

Ecological site R028BY073NV SHALLOW SILTY 5-8 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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Date	05/15/2013
Approved by	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. Number and extent of rills:** This site is nearly level, thus rills are non-existent.
- 2. Presence of water flow patterns:** These sites are subject to brief ponding and flooding after summer convection storms. As a result, water flow patterns may be numerous in areas. Flow patterns may be fairly long, meandering and stable.
- 3. Number and height of erosional pedestals or terracettes:** Pedestals are rare with occurrence typically limited to areas within water flow paths. Terracettes are non-existent.
- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground 70-80%
- 5. Number of gullies and erosion associated with gullies:** None
- 6. Extent of wind scoured, blowouts and/or depositional areas:** None - wind scouring may occur from a severe wind event during summer convection storms.

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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) expected to move 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 or ponding 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 4 to 6 on most soil textures found on this site.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface structure is typically fine to medium platy or prismatic. Soil surface colors are pale browns and grays and soils are typified by an ochric epipedon. Surface textures are typically silt loams. A thick vesicular crust is common. Organic matter of the surface 2 to 3 inches is less than 1 percent.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Sparse shrub canopy and associated litter provide some protection from raindrop impact and allow for some snow capture on this site. Medium to fine textured surface soils have moderate to slow infiltration and medium runoff. The vesicular crust also impedes 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):** Compacted layers are none. Massive sub-surface horizons or subsoil calcic 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 (shadscale)
- Sub-dominant: shallow-rooted, cool season, perennial bunchgrasses > deep-rooted, cool season, perennial bunchgrasses > deep-rooted, cool season perennial forbs > associated salt-desert shrubs > fibrous, shallow-rooted, cool season, perennial forbs = annual forbs
- Other:
- 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 common and standing dead shrub canopy material may be as much as 35% of total woody canopy; mature bunchgrasses commonly ($\pm 25\%$) have dead centers.
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14. **Average percent litter cover (%) and depth (in):** Between plant interspaces (10-15%) and depth ($< \frac{1}{4}$ 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 June) ± 300 lbs/ac; Favorable years ± 400 lbs/ac and unfavorable years ± 200 lbs/ac
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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, 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. Little growth or reproduction occurs in extended or extreme drought conditions.
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