USDA Natural Resources
Conservation Service

Ecological site R035XB238AZ
Sandy Terrace 6-10" p.z. Sodic

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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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Date	08/27/2012
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None expected on level slopes, very few on steeper slopes.

2. **Presence of water flow patterns:** None on level slopes, very few on steeper slopes with widths of 1 to 2 feet when they do occur.

3. **Number and height of erosional pedestals or terracettes:** None.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground ranges from 40-65%.

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

6. **Extent of wind scoured, blowouts and/or depositional areas:** Few areas of wind scour occur in the interspaces. Some deposition may occur around shrubs and should be less than 6 inches in height.

7. **Amount of litter movement (describe size and distance expected to travel):** Most fine litter will transported by wind

or water, while woody litter tends to remain under canopies.

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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):** The expected average soil stability rating is 1-2.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** The surface structure is typically moderate (thin, thick) platy structure with a thickness of 2 to 8 inches. Surface textures range from fine sand to fine sandy loam with colors typically light reddish brown to yellowish brown.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** This site is characterized by an even distribution of shrubs and grasses. Herbaceous vegetation generally occurs throughout the shrub interspaces. Perennial grasses and other herbaceous vegetation promote infiltration and assist in slowing runoff moisture. This site when well vegetated is slightly to moderately effective at capturing moisture.

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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. Some soils may a sodium-affected layer (Btn, Bn, or Cn) in the subsurface horizons. This layer is difficult to excavate and may be mistaken for a compacted layer. This layer may also be exposed in areas where the surface layer has been scoured or blown away.

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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: Salt Tolerant Shrubs (black greasewood, shadscale, Torrey seepweed) >>

    Sub-dominant: Warm season grasses > Cool season grasses >

    Other: Forbs > Other shrubs

    Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** All plant functional groups are adapted to survival in all but the most severe droughts. Severe winter droughts affect shrubs the most. Severe summer droughts affect grasses the most.

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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):** Average annual production on this site is expected to be 450 to 550 lbs/ac. in a year of average annual precipitation.

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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:** Black greasewood, seepweed, mound saltbush and shadscale

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17. **Perennial plant reproductive capability:** All plants native to this site are adapted and are capable of producing seeds, stolons and rhizomes in all but the most severe drought.
