

## Ecological site R029XY080NV SHALLOW SANDY LOAM 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	11/01/2016
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

1. **Number and extent of rills:** Rills are not expected on this site.

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2. **Presence of water flow patterns:** Water flow patterns none to rare. A few, short (<1 m) and meandering may occur on steeper slopes after summer convection storms.

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3. **Number and height of erosional pedestals or terracettes:** Pedestals and terracettes are none to rare. Occurrence is limited to water flow paths.

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground  $\pm$  50%, depending on amount of rock fragments.

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

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6. **Extent of wind scoured, blowouts and/or depositional areas:** Typically none – with surface disturbance some localized wind-scouring may occur.

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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 (< 3 m) during intense summer storms. 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 2 to 4 on the moderately coarse soil textures typically 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 slightly hard, moderate thick platy. Soil surface colors are pale browns and soils are typified by an ochric epipedon. Organic matter of the surface 2 to 3 inches is typically less than 1 percent. Organic matter content can be more or less depending on micro-topography.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Perennial herbaceous plants (especially deep-rooted perennial grasses [i.e. Indian ricegrass] slow runoff and increase infiltration. Shrub canopy and associated litter break raindrop impact and provide opportunity for snow catch and accumulation on site.
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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. Subsoil petrocalcic horizons should not be mistaken for 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 State: Salt-desert deciduous shrubs (i.e., fourwing saltbush, spiny menodora) > deep-rooted, cool season, perennial bunchgrasses>>
- Sub-dominant: associated shrubs > deep-rooted perennial forbs > warm season, rhizomatous perennial grasses >> warm season, perennial bunchgrasses > shallow-rooted, cool season, annual forbs.
- Other: succulents, microbial crusts
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** ead branches within individual shrubs common and standing dead shrub canopy material may be as much as 30% of total woody canopy; some of the mature bunchgrasses ( $\pm 20\%$ ) have dead centers.
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14. **Average percent litter cover (%) and depth ( in):** Between plant interspaces (15-20%) and depth of litter is <¼ inch
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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-June)  $\pm 400$  lbs/ac; Favorable years  $\pm 600$  lbs/ac; unfavorable years  $\pm 250$  lbs/ac. Late summer moisture affects production of warm season grasses

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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 on this site include red brome, cheatgrass, Russian thistle, and annual mustards.

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17. **Perennial plant reproductive capability:** All functional groups should reproduce in average (or normal) and above average growing season years. Little to no growth or reproduction occurs during years of extreme drought conditions.

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