

Ecological site R013XY043ID Shallow Silt Stone 12-16 PZ STAC/ACHY

Last updated: 9/23/2020
Accessed: 05/05/2024

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
Date	05/15/2008
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 gravelly surface soils.
- 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, shrubs, and surface gravel. They are not extensive.
- Number and height of erosional pedestals or terracettes:** pedestals can occur on the site especially where flow patterns are present and on slopes greater than 20%. Terracettes are rare.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** it ranges from 5-15 percent but additional data is needed.
- Number of gullies and erosion associated with gullies:** none.

6. **Extent of wind scoured, blowouts and/or depositional areas:** usually not present.
-
7. **Amount of litter movement (describe size and distance expected to travel):** fine litter in the interspaces typically moves up to three feet. Coarse litter generally does not move. Fine litter can be moved by wind.
-
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 4 to 6 but needs to be tested.
-
9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** structure ranges from weak very fine and fine granular to moderate very fine and fine granular. Soil organic matter (SOM) ranges from 1 to 2 percent. Surface color is pale brown. The A or A1 horizon is typically 2 to 5 inches thick.
-
10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** bunchgrasses and half-shrubs, especially deep rooted perennials, and surface gravels slow runoff and increase infiltration.
-
11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** not present.
-
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: half shrubs
- Sub-dominant: cool season deep rooted perennial bunchgrasses
- Other: perennial forbs
- Additional: shallow rooted perennial bunchgrasses-warm season grasses
-
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.
-
14. **Average percent litter cover (%) and depth (in):** ranges from 1-5 percent.
-
15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** is 300 pounds per acre (333 Kg/ha) in a year with normal precipitation and temperatures. Perennial grasses produce 30-40 percent of the total production, forbs 5-10 percent and shrubs and half-shrubs 40-50 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 and bulbous bluegrass.
-

17. **Perennial plant reproductive capability:** all functional groups have the potential to reproduce in normal and favorable years.
-