

Ecological site R038XB213AZ Volcanic Upland 16-20" 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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Contact for lead author	
Date	04/18/2012
Approved by	Scott Woodall
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** None present on the site. Perennial grass basal cover is 5-10%, dominated by bunchgrass that promote infiltration and break up water flow, thereby reducing its energy and ability to produce rills on the site.
- Presence of water flow patterns:** Water flow paths are less than 12 inches in length before encountering plant bases. Perennial grass basal area is 5-10%, dominated by bunchgrasses that break up water flow paths.
- Number and height of erosional pedestals or terracettes:** None present on the site. High foliar cover of plants 87-95%, mostly perennials 64-86% cover with significant basal cover 5-10% and very high litter cover 50-60% and rock cover 32-60%, reduces the potential for soil erosion.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Very low for site, on average 2%.
- Number of gullies and erosion associated with gullies:** None present on the site. High foliar cover of plants 87-95%, mostly perennials 64-86% cover with significant basal cover 5-10% and very high litter cover 50-60% and rock cover 32-60%, reduces the potential for soil erosion.

6. **Extent of wind scoured, blowouts and/or depositional areas:** None present on the site. High foliar cover of plants 87-95%, mostly perennials 64-86% cover with significant basal cover 5-10% and very high litter cover 50-60% and rock cover 32-60%, reduces the potential for soil erosion.
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7. **Amount of litter movement (describe size and distance expected to travel):** Herbaceous litter travels less than 12 inches before encountering a plant base.
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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):** Expect values of 5-6 across the site.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Moderate to strong, fine to medium granular structure. A horizon thickness ranges from 0-2 inches with moist colors ranging from 7.5YR3/2, 7.5YR3/3, 7.5YR4/2, 7.5YR4/3.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Midgrasses>>annual forbs and grasses>>shrubs>>perennial forbs. High foliar cover of plants 87-95%, mostly perennials 64-86% cover with significant basal cover 5-10% and very high litter cover 50-60% and rock cover 32-60%, reduces the potential for soil erosion.
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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.
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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: Midgrasses
- Sub-dominant: Annual forbs and grasses=shrubs.
- Other:
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Slight.
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14. **Average percent litter cover (%) and depth (in):**
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 835 lbs/ac below average year, 1558 lbs/ac average year, 2310 lbs/ac above average year.

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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: Single leaf pinyon, blue grama, bear grass, red berry juniper and one seed juniper, Cane cholla.
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17. **Perennial plant reproductive capability:** Not affected after several years of drought in the region.
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