

**WEST GRASSY  
MOUNTAIN**

**ALLOTMENT**

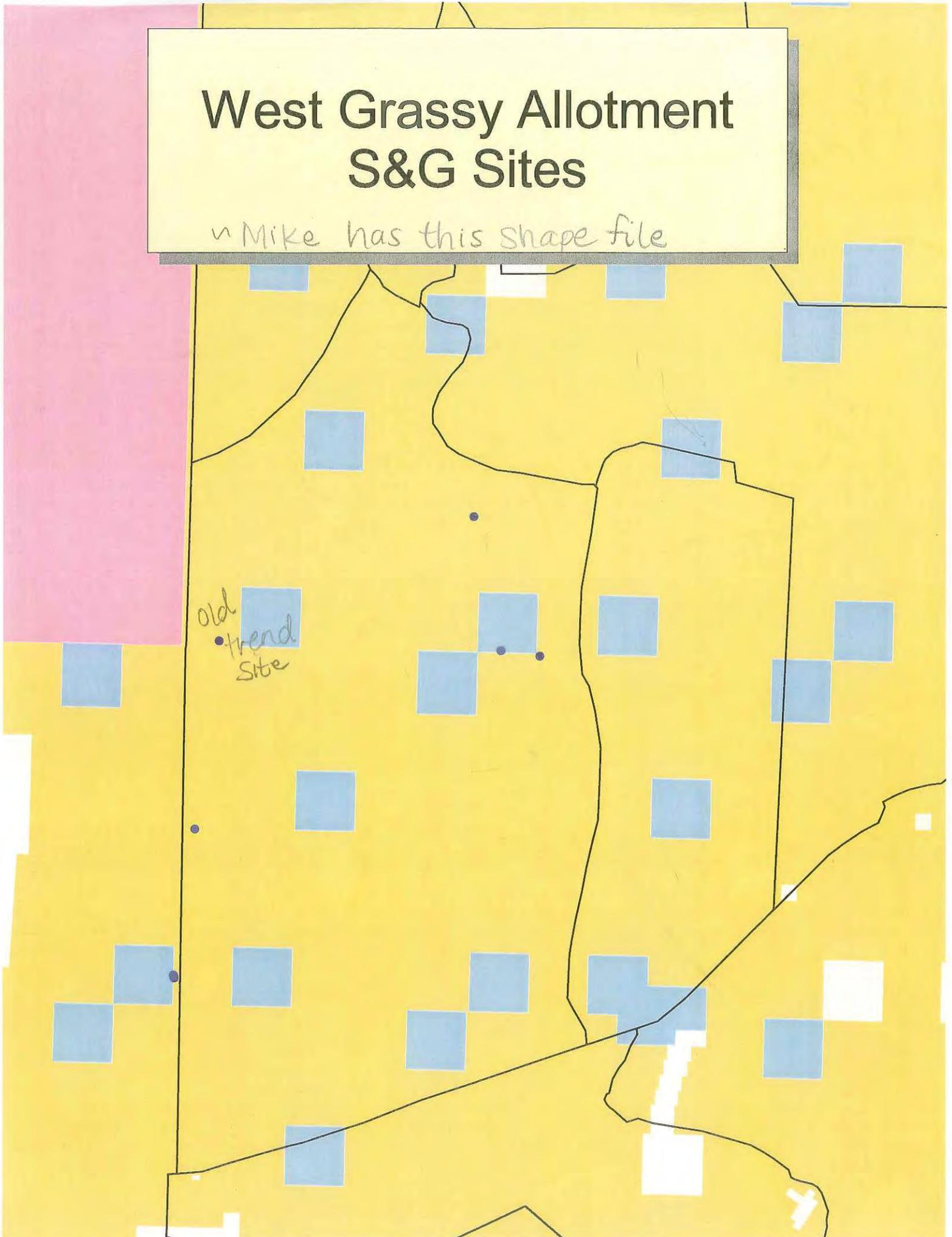
**# 04042**

**M O N I T O R I N G  
D A T A**

# West Grassy Allotment S&G Sites

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old  
trend  
site



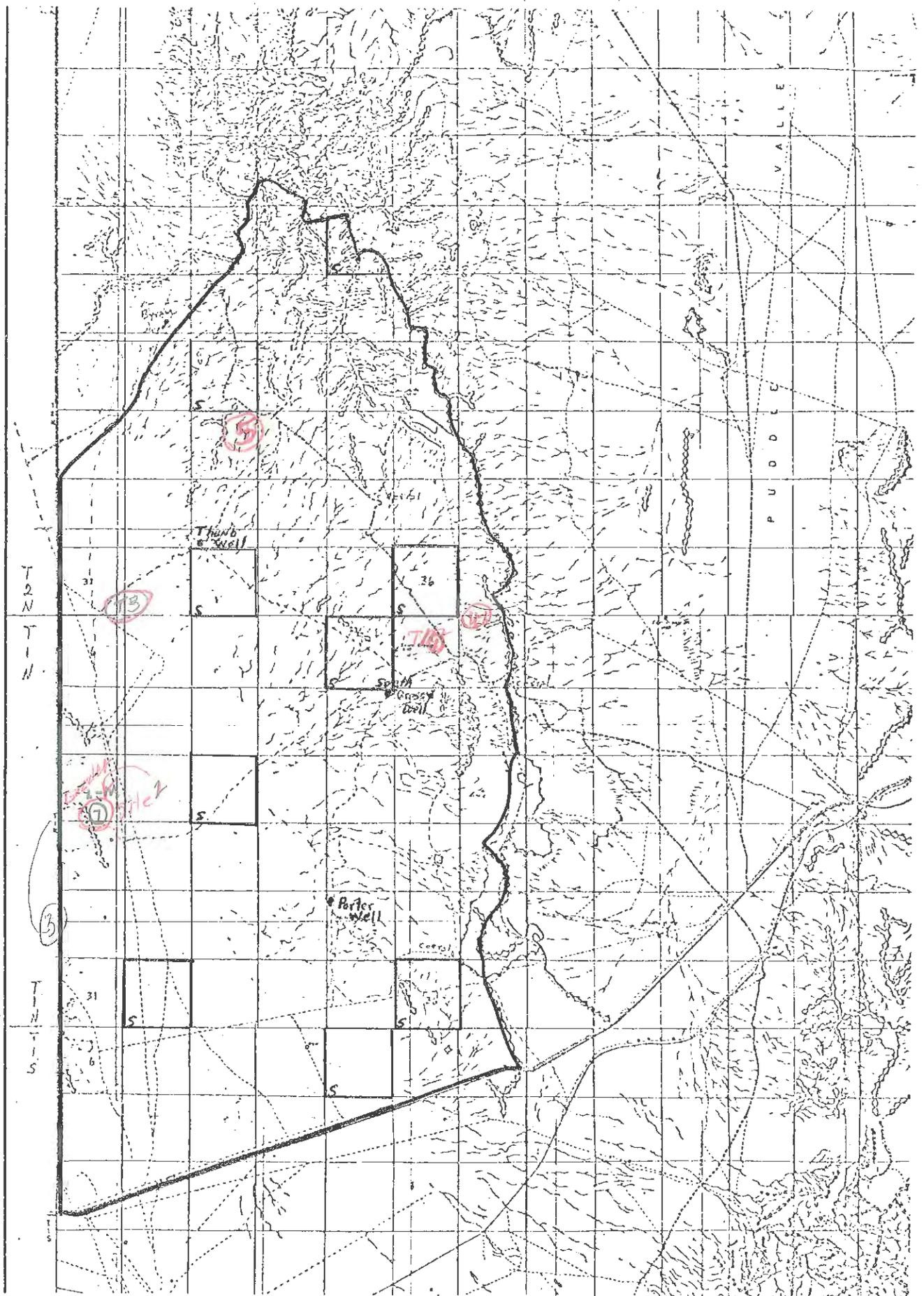
**RANGELAND**

**HEALTH**

**ASSESSMENTS**

**FOR**

**WEST GRASSY MOUNTAIN ALLOTMENT**



**FUNDAMENTALS OF RANGELAND HEALTH**  
**Standards and Guidelines Assessment**  
**West Grassy Allotment**

Utah Standards for Rangeland Health were assessed by and an interdisciplinary team on 8/27/2002 on the West Grassy (#04042) allotment. The interdisciplinary team (consisting of Rangeland Management Specialists, Wildlife Biologists, and Natural Resource Specialists) utilized the Tooele County Soil Survey (USDA-NRCS 2000), Range Site Descriptions (USDA-SCS 1994), and Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2000). Specific Upland sites were selected based on land ownership, representative range sites, livestock use patterns, and the permittees (figure 1).

**PART 1. CONFORMANCE REVIEW**

STANDARD#1      Upland soils exhibit permeability and infiltration rates that sustain or improve site productivity, considering the soil type, climate, and landform.

Site Number	Soil Stability	Hydrologic Function
Trend Site #1&2	Stable	Functioning
Trend Site #3&4	Stable	Functioning
Trend Site #5&6	Stable	Functioning
Trend Site #7&8	Stable	Functioning
Site #2	Stable	Functioning
Site #3	Stable	Functioning

*RESOURCE CONDITIONS WITHIN THE ALLOTMENT MEET THE STANDARD? Yes*

Rationale:      The Ecological Sites in this allotment included Desert loam (Shadscale) (#122), Desert gravelly loam (Shadscale) (#120), Desert Flat (Shadscale) (#126), Alkali Flat (Greasewood) (#004), Semi-desert stony loam (Black sagebrush) (#252), Semi-desert sandy loam (Wyoming big sagebrush) (#226). There were no signs of gullies, wind scours, or blowouts. Bare ground was considered adequate for site potential and litter was found to be in place. No sign of compaction was observed. Flow patterns matched that expected for the sites studied. There were no active pedestals or deposition areas. The vegetation on the site is adequate to protect the site from erosion. These factors indicate that the existing soil resource is

stable and functioning hydrologically.

STANDARD#2

Riparian and wetland areas are in properly functioning condition. Stream channel morphology and functions are appropriate to soil type, climate and landform.

Stream/Spring	PFC Rating
No Riparian Areas on allotment	N/A

*RESOURCE CONDITIONS WITHIN THE ALLOTMENT MEET THE STANDARD? N/A*

Rationale: There are no riparian areas on the West Grassy Allotment. Standard #2 does not apply.

STANDARD#3

Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved.

Site Number	Species Diversity
Trend Site #1&2	At Risk
Trend Site #3&4	Intact
Trend Site #5&6	Intact
Trend Site #7&8	Intact
Site #2	Intact
Site #3	Not Intact

*RESOURCE CONDITIONS WITHIN THE ALLOTMENT MEET THE STANDARD? Yes*

Rationale: The allotment nearly matches the Range site descriptions, biotic diversity is for the most part “Intact.” All native plant species are present and in abundance on all sites studied and the condition of the allotment was considered to be improving. The Rangeland health assessment team determined that Trend Site #1&2 is “At Risk” due to the exotic nonnative forb Halogeton (*Halogeton glomeratus*). Halogeton is currently a minor component of this site, but could become dominant if some disturbance were to happen. The Biotic Diversity for

Site #3 was determined to be “Not intact.” The Site is an Alkali Flat (Greasewood); major components of this ecological site are missing. The concluded that it was along the Hastings Cutoff and could have been due to historic grazing practices.

STANDARD#4      BLM will apply and comply with water quality standards established by the State of Utah (R.317-2) and the Federal Clean Water and Safe Drinking Water Acts. Activities on BLM lands will fully support the designated beneficial uses described in the Utah Water Quality Standards (R.317-2) for surface and groundwater.

*RESOURCE CONDITIONS WITHIN THE ALLOTMENT MEET THE STANDARD? Yes*

Rationale:              The allotment is not located near a water body, water source, or wetland.

**PART 2.      ARE LIVESTOCK A CONTRIBUTING FACTOR TO NOT MEETING THE STANDARDS?**

Standard #1

No. The West Grassy allotment is currently meeting the standard for Soil Stability and Hydrologic Function.

Standard #2

No. This standard does not apply to the West Grassy allotment.

Standard #3

No. The West Grassy allotment is currently meeting the standard for Biotic Diversity.

The Rangeland Health Assessment team found that Trend Site #1&2 was “At Risk” to invasive nonnative annual forbs. The Biotic Integrity of this site was determined to be “At Risk” because of Halogeton is common throughout the site. Halogeton is currently a minor component, although some disturbance or chain of disturbances on this site may allow Halogeton to dominate this site. It was determined that the current livestock use on this site is not contributing to the Halogeton problem.

The assessment team determined that Site #3 is “Not Intact” due to large Halogeton flats which resulted from some historical disturbance. The team could not identify the cause of the disturbance. This site is located along the Hastings Cutoff trail, an important migration route for early settlers to the west. Perennial grasses are almost completely absent and the shrub component is significantly reduced. It was determined that the current livestock management is

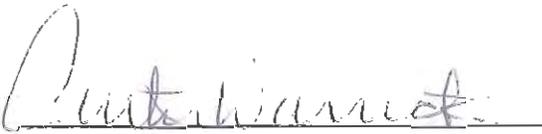
not contributing to the Biotic diversity situation.

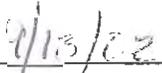
Standard #4

No. This standard does not apply to the West Grassy allotment.

**PART 3. GUIDELINES FOR GRAZING MANAGEMENT TO IMPLEMENT**

The West Grassy Allotment is currently meeting the standards in all Rangeland Health assessments except the Biotic Diversity standard on Site #3. Site #3 was determined to be "Not Intact" due to historic disturbance and the over abundance of Halogeton (*Halogeton glomeratus*). It was determined that the "Not Intact" condition of Site #3 was not due to current livestock grazing management. Therefore, Guidelines for Grazing Management to Implement are not required at this time.

  
\_\_\_\_\_  
Glenn A. Carpenter  
Salt Lake Field Office Manager  
Acting for

  
\_\_\_\_\_  
Date

## REFERENCES

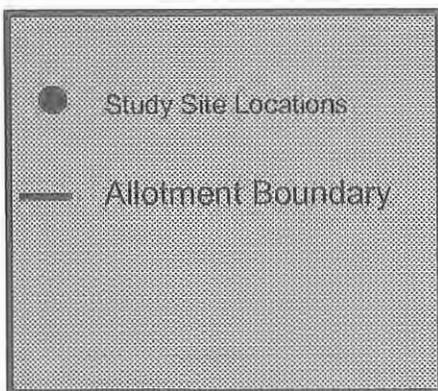
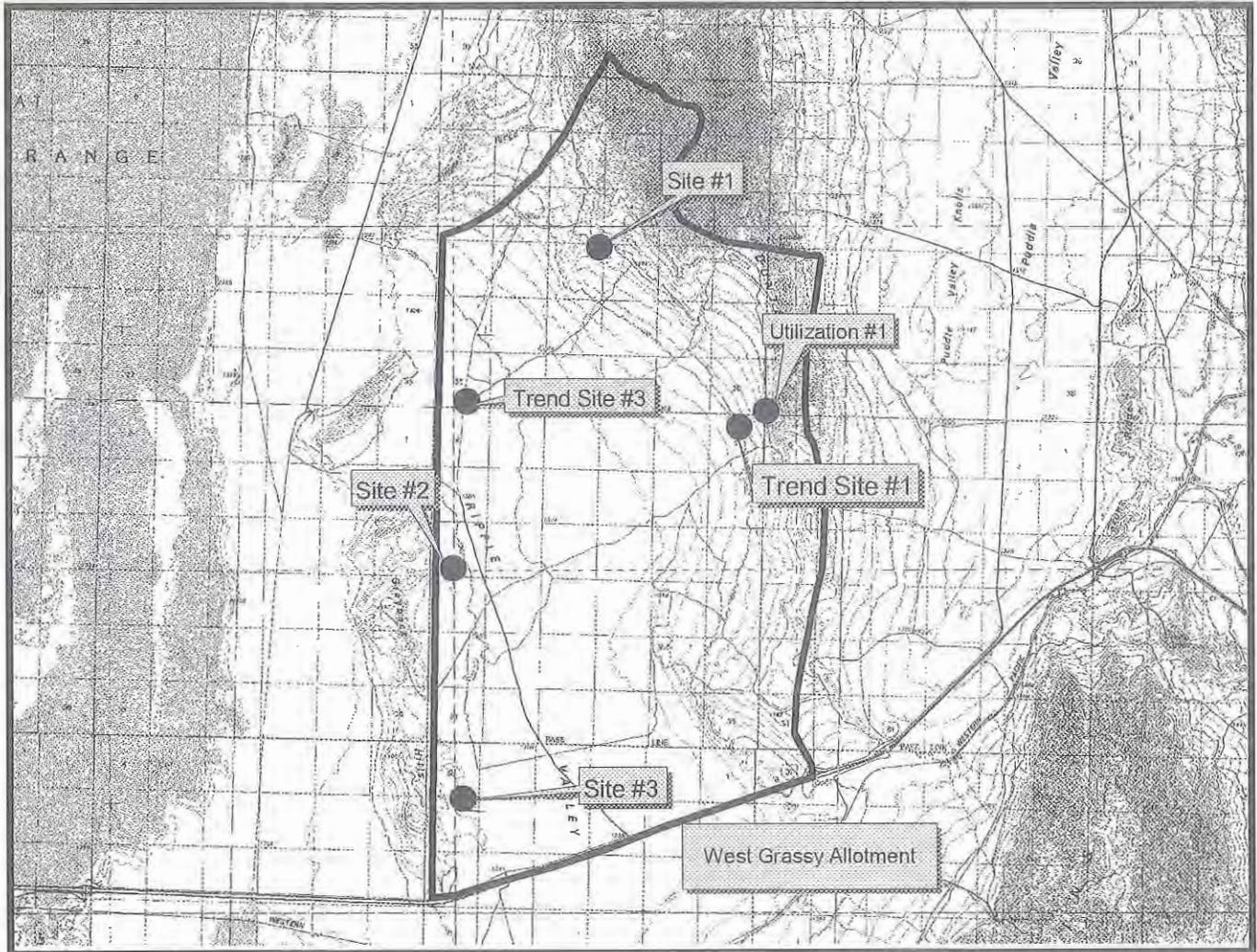
USDA-NRCS. 1997. Soil Survey of Tooele Area, Utah. US Government Printing Office:

USDA-SCS. 1994. Range Site Descriptions (059). Section II-E. Soil Conservation Service.

USDI-BLM. 2000. Rangeland Health Assessment Worksheets. Salt Lake Field Office.  
Unpublished field data.

Utah-DEQ. 2000. Utah's 303(d) List of Impaired Waters. Utah Department of Environmental Quality. Salt Lake City, Utah.

# West Grassy Allotment



Bureau of Land Management  
Salt Lake Field Office  
2370 South 2300 West  
Salt Lake City, UT 84119



This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause misalignment of data layers.

Figure 1. West Grassy Allotment Rangeland Health Assessment Site Locations.

### Rangeland Health Evaluation Summary Worksheet

**Part 1. Area of Interest Documentation** (Bold items require completion, other information is optional)

State Ut Office Ut-020 Management Unit West Grass

Pasture/Watershed \_\_\_\_\_ ID# WG-2 Major Land Resource Area \_\_\_\_\_

**Location (description)** \_\_\_\_\_

Legal T \_\_\_\_\_, R \_\_\_\_\_, Sec \_\_\_\_\_, \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4 or Lat \_\_\_\_\_, Long \_\_\_\_\_ or UTM Coord N: 4519764  
E: 319797

Size of Evaluation Area \_\_\_\_\_ Photo(s) Taken Yes  No \_\_\_\_\_

Observer(s) Gates, Heaton, Torres Date 8/27/02

Ecological Site Desert gravelly (shadscale) loam Soil Map Unit Name Skunkah Silt Loam #56

**Soil/Site Verification**

Rangeland Ecological Site Description and/or Soil Survey

Area of Interest Determination

Surface Texture \_\_\_\_\_

Surface Texture \_\_\_\_\_

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

List diagnostic horizons in profile and depth

List diagnostic horizons in profile and depth

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

Parent Material \_\_\_\_\_ Slope 1 % Elevation 4348 ft Topographic Position \_\_\_\_\_ Aspect NW

Avg Annual Precip \_\_\_\_\_ Recent Weather (last 2 years) Drought  Normal \_\_\_\_\_ Wet \_\_\_\_\_

Describe wildlife and livestock use and recent disturbances sheep allotment, lots of trailing  
lots of antelope use

Describe offsite influences on area of interest Big game quizzler adjacent to site.

# Species Dominance Worksheet

## Part 1 (Required)

The most common species, noxious weeds (state-listed plants), invasive natives, invasive exotics (non-noxious) are **ranked** according to dominance using cover  or weight .

### Dominant Species on Site

- 1 Atco
- 2 KoAm
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

### Noxious Weeds

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Natives

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Exotics

- 1 Haloxylon
- 2 Brtf
- 3 \_\_\_\_\_

## Part 2 (Optional) Dominant Species by Life Form

The most common species are ranked according to dominance using cover  or weight  by life form.

### Annual Grasses

- 1 Brtf
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Annual Forbs

- 1 Haloxylon lepidium perfoliatum
- 2 Burr butter Cup
- 3 Mustard

### Perennial Grasses

- 1 Ortly
- 2 Sihy
- 3 Posp

### Perennial Forbs

- 1 Sego lily
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Shrubs and Trees

- 1 Atco Attr
- 2 KoAm Cusa
- 3 Arsp

### Succulents

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Biological Crust (rate by component not species, e.g., lichen, moss, or algae)

- 1 Black Crust
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

## Functional/Structural Groups Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_ Site ID \_\_\_\_\_  
 Observer(s) Gates, Heaton, Torres Date 8/27/02

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential <sup>1</sup>	Actual <sup>2</sup>	Plant Names
Annual Forb	7	2	
Perennial forb	510	1	
Perennial Grass	40	15	
Annual Grass	0	2	
Shrubs	50	80	
Biological Crust <sup>3</sup>			

Indicate whether each "structural/functional group" is a **Dominant (D)** (roughly 41-100% composition), a **Subdominant (S)** (roughly 11-40% composition), a **Minor Component (M)** (roughly 3-10% composition), or a **Trace Component (T)** (<3 % composition) based on weight or cover composition in the area of interest (e.g., "Actual<sup>2</sup>" column) relative to the "Potential<sup>1</sup>" column derived from information found in the ecological site description and/or at the ecological reference area.

**Biological Crust<sup>3</sup>** dominance is evaluated solely on cover not composition by weight.

## Cover Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_  
 Observer(s) Gates, Heaton, Torres Date 8/27/02 Site ID \_\_\_\_\_

### COVER CLASSES (% Canopy)

LIFE FORMS <sup>1</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Grass</b>								
Annual			2					
Native Perennial				8				
Exotic Perennial	0							
<b>II - Forb</b>								
Annual		1						
Perennial			2					
<b>III - Shrub</b>					28			
<b>IV - Tree</b>	0							
<b>V - Succulent</b>	0							
<b>VI - Biological Crust</b>								
% GROUND COVER <sup>2</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Vascular Plants</b>						41		
<b>II - Standing Dead Vegetation</b>				6				
<b>III - Litter</b> (in contact with the soil surface)				8				
<b>IV - Biological Crust</b>					25			
<b>V - Rock/Gravel</b>				12				
<b>VI - Bare Ground</b>				8				

<sup>1</sup> **Life Forms Cover** - Record multiple canopy cover classes; total plant canopy may exceed 100%. Small openings (less than 2" in diameter) are included as cover.

<sup>2</sup> **Ground Cover** - Category I is an estimate of total vascular plant cover; overlapping canopies are counted as only **one** canopy (record life form with first point of contact). Total vascular plant cover (I) together with the sum of cover in Categories II-VI should total to approximately 100%.

**Notes:** Include source of cover data (e.g., estimates or measurements)

## Part 2. Indicator Rating

Attribute	Indicators	Departure from Ecological Site Description/ Ecological Reference Area(s)				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,H	1. Rills					
Comments:						
S,H	2. Water Flow Patterns				X	
Comments:						
S,H	3. Pedestals and/or Terracettes				X	
Comments: <i>in the water flows patterns</i>						
S,H	4. Bare Ground				X	
Comments: <i>Slightly more due to loss of grass</i>						
S,H	5. Gullies					
Comments:						
S	6. Wind-Scoured, Blowouts, and/or Deposition Areas					
Comments:						
H	7. Litter Movement				X	
Comments: <i>moving mostly in water flow patterns</i>						
S,H,B	8. Soil Surface Resistance to Erosion					
Comments: <i>Good resistance due to veg, crust, &amp; lots of rock.</i>						
S,H,B	9. Soil Surface Loss or Degradation					
Comments:						
H	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff					
Comments:						
S,H,B	11. Compaction Layer				X	
Comments: <i>Slight compaction in trails</i>						
B	12. Functional/Structural Groups				X	
Comments: <i>Grasses ↓ than expected w/ Shrubs ↑ than expected.</i>						
B	13. Plant Mortality/Decadence				X	
Comments: <i>Some w/ shade scale being decadent</i>						
H,B	14. Litter Amount					
Comments:						
B	15. Annual Production					
Comments: <i>250 unfavorable</i>						
B	16. Invasive Plants				X	
Comments: <i>mainly just on disturbed sites</i>						
B	17. Reproductive Capability of Perennial Plants					
Comments:						

**Part 3. Summary**  
**A. Indicator Summary**

Departure from Ecological Site Description/  
 Ecological Reference Area(s)

Rangeland Health Attributes		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight	Σ
S	Soil/Site Stability (Indicators 1-6, 8, 9 & 11)				4		9
H	Hydrologic Function (Indicators 1-5, 7-11 & 14)				5		11
B	Biotic Integrity (Indicators 8-9 & 11-17)				4		9

**B. Attribute Summary** - Check the category that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of indicator ratings in the preceding Indicator Summary table.

Attribute	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability Rationale:				X	
Hydrologic Function Rationale:					X
Biotic Integrity Rationale:					X

Attribute Rating- Check one in each row

Soil/Site Stability	Not Stable <input type="checkbox"/>	At Risk <input type="checkbox"/>	Stable <input checked="" type="checkbox"/>
Biotic Integrity	Not Intact <input type="checkbox"/>	At Risk <input type="checkbox"/>	Intact <input checked="" type="checkbox"/>
Watershed Function	Non-Functioning <input type="checkbox"/>	At Risk <input type="checkbox"/>	Functioning <input checked="" type="checkbox"/>

Comments on Indicator(s) on other side of this page

Appendix 6.

Soils stable, but there is <sup>40</sup> a lot of sheep trailing through site. Also there is a lot of antelope in the immediate area.  
 Biotic is intact plant diversity is adequate. Grass composition is lower than expected & shrubs are more abundant than expected. Invasives are only a minor component of the plant community

Page 2

### Rangeland Health Evaluation Summary Worksheet

Part 1. Area of Interest Documentation (Bold items require completion, other information is optional)

State UT Office UT-020 Management Unit West grassy

Pasture/Watershed \_\_\_\_\_ ID# \_\_\_\_\_ Major Land Resource Area \_\_\_\_\_

Location (description) \_\_\_\_\_

Legal T \_\_\_\_\_, R \_\_\_\_\_, Sec \_\_\_\_\_, \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4 or Lat \_\_\_\_\_, Long \_\_\_\_\_ or UTM Coord: <sup>N: 4515723</sup> <sub>E: 319238</sub>

Size of Evaluation Area \_\_\_\_\_ Photo(s) Taken Yes  No \_\_\_\_\_

Observer(s) Heaton, Gaites, Torres Date 08/27/02

Ecological Site Alkali Flat (Greasewood) Soil Map Unit Name #27. Irramatch

Soil/Site Verification Cliff down alkali

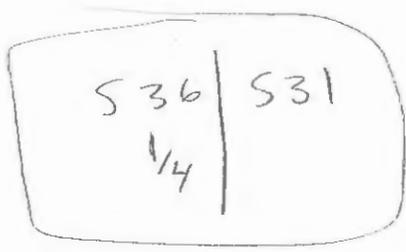
Rangeland Ecological Site Description and/or Soil Survey	Area of Interest Determination
Surface Texture _____	Surface Texture _____
Depth: Very Shallow <input type="checkbox"/> Shallow <input type="checkbox"/> Moderate <input type="checkbox"/> Deep <input type="checkbox"/> (<10") (10"-20") (20"-40") (>40")	Depth: Very Shallow <input type="checkbox"/> Shallow <input type="checkbox"/> Moderate <input type="checkbox"/> Deep <input type="checkbox"/> (<10") (10"-20") (20"-40") (>40")
List diagnostic horizons in profile and depth	List diagnostic horizons in profile and depth
1 _____ 3 _____	1 _____ 3 _____
2 _____ 4 _____	2 _____ 4 _____

Parent Material \_\_\_\_\_ Slope 0 % Elevation 4280 ft Topographic Position \_\_\_\_\_ Aspect N/A

Avg Annual Precip \_\_\_\_\_ Recent Weather (last 2 years) Drought  Normal \_\_\_\_\_ Wet \_\_\_\_\_

Describe wildlife and livestock use and recent disturbances Sheep allotment, no sign of current livestock grazing, some sign of rabbit & antelope

Describe offsite influences on area of interest \_\_\_\_\_



← Section marker  
We GPS'd it because it is broken off.

# Species Dominance Worksheet

## Part 1 (Required)

The most common species, noxious weeds (state-listed plants), invasive natives, invasive exotics (non-noxious) are **ranked** according to dominance using cover  or weight .

### Dominant Species on Site

- 1 Halogeton
- 2 SAVE
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

### Noxious Weeds

- 1 None
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Natives

- 1 None
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Exotics

- 1 Halogeton
- 2 Salsola
- 3 Lepidium

## Part 2 (Optional) Dominant Species by Life Form

The most common species are ranked according to dominance using cover  or weight  by life form.

### Annual Grasses

- 1 BRTG
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Annual Forbs

- 1 Halogeton Tansy mustard
- 2 Lepidium perfoliatum
- 3 Salsola iberica

### Perennial Grasses

- 1 SIHY
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Perennial Forbs

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Shrubs and Trees

- 1 SAVE
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Succulents

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Biological Crust (rate by component not species, e.g., lichen, moss, or algae)

- 1 Black Crust
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

## Functional/Structural Groups Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_ Site ID \_\_\_\_\_  
 Observer(s) Gates, Heaton, Torres Date 8/27/02

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential <sup>1</sup>	Actual <sup>2</sup>	Plant Names
A. Forb	2	40	
P. Forb	310	0	
Shrub	70	55	
A. Grass	0	5	
P. Grass	20	T	
Biological Crust <sup>3</sup>			

Indicate whether each "structural/functional group" is a **Dominant (D)** (roughly 41-100% composition), a **Subdominant (S)** (roughly 11-40% composition), a **Minor Component (M)** (roughly 3-10% composition), or a **Trace Component (T)** (<3 % composition) based on weight or cover composition in the area of interest (e.g., "Actual<sup>2</sup>" column) relative to the "Potential<sup>1</sup>" column derived from information found in the ecological site description and/or at the ecological reference area.

**Biological Crust<sup>3</sup>** dominance is evaluated solely on **cover** not composition by weight.

## Cover Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_  
 Observer(s) Gates, Heaton, Torres Date 8/27/02 Site ID \_\_\_\_\_

### COVER CLASSES (% Canopy)

LIFE FORMS <sup>1</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Grass</b>								
Annual			5					
Native Perennial		7						
Exotic Perennial	0							
<b>II - Forb</b>								
Annual						41		
Perennial	0							
<b>III - Shrub</b>								
IV - Tree	0				18			
<b>V - Succulent</b>								
<b>VI - Biological Crust</b>								
<b>% GROUND COVER<sup>2</sup></b>								
% GROUND COVER <sup>2</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Vascular Plants</b>								
II - Standing Dead Vegetation			4				64	
III - Litter (in contact with the soil surface)				8				
IV - Biological Crust			4					
<b>V - Rock/Gravel</b>								
<b>VI - Bare Ground</b>								
					20			

<sup>1</sup> **Life Forms Cover** - Record multiple canopy cover classes; total plant canopy may exceed 100%. Small openings (less than 2" in diameter) are included as cover.

<sup>2</sup> **Ground Cover** - Category I is an estimate of total vascular plant cover; overlapping canopies are counted as only one canopy (record life form with first point of contact). Total vascular plant cover (I) together with the sum of cover in Categories II-VI should total to approximately 100%.

**Notes:** Include source of cover data (e.g., estimates or measurements)

## Part 2. Indicator Rating

		Departure from Ecological Site Description/ Ecological Reference Area(s)				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,H	1. Rills					
Comments:						
S,H	2. Water Flow Patterns					
Comments:						
S,H	3. Pedestals and/or Terracettes					
Comments:						
S,H	4. Bare Ground					
Comments: as expected, but cover all annual/invasive forbs						
S,H	5. Gullies					
Comments: natural drainages						
S	6. Wind-Scoured, Blowouts, and/or Deposition Areas					
Comments: Lots of ant hills!						
H	7. Litter Movement					
Comments:						
S,H,B	8. Soil Surface Resistance to Erosion					
Comments: lots of organic matter protecting soils						
S,H,B	9. Soil Surface Loss or Degradation				X	
Comments: Some loss of topsoil						
H	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff					
Comments:						
S,H,B	11. Compaction Layer					
Comments:						
B	12. Functional/Structural Groups		X			
Comments: Almost completely missing P. grass (SITE) replaced by halogeton						
B	13. Plant Mortality/Decadence				X	
Comments: Slight SAVE die-off, but what is here is looking alright						
H,B	14. Litter Amount				X	
Comments: Slightly more than expected due to annual forbs						
B	15. Annual Production					
Comments: 250 Unfavorable						
B	16. Invasive Plants					
Comments: Halogeton is dominant spp.						
B	17. Reproductive Capability of Perennial Plants					
Comments: SAVE is reproducing						

**Part 3. Summary**  
**A. Indicator Summary**

Departure from Ecological Site Description/  
 Ecological Reference Area(s)

Rangeland Health Attributes		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight	Σ
S	Soil/Site Stability (Indicators 1-6, 8, 9 & 11)				1		9
H	Hydrologic Function (Indicators 1-5, 7-11 & 14)				2		11
B	Biotic Integrity (Indicators 8-9 & 11-17)		1		3		9

**B. Attribute Summary** - Check the category that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of indicator ratings in the preceding Indicator Summary table.

Attribute	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability Rationale:					X
Hydrologic Function Rationale:					X
Biotic Integrity Rationale:					X

Attribute Rating- Check one in each row

Soil/Site Stability	Not Stable <input type="checkbox"/>	At Risk <input type="checkbox"/>	Stable <input checked="" type="checkbox"/>
Biotic Integrity	Not Intact <input checked="" type="checkbox"/>	At Risk <input type="checkbox"/>	Intact <input type="checkbox"/>
Watershed Function	Non-Functioning <input type="checkbox"/>	At Risk <input type="checkbox"/>	Functioning <input checked="" type="checkbox"/>

Comments on Indicator(s) on other side of this page

**Appendix 6**

Soils are stable because pots on a flat & veg. cover is good, so the soils aren't going anywhere. Page 2  
 Biotic is not intact because of Halogeton. Some historical disturbance has occurred. Note: we are at the Hastings cutoff, P. grasses almost completely missing and shrubs are significantly reduced.

T-1  
Trend 1/2

### Rangeland Health Evaluation Summary Worksheet

**Part 1. Area of Interest Documentation** (Bold items require completion, other information is optional)

State UT Office Ut-020 Management Unit West Grassy

Pasture/Watershed \_\_\_\_\_ ID# \_\_\_\_\_ Major Land Resource Area \_\_\_\_\_

Location (description) \_\_\_\_\_

Legal T 1N, R 11W, Sec 1, NE 1/4, \_\_\_\_\_ 1/4 or Lat \_\_\_\_\_, Long \_\_\_\_\_ or UTM Coord N:1484493  
E:1076494

Size of Evaluation Area \_\_\_\_\_ Photo(s) Taken Yes  No \_\_\_\_\_

Observer(s) Gates, Heaton, Torres Date 8/23/02

Ecological Site Desert Loam (shadscale) Soil Map Unit Name Tooele Fine Sandy Loam #69

**Soil/Site Verification**

Rangeland Ecological Site Description and/or Soil Survey

Surface Texture \_\_\_\_\_

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

List diagnostic horizons in profile and depth

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

Area of Interest Determination

Surface Texture \_\_\_\_\_

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

List diagnostic horizons in profile and depth

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

Parent Material \_\_\_\_\_ Slope 1 % Elevation 4620 ft Topographic Position \_\_\_\_\_ Aspect W-SW

Avg Annual Precip \_\_\_\_\_ Recent Weather (last 2 years) Drought  Normal \_\_\_\_\_ Wet \_\_\_\_\_

Describe wildlife and livestock use and recent disturbances Sheep Allotment

Describe offsite influences on area of interest \_\_\_\_\_

could also be  
#12 cliff down gravelly sandy loam  
Desert Gravelly loam (shadscale)

# Species Dominance Worksheet

## Part 1 (Required)

The most common species, noxious weeds (state-listed plants), invasive natives, invasive exotics (non-noxious) are **ranked** according to dominance using cover  or weight .

### Dominant Species on Site

- 1 ATCO
- 2 KRLA
- 3 Halogeton
- 4 \_\_\_\_\_

### Noxious Weeds

- 1 None
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Natives

- 1 None
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Exotics

- 1 Halogeton
- 2 Salsola iberica
- 3 Burr buttercup  
cheatgrass

## Part 2 (Optional) Dominant Species by Life Form

The most common species are ranked according to dominance using cover  or weight  by life form.

### Annual Grasses

- 1 BRTÉ
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Annual Forbs

- 1 Halogeton
- 2 Burr Buttercup
- 3 Salsola Iberica

### Perennial Grasses

- 1 ORHY Nevada Bluegrass
- 2 SLHY
- 3 POSE

### Perennial Forbs

- 1 Sphaeralcea coccinea
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Shrubs and Trees

- 1 GUSA ARSP EPNE
- 2 KRLA CHNA
- 3 ATCO ARNO

### Succulents

- 1 OPPO
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Biological Crust (rate by component not species, e.g., lichen, moss, or algae)

- 1 Black Crust
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

## Functional/Structural Groups Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_ Site ID T-1  
 Observer(s) Heaton, Gates, Torres Date 8/23/02

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential <sup>1</sup>	Actual <sup>2</sup>	Plant Names
A. Forb	7	12	
P. Forb	15	T	
Shrub	40	58	
A. Grass	0	5	
P. Grass	45	25	
Biological Crust <sup>3</sup>			

Indicate whether each "structural/functional group" is a **Dominant (D)** (roughly 41-100% composition), a **Subdominant (S)** (roughly 11-40% composition), a **Minor Component (M)** (roughly 3-10% composition), or a **Trace Component (T)** (<3 % composition) based on weight or cover composition in the area of interest (e.g., "Actual<sup>2</sup>" column) relative to the "Potential<sup>1</sup>" column derived from information found in the ecological site description and/or at the ecological reference area.

**Biological Crust<sup>3</sup>** dominance is evaluated solely on **cover** not composition by weight.

## Cover Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_  
 Observer(s) Gates, Heaton, Torres Date 8/23/02 Site ID T-1

### COVER CLASSES (% Canopy)

LIFE FORMS <sup>1</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Grass</b>								
Annual			2					
Native Perennial				15				
Exotic Perennial	0							
<b>II - Forb</b>								
Annual				10				
Perennial		T						
<b>III - Shrub</b>								
					20			
<b>IV - Tree</b>								
<b>V - Succulent</b>								
<b>VI - Biological Crust</b>								
% GROUND COVER <sup>2</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
I - Vascular Plants						47		
II - Standing Dead Vegetation			4					
III - Litter (in contact with the soil surface)				6				
IV - Biological Crust					20			
V - Rock/Gravel				8				
VI - Bare Ground				15				

<sup>1</sup> **Life Forms Cover** - Record multiple canopy cover classes; total plant canopy may exceed 100%. Small openings (less than 2" in diameter) are included as cover.

<sup>2</sup> **Ground Cover** - Category I is an estimate of total vascular plant cover; overlapping canopies are counted as only **one** canopy (record life form with first point of contact). Total vascular plant cover (I) together with the sum of cover in Categories II-VI should total to approximately 100%.

**Notes:** Include source of cover data (e.g., estimates or measurements)

**Part 2. Indicator Rating**

		Departure from Ecological Site Description/ Ecological Reference Area(s)				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,H	1. Rills					
Comments:						
S,H	2. Water Flow Patterns				X	
Comments:						
S,H	3. Pedestals and/or Terracettes				X	
Comments: <i>Just w/in water flow patterns</i>						
S,H	4. Bare Ground					
Comments:						
S,H	5. Gullies					
Comments:						
S	6. Wind-Scoured, Blowouts, and/or Deposition Areas					
Comments:						
H	7. Litter Movement					
Comments:						
S,H,B	8. Soil Surface Resistance to Erosion					
Comments:						
S,H,B	9. Soil Surface Loss or Degradation					
Comments:						
H	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff					
Comments:						
S,H,B	11. Compaction Layer					
Comments:						
B	12. Functional/Structural Groups				X	
Comments: <i>Annual forbs present throughout the site, less grass &amp; more shrubs than expected</i>						
B	13. Plant Mortality/Decadence					
Comments:						
H,B	14. Litter Amount					
Comments:						
B	15. Annual Production					
Comments:						
B	16. Invasive Plants		X			
Comments: <i>Halogeton common - site unusual to this is dominated by halogeton &amp; other annual forbs &amp; may be working its way out of this site.</i>						
B	17. Reproductive Capability of Perennial Plants					
Comments: <i>looking good</i>						

**Part 3. Summary**  
**A. Indicator Summary**

Departure from Ecological Site Description/  
 Ecological Reference Area(s)

Rangeland Health Attributes		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight	Σ
S	Soil/Site Stability (Indicators 1-6, 8, 9 & 11)				2		9
H	Hydrologic Function (Indicators 1-5, 7-11 & 14)				2		11
B	Biotic Integrity (Indicators 8-9 & 11-17)		1		1		9

**B. Attribute Summary** - Check the category that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of indicator ratings in the preceding Indicator Summary table.

Attribute	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability Rationale:					X
Hydrologic Function Rationale:					X
Biotic Integrity Rationale:				X	

Attribute Rating- Check one in each row

Soil/Site Stability	Not Stable <input type="checkbox"/>	At Risk <input type="checkbox"/>	Stable <input checked="" type="checkbox"/>
Biotic Integrity	Not Intact <input type="checkbox"/>	At Risk <input checked="" type="checkbox"/>	Intact <input type="checkbox"/>
Watershed Function	Non-Functioning <input type="checkbox"/>	At Risk <input type="checkbox"/>	Functioning <input checked="" type="checkbox"/>

Comments on Indicator(s) on other side of this page

**Appendix 6**

40

Biotic is @ risk because halogeton is common throughout site... currently is a minor component. Through some event or chain of events, this site may have the capability of becoming dominated by annual forbs. There is a site adjacent to this one that is dominated by annual forbs (halogeton, russian thistle, burr buttercup) which causes concern for this site.

T-3

Trend 344

### Rangeland Health Evaluation Summary Worksheet

**Part 1. Area of Interest Documentation** (Bold items require completion, other information is optional)

State UT Office Ut-020 Management Unit West Grass

Pasture/Watershed \_\_\_\_\_ ID# \_\_\_\_\_ Major Land Resource Area \_\_\_\_\_

Location (description) \_\_\_\_\_

Legal T \_\_\_\_\_, R \_\_\_\_\_, Sec \_\_\_\_\_, \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4 or Lat \_\_\_\_\_, Long \_\_\_\_\_ or UTM Coord N:4524875  
E:320948

Size of Evaluation Area \_\_\_\_\_ Photo(s) Taken Yes  No \_\_\_\_\_

Observer(s) Gates, Heaton, Torres Date 8/27/02

Ecological Site Desert flat (Shadscale) Soil Map Unit Name Timpire silt loam  
#107

#### Soil/Site Verification

Rangeland Ecological Site Description and/or Soil Survey

Area of Interest Determination

Surface Texture \_\_\_\_\_

Surface Texture \_\_\_\_\_

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

List diagnostic horizons in profile and depth

List diagnostic horizons in profile and depth

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

Parent Material \_\_\_\_\_ Slope 0 % Elevation 4283 ft Topographic Position \_\_\_\_\_ Aspect N/A

Avg Annual Precip \_\_\_\_\_ Recent Weather (last 2 years) Drought  Normal \_\_\_\_\_ Wet \_\_\_\_\_

Describe wildlife and livestock use and recent disturbances No sign of livestock use

Describe offsite influences on area of interest \_\_\_\_\_

# Species Dominance Worksheet

## Part 1 (Required)

The most common species, noxious weeds (state-listed plants), invasive natives, invasive exotics (non-noxious) are **ranked** according to dominance using cover  or weight .

### Dominant Species on Site

- 1 KOAM
- 2 ATCO
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

### Noxious Weeds

- 1 None
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Natives

- 1 None
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Exotics

- 1 Halogeton
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

## Part 2 (Optional) Dominant Species by Life Form

The most common species are ranked according to dominance using cover  or weight  by life form.

### Annual Grasses

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Annual Forbs

- 1 Halogeton
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Perennial Grasses

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Perennial Forbs

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Shrubs and Trees

- 1 ATCO ATTR
- 2 KOAM (Green molly)
- 3 SAVE

### Succulents

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Biological Crust (rate by component not species, e.g., lichen, moss, or algae)

- 1 Black Crust
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

## Functional/Structural Groups Worksheet

State UT Office OZO Ecological Site \_\_\_\_\_ Site ID \_\_\_\_\_

Observer(s) Gates, Heaton, Torres Date 8/27/02

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential <sup>1</sup>	Actual <sup>2</sup>	Plant Names
A. Forb		1	
P. Forb	5	0	
Shrub		99	
A. Grass		0	
P. Grass	10	0	
Biological Crust <sup>3</sup>			

Indicate whether each "structural/functional group" is a **Dominant (D)** (roughly 41-100% composition), a **Subdominant (S)** (roughly 11-40% composition), a **Minor Component (M)** (roughly 3-10% composition), or a **Trace Component (T)** (<3 % composition) based on weight or cover composition in the area of interest (e.g., "Actual<sup>2</sup>" column) relative to the "Potential<sup>1</sup>" column derived from information found in the ecological site description and/or at the ecological reference area.

**Biological Crust<sup>3</sup>** dominance is evaluated solely on **cover** not composition by weight.

# Cover Worksheet

13  
4  
2

State UT Office OZO Ecological Site \_\_\_\_\_

Observer(s) Gates, Heaton, Torres Date 8/27/02 Site ID \_\_\_\_\_

### COVER CLASSES (% Canopy)

LIFE FORMS <sup>1</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Grass</b>								
Annual								
Native Perennial								
Exotic Perennial								
<b>II - Forb</b>								
Annual								
Perennial								
<del>III - Shrub</del>					28			
<b>IV - Tree</b>								
<b>V - Succulent</b>								
<b>VI - Biological Crust</b>								
% GROUND COVER <sup>2</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Vascular Plants</b>								
<del>II - Standing Dead Vegetation</del>				8				
<del>III - Litter (in contact with the soil surface)</del>				10				
<del>IV - Biological Crust</del>							45	
<b>V - Rock/Gravel</b>								
<del>VI - Bare Ground</del>				8				

<sup>1</sup> **Life Forms Cover** - Record multiple canopy cover classes; total plant canopy may exceed 100%. Small openings (less than 2" in diameter) are included as cover.

<sup>2</sup> **Ground Cover** - Category I is an estimate of total vascular plant cover; overlapping canopies are counted as only **one** canopy (record life form with first point of contact). Total vascular plant cover (I) together with the sum of cover in Categories II-VI should total to approximately 100%.

**Notes:** Include source of cover data (e.g., estimates or measurements)

## Part 2. Indicator Rating

Attribute	Indicators	Departure from Ecological Site Description/ Ecological Reference Area(s)				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,H	1. Rills					
Comments:						
S,H	2. Water Flow Patterns					
Comments:						
S,H	3. Pedestals and/or Terracettes					
Comments:						
S,H	4. Bare Ground				X	
Comments: <i>Slightly more due to lack of vegetative cover</i>						
S,H	5. Gullies					
Comments: <i>none</i>						
S	6. Wind-Scoured, Blowouts, and/or Deposition Areas					
Comments:						
H	7. Litter Movement					X
Comments: <i>its not moving</i>						
S,H,B	8. Soil Surface Resistance to Erosion					
Comments: <i>mainly stabilized by crust, but also vegetative cover</i>						
S,H,B	9. Soil Surface Loss or Degradation					
Comments:						
H	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff					
Comments:						
S,H,B	11. Compaction Layer					
Comments: <i>lake hardpan ~ 10"</i>						
B	12. Functional/Structural Groups				X	
Comments: <i>completely missing grass component, but possibly not here. Overall vegetation lacking</i>						
B	13. Plant Mortality/Decadence				X	
Comments: <i>slight shade/decadence</i>						
H,B	14. Litter Amount				X	
Comments: <i>Slightly less than expected</i>						
B	15. Annual Production					
Comments: <i>25% unfavorable</i>						
B	16. Invasive Plants					
Comments:						
B	17. Reproductive Capability of Perennial Plants					
Comments:						

**Part 3. Summary**  
**A. Indicator Summary**

Departure from Ecological Site Description/  
 Ecological Reference Area(s)

Rangeland Health Attributes		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight	Σ
S	Soil/Site Stability (Indicators 1-6, 8, 9 & 11)				1		9
H	Hydrologic Function (Indicators 1-5, 7-11 & 14)				2		11
B	Biotic Integrity (Indicators 8-9 & 11-17)				3		9

**B. Attribute Summary** - Check the category that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of indicator ratings in the preceding Indicator Summary table.

Attribute	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability Rationale:					<input checked="" type="checkbox"/>
Hydrologic Function Rationale:					<input checked="" type="checkbox"/>
Biotic Integrity Rationale:					<input checked="" type="checkbox"/>

Attribute Rating- Check one in each row

Soil/Site Stability	Not Stable <input type="checkbox"/>	At Risk <input type="checkbox"/>	Stable <input checked="" type="checkbox"/>
Biotic Integrity	Not Intact <input type="checkbox"/>	At Risk <input type="checkbox"/>	Intact <input checked="" type="checkbox"/>
Watershed Function	Non-Functioning <input type="checkbox"/>	At Risk <input type="checkbox"/>	Functioning <input checked="" type="checkbox"/>

Comments on Indicator(s) on other side of this page

Appendix 6.

Biotic is intact. Lacking <sup>40</sup> some veg. cover, missing grass component, but according to trend studies there has been no grass as far as we can tell... since 1973

Soils are stable due to biotic crust cover.

U-1

Trnd 5+6

### Rangeland Health Evaluation Summary Worksheet

**Part 1. Area of Interest Documentation** (Bold items require completion, other information is optional)

State UT Office Ut-020 Management Unit West Grass 4

Pasture/Watershed \_\_\_\_\_ ID# \_\_\_\_\_ Major Land Resource Area \_\_\_\_\_

Location (description) \_\_\_\_\_

Legal T \_\_\_\_\_, R \_\_\_\_\_, Sec \_\_\_\_\_, \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4 or Lat \_\_\_\_\_, Long \_\_\_\_\_ or UTM Coord <sup>N:14844006</sup> <sub>E:1079860</sub>

Size of Evaluation Area \_\_\_\_\_ Photo(s) Taken Yes  No \_\_\_\_\_

Observer(s) Sates, Heston, Torres Date 8/23/02

Ecological Site Semi desert Stony Loam Soil Map Unit Name Hiko Peak very stony

(Black Sagebrush) Soil/Site Verification Loam #22

Rangeland Ecological Site Description and/or Soil Survey

Surface Texture \_\_\_\_\_

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

List diagnostic horizons in profile and depth

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

Area of Interest Determination

Surface Texture \_\_\_\_\_

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

List diagnostic horizons in profile and depth

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

Parent Material \_\_\_\_\_ Slope 6 % Elevation 4852 ft Topographic Position \_\_\_\_\_ Aspect W

Avg Annual Precip \_\_\_\_\_ Recent Weather (last 2 years) Drought  Normal \_\_\_\_\_ Wet \_\_\_\_\_

Describe wildlife and livestock use and recent disturbances sheep allotment, good antelope habitat

Describe offsite influences on area of interest Dense cheatgrass area adjacent to site

# Species Dominance Worksheet

## Part 1 (Required)

The most common species, noxious weeds (state-listed plants), invasive natives, invasive exotics (non-noxious) are **ranked** according to dominance using cover  or weight .

### Dominant Species on Site

- 1 ArNo
- 2 Blue bunch
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

### Noxious Weeds

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Natives

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Invasive Exotics

- 1 Brte
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

## Part 2 (Optional) Dominant Species by Life Form

The most common species are ranked according to dominance using cover  or weight  by life form.

### Annual Grasses

- 1 Brte
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Annual Forbs

- 1 Burr butter cup
- 2 Phlox
- 3 \_\_\_\_\_

### Perennial Grasses

- 1 ORHY
- 2 Pose
- 3 Blue bunch

### Perennial Forbs

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Shrubs and Trees

- 1 ARNO EPNE Arsp
- 2 ATCO Kola Chvi
- 3 Tetradymia JUUS

### Succulents

- 1 Opuntia
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

### Biological Crust (rate by component not species, e.g., lichen, moss, or algae)

- 1 Black Crust
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_



## Cover Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_  
 Observer(s) Gates, Heaton, Torres Date 8/23/02 Site ID U-1

### COVER CLASSES (% Canopy)

LIFE FORMS <sup>1</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Grass</b>								
Annual			2					
Native Perennial					24			
Exotic Perennial	0							
<b>II - Forb</b>								
Annual		1						
Perennial		1						
<b>III - Shrub</b>								
IV - Tree		1				45		
<b>V - Succulent</b>								
<b>VI - Biological Crust</b>								
% GROUND COVER <sup>2</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Vascular Plants</b>								
II - Standing Dead Vegetation			2				72	
III - Litter (in contact with the soil surface)				6				
IV - Biological Crust			5					
V - Rock/Gravel				13				
VI - Bare Ground			2					

<sup>1</sup> **Life Forms Cover** - Record multiple canopy cover classes; total plant canopy may exceed 100%. Small openings (less than 2" in diameter) are included as cover.

<sup>2</sup> **Ground Cover** - Category I is an estimate of total vascular plant cover; overlapping canopies are counted as only **one** canopy (record life form with first point of contact). Total vascular plant cover (I) together with the sum of cover in Categories II-VI should total to approximately 100%.

**Notes:** Include source of cover data (e.g., estimates or measurements)

**Part 2. Indicator Rating**

		Departure from Ecological Site Description/ Ecological Reference Area(s)				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,H	1. Rills					
Comments:						
S,H	2. Water Flow Patterns				X	
Comments: <i>short, stable, lots of gravel, steep slope</i>						
S,H	3. Pedestals and/or Terracettes				X	
Comments: <i>in water flow patterns</i>						
S,H	4. Bare Ground					
Comments: <i>mostly rocks</i>						
S,H	5. Gullies				X	
Comments: <i>Vegetated</i>						
S	6. Wind-Scoured, Blowouts, and/or Deposition Areas					
Comments:						
H	7. Litter Movement					
Comments:						
S,H,B	8. Soil Surface Resistance to Erosion					
Comments: <i>Rock &amp; vegetation, gravelly soil</i>						
S,H,B	9. Soil Surface Loss or Degradation					
Comments:						
H	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff					
Comments: <i>(gravelly soil)</i>						
S,H,B	11. Compaction Layer					
Comments:						
B	12. Functional/Structural Groups				X	
Comments: <i>Less grass &amp; forbs more shrubs</i>						
B	13. Plant Mortality/Decodence					
Comments:						
H,B	14. Litter Amount					
Comments:						
B	15. Annual Production					
Comments: <i>300 unfavorable</i>						
B	16. Invasive Plants				X	
Comments: <i>On isolated &amp; disturbed areas it is thick &amp; then scattered throughout</i>						
B	17. Reproductive Capability of Perennial Plants					
Comments:						

**Part 3. Summary**  
**A. Indicator Summary**

Departure from Ecological Site Description/  
 Ecological Reference Area(s)

Rangeland Health Attributes		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight	Σ
S	Soil/Site Stability (Indicators 1-6, 8, 9 & 11)				3		9
H	Hydrologic Function (Indicators 1-5, 7-11 & 14)				3		11
B	Biotic Integrity (Indicators 8-9 & 11-17)				1		9

**B. Attribute Summary** - Check the category that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of indicator ratings in the preceding Indicator Summary table.

Attribute	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil/Site Stability Rationale:					X
Hydrologic Function Rationale:					X
Biotic Integrity Rationale:					X

Attribute Rating- Check one in each row

Soil/Site Stability	Not Stable <input type="checkbox"/>	At Risk <input type="checkbox"/>	Stable <input checked="" type="checkbox"/>
Biotic Integrity	Not Intact <input type="checkbox"/>	At Risk <input type="checkbox"/>	Intact <input checked="" type="checkbox"/>
Watershed Function	Non-Functioning <input type="checkbox"/>	At Risk <input type="checkbox"/>	Functioning <input checked="" type="checkbox"/>

Comments on Indicator(s) on other side of this page

**Appendix 6**

*Cheatgrass invading  
 have a little less perennial grasses & forbs than expected  
 Very gravelly soil intact & where not gravelly have vegetation*

Site #1  
Trend 548

### Rangeland Health Evaluation Summary Worksheet

**Part 1. Area of Interest Documentation** (Bold items require completion, other information is optional)

State UT Office Ut-020 Management Unit West grassy

Pasture/Watershed \_\_\_\_\_ ID# \_\_\_\_\_ Major Land Resource Area \_\_\_\_\_

**Location (description)** \_\_\_\_\_

Legal T \_\_\_\_\_, R \_\_\_\_\_, Sec 23, \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4 or Lat \_\_\_\_\_, Long \_\_\_\_\_ or UTM Coord N: 4528229 E: 327378

**Size of Evaluation Area** \_\_\_\_\_ **Photo(s) Taken** Yes  No \_\_\_\_\_

**Observer(s)** Gates, Heaton, Torres **Date** 8/23/02

**Ecological Site** Bemi desert sandy loam **Soil Map Unit Name** Stumpsk silt loam  
Wyoming big sage #56

#### Soil/Site Verification

Rangeland Ecological Site Description and/or Soil Survey

Area of Interest Determination

Surface Texture \_\_\_\_\_

Surface Texture \_\_\_\_\_

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

Depth: Very Shallow  Shallow  Moderate  Deep   
(<10") (10"-20") (20"-40") (>40")

List diagnostic horizons in profile and depth

List diagnostic horizons in profile and depth

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

1 \_\_\_\_\_ 3 \_\_\_\_\_  
2 \_\_\_\_\_ 4 \_\_\_\_\_

Parent Material \_\_\_\_\_ **Slope** 2 % **Elevation** 5018 ft **Topographic Position** \_\_\_\_\_ **Aspect** SW

**Avg Annual Precip** \_\_\_\_\_ **Recent Weather (last 2 years)** Drought  Normal \_\_\_\_\_ Wet \_\_\_\_\_

Describe wildlife and livestock use and recent disturbances sheep allotment

**Describe offsite influences on area of interest** \_\_\_\_\_

## Species Dominance Worksheet

### Part 1 (Required)

The most common species, noxious weeds (state-listed plants), invasive natives, invasive exotics (non-noxious) are **ranked** according to dominance using cover  or weight .

#### Dominant Species on Site

- 1 Atco
- 2 SiHy
- 3 KRLA
- 4 \_\_\_\_\_

#### Noxious Weeds

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

#### Invasive Natives

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

#### Invasive Exotics

- 1 Brite
- 2 SnTB
- 3 \_\_\_\_\_

### Part 2 (Optional) Dominant Species by Life Form

The most common species are ranked according to dominance using cover  or weight  by life form.

#### Annual Grasses

- 1 BRTF
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

#### Annual Forbs

- 1 Halogeton Burr butter Ciss
- 2 Salsola iberica
- 3 Lepidium perfoliatum

#### Perennial Grasses

- 1 SIHY
- 2 ORHY
- 3 POSE

#### Perennial Forbs

- 1 Phlox
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

#### Shrubs and Trees

- 1 ARTR KRLA tetradymia
- 2 GUSA ARSP ARND
- 3 ATCO SAVE CHVA

#### Succulents

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

#### Biological Crust (rate by component not species, e.g., lichen, moss, or algae)

- 1 Black Crust
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

## Functional/Structural Groups Worksheet

State VT Office 020 Ecological Site \_\_\_\_\_ Site ID \_\_\_\_\_  
 Observer(s) Gates, Heaton, Torres Date 8/23/02

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential <sup>1</sup>	Actual <sup>2</sup>	Plant Names
A. Forb	710	8	
P. Forb	5	T	
Shrub	35	62	
A. Grass	-	5	
P. Grass	55	25	
Tree		T	
Biological Crust <sup>3</sup>			

Indicate whether each "structural/functional group" is a **Dominant (D)** (roughly 41-100% composition), a **Subdominant (S)** (roughly 11-40% composition), a **Minor Component (M)** (roughly 3-10% composition), or a **Trace Component (T)** (<3 % composition) based on weight or cover composition in the area of interest (e.g., "Actual<sup>2</sup>" column) relative to the "Potential<sup>1</sup>" column derived from information found in the ecological site description and/or at the ecological reference area.

**Biological Crust<sup>3</sup>** dominance is evaluated solely on **cover** not composition by weight.

## Cover Worksheet

State UT Office 020 Ecological Site \_\_\_\_\_  
 Observer(s) Gates, Newton, Torrie Date 8/23/02 Site ID \_\_\_\_\_

### COVER CLASSES (% Canopy)

LIFE FORMS <sup>1</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Grass</b>								
Annual				6				
Native Perennial					22			
Exotic Perennial	0							
<b>II - Forb</b>								
Annual				12				
Perennial		1						
<b>III - Shrub</b>					29			
<b>IV - Tree</b>		7						
<b>V - Succulent</b>								
<b>VI - Biological Crust</b>								
% GROUND COVER <sup>2</sup>	0	0-1	2-5	6-15	16-30	31-50	51-75	76-100
<b>I - Vascular Plants</b>							69	
<b>II - Standing Dead Vegetation</b>			5					
<b>III - Litter</b> (in contact with the soil surface)				7				
<b>IV - Biological Crust</b>				12				
<b>V - Rock/Gravel</b>								
<b>VI - Bare Ground</b>				6				

<sup>1</sup> **Life Forms Cover** - Record multiple canopy cover classes; total plant canopy may exceed 100%. Small openings (less than 2" in diameter) are included as cover.

<sup>2</sup> **Ground Cover** - Category I is an estimate of total vascular plant cover; overlapping canopies are counted as only **one** canopy (record life form with first point of contact). Total vascular plant cover (I) together with the sum of cover in Categories II-VI should total to approximately 100%.

**Notes:** Include source of cover data (e.g., estimates or measurements)

**Part 2. Indicator Rating**

		Departure from Ecological Site Description/ Ecological Reference Area(s)				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,H	1. Rills					
Comments:						
S,H	2. Water Flow Patterns				X	
Comments:						
S,H	3. Pedestals and/or Terracettes				X	
Comments: <i>In water flow patterns</i>						
S,H	4. Bare Ground					
Comments:						
S,H	5. Gullies				X	
Comments: <i>Stable</i>						
S	6. Wind-Scoured, Blowouts, and/or Deposition Areas					
Comments:						
H	7. Litter Movement					
Comments:						
S,H,B	8. Soil Surface Resistance to Erosion					
Comments: <i>Lots of crust &amp; good veg cover</i>						
S,H,B	9. Soil Surface Loss or Degradation					
Comments: <i>A horizon @ 4 inches</i>						
H	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S,H,B	11. Compaction Layer					
Comments:						
B	12. Functional/Structural Groups				X	
Comments: <i>Missing some perennials grasses forbs</i>						
B	13. Plant Mortality/Decadence					
Comments: <i>Shadscale &amp; bunchgrasses</i>						
H,B	14. Litter Amount				X	
Comments: <i>A little less</i>						
B	15. Annual Production					
Comments:						
B	16. Invasive Plants				X	
Comments: <i>Especially on disturbed sites</i>						
B	17. Reproductive Capability of Perennial Plants					
Comments:						

**Part 3. Summary**  
**A. Indicator Summary**

Departure from Ecological Site Description/  
 Ecological Reference Area(s)

Rangeland Health Attributes		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight	Σ
S	Soil/Site Stability (Indicators 1-6, 8, 9 & 11)				3		9
H	Hydrologic Function (Indicators 1-5, 7-11 & 14)				5		11
B	Biotic Integrity (Indicators 8-9 & 11-17)				3		9

**B. Attribute Summary** - Check the category that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of indicator ratings in the preceding Indicator Summary table.

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Soil/Site Stability Rationale:					X
Hydrologic Function Rationale:				X	
Biotic Integrity Rationale:				X	

Attribute Rating- Check one in each row

Soil/Site Stability	Not Stable <input type="checkbox"/>	At Risk <input type="checkbox"/>	Stable <input checked="" type="checkbox"/>
Biotic Integrity	Not Intact <input type="checkbox"/>	At Risk <input type="checkbox"/>	Intact <input checked="" type="checkbox"/>
Watershed Function	Non-Functioning <input type="checkbox"/>	At Risk <input type="checkbox"/>	Functioning <input checked="" type="checkbox"/>

Comments on Indicator(s) on other side of this page

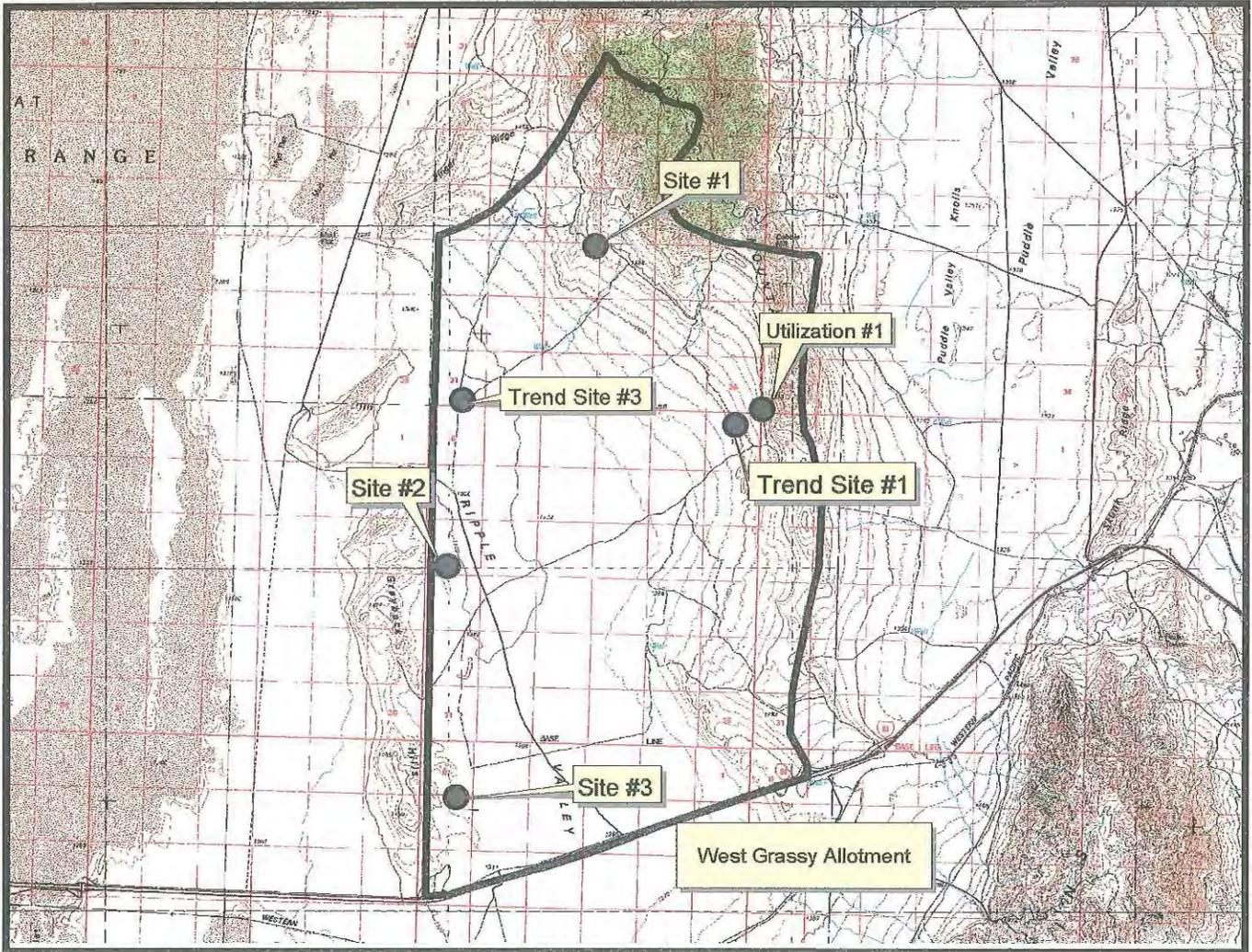
**Appendix 6**

Less Perennial grass & more shrubs than expected

Grass die off & shadscale die off

In transition areas but are at transect, maybe abandon trend site?

# West Grassy Allotment



● Study Site Locations

— Allotment Boundary

Bureau of Land Management  
Salt Lake Field Office  
2370 South 2300 West  
Salt Lake City, UT 84119



This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause misalignment of data layers.

Figure 1. West Grassy Allotment Rangeland Health Assessment Site Locations.