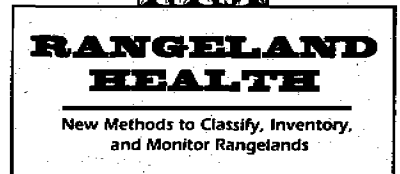


TABLE 4-8 Rangeland Health Evaluation Matrix

Indicator	Healthy	At Risk	Unhealthy
<i>Phase 1: Soil stability and watershed function</i>			
A-horizon	Present and distribution unfragmented	Present but fragmented distribution developing	Absent, or present only in association prominent plants or with other obstructions
Pedestaling	No pedestaling of plants or rocks	Pedestals present, but on mature plants only; no roots exposed	Most plants and rocks pedestaled; roots exposed
Rills and gullies	Absent, or with blunted and muted features	Small, embryonic, and not connected into a dendritic pattern	Well defined, actively expanding, dendritic pattern established
Scouring or sheet erosion	No visible scouring or sheet erosion	Patches of bare soil or scours developing	Bare areas and scours well developed and contiguous
Sedimentation or dunes	No visible soil deposition	Soil accumulating around plants or small obstructions	Soil accumulating in large barren deposits or dunes or behind large obstructions
<i>Phase 2: Distribution of nutrient cycling and energy flow</i>			
Distribution of plants	Plants well distributed across site	Plant distribution becoming fragmented	Plants clumped, often in association with prominent individuals; large bare areas between clumps
Litter distribution and incorporation	Uniform across site	Becoming associated with prominent plants or other obstructions	Litter largely absent
Root distribution	Community structure results in rooting throughout the available soil profile	Community structure results in absence of roots from portions of the available soil profile	Community structure results in rooting in only one portion of the available soil profile
Distribution of photosynthesis	Photosynthetic activity occurs throughout the period suitable for plant growth	Most photosynthetic activity occurs during one portion of the period suitable for plant growth	Little or no photosynthetic activity on location during most of the period suitable for plant growth
<i>Phase 3: Recovery mechanisms</i>			
Age-class distribution	Distribution reflects all species	Seedlings and young plants missing	Primarily old or deteriorating plants present
Plant vigor	Plants display normal growth form	Plants developing abnormal growth form	Most plants in abnormal growth form
Germination microsite	Microsites present and distributed across the site	Developing crusts, soil movement, or other factors degrading microsites; developing crusts are fragile	Soil movement or crusting sufficient to inhibit most germination and seedling establishment

TABLE 4-7 Relationship between Health Criteria and Thresholds

Phase	Healthy	At Risk	Unhealthy
1. Soil stability and watershed function	No evidence of soil movement	Soil is moving, but remains on site	Soil is moving off site
2. Distribution of nutrients and energy	Plant and litter distribution unfragmented	Fragmented distribution developing	Fragmented distribution developed, with large barren areas between fragments
	Photosynthetic activity occurs throughout the period suitable for plant growth	Photosynthetic activity restricted during one or more seasons	Photosynthetic activity restricted to one season only
	Rooting throughout the available soil profile	Roots absent from portions of the available soil profile	Rooting in only one portion of the available soil profile
3. Recovery mechanisms	Diverse age-class distribution Plants are vigorous	Seedlings and young plants are missing Plant vigor is reduced	Decadent plants predominate Plant vigor is poor
	Germination microsites are present and well distributed	Developing crusts or soil movement degrade microsites	Soil movement or crusting inhibit most germination



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