

## Ecological site R028BY084NV COARSE SILTY 6-8 P.Z.

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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	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

- Number and extent of rills:** Rills are none to rare.
- Presence of water flow patterns:** Water flow patterns are none to rare. A few waterflow patterns may be evident in areas subjected to summer convection storms. Where flow patterns are observed, they are short (< 2m), meandering and stable.
- Number and height of erosional pedestals or terracettes:** Pedestals are rare with occurrence typically limited to areas within water flow paths. There are no terracettes.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground 40-60%; surface rock fragments up to  $\pm 15\%$ ; shrub canopy 15 to 25%; basal area for perennial herbaceous plants  $\pm 10\%$ .
- Number of gullies and erosion associated with gullies:** None
- Extent of wind scoured, blowouts and/or depositional areas:** None to rare. If observed, wind scoured spots are

isolated and very small in areal extent (<50ft<sup>2</sup>).

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7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter (foliage from grasses and annual & perennial forbs) is expected to move the distance of slope length during intense summer convection storms or rapid snowmelt events. Persistent litter (large woody material) will remain in place except during large rainfall events.
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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):** Soil stability values should be 3 to 6 on most soil textures found on this site. Soils having thin surface sand sheet have lower stability values.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface soil structure is typically single grained to medium platy. Soil surface colors are light grays or yellowish browns and the soils are typified by an ochric epipedon. Surface textures are sandy loams, fine sandy loams, loams or silt loams. A soft vesicular crust is present on the surface. Organic carbon of the surface 2 to 3 inches is typically 1 or less percent.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Shrub canopy and associated litter break raindrop impact and provide for snow capture on this site. Deep-rooted perennial bunchgrasses promote infiltration and reduce runoff.
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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):** Compacted layers are none. Platy or massive sub-surface horizons are not to be interpreted as compacted layers.
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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: Reference State: Salt desert shrubs (winterfat & bud sagebrush) = deep-rooted, cool season, perennial bunchgrasses (Indian ricegrass)(by above ground production).
- Sub-dominant: >> shallow-rooted and/or rhizomatous, perennial, grasses = deep-rooted, perennial, forbs = fibrous, shallow-rooted, annual and perennial forbs (by above ground production).
- Other: microbiotic crusts
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Dead branches within individual shrubs are common and standing dead shrub canopy material may be as much as 25% of total woody canopy; mature bunchgrasses commonly ( $\pm 15\%$ ) have dead centers.
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14. **Average percent litter cover (%) and depth ( in):** Between plant interspaces (10-20%) and depth ( $\pm \frac{1}{4}$  in.)

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** For normal or average growing season (thru May)  $\pm 700\text{lbs/ac}$ ; Favorable years  $\pm 900\text{lbs/ac}$  and unfavorable years  $\pm 400\text{lbs/ac}$  Spring moisture significantly affects total production.
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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: Potential invaders include halogeton, Russian thistle, bur buttercup, annual mustards, and cheatgrass.
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17. **Perennial plant reproductive capability:** All functional groups should reproduce in average and above average growing season years. Reduced growth and reproduction occur during extreme or extended drought periods.
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