

Ecological site R010XY031ID South Slope Sandy 12-16 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.

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Approved by	Brendan Brazee
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. Number and extent of rills:** Rills do not usually occur on this site due to surface texture
- 2. Presence of water flow patterns:** Water-flow patterns can occur on this site due to moderate to steep slopes. They usually occur during high intensity convection storms. They are disrupted by large bunchgrasses and shrubs. They are not extensive.
- 3. Number and height of erosional pedestals or terracettes:** Pedestals do not occur. A few terracettes can occur where water flow patterns are present. They are not extensive
- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Ranges from 10-20%
- 5. Number of gullies and erosion associated with gullies:** Gullies do not occur on this site
- 6. Extent of wind scoured, blowouts and/or depositional areas:** Scouring and blowouts can occur on this site

particularly following a wildfire.

7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter in the interspaces may move up to 3 feet or further following a significant run-off event or even further from wind. Terracettes can trap fine litter. Coarse litter generally does not move
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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):** Values should range from 4 to 5
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** no data
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Bunchgrasses, especially deep-rooted perennials, slow run-off and increase infiltration. Tall shrubs catch snow in the interspaces. Terracettes provide a favorable micro-site for vegetative establishment which further increases infiltration.
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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):** Not present
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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: cool season deep-rooted perennial bunchgrasses>>>
- Sub-dominant: tall shrubs>
- Other: perennial forbs>
- Additional: shallow rooted grasses
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Basin big sagebrush and antelope bitterbrush will become decadent in the absence of fire and ungulate grazing. Grass and forb mortality will occur as tall shrubs increase
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14. **Average percent litter cover (%) and depth (in):** Annual litter cover in the interspaces will be 5-10 percent to a depth of <0.1 inch. Under the mature shrubs litter is greater than 0.5 inches. Fine litter can accumulate on the terracettes and behind surface stones.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 800 lbs. per acre in a year with normal precipitation and temperatures. Production is normally low due to low infiltration, steep south aspect and moderate water capacity. Perennial grasses produce 55-65 percent of the total,

forbs 5-15 percent, and shrubs 25-35 percent.

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: includes cheatgrass, bulbous bluegrass, rush skeletonweed, scotch thistle, and spotted and diffuse knapweed
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17. **Perennial plant reproductive capability:** all functional groups have the potential to reproduce in normal years.
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