactus on site despite degraded vegetation community.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05002P01D02	Dedication Site	Salt Desert Breaks cool slope	Pinyon-Juniper	1 meets 3 meets w prob 4 meets	none documented	none documented

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
5/25/2011	28.9	1.1	10.0	27.8	5.0	5.0
E.S. averages	34.0	7.0	6.8	15.8	3.6	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Basal may be low due to transect crossing into different vegetation type within the same ecological site (from tree to grass-shrub dominated).

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
5/25/2011	7.0	0.7	5.2	1.2	13.0	2.5	22.7	6.8
E.S. avgs	4.0	1.8	-	-	12.0	0.8	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/25/2011	4.0	3.0	3.0	0.0	24.0	20.0	56.0
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Halogeton jeopardizes site, also other weedy exotics fairly high. Trees increasing, stand dominated by young age individuals. Bighorn sheep habitat.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Potential for sensitive plant species, sclerocactus, wt prairie dogs nearby, winter foraging for bald eagles, migratory birds. Weeds jeopardize habitat value.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05003P01D01	Selig Canal	Loamy Salt Desert flat	Salt desert Shrub	1 meets/ meets w prob 3 meets w prob 4 meets	none documented	NA

Site Photos



2001 Photo



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/13/2001	51.1	4.4	12.2	27.8	-	-
8/26/2004	43.3	1.1	26.7	22.2	-	-
5/10/2011	27.2d	0.0d	39.1i	30.4i	5.0	5.0
E.S. averages	48.8	7.0	5.7	18.0	3.8	4.0

Upland Biological Transect—Data Summary and Evaluation Sheet

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Predominance of good indicator conditions overrides lack of basal cover, as soil not actively eroding. Soil protection increasing overall, overrides declining basal in terms of soil protection.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/13/2001	0.3	0	0.2	0	11.3	0	11.5	0.3
8/26/2004	1.0	0	0	0	24.0	0	24.0	1.0
5/10/2011	0.2	0s	0.2i	0s	25.0s	0s	25.2s	0.2d
E.S. avgs	6.7	2.0	1.1	10.9	12.1	0.5	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/13/2001	-	-	-	26.5	0.0	-	-
8/26/2004	-	-	-	46.2	0.0	-	-
5/10/2011	3.0	4.0	3.0	0.0d	0.0s	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems

Standard 3 Trend: Stable

Rationale: Halogeton and Russian knapweed jeopardize site (on road near site.) Lack of forbs and very low grasses is a problem (maybe due to high winterfat cover, which is a desirable native shrub). Trend rated stable based on 2004 to 11 readings which show minor increases and decreases balancing out.

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Standard 4 Special Status Species

Standard 4 Rating: Meeting with problems

Standard 4 Trend: Stable

Rationale: Known occurrences of buckwheat, potential for sensitive plants, wt prairie dog in area, migratory birds. Noxious weeds could threaten plant species, especially since buckwheat grows in the most mesic sites, where knapweed is likely to invade. Trend stable similar to Standard 3.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05003P01D02	Selig Canal	Clayey Salt Desert flat	Salt desert Shrub	1 meets w prob 3 meets w prob 4 meets	none documented	NA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/26/2004	85.6	1.1	4.4	8.9	-	-
5/10/2011	81.1s	3.3i	1.1d	13.3i	3.0	2.0
E.S. averages	57.1	6.3	3.7	18.6	3.8	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems

Standard 1 Trend: Static

Rationale: Very harsh site but numerous problem indicators. Increases in basal and litter, slight decline in bare, but concerns with possible reader error on cryptogams. Changes not adequate to indicate other than static trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/26/2004	0.7	4.2	1.0	0	18.7	0	23.9	0.7	
5/10/2011	0.7	0s	2.5i	0s	8.3d	0s	11.2d	0.3s	
E.S. avgs	8.9	1.7	0.8	0	11.3	0.1	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/26/2004	-	-	-	72.0	0.0	-	-
5/10/2011	3.0	3.0	3.0	16.0d	0.0s	-	-
E.S. avgs	2.3	3.2	4.7	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Upward

Rationale: Perennial forb in 2004 likely a biennial or annual. Perennial forbs not significant part of the mat saltbush community. Halogeton, erodium present at low levels, may not threaten site. Increasing cool season grass, decreasing exotics, improving shrub vigor indicates upward trend, overriding drop in shrub cover-probably due to drought and recovery.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: stable

Rationale: Buckwheat known occurrences, potential for sensitive plants, known occurrences for some also, known sclerocactus, wt prairie dogs, migratory birds. No cowbirds or exotic birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05007P01D01	Upper Peach Valley	Stony Salt Desert cool slope	Salt desert Shrub	1 meets w prob 3 meets w prob/ not meet 4 meets	none documented	GGNCA

Site Photos



2004 Photo

2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/16/2004	39.3	5.6	-	46.1	-	-
5/25/2011	18.2d	15.9i	2.3	59.1i	5.0	4.0
E.S. averages	34.3	6.1	5.2	13.6	3.9	3.9

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Bare, basal, litter show good soil protection, and little sign of active erosion despite slope. Large increases in basal and declines in bare for upward trend rating.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/16/2004	19.0	1.3	0	9.2	3.8	0	26.0	7.3

Upland Biological Transect—Data Summary and Evaluation Sheet

5/25/2011	17.7	0.2d	0s	2.7d	3.0s	0s	7.0d	16.3i
E.S. avgs	6.5	2.2	2.0	10.0	10.5	1.3	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/16/2004	-	-	-	50.0	4.2	-	-
5/25/2011	4.0	2.0	2.0	28.0d	4.0s	-	-
E.S. avgs	3.5	3.6	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting Standard 3 Trend: Downward

Rationale: Cheatgrass, alyssum and halogeton high frequency, and dominance by exotic annuals lead to not meeting rating. Galleta declined in frequency and cover. Increasing exotics, decreasing natives and warm season grasses indicate declining trend, despite improving browse vigor.

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Standard 4 Special Status Species

Standard 4 Rating: Not meeting Standard 4 Trend: Downward

Rationale: Potential sensitive plants, sclerocactus, wt prairie dog, kit fox, known burrowing owl and golden eagle, migratory birds, no cowbirds or exotic birds. Exotic plants degrade and threaten habitat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05007P01D02	Upper Peach Valley	Clayey Saltdesert flat	Saltdesert Shrub	1 meets w prob 3 meets w prob/ not meet 4 meets	none documented	GGNCA

Site Photos



2004 Photo



2011 Photo (may not be same area)

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/26/2004	64.4	2.2	11.1	22.2	-	-
5/25/2011	53.3	2.2	1.1	42.2	5.0	5.0
E.S. averages	57.1	6.3	3.7	18.6	3.8	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Most indicators within range, except for cryptogams, low basal, high litter fueled by annuals from past years. No active erosion, justifies “meeting” rating. No trend rating because we can’t be sure transect has been accurately relocated to original site.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/26/2004	47.7	0	0	0	0	0	0.3	47.3	
5/25/2011	3.3	0	1.2	0	0	0	3.7	0.8	

Upland Biological Transect—Data Summary and Evaluation Sheet

E.S. avgs	8.9	1.7	0.8	0.0	11.3	0.1	-	-
	Land Health Scores (5=best 1=worst)			Browse		Trees		
Date Read	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees	
5/25/2011	1.0	1.0	2.0	-	-	-	-	
E.S. avgs	2.3	3.2	4.7	-	-	-	-	

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Unknown

Rationale: Halogeton most prevalent plant on sites. Lack of native species other than western wheat and native annuals lead to not meeting rating. No trend rating because we can't be sure transect has been accurately relocated to original site.

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Standard 4 Special Status Species

Standard 4 Rating: Not meeting

Standard 4 Trend: Unknown

Rationale: No exotic birds or cowbirds, potential for sensitive plants, known for some sensitive plants, sclerocactus, buckwheat, potential wt prairie dog and kit fox. Migratory birds. Lack of native plants compromise habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05007P01D04	Upper Peach Valley	Salt Desert Breaks cool slope	Pinyon-Juniper	1 meets 3 meets 4 meets	none documented	GGNCA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
5/25/2011	32.6	2.2	2.2	13.5	4.0	3.0
E.S. averages	34.0	7.0	6.8	15.8	3.6	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Flowpaths not unexpected given 10% slope. Basal and cryptogam also may be low due to slope, seems adequate for site.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
5/25/2011	0.5	0.5	0	0	7.3	1.5	9.3	0.5
E.S. avgs	4.0	1.8	-	-	12.0	0.8	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/25/2011	3.0	5.0	5.0	40.0	36.0	0.0	80.8
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Lack of exotics and noxious good, but low shrubs, forbs and poor shrub vigor. Looks like invading trees on site. Ecological site averages are based on very small group, discount for that reason. Cool and warm season grass present in a few large frames. Poor browse vigor in big game winter range and low levels of grasses and forbs lead to rating. Potential bighorn habitat.

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Exotic birds and cowbirds threaten habitat quality. Potential for sensitive plant species, potential sclerocactus, potential kit fox, known golden eagle.

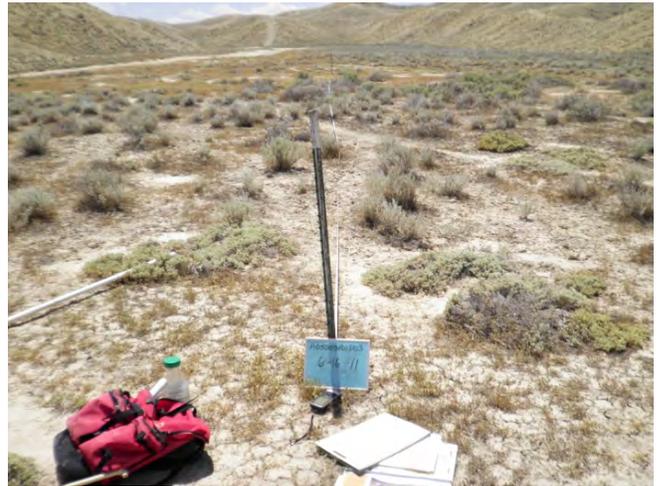
Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05008P01D03	Brush Point	Loamy Salt Desert flat	Salt desert Shrub	1 meets w prob 3 not meet 4 meets	none documented	GGNCA Flat Top/Peach Valley SRMA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/13/2004	63.3	2.2	16.7	17.8	-	-
6/16/2011	47.2d	5.6i	7.9d	39.3i	5.0	4.0
E.S. averages	48.8	7.0	5.7	18.0	3.8	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Indicators look like soil stable and adequately protected. High litter may not be a benefit to this site or this soil, could be covering up cryptogams. Increasing litter a negative for the site as are decreasing cryptogams, offset improvements in bare and basal.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/13/2004	22.2	0	0	0	19.5	0	19.5	22.2
6/16/2011	18.5	0s	0s	0s	10.5d	0s	10.5d	18.5s
E.S. avgs	6.7	2.0	1.1	10.9	12.1	0.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/13/2004	-	-	-	52.2	0.0	-	-
6/16/2011	1.0	2.0	3.0	12.0d	0.0s	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting **Standard 3 Trend: Static**

Rationale: Lack of grasses, halogeton and other exotics dominate and jeopardizes site. Site appears stuck, loss of shrub cover offsets improvement in low vigor shrubs for static rating.

.

Standard 4 Special Status Species

Standard 4 Rating: Not meeting **Standard 4 Trend: Static**

Rationale: Potential and known occurrences of sensitive plants, known sclerocactus and buckwheat, potential wt prairie dog, kit fox, migratory birds. Dominance by exotics, lack of native herbaceous degrade habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05008P01D04	Brush Point	Silty Salt Desert flat	Salt desert Shrub	1 meets 3 meets/ meets w prob 4 meets	none documented	GGNCA Flat Top/Peach Valley SRMA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
08/13/2004	68.9	6.7	1.1	23.3	-	-
6/16/2011	51.6d	9.9i	5.5i	33.0i	5.0	5.0
E.S. averages	64.7	4.2	2.5	13.6	3.9	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Question ecosite average for cryptogam. Some questions about the value of comparatively high litter versus ecosite average, but other improving indicators lead to trend rating.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/13/2004	3.7	1.0	5.7	7.8	17.8	-	32.3	3.7	
6/16/2011	4.2	0.3d	9.3i	5.7d	7.7d	-	23.0d	4.0s	

Upland Biological Transect—Data Summary and Evaluation Sheet

E.S. avgs	7.8	0.6	1.7	0.8	13.9	0.0	-	-
	Land Health Scores (5=best 1=worst)			Browse		Trees		
Date Read	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees	
8/13/2004	-	-	-	4.0	4.0	-	-	
6/16/2011	4.0	3.0	5.0	16.0i	0.0d	-	-	
E.S. avgs	2.2	3.1	4.8	-	-	-	-	

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Static

Rationale: No problems with indicators other than minor amounts of exotics (Cheatgrass and burr buttercup). Loss of snakeweed and winterfat led to drop in shrubs and natives. minor degradation of site. Declining shrub vigor in this big game winter range a concern for wildlife, however shadscale coming into site. Improvement in cool season grass is favorable, and more than offsets decreasing warm season grass cover (galleta frequency actually increased, so not an issue).

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Static

Rationale: Potential sensitive plants, wt prairie dog, potential kit fox, migratory birds, no exotic birds or cowbirds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05008P01D06	Brush Point	Salt Flats flat	Salt desert Shrub	1 meets w prob 3 not meet 4 meets	none documented	GGNCA Flat Top/Peach Valley SRMA

Site Photos



2004 Photo

2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/16/2004	63.3	0	-	27.8	-	-
5/26/2011	38.2d	1.1i	1.1	55.1i	5.0	4.0
E.S. averages	48.3	5.3	12.6	24.2	3.9	3.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meeting with problems Standard 1 Trend: Static

Rationale: Litter value too high because it's made up of exotic annuals, probably affecting cryptogams and reducing bare. Other problems with basal lead to problem rating. Slight increase in basal does not outweigh increasing exotic litter, which is also reducing the bare soil. Leads to static trend rating.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/16/2004	11.3	0	0	0.2	16.8	-	17.0	11.3	
5/26/2011	19.2	0s	1.2i	0s	18.8s	-	22.2i	17.0i	
E.S. avgs	13.5	0.3	5.0	0.8	14.1	0.0	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/16/2004	-	-	-	40.0	16.0	-	-
5/26/2011	3.0	2.0	2.0	36.0s	16.0s	-	-
E.S. avgs	2.2	3.0	4.6	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Static

Rationale: Site does not represent much of allotment, but placed here because it is not possible to cross the ditch. —site is a narrow strip along bottom. 6 different exotics, dominate the understory, lead to not meeting rating). Halogeton jeopardizes site. Western wheatgrass appeared on transect, but not enough to offset increase in exotics or establish an upward trend without another reading.

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Standard 4 Special Status Species

Standard 4 Rating: Meeting with problems

Standard 4 Trend: Static

Rationale: No exotic birds, no cowbirds, potential sensitive plants, potential for wt prairie dogs, kit fox, migratory birds. Weedy community may impact sensitive plants and habitat for wildlife.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05008P01D07	Brush Point	Semidesert Juniper Loam cool slope	Pinyon-Juniper	1 meets 3 meets w prob 4 meets	none documented	GGNCA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/18/2004	10.1	0	-	41.6	-	-
5/26/2011	7.5d	0.0s	6.5	39.8s	5.0	2.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Flowpaths may be acceptable for this site given slope and shallow soils. Other indicators appear alright. Very little change in measured indicators for static trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/18/2004	2.5	2.7	0.3	0	0.3	24.0	28.5	0.3	
5/26/2011	8.0	0.8d	0.2s	0s	0.3s	27.2s	29.0s	7.0i	
E.S. avgs	-	-	-	-	-	-	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/18/2004	-	-	-	-	-	68.0	12.0
5/26/2011	4.0	2.0	5.0	-	-	52.0d	24.0i
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Down

Rationale: Four exotic species. Only one in 2004. Alyssum appeared on site in high frequency. Too few perennial grasses and forbs gives problem rating. Trend shows mostly minor increases and decreases. Drop in perennial forbs and increase in exotic cover and species, and major increase in exotic alyssum leads to downward trend. Presence data show many forbs still in area, but at low cover.

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: Down

Rationale: Potential for sensitive plants, migratory birds. Competitive annuals degrade habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05008P01D08	Brush Point	Shallow and Sandy Loam PJ cool slope	Pinyon-Juniper	1 meets 3 meets w prob 4 meets	none documented	GGNCA Gunnison Gorge Wilderness

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/24/2011	26.7	0.0	17.8	36.7	5.0	5.0
E.S. averages	20.4	3.9	12.9	41.1	4.1	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Active erosion indicators show no problems. Excellent cryptogams.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/24/2011	3.0	0.2	1.7	0	8.7	21.3	32.0	2.8
E.S. avgs	10.0	2.5	5.7	2.5	7.9	14.3	-	-

Land Health Scores (5=best 1=worst)	Browse	Trees

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/24/2011	5.0	3.0	5.0	20.0	0.0	11.1	22.2
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Unknown

Rationale: Cheatgrass sparse and at 40% frequency. Good diversity. Grasses low, but not unexpected for a site with high tree cover. Bighorn sheep potential habitat.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Unknown

Rationale: No exotic birds or cowbirds, potential for sensitive plants, winter foraging for bald eagle, known golden eagle nest, migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05010P01D02	Dead Horse Common	Brushy Loam flat	Mountain Shrub	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
7/7/2011	7.8	21.1	1.1	66.7	5.0	5.0
E.S. averages	25.9	11.4	2.4	48.1	4.0	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: All indicators look good. Transect orientation probably underrepresented shrubs.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
7/7/2011	5.5	12.2	10.0	0	27.7	0	42.7	12.8	
E.S. avgs	0.9	11.3	31.7	0	47.4	1.1	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low	% Severely	% Low	% Young

Upland Biological Transect—Data Summary and Evaluation Sheet

				Vigor	Hedged	Vigor	Trees
7/7/2011	5.0	4.0	5.0	20.0	16.0	-	-
E.S. avgs	3.7	4.3	4.9	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: unknown

Rationale: Shrub cover probably acceptable given broad range of Brushy loam ecosites. Minor exotic component (Kentucky bluegrass, dandelion, alyssum) outweighed by native dominance and diversity. Most of the big oaks in this savanna have some degree of frost kill, but overall shrub stand in acceptable vigor when other species are included.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/7/2011	0.2	27.5	-	10.0	13.1	15.9	6.7
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meet

Standard 4 Trend: Unknown

Rationale: Bald eagle winter foraging, migratory birds, potential sage grouse. This habitat includes pockets of sagebrush, this transect in more of the tall shrub type. While sage grouse use mountain shrub, the habitat guidelines are more geared toward sagebrush. Grass and forb cover a little low, but heights alright. Not enough to down rank for sage grouse habitat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05011P01D01	Gould Reservoir	Stony Loam warm slope	Mountain Shrub	1 meets 3 meets w prob 4 meets w prob	none documented	NA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/28/2004	43.3	3.3	-	31.1	-	-
7/7/2011	32.6d	11.2i	4.5	23.6d	4.0	5.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: All indicators look good. Basal improved substantially, as did bare, but decline in litter for overall static trend until we get additional data.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
9/28/2004	0.3	4.5	16.5	0	38.7	0	60.7	0	
7/7/2011	0.3	9.0i	4.3d	0s	29.3d	0s	43.2d	0s	
E.S. avgs	-	-	-	-	-	-	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/28/2004	-	-	-	38.5	3.8	-	-
7/7/2011	5.0	5.0	5.0	16.0d	64.0i	-	-
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Down

Rationale: Low rabbitbrush declined in cover dramatically, no change in frequency. Increasing perennial forbs. Rated with problems due to severe hedging on shrubs in deer and elk winter range. (There have been recent changes in access and probably also wildlife behavior as well). Improving shrub vigor may reflect recovery from drought, but loss in perennial grass and increasing shrub hedging lead to downward trend rating. Additional readings needed to substantiate trend.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/7/2011	0.2	29.3	14.5	4.3	4.8	6.6	8.6
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: Down

Rationale: Cowbirds present. Winter foraging for bald eagle, sage grouse habitat, migratory birds. Mountain shrub site, does not have capacity to reach sagebrush habitat guidelines, nevertheless the grass cover is low. Shrub hedging probably also a problem for the birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05011P01D03	Gould Reservoir	Brushy Loam warm slope	Mountain Shrub	1 meets 3 meets w prob 4 meets w prob	none documented	Gunnison Sage Grouse ACEC

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
7/7/2011	2.3	11.4	0.0	83.0	4.0	4.0
E.S. averages	15.1	11.5	2.7	59.1	4.5	4.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Low crypt maybe due to transition zone—low potential with high precip and vegetation. Indicators look good.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
7/7/2011	1.2	4.3	26.7	0	84.7	0	118.8	1.3

Upland Biological Transect—Data Summary and Evaluation Sheet

E.S. avgs	1.1	24.3	25.2	0.2	51.3	1.3	-	-
	Land Health Scores (5=best 1=worst)			Browse		Trees		
Date Read	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees	
7/7/2011	5.0	4.0	5.0	16.0	0.0	-	-	
E.S. avgs	4.2	3.8	4.8	-	-	-	-	

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Unknown

Rationale: Should be forb rich community, and forb diversity and forb species composition is high but forb cover low, maybe drying up at this time. Maybe made up for by high shrubs. No noxious present.

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Standard 4 Special Status Species

	Sage Grouse Habitat Parameters+						
Date Read	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/7/2011	8.8	76.4	27.6	26.7	5.3	9.8	6.4
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meeting

Standard 4 Trend: Unknown

Rationale: Sagebrush low but probably due to being on transition between sage and mountain shrub. Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05012P01D01	Cedar Point	Deep Clay Loam cool slope	Sagebrush	1 meets w prob 3 meets w prob 4 meets	Cedar prescribed fire 1 1999	NA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/20/2001	31.1	11.1?	1.1	54.4	-	-
9/1/2004	0	0	0	100.0	-	-
8/17/2011	18.0d	4.5i	0.0s	76.4d	5.0	5.0
E.S. averages	33.0	9.0	3.3	37.3	3.6	3.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: No sign of active erosion. Very low vulnerability to erosion. Problems associated with annual dominance and recovery from fire, but these effects appears to be declining.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/20/2001	41.0	23.7	0.2	0	0.2	0	38.2	25.3
9/1/2004	87.2	2.5	0	0	0.2	0	4.5	87.2
8/17/2011	13.3	18.5i	8.2i	0s	6.2i	0s	43.8i	4.7d
E.S. avgs	0.5	13.3	19.5	0.0	30.8	3.0	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/20/2001	-	-	-	4.0	4.0	-	-
8/17/2011	3.0	3.0	4.0	20.0i	0.0s	-	-
E.S. avgs	3.6	4.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Upward

Rationale: Canada and musk thistle present. High forb and low shrub part of early seral. Appears to be recovering well from fire followed by drought. Huge drop in cheatgrass. Sagebrush in moderate vigor, only snowberry in low vigor, probably borderline site for it. Many indicators improving on site.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/17/2011	0.2	6.0	27.3	8.2	30.0	11.0	9.4
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meeting with problems Standard 4 Trend: Upward

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Rating due to weeds which threaten habitat. Early succession leads to low sage, but trend up for that species. Excellent forb cover.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05012P01D03	Cedar Point	Loamy Foothills cool slope	Sagebrush	1 meets w prob 3 meets w prob 4 meets	None documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/17/2011	16.7	6.7	7.8	68.9	4.0	3.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Trees encroaching into sagebrush and some evident flowpaths, but soil appears largely stable and groundcover values good.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/17/2011	2.3	34.3	15.2	0	4.7	16.8	72.8	0.5
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/17/2011	4.0	4.0	5.0	44.0	44.0	12.0	92.0
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems **Standard 3 Trend:** Unknown

Rationale: Only rated down due to condition of shrub stand. Deer and elk hitting shrubs hard. Moving into later successional stage, probably contributing to low shrubs in stand. Mapped winter range but close to deer and elk winter concentration areas.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/17/2011	4.2	12.3	26.2	15.2	36.1	13.7	4.5
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meeting with problems **Standard 4 Trend:** Down

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Late succession site, moving out of sagebrush. Excellent forb cover. High tree cover means this is not currently suitable sage grouse habitat, but could be if trees were removed. Moderate vigor and hedging on sagebrush, no reproduction, mainly mature plants. Trend rated down based on apparent trend of site transitioning into trees, only due to sage grouse considerations and the fact it lies within the mapped occupied range.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05013P01D01	Iron Canyon	Brushy Loam cool slope	Mountain Shrub	1 meets w prob 3 meets w prob 4 meets w prob	Iron Springs rollerchop 2 2002	Gunnison Sagegrouse ACEC

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/1/2004	20.0	4.4	-	70.0	-	-
6/29/2011	15.7d	21.3i	0.0	60.7d	5.0	5.0
E.S. averages	16.8	14.7	1.3	58.6	4.7	4.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Soil stable and good groundcover values. Improving basal and bare, excessive litter generated from rollerchop starting to decrease.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/1/2004	0.7	2.0	30.7	0	34.0	0	67.7	0

Upland Biological Transect—Data Summary and Evaluation Sheet

6/29/2011	0s	2.0s	45.0i	0s	29.7s	0s	76.8s	0s
E.S. avgs	1.4	17.3	27.8	0.1	44.2	2.3	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/29/2011	4.0	5.0	4.0	4.0	20.0	-	-
E.S. avgs	4.1	3.9	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Upward

Rationale: Isolated musk thistle, in litter piles likely to decline as community matures. Lots of young shrubs in the stand. Low shrubs due to rollerchop and seral stage. Trend improving since rollerchopping, with grass showing big increase.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/29/2011	6.7	23.0	18.6	45.0	2.0	3.5	2.6
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems

Standard 4 Trend: Static

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Known sage grouse (gps male-August, and radiotelemetry July-Aug transplanted bird) occurrences. Spotted knapweed nearby. Unlikely that this deciduous shrub site can reach sage cover guidelines, but forb cover low. Trend rated static due to lack of change in forbs from last reading.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05013P01D04	Iron Canyon	Deep Clay Loam cool slope	Sagebrush	1 meets w prob 3 meets w prob 4 meets w prob	none documented	Gunnison Sage Grouse ACEC

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
6/29/2011	24.2	14.3	1.1	56.0	4.0	4.0
E.S. averages	33.0	9.0	3.3	37.3	3.6	3.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: All indicators look good.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
6/29/2011	0.7	4.5	40.0	0.0	33.8	0.0	79.3	0.0
E.S. avgs	0.5	13.3	19.5	0.0	30.8	3.0	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/29/2011	4.0	5.0	5.0	12.0	0.0	0.0	44.0
E.S. avgs	3.6	4.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Unknown

Rationale: Although forb cover low, lots of species present. Other indicators look good.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/29/2011	18.2	15.6	22.4	40.0	5.2	11.5	4.1
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: Unknown

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Known sage grouse (gps male-August, and radiotelemetry July-Aug transplanted bird) occurrences. Spotted knapweed nearby. Rating due to low forbs in important sage grouse habitat. Near drinker.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05014P01D01	Poison Spring	Loamy Foothills cool slope	Sagebrush	1 meets w prob 3 meets 4 meets w prob	none documented	Gunnison Sage Grouse ACEC

Site Photos



2001 Photo



2004 Photo



2011 Photo

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/18/2001	40.7	11.0	0.0	37.4	-	-
8/27/2004	44.4	3.3	1.1	43.3	-	-
6/29/2011	41.1s	13.3i	0.0s	37.8s	4.0	4.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Although bare higher than average it seems to be unchanged, indicating that this may be within the range not seeing active erosion. Basal is higher than average. Does not seem to be having significant impact on potential of soils. Trend rated static due to most indicators being static and basal varying over the three readings.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/18/2001	0	1.7	30.3	0	30.0	6.2	67.0	1.2
8/27/2004	0.8	0.8	22.7	0	30.7	9.3	64.3	0
6/29/2011	0	2.2i	21.2d	0s	12.3d	11.3i	47.0d	0.2s
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/18/2001	-	-	-	24.0	16.0	19.2	7.7
8/27/2004	-	-	-	44.0	16.0	-	-
6/29/2011	3.0	4.0	5.0	24.0s	12.0d	4.0d	52.0i
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Downward

Rationale: Rated meeting due to being within ranges for ecosite, only low on forbs. Questions about high grass impeding forb cover, site appears to be moving toward tree dominance as shown by high levels of young trees. This site potential is for long term shrub dominance, with high herbaceous cover

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/29/2011	10.5	1.8	15.3	21.2	2.2	8.4	3.7
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: Down

Rationale: Low forbs led to rating. Trees also a concern on site. Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Known sage grouse (gps male-August) Spotted knapweed nearby. Increasing trees and decreasing shrubs lead to downward trend with expected type conversion.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05015P01D01	Grizzly Gulch	Deep Clay Loam flat	Sagebrush	1 meets 3 meets 4 mets w prob	none documented	Gunnison Sage Grouse ACEC

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
7/6/2011	19.3	9.1	1.1	65.9	5.0	5.0
E.S. averages	24.4	9.2	4.6	46.9	3.9	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: High herbaceous prevents cryptogam growth. All other factors good.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
7/6/2011	3.7	6.0	23.3	0	17.2	0	50.0	0.2
E.S. avgs	2.1	9.6	19.0	0.0	36.3	2.9	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
7/6/2011	5.0	4.0	5.0	36.0	64.0	-	-
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Unknown

Rationale: Heavy elk use area, in deer and elk winter concentration area. Only rated down due to shrub use and vigor. Potential bighorn sheep.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/6/2011	4.7	12.5	16.9	23.3	9.7	10.7	8.1
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Known sage grouse lek site and telemetry birds in area, Shrub and forb cover a concern for sage grouse habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05017P01D02	Green Mtn	Loamy Foothills flat	Sagebrush	1 meets 3 meets 4 meets w prob	Green Mountain plow and seed 1 1983	Gunnison Sage Grouse ACEC

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/17/2004	28.9	4.4	-	64.4	-	-
7/6/2011	4.4d	16.7i	8.9	68.9s	4.0	4.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Indicators look good. Trend may be due to precipitation, but is reflecting increasing soil cover.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/17/2004	0.5	5.7	23.7	0.0	15.3	0	24.2	27.0
7/6/2011	4.3	2.8d	25.5s	0.0s	21.5i	0s	31.3i	23.7s
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/17/2004	-	-	-	32.0	36.0	-	-
7/6/2011	3.0	2.0	5.0	36.0s	20.0d	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Static

Rationale: Crested wheat dominates for not meeting rating, few native grasses. Static trend because minor improvements offset by minor declines. Mule deer and elk winter concentration area, known high numbers in area in spring.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/6/2011	4.7	16.8	19.8	25.7	7.0	13.0	6.9
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meeting with problems

Standard 4 Trend: Static

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Known sage grouse lek site and telemetry birds in area. Known nesting area. Fact that this is youngest, healthiest sagebrush in area, and grass cover high, and good alfalfa cover mitigates the dominance of site by crested wheatgrass. Crested wheat provides good hiding cover for grouse. Less grazing seems to occur here-crested not utilized as much as other grasses during grazing season, provides good nesting cover.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05017P01D03	Green Mtn	Deep Clay Loam flat	Mountain Shrub	1 meets w prob 3 meets w prob 4 meets w prob	Crawford prescribed fire 2 1993	Crawford prescribed fire 2 1993

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/17/2004	21.2	4.7	-	61.2	-	-
7/5/2011	33.7i	5.6i	2.2	48.3d	5.0	4.0
E.S. averages	24.4	9.2	4.6	46.9	3.9	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Even though slightly more bare than average, not seeing pedestalling or flow paths and on shallow slope so little threat of erosion, substantiates the meeting rating. High litter further positive aspect of soils on this site. Trend static due to tradeoff between increasing bare but improving basal and drop in exotic plant litter.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
8/17/2004	42.7	4.6	1.4	0	17.7	0	27.1	39.3	
7/5/2011	4.2	7.7i	13.7i	0s	20.7i	0s	44.2i	1.7d	
E.S. avgs	2.1	9.6	19.0	0.0	36.3	2.9	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
	7/5/2011	5.0	3.0	5.0	32.0	16.0	-
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting

Standard 3 Trend: Upward

Rationale: Elk winter concentration area, within bighorn sheep range. Low grass but not too far off average and to be expected for old burn. Big drop in exotic annuals, improvements in perennial herbaceous for upward trend.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/5/2011	9.3	11.4	14.3	13.7	10.4	8.9	4.0
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meeting with problems

Standard 4 Trend: Upward

Rationale: Occupied sage grouse (radiotelemetry and gps locations), migratory birds and bald eagle winter range, cowbirds present. Sagebrush in low to moderate vigor, but young sage coming in. Low forbs but in comparison to averages from Great Basin, may be nearly all we can expect. Recovering from fire. Minor problems, but a concern given state of grouse. Forbs and cooler temperatures the bigger concern for grouse use in this zone. Forbs and shrubs increasing for upward trend.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05017P01D05	Green Mtn	Loamy Foothills cool slope	Sagebrush	1 meets 3 meets 4 meets w prob	Green Mountain plow and seed 1 1983	Gunnison Sage Grouse ACEC

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/27/2004	26.7	1.1??	-	63.3	-	-
7/5/2011	23.3s	14.4i	0.0	60.0s	4.0	4.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Soil looks good, lacking crypts but groundcover and litter protecting soil, low slope and little evidence of soil movement. Question basal reading from 04—Sept reading, some basal may have been confused w litter.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/27/2004	0.3	7.0	38.8	0	9.7	0	42.7	13.2
7/5/2011	0	15.5i	29.0d	0s	7.8s	0s	24.5d	29.0i
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/27/2004	-	-	-	19.2	0.0	-	-
7/5/2011	2.0	2.0	5.0	20.0s	40.0i	-	-
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting Standard 3 Trend: Downward

Rationale: Nonnative seeded species dominate site. Dominance by nonnatives and hedging on sagebrush led to rating. Sage does show recruitment however, although not increasing in cover. Crested wheat and alfalfa increased greatly since 2004 (only two readings.) Sept reading may have made species harder to correctly id. Crested and alfalfa increase in species composition from 2004. Big decline in muttongrass between readings. Overall combination of factors leads to downward trend as community moves toward more nonnative dominance.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/5/2011	6.8	1.0	14.3	29.0	15.5	12.5	9.8
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: Down

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Known sage grouse lek site and telemetry birds in area. Known nesting area. Fact that this is youngest, healthiest sagebrush in area, and grass cover high, and good alfalfa cover mitigates the dominance of site by crested wheatgrass. Crested wheat provides good hiding cover for grouse. Less grazing seems to occur here-crested not utilized as much as other grasses during grazing season, provides good nesting cover. Downward trend due to sagebrush not doing really well, and increasing nonnatives. **Tree removal occurred after transect read, reducing predator perches and threat of type conversion**

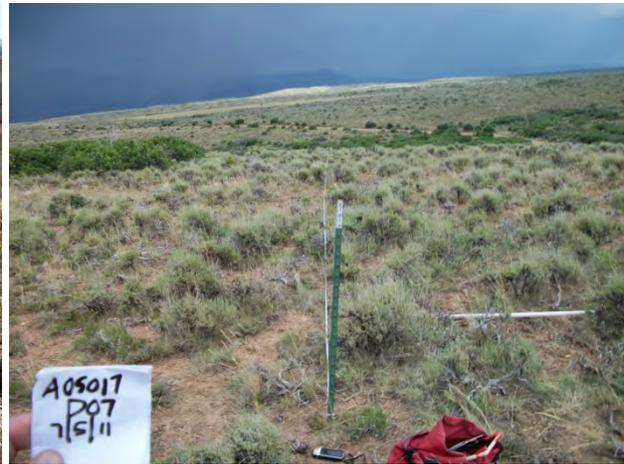
Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05017P01D07	Green Mtn	Loamy Foothills cool slope	Sagebrush	1 meets 3 meets w prob 4 meets w prob	Crawford PJ cutting 1	Gunnison Sage Grouse ACEC

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/27/2004	24.4	17.8	2.2	43.3	-	-
7/5/2011	12.4d	11.2d	12.4i	50.3s	3.0	3.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Pedestals and flowpaths reflection of slope and soil type, also prescribed burn may have contributed some. Groundcover parameters good for meeting rating. Declining basal and increasing cryptogam offset decreasing bare for static trend.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
9/27/2004	0.2	12.7	17.7	0	28.0	0	58.5	0	
7/5/2011	0.7	9.2d	27.2i	0s	21.0d	0s	57.8s	0.2s	
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/27/2004	-	-	-	15.4	0.0	-	-
7/5/2011	4.0	4.0	5.0	52.0i	40.0i	-	-
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems **Standard 3 Trend: Down**

Rationale: Spotted knapweed in area. Winter concentration for deer and elk. Vegetation treatment that seems slow to recover, may be near to old brushbeat or others. Rated with problems due to browse condition. Little sage recruitment, mostly black sage. Shrub problems seem to be increasing for downward trend.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/5/2011	17.3	3.7	12.2	27.2	9.4	13.9	8.3
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems **Standard 4 Trend: Down**

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. Known sage grouse lek site and telemetry birds in area. Several known grouse occurrences, males and females. Ratings due to poor and declining sage vigor and hedging problems (see Std 3).

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05017P01D09	Green Mtn	Mountain Pinyon warm slope	Pinyon-Juniper	1 meets 3 meets 4 meets	none documented	GGNCA Gunnison Gorge Wilderness

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
7/6/2011	17.8	6.7	3.3	48.9	5.0	5.0
E.S. averages	24.9	3.6	8.4	44.7	4.0	3.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Perhaps could have more cryptogams, but not causing soil problems. Other parameters good.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
7/6/2011	0.8	6.3	14.7	0	2.0	25.3	48.7	0.7	
E.S. avgs	3.6	6.2	4.9	0.5	10.1	26.3	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
7/6/2011	5.0	4.0	5.0	-	-	36.0	40.0
E.S. avgs	3.7	4.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Unknown

Rationale: Indicators look good, shrubs not out of expected range given tree dominance and age of stand. Within bighorn sheep range.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Unknown

Rationale: Cowbirds, bald eagle winter foraging, golden eagle known occurrence, migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05017P01D10	Green Mtn	Brushy Loam flat	Mountain Shrub	1 meets 3 meets w prob 4 meets	none documented	GGNCA Gunnison Gorge Wilderness

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
7/6/2011	16.7	10.0	0.0	64.4	3.0	4.0
E.S. averages	25.9	11.4	2.4	48.1	4.0	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Slightly high pedestals which may be a result of higher precipitation and type of vegetation, but bare and litter look good.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
7/6/2011	4.0	4.2	26.2	0	28.8	2.0	65.0	0.2
E.S. avgs	0.9	11.3	31.7	0.0	47.4	1.1	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
7/6/2011	4.0	4.0	5.0	40.0	8.0	-	-
E.S. avgs	3.7	4.3	4.9	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Unknown

Rationale: Some issues with big sage vigor, no recruitment, lots of dead and decadent. Some trees appearing to encroach on edges of site. Site rated with problems due to sagebrush condition and low forbs. Bighorn sheep potential habitat.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/6/2011	8.4	20.4	17.5	26.2	8.1	13.8	6.1
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Cowbirds present, bald eagle foraging area, within the GUSG range, and migratory birds in area. In transition zone between sage and mountain shrub. High cover of other shrubs may be neutral to Gunnison sage grouse. Poor sage condition for rating with problems.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05018P01D02	Crawford Reservoir	Loamy Foothills flat	Pinyon-Juniper	1 meets w prob 3 not meet 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/24/2011	8.9	1.1	2.2	82.2	5.0	4.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Increased litter from exotic annuals not resulting in enough problems to downgrade site. Possibly contributing to low cryptogams and reducing bare levels.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/24/2011	15.7	2.2	2.7	0	4.8	42.8	52.5	15.7
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/24/2011	2.0	3.0	5.0	32.0	32.0	60.0	44.0
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to note direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Unknown

Rationale: This site very dominated by trees, and natives still dominate but all life forms in low vigor, lots of cheatgrass and alyssum, very close to agricultural land.

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: Unknown

Rationale: Cowbirds, winter foraging bald eagle, migratory birds. Shrub and tree vigor low implying that habitat condition will likely decline, and exotics likely to fill the void.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05020P01D01	Black Ridge	Loamy Foothills cool slope	Pinyon-Juniper	1 meets w prob 3 meets w prob 4 meets w prob	none documented	GGNCA Gunnison Sage Grouse ACEC

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
09/13/2004	31.1	1.1	21.1	30.0	-	-
6/8/2011	44.9i	3.4i	15.7d	27.0s	4.0	4.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Low litter within expected range for site with this cover of trees. Bare seems higher than would be expected, but balanced out with high cryptogam. Little active erosion. Increase in basal, offsets increase in bare, decline in cryptogams for static trend.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
9/13/2004	1.0	1.3	7.5	0	8.8	0	18.7	0	
6/8/2011	4.3	1.5s	2.5d	0.3s	16.3i	2.8i	23.3i	4.3i	
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/13/2004	-	-	-	72.0	48.0	28.0	28.0
6/8/2011	4.0	4.0	4.0	56.0d	0.0d	26.9s	19.2d
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems **Standard 3 Trend: Static**

Rationale: Alyssum and cheatgrass on site. Halogeton and jointed goatgrass along road. Invasives, low grass and forbs and low sagebrush vigor led to problem rating. Elk severe winter range. Appears to be moving toward shrub and tree dominance, although unlikely to be high tree cover ever because harsh site, low productivity. Improving shrub condition offsetting decline in grass cover for static trend. Bighorn sheep range,

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/8/2011	10.3	6.0	21.5	2.8	2.5	6.4	2.5
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

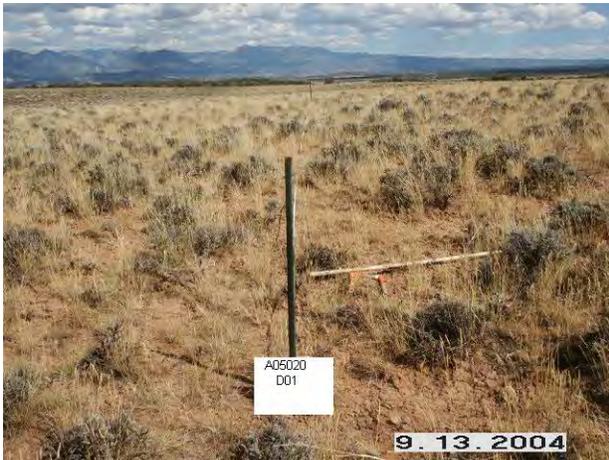
Standard 4 Rating: Meets **Standard 4 Trend: Static**

Rationale: In sage grouse range, although this site in current state wouldn't support grouse. Bald eagle winter concentration area, exotic and cowbirds, migratory birds. No notable problems.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05020P01D03	Black Ridge	Loamy Foothills flat	Sagebrush	1 meets 3 meets w prob/not 4 meets w prob	Westend plow and seed 1	GGNCA Gunnison Sage Grouse ACEC

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/13/2004	45.9	2.4	2.4	49.4	-	-
6/9/2011	43.3s	7.8i	1.1s	47.8s	4.0	4.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: High litter due to exotic crested wheat. No other evident soil problems, soil not eroding. Few changes for static trend. June vs Sept readings. Nice increase in basal but mainly from exotic species, and other factors static for overall static trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
9/13/2004	0	1.7	37.3	0	20.3	0	42.8	16.5	
6/9/2011	0	1.0s	15.8d	0s	18.3s	0s	22.2d	13.0s	
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/13/2004	-	-	-	44.0	60.0	-	-
6/9/2011	3.0	2.0	5.0	52.0i	60.0s	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static

Standard 3 Rating: Not meeting Standard 3 Trend: Downward

Rationale: Muttongrass declined dramatically on site. Severe elk winter range. Elk winter concentration area, bighorn sheep range. No sagebrush recruitment. Crested wheat dominant, and poor sage stand condition. Also no warm season grass. Downward trend due to decline in muttongrass, increase in crested wheat and declining shrub condition.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/9/2011	18.2	0.1	13.2	15.8	1.0	11.2	3.0
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Not meeting Standard 4 Trend: Downward

Rationale: Cowbirds, bald eagle winter foraging, within sage grouse range, migratory birds. Poor habitat quality for sage grouse. Habitat quality (sage vigor and hedging, crested wheat dominance), and shrubs and native plants declining for ratings and trend.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05020P01D05	Black Ridge	Salt Desert Breaks cool slope	Pinyon-Juniper	1 meets w prob 3 meets w prob 4 meets	none documented	GGNCA Gunnison Gorge Wilderness

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/30/2011	6.7	1.1	34.4	53.3	3.0	3.0
E.S. averages	34.0	7.0	6.8	15.8	3.6	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Steepness of site and lack of vegetation, pedestal and flow path readings within expected ranges, especially with exceptional crust.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/30/2011	0.5	0	0.7	0.5	2.8	43.7	48.0	0.2
E.S. avgs	4.0	1.8	-	-	12.0	0.8	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/30/2011	4.0	4.0	5.0	12.0	12.0	24.0	32.0
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Unknown

Rationale: Forbs present in frequency plots, but not on cover transect, also Sept reading late for seeing forbs. Shaley site, wouldn't expect a lot of forbs, high in gypsum. Severe winter and winter concentration area for elk. Bighorn sheep range in sheep allotment. Otherwise no concerns.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: Winter foraging for bald eagle, within sage grouse range, migratory birds. Problem rating due to big horn sheep high probability score, and breeding season overlap.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05022P01D01	Rabbit Gulch	Salt Desert Breaks cool slope	Salt desert Shrub	1 meets w prob 3 meets w prob 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/25/2011	27.6	4.6	0.0	23.0	3.0	4.0
E.S. averages	34.0	7.0	6.8	15.8	3.6	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Gravel helps armor site, and prevents some cryptobiotic development. Bare and litter above averages. Active erosion likely due to steepness of slope.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/25/2011	7.7	0	1.3	7.7	0.7	0	9.7	7.7
E.S. avgs	4.0	1.8	-	-	12.0	0.8	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/25/2011	4.0	3.0	5.0	60.0	20.0	16.0	64.0
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Unknown

Rationale: Evidence of desiccated forbs on site. Alyssum and cheatgrass abundant. Shrub condition problems, and overall low shrub and native species cover, lack of significant forbs for problem rating. Bighorn sheep range,

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: Unknown

Rationale: Exotic birds, cowbirds, potential for sclerocactus, Bald eagle winter concentration, migratory birds. Weeds and shrub condition for problem rating.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05022P01D02	Rabbit Gulch	Salt Desert Breaks flat	Salt desert Shrub	1 meets w prob 3 meets w prob 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/25/2011	23.3	5.6	0.0	53.3	3.0	4.0
E.S. averages	38.4	6.3	5.0	15.9	3.4	3.9

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: Unknown

Rationale: Rating due to high litter due to exotic annuals alyssum and cheatgrass. Low percentage of bare and lack of crypts probably also related to high annuals. Gentle slope for this degree of pedestals, but high rock mitigates this some. Altered litter, nutrient cycling indicated.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/25/2011	26.5	0.5	1.3	11.8	1.3	0	13.7	27.8

Upland Biological Transect—Data Summary and Evaluation Sheet

E.S. avgs	6.0	1.3	-	-	16.0	0.6	-	-
	Land Health Scores (5=best 1=worst)			Browse		Trees		
Date Read	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees	
8/25/2011	2.0	2.0	5.0	20.0	36.0	84.0	12.0	
E.S. avgs	3.1	3.4	5.0	-	-	-	-	

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Unknown

Rationale: Surrounded by drill seeding, but not on transect. Halogeton on transect and in area, and nearby knapweed on private. Bighorn range. Low cool seasons, dominating annual exotics, low forbs and vigor/hedging problems on woody species lead to rating.

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Standard 4 Special Status Species

Standard 4 Rating: Not meeting

Standard 4 Trend: Unknown

Rationale: Known occurrence of sclerocactus, Lesquerella vicina, Lomatium concinnum nearby, near buckwheat. Bald eagle winter concentration, migratory birds, known long eared owl. Weedy habitat in poor condition led to rating.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05023P01D01	Sulphur Gulch	Silty Salt Desert cool slope	Salt desert Shrub	1 unknown 3 unknown 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/13/2001	63.3	8.9	-	20.0	-	-
6/7/2011	57.8s	1.1d	1.1	33.3i	5.0	3.0
E.S. averages	46.7	8.8	25.4	9.6	4.7	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Not meeting

Standard 1 Trend: Down

Rationale: Flowpaths an indicator that groundcover is insufficient to protect soil. Low cryptogams a concern on this site, should be a critical component of this site. Also litter too high due to exotic annuals. Annuals increasing, declining basal lead to downward trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
9/13/2001	0.3	0	0.2	0	12.7	0	13.2	0	
6/7/2011	6.3i	0s	2.2i	0s	11.3s	0s	13.5s	6.3i	
E.S. avgs	0.9	2.5	-	-	10.8	0.0	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/7/2011	3.0	2.0	4.0	28.0	0.0	-	-
E.S. avgs	2.3	4.5	4.3	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Static

Rationale: Dominance by nonnative annuals, presence of halogeton, and lack of forbs lead to rating. Static trend due to minor changes, increase in nonnatives offset by increasing cool season grass. Bighorn sheep range.

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Standard 4 Special Status Species

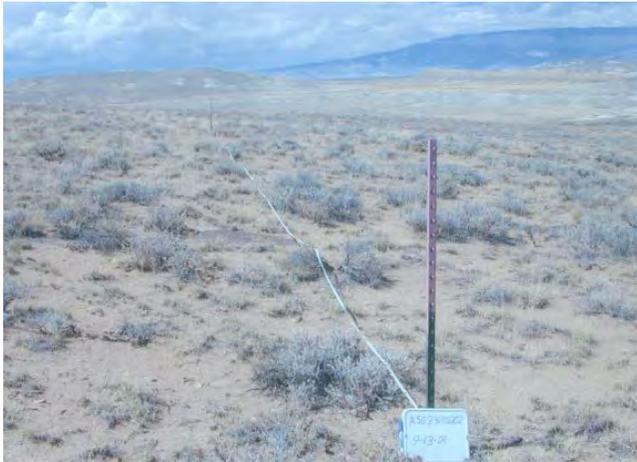
Standard 4 Rating: Not meeting

Standard 4 Trend: Static

Rationale: Exotic birds, cowbirds, potential for sclerocactus, white tail prairie dog range, bald eagle winter concentration, migratory birds. Exotics reduce habitat quality for rating.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05023P01D02	Sulphur Gulch	Loamy Salt Desert flat	Salt desert Shrub	1 meets 3 meets w prob 4 meets	none documented	GGNCA Gunnison River SRMA

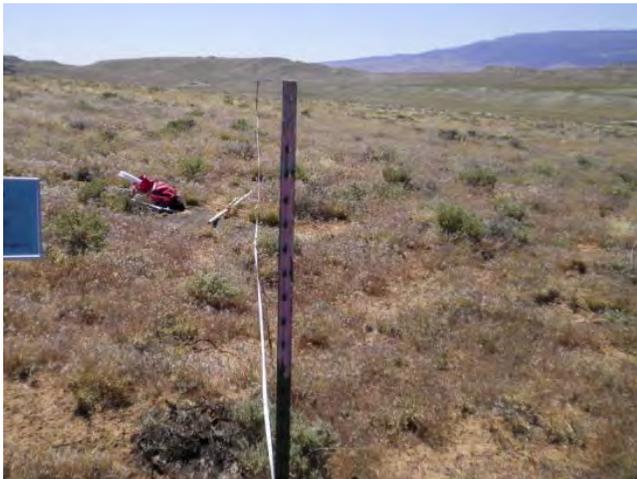


Site Photos

2001 Photo



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/13/2001	47.8	5.6	1.1	28.9	-	-
9/15/2004	30.3	2.2	4.5	49.4	-	-
6/7/2011	35.6s	7.8i	0.0d	41.1i	4.0	4.0
E.S. averages	48.8	7.0	5.7	18.0	3.8	4.0

Upland Biological Transect—Data Summary and Evaluation Sheet

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: downward

Rationale: High litter on site due to cheatgrass, which have reduced the bare soil levels. Complete lack of cryptogams a concern on this site, and unnaturally high litter lead to rating. Downward trend due to evidence of sustained increasing exotics and exotic plant litter over time and associated loss of cryptogams.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees	Natives	Exotics
			Cool	Warm				
9/13/2001	0.5	0.2	0	16.0	6.3	0	22.5	0.5
9/15/2004	22.7	1.7	0.2	15.7	7.3	0	26.2	21.3
6/7/2011	22.7i	0d	0.3s	5.7d	6.2s	0s	12.5d	36.5i
E.S. avgs	6.7	2.0	1.1	10.9	12.1	0.5	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/13/2001	-	-	-	27.9	0.0	-	-
9/15/2004	-	-	-	48.0	4.0	-	-
6/7/2011	3.0	2.0	4.0	0.0d	12.0i	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting Standard 3 Trend: Downward

Rationale: Halogeton on site, lots of cheatgrass. Bighorn sheep range. Problems with herbaceous layer, led to rating. Declines in desirable species, increases in exotics lead to downward trend.

Standard 4 Special Status Species

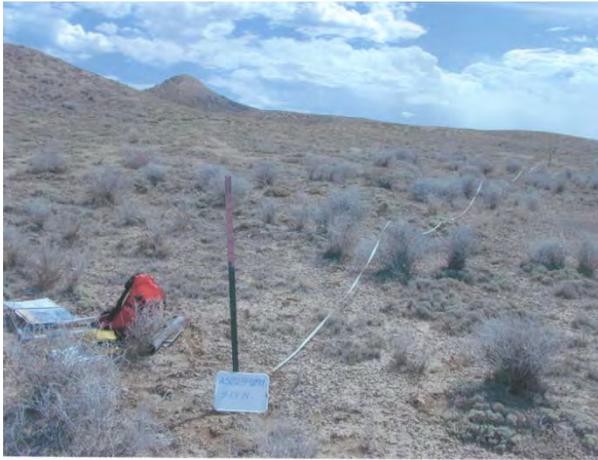
Standard 4 Rating: Not meeting Standard 4 Trend: Downward

Rationale: Exotic birds, cowbirds, known sclerocactus, bald eagle winter concentration, golden eagle known occurrence, migratory birds. Rating due to degraded habitat from weeds, depleted natives. White tailed prairie dogs. Many towns plagued out.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05024P01D01	Shamrock	Clayey Salt Desert warm slope	Salt desert Shrub	1 meets 3 not meet 4 meets	none documented	GGNCA Gunnison River SRMA

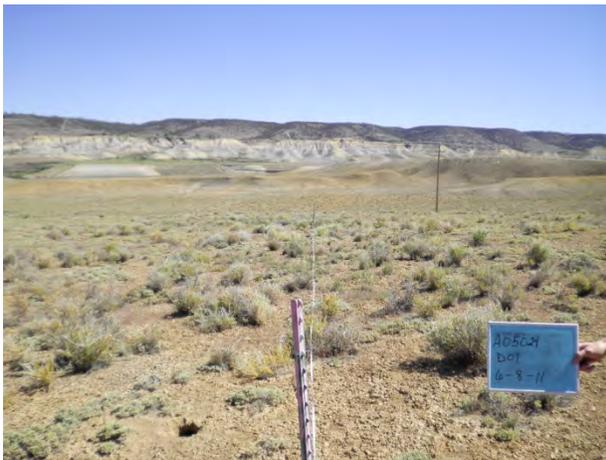
Site Photos



2001 Photo (taken from opposite post (?))



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/13/2001	44.4	10.0	-	22.2	-	-
9/15/2004	38.9	10.0	3.3	21.1	-	-
6/7/2011	38.2s	0.0d	12.4i	22.5s	5.0	5.0
E.S. averages	33.0	2.5	1.5	31.5	3.4	3.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Rating: Meeting

Standard 1 Trend: Static

Rationale: Lack of pedestals and flowpaths and good cryptogam cover for rating. Increasing cryptogams offset loss of basal area for static trend.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/13/2001	0	0.2	1.2	6.5	18.2	0	26.0	0
9/15/2004	0.2	0	1.3	8.8	22.7	0	32.8	0.2
6/7/2011	3.0i	0s	1.7s	2.8d	29.8i	0s	34.3i	3.0i
E.S. avgs	24.0	0.5	1.7	0.0	10.0	0.0	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/15/2004	-	-	-	32.0	8.0	-	-
6/7/2011	4.0	4.0	4.0	7.7d	0.0d	-	-
E.S. avgs	2.2	2.2	4.2	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems

Standard 3 Trend: Static

Rationale: Halogeton and knapweed near site, burr buttercup and cheatgrass on site and lack of forbs led to rating. Trend rated static due to increasing exotics and declining warm grass cancelling out increasing shrubs and natives, and improved shrub hedging.

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Standard 4 Special Status Species

Standard 4 Rating: Meeting with problems

Standard 4 Trend: Static

Rationale: Active wt prairie dog town in area. Known occurrence of Lesquerella v. and Lomatium c. Known occurrences of sclerocactus and buckwheat, bald eagle winter concentration, migratory birds. Vegetation issues above affect habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05024P01D02	Shamrock	Clayey Salt Desert flat	Salt desert Shrub	1 meets 3 not meet 4 meets	none documented	NA

Site Photos



2001 Photo
Standard 1 Soils



2011 Photo

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/13/2001	70.0	2.2	5.6	14.4	-	-
6/24/2004	70.8	5.6	-	14.6	-	-
6/7/2011	73.6s	0.0d	6.6s	14.3s	5.0	4.0
E.S. averages	57.1	6.3	3.7	18.6	3.8	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: While bare appears high, little sign of active erosion, partly due to flat site. Cryptogams and basal cancel, bare and total litter not changing, although a departure from average, for static trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/13/2001	0	0	3.5	0.5	5.2	0	9.2	0
6/24/2004	7.3	0	1.8	1.2	4.7	0	7.7	7.3
6/7/2011	5.5i	0s	8.0i	0.3d	5.3s	0s	14.7i	4.5s
E.S. avgs	8.9	1.7	0.8	0.0	11.3	0.1	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/7/2011	4.0	3.0	3.0	4.0	0.0	-	-
E.S. avgs	2.3	3.2	4.7	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems Standard 3 Trend: Upward

Rationale: Knapweed nearby on road and trail and railroad. Halogeton on transect. Lack of perennial forbs, noxious and invasives led to rating. Increasing cool grass cover and frequency and natives lead to upward trend.

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Standard 4 Special Status Species

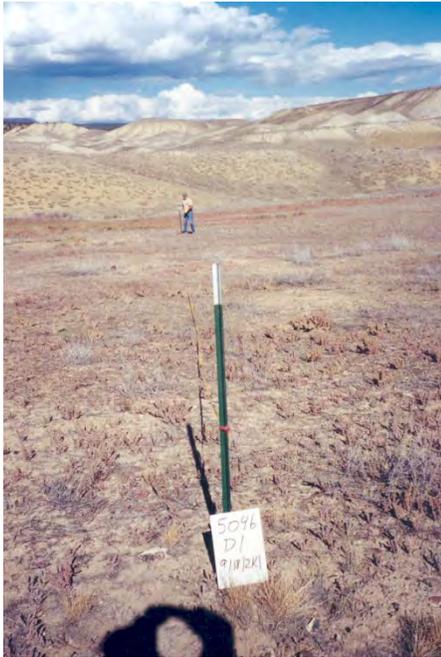
Standard 4 Rating: Meeting with problems Standard 4 Trend: Upward

Rationale: Known occurrences of Lomatium and Lesquerella, sclerocactus, and buckwheat nearby, wt prairie dog, bald eagle winter concentrations, migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05024P01D03	Shamrock	Stony Salt Desert cool slope	Salt desert Shrub	1 unknown 3 unknown 4 meets	none documented	NA

Site Photos



2011 Photo

2001 Photo from opposite post

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/18/2001	30.3	4.5?	1.1	31.5?	-	-
10/20/2011	12.1d	0.0d	5.5i	44.0i	5.0	5.0
E.S. averages	34.3	6.1	5.2	13.6	3.9	3.9

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: Unknown

Rationale: Lack of perennial basal cover but no actual soil loss-led to intermediate rating. Trend in question, left at unknown based on questionable basal reading from 2001.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
9/18/2001	9.2	0	0	0	0	0	0	9.2	
10/20/2011	14.2i	0s	5.2i	0s	0s	0s	5.2i	14.2i	
E.S. avgs	6.5	2.2	2.0	10.0	10.5	1.3	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
10/20/2011	1.0	1.0	1.0	-	-	-	-
E.S. avgs	3.5	3.6	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Static

Rationale: Squirreltail present but at low cover. Everything else nonnative. Halogeton a dominant plant, other exotics also dominate. New nonnative species on the site-cheatgrass, blue mustard, burr buttercup offsets appearance on native perennial grass. Elk severe winter range, deer severe winter and winter concentration area.

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Standard 4 Special Status Species

Standard 4 Rating: Not meeting

Standard 4 Trend: Static

Rationale: Migratory birds, sclerocactus, buckwheat, lomatium, wt prairie dogs, bald eagle winter foraging and concentration. Poor habitat conditions for rare plants.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05025P01D01	Fruitland Mesa	Loamy Foothills Cool Slope	Pinyon-Juniper	1 unknown 3 unknown 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/25/2011	4.4	4.4	16.7	57.8	4.0	3.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Rating due to slope and rock on site contributing to more flowpaths from impervious nature and pinyon juniper which also contributes to flowpaths.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/25/2011	1.0	3.0	6.2	0	4.8	48.7	62.8	1.3
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/25/2011	4.0	3.0	5.0	48.0	8.0	24.0	36.0
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: unknown

Rationale: Rated meeting due to preponderance of factors appropriate for a woodland site. Low vigor shrubs are to be expected in this woodland stage. Severe winter range elk and deer, winter concentration for deer.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: Lesquerella, bald eagle winter foraging, migratory birds. Good condition habitat given location.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05027P01D01	Adobe	Clayey Foothills flat	Sagebrush	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/19/2001	7.8	7.8	4.4	80.0	-	-
8/23/2011	20.0i	7.8s	3.3d	68.9d	5.0	3.0
E.S. averages	38.6	3.9	10.4	37.9	4.1	3.9

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: No indicators that point to significant problems on site. No major changes to groundcover beyond changing litter and bare.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/19/2001	7.5	5.3	5.0	0	37.0	0	46.0	9.0
8/23/2011	13.2i	2.5d	5.0s	0s	33.8s	0s	40.3s	14.3i
E.S. avgs	24.6	3.2	5.4	0.0	15.0	2.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/19/2001	-	-	-	8.0	0.0	25.0	37.5
8/23/2011	3.0	3.0	4.0	20.0i	0.0s	0.0d	44.0s
E.S. avgs	3.0	2.9	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems

Standard 3 Trend: Down

Rationale: Musk thistle on site, other exotics. Increasing sage, decreasing forbs, increasing exotics, squirreltail disappeared, worsening browse vigor point toward downward trend. Severe winter for elk and deer, winter concentration for deer. Bighorn range.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/23/2011	23.7	10.1	42.0	5.0	2.7	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems

Standard 4 Trend: down

Rationale: No longer sage grouse habitat, winter foraging bald eagle, Lesquerella potential, migratory birds. Declining habitat condition for sage specific sparrows, and veg data indicates declining sage community condition

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05027P01D02	Adobe	Clayey Foothills warm slope	Sagebrush	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
8/23/2011	33.7	12.4	6.7	47.2	4.0	3.0
E.S. averages	40.3	5.6	6.0	35.0	4.0	3.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Flowpaths probably result of interspaces of sagebrush community allow for flowpath development, but not enough to mobilize much soil.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/23/2011	0.3	4.2	5.3	0	42.0	0.2	51.7	0.3
E.S. avgs	16.9	5.6	6.7	0.4	16.3	0.6	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/23/2011	3.0	3.0	5.0	8.0	4.0	-	-
E.S. avgs	3.8	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Unknown

Rationale: No evident problems, exotics alyssum, lambsquarter sparse, not apparently degrading site much. In bighorn range.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/23/2011	31.0	11.0	35.5	5.3	4.2	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: No longer sage grouse habitat, winter foraging bald eagle, Lesquerella potential, migratory birds. Shrub community seems healthy.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05028P01D02 Needs reorientation	Doug Cr	Brushy Loam cool slope	Mountain Shrub	All Standards Met	none documented	none documented

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/17/2011	53.3	0.0	1.1	44.4	5.0	2.0
E.S. averages	16.8	14.7	1.3	58.6	4.7	4.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets Standard 1 Trend: unknown

Rationale: Orientation of transect may have affected soil data, increased bare levels.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/17/2011	0.3	2.3	0.2	0	41.5	0	44.0	0
E.S. avgs	1.4	17.3	27.8	0.1	44.2	2.3	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/17/2011	2.0	5.0	5.0	0.0	0.0	-	-
E.S. avgs	4.1	3.9	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: meets with problems Standard 3 Trend: unknown

Rationale: Low diversity score.

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Standard 4 Special Status Species

Standard 4 Rating: meets with problems Standard 4 Trend: unknown

Rationale: Low diversity score.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05029P01D01	Spring Gulch	Brushy Loam warm slope	Mountain Shrub	1 meets 3 meets 4 meets	Spring Gulch wildfire 1 2003	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/17/2011	4.4	0.0	0.0	95.6	5.0	4.0
E.S. averages	15.1	11.5	2.7	59.1	4.5	4.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Soil fully protected.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/17/2011	0.3	0.7	20.3	0	74.5	0	94.5	4.2	
E.S. avgs	1.1	24.3	25.2	0.2	51.3	1.3	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/17/2011	5.0	3.0	5.0	0.0	0.0	-	-
E.S. avgs	4.2	3.8	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: unknown.

Rationale: Exotic is Kentucky bluegrass. Many natives present. Winter concentration for elk. Bighorn range.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: Winter foraging and concentration for bald eagle, lots of migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05030P01D01	Adobe South	Clayey Salt Desert cool slope	Salt desert Shrub	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/30/2001	57.1	14.3	0.0	28.6	-	-
5/24/2011	41.8d	9.9d	4.4i	44.0i	5.0	4.0
E.S. averages	39.4	5.0	26.9	31.3	4.5	3.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Little sign of active erosion despite slope and crust. Decreasing bare and basal offset each other, resulting in static trend.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees	Natives	Exotics
			Cool	Warm				
8/30/2001	0.2	13.2	4.7	0	14.7	0	32.5	0.2
5/24/2011	7.7i	18.2i	9.7i	0s	19.0i	0s	45.8i	8.7i
E.S. avgs	28.8	1.3	5.6	0	11.9	0	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/24/2011	4.0	3.0	4.0	16.0	0.0	-	-
E.S. avgs	3.8	2.5	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Upward

Rationale: Generally good indicators, increase in cool season grass and forbs offset increase in exotics. Cheatgrass disappeared, for upward trend. Severe winter range and concentration nearby for deer and elk.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Upward

Rationale: Lesquerella and lomatiom known occurrences nearby, possibly near to buckwheat locations. Migratory birds. Good habitat conditions for rare plants.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05030P01D02	Adobe South	Clayey Salt Desert flat	Salt desert Shrub	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/30/2001	45.1	7.7	20.9	25.3	-	-
6/17/2011	48.3s	7.9s	5.6d	38.2i	5.0	4.0
E.S. averages	57.1	6.3	3.7	18.6	3.8	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Soil appears stable and protected. Cryptogams appear to have decreased but maybe from reader error or increase in annual cover, otherwise indicators show little change.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees	Natives	Exotics
			Cool	Warm				
8/30/2001	5.0	0.2	9.5	0	18.0	0	27.5	5.0
6/17/2011	7.3i	0s	6.5s	0s	18.3s	0	25.2s	7.0i
E.S. avgs	8.9	1.7	0.8	0	11.3	0.1	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/30/2001	-	-	-	4.0	2.0	-	-
6/17/2011	4.0	3.0	5.0	8.0i	0.0s	-	-
E.S. avgs	2.3	3.2	4.7	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Static

Rationale: Lack of forbs and abundance of exotics led to rating. Frequency stayed same on grasses, for static. Burr buttercup came into transect, but overall static trend. Severe winter for elk and deer.

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Standard 4 Special Status Species

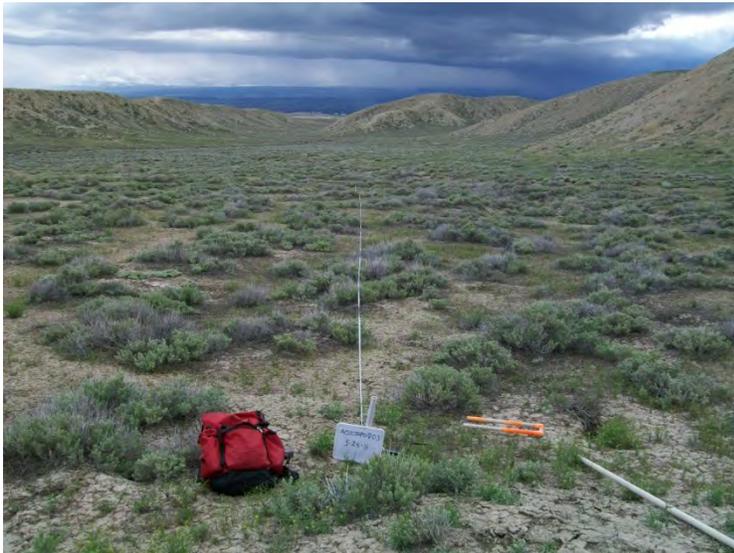
Standard 4 Rating: Meets with problems Standard 4 Trend: Static

Rationale: WT prairie dog, lomatium, near to buckwheat, potential for sclerocactus, migratory birds. Exotics and lack of forbs degrade habitat for rare plants.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05030P01D03	Adobe South	Clayey Saltdesert flat	Saltdesert Shrub	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
5/24/2011	33.7	2.2	25.8	38.2	5.0	5.0
E.S. averages	57.1	6.3	3.7	18.6	3.8	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Good crypto cover and low slopes contribute to lack of soil movement.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
5/24/2011	18.0	0.2	0	0	12.7	0	12.7	18.2
E.S. avgs	8.9	1.7	0.8	0.0	11.3	0.1	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/24/2011	1.0	2.0	5.0	12.0	0.0	-	-
E.S. avgs	2.3	3.2	4.7	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Perennial grass present on frequency plots but at low cover across site, as are forbs. Excessive exotics on site. Very low diversity, 5 natives. Areas adjacent to transect look better. Severe winter for elk and deer, winter concentration area for deer.

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Lomatium, wt prairie dog, migratory birds, degraded habitat for rare plants and birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05031P01D01	Black Canyon/Jones D	Mountain Pinyon cool steep	Pinyon-Juniper	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2011 Photo



2001 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/27/2001	2.2	11.0	1.1	80.2	-	-
6/7/2011	1.1d	12.4s	0.0d	83.1s	5.0	5.0
E.S. averages	14.8	4.8	4.5	47.3	4.2	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: All indicators are indicative of stable site, except for cryptogams which are probably low due to high vegetation cover. Little change for indicators.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							
	Annuals	Pr Forbs	Pr Grasses	Pr Grasses	Shrubs	Trees	Natives	Exotics
			Cool	Warm				
8/27/2001	0.8	0.2	20.5	0	42.7	34.7	98.7	0.2
6/7/2011	2.8i	6.2i	13.7d	0s	38.3s	55.5i	115.5s	1.0i
E.S. avgs	1.2	5.0	7.8	0.3	22.3	23.3	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/27/2001	-	-	-	36.0	4.0	24.0	40.0
6/7/2011	4.0	4.0	5.0	8.0d	4.0s	44.0i	12.0d
E.S. avgs	4.2	4.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Static

Rationale: Musk thistle on site and transect, but other parameters look good, musk probably does not present a threat to site. Increasing forbs offset declining grasses, pinyon increasing on site. Winter concentration of elk, severe winter and winter concentration for deer. Bighorn range.

Standard 4 Special Status Species

Standard 4 Rating: Meet

Standard 4 Trend: Static

Rationale: Known golden eagle, lesquerella, migratory birds, Good habitat conditions.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05031P01D02	Black Canyon/Jones D	Mountain Pinyon cool slope	Mountain Shrub	1 meets 3 meets w prob 4 meets	Warner wildfire 1 1996	NA

Site Photos



2001 Photo
Standard 1 Soils

2011 Photo—

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/27/2001	8.9	7.8	0.0	83.3	-	-
6/7/2011	14.6i	19.1i	0.0s	66.3d	3.0	4.0
E.S. averages	26.5	7.1	9.4	37.1	3.8	3.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Crypts and pedestals remnant from past fire, other indicators show a stable soil. Trend up based on improving basal, drops in litter and increase in bare reflect reduction in annuals as site revegetates.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							
	Annuals	Pr Forbs	Pr Grasses	Pr Grasses	Shrubs	Trees	Natives	Exotics
			Cool	Warm				
8/27/2001	8.3	9.5	28.5	0	41.8	0	65.2	22.8
6/7/2011	0.7d	4.2d	27.5s	0s	49.8s	0s	73.2i	9.3d
E.S. avgs	2.0	6.3	12.8	1.8	9.9	19.3	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/7/2011	4.0	3.0	5.0	4.0	0.0	-	-
E.S. avgs	4.0	4.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Upward

Rationale: This site prior to fire was dominated by trees, now a mountain shrub site. Dandelion and jim hill mustard and Kentucky bluegrass on site. Forbs declining as expected as site revegetates, but drops in exotics and increase in natives lead to upward trend. Winter concentration of elk, severe winter and winter concentration for deer, bighorn range.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/7/2011	< 0.01	49.8	18.0	27.5	4.9	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: Upward

Rationale: Migratory birds. Not in sage grouse range. Habitat in good and improving condition. Habitat quality will improve as vegetation matures.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05032P01D01	Bostwick Park	Mountain Pinyon cool steep	Pinyon-Juniper	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/30/2001	22.2	5.6	4.4	54.4	-	-
6/8/2011	16.5d	10.6i	0.0d	57.6s	4.0	4.0
E.S. averages	14.8	4.8	4.5	47.3	4.2	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Site well armored and good litter, helps stabilize soil, little sign of erosion. Site may not be as conducive to cryptogams as other areas. Increasing basal, drop in bare outweigh reduction in cryptogams for upward trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/30/2001	3.3	1.0	3.2	0	18.3	13.7	38.0	1.5	
6/8/2011	4.3s	1.2s	5.5i	0s	15.0s	11.0s	33.3s	3.5i	
E.S. avgs	1.2	5.0	7.8	0.3	22.3	23.3	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/30/2001	-	-	-	48.0	44.0	23.1	69.2
6/8/2011	5.0	4.0	4.0	32.0d	60.0i	48.0i	24.0d
E.S. avgs	4.2	4.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems **Standard 3 Trend: Static**

Rationale: Whitetop in area although still isolated. Cheatgrass present and increasing. Increasing cool grass offset by increase in exotics for static trend, reduced poor vigor offset by increasing heavy browsing. Also poor browse condition and heavy hedging led to problem rating. Severe and winter concentration for deer and elk.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/8/2011	< 0.01	15.0	25.5	5.5	2.0	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems **Standard 4 Trend: Static**

Rationale: WT prairie dog in area, cowbirds, migratory birds, poor browse condition and cowbirds reduces habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05033P01D01	Pinyon Springs	Loamy Foothills warm slope	Sagebrush	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/27/2001	17.6	11.0	0.0	70.3	-	-
6/8/2011	13.3d	12.2s	1.1i	72.2s	4.0	4.0
E.S. averages	30.0	7.5	5.4	38.6	3.7	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Bare and basal and low slope provide good soil protection. Lack of crypts offset by high basal cover. Minor changes offset one another for static trend.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses	Pr Grasses	Shrubs	Trees			
			Cool	Warm					
8/27/2001	2.8	0.8	18.5	0	34.7	1.5	57.3	0.8	
6/8/2011	3.8i	5.5i	17.0s	0s	39.2s	4.3i	64.3s	0s	
E.S. avgs	8.6	6.1	19.0	0.0	18.2	8.2	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/27/2001	-	-	-	44.0	0.0	48.0	60.0
6/8/2011	5.0	4.0	5.0	12.0d	4.0s	10.7d	50.0s
E.S. avgs	3.3	3.1	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Static

Rationale: No evident problems. Static trend due to most factors not changing, minor improvement in forbs as species shift. Severe and winter concentration for deer and elk. Bighorn range.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/8/2011	33.3	5.9	33.4	17.0	9.3	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: Static

Rationale: WT prairie dog in area, cowbirds, migratory birds. Not in sage grouse range.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05033P01D02	Pinyon Springs	Mountain Pinyon cool slope	Mountain Shrub	1 meets 3 meets w prob 4 meets	Warner wildfire 1 1996	NA

Site Photos



2001 Photo



2011 Photo (may be taken from other post)

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/22/2001	15.1	8.6	1.1	74.2	-	-
6/8/2011	22.5i	16.9i	0.0d	53.9d	3.0	3.0
E.S. averages	26.5	7.1	9.4	37.1	3.8	3.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: High flowpaths and cryptogams from old fire, residual loss of topsoil. Moving from exotic annual grass to more native shrub domination, improved basal cover lead to upward trend.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses	Pr Grasses	Shrubs	Trees			
			Cool	Warm					
8/22/2001	33.0	3.7	15.7	0	27.7	0	49.3	32.7	
6/8/2011	0.7d	17.2i	19.8i	0s	31.8s	0s	68.5i	0.8d	
E.S. avgs	2.0	6.3	12.8	1.8	9.9	19.3	-	3.8	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/22/2001	-	-	-	14.0	10.0	-	-
6/8/2011	5.0	4.0	4.0	8.0d	40.0i	-	-
E.S. avgs	4.0	4.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Upward

Rationale: Good indicator ratings. Severe and winter concentration for deer and elk. Vigor still good. Overall not enough problems to downgrade. Improving trend as exotics decline with revegetation from old burn. Bighorn range.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Upward

Rationale: Cowbirds, migratory birds. Good and improving habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05034P01D01	Rawhide/Coffee Pot	Alkaline Slopes warm steep	Salt desert Shrub	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
8/30/2001	27.8	5.6	0.0	54.4	-	-
6/16/2011	35.6i	6.7s	0.0s	40.0d	4.0	4.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Little sign of active erosion, particularly given steep slope. Groundcover adequate, heightened litter due to annuals. Little change in indicators.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/30/2001	28.2	0.2	7.0	9.7	15.8	0	32.7	28.2
6/16/2011	41.3i	0.7i	4.7d	15.3i	24.5i	0	45.2i	41.3i
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/30/2001	-	-	-	52.0	32.0	12.0	76.0
6/16/2011	3.0	3.0	4.0	20.0d	0.0d	8.0d	20.0d
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems Standard 3 Trend: Static

Rationale: Little change in grass and exotics frequency despite cover changes for static trend. Knapweed nearby on road. Abundant exotics lead to rating. Severe winter and winter concentration for deer and elk.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/16/2011	2.2	22.3	29.2	20.0	0.7	9.3	4.0
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meeting with problems Standard 4 Trend: Static

Rationale: Sage grouse, wt prairie dog, migratory birds. Marginal site for sage grouse but possible winter use, and sage cover low for that. Exotics degrade habitat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05034P01D02	Rawhide/Coffee Pot	Mountain Loam warm slope	Sagebrush	1 unknown 3 unknown 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
6/16/2011	28.9	8.9	0.0	62.2	4.0	4.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Bare and basal are adequate to stabilize soil surface. Little active erosion.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
6/16/2011	1.0	3.8	3.3	0	51.8	0	58.0	2.2
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/16/2011	3.0	4.0	4.0	12.0	0.0	-	-
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Knapweed and whitetop along road into point, could threaten site, whitetop in small draws nearby. Low grass and forb cover. High sagebrush cover. Severe and winter concentration for deer and elk.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/16/2011	38.0	13.8	25.1	3.3	3.8	6.4	5.1
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Not meeting Standard 4 Trend: unknown

Rationale: Known lek site. Occupied sage grouse habitat. Migratory birds. Cowbirds. Poor habitat quality for occupied sage grouse habitat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05036P01D01	Big Gulch-40	Alkaline Slopes flat	Salt desert Shrub	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
6/9/2011	32.2	3.4	3.4	51.7	5.0	3.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Flowpaths due to being on alluvial fan, with historical high flows coming down causing flowpaths. Other factors indicate well protected soils.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
6/9/2011	7.0	0.2	0	0	23.3	0	27.3	5.3
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/9/2011	3.0	3.0	3.0	32.0	0.0	-	-
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: unknown

Rationale: Noxious included knapweed, tamarisk, Russian olive, whitetop—probably associated with river and drainage. Rated down due to lack of perennial grass cover and noxious weeds. Severe winter for elk and deer, and deer winter deer concentration. Bighorn range.

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Standard 4 Special Status Species

Standard 4 Rating: Not meeting

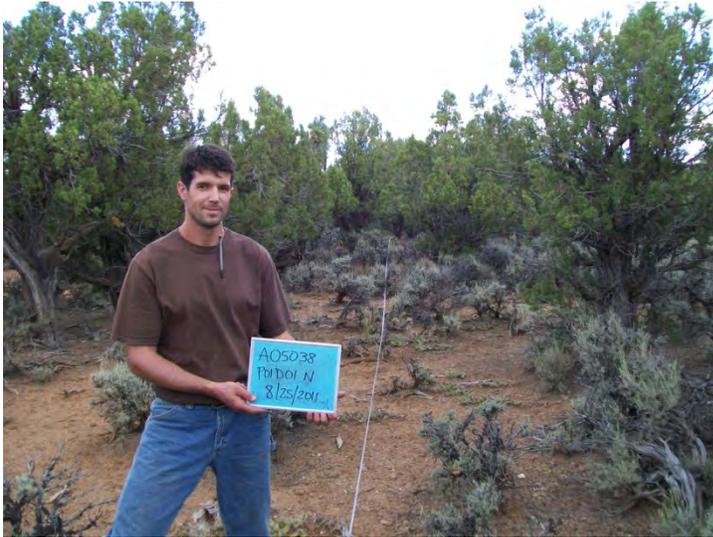
Standard 4 Trend: unknown

Rationale: Sclerocactus around site. Exotic birds, cowbirds, Colorado river cutthroat recreation population, BLM sensitive warm water fish, lesquerella, bald eagle winter foraging and concentration. Poor habitat quality for sclerocactus.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05038P01D01	Red Canyon	Loamy Foothills flat	Sagebrush	1 unknown 3 unknown 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/25/2011	24.7	2.2	19.1	40.4	3.0	4.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Pedestalling around larger features, but few flowpaths indicating not losing a lot of soil around site, and excellent cryptogam cover justifies meeting rating despite having low basal.

.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/25/2011	3.3	0	3.5	0	15.3	13.5	32.8	3.3
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/25/2011	3.0	3.0	5.0	56.0	68.0	64.0	36.0
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Cheatgrass, buttercup and alyssum on site. Low grasses and lack of forbs justifies problem rating, along with very poor browse condition. Severe winter and winter concentration for deer and elk. Bighorn range.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/25/2011	9.0	6.3	20.8	3.5	0.0	11.3	3.1
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Within grouse range, potential habitat if opened up, but mainly across canyon. Migratory birds. WT prairie dogs in area. In tree stage, not very suitable for sage grouse. Same problems as for Standard 3.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05039P01D01	Onion Valley	Stony Loam warm slope	Sagebrush	1 unknown 3 unknown 4 meets w prob	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/23/2011	10.1	11.2	1.1	44.9	2.0	4.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: unknown

Rationale: Pedestals a concern, groundcover values look alright. Rock can increase imperviousness of site, increasing erosiveness. This site is on a shoulder slope with likely thinner soils probably contributing to erosion.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/23/2011	2.5	6.2	12.0	0	28.5	0	48.2	1.0
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/23/2011	5.0	4.0	5.0	32.0	36.0	-	-
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: unknown

Rationale: Deer winter concentration area. Browse condition a concern but probably acceptable.

.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/23/2011	26.0	2.5	17.9	12.0	7.7	7.6	4.5
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: Sage grouse, migratory birds, cowbirds, Brewer’s sparrows, winter foraging for bald eagles. Grouse values seem appropriate for xeric site. No data showing significant current or historic sage grouse use.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05040P01D01	Pine Ridge	Aspen Woodland flat	Aspen	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
8/23/2011	6.7	13.3	0.0	80.0	5.0	5.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Soil well protected, not eroding.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/23/2011	0.5	18.8	28.5	0	56.0	3.8	89.3	28.8
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/23/2011	4.0	3.0	5.0	8.0	12.0	7.1	78.6
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Unknown

Rationale: No evident problems, Kentucky bluegrass and dandelions the exotics. A lot of ungulate use on the young aspen which might otherwise rejuvenate the stand. Bighorn range.

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Standard 4 Special Status Species

Standard 4 Rating: Meeting

Standard 4 Trend: unknown

Rationale: In Lynx analysis unit, near Colorado cutthroat stream, winter foraging for bald eagle.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05041P01D01	E Gould Reservoir	Clayey Foothills warm slope	Sagebrush	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2001 Photo



2004 Photo



2011 Photo

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
9/19/2001	11.4	11.4	-	76.1	-	-
9/1/2004	12.2	0	0	86.7	-	-
8/16/2011	14.4s	12.2s	0.0s	70.0s	4.0	4.0
E.S. averages	40.3	5.6	6.0	35.0	4.0	3.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: static

Rationale: Low slopes and good basal cover contribute to stable soil conditions.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/19/2001	0	0.5	38.2	0	17.5	0	56.2	0
9/1/2004	10.0	0.3	26.2	0	21.2	0	49.0	10.0
8/16/2011	9.7s	11.7i	48.5i	0s	2.0d	0s	61.3i	10.8i
E.S. avgs	16.9	5.6	6.7	0.4	16.3	0.6	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/19/2001	-	-	-	34.0	14.0	-	-
8/15/2011	4.0	3.0	4.0	32.0s	20.0i	-	-
E.S. avgs	3.8	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Static

Rationale: Alyssum, cheatgrass and Japanese brome and bulbous bluegrass are the exotics. Musk thistle on road accessing site. Losses in shrubs offset by gains in forbs and grasses. Winter concentration for deer.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/16/2011	0.2	1.8	15.8	48.5	11.7	12.5	5.8
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: static

Rationale: Near to sage grouse habitat. Winter foraging for bald eagle, migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05041P01D02	E Gould Reservoir	Brushy Loam cool steep	Mountain Shrub	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/17/2011	7.8	13.3	0.0	74.4	4.0	3.0
E.S. averages	8.0	8.5	1.2	73.8	4.8	4.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Steep slope, yet soils remain well protected with vegetation cover, only minor flowpaths.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/17/2011	26.7	15.7	14.5	0	41.2	0	68.3	29.5	
E.S. avgs	1.2	13.7	16.3	0	53.0	3.3	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/17/2011	4.0	3.0	5.0	28.0	52.0	-	-
E.S. avgs	4.1	4.4	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Crested wheat, Japanese brome, alyssum the exotics. Heavily hedged shrubs. Winter concentration area for deer.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/17/2011	< 0.01	41.2	38.5	14.5	16.0	21.4	8.1
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: meets

Standard 4 Trend: unknown

Rationale: Cowbirds present, winter foraging for bald eagle, possible Cirsium perplexans, migratory birds. Near sage grouse habitat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05043P01D01	Collins	Mountain Pinyon cool slope	Pinyon-Juniper	1 meets w prob 3 meets 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/19/2001	26.7	5.6	6.7	58.9	-	-
8/17/2011	23.1s	7.7i	0.0?d	59.3s	3.0	2.0
E.S. averages	26.5	7.1	9.4	37.1	3.8	3.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems

Standard 1 Trend: Static

Rationale: Flowpaths a concern. Questions about what ecological site, deep soils, mountain shrub or woodland? Seems transitional between the two.

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Standard 3 Plants and

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/19/2001	0.3	5.0	16.5	0	22.5	20.7	65.2	0
8/17/2011	4.2i	6.0s	12.3d	0s	25.8s	24.8s	70.3s	2.7i
E.S. avgs	2.0	6.3	12.8	1.8	9.9	19.3	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/19/2001	-	-	-	20.0	28.0	40.0	16.0
9/1/2004	-	-	-	52.0	24.0	-	-
8/17/2011	4.0	3.0	5.0	52.0i	24.0s	56.0i	44.0i
E.S. avgs	4.0	4.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Static

Rationale: Japanese brome the exotic on site. Appeared to be tree invasion into a shrub site. Trees and shrubs in low vigor, apparently overcompetition within plant community. Overall rated meeting due to apparently natural situation and seral stage. Severe winter for elk, winter concentration for deer.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/17/2011	< 0.01	25.8	23.9	12.3	7.5	9.3	4.5
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: static

Rationale: Winter foraging for bald eagle, not a sagegrouse site. Migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05044P01D01	Big Pasture	Deep Clay Loam cool slope	Sagebrush	All Standards Met	none documented	none documented

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/19/2001	4.4	13.2	6.6	75.8	-	-
8/17/2011	6.7i	20.0i	0.0d	72.2s	5.0	5.0
E.S. averages	33.0	9.0	3.3	37.3	3.6	3.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Soil stable. Site appears static (some reader variability on cryptogams?). Minor increases and decreases offset each other.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
9/19/2001	0.3	8.8	26.0	0	72.0	0	83.2	26.0
8/17/2011	0.3s	17.3i	40.5i	0s	50.5d	0s	72.5s	36.2i
E.S. avgs	0.5	13.3	19.5	0.0	30.8	3.0	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/19/2001	-	-	-	6.0	0.0	-	-
8/17/2011	3.0	3.0	5.0	0.0d	12.0i	-	-
E.S. avgs	3.6	4.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems Standard 3 Trend: static.

Rationale: Cheatgrass, smooth brome, Kentucky bluegrass exotics. Rated down due to very low native grass cover. Increases in nonnative grasses offset by increases in forbs. Decline in shrubs a concern. Winter concentration for deer, moderate probability for bighorn interaction.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/17/2011	< 0.01	50.5	42.0	40.5	17.6	24.5	8.5
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: Static

Rationale: Cowbirds, migratory birds (rich site), bald eagle winter foraging. Not sage grouse habitat. Cowbirds and nonnative grasses degrade habitat quality.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05045P01D01	Black Bullet	Loamy Foothills flat	Pinyon-Juniper	1 unknown 3 unknown 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
10/20/2011	26.7	11.1	5.6	44.4	5.0	4.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: All indicators look good.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
10/20/2011	1.2	2.2	4.0	0	6.7	24.8	38.3	0.8
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
10/20/2011	4.0	4.0	4.0	40.0	16.0	8.0	52.0
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: unknown

Rationale: Site has moved toward tree dominance, so low grass cover to be expected, as is poor shrub vigor. Severe winter and winter concentration area for deer. Bighorn range.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
10/20/2011	2.7	4.0	25.9	4.0	2.6	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: Not sage grouse habitat. Cowbirds, wt prairie dogs, lesquerella, winter foraging for bald eagle, Migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05049P01D01	Smith Fork Ind	Shallow and Sandy Loam PJ warm slope	Pinyon-Juniper	1 meets w prob 3 meets 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/24/2011	12.2	3.3	14.4	48.9	5.0	5.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: All erosion factors look good. Litter a little high due to exotics.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/24/2011	18.0	1.2	4.8	0	3.7	9.7	19.3	18.0
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/24/2011	3.0	3.0	4.0	48	56	88.0	28.0
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Knapweed, whitetop, bindweed adjacent to site, lots of alyssum. Poor shrub and tree condition contribute to rating. Severe winter for elk and deer, winter concentration for deer, bighorn range.

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Cowbirds, wt prairie dog nearby, winter foraging for bald eagle, migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05050P01D01	Allen Reservoir	Clayey Foothills cool slope	Salt desert Shrub	1 meets 3 not meet 4 meets	none documented	NA

Site Photos



2001 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
9/19/2001	43.3	18.9	-	37.8	-	-
8/23/2011	25.0d	15.2s	0.0	59.8i	5.0	3.0
E.S. averages	35.0	3.1	10.6	36.3	4.1	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Upward

Rationale: Potential for cryptogams, but soil fairly stable for slope. Some evidence for upward trend with declining bare and increasing litter cover.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
9/19/2001	0.2	6.8	27.8	0	20.5	0.2	41.3	14.0	
8/23/2011	0.3s	1.3d	11.0d	0s	15.2d	0s	25.8d	2.0d	
E.S. avgs	26.6	2.2	3.8	0.0	19.4	0.9	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
9/19/2001	-	-	-	25.5	2.0	-	-
8/23/2011	3.0	3.0	5.0	4.0d	16.0i	-	-
E.S. avgs	2.6	2.6	4.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Down

Rationale: Shrub decline mostly due to snakeweed. Lost one perennial forb species (out of 2). Grass frequency stayed the same, but cover declined. Kentucky bluegrass the exotic. No outstanding problems. Declines in forbs, grasses and shrubs led to downward trend. Severe winter range for deer. Bighorn range.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/23/2011	< 0.01	15.2	37.3	11.0	1.5	6.5	7.9
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: Down

Rationale: Bald eagle winter foraging, migratory birds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05051P01D01	Rim Rock	Loamy Foothills flat	Sagebrush	1 meets 3 meets 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
8/25/2011	20.0	10.0	13.3	53.3	3.0	2.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: unknown

Rationale: This level of flowpaths on a flat site is evidence of a lot of soil movement, led to rating, despite good groundcover. Basal cover reading seems high for this site.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/25/2011	3.0	0.5	4.5	0	25.5	6.5	37.0	3.0
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/25/2011	2.0	3.0	5.0	80.0	0.0	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting **Standard 3 Trend: unknown**

Rationale: Cheatgrass was widespread and across site. Low diversity, low herbaceous cover, no warm season grasses, and moving toward woodland, low shrub vigor. Elk and deer severe winter range, deer winter concentration area. Bighorn range.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/25/2011	25.2	0.3	21.0	4.5	0.5	11.2	3.8
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Not meeting **Standard 4 Trend: unknown**

Rationale: WT prairie dogs, winter foraging for bald eagle, migratory birds. Poor habitat quality for TES species.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A05535P01D01	Cedar Cr	Clayey Foothills warm steep	Grass-Forb	1 unknown 3 unknown 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
6/16/2011	6.7	7.8	0.0	72.2	5.0	5.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: unknown

Rationale: No evidence of soil movement, stabilized by annual weeds. Litter is too high, drowning out cryptogams, affecting carbon cycle.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
6/16/2011	92.5	0.3	0	7.0	0.5	0	7.8	92.5
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/16/2011	2.0	2.0	3.0	48.0	48.0	-	-
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: unknown

Rationale: Exotic annuals dominate community, lack of natives, cool seasons and adequate forbs. Shrub condition poor. Severe winter for elk and deer, winter concentration area for both.

.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/16/2011	0.5	0.0	16.7	7.0	0.3	13.3	18.0
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Not meeting

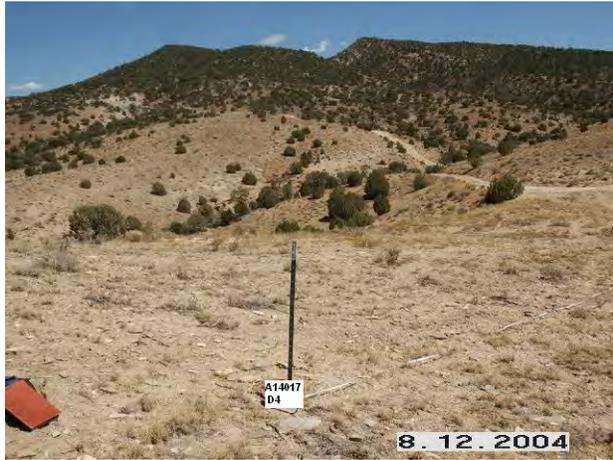
Standard 4 Trend: unknown

Rationale: Not sage grouse habitat. Lomatium, lesquerella, migratory birds. Degraded habitat for rare plants.

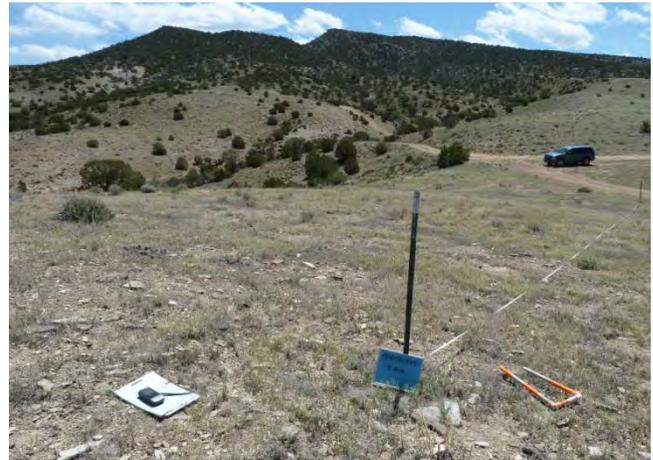
Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A14017P01D04	Middle Peach Valley	Salt Desert Breaks warm slope	Grass-Forb	1 meets 3 meets 4 meets	none documented	GGNCA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/12/2004	63.3	6.7	-	4.4	-	-
5/10/2011	26.7d	1.1d	0.0	37.8i	5.0	4.0
E.S. averages	36.1	5.8	5.8	18.4	3.7	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: Downward

Rationale: Litter drowning out cryptogams, altered C:N ratios. However little evidence of active soil erosion. Increasing exotic litter and declining basal for trend rating

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/12/2004	0.3	0.2	0	7.8	3.2	0	11.5	0.2	
5/10/2011	25.8i	0.3s	0s	3.0d	1.5d	0s	5.3d	25.3i	
E.S. avgs	4.4	3.1	-	-	10.3	0.7	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low	% Severely	% Low	% Young

Upland Biological Transect—Data Summary and Evaluation Sheet

				Vigor	Hedged	Vigor	Trees
7/22/2009	-	-	-	16.0	4.0	8.0	40.0
5/10/2011	3.0	2.0	2.0	24.0i	0.0d	8.0s	40.0s
E.S. avgs	3.4	3.8	4.9	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: down

Rationale: Alyssum, halogeton, cheatgrass, etc. large increase in halogeton. Weeds increasing on site, alyssum new on site. Snakeweed lower in 2011, explains drop in shrubs. Drop in natives, cool grasses and increase in exotics for downward trend. Severe winter for deer and elk, bighorn range. This spot may be worse than much of the country in this area, may not be representative of most of country.

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Standard 4 Special Status Species

Standard 4 Rating: Not meeting

Standard 4 Trend: down

Rationale: Known golden eagle, sclerocactus, potential for buckwheat within a mile, migratory birds, bald eagle winter concentration, lesquerella, lomatium, wt prairie dog range. Poor habitat for cactus.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A14017P01D05	Middle Peach Valley	Clayey Salt Desert flat	Salt desert Shrub	1 meets w prob 3 meets w prob 4 meets	none documented	NA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/12/2004	75.0	3.6	2.4	19.0	-	-
5/9/2011	64.4s	1.1d	2.2s	32.2i	5.0	4.0
E.S. averages	57.1	6.3	3.7	18.6	3.8	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: static

Rationale: Despite low crypts and basal, litter and low slope lead to soil stability. Increasing litter offsets declining basal for static trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/12/2004	0.2	0	0.2	1.2	15.2	0	16.5	0.2
5/9/2011	2.7i	0s	4.7i	0.3d	9.0d	0s	13.7s	2.5i
E.S. avgs	8.9	1.7	0.8	0.0	11.3	0.1	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/12/2004	-	-	-	56.0	0.0	-	-
5/9/2011	4.0	3.0	3.0	4.0d	0.0s	-	-
E.S. avgs	2.3	3.2	4.7	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems

Standard 3 Trend: upward

Rationale: Cheatgrass, halogeton, wallflower, salsify, annual wheat exotics. Good cool season grasses, but with noxious halogeton and other annuals, site is being threatened. Trend rated up based on improvements in cool season grass cover and frequency, stable frequency for warm season grass, improvements in shrub vigor more than offsetting exotic plants.

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems

Standard 4 Trend: upward

Rationale: Known occurrence of buckwheat nearby, lomatium and sclerocactus nearby, wt prairie dogs, migratory birds. Physical impact from sheep trailing degrades rare plant habitat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A14017P01D06	Middle Peach Valley	Salt Desert Breaks warm slope	Salt desert Shrub	1 meets w prob 3 meets w prob 4 meets	none documented	GGNCA

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/26/2004	41.6	1.1	12.4	23.6	-	-
5/10/2011	23.0d	3.4i	10.3s	39.1i	4.0	3.0
E.S. averages	36.1	5.8	5.8	18.4	3.7	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Static

Rationale: Flowpaths probably due to slope. Otherwise good cryptogams offset slightly low basal. Artificially high litter-partly due to annuals. Trend static due to litter and bare due to increasing annuals, and otherwise small improvement in basal not substantial enough to be other than static trend.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
8/26/2004	6.5	2.3	0	14.3	9.5	0	32.5	0.2	
5/10/2011	6.7s	1.3d	1.0i	4.8d	2.7d	0.2s	11.7d	5.0i	
E.S. avgs	4.4	3.1	-	-	10.3	0.7	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/26/2004	-	-	-	84.0	0.0	-	-
5/10/2011	4.0	3.0	3.0	56.0d	0.0s	-	-
E.S. avgs	3.4	3.8	4.9	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: Static

Rationale: Snakeweed had a major die off. This is largely responsible for change in shrub cover, but shadscale also increasing. Halogeton on site. Appearance of cool season grass and increasing shadscale, and improving browse vigor positive developments, offset declines in perennial forbs, increasing exotics (alyssum), and warm season grass cover (however galleta frequency unchanged over that time). Halogeton levels unchanged over time. Bighorn sheep range.

Standard 4 Special Status Species

Standard 4 Rating: Not meeting Standard 4 Trend: Static

Rationale: Migratory birds Cowbirds, known occurrences of sclerocactus, wt prairie dog range,. Weeds degrade habitat for sclerocactus.

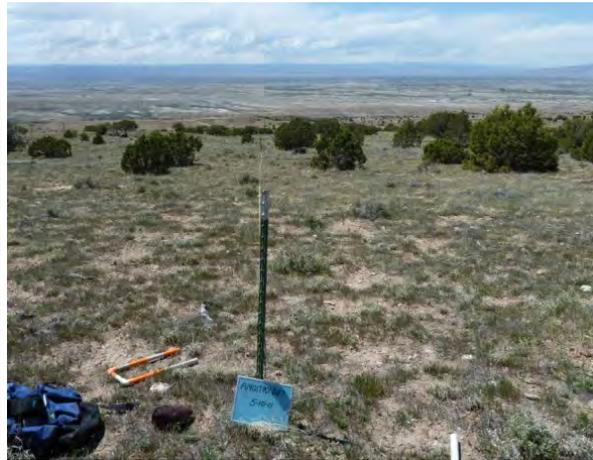
Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A14017P01D07	Middle Peach Valley	Salt Desert Breaks warm slope	Grass-Forb	1 meets w prob 3 meets 4 meets	none documented	GGNCA Native Plant ACEC

Site Photos



2004 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/30/2004	47.2	1.1	2.2	22.5	-	-
5/10/2011	27.5d	4.4i	0.0d	47.3i	4.0	4.0
E.S. averages	36.1	5.8	5.8	18.4	3.7	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems Standard 1 Trend: static

Rationale: Flowpaths and pedestals alright, reassuring that erosion not an issue. Litter high due to exotic annuals, and lack of cryptogams leads to problem rating. Basal increasing, but exotics triggering increase in litter, these factors offset for static trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/30/2004	11.8	4.5	0.2	15.0	11.3	0.2	41.7	1.3
5/10/2011	23.0i	0.7d	1.2i	4.3d	5.0d	0.2s	11.5d	22.8i
E.S. avgs	4.4	3.1	-	-	10.3	0.7	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/30/2004	-	-	-	36.0	0.0	20.0	4.0??
5/10/2011	3.0	2.0	3.0	4.0d	4.0s	30.8i	53.8i
E.S. avgs	3.4	3.8	4.9	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: Static

Rationale: Winterfat and Shadscale increasing on site in frequency but shadscale declining in cover, alyssum increasing, cheatgrass appearing, snakeweed declined dramatically. Sheep allotment in bighorn range. Loss of natives partly explained by natural snakeweed cycling. Increasing needleandthread. Loss of galleta cover and frequency. Halogeton nearby in patches. Some concern about rating down due to exotic dominance-which may vary with precipitation. Trees increasing. Trend rated static because improvements in shrubs, cool season grass offset by loss of warm grass cover and frequency and decline in forbs. Site may be moving toward more trees and exotics. Severe winter range deer and elk.

Standard 4 Special Status Species

Standard 4 Rating: Not meeting

Standard 4 Trend: Static

Rationale: Migratory birds Exotic birds, cowbirds, known occurrences of sclerocactus, in bighorn sheep range, bald eagle foraging. Weeds threaten sclerocactus.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A14017P01D19	Middle Peach Valley	Semidesert Juniper Loams cool slope	Pinyon-Juniper	1 meets w prob 3 meets w prob 4 meets	none documented	GGNCA Native Plant ACEC

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/24/2011	27.0	0.0	3.4	21.3	4.0	3.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: Unknown

Rationale: Rock is the dominant groundcover. Flowpaths probably appropriate for PJ site. Crypts and basal might be low, but due to gravelly site, less potential for cryptogam development.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/24/2011	1.8	0.3	0	0	3.5	12.8	16.7	1.8
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/24/2011	2.0	3.0	5.0	24.0	0.0	12.0	16.0
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: unknown

Rationale: Seems to be a low potential site and mature woodland. Transect orientation may have reduced plant cover—appears to be placed in interspaces. Low herbaceous production and diversity probably due to site potential. Cheatgrass the exotic species, lightly scattered across site, in every plot. Severe winter range for deer and elk.

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Standard 4 Special Status Species

Standard 4 Rating: Meets Standard 4 Trend: unknown

Rationale: Migratory birds, exotic birds, cowbirds, bald eagle winter concentrations, potential for sclerocactus. Not enough concerns to lower site rating.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A14540P01D02	N Saddle Peak	Brushy Loam cool steep	Mountain Shrub	1 meets 3 meets 4 meets	Sand prescribed fire 1	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
10/20/2011	3.3	13.3	0.0	75.6	5.0	5.0
E.S. averages	8	8.5	1.2	73.8	4.8	4.4

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: unknown

Rationale: Pedestals and flowpaths good, excellent stability given slope. Cryptogams absent due to plant cover. Herbaceous cover more than adequate.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
10/20/2011	0.3	4.8	14.3	0	80.0	0	98.0	2.5
E.S. avgs	1.2	13.7	16.3	0	53.0	2.6	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
10/20/2011	3.0	4.0	5.0	0.0	24.0	-	-
E.S. avgs	4.1	4.4	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: unknown

Rationale: Forbs low partially due to late season reading. High shrubs expected on steep slope like this. Only exotic is Kentucky bluegrass. Severe winter for deer and elk.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: Within a lynx LAU, bald eagle winter foraging, peregrine nesting area, migratory birds. No concerns for TES species habitat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
A14542P01D01	Needle Rock	Deep Clay Loam flat	Grass-Forb	1 meets 3 meets w prob 4 meets	none documented	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/24/2011	2.2	21.1	0.0	76.7	5.0	5.0
E.S. averages	24.4	9.2	4.6	46.9	3.9	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: unknown

Rationale: Pedestals and flowpaths good, indicating excellent stability. Cryptogams absent due to past irrigation. Herbaceous cover more than adequate to protect soil. Site has been altered by irrigation, modified into a largely nonnative site.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/24/2011	9.2	9.0	29.2	0	5.7	0	13.8	39.2
E.S. avgs	2.1	9.6	19.0	0	36.3	2.9	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/24/2011	1.0	2.0	3.0	-	-	-	-
E.S. avgs	3.6	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Not meeting

Standard 3 Trend: unknown

Rationale: Old irrigated field. Whitetop and Canada thistle on site. Smooth brome and Kentucky bluegrass dominant. Native community completely altered for low rating. May be trespass irrigation or old homestead. Severe winter elk and deer, winter concentration for deer.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems Standard 4 Trend: unknown

Rationale: Lynx LAU, known occurrence of northern leopard frog, bald eagle winter foraging, peregrine nesting area, migratory birds. Majority of vegetation is nonnative, does not provide suitable habitat for many TES species.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
BLACK RG RC1 CT12	Black Ridge	Loamy Foothills cool slope	Pinyon-Juniper	1 meets w prob 3 meets w prob 4 meets w prob	Black Ridge rollerchop 1 1998	GGNCA Gunnison Sage Grouse ACEC

Site Photos



2001 Photo



2004 Photo



2011 Photo

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
6/25/2001	21.1	12.2	-	63.3	-	-
6/14/2004	14.3	7.1	-	64.3	-	-
6/9/2011	24.4i	11.1s	0.0	58.9s	4.0	4.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: static

Rationale: Basal balances out cryptogams for adequate soil protection. Cryptogams likely destroyed by treatment. Soil stable. Little change from a soils standpoint. Gentle slope has little potential for transport.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
6/25/2001	3.0	3.7	22.8	0	1.3	2.0	30.2	3.0
6/14/2004	25.2	2.3	6.6	0	1.6	1.3	12.9	25.2
6/9/2011	7.7u	8.0i	19.3s	0s	3.0i	0.5d	29.5s	12.0d
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/25/2001	-	-	-	0.0	0.0	-	-
6/6/2004	-	-	-	24.0	12.0	-	-
6/9/2011	4.0	3.0	5.0	12.0s	24.0i	-	-
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: static

Rationale: Cheatgrass declined a lot from 2004. Cheatgrass, alyssum, salsify, shepards purse, etc were the exotics, contributed to problem rating. Deer and elk severe and winter concentration. Bighorn range. Big fluctuations in annuals may mostly be due to precipitation. Muttongrass and junegrass fluctuations through the readings. Trend unsettled. appears static after downward period after drought.

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/9/2011	2.2	0.8	6.0	19.3	8.0	6.0	5.6
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems

Standard 4 Trend: Static

Rationale: Migratory birds, cowbirds, wt prairie dog range, bald eagle winter foraging, Gunnison sage grouse range Sage grouse habitat quality issues lead to rating.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
BLACK RG RC2 CTO3	Black Ridge	Shallow and Sandy Loam PJ warm slope	Sagebrush	1 meets w prob 3 meets w prob 4 meets w prob	None documented	GGNCA Gunnison Sage Grouse ACEC

Site Photos



2002 Photo



2005 Photo



2011 Photo

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
6/20/2002	17.8	2.2	4.4	45.6	-	-
7/8/2005	26.7	1.1	5.6	35.6	-	-
9/10/2009	6.7	0.0	6.7	55.1	-	-
6/9/2011	13.2s	3.3i	4.4s	54.9s	4.0	4.0
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: static

Rationale: Stable soils, relatively little disturbance given proximity to rollerchop, potential for higher crypts except for trampling by ungulates. Minor fluctuations offset each other for static trend, little overall change.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
6/20/2002	0.5	0.2	1.2	0	2.7	11.8	15.8	0.5
7/8/2005	7.8	0.2	6.8	0	7.7	21.0	37.3	6.2
9/10/2009	7.2	2.5	7.7	0	6.5	15.3	32.2	6.8
6/9/2011	2.0u	1.2s	4.2s	0s	5.2s	21.8s	32.7s	1.7d
E.S. avgs	-	-	-	-	-	-	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/20/2002	-	-	-	41.7	8.3	41.7	0.0
7/8/2005	-	-	-	52.0	0.0	28.0	28.0
9/10/2009	-	-	-	16.7	33.3	-	-
6/9/2011	4.0	4.0	5.0	52.0s	20.0	8.0d	40.0i
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: meets

Standard 3 Trend: static

Rationale: Annuals and cheatgrass fluctuation over the years with precipitation. Concern for the shrub vigor, but not enough to rate site down. To be expected in mature woodland. Severe and winter concentration for elk, bighorn range Minor fluctuations in veg types over the years with little apparent direction.

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

	Sage Grouse Habitat Parameters+						
Date Read	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/9/2011	3.7	1.5	9.6	4.2	1.5	4.7	3.2
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: meeting with problems

Standard 4 Trend: static

Rationale: Bighorn sheep range, bald eagle winter foraging, Gunnison sage grouse range, known golden eagle occurrence, migratory birds, and sage grouse habitat lead to rating.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
BOSTWICK PK RC1 CTI2	Black Canyon/Jones D	Loamy Foothills warm slope	Sagebrush	1 meets 3 meets w prob 4 meets	Bostwick Park rollerchop 1 2001	NA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
6/19/2003	40.7	13.2	5.5	37.4	-	-
6/7/2011	22.2d	5.6d	8.9i	56.7i	4.0	5.0
E.S. averages	30.0	7.5	5.4	38.6	3.7	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: static

Rationale: Litter high due partly to high nonnative annual cover and crested wheatgrass. Lack of flowpaths and soil stability, and good cryptogam cover indicate excessive litter not causing problems with drowning out crypts. Trend rated static due to loss of basal somewhat offset by increase in cryptogams. Litter not a big factor in this determination.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
6/19/2003	43.2	1.2	3.8	0	8.0	0	12.7	43.5	
6/7/2011	9.8	4.3i	15.7i	0s	10.5i	0s	18.3i	22.0d	
E.S. avgs	8.6	6.1	19.0	0	18.2	8.2	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/19/2003	-	-	-	53.8	57.7	-	-
6/7/2011	4.0	2.0	5.0	24.0d	0.0d	12.0	76.0
E.S. avgs	3.3	3.1	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: meets with problems Standard 3 Trend: upward

Rationale: Severe winter concentration for elk and deer. Bighorn range. Native grasses present, just lower cover. Shrub cover lower as expected on treated site. Trend improving for grass, forbs, shrubs, and overall natives, as exotics decrease.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/7/2011	10.3	0.2	21.1	15.7	4.3	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems Standard 4 Trend: upward

Rationale: known occurrence of lesquerella, lomatium, sclerocactus, buckwheat in larger area. Bighorn and wt prairie dog range, golden eagle known occurrence, migratory birds, Near old sage grouse population. Sage grouse habitat and nonnatives competing with sensitive plants.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
CRAWF BB2 CTII	Poison Spring	Deep Clay Loam warm slope	Sagebrush	1 meets w prob 3 meets 4 meets w prob	Crawford brushbeat 1997	Gunnison Sage Grouse ACEC

Site Photos



2001 Photo
Standard 1 Soils

2007 Photo

2011 Photo

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
11/12/2001	15.7	20.2	-	64.0	-	-
11/14/2007	16.7	35.6	-	47.9	-	-
7/7/2011	12.2d	21.1s	0.0	66.7s	5.0	5.0
E.S. averages	30.4	5.8	1.3	33.3	3.7	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: static

Rationale: Lack of crypts likely from treatment disturbance, high basal. Site is highly stable. Long term trend static, despite minor fluctuations over time.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
11/12/2001	0.2	1.0	29.7	0	2.7	0	33.5	0	
11/14/2007	7.5	1.3	37.2	0	4.7	0	43.0	7.7	
7/7/2011	3.7u	4.0i	34.0s	0s	10.8i	0s	49.8i	2.5d	
E.S. avgs	8.8	8.3	-	-	32.1	1.3	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
11/12/2001	-	-	-	4.0	12.0	-	-
11/14/2007	-	-	-	42.3	84.6	-	-
7/7/2011	4.0	3.0	5.0	5.0d	50.0d	-	-
E.S. avgs	3.2	2.8	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: Upward

Rationale: Prior November readings probably contributed to some of the fluctuations. Exotics at low levels on site, minor concern. Winter concentration for deer and elk, severe winter for elk. Bighorn range. Hedging not so great a concern on site where shrubs were brushbeat. Increasing natives, forbs, fewer problems with severe hedging, for upward trend.

.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/7/2011	7.3**	3.5	10.2	34.0	5.8	9.5	3.1
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: meeting with problems

Standard 4 Trend: upward

Rationale: Cowbirds, winter foraging bald eagle, known sage grouse (radio telemetry birds), migratory birds. **Treatments done in part to create lek, breeding areas for grouse, shrub and low forb cover a concern, since not a known lek.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
CRAWF BB2 CTI4	Green Mtn	Loamy Foothills cool slope	Sagebrush	1 meets 3 meets w prob 4 meets w prob	Crawford brushbeat 2 1997	Gunnison Sage Grouse ACEC

Site Photos



2002 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
6/8/2002	22.2	11.1	2.2	64.4	-	-
7/22/2008	12.2	0.0??	1.1	86.7	-	-
7/6/2011	31.1i	14.4i	1.1s	53.3d	4.0	4.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: static

Rationale: Crypts due to high basal component, and mechanical treatment. Trend static due to increasing basal offsetting increasing bare, decline in basal

.

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses	Pr Grasses	Shrubs	Trees			
			Cool	Warm					
6/8/2002	0.5	2.3	33.5	0	2.2	0.2	22.0	16.7	
7/22/2008	1.0	3.7	19.2	0	3.0	2.0	13.8	15.2	
7/6/2011	0.3s	5.8i	42.7i	0s	6.5i	1.0s	40.2i	16.2s	
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/8/2002	-	-	-	12.0	0.0	-	-
7/22/2008	-	-	-	12.0	24.0	-	-
7/6/2011	4.0	3.0	5.0	28.0i	0.0s	0.0	88.5
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: upward

Rationale: Exotics mainly crested wheat, Japanese brome. Despite amount of exotics, natives dominate for meeting reading. Young trees increasing on site, declining shrub vigor may be due to aging shrubs, also increasing trees. Other herbaceous and shrub cover improving. For upward trend. Winter deer and elk concentration area.

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Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/6/2011	5.3	1.2	14.4	42.7	2.5	11.4	4.4
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets with problems

Standard 4 Trend: upward

Rationale: Migratory birds, bald eagle winter foraging, sage grouse range, likely winter use by sage grouse. Some veg health problems for sage grouse habitat justify rating. Increasing forbs and shrubs for upward trend-mainly for sage grouse.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
CRAWF BB2 CTO2	Poison Spring	Mountain Loam flat	Sagebrush	1 meets w prob 3 meets 4 meets w prob	none documented	Gunnison Sage Grouse ACEC

Site Photos



2001 Photo



2007 Photo



2011 Photo

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
11/12/2001	31.1	20.0	2.2	40.0	-	-
11/14/2007	31.1	33.3	1.1	32.2	-	-
7/7/2011	28.7s	10.3d	0.0d	49.4i	4.0	4.0
E.S. averages	27.7	10.9	1.3	36.8	3.9	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: Static

Rationale: Crypts not a concern due to highly productive vegetation cover, very stable. Litter increasing, basal decline maybe due to reading times, otherwise no major shifts.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
11/12/2001	0	1.0	25.7	0	20.8	0	47.5	0
11/14/2007	0.3	1.0	26.8	0	12.5	0	40.8	0
7/7/2011	1.2i	4.7i	29.2i	0s	26.8i	0s	62.3i	0s
E.S. avgs	0.4	12.3	26.4	1.6	25.4	3.4	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
11/12/2001	-	-	-	12.0	4.0	-	-
11/14/2007	-	-	-	32.0	80.0	-	-
7/7/2011	4.0	4.0	5.0	3.8d	19.2d	-	-
E.S. avgs	4.3	4.3	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: meets

Standard 3 Trend: Upward

Rationale: All parameters look good with exception of low forbs, but many present, not enough of a concern to lower rating. Improvements in herbaceous and natives for upward trend. Winter concentration for deer and elk.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/7/2011	15.3	11.5	19.8	29.2	5.9	13.7	6.2
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: Meets

Standard 4 Trend: upward

Rationale: Migratory birds, sage grouse, winter foraging for bald eagle, cowbirds.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
CRAWF HA1 CTI2	Poison Spring	Loamy Foothills flat	Sagebrush	1 meets w prob 3 meets 4 meets w prob	Crawford hydroaxe 1 2001	NA

Site Photos



2003 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
8/12/2003	22.5	10.1	2.2	58.4	-	-
7/6/2011	11.4d	11.4s	1.1d	64.8s	4.0	5.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets

Standard 1 Trend: static

Rationale: Hydroaxe spread litter across site and raised value with corresponding drop in bare, crypts. No potential for transport. Little change from earlier reading for static trend.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/12/2003	0	2.3	10.5	0	4.7	0.5	18.0	0	
7/6/2011	0s	3.9i	21.2i	0s	6.0i	1.2i	31.5i	0.5s	
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/12/2003	-	-	-	30.4	30.4	-	-
7/6/2011	5.0	4.0	5.0	8.0d	52.0i	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets

Standard 3 Trend: upward

Rationale: Warm season grasses may be naturally lower at this elevation. Heavy hedging a concern in this severe and winter concentration area for deer and elk, but vigor of stand still good. Increasing forbs, grasses, shrubs, natives for upward trend.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/6/2011	4.3	1.7	9.6	21.2	3.9	15.7	6.1
Xeric Site Habitat Guidelines	15-25%	5-15%	10-20"	10-30%	5-15%	4-6"	2-4"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: meeting with problems

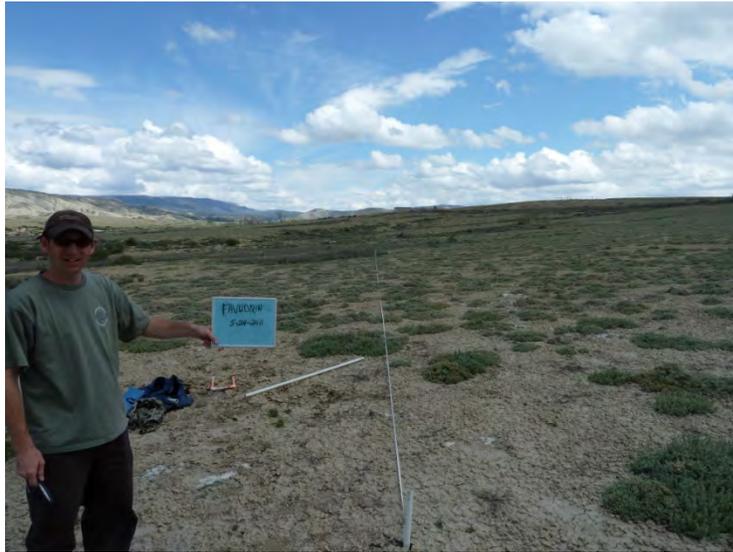
Standard 4 Trend: upward

Rationale: Lek within a mile of site, migratory birds, winter foraging for bald eagle, More of a black sage site, explaining low sage height in part. Rated down due to low sage cover and forb cover, but these factors showing improvement over time also for upward trend.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
FAIRVIEW ND01	unallotted	Clayey Salt Desert flat	Salt desert Shrub	1 meets 3 meets 4 meets	none documented	Fairview ACEC

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
5/24/2011	73.6	0.0??	6.9	19.5	5.0	5.0
E.S. averages	57.1	6.3	3.7	18.6	3.8	3.3

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: unknown

Rationale: All factors within averages for this site. Low basal may be due to plot falling in between the mat saltbushes.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
5/24/2011	0	0	0	0	11.5	0	11.5	0	
E.S. avgs	8.9	1.7	0.8	0	11.3	0.1	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/24/2011	1.0	4.0	3.0	15.4	3.9	-	-
E.S. avgs	2.3	3.2	4.7	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems **Standard 3 Trend: unknown**

Rationale: Russian knapweed on site. Lack of herbaceous community, for problem rating.

.

Standard 4 Special Status Species

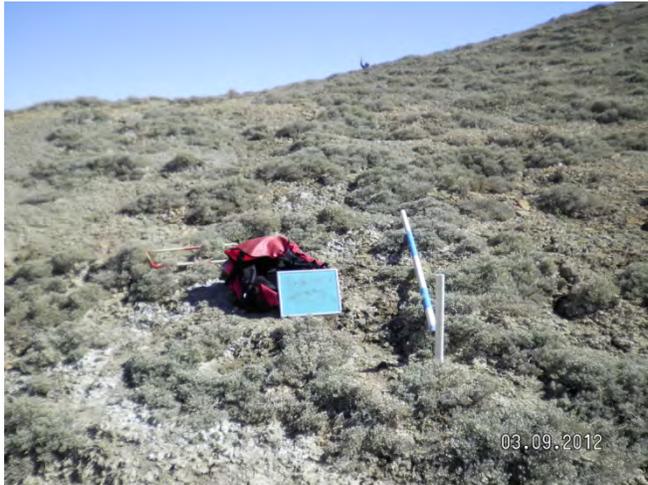
Standard 4 Rating: not meeting **Standard 4 Trend: downward**

Rationale: Buckwheat protection area. Knapweed within 1 meter of buckwheat threatens its survival. WT prairie dog range, trend downward based on invasiveness of knapweed, and likely impacts from weed treatment.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
Flat Top OHV D01	Brush Point	Clayey Salt Desert cool steep	Salt desert Shrub	1 meets 3 meets w prob 4 meets	none documented	Peach Valley-Flat Top SRMA

Site Photos



2012 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
3/9/2012	68.2	8.2	2.4	10.5	2	1
E.S. averages	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: Meets with problems

Standard 1 Trend: unknown

Rationale: Pedestals and flowpath scores reflect high level of soil movement, half of the transect appears affected by increased levels of erosion, even beyond the high levels that would be expected for this site.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
3/9/2012	0.3	0	0	0	8.7	0	9.0	0
E.S. avgs	-	-	-	-	-	-	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
3/9/2012	2	4	5	13.6	0	-	-
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meeting with problems **Standard 3 Trend: unknown**

Rationale: Lack of herbaceous species, low total cover, second half of transect has been largely denuded by OHV traffic.

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Standard 4 Special Status Species

Standard 4 Rating: Meeting with problems **Standard 4 Trend: unknown**

Rationale: Physical destruction of vegetation affecting habitat quality for buckwheat, which could occur in this area.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
FRUITLAND WF1 CT11	Black Ridge	Loamy Foothills cool slope	Grass-Forb	1 meets w prob 3 meets prob/ not meet 4 meets w prob	Fruitland wildfire 1 2006	GGNCA Gunnison Sage Grouse ACEC

Site Photos



2001 Photo



2004 Photo



2011 Photo

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
7/3/2001	71.1	1.1	0	5.6	-	-
6/24/2004	12.2	7.8	0	50.0	-	-
8/17/2009	4.4	0.0	0.0	88.9	-	-
6/9/2011	15.6d	1.1s	0.0s	74.4i	5.0	4.0
E.S. averages	27.8	6.4	3.9	48.6	3.6	3.8

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets with problems **Standard 1 Trend: static**

Rationale: Rating due to high litter (annuals), lack of cryptogams and low basal. Varying bare, litter, basal make any direction of trend difficult to discern.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
7/3/2001	10.8	0.8	2.5	0	0	0	6.8	7.3
6/24/2004	52.2	4.7	1.2	0	0	0	6.0	54.8
8/17/2009	82.5	0	0	0	0	0	10.2	73.3
6/9/2011	17.0u	0d	1.0d	0s	0s	0s	1.7d	16.5d
E.S. avgs	11.9	7.8	10.6	1.1	11.9	13.9	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/9/2011	1.0	2.0	2.0	0.0	4.0	-	-
E.S. avgs	4.0	3.0	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: not meeting **Standard 3 Trend: downward**

Rationale: Russian knapweed along road, halogeton on transect. Dominated by nonnative for not meeting rating. Loss of forbs, decline in grasses, natives contribute to downward trend. Severe and winter concentration for deer and elk.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
6/9/2011	< 0.01	0.0	15.0	1.0	0.5	12.0	4.5
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: not meeting

Standard 4 Trend: downward

Rationale: Sage grouse range, winter foraging bald eagle, migratory birds. Poor habitat quality for rating. Habitat quality appears to be declining.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
GREEN MT RX3 CT11	Green Mtn	Brushy Loam cool slope	Mountain Shrub	1 meets w prob 3 meets w prob 4 meets w prob	Green Mountain prescribed fire 3 1999	Gunnison Sage Grouse ACEC

Site Photos



2001 Photo



2004 Photo



2011 Photo

Standard 1 Soils

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
8/13/2001	43.3	3.3	-	53.3	-	-
6/17/2004	28.9	8.4	-	62.7	-	-
7/22/2009	13.3	2.2	0.0	83.3	-	-
7/5/2011	30.3s	6.7s	0.0s	62.9s	5.0	5.0
E.S. averages	16.8	14.7	1.3	58.6	4.7	4.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: static

Rationale: Meets due to lack of soil instability despite slope, low crypts and basal probably all due to recent fire. Little change in groundcover for static trend.

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Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
8/13/2001	13.0	1.8	23.8	0	10.0	0	47.5	1.2
6/17/2004	55.2	8.2	3.8	0	4.8	0	57.3	14.5
7/22/2009	11.2	23.0	15.8	0	16.0	0	52.7	11.5
7/5/2011	13.0u	6.3d	27.2i	0s	15.8s	0s	57.2s	5.2d
E.S. avgs	1.4	17.3	27.8	0.1	44.2	2.3	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/13/2001	-	-	-	16.0	0.0	-	-
6/17/2004	-	-	-	12.0	20.0	-	-
7/22/2009	-	-	-	0.0	18.5	-	-
7/5/2011	4.0	3.0	5.0	12.5s	20.8s	-	-
E.S. avgs	4.1	3.9	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: meets

Standard 3 Trend: static

Rationale: Sandberg and western wheat increased, and cheatgrass cover declined recently. Herbaceous cover has varied widely over the years, and little trend is evident in any factor other than minor increase in grass. Winter concentration for deer and elk.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/5/2011	2.5	13.3	18.4	27.2	15.5	10.6	6.1
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: meets

Standard 4 Trend: static

Rationale: Bald eagle foraging, within sage grouse range, moderate cowbirds present, migratory birds. Rating due to sage grouse parameters within expected range considering site recovering from fire. More shrub recovery would be desirable for sage grouse.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
IRON SPR RC2 CTO1	Gould Reservoir	Loamy Foothills flat	Sagebrush	1 meets 3 meets w prob 4 meets w prob	none documented	Gunnison Sage Grouse ACEC

Site Photos



2004 Photo



2007 Photo



2011 Photo

Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
6/30/2004	16.7	8.9	-	73.3	-	-
11/18/2007	2.2	35.6	1.1	60.0	-	-
7/7/2011	10.0s	13.3s	0.0u	76.7s	5.0	5.0
E.S. averages	45.6	7.3	6.0	29.5	3.4	3.7

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: static

Rationale: Vegetation prevents much cryptogam development, soil stable, litter due to native community. Little change that might not be due to reader variability.

.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
6/30/2004	2.8	4.2	25.0	0	30.2	1.0	61.8	0
11/18/2007	4.0	1.2	29.8	0	21.5	1.0	49.7	3.8
7/7/2011	3.8s	17.0i	49.8i	0s	15.7d	2.8i	90.3??	1.3s
E.S. avgs	2.4	3.1	22.7	13.9	21.4	10.5	-	-

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
6/30/2004	-	-	-	52.0	24.0	-	-
11/18/2007	-	-	-	56.0	92.0??	-	-
7/7/2011	5.0	4.0	5.0	40.0d	0.0	32.0	72.0
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: meets

Standard 3 Trend: upward

Rationale: trees increasing on site, may be causing decline in shrubs, as could elk, as could competitive understory. Excellent condition site. Herbaceous improving for upward trend. Winter concentration for elk.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/7/2011	10.7	5.0	26.2	49.8	20.8	14.1	8.4
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 rating: meets

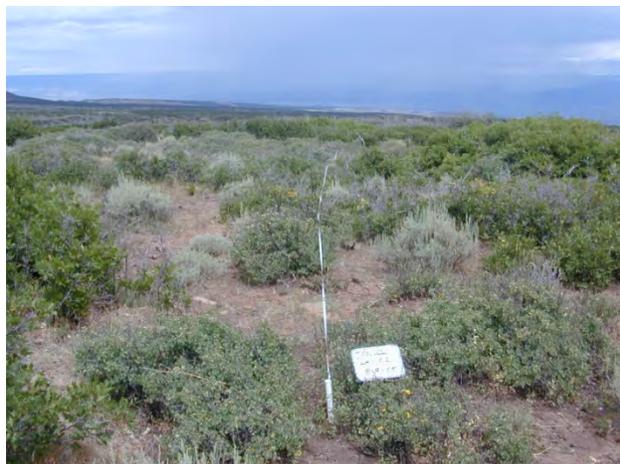
Standard 4 Trend: downward

Rationale: Within sage grouse range, migratory birds, cowbirds, bald eagle winter foraging, conditions currently favorable for grouse but increasing trees present threat to habitat quality for downward trend.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
JENSEN LA1 CTO2	unallotted	Brushy Loam cool slope	Mountain Shrub	1 meets w prob 3 meets w prob 4 meets w prob	None documented	Gunnison Sage Grouse ACEC

Site Photos



2005 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
8/9/2005	20.0	0?	-	67.8	-	-
7/5/2011	27.0i	13.5	0.0	52.8d	4.0	5.0
E.S. averages	16.8	14.7	1.3	58.6	4.7	4.5

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: static

Rationale: Low cryptogams may be due to high basal, litter and veg cover. Little change in litter and bare, some question about first reading.

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Upland Biological Transect—Data Summary and Evaluation Sheet

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses		Shrubs	Trees			
			Cool	Warm					
8/9/2005	8.3	1.5	8.2	0	37.2	0	48.8	6.3	
7/5/2011	0.5d	4.2i	13.5i	0s	46.7i	0s	65.0i	0d	
E.S. avgs	1.4	17.3	27.8	0.1	44.2	2.3	-	-	

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/9/2005	-	-	-	0.0	25.0	-	-
7/5/2011	5.0	4.0	5.0	8.0i	28.0s	-	-
E.S. avgs	4.1	3.9	4.8	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems Standard 3 Trend: upward

Rationale: Forbs and grasses lower for such a productive site. Would expect higher productivity. Herbaceous and shrubs appear to be increasing for upward trend. Winter concentration for deer and elk.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
7/5/2011	9.7	37.0	16.7	13.5	4.7	11.5	6.1
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

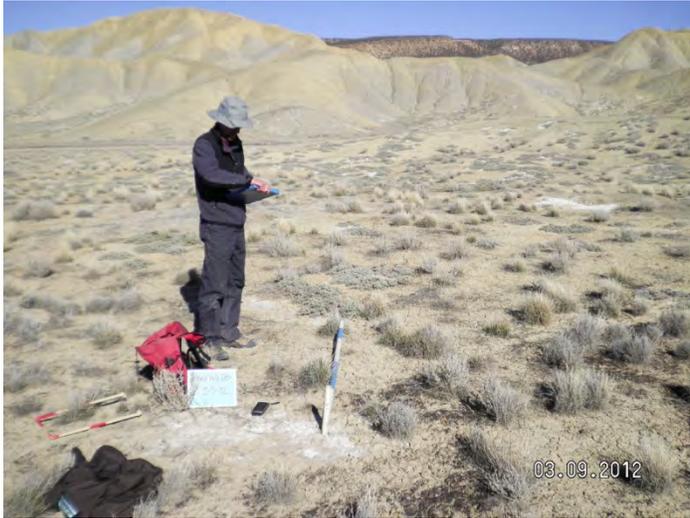
Standard 4 Rating: Meets with problems Standard 4 Trend: upward

Rationale: Migratory birds, cowbirds, winter bald eagle foraging, sage grouse (radiotelemetry), Low forb and grass cover for sage grouse habitat provided low rating. Trend upward because these parameters have improved..

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
Peach Valley D01	Brush Point	Clayey Salt Desert flat	Saltdesert Shrub	1 meets 3 meets w prob 4 meets	none documented	Peach Valley-Flat Top SRMA

Site Photos



2012 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
3/9/2012	51.1	14.8	14.8	19.2	5	4
E.S. averages	57.1	6.3	3.7	18.6	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: unknown

Rationale: Good cryptogam cover, soils seem stable, there is not excessive litter due to invasive annuals.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
3/9/2012	2.7	0	1.8	0	15.8	0	16.5	2.3
E.S. avgs	8.9	1.7	0.8	0	11.3	0.1	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
3/9/2012	4	3	4	22.3	0	-	-
E.S. avgs	-	-	-	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: Meets with problems

Standard 3 Trend: unknown

Rationale: Presence of exotic species and halogeton triggered problem rating.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems **Standard 4 Trend: unknown**

Rationale: Presence of exotic species and halogeton degrades potential habitat for TES buckwheat.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
POISON SPR RG RC1 CT12	Gould Reservoir	Brushy Loam flat	Mountain Shrub	1 meets 3 meets w prob 4 meets w prob	Poison Spring Ridge rollerchop 1 2003	Gunnison Sage Grouse ACEC

Site Photos



2005 Photo



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGAM	% Total litter	Pedestals	Flowpaths
8/18/2005	11.9	8.3	0	75.0	-	-
8/11/2011	4.4d	5.6d	0.0s	85.6s	4.0	3.0
E.S. averages	25.9	11.4	2.4	48.1	4.0	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets

Standard 1 Trend: static

Rationale: Litter a byproduct of veg treatment. Low crypts due to high vegetation. Soil stable. Basal offsets bare for static rating.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages							Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees			
8/18/2005	3.4	13.6	34.5	0	17.7	0	43.0	30.5	
8/11/2011	0.8	14.0s	20.5d	0s	30.7i	0s	62.5i	7.3d	
E.S. avgs	0.9	11.3	31.7	0	47.4	1.1	-	-	

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
8/18/2005	-	-	-	24.0	0.0	-	-
8/11/2011	5.0	4.0	5.0	0.0d	0.0s	-	-
E.S. avgs	3.7	4.3	4.9	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: meets

Standard 3 Trend: static

Rationale: Kentucky bluegrass and crested wheat decreased, muttongrass, western wheat increased. Trend rated static due to few changes, declining grass probably due to utilization differences between years. Probable elk winter concentration area

.

Standard 4 Special Status Species

Date Read	Sage Grouse Habitat Parameters+						
	Sagebrush Canopy Cover %	Non-Sagebrush Shrub Canopy Cover %	Sagebrush Height (inches)	Grass Canopy Cover %	Forb Canopy Cover %	Grass Height (inches)	Forb Height (inches)
8/11/2011	0.5	14.8	-	34.5	13.6	-	-
Mesic Site Habitat Guidelines	10-20%	5-15%	12-20"	20-40%	20-40%	4-6"	2-6"

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values.

+Mesic and xeric sites were based on the presence of black sagebrush. Mesic did not have and xeric did have black sage brush.

Standard 4 Rating: meets

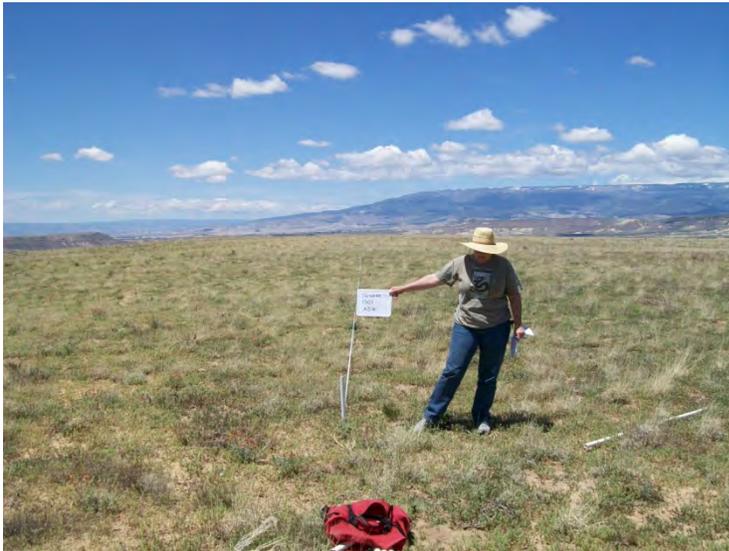
Standard 4 Trend: static

Rationale: Sage grouse range. Migratory birds, cowbirds, winter foraging bald eagle. Habitat quality in good shape for TES.

Upland Biological Transect—Data Summary and Evaluation Sheet

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
TRISTATED01	Unallotted grass bank	Loamy Salt Desert flat	Salt desert Shrub	1 meets 3 meets w prob 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
5/25/2011	46.2	0.0	4.4	42.9	5.0	5.0
E.S. averages	48.8	7.0	5.7	18.0	3.8	4.0

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets with problems Standard 1 Trend: unknown

Rationale: High litter due to exotic annuals. Lack of basal and excess litter a concern.

.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
5/25/2011	28.0	2.0	0	3.2	0.7	0	5.8	28.0
E.S. avgs	6.7	2.0	1.1	10.9	12.1	0.5	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/25/2011	2.0	2.0	3.0	0.0	0.0	-	-
E.S. avgs	3.1	3.5	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: not meeting

Standard 3 Trend: unknown

Rationale: Halogeton on site, filaree, alyssum, cheatgrass, etc. Herbaceous and shrub community in bad shape, and dominated by exotics. Severe winter for elk, deer, winter concentration for deer. Bighorn range.

.

Standard 4 Special Status Species

Standard 4 Rating: not meeting

Standard 4 Trend: unknown

Rationale: Winter foraging and concentration for bald eagle, within wt prairie dog range, old dog towns in area, sclerocactus, migratory birds, cowbirds, exotic birds. Rated not meeting due to poor habitat quality for cactus, other TES species.

Study Name	Allotment	Ecological Site	Vegetation Type	Former LH Status	Treatment	Special Area
TRISTATED02	Unallotted grass bank	Salt Desert Breaks flat	Saltdesert Shrub	1 meets 3 meets w prob 4 meets	none documented	GGNCA Gunnison River SRMA

Site Photos



2011 Photo

Standard 1 Soils

Date Read	Groundcover Percentages				Land Health Scores 5=best 1=worst	
	% BARE	% BASAL	% CRYPTOGRAM	% Total litter	Pedestals	Flowpaths
5/10/2011	32.2	0.0	13.3	51.1	5.0	5.0
E.S. averages	38.4	6.3	5.0	15.9	3.4	3.9

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 1 Rating: meets with problems Standard 1 Trend: unknown

Rationale: High litter due to exotic annuals, lack of basal cover lead to problem rating.

.

Standard 3 Plants and Animals

Date Read	Canopy Cover Percentages						Natives	Exotics
	Annuals	Pr Forbs	Pr Grasses Cool	Pr Grasses Warm	Shrubs	Trees		
5/10/2011	11.7	0.3	0.5	7.8	2.7	0	11.3	11.7
E.S. avgs	6.0	1.3	-	-	16.0	0.6	-	-

Upland Biological Transect—Data Summary and Evaluation Sheet

Date Read	Land Health Scores (5=best 1=worst)			Browse		Trees	
	Diversity	Exotics	Noxious	% Low Vigor	% Severely Hedged	% Low Vigor	% Young Trees
5/10/2011	1.0	2.0	2.0	48.2	3.7	-	-
E.S. avgs	3.1	3.4	5.0	-	-	-	-

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 3 Rating: not meeting

Standard 3 Trend: unknown

Rationale: Halogeton near site on old prairie dog burrows. Exotics dominate, terrible diversity. Winter concentration for deer, severe winter for elk.

.

Standard 4 Special Status Species

Standard 4 Rating: Not meeting

Standard 4 Trend: unknown

Rationale: Migratory birds, sclerocactus, buckwheat?? Bald eagle foraging and winter concentration, known golden eagle, lesquerella, wt prairie dog range and known. Rated down due to poor habitat quality for TES plants and animals.

Gunnison Gorge Land Health Assessment

2011-2012

Appendix C

Appendix C contains the riparian transect summary sheets for Standards 2, 4 and 5.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
B041614209R001 S1	Iron Canyon	Iron Canyon	Status Undetermined	Not Applicable

Site Photos



2011 Photo – View Downstream
Standard 2 Riparian



2011 Photo –View Upstream

Greenline Form								
Date Read	Channel Width	Riparian Width	Wetland Obligate	Wetland Facul	Riparian Tree	Riparian Shrub	Total Native	Total Introd
NA	-	-	-	-	-	-	-	-
Proper Functioning Condition Form								
Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabltly	PFC Rating
11/9/2011	partially	yes	yes	yes	yes	yes	yes	Mid-PFC

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 2 Rating: Meets

Standard 2 Trend: Unknown

Rationale: Rated PFC, no issues other than lack of frequent flooding in some areas.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Unknown

Rationale: Since the riparian is rated PFC, there are no issues related to sensitive species habitat. However is not a fully natural aquatic system due to complete damming of Iron Canyon at Gould

Riparian/Water Transect—Data Summary and Evaluation Sheet

Reservoir. May be some alteration of temperatures and seasonal flows. **Minor concerns for temperature, flows for warm water fish**

.

Standard 5 Water Quality

Date read	Water Chemistry				Biological Indicators			Sediment	
	EC µmhos/cm	pH	Se ppm	Standard Exceed- ences	Macros O to E index	Macros MMI index	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
	NA	NA	NA	NA	NA	NA	NA	8	1-3*

*estimate from map/aerial photo coupled with calculations from the mapped roads

Standard 5 Rating: Meets

Standard 5 Trend: Unknown

Rationale: In the absence of water quality or macroinvertebrate data the ground cover index and road network density are used to determine the rating. The ground cover index and road density at this site are within an acceptable range.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
B041614395R001 S1	Doug Creek	Doug Creek	All Standards Met	Not Applicable

Site Photos



2011 Photo – View Downstream



2011 Photo – View Upstream



2006 Photo – View Downstream
Standard 2 Riparian



2006 Photo – View Upstream

Greenline Form

Date Read	Channel Width	Riparian Width	Wetland Obligate	Wetland Facul	Riparian Tree	Riparian Shrub	Total Native	Total Introd
NA	-	-	-	-	-	-	-	-

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dssspates	Lateral Vertical Stabltly	PFC Rating
8/15/2006	NA	no	yes	no	yes	yes	yes	Low PFC

Riparian/Water Transect—Data Summary and Evaluation Sheet

11/9/2011	NA	yes	yes	yes	yes	yes	yes	Mid PFC
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*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Note-first reading made upstream of second reading, but reach appears similar at the two locations.

Standard 2 Rating: Meets

Standard 2 Trend: Static

Rationale: Rated PFC with no issues. Although there is no Greenline or MIM data, apparent trend indicates no major changes. Channel morphology appears to have improved, extensive beaver activity may be helping improve conditions.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Static

Rationale: This is an altered aquatic habitat due to extensive ditch works upstream which probably augment flows at times and divert flows at others. Beaver have extensively dammed stream and altered habitat, creating large wetland. No concerns.

.

Standard 5 Water Quality

Date read	Water Chemistry			Biological Indicators			Sediment		
	EC µmhos/cm	pH	Se ppm	Standard Exceed- ences	Macros O to E index	Macros MMI index	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
	NA	NA	NA	NA	NA	NA	NA	4	1-3*

*estimate from map/aerial photo coupled with calculations from the mapped roads

Standard 5 Rating: Meets

Standard 5 Trend: Unknown

Rationale: In the absence of water quality or macroinvertebrate data the ground cover index and road network density are used to determine the rating. The ground cover index at this site is fairly low. The configuration of private land and limited BLM in the watershed could account for the low numbers. The road density at this site is within an acceptable range.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
B041614R001S2	Muddy Creek	Crawford Reservoir	Some Standards Not Met	Not Applicable

Site Photos



2011 Photo – View Downstream
Standard 2 Riparian



2011 Photo – View Upstream

Greenline Form

Date Read	Channel Width	Riparian Width	Wetland Obligate	Wetland Facul	Riparian Tree	Riparian Shrub	Total Native	Total Introd
NA	-	-	-	-	-	-	-	-

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabltly	PFC Rating
9/26/2011	no	partial	yes	yes	yes	yes	yes	Low PFC

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 2 Rating: Meets

Standard 2 Trend: Unknown

Rationale: Stream rated as PFC and no issues other than lack of frequent flooding in some areas. Beaver have altered stream morphology.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: Unknown

Rationale: This is an altered aquatic habitat due to being directly downstream of Crawford Reservoir, which probably affects seasonal flows and temperatures. Beaver have extensively dammed stream and altered habitat, creating series of narrow pools. **Minor concerns for temperature, flows for warm water fish**

.

Standard 5 Water Quality

Date read	Water Chemistry				Biological Indicators			Sediment	
	EC µmhos/cm	pH	Se ppm	Standard Exceed- ences	Macros O to E index	Macros MMI index	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
	NA	NA	NA	NA	NA	NA	NA	NA- private	NA- private

Standard 5 Rating: NA

Standard 5 Trend: NA

Rationale: No data was collected for this stream.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
B041R001S5	Smith Fork	Black Ridge	Some Standards Not Met	GGNCA, Gunnison Gorge Wilderness

Site Photos



2011 Photos: Cross Section 1-upper left, Transect 2-upper right, Transect 3-left

Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length					Total introd
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub	Total native	
9/30/2011	11	136	59	49	7	48	95	1

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspatates	Lateral Vertical Stabty	PFC Rating
9/30/2011	yes	yes	yes	yes	yes	yes	yes	Mid PFC

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 2 Rating: meets

Standard 2 Trend: unknown

Rationale: Stream rated as PFC, with no concerns. Greenline data shows variety of riparian vegetation functional groups, including abundant wetland obligate species.

.

Standard 4 Special Status Species

Standard 4 Rating: meets

Standard 4 Trend: unknown

Rationale: Special status fish the primary concern at this point and downstream. No concerns with indicators of habitat problems.

.

Standard 5 Water Quality

Date read	Water Chemistry			Standard Exceed-ences	Biological Indicators			Sediment	
	EC μ mhos /cm	pH	Se μ g/L		Macros HBI	Macros EPT Richness/ Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
8/20/2000	4220	7.2	0		-	-	N/A		
9/05/2001	4720	7.2	0		-	-	N/A		
9/30/2011	2790	8.3	1.3	N/A	4.71	10/589	N/A	15	1.8-3*

*estimate from map/aerial photo coupled with calculations from the mapped roads

Standard 5 Rating: Meets

Standard 5 Trend: static

Rationale: Good macro diversity/richness-especially compared with the N Fk Gunnison River, but poor abundance (although only 1 riffle sampled for each stream). Appearance of Selenium in 2011 may be due to lab test sensitivity-improving methods, but value is still below the standard of 4.6. E coli not collected in 2011 but this stream was recently included on 303D list for E. coli. Nutrients may be an issue and conductivity is high.

Riparian/Water Transect—Data Summary and Evaluation Sheet

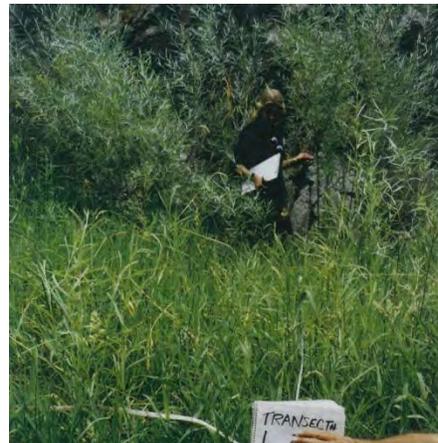
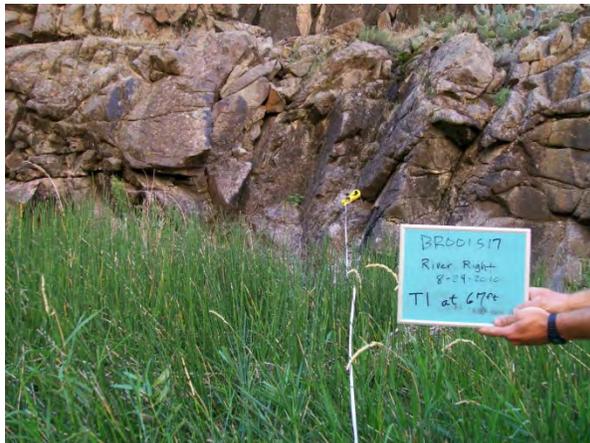
Study Name	Stream Name	Allotment	Former LH Status	Special Area
BR001S17 std 2 BR001S2 std 5 Same reach	Upper Gunnison River	Unallotted	All Standards Met	GGNCA, Gunnison Gorge Wilderness

Site Photos



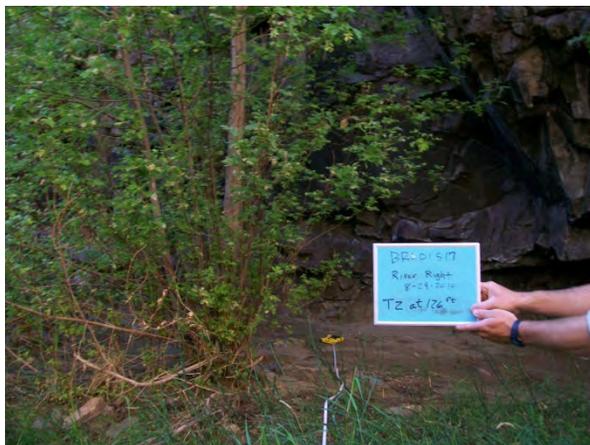
S17 2010 Photo Greenline Transect

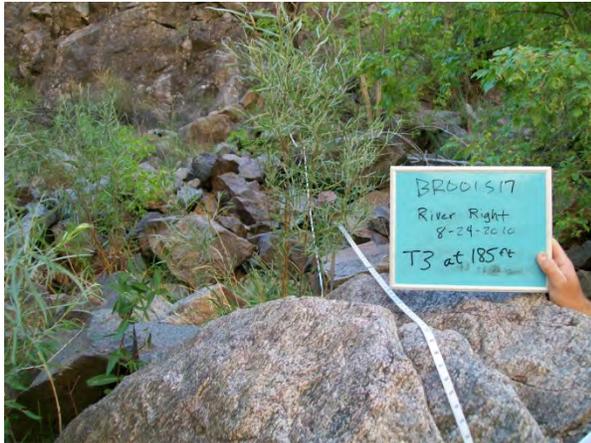
S17 1997 Photo Greenline Transect



S17 2010 Photo Perpendicular Transect 1^, 2^

S17 1997 Photo Perpendicular Transect 1^, 2^





S17 2010 Photo Perpendicular Transect 3 S17 1997 Photo Perpendicular Transect 3

Greenline Transect

Date Read	Distance in feet		% of total transect length					Total native	Total introd
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub			
8/9/1997	NA	17 avg	82	24	0	31	85**	0**	
8/24/2010	NA	25 avg i	73 s	69 i	8 i	4 d	95** s	0** s	

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabltly	PFC Rating
8/24/2010	partial	partial	yes	yes	yes	yes	yes	High FAR

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.
 ** 79% of the length was occupied by reed canarygrass, in 2010 and in 1997. Reed canarygrass is considered an invasive weed, but due to distribution and genetic uncertainties it is currently classified as a native species by the USDA Plants database.

Standard 2 Rating: Meets with problems **Standard 2 Trend:** down

Rationale: Low frequency of overbank flooding and alteration of channel morphology (channel increasingly clogged with large rocks, and sediment dynamics no longer maintaining original riparian characteristics, scour and regeneration) leads to FAR and problem rating. Trend appears down—appears that system is growing increasingly stable, riparian area widening inward, shrubs (mostly sandbar willow) disappearing, trees (all box elder) increasing—these changes possibly due to altered hydrology, beaver impacts.

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Standard 4 Special Status Species

Standard 4 Rating: meeting with problems **Standard 4 Trend:** down

Riparian/Water Transect—Data Summary and Evaluation Sheet

Rationale: Habitat issues with reduced willows and channel problems identified above-for sensitive fish (warm water fish downstream). Concerns: **declining willows and temperature and flow alterations for warm water fish downstream.**

.

Standard 5 Water Quality

Date read	Water Chemistry				Biological Indicators			Sediment	
	EC µmhos/ cm	pH	Se µg/L	Standard Exceed- ences	Macros HBI	Macros EPT Richness/ Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
9/05/2001	200	7	0		5.25	12/5205	4		
5/23/2003	257	7.45	0		5.54	18/867			
9/25/2003	264	7.2	0		5.06	16/3376			
8/05/2004	262	7.7	0		4.99	8/4199	1000		
09/20/2011	184	8.2	0.3	N/A	5.50	16/1982	2	1	0.8

Standard 5 Rating: meets

Standard 5 Trend: static

Rationale: Both water chemistry and macroinvertebrate data from 2011 are within the variability of sampling over time, and do not exceed any water quality standards. The ground cover index is very low in part due to the steepness of the canyon walls and complete lack of vegetation in places.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
BR001S19 std 2 BR001S24 std 5 0.4 mi apart	Upper Gunnison River	Unallotted	All Standards Met	GGNCA, Gunnison Gorge Wilderness

Site Photos



S19 2010 Photo Greenline Transect 1



S19 1997 Photo Greenline Transect 1



S19 2010 Photo Perpendicular Transect 1^2~



S191997 Photo Perpendicular Transect 1^, 2~



Riparian/Water Transect—Data Summary and Evaluation Sheet



S19 2010 Photo Perpendicular Transect 3

S19 1997 Photo Perpendicular T3

Greenline Transect

Date Read	Distance in feet		% of total transect length					
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub	Total native	Total introd
9/8/1997	NA	18 avg	83	51	0	6	93**	4**
8/24/2010	NA	13 avg d	60 d	80 i	0 s	1 d	96** s	27** i

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabltly	PFC Rating
8/24/2010	partial	partial	yes	yes	yes	yes	yes	High FAR

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

**53% of the length was occupied by reed canarygrass, in 2010 and in 76% in 1997. Reed canarygrass is considered an invasive weed, but due to distribution and genetic uncertainties it is currently classified as a native species by the USDA Plants database.

Standard 2 Rating: Meets with problems

Standard 2 Trend: down

Rationale: Lack of frequent overbank flooding and altered channel morphology lead to FAR and problem rating. Sandbar willow declined from 6% to 1% over time frame. Unknown what the cause is of this decline is—could be beaver, hydrologic regime, or competitiveness of other vegetation, leads to downward trend.

• • • • •

Standard 4 Special Status Species

Standard 4 Rating:

Standard 2 Rating: Meets with problems

Standard 4 Trend: down

Rationale: Habitat issues with reduced willows and channel problems identified above-for downstream sensitive fish (warm water fish). **Concerns: declining willows and temperature and flow alterations for warm water fish downstream.**

.

Standard 5 Water Quality

Date read	Water Chemistry				Biological Indicators			Sediment	
	EC µmhos/cm	pH	Se ppm	Standard Exceed-ences	Macros HBI	Macros EPT Richness/ Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
9/21/11	197	8.3	0.3	none	4.79	20/19,265	0	15	1.8-3*

*estimate from map/aerial photo coupled with calculations from the mapped roads

Standard 5 Rating: Meets

Standard 5 Trend: unknown

Rationale: All water quality parameters are within range and macroinvertebrates appear to be healthy

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
BR001S8 Std 2 BR001S2 Std 5 (79 m apart)	Upper Gunnison River	Unallotted	All Standards Met	GGNCA, Gunnison Gorge Wilderness

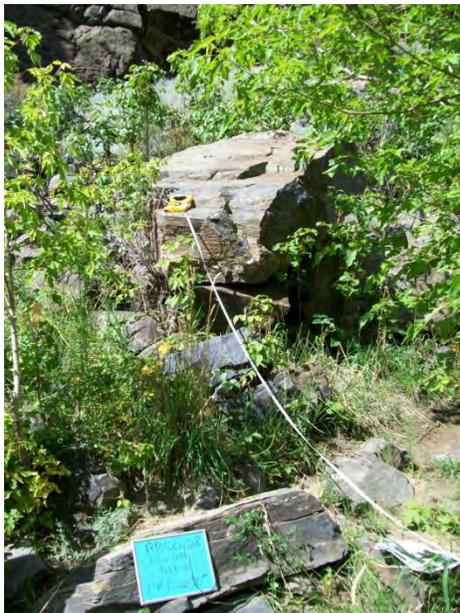
Site Photos



S8 2010 Photo Greenline Transect 1



S8 1997 Photo Greenline Transect 1



S8 2010 Photo Perpendicular Transect 1



S8 1997 Photo Perpendicular Transect 1

Riparian/Water Transect—Data Summary and Evaluation Sheet



S8 2010 Photo Perpendicular Transect 2^



S8 1997 Photo Perpendicular Transect 2>

S8 2010 Photo Perpendicular Transect 3^ S8 1997 Photo Perpendicular Transect 3^



Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length					
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub	Total native	Total introd
8/4/1997	NA	11 avg	44	4	0.4	1	44**	0**
8/23/2010	NA	14 avg i	85 i	24 i	16 i	2 i	95 i**	0 s**

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabty	PFC Rating
8/23/2010	partial	partial	yes	partial	yes	yes	yes	High FAR

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Riparian/Water Transect—Data Summary and Evaluation Sheet

**85% of the length was occupied by reed canarygrass, in 2010 and in 42% in 1997. Reed canarygrass is considered an invasive weed, but due to distribution and genetic uncertainties it is currently classified as a native species by the USDA Plants database. The 1997 natives may actually be higher, but species were combined together. Poison ivy (an undesirable native) occurred along 2.4% of the transect in 2010, and 1.7% in 1997.

Standard 2 Rating: Meets with problems **Standard 2 Trend:** static

Rationale: Trees are increasing, riparian species (obligate and facultative) are increasing, riparian area appears to be widening inward (constrained by rock walls). Poison ivy is the only shrub and it is increasing. Generally these would be improvements, but in this case appear consistent with a more controlled, less varied flow regime as we know is happening from the Aspinnall dam just upstream. However, because obligates are increasing this will be considered to offset departure from natural more scoured conditions for static trend.

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Standard 4 Special Status Species

Standard 4 Rating: Meets with problems **Standard 4 Trend:** static

Rationale: Should be warm water fish in this river, but habitat has been changed from the dam upstream. Otherwise, rating reflects Standard 2. **Concerns: temperature and flow alterations for warm water fish downstream.**

.

Standard 5 Water Quality

Date read	Water Chemistry				Biological Indicators			Sediment	
	EC µmhos/ cm	pH	Se µg/L	Standard Exceed- ences	Macros HBI	Macros EPT Richness/ Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
9/05/2001	200	7	0		5.25	12/5205	4		
5/23/2003	257	7.45	0		5.54	18/867			
9/25/2003	264	7.2	0		5.06	16/3376			
8/05/2004	262	7.7	0		4.99	8/4199	1000		
09/20/2011	184	8.2	0.3	N/A	5.50	16/1982	2	1	0.8

Standard 5 Rating: meets **Standard 5 Trend:** static

Rationale: Both water chemistry and macroinvertebrate data from 2011 are within the variability of sampling over time, and do not exceed any water quality standards. The presence of selenium in the water quality sample this year is likely a reflection of the lab’s ability to detect low concentrations.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
BR001S20 std 2 BR001S3 std 5 Same reach	Upper Gunnison River	Dedication Site	All Standards Met	GGNCA

Site Photos

S20 2010 Photo Greenline Transect 1



S20 1997 Photo Greenline Transect 1



S20 2010 Photo Perpendicular Transect 1

S20 1997 Photo Perpendicular Transect 1

Riparian/Water Transect—Data Summary and Evaluation Sheet



2010 Photo Perpendicular Transect 2 S20



S20 2010 Photo Perpendicular T2



S20 2010 Photo Perpendicular Transect 2



S20 2010 Photo Perpendicular T2

Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length				
	Channel	riparian	Wetland	Wetland	Riparian	Riparian	Total

Riparian/Water Transect—Data Summary and Evaluation Sheet

	width	width	obligate	facultat	tree	shrub	native	introd
9/8/1997	NA	26 avg	89	23	1	57	98**	1**
8/21/2008	NA	24 avg	84	22	10	21	99**	13**
8/24/2010	NA	24 avg s	80 s	85 i	6 i	27 d	95** s	39** i

Proper Functioning Condition Form

	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabltly	PFC Rating
Date Read								
8/24/2010	partial	partial	yes	yes	yes	yes	yes	High FAR

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

**52% of the length was occupied by reed canarygrass, in 2010 and in 56% in 1997. Reed canarygrass is considered an invasive weed, but due to distribution and genetic uncertainties it is currently classified as a native species by the USDA Plants database. Poison ivy (an undesirable native) occurred along 9% of the transect in 2010, and 0% in 1997.

Standard 2 Rating: Meeting with problems **Standard 2 Trend:** down

Rationale: Willow has declined from 51% to 18% of transect length, and poison ivy has increased from 0 to 9% of the length; primary introduced species is meadow fescue. Facultatives (fescue) increased, obligates static, width slightly decreased, and natives appear static but introduced increased—consistent with downward trend.

.

Standard 4 Special Status Species

Standard 4 Rating: Meeting with problems **Standard 4 Trend:** down

Rationale: Dam has reduced habitat for warm water fish, and changing habitat values from Standard 2 lead to trend and Std 4 ratings.. **Concerns: declining willows and temperature and flow alterations for warm water fish downstream.**

.

Standard 5 Water Quality

	Water Chemistry				Biological Indicators			Sediment	
Date read	EC μmhos/cm	pH	Se ppm	Standard Exceed-ences	Macros HBI	Macros EPT Richness/Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
9/21/11	199	8.4	0.2	None	3.85	22/17,711	0	15	1.8-3*

*estimate from map/aerial photo coupled with calculations from the mapped roads

Standard 5 Rating: Meets

Standard 5 Trend: unknown

Riparian/Water Transect—Data Summary and Evaluation Sheet

Rationale: Best macroinvertebrates of any of the main stem Gunnison samples in 2011. Water quality and macroinvertebrate data are all consistent with standards.

Study Name	Stream Name	Allotment	Former LH Status	Special Area
CR001S2	North Fork Gunnison River	Unallotted	All Standards Met	Gunnison River SRMA, GGNCA

Site Photos



2010 Photo Cross Section Transect



2007 Photo Cross Section Transect



2010 Photo Greenline Transect T1



2007 Photo Greenline Transect T1

Riparian/Water Transect—Data Summary and Evaluation Sheet



2010 Photo Greenline Transect T2



2007 Photo Greenline Transect T2

Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length					
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub	Total native	Total introd
7/24/2007	132	156	43	34	2	34	67**	20**
9/19/2011	135 s	154 s	39 s	36 s	2 s	33 s	66**s	4**d

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabltly	PFC Rating
9/19/2011	yes	yes	yes	yes	yes	yes	yes	Mid PFC

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

**8% of the length was occupied by reed canarygrass, in 2011 and in 10% in 2007. Reed canarygrass is considered an invasive weed, but due to distribution and genetic uncertainties it is currently classified as a native species by the USDA Plants database. Poison ivy (an undesirable native) occurred along 8% of the transect in 2011, and 6% in 2007. Russian knapweed occurred along 2% of the length in 2011, and 27% in 2007.

Standard 2 Rating: Meets

Standard 2 Trend: static

Riparian/Water Transect—Data Summary and Evaluation Sheet

Rationale: All parameters consistent with proper functioning system. Hydrology reasonably intact. Short period of trend, but little change in parameters. Reduction in Russian knapweed main cause of drop in introduced species. Willow and poison ivy increased from 5-7% each. Obligate and facultative values look good although % values low due to width of river taking up much of transect.

.

Standard 4 Special Status Species

Standard 4 Rating: Meets with problems **Standard 4 Trend: static**

Rationale: Warm water fish may be affected by water temperature changes from Paonia Reservoir upstream, and downstream cold water barrier of main stem Gunnison River. Other parameters for habitat look good, but water temperature situation probably not changing. Water temperature was 14.4 Celsius and was 13.5 Celsius on main stem of Gunnison in September.

Concerns: temperature alterations for warm water fish.

.

Standard 5 Water Quality

Date read	Water Chemistry				Biological Indicators			Sediment	
	EC µmhos/cm	pH	Se ppm	Standard Exceed- ences	Macros HBI	Macros EPT Richness/ Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
9/19/11	1,230	8.4	3.8	none	4.97	10/4,105	124	2	2.8-5*

*estimate from map/aerial photo coupled with calculations from the mapped roads

Standard 5 Rating: meets **Standard 5 Trend: unknown**

Rationale: Water quality and macroinvertebrate data within the state water quality standards. The macroinvertebrate community appears to be healthy although there is likely some organic pollution present as indicated by the higher HBI index.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
D993R001S1	Sulphur Gulch	Sulphur Gulch	All Standards Met	Gunnison River SRMA, GGNCA

Site Photos



2011 Photo Cross Section Transect 1



1997 Photo Cross Section Transect 1



2011 Photo Greenline Transect 1



1997 Photo Greenline Transect 1

Riparian/Water Transect—Data Summary and Evaluation Sheet



2011 Photo Greenline Transect 2



1997 Photo Greenline Transect 2

Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length					Total native	Total introd
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub			
7/24/2007	Channel not defined	77	0**	21	0	5	96	7	
9/26/2011	Channel not defined	77	0**	16	0	7	98	0	

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stably	PFC Rating
9/26/2011	NA	yes	no	no	yes	yes	yes	Low PFC

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

** The majority of the riparian was composed of cosmopolitan bulrush, the wetland status of which has not yet been determined

Standard 2 Rating: NA

Standard 2 Trend: NA

Rationale: Artificial system augmented by irrigation return flows or groundwater recharge of surface system (probably due to irrigation). Therefore, Standard 2 will not apply-not a natural riparian system.

.

Standard 4 Special Status Species

Standard 4 Rating: NA

Standard 4 Trend: NA

Rationale: Artificial system augmented by irrigation return flows or groundwater recharge of surface system (probably due to irrigation)

.

Standard 5 Water Quality

Date read	Water Chemistry			Standard Exceed-ences	Biological Indicators			Sediment	
	EC μ mhos/cm	pH	Se ppm		Macros HBI	Macros EPT Richness/Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
9/30/11	22,600	8.1	41	Se	NA	NA	NA	5	2.9

Standard 5 Rating: Not meeting

Standard 5 Trend: unknown

Rationale: Selenium is present at ten times the aquatic life standard. The conductivity is characteristic of brine sea water. The water source is likely deep irrigation return flows from irrigation systems higher in the basin. The sulfate concentration in the water quality sample is 16,800 mg/L. The high sulfates may be due to the relatively low calcium concentrations. In systems where calcium is limiting, sulfates can concentrate to form brines.

Study Name	Stream Name	Allotment	Former LH Status	Special Area
DR001S11 std 2 DR001S5 std 5 Same reach	Lower Gunnison River	Sulphur Gulch	All Standards Met	Gunnison River SRMA, GGNCA

Site Photos



2010 Photo – Greenline Transect



2010 Photo – Cross Section Transect 1



2010 Photo Cross Section Transect 2



2010 Photo Cross Section Transect 3

Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length					Total introd
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub	Total native	
8/26/2010	NA	64 avg	85	80	0	55	100	1

Riparian/Water Transect—Data Summary and Evaluation Sheet

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspatates	Lateral Vertical Stably	PFC Rating
8/26/2010	yes	yes	yes	yes	yes	yes	yes	Low PFC

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.
 **4% of the length was occupied by reed canarygrass, in 2010. Reed canarygrass is considered an invasive weed, but due to distribution and genetic uncertainties it is currently classified as a native species by the USDA Plants database. Poison ivy (an undesirable native) did not occur along the length of the transect in 2010.

Standard 2 Rating: Meets

Standard 2 Trend: unknown

Rationale: Rated as PFC, no concerns noted. Good amount of facultative and obligate species low amount of reed canarygrass and no poison ivy, few nonnatives.

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Standard 4 Special Status Species

Standard 4 Rating: Meets

Standard 4 Trend: unknown

Rationale: Probably somewhat affected by seasonal flow alterations from upstream dams, but diminished effects on temperatures due to distance. No concerns.

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Standard 5 Water Quality

Date read	Water Chemistry				Biological Indicators			Sediment	
	EC μ mhos /cm	pH	Se ppm	Standard Exceed-ences	Macros HBI	Macros EPT Richness/ Abundance	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
8/05/2004	470	7.5	0.003	N/A	4.3	21/1210	4		
9/19/2011	454	8.5	0.0009	N/A	4.18	9/8624	16	NA	3.5

Standard 5 Rating: Meets

Standard 5 Trend: Static

Rationale: The selenium concentration appears to have decreased but the richness of macroinvertebrates at the site has gone down. The HBI index has increased slightly but there is still some organic pollution present. Balancing the good water quality and lesser macro data for a meeting rating. The trend appears to be static since none of the parameters seems to indicate a dramatic shift since 2004.

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
DR001S16 std 2 DR001S5 std 5 Same reach	Lower Gunnison River	Smith Mountain	All Standards Met	Gunnison River SRMA, GGNCA

Site Photos



2010 Photo – Transect 0



2010 Photo – Transect 1



2010 Photo – Transect 2



2010 Photo – Transect 3

Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length					
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub	Total native	Total introd

Riparian/Water Transect—Data Summary and Evaluation Sheet

Study Name	Stream Name	Allotment	Former LH Status	Special Area
E320811R001S1	Rawhead Gulch	Rawhide/Coffee pot	All Standards Met	Not Applicable

Site Photos



2011 Photo – View Downstream



2011 Photo – View Upstream

Standard 2 Riparian

Greenline Transect

Date Read	Distance in feet		% of total transect length					Total native	Total introd
	Channel width	riparian width	Wetland obligate	Wetland facultat	Riparian tree	Riparian shrub			
NA									

Proper Functioning Condition Form

Date Read	Floods	Channel Morph	Age Class Divrsty	Species Divrsty	Plants Protect Banks	Energy Dsspates	Lateral Vertical Stabltly	PFC Rating
5/11/2006	partial	yes	yes	yes	yes	yes	yes	Low PFC
9/29/2011	no	yes	partial	yes	yes	yes	yes	Low PFC

*Designations: Colors denote condition of indicators used to rank Land Health with blue=better, red worse, and white neutral compared to expected values. Letters used to denote direction of trend for measured indicators with i=increasing, d=decreasing, s=static.

Standard 2 Rating: meets

Standard 2 Trend: static

Rationale: Rated as PF despite limited evidence of flooding and age class diversity, but this seems to be a stream largely controlled by leakage from an upstream ditch, not subject to typical climate-related hydrologic patterns. It does support a riparian area, but probably artificial. No Greenline information collected, but apparent trend appears static.

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Standard 4 Special Status Species

Standard 4 Rating: meets

Standard 4 Trend: static

Rationale: This is likely an artificially created aquatic habitat due to extensive ditch works upstream which probably provide nearly all the flows. Would otherwise be ephemeral channel. No concerns.

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Standard 5 Water Quality

Date read	Water Chemistry			Biological Indicators			Sediment		
	EC µmhos/cm	pH	Se ppm	Standard Exceed- ences	Macros O to E index	Macros MMI index	Coliform #/100ml	Ground Cover index	Road netwrk mi/mi ²
								1	>>0.6

Standard 5 Rating: Meets

Standard 5 Trend: Unknown

Rationale: In the absence of water quality or macroinvertebrate data the ground cover index and road network density are used to determine the rating. The ground cover index at this site is low, however the road density is very good, therefore the site meets.

Appendix D

Appendix D contains the development summary sheets

Abandoned Mines (AML Sites)

Documented # in GGLHA Unit: 6

Assessed: 2

% of Total: 33%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Bentonite claims- ID2419 (exploration only, not closed)			s√	-		√					√
Brush Mines – ID 2418 (closed)			√	--	√						√
Total	0%	0%	100%	-	50%	50%	0%	0%	0%	0%	100%

* S=slight ,0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Abandoned mines are mines or exploration pits which are no longer active with low likelihood of being used again, generally because of safety issues or lack of suitable ore. In the Gunnison Gorge LHA unit there has been little past mining activity. The abandoned mine sites analyzed were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: neutral to slightly negative for water erosion and groundcover
- Standard 2: not affected
- Standard 3: neutral to negative for native plants, slightly negative for weeds
- Standard 4: neutral for TES populations, neutral to slightly negative for TES habitat
- Standard 5: neutral to slightly negative for pollutants and sediment.

Abundance and distribution of abandoned mines in the Gunnison Gorge unit is low, and they have an overall minor negative influence on land health at the site level, and neutral influence on land health at the landscape level.

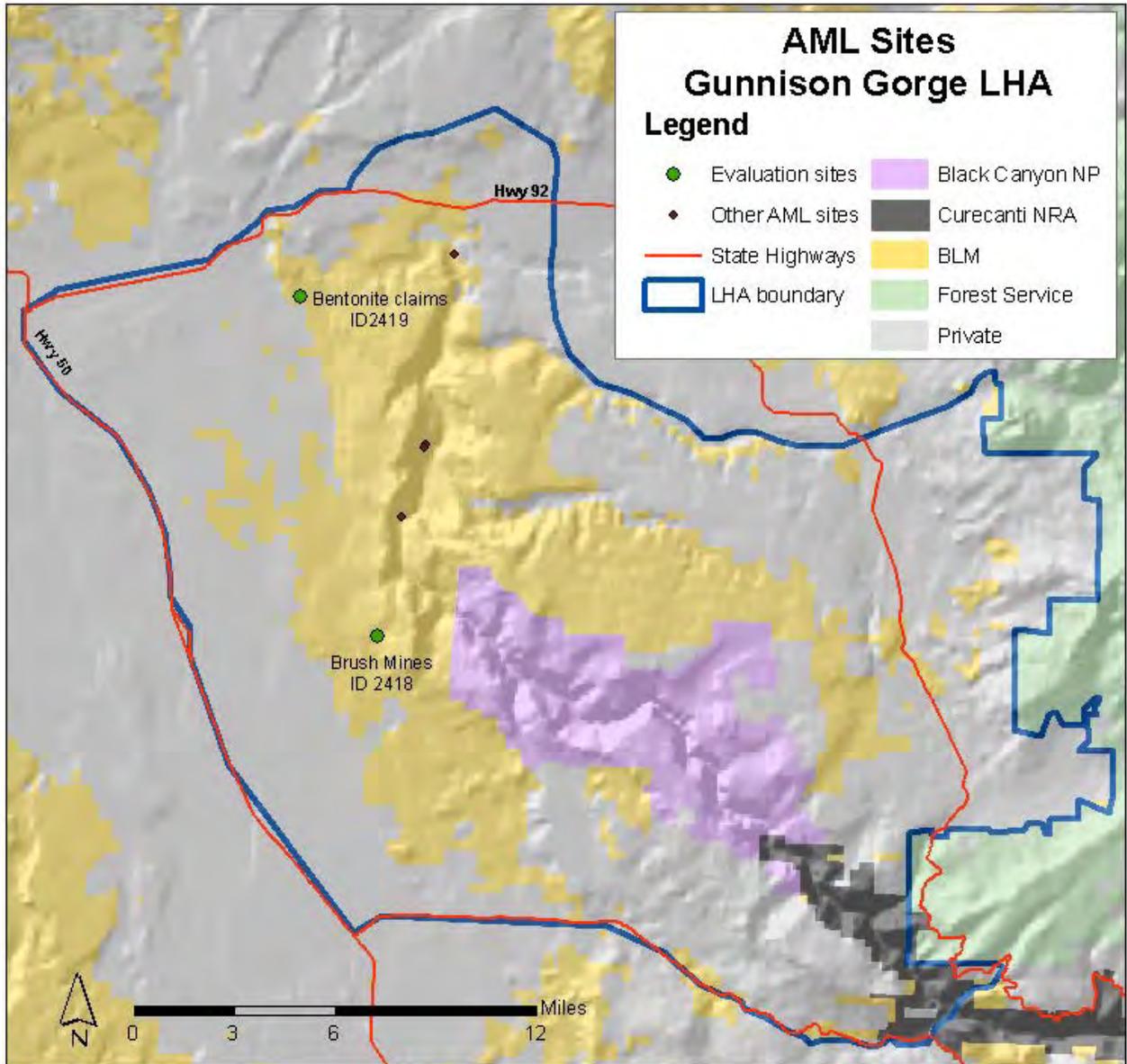
Functionality: Underground mines typically include entrances (adits), waste rock piles, and access roads. Exploration pits may also be present. BLM is carrying out a long term program to address abandoned mines in which they are reviewed for safety and environmental issues. Closure and rehabilitation is taking place as money becomes available. Thirty three percent of the documented abandoned mines in the Gunnison Gorge LHA unit are closed. Closure constitutes sealing the adit either through backfilling with soil or bulkheading with rock or concrete blocks and mortar. Some of them include bat gates to retain access for bats into the mine. The following observations were made at abandoned mines:

- Condition: the exploration pits had problems and had not been addressed or rehabilitated, the closed mine was no longer functioning as a mining site
- Location: has problems or not applicable
- Size: appropriate or not applicable
- On Site Results: has problems or not applicable

Compliance: The abandoned mines typically predate federal requirements that protect the environment and require rehabilitation once operations are complete. Compliance for closing abandoned mines that relates to land health involves closure of the adits along with rehabilitation and revegetation of the disturbed areas in and around the mine site. This also includes stabilization of the waste rock piles and the appropriate level of closure to minimize impacts to bat populations. Findings from field visits to abandoned mines included:

- Design specifications: not applicable for the exploration pits (done prior to regulation), but adequate for the closed mine
- Rehabilitation specifications: not applicable for the exploration pits (done prior to regulation), but partially successful for the closed mine
- Maintenance specifications: not applicable for either mine





BLM Routes

Documented # in GGLHA Unit: 567miles # Assessed: 22 (approx. 11 miles) % of Total: 2%

Total miles by route type: ATV route miles-35
 Admin only route miles-0.3
 Closed route miles-110
 Motorized 1-track route miles-105
 Nonmotorized route miles-0.2
 Nonmotorized/Nonmechanical route miles-6
 Open or unclassified route miles-309

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
ATV routes											
GG-DP-54			√		√						√
GG-DP-55		√			√			√			
GG-DP-56		√			√				√		
Closed routes											
GG-DP-57			√				NA				√
GG-DP-58			√				NA			√	
GG-DP-59			s√	-			√				√
GG-DP-60			√				NA			√	
GG-DP-61	Mapped closed, signed limited use						√			√	
Motorized 1 track											
GG-DP-62			s√		√			√			
GG-DP-63			s√		√			√			
GG-DP-64		√			√			√			
GG-DP-65		√		0	√			√			
GG-DP-66			s√	-	√					√	
Non-mechanized											
GG-DP-67	√				√			√			
GG-DP-68	s√				√			√			
Open routes											
GG-DP-69			√		√				√		
GG-DP-70		√		0	√				√		
Unclassified routes											
GG-DP-49		√		0	√						√
GG-DP-50		√		0							√
GG-DP-51			s√	-			NA				√
GG-DP-52			s√	++	√			√			
GG-DP-53		√		0	√						√
Total	10%	38%	52%	0	88%	0%	12%	36%	14%	18%	32%

*S=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: BLM roads and trails are nearly all user-created, with many arising from motorized recreationists in the Gunnison Gorge LHA area. BLM has designated routes for much of the NCA area, with the main designations being ATV, closed, motorized single track, non-mechanized, and open routes. The BLM roads and trails analyzed here were subdivided into these classes. They were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: slight groundcover, water and wind erosion concerns on some routes, occasionally mitigated
- Standard 2: not affected, no streams in areas evaluated
- Standard 3: generally slight native community and weed concerns on many routes
- Standard 4: slight to substantive concerns for TES plants and habitat on some routes and also for sensitive animals including sage grouse
- Standard 5 slight sediment and pollutant concerns on some routes, rarely mitigated

BLM routes vary from heavily used to unused, from wide to narrow, from heavy vegetation and soil disturbance to minimal levels. At the landscape level, concentrating travel onto a route benefits areas which might have otherwise received overland travel, however routes also invite more users into an area and are the primary source of habitat fragmentation. Overall, BLM roads and trails occur at a high level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and minor negative influence on land health at the landscape level for the whole LHA area. There are places where the route density is so high that it warrants a major negative for landscape level impacts, especially because of habitat fragmentation. We do not see substantive erosion on most routes (gullying, weeds, washing), or other substantive problems on the site, however there is a very high density of routes. There are benefits to route designation because it concentrates use in places that are planned.

Functionality: BLM roads and trails provide access to BLM lands for all users ranging from range permittees to ROW holders and recreational users. The roads and trails also provide access for private landowners. The following observations were made:

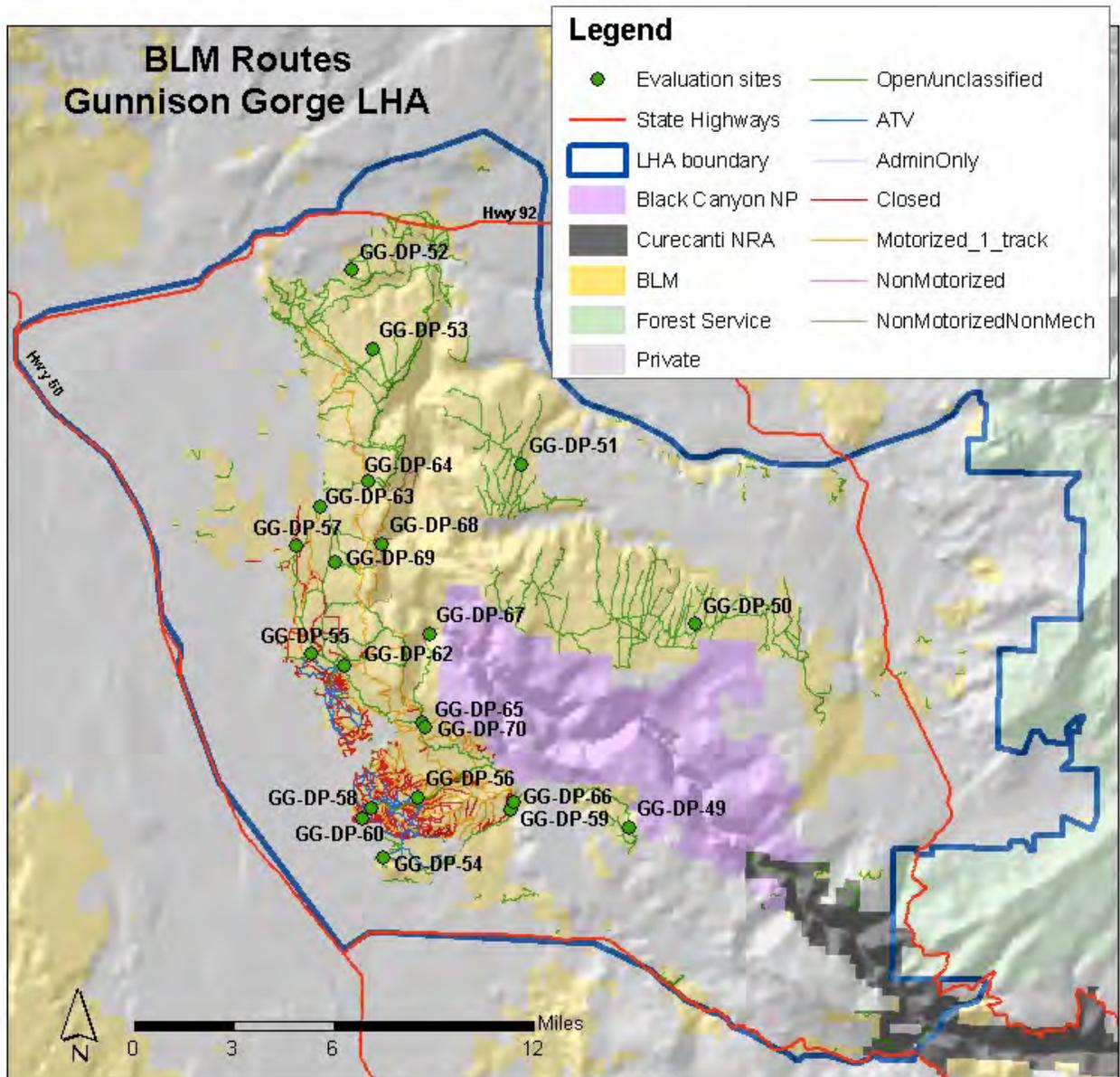
- Condition: most in good condition, only a few have problems
- Location: nearly all appropriately located, only a couple have concerns
- Size: most appropriately sized, only a couple have concerns
- On Site Results: Only around 20% have concerns, mainly the closed routes

Compliance: Most BLM roads and trails were user created, and were not initially authorized or designed, nor are most maintained. Some roads and trails were created by the BLM, typically in association with vegetation treatments or range improvements, or as recreation projects. Some of these have followed design standards and are being maintained whereas some did not. Only a few of the roads are on BLM's maintenance plan. The Uncompahgre Field Office route map is not complete for



the entire LHA unit. Findings from field visits to roads and trails included:

- Design specifications: these are historic and user created roads with no required design
 - Rehabilitation specifications: these are historic and user created roads with no required rehabilitation
 - Maintenance specifications: Most routes were considered to be not subject to maintenance specs, or fully compliant. About 20% were partially compliant, and these were open routes or motorized single track.



Campsites

Documented # in GGLHA Unit: 43

Assessed: 8

% of Total: 19%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Chukar Trailhead Camping Area			s√	++	√			√			
Chukar Campsite		√		++	√			√			
Dispersed Campsites 2 (Big Cottonwood)		√		++	√			√			
Last Camp		√		+	√			√			
Upper Duncan			s√	++	√			√			
Duncan Point			s√	++	√			√			
Dispersed Campsite 3 (Big Eddy)			√	--		√					√
Cottonwood Grove Campground		√		++	√			√			
Total	0%	50%	50%	++	88%	12%	0%	88%	0%	0%	12%

* S=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Campsites are known user-created or developed areas where people camp. Camping areas analyzed in the Gunnison Gorge unit were associated with river recreation. While there are other dispersed campsites in unit, they have not been inventoried. The evaluated campsites were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: slightly negative for groundcover on most, water erosion on a few
- Standard 2: slightly negative for riparian vegetation on some, bank erosion on a few
- Standard 3: slightly negative overall for plants on some, and weeds on most
- Standard 4: not affected
- Standard 5: neutral for nearly all indicators

At the landscape level, establishment of campsites concentrates and limits the impacts associated with camping and can relieve other areas from these impacts. However, established campsites can also invite more users into an area. Overall, campsites occur at a moderate level in the LHA unit (concentrated along river areas, not affecting uplands much), and they have an overall minor negative influence on land health at the site level, and minor positive influence on land health at the landscape level because they concentrate use in planned areas, and can alleviate use in more vulnerable areas.

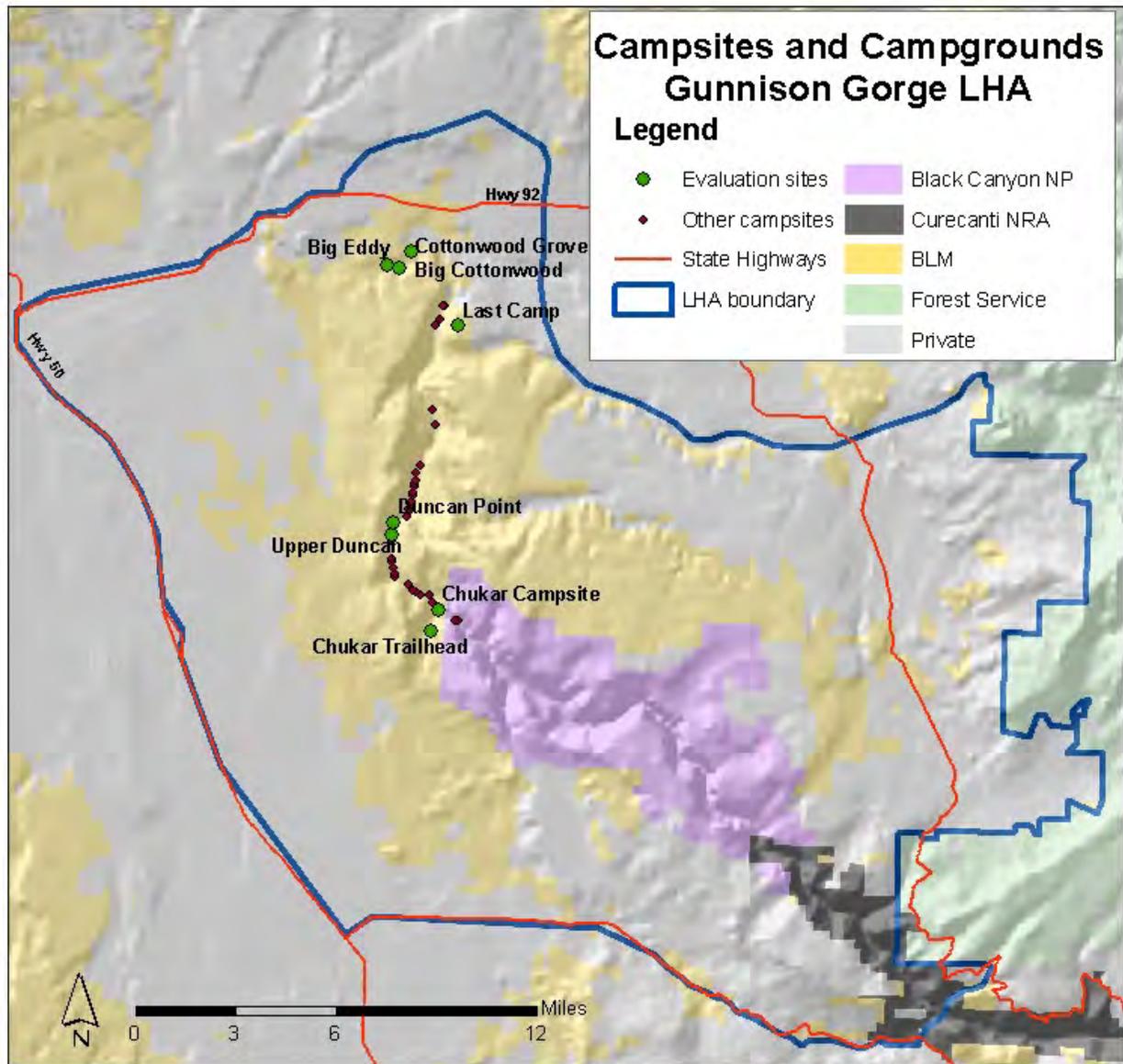
Functionality: Campsites provide an area for public land users to stay overnight in the outdoors. Campsites generally include a parking area, access road, area for camping gear and fire pit. The following observations were made:

- Condition: most good, one had problems with layout and usability
- Location: most good, Big Eddy had problems with layout being constrained by topography and the slope
- Size: most good, a couple with had concerns with size of barren area being larger than necessary
- On Site Results: most good, Big Eddy had problems with resource damage, people driving around barricades, etc.

Compliance: When a campsite is encountered, it is mapped with GPS. BLM may perform some maintenance or cleanup when the need is identified. Findings from field visits to campsites included:

- Design specifications: not applicable, or fully met
- Rehabilitation specifications: most not applicable, a few only partially met
- Maintenance specifications: most fully met





Cattleguards and Corrals

Documented # in Gunnison Gorge LHA Unit: 7* Number Assessed: 2 Percent of Total: 29%

*7 were in the RIPS records but only 4 were found in the GIS data

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Peach Valley Cattleguard #236159			s√			√			√		
Green Mtn Corral #231281			√			√					√
Total	0%	0%	100%		0%	100%	0%	0%	50%	0%	50%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Cattleguards are associated with fencelines and are used to restrict animal movement on roadways while allowing free flowing traffic. Corrals are small enclosures for livestock management. Not all the cattle guards and corrals are documented in GIS yet. The cattleguards and corrals analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: nearly all neutral
- Standard 2: not applicable
- Standard 3: slightly negative for native vegetation and weeds. The cattle guard was also slightly negative for wildlife habitat and connectivity
- Standard 4: neutral
- Standard 5: neutral

At the landscape level, establishment of range improvements such as cattleguards and corrals allows for improved livestock management across a grazing allotment. While the developments themselves can affect health indicators on site, improved livestock management can reduce the impacts of unmanaged grazing across a larger area. Overall, cattleguards and corrals occur at a low level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and minor positive influence on land health at the landscape level.

Functionality: Cattleguards are designed to include a base, a pit, a grate and wings, with an associated gate to the side. Functionality of a cattleguard includes restricting livestock passage while allowing for safe passage of traffic without the drivers needing to open or close a gate. Corrals generally include poles, panels, or other fencing, and include sorting facilities, gates, and loading ramps. Functionality of a corral depends on the appropriate location to achieve livestock management objectives, appropriate design and adequate maintenance of the facility. The following observations were made:

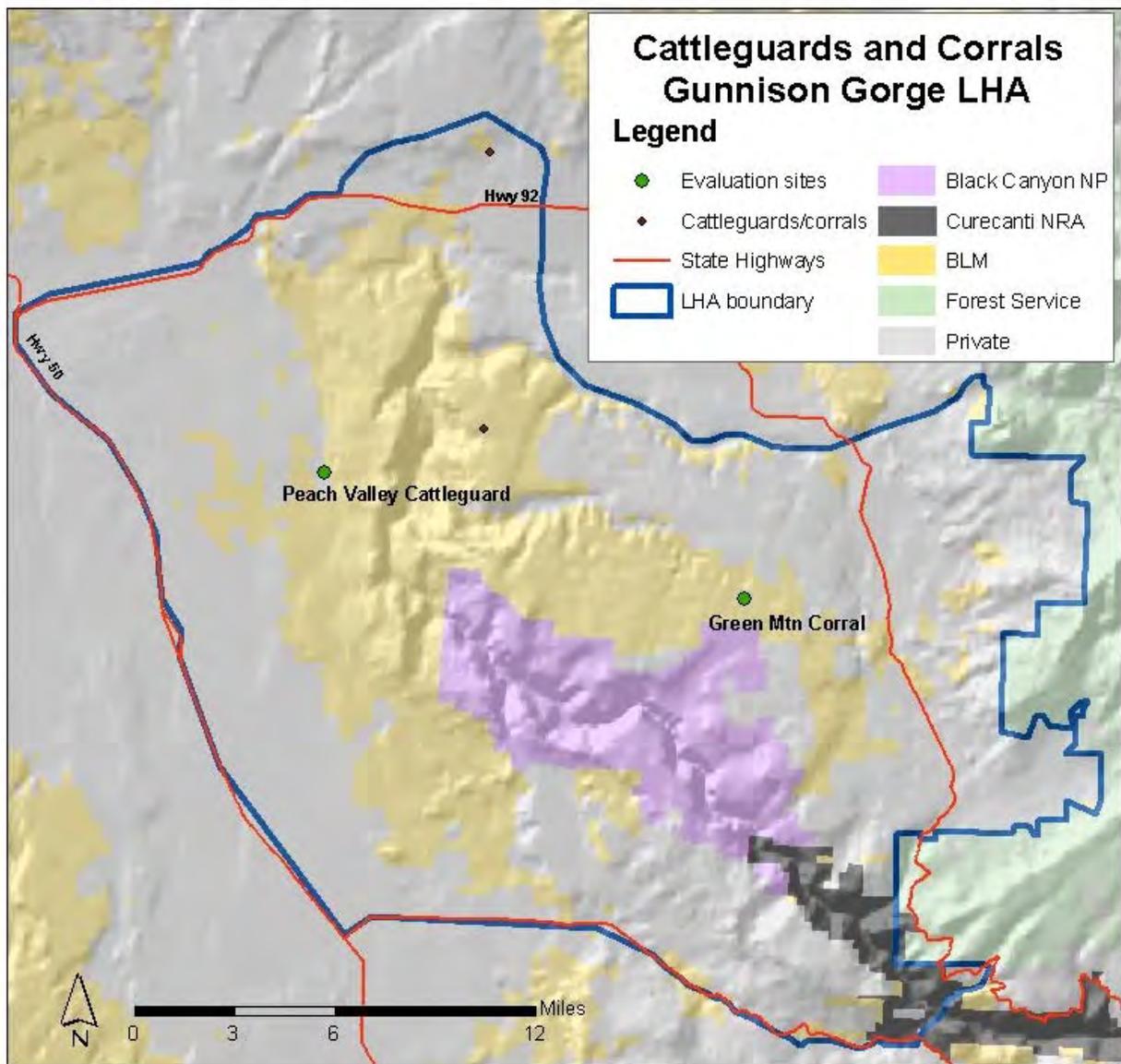
- Condition: both had problems with fencing being inadequate to hold animals

- Location: both good
- Size: both appropriate
- On Site Results: one good, one had problems with downed fencing

Compliance: Compliance for cattleguards involves following BLM design and installation specifications, along with state and county mandates as necessary. Required maintenance includes periodic cleaning of the pit, general repairs to the components, and keeping in a weed free state. Findings from field visits to cattleguards included:

- Design specifications: one partially met, one not applicable
- Rehabilitation specifications: not applicable
- Maintenance specifications: one fully met, one not applicable





Communications Site ROWs

Documented # in GGLHA Unit: 4 areas, 12 authorizations # Assessed: 3 % of Total: 75%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Flat Top Tower 1 COC 069163		√			√			√			
Flat Top Tower 2: COC 035117, 038358, 055475, 058093, 06460, etc.			s√		√			√			
Green Mtn: COC 060533, 059910, 063197			s√	-	√			√			
Total	0%	33%	67%	-	100%	0%	0%	67%	33%	0%	0%

*0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Communication site ROWs are leases to authorize communications equipment on public lands. The sites analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: mainly neutral, slight groundcover impacts on one site, water erosion impacts on another
- Standard 2: not affected
- Standard 3: slightly negative on one for native plants and weeds. Slightly negative for wildlife mainly from tower’s guyed wires on all sites.
- Standard 4: neutral
- Standard 5: neutral

At the landscape level, while communication sites can affect health indicators on site, they do not affect other factors which influence land health. Overall, communication sites occur at a low level in the LHA unit, and they have an overall minor negative influence on land health at the site level (mainly due to guyed wires and bird impacts), and neutral influence on land health at the landscape level. Rated neutral at the landscape level because they are so few across the landscape, and the authorizations are centrally located.

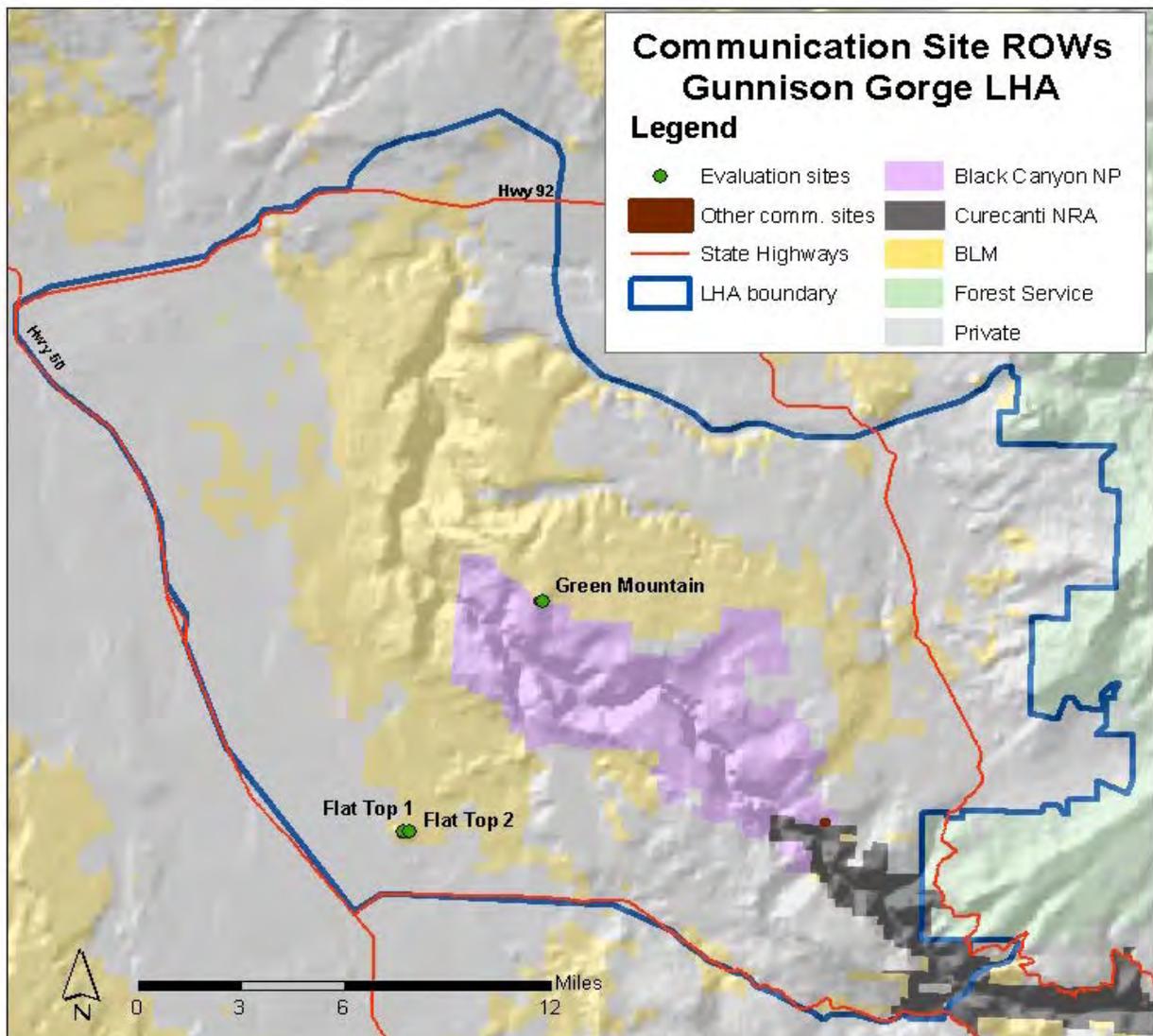
Functionality: Communications sites are specifically located to optimize broadcast or transmission abilities—typically on higher elevation points. They generally include a tower, a building to house equipment, sometimes a generator or batteries, often a protective fence, and an access route. The following observations were made:

- Condition: good
- Location: good
- Size: appropriate
- On Site Results: good

Compliance: Compliance for communication site ROWs that relate to land health involves meeting construction stipulations and size of site, ensuring the area is kept free of vegetation to protect against fire, erosion prevention and maintenance of the access routes, staying on the designated routes, and ensuring noxious weeds are controlled. Findings from field visits to communication sites included:

- Design specifications: fully met
- Rehabilitation specifications: not applicable or fully met
- Maintenance specifications: one partially met, the others fully met





Contour Furrows and Check Dams (watershed stabilization)

Documented # in GGLHA Unit: >4,500 acres

Number Assessed: 5

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
GG-DP-93			√				√				√
GG-DP-94			s√				√	√			
GG-DP-95			√				√				√
GG-DP-96			√				NA				√
GG-DP-97			s√				√	√			
Total	0%	0%	100%		0%	0%	100%	40%	0%	0%	60%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Contour furrows and check dams are used to slow the runoff of precipitation and sediment from a watershed, and encourage more moisture to infiltrate into the soil. These are old structures put in in the 1960s to slow soil erosion, with over 1200 of them put in on the west side of the unit. The contour furrows and check dams analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: slightly to substantially negative for water erosion, most slightly negative for wind erosion and groundcover
- Standard 2: neutral or not affected
- Standard 3: most substantially negative for native plants, and slightly to substantially negative for weeds, with associated impacts to wildlife habitat on most sites.
- Standard 4: neutral
- Standard 5: most slightly to substantially negative for sediment.

At the landscape level, contour furrows and check dams alter normal runoff patterns and can change the location, timing, and amounts of water and associated sediment movement within a watershed. Overall, contour furrows and check dams occur at a moderate level in the LHA unit (cover about 20% of unit), and they have an overall major negative influence on land health at the site level, and minor negative influence on land health at the landscape level, but major negative influence in the adobes.

Functionality: Contour furrows are long, shallow furrows generally constructed along the contour at regular intervals within a watershed thought to be at risk of erosion. Gully plugs are small earthen berms constructed across small drainages. The following observations were made:

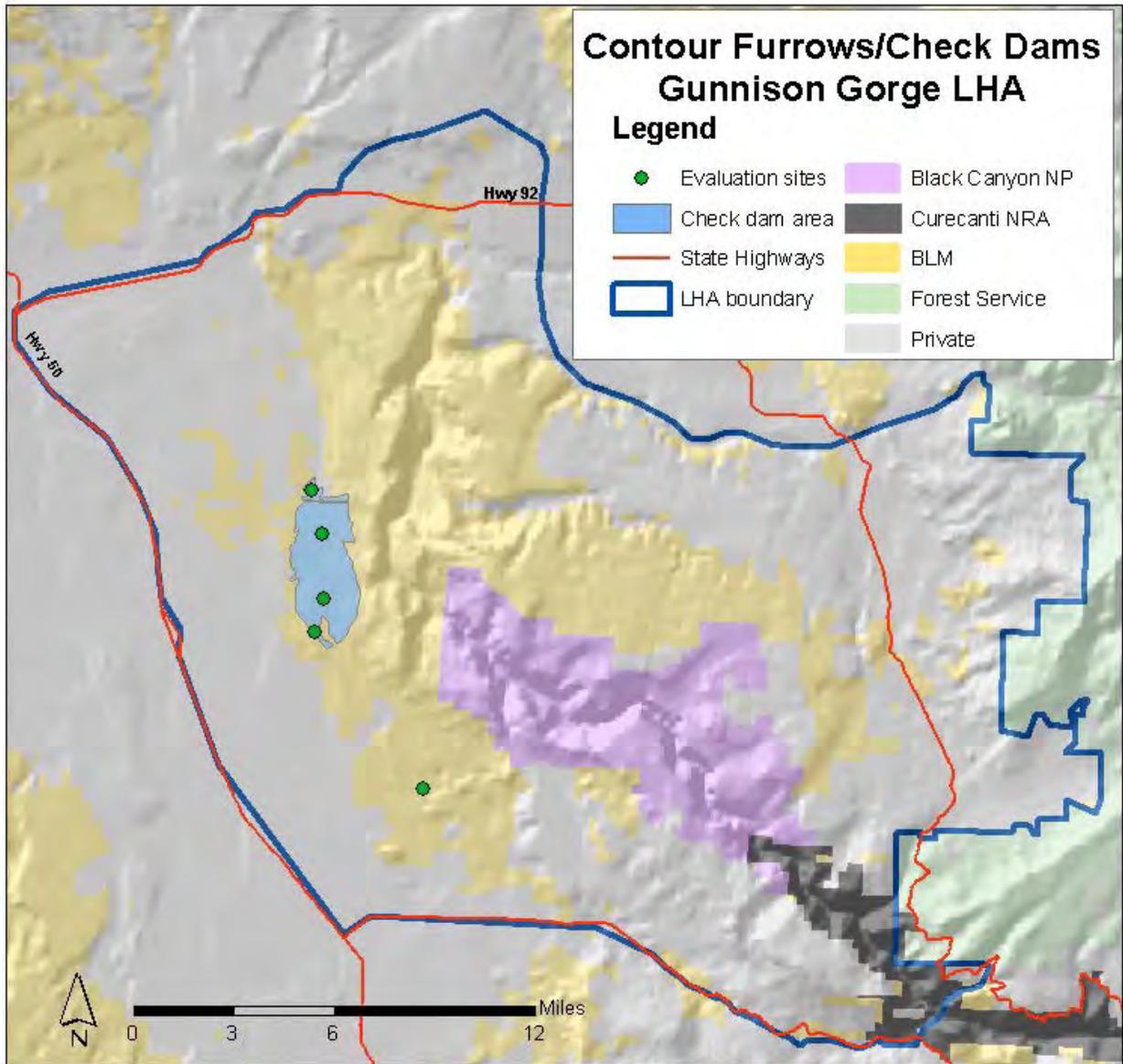
- Condition: most nonfunctional, some partially functional
- Location: most good, one not appropriate
- Size: good
- On-site Results: have problems and not achieving original intent

Compliance: Compliance for contour furrows involves following BLM design specifications. It is unlikely that rehabilitation other than seeding was required for these watershed stabilization

projects. Maintenance was likely anticipated to include re-pulling of the furrows periodically. These should be kept in a weed free state. Findings from field visits to reservoirs included:

- Design specifications: fully met
- Rehabilitation specifications: fully met or not applicable
- Maintenance specifications: not applicable. Most had increased levels of weeds





Cultural Interpretation Sites

Documented # in Gunnison LHA Unit: 1 Number Assessed: 1 Percent of Total: 100%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Lawhead Gulch Rock Art Site		√		++	√			√			
Total	0%	100%	0%	++	100%	0%	0%	100%	0%	0%	0%

*0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Cultural interpretation sites include the cultural site itself as well as barriers or other protective measures to prevent damage from occurring to the site. Kiosks or interpretive signs may also be present. These sites can also include parking areas, access routes, and additional facilities as needed. The cultural interpretation site analyzed in the Gunnison Gorge LHA was found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: slightly positive for water erosion
- Standard 2: not affected
- Standard 3: slightly negative for weeds
- Standard 4: not affected
- Standard 5: neutral

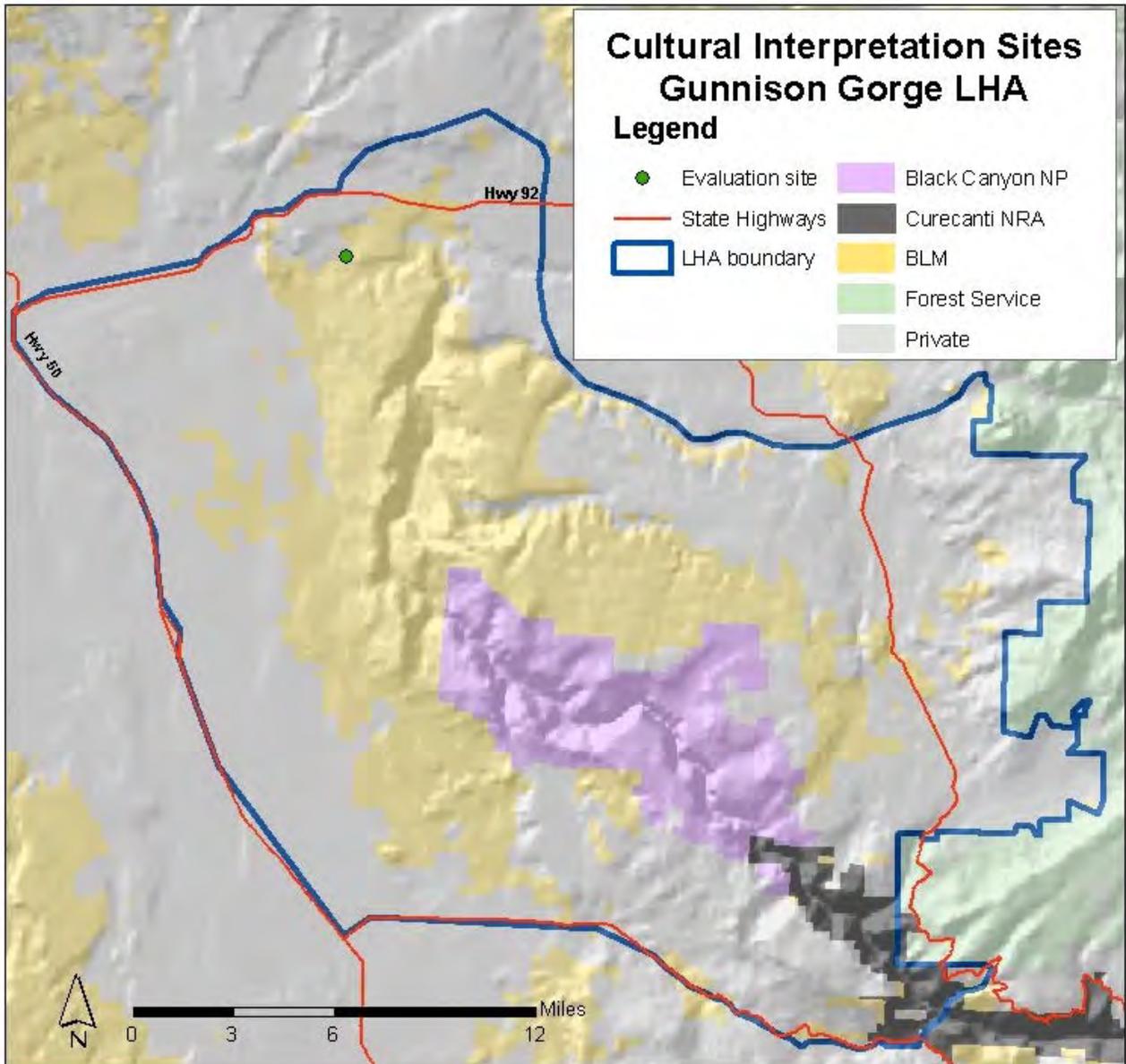
Overall, cultural interpretation sites occur at a low level in the LHA unit, and they have an overall neutral influence on land health at the site level, and neutral influence on land health at the landscape level.

Functionality: Cultural interpretation sites are designed to inform the public about the cultural resource, while protecting the resource from theft or damage. The following observations were made:

- Condition: good
- Location: good
- Size: good
- On-Site Results: good

Compliance: Cultural interpretation sites may be designed according to basic recreation site and engineering specifications, as well as guidelines provided by the National Association for Interpretation, and the National Park Service “Interpretive Development Program”. Maintenance is done on as needed basis. Findings from field visits to the cultural interpretation site included:

- Design specifications: fully met
- Rehabilitation specifications: not applicable
- Maintenance specifications: fully met



Developed Recreation Sites (includes boat launch, trailheads, OHV staging areas, parking areas)

Documented # in GGLHA Unit: 34

Assessed: 10

% of Total: 29%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Boat launch											
Orchard Boat Launch		√		0	√			√			
OHV staging											
Flat Top Staging Area			s√		√				√		
Peach Valley OHV Staging Area			√		√			√			
Parking areas											
East Flat Top			√	+	√						
Gunnison Forks Overlook			s√	0	√				√		
Cool Rock Parking Area		√			√				√		
Trailheads											
Eagle Valley Trailhead			s√		√				√		
Duncan Trailhead			s√		√			√			
Lawhead Gulch Trailhead			√				√				√
Birthday Canyon Trailhead		√				√		√			
Total	0%	30%	70%	+	80%	10%	10%	44%	44%	0%	12%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Special recreation sites include boat launches, trail heads, developed picnic and camping areas, parking and staging areas, and information kiosks. These sites can include parking areas, access roads, informational signs, and additional facilities as needed. The special recreation sites analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: neutral for most indicators, minor to substantive concerns with groundcover on a few sites, minor concerns with water erosion on a few sites
- Standard 2: generally neutral or not affecting riparian indicators with the exception of minor bank erosion at one site
- Standard 3: minor impacts to native plants at some sites, most sites had minor to substantive weed issues, generally neutral to wildlife
- Standard 4: neutral or not applicable for most indicators, a few minor concerns with impact to TES habitat

- Standard 5: generally neutral, minor concerns with sediment at a few sites

At the landscape level, developed recreation sites concentrate and direct use, and can limit the impacts associated with recreation. However, developed recreation sites can also invite more users into an area. Overall, developed recreation sites occur at a moderate level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and neutral influence on land health at the landscape level. Some sites are concentrating uses in areas we don't want biological impacts (TES lands), however concentrating the uses in a planned area, reduces some of the parking impacts.

Functionality: Special recreation sites are designed to provide facilities to users and additional protection for natural resources within the area. Special recreation sites are usually developed areas where high levels of use are observed and the improvements are needed to eliminate further resource impacts to those areas.

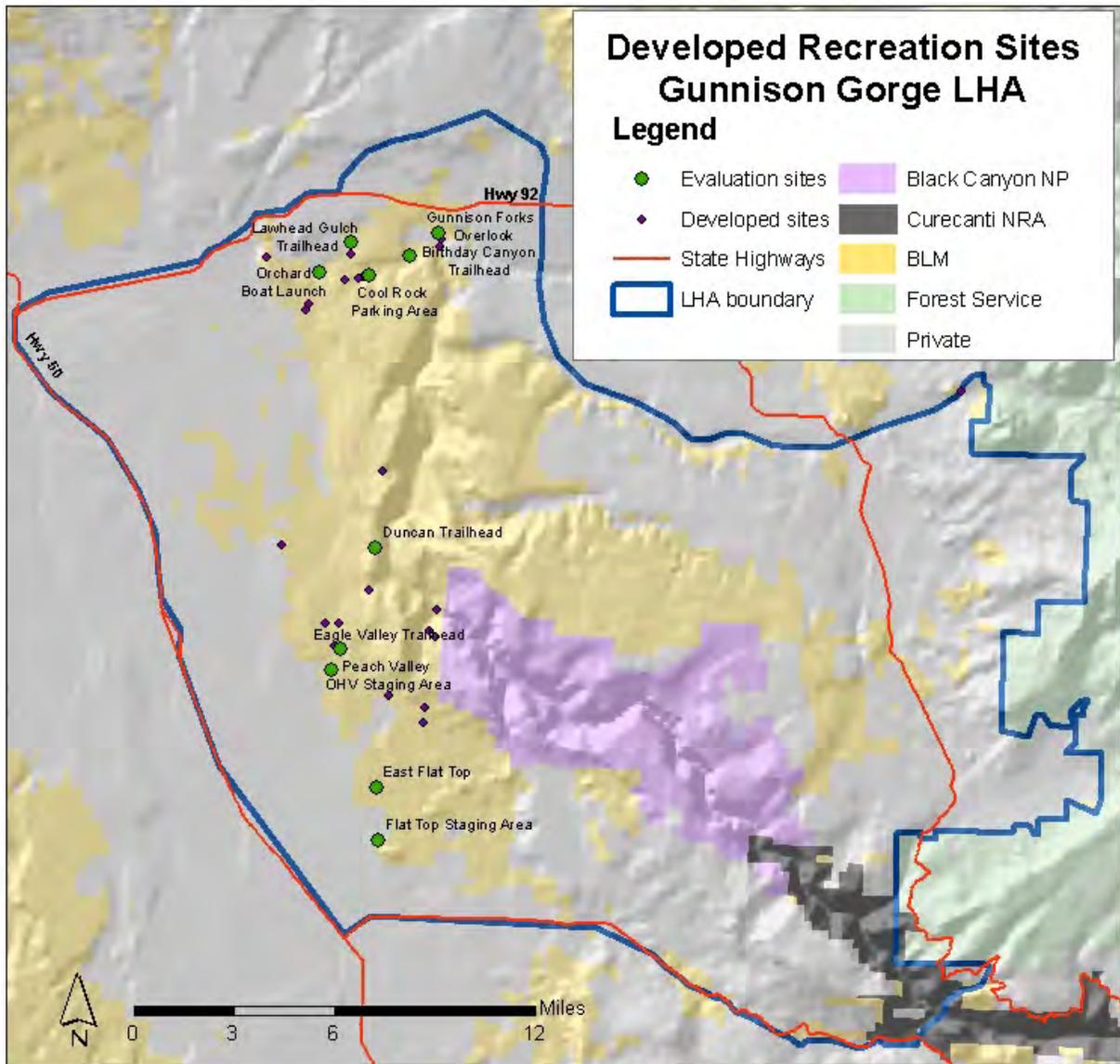
The following observations were made:

- Condition: most fully functioning, one not fully developed (Lawhead Gulch trailhead) which allows uncontrolled parking
- Location: most good, one is located in a location where it is unclear what the purpose is
- Size: most appropriate, 3 seem too large or are not adequately confined
- On-Site Results: most good, Lawhead Gulch trailhead the exception

Compliance: Special recreation sites that have been developed or have improvements provided by the BLM are designed by BLM and use Best Management Practice standards. Special recreation sites that were developed by BLM or popular user-created sites with BLM improvements are monitored annually for adverse resource impacts that may occur within the site such as the growth of weeds. Every five years, these sites also have safety inspections conducted on-site to identify any safety hazards needing to be mitigated that may affect the public or the surrounding natural resources. Findings from field visits to the special recreation sites included:

- Design specifications: fully met with the exception of Lawhead Gulch trailhead
- Rehabilitation specifications: field crews did not feel that rehab was required for most sites, some sites fully met specifications, and one did not meet rehab requirements.
- Maintenance specifications: fully met for half the sites, partially met for some sites, with weed and erosion issues cited.





Ditch ROWs

Total Number in GGLHA Unit: 3 (9.8 mi) # Assessed: 1 (assessed longest ROW in two locations totaling about 1 mile) % of Total: 33% of ROWs (10% of miles)

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
COD 0035896			√	--	√				√		
COD 0035896		√		0	√						√
Total	0%	50%	50%	-	100%	0%	0%	67%	50%	0%	50%

*0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Water pipeline and water facility ROWs are authorizations for transport of water across public lands. The water pipeline and ditch ROWs analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: neutral
- Standard 2: neutral
- Standard 3: one substantially negative for native plants and weeds
- Standard 4: neutral
- Standard 5: neutral

At the landscape level, ditches move water from one area to another area where it would not go under normal hydrology. This can increase or decrease water from the natural drainage pattern, resulting in hydrologic impacts that extend beyond the development itself. They also increase the rate of weed dispersal across a landscape. Overall, ditches and their ROWs occur at a low level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and neutral influence on land health at the landscape level. Weed control would improve site ratings to neutral

Functionality: Water ditches include the ditch, headgates, diversions, measuring facilities or equipment, and access routes typically along the ditch. Functionality of a ditch ROW includes adequate width on the ground for construction, operation, maintenance, and reclamation. The following observations were made:

- Condition: good
- Location: good
- Size: good
- Layout: good

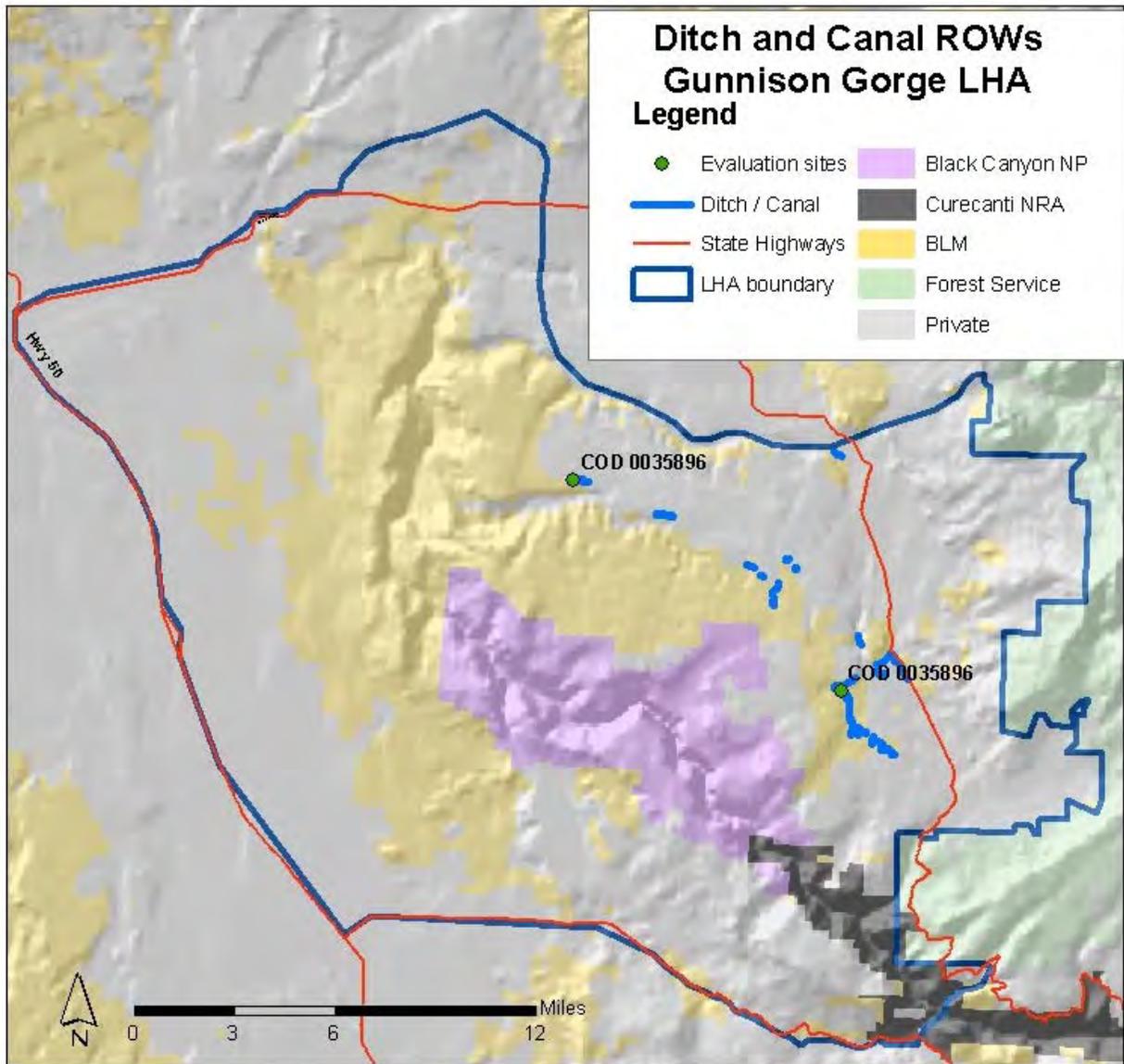
Compliance: Right of way compliance for ditches relating to land health involves meeting construction stipulations and width of the ROW, revegetation of disturbed areas, erosion prevention, staying on the designated



routes, and ensuring noxious weeds are controlled. These are Pre-FLPMA ROWs with no required maintenance or compliance. Findings from field visits to ditch ROWs included:

- Design specifications: fully met
- Rehabilitation specifications: fully met or not applicable
- Maintenance specifications: one fully met, the other partially met with weeds not adequately controlled





Exclosures

Documented # in GGLHA Unit: 5

Assessed: 2

% of Total: 40%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Candy Lane Exclosure 1		√			√			√			
Peach Valley Exclosure		√			√			√			

Total	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%
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*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Exclosures are used as a study tool to observe the effects of the absence of livestock (and potentially deer and elk) grazing, and can also be useful to exclude OHV use. The exclosures analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: neutral to slightly positive for groundcover
- Standard 2: not applicable
- Standard 3: slightly positive for native plants, slight negative impacts on weeds and habitat connectivity on one site
- Standard 4: neutral
- Standard 5: neutral

At the landscape level, exclosures exclude use from small areas which can lead to slightly higher use levels outside of the closed off area. However, their purpose of demonstrating impacts of use and recovery potential of sites can lead to better informed management across the landscape. Overall, exclosures occur at a low level in the LHA unit, and they have an overall neutral influence on land health at the site level, and neutral influence on land health at the landscape level.

Functionality: Exclosures are small fenced areas, generally with a gate. Depending on the design and height, they exclude livestock or wildlife grazing from the protected area to provide a comparison with an adjacent grazed area. Functionality of an exclosure includes preventing animal access, providing access to people, and providing a way to let out any animals that become trapped inside.

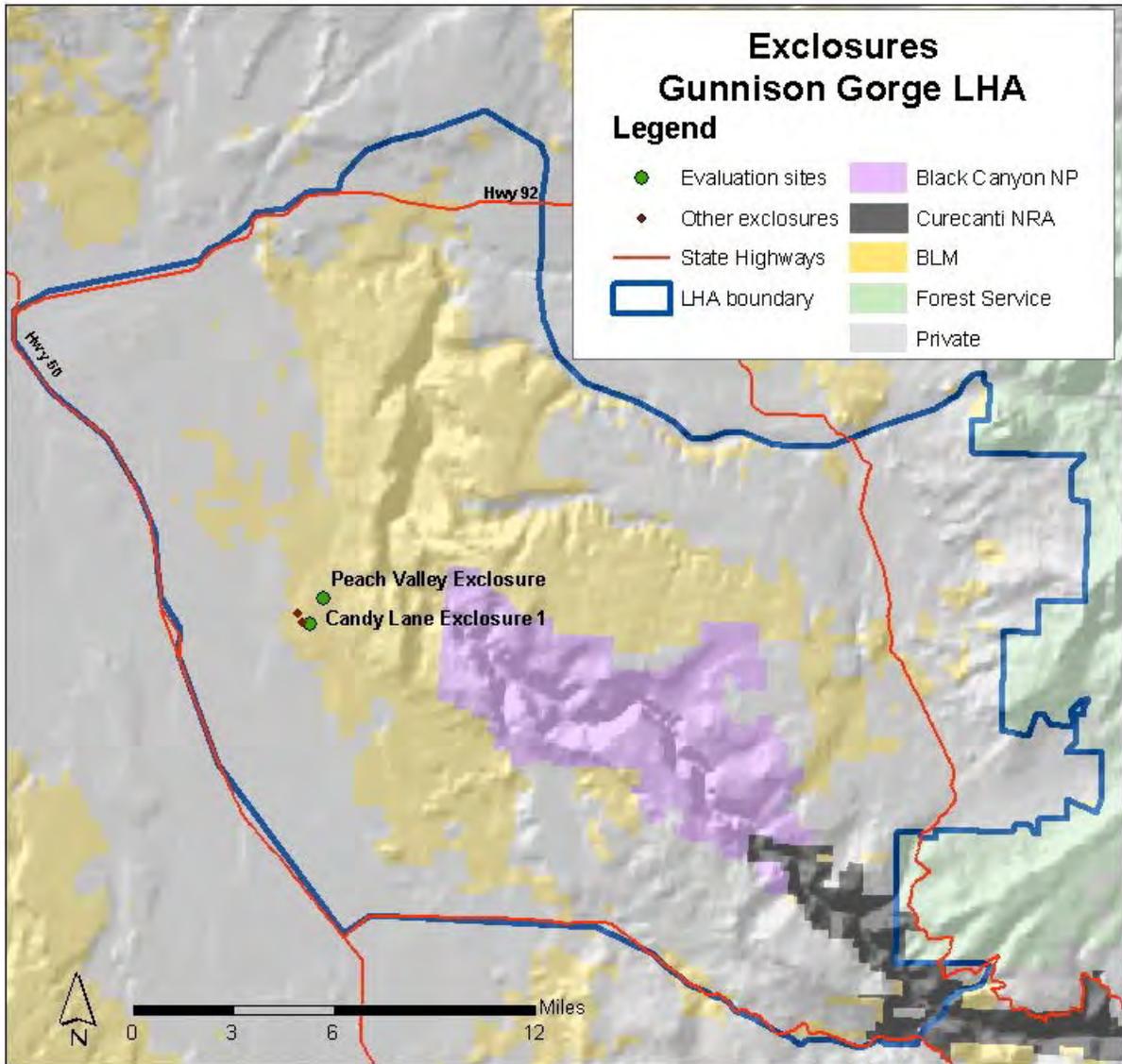


The following observations were made:

- Condition: both good
- Location: both good
- Size: both appropriate
- On-Site Results: both good

Compliance: Compliance for exclosures involves following BLM design specifications, seeding of any areas where soil disturbance has occurred, and regular maintenance of the fence. Findings from field visits to exclosures included:

- Design specifications: fully met
- Rehabilitation specifications: rehabilitation not required
- Maintenance specifications: fully met



Fences (includes range allotment division and boundary fences, and recreation barrier fences)

Documented # in GGLHA Unit: Unknown

Assessed: 8

% of Total: 27

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Recreation barrier fence											
GG-DP-72	√				√				√		
GG-DP-73	√				√				√		
Range division fence											
Green Mtn Division fence, #231485			s√	0	√			√			
Adobe Fence #235366			√				√			√	
Allotment boundary fence											
Green Mountain		√		0	√			√			
Poison Spring			√	-			√				√
Rawhide Coffeepot		√		0			√				√
Cedar Point	No fence										
Total	29%	29%	42%	0	57%	0%	42%	29%	29%	14%	29%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Fences generally are a barrier to contain domestic livestock within an area. They can also be effective at controlling OHV use. The fences analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: most neutral, one substantially positive for groundcover
- Standard 2: not applicable
- Standard 3: mostly neutral for native plants and weeds with the exception of substantial benefits to native plants in one area, and minor impacts with. Minor to substantial impacts to wildlife and connectivity on some fences
- Standard 4: mostly not applicable or neutral, slightly negative impacts to TES species and habitat on a few fences.
- Standard 5: neutral

At the landscape level, fences control animal and human movement, which can help manage and reduce impacts from uncontrolled use across the larger landscape. By doing this they also fragment the habitat to animals which cannot easily pass through them. Overall, fences occur at a moderate level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and minor positive influence on land health at the landscape level.

Functionality: Fences are designed to include or exclude domestic livestock or vehicles in or from designated areas, and typically include posts or wire, but may be constructed of brush, poles or electric wire. Fences function best when they are in the right location to meet the original management objectives.

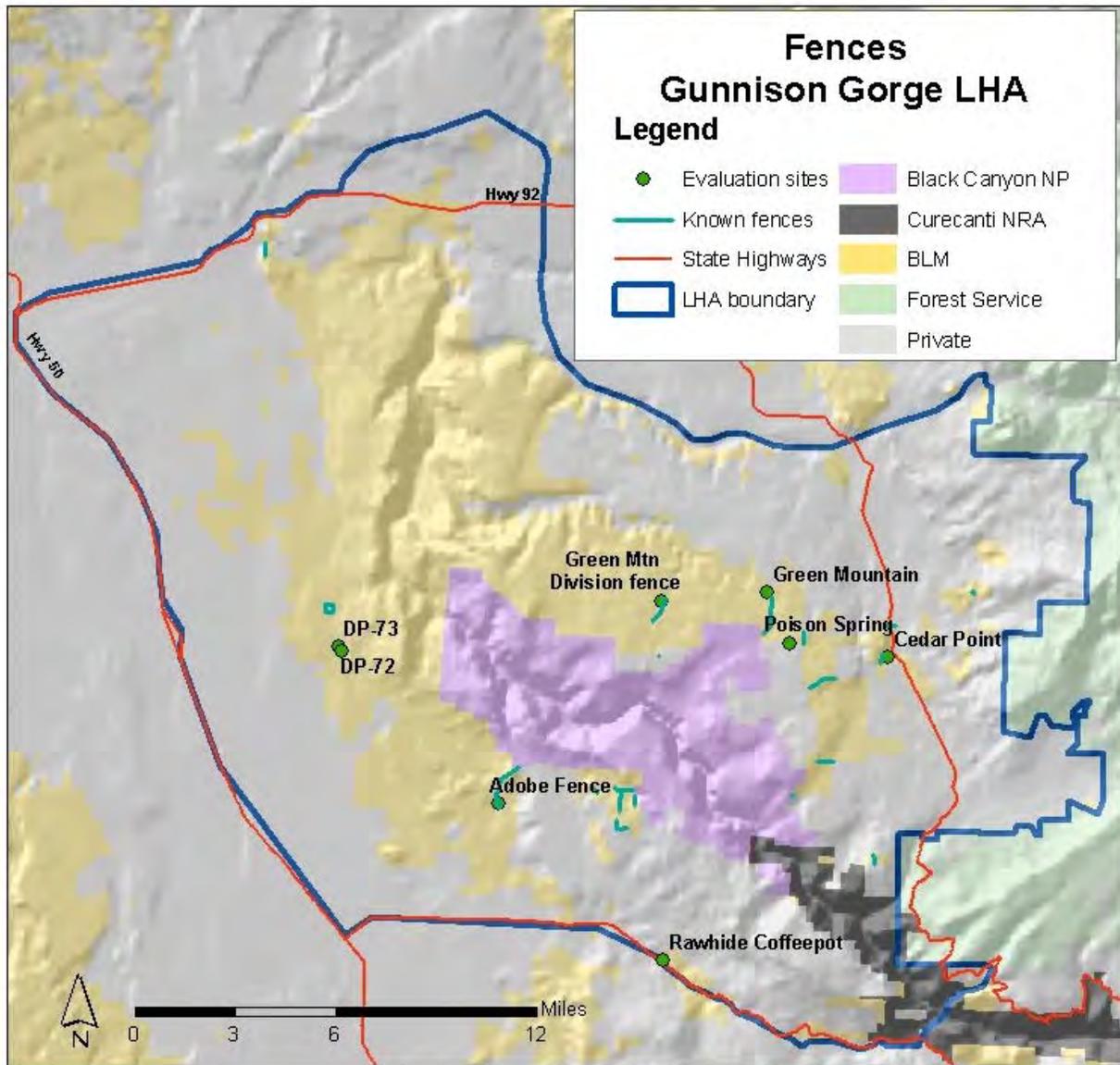
The following observations were made:

- Condition: most good, some nonfunctional
- Location: all good
- Size: most appropriate, one fence has problems with wire spacing
- On-site Results: most good, one has problems with downed wires tangling livestock-destroyed by target shooters

Compliance: Compliance for fences involves following BLM design specifications, monitoring of conditions, and adequate maintenance. While it is not a written guideline, fence maintenance or construction activities that cause ground disturbance require seeding of those areas. Findings from field visits to fences included:

- Design specifications: fully met or not applicable
- Rehabilitation specifications: not applicable
- Maintenance specifications: some fully met, one partially met, one not met





Pipeline ROWs

Documented # in GGLHA Unit: 9 (12.8 mi)

Assessed: 3

% of Total: 33%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
COC 73595			√	-	√			√			
COC 050588	Not found										
COC 026595	√			+	√			√			
Total	50%	0%	50%	0	100%	0%	0%	50%	50%	0%	0%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Pipeline ROWs are authorizations to locate pipelines for the transport of fluids across public lands. The pipelines analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: neutral for majority of indicators, minor negative for groundcover on one site
- Standard 2: not affected
- Standard 3: minor to substantial weed impacts, minor positive to minor negative impacts for native plants. Neutral to minor positive impacts to wildlife and habitat
- Standard 4: not affected or neutral
- Standard 5: neutral

At the landscape level, while pipeline ROWs can affect health indicators on site, they generally do not affect other factors which influence land health, unless exceptional rehabilitation improves native plant species and health where the pipeline passes through a degraded landscape. Overall, pipeline ROWs occur at a low level in the LHA unit, and they have an overall neutral influence on land health at the site level, and neutral influence on land health at the landscape level (but minor negative influence in the adobes). Ground disturbance always brings in a different vegetation complex. In adobes, this will lead to health problems especially with weeds.

Functionality: Pipelines are designed to transport fluid minerals or other fluids from one location to another and include underground pipe and aboveground location markers and valves. There may be associated compressor stations, and access points for maintenance and equipment. Functionality of a pipeline ROW includes adequate width on the ground for construction, operation, maintenance, and reclamation. Additional temporary workspace ROWs may be included.

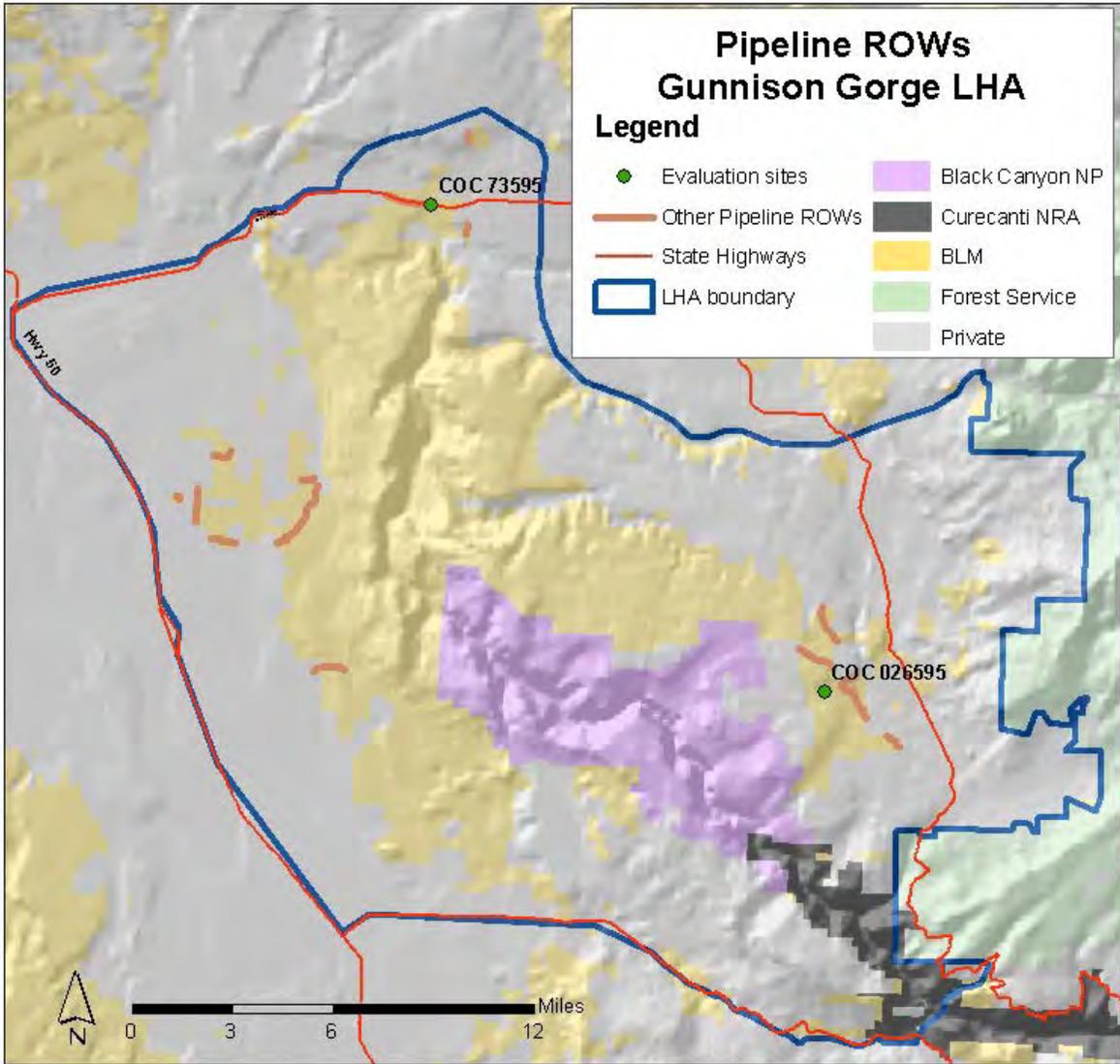
The following observations were made:

- Condition: good
- Location: good
- Size: appropriate
- On-site Results: good

Compliance: Right of way compliance for gas pipeline ROWs which relates to land health involves the following: meeting construction stipulations and width of the ROW, revegetation of disturbed areas, erosion prevention and maintenance of the access routes, staying on the designated routes, and ensuring noxious weeds are controlled. Findings from field visits to the pipeline included:

- Design specifications: fully met
- Rehabilitation specifications: partially to fully met
- Maintenance specifications: fully to partially met





Gas Wells and Pads

Documented # in GGLHA Unit: 8

Assessed: 2

% of Total: 25

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
05-085-05048	Not found										
05-029-05016			√		NA						√
Total	50%	0%	50%	0	100%	0%	0%	50%	50%	0%	0%

*0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Oil and gas development is very limited in the LHA unit, and those in the unit are abandoned or closed. One of the wells documented in the GIS data could not be found, the other one scheduled for a site visit had been plugged and abandoned. The gas well pad analyzed in the Gunnison Gorge LHA was found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: minor negative for water erosion and groundcover
- Standard 2: not affected
- Standard 3: minor negative for native vegetation and weeds
- Standard 4: neutral
- Standard 5: minor negative for pollutants

At the landscape level, while oil and gas developments can affect health indicators on site, they generally do not affect other factors which influence land health. Overall, oil and gas developments occur at a low level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and neutral influence on land health at the landscape level.

Functionality: Gas or oil wells and associated pads include and are designed to support the infrastructure necessary to drill and develop the well, and secondly to provide access to the well and associated facilities needed to extract the gas or oil. Where wells do not produce and the pad is no longer needed, full reclamation is typically required. Functionality of a well includes the necessary wellhead and pipes, distribution pipelines, and access roads.

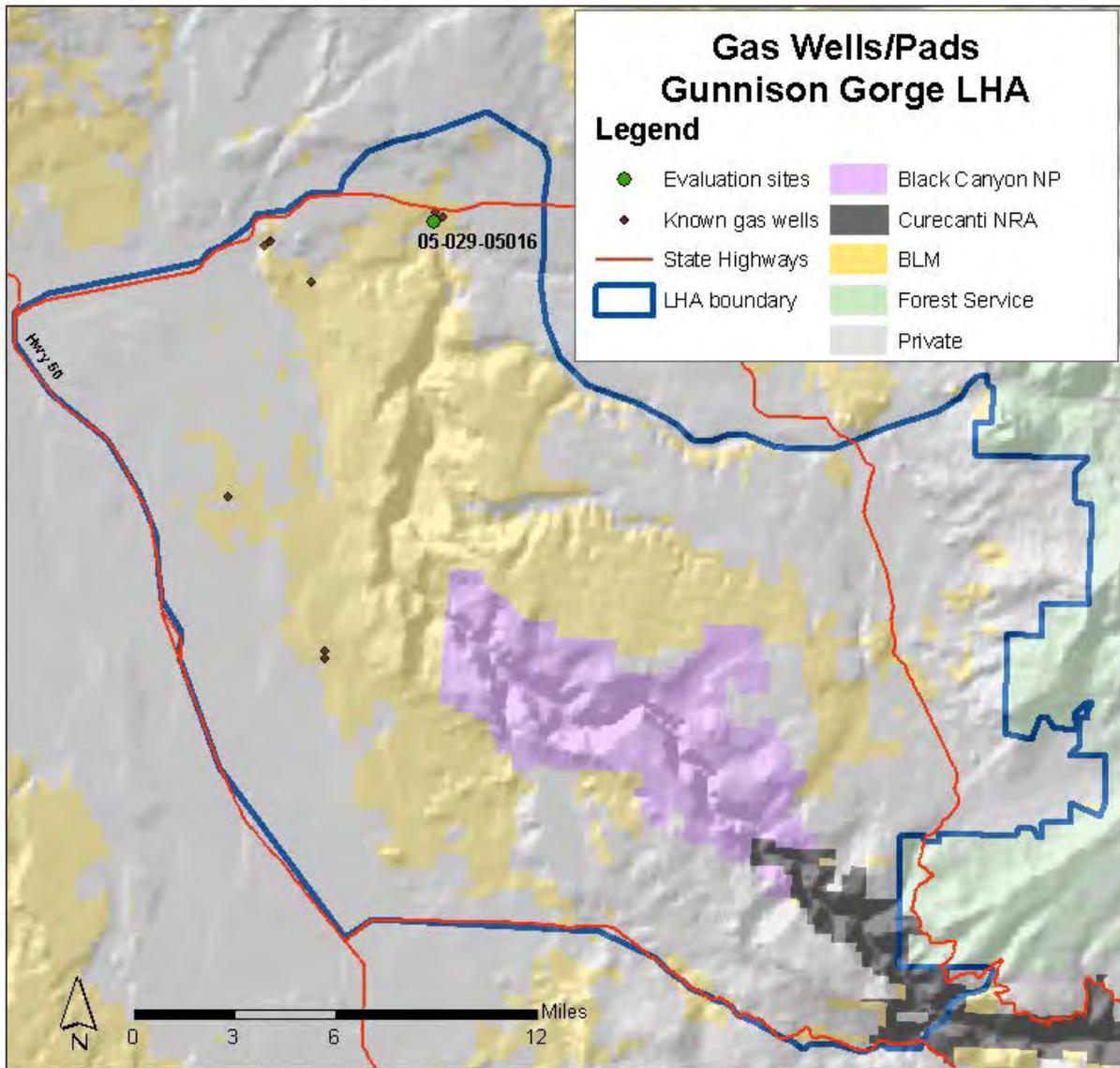
The following observations were made:

- Condition: not applicable, well is not operational, has been plugged and abandoned
- Location: good
- Size: good
- On-site Results: good



Compliance: Compliance for gas well and developments involves meeting construction stipulations, revegetation of disturbed areas, erosion prevention and maintenance of the access routes, and ensuring noxious weeds are controlled. Findings from the field visit to the gas well pad included:

- Design specifications: fully met
- Rehabilitation specifications: not met, evidently not reclaimed
- Maintenance specifications: not applicable



Mineral Development

Total Number in GGLHA Unit: 2 Number Assessed: 2 Percent of Total: 100

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
COC 73888			√	--	√				√		
Grizzly Ridge Gravel Pit			√	-	√			√			
Total	0%	0%	100%	--	100%	0%	0%	50%	50%	0%	0%

*0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Gravel pits, mines, and other areas of mineral extraction are used to collect and remove mineral resources from the ground. Such mines and sites are uncommon in the Gunnison Gorge LHA unit. The one site evaluated was found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: slightly negative for groundcover on both, slightly negative for wind and water erosion on Grizzly Ridge.
- Standard 2: not applicable
- Standard 3: slightly negative for native plants, slightly to substantially negative for weeds
- Standard 4: not applicable or neutral
- Standard 5: neutral

At the landscape level, while mineral development can affect health indicators on site, they generally do not affect other factors which influence land health. Overall, mineral developments occur at a low level in the LHA unit, and they have an overall major negative influence on land health at the site level, and neutral influence on land health at the landscape level, because of low abundance.

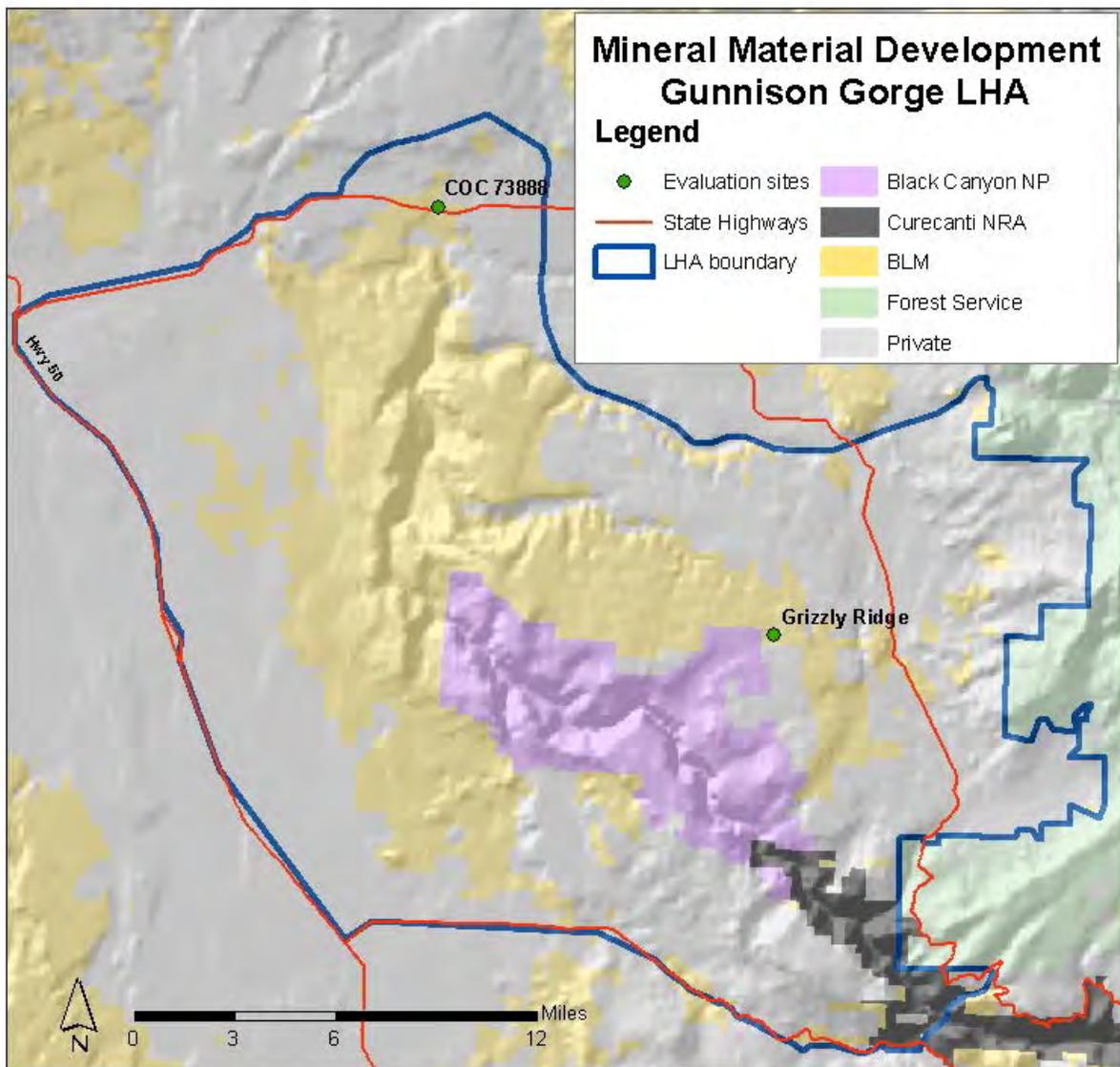
Functionality: Gravel pits are designed to efficiently and safely extract a mineral resource. An open pit mine includes a waste rock dump and an excavated pit, along with roads and a topsoil pile. The following observations were made for the gravel pit:

- Condition: good
- Location: good
- Size: appropriate
- On-site Results: appropriate



Compliance: Compliance for gravel pits involves checking whether all aspects of the permitted plan are being complied with, including reclamation once the mine is completed. Maintenance during mine operation includes seeding of the topsoil stockpile, weed control on and around mine facilities. Interim reclamation may be required in some cases for some parts of the operation Findings from field visits to gravel pits included:

- Design specifications: fully met
- Rehabilitation specifications: partially to fully met
- Maintenance specifications: partially to fully met—there are both noxious weeds (Russian knapweed and halogeton) and invasive annual weeds (kochia, annual wheatgrass) on COC 73888 and field bindweed, musk thistle, cheat grass Russian thistle, and kochia on Grizzly Ridge. This indicates that both sites have weed control compliance concerns.



Powerline and Telephone ROWs

Documented # in GGLHA Unit (16/27 mi)

Assessed: 6

% of Total: 38%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Power ROW											
COC 028026 (o**)		√		-	√			√			
COC 063216(b)		√		0	√			√			
COC 44605(o)			s√	-	√				√		
Telephone/Fiber Optic ROW											
COC 039185(o)		√		0	√				√		
COC 58471(b)		√		0	√			√			
COC 39186(b)			√	-	√				√		
Total	0%	67%	33%	-	100%	0%	0%	50%	50%	0%	0%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

**o=overhead, b=buried

Land Health: Powerline, phone and fiber optic ROWs are authorizations for communications and power transmission and distribution lines to cross public lands. The ROWs analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: all neutral for water and wind erosion, minor impacts to groundcover on one ROW
- Standard 2: not affected
- Standard 3: mostly neutral except for minor impacts to native plants on one, minor to substantial negative weed impacts on some, and minor negative impacts to habitat connectivity on one
- Standard 4: not affected or neutral
- Standard 5: not affected or neutral

At the landscape level, while powerline and phone/optic line ROWs can affect health indicators on site, they generally do not affect other factors which influence land health. Overall, power, telephone and fiber optic ROWs occur at a low level in the LHA unit, and they have an overall minor negative influence on land health at the site level (weeds, native plants and birds), and neutral influence on land health at the landscape level (because of their low abundance).

Functionality: Powerlines are designed to transmit or distribute electricity, while telephone and fiber optic lines are designed to provide communications services to customers. Typical ROWs for these include access routes, and either overhead or buried lines. Overhead lines involve towers or poles and wires, while buried lines include above ground equipment boxes and

underground cables. Functionality of a ROW includes adequate width on the ground for access, construction, operation, maintenance, and reclamation. The following observations were made:

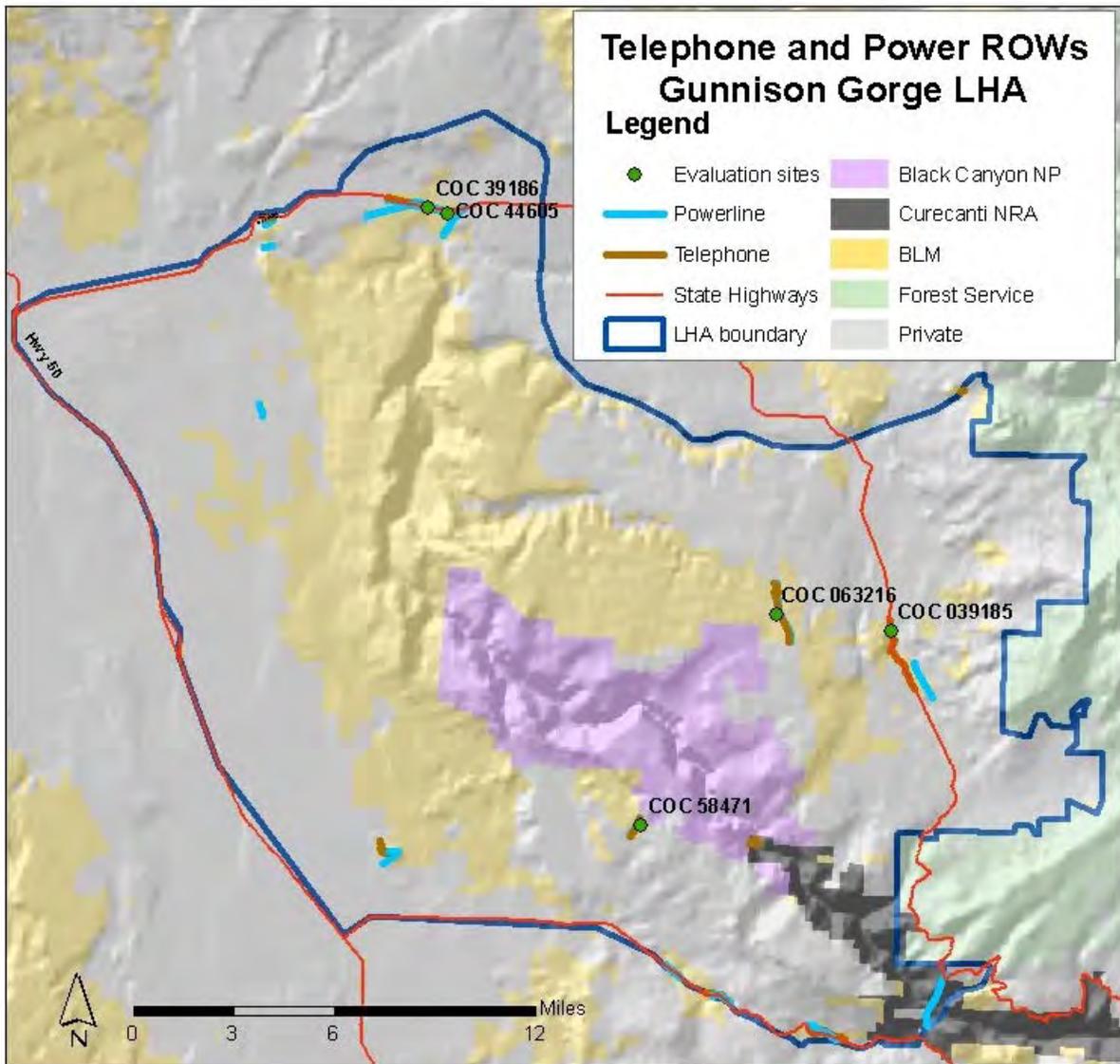
- Condition: good
- Location: good
- Size: appropriate
- On-site Results: good

Compliance: Right of way compliance for power, telephone and fiber optic lines that relates to land health involves: meeting construction stipulations and width of the ROW, revegetation of disturbed areas, fuels management if necessary, erosion prevention and maintenance of the access routes, staying on the designated routes, and ensuring noxious weeds are controlled.

Findings from field visits included:

- Design specifications: all fully met
- Rehabilitation specifications: most fully met or not applicable, one partially met with weed issues
- Maintenance specifications: half fully met, half partially met with weed concerns or encroaching trees





Reservoirs and Stock Ponds

Documented # in GGLHA Unit: 63

Assessed: 8

% of total: 13

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Stock Pond in RIPS											
Rider Reservoir		√		++	√			√			
Ditch											
Ayers Section 4 Stock pond #230460			√	+	√						√
Rider Res and Ditch #230964			s√	-			√				
Brush Peak Fork Res. #231265		√				√			√		
Stock Pond not in RIPS											
GG-DP-86			√	-		√					√
GG-DP-86			s√	--		√			√		
Retention Dam not in RIPS			s√								
GG-DP-88		√		0		√		√			
GG-DP-89							√				√
Total	0%	37%	63%	-	25%	50%	25%	29%	29%	0%	42%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Reservoirs are used to provide dispersed water sources for livestock management and wildlife habitat improvement. They are also used to control flooding and sediment deposition in order to protect areas lower in the watershed. The reservoirs analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: majority neutral, minor negatives for water erosion, groundcover, in some cases
- Standard 2: neutral or not affected
- Standard 3: about half had minor negative impacts to native vegetation, all reservoirs had either minor or significantly negative impacts for weeds. Some reservoirs were positively impacting wildlife.
- Standard 4: mainly neutral for sensitive species, or not applicable. One reservoir was positive for both sage grouse and their habitat.
- Standard 5: all neutral for pollutants, a few were minor to substantially negative for algae and sediment. One reservoir positively impacted sediment

At the landscape level, reservoirs influence domestic livestock and wildlife distribution and movement, which can help reduce grazing and browsing impacts around limited water sources in dry landscapes. In addition to the on-site impacts of reservoir construction, development of these water sources can also increase grazing impacts in areas which formerly were not grazed or only lightly grazed. They also provide new islands of aquatic habitat for some wildlife species, alter sediment movement and flood patterns in downstream drainages, and can increase the rate of weed dispersal across a landscape. Overall, reservoirs and stock ponds occur at a moderate level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and minor negative influence on land health at the landscape level. If the weeds were controlled this would shift to positive landscape effects because of their positive influence on livestock distribution/management and wildlife (including hunting opportunities)

Functionality: Reservoirs are generally constructed in a drainage and include an earthen berm, associated spillway, and a basin to hold water. Some are associated with a pipe and trough. A reservoir stores water for livestock and wildlife use in areas where natural water sources are scarce.

The following observations were made:

- Condition: half in good condition, half were either nonfunctional or had problems catching or holding water
- Location: half good, half had problems relating to size of watershed area and position in watershed
- Size: all good
- On-site Results: a few good, most had some degree of concerns about water capturing and holding performance

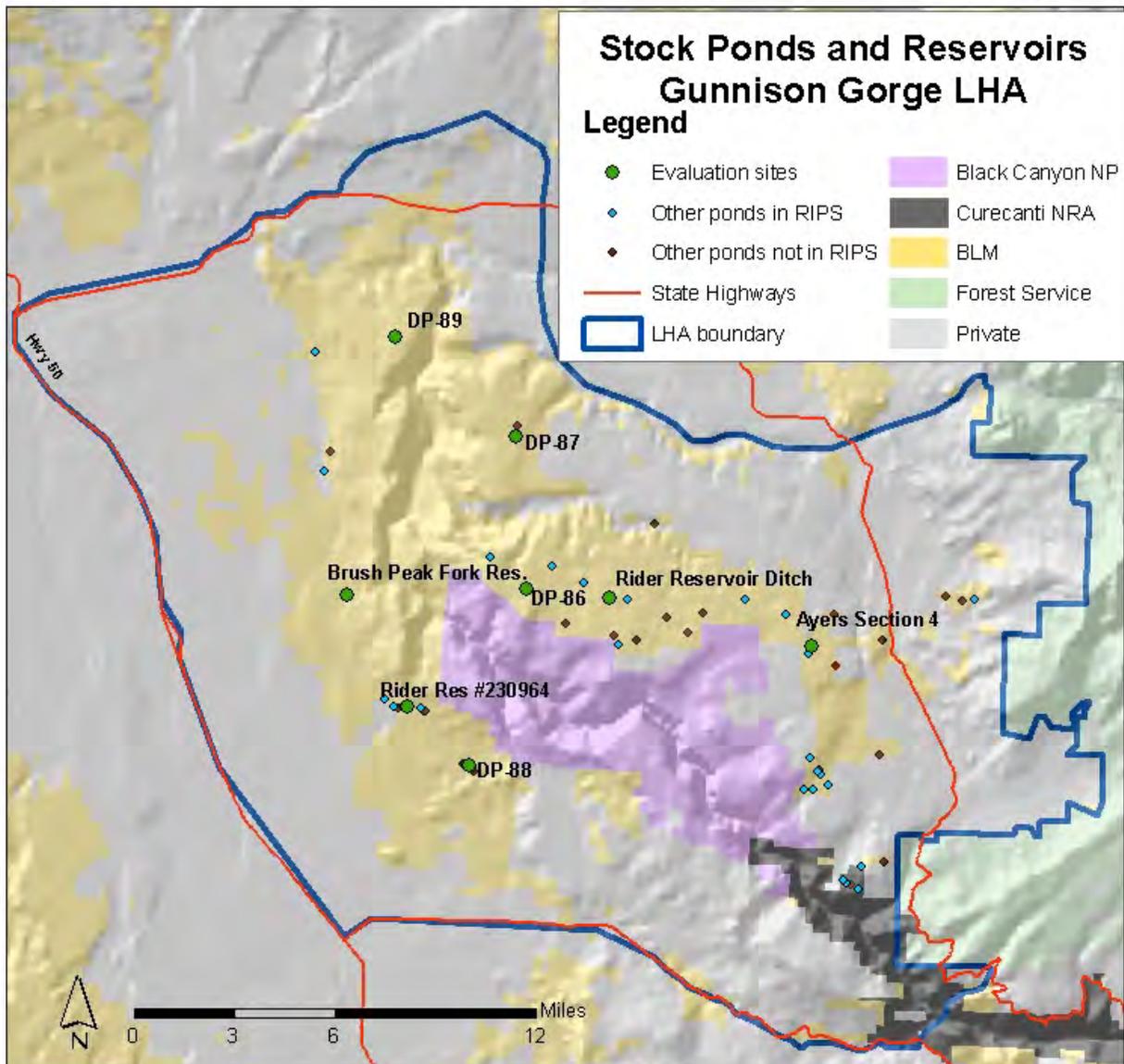
Compliance: Compliance for reservoirs involves following BLM design specifications and rehabilitation includes recontouring and seeding of disturbed soil including the dam and outside the ponded area. On reservoirs where there is a Coop Agreement with the grazing permittee, they are required to keep the basin useable by removing sediment periodically, and to maintain the integrity of the spillway and berm. These should be kept in a weed free state. Findings from field visits to reservoirs included:

- Design specifications: most fully met, one partially met, mostly because of spillway issues
- Rehabilitation specifications: most with no required rehab, one had problems with no evident seeding having occurred on or around the dam
- Maintenance specifications: most partially met or not met. These generally needed to be more regularly cleaned of sediment (and evidently weeds). Some reservoirs were identified as not having





maintenance specifications at the time they were constructed.



Road and Highway ROWs

Documented # in GGLHA Unit: 20 (>100 miles) # Assessed: 13 (7 mi) % of Total: 65% (7%)

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Highway ROW											
COC 72926			√	--	√				√		
County Road ROW											
Coalbank Rd			s√		√			√			
C77 Road		√		0	√			√			
Peach Valley Rd			s√		√				√		
Deadwood Trail			√	-	√			√			
850 Rd		√		-	√			√			
H75 Rd			s√	-	√			√			
Ute Road			s√			√			√		
Private Road ROW											
COC 066428			s√	-	√				√		
COC 060533		√		0	√			√			
COC 60533, 059910, 063197			s√	-	√			√			
Total	0%	27%	73%	-	91%	9%	0%	64%	36%	0%	0%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Road and highway ROWs are authorizations for non-BLM roads to cross the public lands. The road ROWs analyzed in the Gunnison Gorge LHA were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: most slightly negative for water erosion, some slightly negative for groundcover
- Standard 2: not affected
- Standard 3: some slightly negative for native plants, most slightly to substantially negative for seeds. A few slightly negative for wildlife, one slightly negative for connectivity
- Standard 4: a few slightly negative for TES species and habitat
- Standard 5: a few slightly negative for pollutants, more than half slightly negative for sediment

The county road and highway ROWs provide nearly all the public access into and through the Gunnison Gorge LHA unit where they also traverse a substantial amount of ground. While this evaluation looks primarily at site level impacts, routes also invite more users into an area and are the primary source of habitat fragmentation, affecting health of the larger landscape. Overall, road ROWs occur at a moderate level in the LHA unit, and they have an overall minor negative influence on land health at the site level, and minor negative influence on land health at the

landscape level. Weed control would shift landscape level impacts more toward neutral, although there would still be other fragmentation concerns.

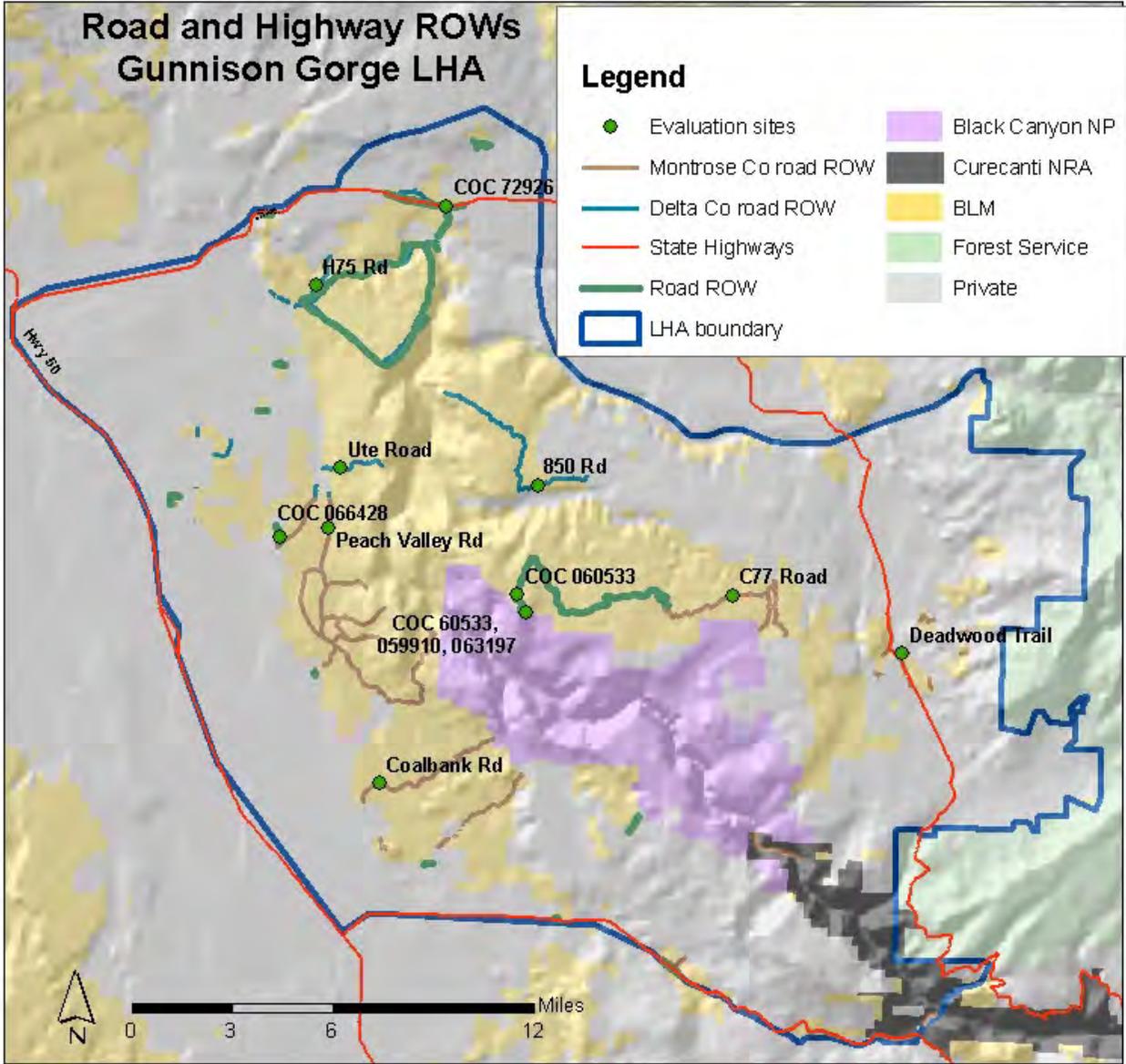
Functionality: Roads and highways generally include a road and possibly culverts and bridges, and other safety facilities such as guardrails, fencing, or rest areas. Functionality of a road ROW includes adequate width on the ground for construction, operation, maintenance, and reclamation. The following observations on road ROWs were made:

- Condition: nearly all good, only one with erosion problems affecting condition
- Location: all good
- Size: all appropriate
- On-site Results: nearly all good, only one with problems that may affect functionality in the future (bladed down not crowned)

Compliance: Right of way compliance for roads and highways that relates to land health involves meeting construction stipulations and width of the ROW, revegetation of disturbed areas, erosion prevention, vegetation management for safe driving conditions, and ensuring noxious weeds are controlled. Findings from field visits to roads included:

- Design specifications: mostly fully met, a few with problems especially with entrenchment
- Rehabilitation specifications: most thought to be not requiring rehab, only one with problems identified involving weeds
- Maintenance specifications: most partially met with weed control or road surface maintenance concerns





Spring Developments, Guzzlers and Drinkers

Documented # in GGLHA Unit: 13 (4 springs in RIPS, 3 guzzlers, 6 drinkers)

Assessed: 3 % of Total: 23%

Sites Assessed	Land Health				Functionality			Compliance			
	positive	neutral	negative	net* effects	full	part	not	full	part	not	NA
Springs Nichols Bros Spring #235370			√	0			√			√	
Guzzlers/Drinkers											
Smith Fork Guzzler	s√			++	√			√			
Sage Grouse drinker	√			++	√			√			
Total	67%	0%	33%	+	67%	0%	33%	67%	0%	33%	0%

*s=slight, 0=neutral, +=slight positive, ++=positive, -=slight negative, --=negative

Land Health: Spring developments are collection facilities that provide clean, reliable water away from the spring source. Guzzlers are small tanks with a larger collection area that captures and holds precipitation with an opening for wildlife to drink out of. Drinkers are smaller units hooked up to a water pipeline and provide small amounts of water. These are designed for sage grouse to drink from. The water developments analyzed in the Gunnison Gorge LHA unit were found to influence the indicators for Land Health Standards in the following manner:

- Standard 1: generally neutral, one drinker slightly positive for water erosion
- Standard 2: not applicable
- Standard 3: one slightly negative for native plants, the spring development substantially negative for weeds, the guzzler and drinker slightly to substantially positive for wildlife and the guzzler slightly improving habitat connectivity
- Standard 4: not applicable or slightly positive for sage grouse and their habitat
- Standard 5: neutral

At the landscape level, small water developments like springs, drinkers and guzzlers influence wildlife distribution and movement, which can expand usable habitat or improve existing habitat quality for some species. Overall, springs, guzzlers and drinkers occur at a low level in the LHA unit, and they have an overall minor positive influence on land health at the site level, and minor positive influence on land health at the landscape level.

Functionality: Spring developments generally include the spring source which is normally fenced in to protect it from trampling, a water collection area, and a small pipeline to a trough. Guzzlers are designed to catch precipitation, store it, and provide it to wildlife in a trough or drinker. They include a collector, which is made of impervious material, a storage unit, and usually a small pipeline to a drinker or trough. Drinkers are a smaller version of this, and typically hooked to a pipeline. Functionality of these developments includes providing clean,

reliable water to wildlife in areas where water is lacking or in short supply, in a manner that is safe and does not drown or present a hazard to animals.

Functionality of a spring development includes the development, collection and movement of water in a quantity adequate for livestock and wildlife use. Most of the time the water overflows back into the normal channel. The following observations were made:

- Condition: the spring nonfunctional, the others in good condition
- Location: guzzler and drinker good, spring has problems with tank located too high
- Size: appropriate
- On-site results: the spring development has unsatisfactory results, while the other two have good results

Compliance: Compliance for spring developments, guzzlers and drinkers involves following BLM design specifications, and seeding soil disturbances outside the footprint of the site. These developments should have regular maintenance for the protection of the spring source and integrity and functionality of the development, including turning on the water when needed.

These should be kept weed free. Findings from field visits to spring developments included:

- Design specifications: most fully met, spring partially met with tank and drain placement concerns
- Rehabilitation specifications: no rehabilitation required to fully rehabbed
- Maintenance specifications: range from unmaintained to fully maintained. Drinker needs improved approach to maintenance



Appendix E

Appendix E contains the Existing Environment descriptions for reference in NEPA documents covering future actions that take place in the Gunnison Gorge LHA unit

This section is awaiting staff input. It is partially complete.