

# INTERPRETING INDICATORS OF RANGELAND HEALTH VERSION 5 EVALUATION FORM – PAGE 1

Complete the following information as necessary for project documentation and assessment purposes.

Evaluation area name or ID:		Date:
Management unit:	State:	Office:
Evaluator(s):		

## Ecological Site/ Reference Sheet Used for Evaluation *(Complete this section last)*

Ecological Site name:	Ecological Site ID:
Reference sheet used/authors:	Date:
Soil component:	Composition based on (check one): Cover <input type="checkbox"/> Annual Production <input type="checkbox"/>

## Ecological Site Determination *(Describe reference on the left and observations of the evaluation area on the right.)*

Soil Survey:					Soil map unit:				
<b>Soil and site reference description</b>					<b>Evaluation area soil and site characterization</b>				
Description Source: Ecological Site Description OR Soil Survey									
Parent material:		Slope range: %		Parent material:		Elevation: ft / m			
Elevation range: ft / m		Aspect (if specified):		Slope: %		Aspect:			
Topographic position:					Topographic position:				
Precipitation range: in / cm					Average annual precipitation: in / cm				
Seasonal precipitation distribution:					Seasonal precipitation distribution:				
Soil depth <sup>1</sup> : Very shallow <input type="checkbox"/> Shallow <input type="checkbox"/> Moderate <input type="checkbox"/> Deep <input type="checkbox"/> Very deep <input type="checkbox"/>					Pit depth: in / cm				
<b>Type and depth of diagnostic horizons: in / cm</b>					<b>Type and depth of diagnostic horizons: in / cm</b>				
Soil horizon	Depth	Texture	Eff <sup>2</sup>	Other	Soil horizon	Depth	Texture	Eff <sup>2</sup>	Other

## Evaluation Area Location

Criteria used to select evaluation area:			
Location description/directions:			
Size of evaluation area:		UTM Zone: Datum:	Position by GPS? Yes / No
Township	Range	OR	N. Latitude
Section	¼ Section	OR	W. Longitude

## Supplemental Information & Reference Community Phase

Recent weather (last 2 years): drought <input type="checkbox"/> normal <input type="checkbox"/> wet <input type="checkbox"/>
Natural disturbance type(s) and date(s):
Land treatment type(s) and date(s):
Wildlife, livestock, recreation, or other uses:
Offsite influences:
Photos taken? Yes / No
Quantitative data collected:
F/S groups worksheet completed? <b>Yes</b> (attach worksheet) <b>No</b> (document expected relative dominance on next line)
Reference community phase/description <sup>3</sup> :

<sup>1</sup>Depth classes: Very shallow < 25 cm; Shallow 25-50 cm; Moderate 50-100 cm; Deep 100-150 cm; Very Deep > 150 cm

<sup>2</sup>Soil effervescence (Eff) codes: NE – non-eff.; VS – very slightly eff.; SL – slightly eff.; ST – strongly eff.; V – violently eff.

<sup>3</sup>If F/S worksheet is not completed, describe expected reference community F/S groups' relative dominance in this field.

Interpreting Indicators of Rangeland Health Version 5 Evaluation Form - Page 2

Evaluation Area ID:						Date:								
Departure from Expected					Code		Instructions							
None to Slight					N-S		(1) Assign 17 indicator ratings, record comments and any measurements.							
Slight to Moderate					S-M		(2) In the attribute rating tables at the bottom of the form, write the indicator number in the appropriate column for each indicator applicable to the attribute.							
Moderate					M		(3) Assign overall rating for each attribute based on preponderance of evidence.							
Moderate to Extreme					M-E		(4) Provide rationale for each attribute rating in writing.							
Extreme to Total					E-T									
Indicator					Rating		Comments							
1. Rills					S	H								
2. Water-flow patterns					S	H								
3. Pedestals and/or terracettes					S	H								
4. Bare ground (observed): ____%					S	H								
5. Gullies					S	H								
6. Wind-scoured and/or depositional areas					S									
7. Litter movement (wind or water)					S									
8. Soil surface resistance to erosion Interspace : _____ Plant Canopy: _____					S	H	B							
9. Soil surface loss and degradation					S	H	B							
10. Effects of plant community composition and distribution relative to infiltration						H								
11. Compaction layer					S	H	B							
12. Functional/structural groups a. Relative dominance: _____ b. F/S groups not expected at the site: _____ c. Number of F/S groups: _____ d. Spp # in dom & subdom F/S groups: _____							B							
13. Dead or dying plants or plant parts							B							
14. Litter cover and depth Observed cover: ____% Depth: ____cm/in						H	B							
15. Annual production: Pounds or Kilograms) Observed: _____ ÷ Expected _____ = _____							B							
16. Invasive plants							B							
17. Vigor with an emphasis on reproductive capability of perennial plants							B							
Soil and Site Stability "S" (10 indicators)					Hydrologic Function "H" (10 indicators)					Biotic Integrity "B" (9 indicators)				
Attribute Rating: _____		Rationale:			Attribute Rating: _____		Rationale:			Attribute Rating: _____		Rationale:		
E-T	M-E	M	S-M	N-S	E-T	M-E	M	S-M	N-S	E-T	M-E	M	S-M	N-S

# INTERPRETING INDICATORS OF RANGELAND HEALTH *VERSION 5*

## Functional/Structural Groups Worksheet

Evaluation Area ID: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator(s): \_\_\_\_\_

**Instructions** (Numbers correspond to fields in the worksheet; see Appendix 4 for detailed instructions.):

- 1) Record the ecological site for the evaluation area. Considering the disturbance and land treatment history at the evaluation area, select the appropriate reference community phase from the F/S groups table in the reference sheet.
- 2) Observe and list the F/S groups present in the evaluation area.
- 3) Record the species within each F/S group present in the evaluation area. At the bottom of this section, record the number of expected F/S groups and number of species in expected dominant and sub-dominant groups observed in the evaluation area.
- 4) Copy the relative dominance for the selected reference phase from the reference sheet to the **Expected** column.  
In the **Observed** column, document the relative dominance of F/S groups at the evaluation area.  
Use the **Comments** field to make notes, including any adjustments to relative dominance and rationale.
- 5) For each sub-indicator, circle the departure category description that best fits the observed changes in F/S groups in the evaluation area.
- 6) Rate the overall departure for the F/S Groups indicator by choosing the greatest departure category of the four sub-indicators.

1) Ecological site: _____		Reference phase for evaluation area: 1. _____	
2) F/S Groups in Evaluation Area		3) Species List	
Biological soil crusts <sup>1</sup>			
Number of expected F/S groups present in evaluation area <sup>2</sup> :			
Number of species in expected dominant and sub-dominant groups present in evaluation area:			

<sup>1</sup> Biological soils crust dominance is determined based on cover, rather than production. If biological soil crusts are an expected dominant or sub-dominant group, the number of expected life forms (e.g. lichen, moss) is listed, rather than number of individual species.

<sup>2</sup> When a F/S group that is expected to be dominant, sub-dominant or minor is reduced in the evaluation area to a few remnant individuals, the group is not considered to be "functionally present" and is not included in the number of F/S groups present (12c).

**INTERPRETING INDICATORS OF RANGELAND HEALTH *VERSION 5***  
**Functional/Structural Groups Worksheet**

Evaluation Area ID: \_\_\_\_\_ Date: \_\_\_\_\_ Evaluator(s): \_\_\_\_\_

<b>4)</b>	<b>Expected</b> relative dominance of F/S Groups for Phase 1.____ Based on: Production _____ Foliar Cover _____	<b>Observed</b> relative dominance of F/S Groups in the evaluation area
<b>Dominant</b>		
<b>Sub-dominant</b>		
<b>Minor</b>		
<b>Trace</b>		

**Comments:**

**5) Indicator and sub-indicators rating** (circle the appropriate departure category for each sub-indicator below).

<b>Sub-indicator</b>	<b>E-T</b>	<b>M-E</b>	<b>M</b>	<b>S-M</b>	<b>N-S</b>
<b>12a.</b> Relative dominance	All expected dominant F/S groups are now minor, trace, or missing.	One or more dominant F/S groups is now minor or trace, or a minor or trace group is now dominant.	Dominant F/S group(s) has become subdominant.	Subdominant F/S group has become minor or trace, or a minor or trace F/S group has become subdominant.	Resembles expected relative dominance for appropriate reference phase.
<b>12b.</b> F/S groups not expected at the site	F/S group(s) not expected is now dominant.	F/S group(s) not expected is now subdominant.	F/S group(s) not expected is now minor.	F/S group(s) not expected is now trace.	None.
<b>12c.</b> Number of expected F/S groups <sup>2</sup>	Severely reduced (missing $\geq 76\%$ of expected F/S groups).	Greatly reduced (missing 51-75% of expected F/S groups).	Moderately reduced (missing 26-50% of expected F/S groups).	Slightly reduced (missing $\leq 25\%$ of F/S groups).	All expected F/S groups for appropriate phase are present <sup>1</sup>
<b>12d.</b> Total combined number of species expected in dominant and subdominant F/S groups	Severely reduced (missing $\geq 76\%$ ).	Greatly reduced (missing 51-75%).	Moderately reduced (missing 26-50%).	Slightly reduced (missing 10-25%).	Missing less than 10% of expected # of species in dominant and subdominant F/S groups for appropriate reference phase.

**6) Overall departure category for F/S Groups Indicator:**

Data Entry Date: \_\_\_\_\_ By: \_\_\_\_\_ Error Check Date: \_\_\_\_\_ By: \_\_\_\_\_