

## Ecological site R028BY018NV 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	12/14/2015
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

- Number and extent of rills:** This site is nearly level so rills are not expected.
- Presence of water flow patterns:** Water flow patterns are rare to common dependent on site location relative to major inflow areas and on fan skirts subject to summer convection storms. Water flow patterns are typically short (<2m), meandering and stable.
- Number and height of erosional pedestals or terracettes:** Pedestals are none to rare and are confined to water flow paths.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground  $\pm$  80%;
- Number of gullies and erosion associated with gullies:** A few gullies may be evident where this site occurs adjacent to major in-flow areas or ephemeral channels.
- Extent of wind scoured, blowouts and/or depositional areas:** Wind scouring is none to rare, but would occur after a severe wildfire that removed all vegetation.

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7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter (foliage of grasses and annual & perennial forbs) expected to move distance of slope length during periods of intense summer convection storms or run in of early spring snow melt flows. Persistent litter (large woody material) will remain in place except during unusual flooding 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 will range from 3 to 6.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Structure of soil surface is typically thick or thin platy. Soil surface colors are light grays or light brownish grays and soils are typified by an ochric epipedon. Surface textures are silt loams. Organic matter is typically 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:** Shrubs and litter provide protection from raindrop impact and allow for snow capture on this site. Deep-rooted bunchgrasses (i.e., Indian ricegrass) decrease runoff and aid in 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. Duripans and platy or massive subsurface layers are normal for this site and are not to be interpreted as compaction.
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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 Plant Community: Short-stature salt-desert shrub (winterfat) >>
- Sub-dominant: deep-rooted, cool season, perennial bunchgrasses (Indian ricegrass) = shallow-rooted/rhizomatous grasses = associated shrubs > = cool season, rhizomatous grasses > deep-rooted, cool season, perennial forbs = fibrous, shallow-rooted, cool season, perennial and annual forbs.
- 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 common and standing dead shrub canopy material may be as much as 35% of total woody canopy.
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14. **Average percent litter cover (%) and depth ( in):** Dead branches within individual shrubs common and standing dead shrub canopy material may be as much as 35% of total woody canopy
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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 (March thru May)  $\pm$  350 lbs/ac; Favorable years  $\pm$ 500 lbs/ac and unfavorable years  $\pm$ 200 lb/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: annual mustards, annual kochia, Russian thistle, and halogeton.
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17. **Perennial plant reproductive capability:** All functional groups should reproduce in average (or normal) and above average growing season years. Reduced growth and reproduction occur during extended or extreme drought periods.
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