

Ecological site R023XY501OR SHALLOW LOAM 16-25 PZ

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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)	Bob Gillaspay
Contact for lead author	State Rangeland Management Specialist for NRCS Oregon
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Approved by	Bob Gillaspay
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None.

2. **Presence of water flow patterns:** None.

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

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 5-15%

5. **Number of gullies and erosion associated with gullies:** None.

6. **Extent of wind scoured, blowouts and/or depositional areas:** None, slight wind erosion hazard.

7. **Amount of litter movement (describe size and distance expected to travel):** Litter size is Small/Fine. Litter movement is limited, minimal, and short, associated with water flow patterns following extremely high intensity storms. Litter also may be moved during intense wind storms.

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8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Site is Moderately resistant to erosion. Stability class (Herrick et al. 2001) anticipated to be 3-6 at surface under perennial vegetation. Stability class at surface in the interspaces is anticipated to be less than or equal to that under perennial vegetation.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface layer structure is moderate thin platy. The A horizon has a dry color of 3 and is 35 inches thick. The Soil Organic Matter (SOM) content is moderate (3 to 8%).
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Plant foliar cover and basal cover with small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. High herbaceous vegetation on this site will retain more water from precipitation. Significant ground cover (50-70%) and gentle to moderate slopes (3-30%) moderately limit rainfall impact and overland flow.
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11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None.
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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 bunchgrasses
- Sub-dominant: Evergreen shrub
- Other: Perennial forbs => other perennial grasses
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Grasses will nearly always show some mortality and decadence. Normal decadence and mortality expected on other plants.
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14. **Average percent litter cover (%) and depth (in):**
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Low 800 lbs/acre, Representative Value 1200 lbs/acre, High 1600 lbs/acre
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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: This site is highly resistant and resilient to invasive species. Any invasive species will only occupy the site for a short time without repeated disturbance.

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