

## Ecological site R102DY015SD Thin Claypan

Last updated: 8/14/2024  
Accessed: 05/13/2025

### 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	05/24/2018
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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:** Barely observable.

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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):** Bare ground is 10 to 35% with patch size up to 6 inches and disconnected. Associated slick spots are not a part of this site, and will have considerably more bare ground.

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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):** Plant litter may be moved during

ponding events and small accumulations of litter may be visible.

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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 class roughly 2-4. Moderate root content. Soil surface is somewhat resistant to erosion. Crusts may be present (e.g., biological and physical crusts).
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Use soil series description for depth, color and structure of A horizon/surface layer.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Rhizomatous grasses provide for moderate infiltration, but shallow pan reduces effective infiltration.
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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 should be evident. At less than four inches, an extremely dense clay B horizon exists, which has a round-topped columnar structure.
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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: Mid cool-season rhizomatous grass >

Sub-dominant: Short warm-season grasses >>

Other: Mid/tall cool-season bunchgrasses = short grass-likes = forbs = shrubs > mid warm-season grasses = short cool-season grasses.

Additional: Due to differing root structure and distribution, Kentucky bluegrass and smooth brome grass do not fit into reference plant community F/S groups.

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Very little to no evidence of decadence or mortality.
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14. **Average percent litter cover (%) and depth ( in):** Litter cover is in contact with soil surface.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 1,100–2,100 lbs./acre air-dry weight, average 1,600 lbs./acre air-dry weight.
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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: State and local noxious, Kentucky bluegrass, and smooth brome grass.

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17. **Perennial plant reproductive capability:** All species are capable of reproducing.
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