

Ecological site R011XB018ID Shallow Sandy 8-12 PZ ARNO4/ACHY-HECOC8

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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)	Dave Franzen and Jacy Gibbs Intermountain Range Consultants 17700 Fargo Rd. Wilder, ID 83676
Contact for lead author	Brendan Brazee, State Rangeland Management Specialist USDA-NRCS 9173 W. Barnes Drive, Suite C, Boise, ID 83709
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Approved by	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** rills rarely occur on this site due to the sandy surface and relatively high intake rate.
- Presence of water flow patterns:** water-flow patterns rarely occur on this site. When they do occur they are short and disrupted by cool season grasses and shrubs. They are not extensive.
- Number and height of erosional pedestals or terracettes:** both are rare on this site. In areas where slopes are greater than 10% and where flow patterns and /or rills are present, a few pedestals may be expected. Terracettes may develop from livestock trailing on slopes greater than 10 percent.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** ranges from 60-80 percent but additional data is needed.
- Number of gullies and erosion associated with gullies:** gullies do not occur on this site.

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6. **Extent of wind scoured, blowouts and/or depositional areas:** usually does not occur. Some wind erosion may occur immediately following a wildfire or if the plant cover is removed mechanically. Active dunes may occur as inclusions within the site but are never a part of the site.
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7. **Amount of litter movement (describe size and distance expected to travel):** fine litter in the interspaces may move up to 2 feet or further on slopes greater than 10 percent following a significant run-off event. Coarse litter generally does not move.
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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):** values should range from 2 to 4 but needs to be tested.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** No data.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** bunchgrasses, especially deep-rooted perennials, slow run-off and increase infiltration. Shrubs accumulate snow in the interspaces. Terracettes, although rare, provide a favorable micro-site for vegetation establishment which further increases 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):** not present.
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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: cool season deep-rooted perennial bunchgrasses
- Sub-dominant: medium shrubs
- Other: perennial forbs
- Additional: shallow rooted grasses tall shrubs
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** very little mortality or decadence is expected on this site. Mortality of shallow rooted grasses may occur due to extended periods of drought.
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14. **Average percent litter cover (%) and depth (in):** additional data is needed but is expected to be low and at a shallow depth.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** is 450 pounds per acre (504 Kg/ha) in a year with normal precipitation and temperatures. Perennial

grasses produce 50-60 percent of the total production, forbs 10-20 percent, and shrubs 25-35 percent.

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: includes cheatgrass, halogeton, pepperweed, Russian thistle, beggars ticks, annual mustards, and yellow salsify.
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17. **Perennial plant reproductive capability:** all functional groups have the potential to reproduce in normal and favorable years.
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