USDA Natural Resources
Conservation Service

Ecological site R030XB004NV
SANDY 5-7 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	02/23/2010
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.

2. **Presence of water flow patterns:** Water flow patterns none to rare.

3. **Number and height of erosional pedestals or terracettes:** Pedestals are rare with occurrence typically limited to areas affected by wind scouring.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground to 50% to 60%.

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5. **Number of gullies and erosion associated with gullies:** Gullies are none.

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6. **Extent of wind scoured, blowouts and/or depositional areas:** None to slight. If observed, wind scour spots are isolated and of small extent.

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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 storms. 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 4 on the sandy soil textures found on this site. (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 structure is typically single grain or thin to medium platy. Soil surface colors are light and soils are typified by an ochric epipedon. Organic carbon of the surface 2 to 3 inches is typically less than 1 percent dropping off quickly below. 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:** Reference Plant Community: Perennial herbaceous plants (especially deep-rooted bunchgrasses [i.e., Indian ricegrass and big galleta] slow runoff and increase infiltration. Shrub canopy and associated litter break raindrop impact.

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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

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: Deep-rooted, warm season, perennial bunchgrasses

    Sub-dominant: Mojave desert shrubs >> deep-rooted, cool season, perennial bunchgrasses >> perennial forbs = annual forbs = shallow-rooted, perennial, grasses

    Other:

    Additional:

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; some of the mature bunchgrasses (<20%) have dead centers.

14. **Average percent litter cover (%) and depth (in):** Between plant interspaces 5-15% and depth of litter is ±¼ inch.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** For normal or average growing season ±800 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:** Invaders on this site include Mediterranean grass, red brome, and filaree.

17. **Perennial plant reproductive capability:** All functional groups should reproduce in average (or normal) and above average growing season years.
