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KEY TO ECOLOGICAL SITES

MLRA 32X – Northern Intermountain Desertic Basins

Zone 5: 5-9” Bighorn Basin (5-9 BH)

- 1. Soil depth very shallow (<8-10”), possibly with areas of exposed bedrock and pockets of deep soil OR deep heavy clay soils with a high concentration of exchangeable sodium throughout the profile.....**Group I**
- 1. Soil depth >8”2
 - 2. Soil depth shallow (8-15”) OR may be deep (>15”), gravelly and/or cobbly soils on south and west facing slopes which react like shallow soils.....**Group II**
 - 2. Soils depth deep (>15”).....**Group III**

GROUP I – Ecological Sites that are Very Shallow (<8-10”)

- 1. Soils are very fine textured and have a high concentration of exchangeable sodium throughout the profile, Birdfoot Sage common woody species.....**Impervious Clay (IC)**
- 1. Site not as above.....2
 - 2. Site found in uplands, slopes typically 5-25%, WITH many outcrops of clay shale bedrock that may be saline and/or alkaline in various degrees, Gardners Saltbush common woody species.....**Shale (Sh)**
 - 2. Site not as above, upland with steep slopes (25-50%), commonly on windswept ridges, fractured bedrock of various types, and Juniper occasionally found on at higher elevations**Very Shallow (VS)**

GROUP II – Ecological Sites that are Shallow (8-15”)

- 1. Silty clays or heavier textured soils over clay shale bedrock, soil may develop large cracks when dry, Bud Sage, birdfoot sage and Gardner’s saltbush common woody species.....**Shallow Clayey (SwCy)**
- 1. Soils not as above, including gravelly and/or cobbly soils on south and west facing slopes which react like shallow soils.....2
 - 2. Fine sandy loams or coarser textured soils over sandstone or sandy shale, Needleandthread and Indian Ricegrass common grass species on site.....**Shallow Sandy (SwSy)**
 - 2. Very fine sandy loams to clay loam textured soils over various bedrock types (commonly limestone, siltstone, or shale).....**Shallow Loamy (SwLy)**

GROUP III – Ecological Sites that are Deep (>15”)

- 1. Site that receives significant additional moisture from runoff of adjacent slopes or from intermittent/perennial streams or a water table.....2
 - 2. Sites that are saline and/or alkaline.....3
 - 3. Water table within rooting depth of herbaceous species (typically 20-40”) during some or most of the growing season, salt crusts can be found on ridges and mounds during dry periods, Alkali sacaton & Nuttalls alkaligrass common species.....**Saline Subirrigated (SS)**
 - 3. Site not as above.....4

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4. Site adjacent to intermittent/perennial stream, occasionally receiving overflow water, and water table usually >3 feet (within rooting depth of woody plants, but not within rooting depth of herbaceous plants), Greasewood and Alkali Sacaton common species.....**Saline Lowland (SL)**
4. Site not as above.....2
2. Sites that are not saline and/or alkaline.....5
 5. Site poorly drained with water table above surface part of growing season, Nebraska Sedge and Willows common species.....**Wetland (WL)**
 5. Site not as above.....6
 6. Site 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 or remnants thereof may be present.....**Lowland (LL)**
 6. Site not as above.....1
1. Upland site that does not receive significant additional moisture as above.....7
 7. Sites that are saline and/or alkaline, Gardners Saltbush and/or Winterfat common species.....**Saline Upland (SU)**
 7. Sites that are not saline and/or alkaline.....8
 8. Sites with a high volume of coarse fragments in top 20" (>35% by volume).
 9. Site occurs along terrace breaks or steep slopes with the majority of coarse fragments from 2 mm to 3" in diameter covering 50-75% of surface and making up 40-50% volume in top 20", may have lime horizon below 12 inches, Bluebunch Wheatgrass and variety of woody plants may be present, productivity low.....**Gravelly (Gr)**
 9. Site occurs in a variety of upland positions, majority of coarse fragments greater than 3" in diameter found in abundance on surface, at least 35% volume of coarse fragments in top 20", generally increasing with depth, Bluebunch Wheatgrass common**Coarse Upland (CU)**
 8. Sites without high volume of coarse fragments.....10
 10. Soils textures are heavy and range from silty clay to heavy clay, slight to severe soil cracking in dry conditions. Textures range from silty clay through finer silty and sandy clay loams, soil cracking common during dry summer months, though not severe, Big Sagebrush more common woody species.....**Clayey (Cy)**
 10. Soils not as above.....11
 11. Soil textures are coarse and range from fine sandy loam to sand.....12
 12. Soils coarse, loamy sand to sand textures, sometimes as dunes, dark or light colored, Needleandthread and prairie sandreed are abundant species....**Sands (Sa)**
 12. Soils fine sandy loams, sandy loams, or loamy sands in texture, light or dark colored, Needleandthread and Indian Ricegrass are abundant species.....**Sandy (Sy)**
 11. Soils not as above.....**Loamy (Ly)**

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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.