

KEY TO ECOLOGICAL SITES
MLRA 67A
Zone 11 and 12
12-17 SOUTHERN PLAINS (12-17SP)

GROUP KEY

- 1. Site in a lowland position that receives significant additional moisture from runoff of adjacent slopes or from intermittent/perennial streams or a water table (*HIGH Productivity Potential*).....**Group I**
- 1. Upland site that does not receive additional moisture as above.....2
 - 2. Soil depth very shallow (<10”), shallow (10-20”) OR moderately deep to deep (>20”) reacting like shallow soils due to root restrictive layer or on south and west facing slopes (*LOW productivity potential*).....**Group II**
 - 2. Soil depth moderately deep to deep (>20”) without root restricting layer or climate factors that inhibit the productivity potential**Group III**

GROUP I – Sites that Receive Additional Moisture

- 1. Sites that are saline and/or alkaline, dominated by salt tolerant species (greasewood, inland saltgrass, alkali sacaton).....2
 - 2. Water table within rooting depth of herbaceous species (20-40”) during some or most of the growing season, dominated by salt-tolerant grasses such as alkali sacaton and inland saltgrass on nearly level bottom lands adjacent to streams, springs, and ponds-Production 3200-3500 pds.....**Saline Subirrigated (SS)**
 - 2. Site in a lowland position and water table usually >3 feet (within rooting depth of woody plants, but not within rooting depth of herbaceous plants, dominated by alkali sacaton, and greasewood (not known in 15-17 precip zone) Prod. 1500 pds.....**Saline Lowland (SL)**
- 4. Sites that are not saline and/or alkaline.....5
 - 5. Site poorly drained with water table above surface part of growing season, Prairie cordgrass, reedgrasses, and willows common species. Prod. 5000 pds.....**Wetland (WL)**
 - 5. Site not as above-(water table within rooting depth of herbaceous species) (typically above 20”) during part of the growing season, rhizomatous wheatgrasses, bluestems, and willows may be present, as site deteriorates Kentucky bluegrass and Baltic rush invade. Prod. 4000-4500 pds.....**Subirrigated (Sb)**
- 6. Sites not as above-(water table not available for herbaceous spp).....7
 - 7. Site in a lowland position, adjacent to intermittent/perennial stream and water table usually >3 feet (within rooting depth of woody plants, but not within rooting depth of herbaceous plants), cottonwoods, boxelder, or remnants thereof may be present. More Western wheatgrass and green needlegrass than Sandy Lowland Soil texture-Loam- Prod. 2500 pds.....**Loamy Lowland (LL)**

- 7. Site generally occurs on same landform as Loamy Lowland, however soil texture is sandy loam, fine sandy loam, with more needleandthread and bluestems than Loamy Lowland.....
.....**Sandy Lowland (SL)**
- 8. Sites not as above -(no water table available for woody plants).....9
- 9. Site receives periodic overflow from adjacent slopes or intermittent streams, but without a water table within rooting depth of woody plants, silver sagebrush, western wheatgrass, needleandthread common, generally more productive than adjacent sites not receiving additional moisture-(1800-2000 pds) surface texture loam, clay loam-subsurface-loam.....
.....**Loamy Overflow (LyO)**
- 9. Site similar to above with clay sub-surface soils, more western wheatgrass and green needlegrass than Loamy Overflow.....
.....**Clayey Overflow (CyO)**

GROUP II – Upland Sites that are Very Shallow (<10”) OR Shallow (10-20”) or have a layer restrictive to plant growth

- 1. Soils very shallow (<10”), but may include areas of exposed bedrock and pockets of deep soil, often on steep south and west facing slopes with VERY LOW productivity potential.....2
 - 2. Commonly on windswept ridges and steep slopes. Juniper and Pine can occur, bluebunch wheatgrass and little bluestem normally dominate. Production 550 pds.....**Very Shallow (VS)**
- 3. Sites not as above - Soils shallow (10-20”), but may include moderately deep to deep gravelly or cobbly soils, soils with a root restrictive layer, and/or south and west facing slopes that react like shallow soils.....4
 - 4. Fine sand, loamy sand over sandstone, occurs on nearly level to 50% slopes, needleandthread, little bluestem dominant grass species, skunkbrush sumac and yucca common.....**Shallow Sandy (SwSy)**
 - 4. Loam to silt loam textured soils with a loamy subsurface, normally occurs on steep slopes and ridge tops, normally more western wheatgrass than Shallow Sandy.....**Shallow Loamy (SwLy)**
 - 4. Normally shallow soil (10-20”) underlain by soft calcareous materials, however it can occur in deeper soils. Mountain Mahogany and Bluebunch Wheatgrass common-few locations in 12-14’ precip zone**Rocky Hills (RH)**

GROUP III – Upland Sites that are moderately Deep to Deep (>20”)

1. Sites that are saline and/or alkaline.....2
 2. Occurs on hillsides, fans, and stream terraces. Surface texture loam to sandy loam, with a clay subsurface. Four-wing and Gardners saltbush, western wheatgrass common with low production (700 pds) compared to Clayey site, bare ground 30-40%, not know to occur in 15-17” precip zone.....**Saline Upland (SU)**
2. Sites that are not saline and/or alkaline3
3. Sites with a high volume of coarse fragments in surface layer.....4
 4. Soils may very deep, surface texture sandy loam with coarse fragments (>25%) common on surface and throughout profile. Site occurs along terraces, hill slopes, and alluvial or outwash fans, derived from calcareous alluvium. Little bluestem, bluebunch wheatgrass and needleandthread should be present, productivity potential LOW (550-600 pds)**Gravelly (Gr)**
 4. Soils may be very deep, surface texture loam, sandy loam with coarse fragments (10-25%) common on surface. Occurs on hills, ridges and terrace edges. Needleandthread and western wheatgrass commonly dominate. Production higher (1000-1100 pds) than Gravelly site, and lower than loamy site.....**Gravelly Loamy (GrLy)**
5. Sites without high volume of coarse fragments in surface layer.....6
 6. Soil textures range from clay loam to silty clay. Occurs on nearly level to gently sloping areas, soil cracking common during dry summer months, western wheatgrass and green needlegrass common with blue grama increasing as site deteriorates..... **Clayey (Cy)**
7. Soil textures not as above.....8
 8. Soil textures are very coarse (loamy sand to sand), gently undulating lands; slope 0-30%, can develop into dunes if frequent or severe disturbance occurs. Seldom has developed horizons in upper soil layers. Sand bluestem and prairie sandreed are dominant species.....**Sands (Sa)**
 8. Similar to Sands site; however occurs on steeper slopes (10-40%) and is less productive.....**Choppy Sands (CS)**
 8. Productivity potential is similar to Sands site, however surface texture is a sandy loam. Occurs on hillsides, alluvial fans, and stream terraces. Generally has less mid-tall warm season grasses than Sands..... **Sandy (Sy)**
9. Soil textures not as above10
 10. Soil texture are loams to silt loams, a good variety and even mix of grass species. Productivity potential is similar to Sandy site, western wheatgrass and green needlegrass are common and differentiate Loamy from Sandy site.....**Loamy (Ly)**
 10. Similar to Loamy site, occurring on gently sloping to moderately steep areas. Less production and more mid warm season grasses than Loamy site. Sideoats grama and little bluestem likely occur on this site. Parent material is Loess versus alluvium and residuum for the Loamy site.....**Limy Upland (LU)**

Note: Plant species should not be used as sole criteria for ecological site identification as they may not be present or may have been removed from the plant community. An ecological site is based on specific soil characteristics that result in its ability to produce distinctive kinds and amounts of vegetation and responds similarly to disturbance.

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