

Ecological site R030XB019NV Eroded Fan Remnant Pavette 4-6 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	P.Novak-Echenique
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** Rills are rare to none. Rock fragments armor the soil surface against erosion.

- Presence of water flow patterns:** Water flow patterns are none to few. A few may occur in areas recently subject to intense summer rainfall and on steeper slopes. Flow patterns are short (<3m) and stable.

- Number and height of erosional pedestals or terracettes:** Pedestals and terracettes are none to rare.

- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground varies depending on amount of rock fragments: 5-25%

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

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

- Amount of litter movement (describe size and distance expected to travel):** Litter typically remains in place. 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.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil stability values are typically 3 to 4 without canopy cover and 5 to 6 with canopy cover.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface soil structure is typically moderate medium to thick platy. Soil colors are light and soils have an ochric epipedon. Organic matter of the surface 2 to 3 inches is less than 1 percent.

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 provide limited infiltration.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None. Subsoil calcic or petrocalcic horizons are not to be interpreted as compacted layers.

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: Long-lived evergreen shrubs (creosotebush) > associated shrubs

Sub-dominant: warm-season perennial grasses > annual grasses > perennial forbs > annual forbs

Other: succulents

Additional:

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.

14. **Average percent litter cover (%) and depth (in):** Between plant interspaces 5-15% and depth ($\pm 1/4$ -inch).

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** For normal or average growing season ~125 lbs/ac. Favorable years ~200 lbs/ac and unfavorable years ~75 lbs/ac.

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, red-stem filaree, annual mustards and Mediterranean grass.

17. **Perennial plant reproductive capability:** All functional groups should reproduce in normal and above-normal growing seasons. Little growth or reproduction occurs during extreme drought years.
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