The Pedon 22 series consists of very deep, moderately well drained soils that formed in mixed alluvium dominantly from sedimentary and/or granitic rocks. Pedon 22 soils occur on lower lying alluvial fans, fan terraces, basins, and basin rims and have slopes of 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 64 degrees F.

TAXONOMIC CLASS:

TYPICAL PEDON: Pedon 22 clay loam - annual grasses and forbs on a slope of 1 percent at 224 feet elevation. (Colors are for dry soil unless otherwise stated. When described on 11/10/76 the soil was dry throughout.)

_____--0 to 6 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 4/3) moist; strong coarse subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and fine and few medium roots; many very fine interstitial and tubular pores; slightly effervescent, carbonates disseminated; moderately alkaline (pH 7.9); abrupt smooth boundary. (1 to 10 inches thick)

_____--6 to 13 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; strong medium prismatic structure parting to strong medium subangular blocky; hard, friable, sticky and very plastic; many very fine and fine and few medium roots; many very fine interstitial and many very fine and fine tubular pores; few thin clay films on faces of peds and in pores; common scattered gypsum crystals; strongly effervescent, carbonates disseminated and segregated as common fine irregular filaments and soft masses; moderately alkaline (pH 8.2); abrupt smooth boundary. (7 to 19 inches thick)

_____--13 to 24 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; moderate coarse prismatic structure parting to moderate medium subangular blocky; very hard, friable, sticky and very plastic; many very fine roots; many very fine interstitial and tubular pores; few thin clay films on faces of peds and in pores; common scattered gypsum crystals; strongly effervescent, carbonates disseminated and segregated as few fine irregular soft masses; moderately alkaline (pH 8.2); abrupt smooth boundary. (9 to 21 inches thick)

_____--24 to 31 inches; light brownish gray (2.5Y 6/2) clay loam, dark grayish brown (2.5Y 4/2) moist; weak very coarse prismatic structure; hard, friable, sticky and plastic; many very fine roots; common very fine interstitial and tubular pores; few thin clay films on faces of peds and in pores; common scattered gypsum crystals; moderately alkaline (pH 8.2); abrupt wavy boundary. (0 to 10 inches thick)

_____--31 to 52 inches; light yellowish brown (2.5Y 6/4) sandy loam, dark grayish brown (2.5Y 4/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine interstitial and very fine and fine tubular pores; strongly alkaline (pH 8.5); abrupt wavy boundary. (21 to 24 inches thick)

_____--52 to 60 inches; light yellowish brown (2.5Y 6/4) sandy loam, dark grayish brown (2.5Y 4/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine interstitial and common very fine tubular pores; strongly alkaline (pH 8.6).

TYPE LOCATION: Kings County, California; about 50 feet east of 25th Avenue in the northwest 1/4, southwest 1/4, northwest 1/4 of section 22, T.19 S., R.19 E., Vanguard Quadrangle; MDB&M.

RANGE IN CHARACTERISTICS: The soil between the depths of 4 and 12 inches is dry more than 3/4 of the time (cumulative) and is not continuously moist for as long as 75 days. Mean annual soil temperature is 65 degrees to 68 degrees F. The organic matter content is low throughout the soil profile. The soil is moderately alkaline to very strongly alkaline. Electrical conductivity of the saturation extract ranges from 1 to 40 decisiemens per meter.

GEOGRAPHIC SETTING: Pedon 22 soils occur on low lying alluvial fans, fan terraces, basins and basin rims at elevations of 190 to 500 feet. Slopes are 0 to 2 percent. The climate is arid and has long, hot, dry summers and cool, somewhat moist winters. The soil formed in mixed alluvium dominantly from sedimentary and/or granitic rocks. The mean annual precipitation is 5 to 8 inches. The mean January temperature is about 50 degrees F., the mean July temperature is about 83 degrees F., and the mean annual temperature is 63 to 66 degrees F. The frost-free season is 250 to 300 days.

DRAINAGE AND PERMEABILITY: Moderately well drained; very slow runoff; very slow permeability.

USE AND VEGETATION: This soil is used for irrigated barley, milo, cotton, sugar beets, safflower, and pasture. The native vegetation is sparse stand of saltgrass, saltbush, and red brome.

DISTRIBUTION AND EXTENT: West side of the San Joaquin Valley, California. The series is of large extent.