

Ecological site R028AY001NV SILT FLAT

Accessed: 04/18/2024

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) | GK BRACKLEY/P.NOVAK-ECHENIQUE |
| Contact for lead author | State Rangeland Management Specialist |
| Date | 06/22/2006 |
| Approved by | |
| Approval date | |
| Composition (Indicators 10 and 12) based on | Annual Production |

Indicators

- 1. Number and extent of rills:** This site is essentially level and rills do not form.

- 2. Presence of water flow patterns:** Water flow patterns are rare to common depending on site location relative to major inflow areas. Water flow patterns are typically short (<2m), meandering and ending in depressional areas where water ponds.

- 3. Number and height of erosional pedestals or terracettes:** A few plants that occur in water flow paths may have small pedestals (1-3"). Terracettes are none.

- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground >50%; surface rock fragments less than 5%; shrub canopy less than 15%; basal area for perennial herbaceous plants \pm 2%.

- 5. Number of gullies and erosion associated with gullies:** None

- 6. Extent of wind scoured, blowouts and/or depositional areas:** None - this site may experience severe wind scouring after a wildfire that removes all vegetative cover.

-
7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter (foliage of grasses and annual & perennial forbs) expected to move distance of slope length during periods of intense summer convection storms or run in from early spring snow melt flows. Persistent litter (large woody material) will remain in place except during unusual flooding (ponding) events.
-
8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil stability values will range from 3 to 6.
-
9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Structure of soil surface will be platy or fine granular. Soil surface colors are light browns or grays and soils are typified by an ochric epipedon. Surface textures are fine sandy loams, sandy loams or silt loams. A surface vesicular crust is also common. Organic matter is typically less than 3 percent.
-
10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** This site is typically ponded for short periods in the late winter and runoff is not significant. In areas with herbaceous cover (sparse) of deep-rooted perennial herbaceous bunchgrasses (i.e., basin wildrye) and/or rhizomatous grasses (western wheatgrass), these plants can increase infiltration. Moderately fine to fine surface textures and physical crusts result in limited infiltration rates. The surface layer will normally crust and bake upon drying, inhibiting water infiltration and seedling emergence.
-
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. Subsurface subangular blocky, massive or calcic subsoil horizons are not to be interpreted as compaction.
-
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 State: Tall evergreen shrubs (big sagebrush) >>
- Sub-dominant: shallow-rooted cool season, perennial bunchgrasses (bottlebrush squirreltail & Sandberg's bluegrass) > low-stature salt-desert shrubs (green molly, shadscale, etc.) > deep-rooted, cool season, perennial bunchgrasses = cool season, rhizomatous grasses = deep-rooted, cool season, perennial forbs = fibrous, shallow-rooted, cool season, perennial and annual forbs.
- Other: microbiotic crusts
- 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 35% of total woody canopy.
-

14. **Average percent litter cover (%) and depth (in):** Between plant interspaces 5-10% and depth $< \frac{1}{4}$ in.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** For normal or average growing season (through June) ± 325 lbs/ac; Favorable years ± 450 lbs/ac and unfavorable years ± 150 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:** Potential invaders include annual mustards, annual kochia, Russian thistle, and halogeton.

17. **Perennial plant reproductive capability:** All functional groups should reproduce in average (or normal) and above average growing season years. Reduced growth and reproduction occurs during extreme drought or extended drought periods.
