

Results of Assessment

Achieving Standards For Rangeland Health Conforming with Guidelines for Livestock Grazing Management and Establishing cause

Resource Area: Deschutes

Watershed Name/Number: 1707030601
(no name)

Grazing Allotment Name/Number: Wagenblast/07567

Public Land (acres): 80 Upland : 80 Riparian/Wetland: 0 Total: 80

Streams on Public Land (miles): 0

Date(s) of Assessment: 3/30/00

Permitee/Lessee Name: Martin Underhill

Assessment Participants: (Name and Discipline)

JC Hanf, Rangeland Specialist/Wildlife

JC Hanf 3/27/00

Helen McGranahan, Range Technician

Helen McGranahan

Michelle McSwain, Hydrologist

Michelle McSwain

Larry Thomas, Soils

Larry Thomas

Ron Halvorson, Botany

Ron Halvorson

Concurrence:

Paul Pusch acting for 3/29/00
Assistant Deschutes Field Manager

Concurrence:

Sharon Nether 3/29/00
Deschutes Field Manager

Standard 1 (Watershed Function - Uplands)

Check those that apply: (*check all appropriate boxes*)

Standard:

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward
- Standard Does Not Apply

Guidelines for Livestock Grazing Management:

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management, Guideline No(s) _____

Establishment of Cause:

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: ___ on-site; ___ off-site

Rationale/Information Sources:

The 80 acres of public land within this allotment comprises less than 5% of the total. While livestock use at the first of the 20th century obviously adversely impacted vegetative composition in the area, livestock use over the last 50 years has been negligible. No significant livestock use has been documented on the public land portion of this allotment in the last decade. Water for livestock in this area is from the Deschutes River, access to which is controlled by the Oregon Department of Fish and Wildlife and restricted to a couple small watergaps. This limited access to water has further limited the potential for livestock use of the public land tract. Monitoring established in 1988 and re-read in 1998 shows no change and observed apparent trend is static. Completion of the Rangeland Health Evaluation Worksheet resulted in the finding that soil/site stability is stable, biotic integrity not intact but the upland hydrologic process functioning properly.

Standard 2 (Watershed Function - Riparian/Wetland Areas)

Check those that apply: *(check all appropriate boxes)*

Standard:

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward
- X Standard Does Not Apply

Guidelines for Livestock Grazing Management:

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management, Guideline No(s) _____

Establishment of Cause:

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: ___ on-site; ___ off-site

Rationale/Information Sources:

There are no riparian areas within the public land portion of the allotment.

Standard 3 (Ecological Processes)

Check those that apply: (*check all appropriate boxes*)

Standard:

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward
- Standard Does Not Apply

Guidelines for Livestock Grazing Management:

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management, Guideline No(s) _____

Establishment of Cause:

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: ___ on-site; ___ off-site

Rationale/Information Sources:

Plant composition and community structure are not even close to potential for this site. However, accumulation of organic plant material into the soil is high. The scattered native perennial plants present on the site are healthy, vigorous and stable but will increase very slowly on this site due to the dominance of exotic annual grasses. There is little to no movement of the plant litter from the site and root occupancy in the upper levels of the soil profile appear to be adequate. As noted in Standard 1 little, if any, livestock use of the public lands in the allotment has occurred in the last decade.

Standard 4 (Water Quality)

Check those that apply: (*check all appropriate boxes*)

Standard:

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward
- Standard Does Not Apply

Guidelines for Livestock Grazing Management:

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management, Guideline No(s) _____

Establishment of Cause:

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: ___ on-site; ___ off-site

Rationale/Information Sources:

There are no surface of groundwater resources on public land within this allotment.

Standard 5 (Habitat for native, T&E and Locally Important Species)

Check those that apply: (check all appropriate boxes)

Standard:

- Meeting the Standard
- Not Meeting the Standard; Making Significant Progress Toward
- Not Meeting the Standard; Not Making Significant Progress Toward
- Standard Does Not Apply

Guidelines for Livestock Grazing Management:

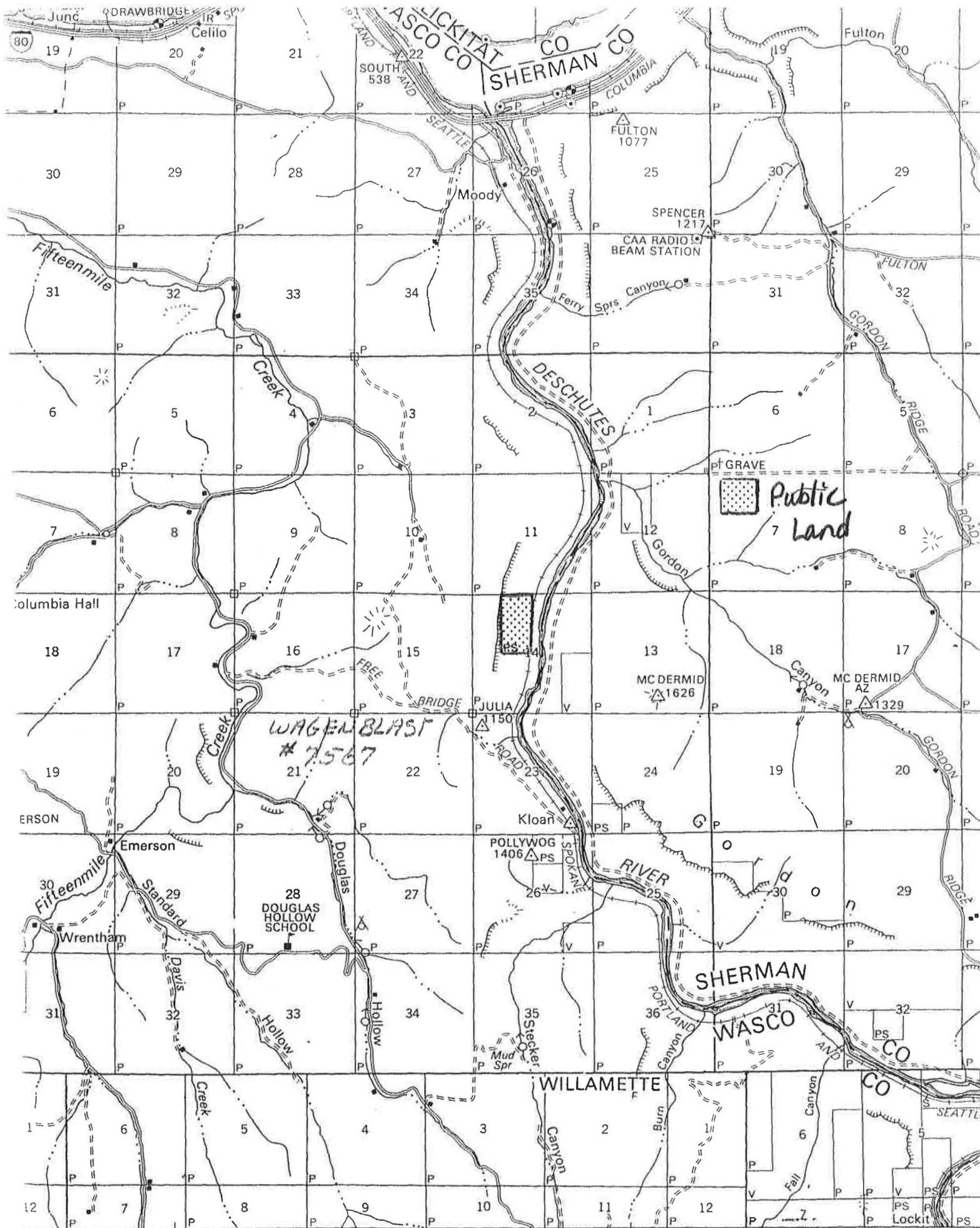
- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management, Guideline No(s) _____

Establishment of Cause:

- Livestock are significantly contributing to the failure to meet the standard
- Livestock are not significant contributors to the failure to meet the standard
- Failure to meet the standard is related to other uses or conditions: ___ on-site; ___ off-site

Rationale/Information Sources:

When in good condition, potential of this site for riparian or rangeland wildlife is poor. Conversion of the public land to an annual dominated site has not changed that potential. No botanical inventory has occurred in this allotment, therefore special status plants are not known from this allotment. Plants that could possibly occur include *Astragalus hoodianus*, *Lomatium farinosum* var. *hambleniae* and *Mimulus jungermannioides*. However, based on the description of habitat it appears that the allotment is unlikely to contain any of these species. *Astragalus hoodianus* is not known from this far east and normally is found in better condition grassland. *Lomatium farinosum* var. *hambleniae* is found in rocky swales, not on steep slopes, and is not known this far east (although it is possible it could occur in correct habitat). *Mimulus jungermannioides* is found on moist, vertical basalt walls which are not present here. Therefore, this standard is not an issue related to special status plants. It does not appear that the standard is being met in the allotment based on the predominant annual /shrub composition. However, although there is really no opportunity for BLM to control livestock use on the public land within the allotment, it appears that current livestock use is occurring sparingly, if at all and existing management complies with the Guidelines for Livestock Grazing Management.



14 E.

1,880,000 FEET.
OREGON

R. 15 E.

Appendix 1.

Rangeland Health Evaluation Site Documentation Worksheet

State OR District/Region/Field Office 056

Management Unit (Allotment) WAGENBLAST Watershed _____

Pasture N/A Reference Area: Yes ___ or No Y

Major Land Resource Area _____

Identification Number (if applicable) _____ Photo(s) Taken: Yes ___ or No Y

Location: EAST FACING SLOPE ON LOWER DOSSHEITS RIVER - TO WARD MOUTH

Legal T. 1N, R. 15E, Sec. 2, NE 1/4, NE 1/4.

Latitude _____, Longitude _____ or UTM Coordinates _____

Size and Topographic Position of Evaluation Area 80 ACRES - LOCATED BELOW THE WEST RIM OF THE RIMICAPAN AND FAIRLY STEEP

Observers: MEGRATH, HANE, GREGORY, MESSIAIN Date: 3/20/00

SITE CHARACTERISTICS

Ecological Site DROUGHTY SOUTH EXPOSURE

Soil Map Unit Name LICKSKILT EXTREMELY STONEY LOAM

Geology or Parent Material UNITED BASALT Aspect EAST

Slope 40+% Elevation 1000 ft. Topographic position _____

Annual Precip. 10 Recent weather: 1) Drought ___, 2) Normal Y, or 3) Wet ___

SITE USES

Describe wildlife and livestock use in the area of the evaluation area

SITE AND SLOPE OF SITE INDICATE PRIMARILY TRAVELING USE BY MAMMALS, SONGBIRDS, RAPTORS, ETC. LIKELY MINIMAL NESTING BY SONGBIRDS POSSIBLE

Describe evidence of recent disturbance (wildfire, recreation, grasshoppers, etc.) NONE

Bold items require completion, other information is optional

Cover Worksheet								
COVER CLASSES (% Canopy)	0	0-1	1-5	6-15	16-30	31-50	51-75	75-100
LIFE FORMS								
I - GRASS								
Annuals				10				
Native Perennial								
Exotic Perennial								
II - FORB								
Annual				10				
Perennial								
III - SHRUB			3.5					
IV - TREE	0							
V - SUCCULENT	0							
VI - BIOLOGICAL SOIL CRUST	0							
GROUND COVER								
I- LITTER							X	
II- BARE GROUND					X			
III- ROCK/GRAVEL			X					
IV- BIOLOGICAL CRUST		X						
V- VASCULAR PLANTS					X			

Life Form Cover- Record multiple canopy cover classes; total plant canopy may exceed 100%.

Ground Cover- All ground cover in Categories I.-IV. are estimated from **interspace** areas only. Category V. is an estimate of total vascular plant cover; overlapping canopies are counted as only one canopy.

Species Abundance Worksheet

The dominant species, noxious weeds (state listed), invasive natives, invasive exotics (non noxious) are ranked according to abundance (cover or weight). These are required components while the "Dominant Species by Life Form" is recommended but is optional.

Dominant Species on Site

1. CHEAT GRASS
2. SIX WEEKS FESCUE
3. RABBIT BRUSH
4. _____

Noxious Weeds

1. _____
2. _____
3. _____

Invasive Natives

1. _____
2. _____
3. _____

Invasive Exotics

1. CHEAT GRASS
2. SIX WEEKS FESCUE
3. SHEEP FESCUE

Optional- Dominant Species by Life Form

The dominant species are ranked according to abundance (cover or weight) by life form.

Annual Grasses.

1. CHEAT GRASS
2. SHEEP FESCUE
3. SIX WEEKS FESCUE

Annual Forbs.

1. GOATS RUE
2. FIDDLE NECK
3. _____

Perennial Grasses

1. SQUIRRELTAIL
2. IDaho FESCUE
3. TAN BLUEGRASS

Perennial Forbs

1. _____
2. _____
3. _____

Shrubs and Trees

1. RABBIT BRUSH
2. BIG SPIN BRUSH
3. _____

Succulents

1. _____
2. _____
3. _____

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

1. _____
2. _____
3. _____

Functional/ Structural Groups	Potential Comp. ¹	Actual Comp.	Species List for Potential Functional/Structural Groups
Warm Season Tall Grasses	75	60	Big Bluestem, Indiangrass, Switchgrass
Warm Season Midgrasses	10	20	Little Bluestem, Sideoats Grama, Blue Grama
Cool Season Midgrasses	5	0	Western Wheatgrass, Green Needlegrass
Warm Season Shortgrass	0	10	Buffalograss
Leguminous Forbs	5	0	Prairie Coneflower, Astragalus spp.
Tap Rooted Forbs	5	0	Dotted Gayfeather, Maximillion Sunflower, Englemann Daisy
Evergreen Shrubs	0	10	Eastern Red Cedar
Biological Crusts ²	5 - 8	0-3	Mosses

Potential Comp.¹ is based on per cent composition by weight from site description or estimated/measured from ecological reference area. Biological Crusts² are evaluated on cover not composition by weight.

Range and Health Ecological Indicator Evaluation Matrix

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

Indicator	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
1. Rills	Rill formation is severe and well defined throughout most of the area.	Rill formation is moderately active and well defined throughout most of the area.	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	No recent formation of rills; old rills have blunted or muted features.	Minimal evidence of current or past formation of rills.
2. Water Flow Patterns	Extensive and numerous; unstable with active erosion; usually connected.	More numerous than expected; deposition and cut areas common; occasionally connected.	Nearly matches what is expected for the site; erosion is minor with some instability and deposition.	Matches what is expected for the site; some evidence of minor erosion. Flow patterns are stable and short.	Matches what is expected for the site; minimal evidence of past or current soil deposition or erosion.
3. Pedestals and/or Terracettes (Wind and Water)	Abundant active pedestalling and numerous terracettes. Many rocks and plants are pedestalled; exposed plant roots are common.	Moderate active pedestalling; terracettes common. Some rocks and plants are pedestalled with occasional exposed roots.	Slight active pedestalling; most pedestals are in flow paths and interspaces and/or on exposed slopes. Occasional terracettes present.	Active pedestalling or terracette formation is rare; some evidence of past pedestal formation, especially in water flow patterns and on exposed slopes.	Minimal current or past evidence of pedestalled plants or rocks. terracettes absent or uncommon.
4. Bare Ground	Much higher than expected for the site. Bare areas are large and generally connected.	Moderately to much higher than expected for the site. Bare areas are large and occasionally connected.	Moderately higher than expected for the site. Bare areas are of moderate size and sporadically connected.	Slightly to moderately higher than expected for the site. Bare areas are small and rarely connected.	Amount and size of bare areas nearly to totally match that expected for the site.
5. Gullies	Common with indications of active erosion; vegetation is infrequent on slopes and/or bed. Nickpoints and headcuts are numerous and active.	Present with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are active; down cutting is not apparent.	Moderate in number with indications of active erosion; vegetation is intermittent on slopes and/or bed. Occasional headcuts are present.	Uncommon, vegetation is stabilized on bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.	Drainages are represented as natural stable channels ; no signs of erosion with vegetation common.

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

Indicator	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
6. Wind Scoured Areas	Extensive with exposed roots common.	Common with some exposed roots.	Occasionally present with some exposed roots.	Infrequent and few exposed roots.	Minimal evidence of active or past activity.
7. Litter Movement (wind or water)	Extreme; concentrated around obstructions. Most size classes of litter have been redistributed.	Moderate to extreme; loosely concentrated near obstructions. Moderate to small size classes of litter have been redistributed.	Moderate movement of smaller size classes in scattered concentrations near obstructions and in depressions.	Slightly more than expected for the site with only small size classes of litter being redistributed.	Matches that expected for the site, with a fairly uniform distribution of litter.
8. Soil Surface Resistance to Erosion	Resistance of soil surface to erosion extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.	Resistance of soil surface to erosion significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.	Resistance of soil surface to erosion significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the site.	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the site. Stabilizing agents reduced below expected.	Resistance of soil surface to erosion matches that expected for the site. Surface soil is stabilized by organic matter decomposition products or a biological crust.
9. Soil Surface Loss (especially in plant interspaces)	Soil surface horizon absent. Soil structure near surface is similar to, or more degraded, than that in subsurface horizons. No distinguishable difference in subsurface organic matter content.	Soil loss or degradation severe throughout site. Minimal difference in soil organic matter content and structure of surface and subsurface layers.	Moderate soil loss or degradation in plant interspaces with some degradation beneath plant canopies. Soil structure is degraded and soil organic matter content is significantly reduced.	Some soil loss has occurred and/or soil structure shows signs of degradation, especially in plant interspaces.	Soil surface horizon intact. Soil structure and organic matter content match that expected for site.
10. Plant Community Composition & Distribution Relative to Infiltration & Runoff	Infiltration is severely decreased due to adverse changes in plant community composition and/or distribution. Adverse plant cover changes have occurred.	Infiltration is greatly decreased due to adverse changes in plant community composition and/or distribution. Detrimental plant cover changes have occurred.	Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.	Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.	Infiltration and runoff are equal to that expected for the site. Plant cover (distribution and amount) adequate for infiltration minimizing runoff.

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

Indicator	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
11. Compaction Layer (below soil surface)	Extensive with >1" thickness, severely restricts water movement and root penetration.	Widespread with >1" thickness, greatly restricts water movement and root penetration.	Moderately widespread, < 1" thick, moderately restricts water movement and root penetration.	Infrequent or is thin and weakly restrictive to water movement and root penetration.	None to minimal, not restrictive to water movement and root penetration.
12. Plant Functional/ Structural Groups (F/S Groups)	Less dominant F/S Groups dominate the site. F/S groups not present in the historic plant communities also may dominate. Number of species in most F/S groups is extremely low.	Dominant F/S groups represented by a few species. Less dominant F/S groups now dominate the site. F/S groups not present in historic plant community are common. Number of species in most F/S groups is low.	Less dominant F/S groups are no longer present. OR Dominant F/S groups occur, but no longer dominate. Less dominant F/S groups no longer present or greatly reduced. F/S groups not present in historic plant communities may be present. Number of species in most F/S groups is low to moderate.	Dominant F/S groups are diminished but still dominate. Less dominant F/S groups are represented in slightly higher proportion than expected for the site. Number of species in most F/S groups is nearly equal to that expected for the site.	F/S groups and number of species in each group closely match that expected for the site.
13. Plant Mortality/ Decadence	Dead and/or decadent plants are common.	Dead plants and/or decadent plants are somewhat common.	Some dead and/or decadent plants are present.	Slight plant mortality and/or decadence.	Plant mortality and decadence matches that expected for the site.
14. Litter Amount	Largely absent or dominant relative to site potential and weather.	Amount greatly reduced or increased relative to site potential and weather.	Moderately more or less relative to site potential and weather.	Amount slightly more or less relative to site potential and weather.	Amount is what is expected for the site potential and weather.
15. Annual Production	Less than 20% of potential production.	20-40% of potential production.	40-60% of potential production.	60-80% of potential production.	Exceeds 80% of potential production.
16. Noxious and Invasive Plants	Dominate the site.	Common throughout the site.	Scattered throughout the site.	Occasionally present on the site.	Rarely present on the site.
17. Reproductive Capability of Perennial Plants	Capability to produce seed or vegetative tillers is severely reduced relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is greatly reduced relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is only slightly limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is not limited relative to recent climatic conditions.

Descriptors/Rating Classes

Departure from Ecological Site Description/Reference Area(s)

Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,W	1. Rills					X
S,W	2. Water Flow Patterns					X
S,W	3. Pedestals and/or Terracettes					X
S,W	4. Bare Ground				X	
S,W	5. Gullies					X
S	6. Wind Scoured Areas					X
W	7. Litter Movement					X
S,B,W	8. Soil Surface Resistance to Erosion				X	
S,B,W	9. Soil Loss					X
S,W	10. Plant Community Comp. & Distrib. Relative to Infiltration & Runoff					X
S,B,W	11. Compaction Layer					X
B	12. Plant Functional/Structural Groups		X			
B	13. Plant Mortality/Decadence					X
B,W	14. Litter Amount			X		
B	15. Annual Production		X			
B	16. Noxious & Invasive Plants	X				
B	17. Perm. Plant Reproductive Capability					X
	Indicator Summary	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil/Site Stability (Indicators 1-6 & 8-11)				X X	X X X X X X X X
B	Biotic Integrity (Indicators 8-9 & 11-17)	X	X X	X	X	X X X
W	Hydrologic Function (Indicators 1-5, 7-11 & 14)				X X	X X X X X X X X X X

Attribute Rating- Check one in each row

<u>Soil/Site Stability</u>	Not Stable-----	At Risk----	Stable-----X-----
<u>Biotic Integrity</u>	Not Intact --X--	At Risk ----	Intact -----
<u>Hydrologic Function</u>	Non-Functioning--	At Risk ----	Functioning--X--

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

Appendix 6. Example of Rangeland Health Evaluation Summary

Descriptors/Rating Classes

Departure from Ecological Site Description/Reference Area(s)

Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S,W	1. Rills				Ö	
S,W	2. Water Flow Patterns				Ö	
S,W	3. Pedestals or Terracettes					Ö
S,W	4. Bare Ground				Ö	
S,W	5. Gullies					Ö
S	6. Wind Scoured Areas					Ö
W	7. Litter Movement					Ö
S,B,W	8. Soil Surface Resistance to Erosion			Ö		
S,B,W	9. Soil Loss			Ö		
S,W	10. Plant Community Comp. & Distrib. Relative to Infiltration & Runoff					Ö
S,B,W	11. Compaction Layer			Ö		
B	12. Plant Functional/Structural Groups	Ö				
B	13. Plant Mortality/Decadence		Ö			
B,W	14. Litter Amount		Ö			
B	15. Annual Production	Ö				
B	16. Noxious & Invasive Plants	Ö				
B	17. Pern. Plant Reproductive Capability	Ö				
	Indicator Summary	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil/Site Stability (Indicators 1-6 & 8-10)			ÖÖÖ	ÖÖÖ	ÖÖÖÖ
B	Biotic Integrity (Indicators 8-9 & 11-17)	ÖÖÖÖ	ÖÖ	ÖÖÖ		
W	Hydrologic Function (Indicators 1-5, 7-11 & 14)		Ö	ÖÖÖ	ÖÖÖ	ÖÖÖÖ

Attribute Rating- Check one in each row

Soil/Site Stability	Not Stable-----	At Risk-----	Stable----- Ö
Biotic Integrity	Not Intact ----- Ö	At Risk ----	Intact -----
Hydrologic Function	Non-Functioning--	At Risk ----	Functioning----- Ö