

ESD Key for MLRA 77D: High Plains, Southwestern Part								
surface layer	calcic	soil depth	water table	slope	elevation	Site Description	Site Name	Site Code
1. Soils Shallow to very shallow								
A. Soils calcareous								
i. Soils gravelly and calcareous, slightly higher position on the landscape than Very Shallow site. Mollic colored soil control section								
Gravelly Clay Loam, Fine Sandy Loam	calcareous	7 to 20 inches	no	0 to 15	2000 to 5000	Soils are shallow to a petrocalcic horizon. They were formed in moderately fine textured eolian sediments. These soils are typically on gently sloping plains, narrow ridges, and side slopes along draws. Slope ranges from 0 to 15 percent. The soils of this site are very shallow to shallow well drained, calcareous, gravelly soils. Permeability is moderate and runoff is low to medium. Parent material is a thin mantle of medium to moderately coarse textured eolian sediments over an indurated layer.	Shallow 12-17" PZ	R077DY048TX
ii. Soils gravelly and calcareous, slightly lower landscape position than Shallow site. Ochric soil control section								
Gravelly loam, Fine sandy loam.	calcareous	4 to 20 inches	no	0 to 3	3600 to 4600	Soils very shallow to shallow over a petrocalcic horizon. They were formed in moderately fine textured eolian sediments. These soils are typically on gently sloping plains, narrow ridges, and side slopes along draws. Slope ranges from 0 to 3 percent. soils of this site are well drained, calcareous, gravelly soils. Permeability is moderate and runoff is low to medium. Parent material is a thin mantle of medium to moderately coarse textured eolian sediments over an indurated layer.	Very Shallow 12-17" PZ	R077DY049TX
B. Soils Gypsic								
Fine sandy loam, Loam, Clay Loam	Gypsic	0 to 20 inches	no	1 to 9	1700 to 2700	The Gyp site occurs on basins, valley floors or adjacent terraces and has slopes ranging from 0 to 50 percent but is generally 0 to 3 percent. These soils are formed in alluvial and eolian sediments or lime and gypsum that precipitated out of from surface and subsurface water. Unweathered gypsum is sometimes visible on the surface. Soils of this site are very shallow to shallow well drained and moderately permeable. They are formed in loamy, calcareous and gypsiferous, alluvial or eolian sediments over gypsum bedrock. They are mostly gently sloping to steep and occur on basin and valley floors and on adjacent terraces.	Gyp 12-17" PZ	R077DY591TX
1. Soils moderately deep to very deep								
A. Soils have high water table influence during some years.								
Fine sandy loam	calcareous	60 inches or more	yes	0 to 2	2800 to 3900	Site occurs in the ancient drainageways that dissect the area. Slopes are nearly level to very gently sloping and the site may or may not be channeled. Runoff generated into these draws generally depends on the amount of vegetative cover of adjacent areas and intensity of the precipitation event. These are upper drainages of the Colorado River System. Soils are deep, nearly level, calcareous fine sandy loams on nearly level flood plains. They formed in moderately coarse textured calcareous alluvial materials. The subsurface horizons are fine sandy loam with thin strata of darker and lighter colored loam and loamy sand. Visible calcium carbonate ranges from 0 to about 5 percent. Below this is dominantly sandy loam or loamy sand, with many thin strata of loam, sandy clay loam, and clay loam materials.	Draw 12-17" PZ	R077DY039TX
Clayey	no	60 inches or more	yes	0 to 1	2600 to 3900	This site occurs in playa lake basins and immediately adjacent areas. The playa floors range from a few feet to more than 30 feet below surrounding uplands. These basins hold water in the more rainy seasons and most of them will dry up in dryer seasons of the year. In the event of drought, these lakebeds may be dry for several years. The frequency and duration of inundation is highly variable from basin to basin. The surrounding areas are generally nearly level plains with a gently sloping transitional area immediately upslope from the basins. The soils are very deep, poorly to somewhat poorly drained soils high in silicate clays. Clay content ranges from 40 to greater than 60 percent and are slightly to moderately alkaline. Due to the high shrink/swell potential of the smectite clays present, unplowed basins may exhibit gilgai microrelief. When wet for extended periods, these soils may develop redoximorphic features in the profile. When dry, these soils may crack to a depth of as much as 40 inches.	Lakebed 12-17" PZ	R077DY041TX
B. Soils DO NOT have high water table influence during some years. Upland sites								
i. Soils moderately deep with a cemented petrocalcic below.								
loam, sandy clay loam, clay loam	underlain by cemented or indurated petrocalcic layers	10 to 40 inches	no	0 to 3	3400 to 4500	Site is comprised of nearly level to gently sloping plains, commonly found adjacent to relict drainageways, and were formed in calcareous, loamy eolian sediments and are underlain by cemented or indurated petrocalcic layers. Runoff is negligible to very low. These shallow to moderately deep soils are developed from calcareous, loamy eolian sediments and are underlain by cemented or indurated petrocalcic layers. Slopes dominantly range from 1 to 3 percent. They are moderate in fertility, have a low level of water storage capacity due to the limited about of soil material above the usually continuous cemented layer. These soils have a slow infiltration rate.	Clay Loam 12-17" PZ	R077DY038TX
ii. Soils deep to very deep.								
a. Soils with Sandy surfce textures.								

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Fine Sands and loamy fine sands	no	over 60 inches	no	1 to 15	2400 to 3500	Soils are very deep soils formed in sandy eolian materials. The landform is dunes and sandsheet. These soils are located on gently undulating to rolling uplands. Slopes range from 1 to 15 percent. Elevation ranges from 2400 to 3500 feet. The soils of this site are very deep, excessively drained, rapidly permeable soils.	Sand Hills 12-17" PZ	R077DY045TX
Fine Sands and loamy fine sands	no	over 60 inches	no	2 to 4	2500 to 4600	Site is composed of nearly level to undulating gently sloping plains, concave plains in broad, shallow basins and swales, and adjacent to natural drainage ways. Slope ranges from 2 to 4 percent. Soils are moderately deep to very deep, noncalcareous loamy fine sands on uplands and shallow swales. This site was formed from loamy eolian sediments and slopes range from 0 to 8 percent. These soils are well drained with moderate permeability. Fertility is moderate, water storage capacity is low, and runoff is slight to moderate.	Sandy 12-17" PZ	R077DY046TX
b. Soils with Loamy to clayey surface textures.								
Soils calcareous								
Sandy loam	calcareous	60 inches or more	no	1 to 5	2950 to 3600	Site consists of very deep, very gently to gently sloping calcareous loamy soils with light colored surfaces and moderately permeable fine sandy loam subsoils. Slopes dominantly range from 1 to 5 percent. Landform: Convex, linear, and curvilinear dunes on the leeward (eastern) margin of playa or salt lake basins to nearly level to very gently sloping terraces. These soils are calcareous (limy) throughout and the water holding capacity is moderate. Soils are calcareous (limy) throughout and the water holding capacity is moderate. The calcium carbonate content may limit the plant community to tolerant plant species. Plant roots will easily penetrate the soil if not severely compacted. Fertility is low and these soils have a moderate permeability rate.	High Lime 12-17" PZ	R077DY040TX
Loam and Fine sandy loam	calcareous	over 60 inches	no	0 to 5	2500 to 3000	Site is on nearly level to gently undulating upland plain. The regolith consists of loamy, calcareous sediments. Slope ranges from 0 to 5 percent. Elevation ranges from 2,500 to 3,000 feet. Soils are moderately deep to deep well drained that are moderately permeable. They are upland soils formed in loamy calcareous materials. They are on nearly level to gently undulating uplands, plain, playa slope, interdune, and basin floor. Runoff is negligible on slopes less than one percent and low from 03 to 5 percent.	Limy Upland 12-17" PZ	R077DY042TX
Soils not calcareous								
Fine sandy loam	no	over 60 inches	no	0 to 3	3400 to 4600	Site is comprised of nearly level to gently sloping plains, commonly adjacent to relict drainageways. Runoff is negligible to medium on these sandy loam soils. These deep to very deep soils have slopes ranging from 1 to 3 percent. They are moderate in fertility, have a moderate level of water storage capacity, and have a moderate infiltration rate	Sandy Loam 12-17" PZ	R077DY047TX