USDA Natural Resources
Conservation Service

Ecological site R010XA003OR
Droughty 8-10 PZ

Accessed: 04/27/2024

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	Cici Brooks
Contact for lead author	State Rangeland Management Specialist for NRCS - Oregon
Date	03/20/2008
Approved by	Bob Gillaspy
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** Few-due to extreme storm events.

2. **Presence of water flow patterns:** Few-associated with extreme storm events which carry water from adjacent uplands above this site.

3. **Number and height of erosional pedestals or terracettes:** None to some

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 10-15%

5. **Number of gullies and erosion associated with gullies:** Few-due to convection storms and the ashy nature of the soils.

6. **Extent of wind scoured, blowouts and/or depositional areas:** Site is not highly prone to wind erosion.

7. **Amount of litter movement (describe size and distance expected to travel):** Fine - limited movement

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Slightly resistant to erosion: aggregate stability = 3-4

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** SOM 1-4%; Moderate very fine granular structure or weak thin platy structure parting to weak fine granular structure.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** The scattered shrubs & bunchgrasses of this plant community may allow little runoff and good infiltration in normal storm events. However, in high storm events with runon from adjacent uplands, some runoff may occur. Reference natural plant community has an approximate percent canopy cover of approximately 55% and basal cover is approximately 8%; microbiotic crusts are approximately 5-10% cover.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None; depth to duripan, when present, is 10 to 20 inches.

12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**

    Dominant: Deep rooted perennial grass/grasslike

    Sub-dominant: Evergreen shrubs>Evergreen trees>Decidious shrubs

    Other:

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Normal decadence and mortality expected

14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Total above ground production is approximately 600 lbs. in unfavorable years, 800# in normal years and

1000# in favorable years.

---

16. **Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:** Cheatgrass and annual forbs invade sites that have lost deep rooted perennial grass functional groups

---

17. **Perennial plant reproductive capability:** All species should be capable of reproducing annually.
