

Ecological site R072XY116KS Salt Flat

Accessed: 04/20/2024

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)	Chris Tecklenburg
Contact for lead author	Chris Tecklenburg chris.tecklenburg@ks.usda.gov
Date	01/05/2017
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None

2. **Presence of water flow patterns:** None where vegetation is continuous. Slick spots (high sodium areas) can pond water and concentrate overland flow. Flow paths should be short in length and disconnected.

3. **Number and height of erosional pedestals or terracettes:** There is no evidence of pedestaled plants or terracettes on the site.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Less than 5% bare ground is found on this site. Bare areas can range from 3-4 inches in diameter. Extended drought may cause bare ground to increase up to 10%. Slick spots occur on the site and support some vegetation.

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

6. **Extent of wind scoured, blowouts and/or depositional areas:** None

-
7. **Amount of litter movement (describe size and distance expected to travel):** None
-
8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Plant canopy is large enough to intercept the majority of raindrops. A soil fragment will not "melt" or lose its structure when immersed in water for 30 seconds. There is no evidence of pedestaled plants or terracettes. Soil stability scores will range from 3-4.
-
9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Ap--0 to 5 inches; very dark grayish brown (10YR 3/2) broken face, moist; silt loam, 26 percent clay; weak fine subangular blocky parting to weak medium granular structure; very friable, soft, moderately sticky, moderately plastic.
Apy--5 to 10 inches; very dark grayish brown (10YR 3/2) broken face, moist; silty clay loam, 35 percent clay; weak coarse subangular blocky structure; friable, slightly hard, moderately sticky, moderately plastic.
-
10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** There is no negative effect on water infiltration and/or runoff due to plant composition or distribution. Diverse grass, forb, shrub functional/structural groups and diverse root structure/patterns reduces raindrop impact that slows overland flow providing increased time for infiltration to occur.
-
11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None
-
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: Grasses dominant component 90%. alkali sacaton 200-350, blue grama 100-200, western wheatgrass 75-150, Nuttall's alkaligrass 50-100, galleta 50-100, saltgrass 50-100, vine mesquite 0-50, buffalograss 0-50
- Sub-dominant: No sub-dominant species that when combined make up roughly 10-40% of the plant composition.
- Other: Shrubs minor component 8.5%. fourwing saltbush 20-100, winterfat 10-50, rabbitbrush 0-30
- Additional: Forbs trace component 1.5%. Nuttall's poverty weed 0-15, twogrooved milkvetch 0-15.
-
13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** The majority of plants are alive and vigorous. Some mortality and decadence is expected for the site. This in part is due to drought, unexpected wildfire or a combination of the two events. This would be expected for both dominant and sub-dominant groups.
-
14. **Average percent litter cover (%) and depth (in):** Plant litter is distributed evenly throughout the site. When prescribed burning is practiced there will be little litter the first half of the growing season. 35-50% litter cover at 0.25-0.50 inch depth. Litter cover during and following extended drought ranges from 25-35%.

-
15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 500 lbs./ac. low precipitation years, 1000 lbs./ac. average precipitation years, 1800 lbs./ac. high precipitation years. After extended drought or the first growing season following wildfire, production may be significantly reduced by 500 – 700 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:** Invasive plants should not occur in reference plant community. However Russian thistle, kochia or other non-native alkali tolerant species may invade following extended drought assuming a seed source is available. Inland saltgrass is the major native (non-invasive) increaser on this site, but rabbitbrush and the muhlys may also increase.
-
17. **Perennial plant reproductive capability:** The only limitations are weather-related, wildfire, natural disease, and insects that may temporarily reduce reproductive capability.
-