

ESD Decision Tree for MLRA 70B, Central Pecos Valleys and Plains				Site Description	Site Name	Site Code
1. 0-15 percent slopes						
A. Site receives moisture from adjacent overland flow or groundwater.						
				Loamy soils with fluctuating water table 1 to 4 feet below the surface for most of the growing season		
				1. These soils frequently have a fluctuating water table at a depth of 1 to 4 feet. The site receives water from the surrounding sites either as shallow groundwater or surface runoff. Slopes are concave and range from 0 to 2%	Wet Meadow	R070BY076NM
				Loamy soils in swales, plays, fan remnants and depressions		
				2. This site is on unguilled concave, nearly level to gently sloping swales, playas, drainages, fan remnants, and depressions. Surface textures are fine sandy loam, silty clay loam, clay loam, or clay. Available water holding capacity is high.	Swale	R070BY057NM
				Loamy soils with moderately alkaline and moderately saline subsurface		
				3. This site is on level, low benches surrounding large enclosed basins or playas on the High Plains. Slopes are typically less than 1 percent, but may range to 3 percent. The regolith consists of fine textured, calcareous, moderately alkaline water-deposited sediments.	Saline	R070BY058NM
				Sandy alluvium fomed soils in fluvial terrace positions adjacent to stream beds		
				4. This site occurs in the flood plains of major streams. It usually occupies fluvial terraces immediately adjacent to the streambed. This site may be flooded periodically to frequent as signs of deposition are usually visible. Soils consist mostly of sandy alluvium with some silty and loamy layers interspersed in certain locations.	Sandy Bottomland 12-18" PZ	R070BY660TX
				Heavy texture dominated sites (Clayey) on fans, terraces and valley bottoms		
				5. This site occurs as alluvial fans and as swales and valley floors in the plains country. Extra runoff may be received from sites higher on the landscape. Surfaces are slightly concave to convex. The appearance is that of a nearly level topography. The soils are deep to very deep and are composed of alluvial or colluvial sediments.	Clayey 12-18" PZ	R070BY662TX
				Site presents as a Cottonwood Bosque along rivers or large streams.		
				6. This is a low gradient, braided, meandering river with some incision. There is a wide floodplain which may not be accessible during low to moderate flow events.	Populus tremontii - Populus sargentii / Salix exigua - Baccharis glutinosa / Pascopyrum smithii	R070BY001NM
B. Site does not receive moisture from adjacent overland flow or groundwater. (upland sites)						
1. Clay loam texture in the surface horizon.						
				Site is typically a calcareous silty clay loam		
				1. The soils are deep, well drained, gently sloping, moderately alkaline, calcareous silty clay loams that are reddish brown in color. The site occurs on nearly level to gently sloping terrain on broad ridges, divides, and foot slopes below hills and escarpments.	Clay Loam 12-18" PZ	R070BY663TX
				Site is shallow, clayey, calcareous, and somewhat poorly developed. Shale and sandstone rock fragments are common on the soil surface. Shale usually occurs at a depth of about 15 inches		
				2. This site occurs as outwash plains or alluvial fans at the foot of escarpments or mesas in the Triassic and/or Permian geology. There are small drainages and areas of deposition throughout the site. Gullies of shallow to moderate depth are common.	Red Shale 12-18" PZ	R070BY664TX
2. Textures other than clay loam in the surface horizon.						
a. soils have a calcic horizon						
				Soils shallow to caliche or petrocalcic or lithic restrictive layer site occurs in southern 1/2 of MLRA Elevation 4000 feet or less		
				1. Soils are well drained, shallow, and very shallow over hard caliches or a petrocalcic layer. Surface texture is gravelly fine sandy loam, very gravelly fine sandy loam, extremely gravelly fine sandy loam, loam, sandy loam, loamy sand, or very gravelly loamy fine sands. Slopes range from 0 to 5%.	Shallow	R070BY062NM
				Soils shallow to caliche or petrocalcic or lithic restrictive layer occur in northern 1/2 of MLRA, Elevation 4000 feet or more		
				2. Soils are very shallow to shallow. Surface and subsurface textures are very fine sandy loam, fine sandy loam, very fine sandy loam, and gravelly very fine sandy loam over caliche, gypsum, sandstone, or limestone at a depth of 9 to 20 inches.	Shallow (Cool)	R070BY075NM
				Soils typically are shallow and have high gravel content in root zone		

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				3. Soils are shallow to very shallow over caliches. Surface and sub-surface textures range from very gravelly fine sandy loam, very gravelly loam, very gravelly loamy fine sand, very cobbly fine sandy loam, gravelly fine sandy loam or extremely cobbly fine sandy loam with a depth of 6 to 18 inches to a lithic horizon of limestone or petrocalcic.	Very Shallow	R070BY070NM
				Soils are NOT shallow to caliche or petrocalcic, strongly calcareous throughout, fine texture surface		
				4. Soils are deep to very deep with high lime horizons above 20 inches. Surface textures are fine sandy loam, very fine sandy loam or loams. The surface layer is fine sandy loam, very fine sandy loam and loam. They are strongly calcareous. Textures are violently effervescent, carbonates are slightly cemented, and some cemented lenses are scattered along the contact of the overlying horizon.	Limy	R070BY068NM
				Soils are NOT shallow to caliche or petrocalcic, strongly calcareous throughout, coarse texture surface		
				5. This site occurs on alluvial/colluvial fan terraces and hillslopes. Land surfaces vary from slightly convex to slightly concave. The soils are deep to very deep fine sandy loams that are derived from the red bed formation of the late Triassic age sandstone and shale. Parent material is calcareous alluvial and eolian sediments.	Sandy Loam 12-18" PZ	R070BY670TX
			a. soils do NOT have a calcic horizon			
				Soils are deep, alluvial or eolian sands, coarse texture surface, undulating or hummocky surface		
				2. This site occurs as the coarse-textured eolian and alluvial sediments on nearly level to undulating and hummocky upland plains, alluvial fans, and valley side slopes. Slopes are nearly level to gently undulating generally ranging from 0 to 5%. Soils are deep and excessively drained.	Deep Sand	R070BY063NM
				Soils are deep, gravelly to very gravelly throughout		
				3. Soils are deep to very deep. Surface textures are fine sandy loam, gravelly loam, gravelly loamy fine sand, very gravelly fine sandy loam, very gravelly sandy clay loam or very gravelly loam. The site occurs on unconsolidated eolian, lacustrine, or fluvial sediments that are on nearly level to undulating, concave plains in broad, shallow basins, terraces along drainageways, and on the fans at the foot of escarpments.	Gravelly	R070BY065NM
				Soils are moderately deep to deep, alluvial or eolian sands, coarse texture surface, This site occurs on level to gently sloping or undulating piedmont slopes or plains, site occurs in southern 1/2 of MLRA Elevation 4000 feet or less		
				1. This site consists of very deep, well drained, moderately permeable soils. The site is on hillslopes, alluvial fan terraces, fan remnant or valley side slopes. Slopes range from 0 to 9%. Soils are deep or very deep. Surface textures are fine sand, sandy clay loam, sandy loam, or loamy fine sand.	Sandy Plains	R070BY055NM
				Soils are moderately deep to deep, alluvial or eolian sands, coarse texture surface, This site occurs on level to gently sloping or undulating piedmont slopes or plains, northern 1/2 of MLRA, Elevation 4000 feet or more		
				4. The soils of this site are self drained, moderately deep to deep. Typically, the surface textures are loamy fine sand 5 to 8 inches or more over sandy clay loam, clay loam, or very fine sandy loam. This site occurs on level to gently sloping or undulating piedmont slopes or plains.	Sandy Plains (Cool)	R070BY074NM
				Soils are shallow to caliche or bedrock, alluvial or eolian sands, coarse texture surface		
				5. This site consists of shallow sands (10-20 inches) over bedrock or caliche from alluvial and eolian material. Surface and subsurface textures are fine sands, sandy loam, loamy very fine sands, gravelly very fine sandy loam, gravelly fine sandy loam and loamy sands that are shallow in depth.	Shallow Plains (Cool)	R070BY069NM
II. Slopes greater than 15%						
	A. Soils are derived from gypsum					
				This site occurs shallow and very shallow, well drained, moderately permeable soils that formed in loamy, calcareous, and gypsiferous sediments. Soils are on basins, valley floors or adjacent terraces and have slopes of 0 to 50 percent. Gypsum outcrop is common.		
				1. This site occurs on shallow and very shallow, well drained soils that formed in loamy, calcareous, and gypsiferous sediments. The subsurface is a gypsiferous loam about 8 to 15 inches thick.	Gyp Uplands	R070BY066NM
				This site occurs shallow and very shallow, well drained, moderately permeable soils that formed in loamy, calcareous, and gypsiferous sediments. Soils are on hills, escarpments or cliffs and have slopes of 10 to 45 percent. Gypsum outcrop is common.		
				2. This site occurs on shallow and very shallow, well drained soils in calcareous, and gypsiferous sediments. Soils are on hills, escarpments or cliffs.	Gyp Hills	R070BY067NM
	B. Soils are deep sand hills.					

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				1. This site occurs on coarse-textured eolian and alluvial sediments on the upland plains. The landscape is typically a complex of vegetated sand ridges and sand swales. The ridges tend to arrange themselves in a chain extending parallel in the direction of the prevailing winds. The sand ridges generally extend to a tip then collapse causing the leeward side to be concave and convex on the windward side.	Sandhills	R070BY061NM
	C. Exposed bedrock is present.					
				a. soils interspersed with sandstone outcrop formations, more than 50% of the site has soil and less than 50% is sandstone outcrop		
				1. This site is on gently sloping to moderately steep canyon walls, hillsides, and mesa tops. The landscape is typically a complex of small pockets of soil and sandstone outcrop in the form of ledges.	Sandstone Savanna	R070BY051NM
				2. This site occurs on convex low ridgetops and side slopes of erosional plains along drainages and on low escarpments. There are sizable areas where up to 50% sandstone bedrock is exposed with areas of soil accumulation occurring randomly throughout.	Shallow Sandstone 12-18" PZ	R070BY665TX
				b. soils interspersed with sandstone outcrop formations, more than 50% of the site has sandstone outcrops and less than 50% is soil pockets		
				Breaks site, very steep with abundant exposed bedrock. 12 to 18 inch precipitation, North and South exposures together		
				1. This site occurs as moderately sloping to steep ridges, knolls, side slopes and erosional remnants on severely dissected landscapes below major escarpments, along canyon slopes, and on steep side slopes below mesa tops. The soils are poorly developed, very shallow, reddish soils formed in loamy to clayey red bed sediments.	Breaks 12-18" PZ	R070BY661TX
				Breaks site, very steep with abundant exposed bedrock, North exposure. 9 to 11 inch precipitation.		
				2. This site formed in residuum and colluvium derived from shale, siltstone, or sandstone of the Santa Rosa and Chinle Formations of Triassic age and has many outcrops of sandstone.	Breaks North Exposure	R070BY059NM
				Breaks site, very steep with abundant exposed bedrock, South exposure. 9 to 11 inch precipitation.		
				3. This site formed in residuum and colluvium derived from shale, siltstone, or sandstone of the Santa Rosa and Chinle Formations of Triassic age and has many outcrops of sandstone.	Breaks South Exposure	R070BY060NM