USDA Natural Resources
Conservation Service

Ecological site R035XA102AZ
Tephra Hills, 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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Date	08/02/2012
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** No rills on this site due to extensive surface tephra.

2. **Presence of water flow patterns:** No water flow patterns on this site; the surface of this site is not mineral soil but rather tephra.

3. **Number and height of erosional pedestals or terracettes:** No erosional pedestals or terracettes on this site.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** No unprotected bare ground on this site; site is covered in tephra

5. **Number of gullies and erosion associated with gullies:** No gullies on this site

6. **Extent of wind scoured, blowouts and/or depositional areas:** Around shrubs on the site there are depositional areas of cinders. As cinders erode down the slope they accumulate under the slopes forming small dunes of lightly weathered cinders and ash.

7. **Amount of litter movement (describe size and distance expected to travel):** Most of the litter remains where it falls; some will move downslope with water. There is little wind erosion on the site due to the protection of the cinders.

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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):** Stability values range from 1-2. The site is stable due to the tephra covering the surface. The mineral soil is not strongly developed.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Weak surface structure; soil is not strongly developed. The tephra surface gives the site stability.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** In areas with shrubs infiltration is higher; however, the shrubs on this site are sparse and clumpy.The tephra helps keep water on the site but because of slope the runoff is high.

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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):** No compaction layer on this site.

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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: Shrubs>>>forbs

    Sub-dominant:

    Other:

    Additional: No grasses present on site.

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Some individual shrub mortality due to drought on-site

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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):** <100 lb/acre

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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: No invasives on site

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17. **Perennial plant reproductive capability:** Good reproduction; lots of seeds and flowers present on site

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