

## Ecological site VX158X01X401 Isohyperthermic Ustic Naturalized Grassland

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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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|---|-------------------|
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| Date  | 04/29/2012        |
| Approved by                                 | Loretta J. Metz   |
| Approval date                               |                   |
| Composition (Indicators 10 and 12) based on | Annual Production |

### Indicators

1. **Number and extent of rills:** None.
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2. **Presence of water flow patterns:** None.
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3. **Number and height of erosional pedestals or terracettes:** None.
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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Total amount of bare ground is less than 5% in a well-managed, functioning pasture system.
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5. **Number of gullies and erosion associated with gullies:** None.
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6. **Extent of wind scoured, blowouts and/or depositional areas:** None.
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7. **Amount of litter movement (describe size and distance expected to travel):** Regardless of size, litter is not expected to move/travel across this site.

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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):** Average values are 4-5.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Light yellowish brown to moderately dark brown A-horizon depending on the amount of organic matter incorporated in the horizon. Note that a true A-horizon may not be present due to past intensive cropping procedures used on sugarcane and pineapple.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Grasses and forbs provide the best opportunity for water infiltration and reduced runoff. As the plant community shifts to shrubs or trees, the ability of the site to absorb water and reduce runoff is significantly compromised.
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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):** May be a compaction layer deeper in the soil profile due to past cropping practices. If present, the compaction layer will typically be located between 6 to 12 inches below the ground surface.
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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: Warm season perennial bunchgrasses >>
- Sub-dominant: Warm season perennial rhizomatous grasses > Warm season perennial leguminous forbs >>
- Other: Other warm season perennial forbs (non-leguminous).
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Plant mortality and decadence occur seasonally, sometimes several times throughout the year depending on precipitation and temperature. Mortality is generally not common; decadence is rather common, particularly within the warm season perennial grasses.
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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):** Over 20,000 pounds per acre is produced annually on this site (total production, not just forage production).
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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: Refer to the plant list on the FSGD, G158XY401HI. Where the annual production amounts are shown as "zero" on the plant/production list, that represents the invasive species typical to the site.

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17. **Perennial plant reproductive capability:** Very high; multiple times per year depending on moisture and temperature received on the site.
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