

Ecological site R030XB109NV GYPSIC BARREN 3-5 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.

Author(s)/participant(s)	P Novak-Echenique
Contact for lead author	State Rangeland Management Specialist
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Approved by	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. Number and extent of rills:** Rills are none to rare, but may be evident in areas recently subjected to summer convection storms.

- 2. Presence of water flow patterns:** Water flow patterns are none to rare. A few waterflow patterns may be evident in areas recently subjected to summer convection storms. Where flow patterns are observed, they are short in length and stable.

- 3. Number and height of erosional pedestals or terracettes:** Pedestals are none to rare with occurrence typically limited to areas within water flow patterns.

- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground variable depending on amount of surface rock fragments and microbiotic crust.

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

- 6. Extent of wind scoured, blowouts and/or depositional areas:** None

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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 catastrophic 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 1 to 3. (To be field tested.)
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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 thick to moderate thin platy. Soil surface colors are light and soils are typified by an ochric epipedon. 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, associated litter, and microbiotic crust break raindrop impact. Medium to fine textured surface soils have moderately rapid 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):** None. Platy or massive sub-surface horizons or gypsic 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: Mojave Desert shrubs
- Sub-dominant: perennial forbs > perennial bunchgrasses = 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 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 (Trace)
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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 ± 75 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: Invaders on this site include annuals such as red brome, filaree, Mediterranean grass and African mustard.
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17. **Perennial plant reproductive capability:** All functional groups should reproduce in average growing season years.
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