Ecological site R035XA128AZ
Tephra Uplands, Loamy 10-14" p.z

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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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Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None. Due to high content of gravels and cobbles along with loamy textures no rills would be expected.

2. **Presence of water flow patterns:** None Expected.

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

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground ranges from 15-30%.

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):** High amounts of vegetation production (mostly grasses) along with high surface rock content yields moderate to high resistance to water erosion and wind resistance. Expected stability values range from 1-2. The site is fairly stable due to the cindery surface.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Soil structure is typically weak very fine granular structure or weak thick platy structure. Surface thickness ranges from 2-10 inches thick. Colors are typically brown (10YR 5/3) or grayish brown (10YR 5/2). See the local soil survey report for specific soils information.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** There is a fairly even distribution of grasses with scattered shrubs and a small amount of forbs. This plant community on this site is moderately effective at capturing and storing moisture.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None. These soils are gravelly to very gravelly with cinders.

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: Warm season colonizing grasses > Warm season bunch grasses >

    Sub-dominant: Cool season bunch grasses > Large shrubs > Half shrubs >

    Other: Forbs > Trees

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** In a normal year up to 10% of grasses and shrubs die off. During and after drought years there can be from 10 to 20% die off of shrubs and grasses. Severe winter droughts affect shrubs, trees and cool season grasses the most. Severe summer droughts affect the warm season grasses the most.

14. **Average percent litter cover (%) and depth (in):**

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.

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: Snakeweed, rabbitbrush, junipers, wooly groundsel, and cacti all have the potential to increase and invade the site with disturbance. Non-native annuals, such as cheatgrass and Russian thistle also have the potentials to invade the site with or without disturbance.

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17. **Perennial plant reproductive capability:** All plants native to this site are adapted to the climate and are capable of producing seeds, stolons and rhizomes except during the most severe droughts.
