

## **Ecological site R023XY011NV DUNES 8-10 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	08/02/2011
Approved by	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### **Indicators**

1. **Number and extent of rills:** None.
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2. **Presence of water flow patterns:** Water flow patterns none.
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3. **Number and height of erosional pedestals or terracettes:** Pedestals are few with occurrence due to wind scouring.
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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 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:** Slight to moderate wind scouring.
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7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter (foliage from grasses and annual and perennial forbs) expected to move unsheltered distance during heavy wind. Persistent litter (large woody material) will remain in place except during intense summer convection storms.
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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 on the sandy soils textures found on the 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 single grained. Soil surface colors are light grey. Organic matter of the surface 2 to 3 inches is typically 1 to 1.5% dropping off quickly below. Organic matter content can be more or less depending on microtopography.
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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 bunch grasses[i.e. Indian rice grass]) slow runoff and increase in 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):** Compacted layers are none.

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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: Deep-rooted, cool season, perennial bunch grasses> tall shrubs (Basin big sagebrush)

Sub-dominant: >>associated shrubs>cool season, perennial, rhizomatous grass>shallow-rooted cool season perennial bunchgrasses> deep-rooted, cool season, perennial forbs=fibrous, shallow-rooted, cool season, annual and perennial 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 in standing dead shrub canopy material may be as much as 25% of total woody canopy; some of the mature bunch grasses (<25%) have dead centers.
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14. **Average percent litter cover (%) and depth ( in):** Between plant interspaces (10-20%) and depth (0.25 in).
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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 (February through May) +/- 700 lbs/ac; spring moisture significantly affects total production.
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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:** Increasers include rubber rabbitbrush and horsebrush. Potential invaders include cheat grass, halogeton,

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.
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