

Soil Survey Ward County, Texas

TABLE 5.—Interpretations of engineering

[An asterisk in the first column indicates that at least one mapping unit in this series is made up of two or more kinds of soil. The soils in referring to other series that appear

Soil series and map symbols	Suitability as source of—		
	Topsoil	Road fill	Sand and gravel
Arno: Ar.....	Poor: clay texture; high to very high salinity.	Poor: high shrink-swell potential; poor traffic-supporting capacity.	Improbable source.....
Courthouse..... Mapped only in an association with Los Tanos soils.	Fair: 10 to 20 inches of fine sandy loam.	Poor: bedrock at depth of 10 to 20 inches.	Improbable source.....
Delnorte: DE.....	Poor: 35 to 50 percent fragments.	Good: rippable cemented caliche at depth of 6 to 10 inches.	Fair: excessive fines; probable source of caliche.
Dune land. Mapped only in an association with Kermit soils. Too variable to be rated.			
Gila: Gf.....	Poor if salinity is high, fair if salinity is moderate: 8 to 16 inches of fine sandy loam.	Fair: fair traffic-supporting capacity.	Improbable source.....
Harkey: Ha.....	Poor if salinity is high, fair if salinity is moderate: 6 to 18 inches of loam.	Fair: fair traffic-supporting capacity; moderate shrink-swell potential.	Improbable source.....
Hodgins: Ho.....	Poor: high salinity.....	Fair: moderate shrink-swell potential.	Improbable source.....
Ima: Im.....	Poor: high salinity.....	Fair: moderate traffic-supporting capacity.	Improbable source.....
*Kermit: KD..... For Dune land part, see Dune land.	Poor: fine sand texture.....	Good.....	Fair: contains excessive fines...
Kinco: Kc.....	Good.....	Good.....	Improbable source.....
*Los Tanos: LT..... For Courthouse part, see Courthouse series.	Good.....	Poor where bedrock is at depth of 20 to 24 inches, fair where bedrock is at depth of 24 to 40 inches: fair traffic-supporting capacity.	Improbable source.....
McCarran: MC.....	Poor where 3 to 6 inches of loam, fair where 6 to 18 inches of loam or silt loam.	Poor: 3 to 18 inches of suitable material.	Improbable source.....
Monahans: Mo.....	Poor where 4 to 6 inches of fine sandy loam: high salinity. Fair where 6 to 12 inches of fine sandy loam: moderate salinity.	Fair: fair traffic-supporting capacity.	Improbable source.....

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properties of the soils

such mapping units may have different properties and limitations, and for this reason it is necessary to follow carefully the instructions for in the first column of this table]

Degree of limitations and soil features affecting farm ponds		Soil features affecting—		
Reservoir areas	Embankments	Agricultural drainage	Irrigation	Terraces and diversions
Slight.....	Moderate: fair slope stability..	Very slow permeability..	Very slow water intake rate; poor internal drainage; salinity.	Highly plastic; flat relief.
Severe: bedrock at depth of 10 to 20 inches.	Severe: bedrock at depth of 10 to 20 inches.	Moderate permeability; bedrock at depth of 10 to 20 inches.	Low available water capacity; bedrock at depth of 10 to 20 inches.	Bedrock at depth of 10 to 20 inches.
Severe: caliche at depth of 6 to 10 inches.	Moderate: poor to fair resistance to piping; hazard of erosion.	Moderate permeability; weakly cemented caliche at depth of 6 to 10 inches.	Low available water capacity; weakly cemented caliche at depth of 6 to 10 inches.	Weakly cemented caliche at depth of 6 to 10 inches.
Moderate: moderate permeability.	Moderate: poor resistance to piping; hazard of erosion.	Moderate permeability.	Moderate permeability; salinity.	Nearly level.
Moderate: moderate permeability.	Moderate: fair resistance to piping; hazard of erosion.	Moderate permeability; perched water table.	Moderate permeability; salinity.	Nearly level.
Moderate: moderate permeability.	Moderate: medium compressibility.	Moderate permeability.	High salinity.....	All features favorable.
Severe: moderately rapid permeability.	Moderate: poor to fair resistance to piping; hazard of erosion.	Unstable ditchbanks...	Moderately rapid permeability; hazard of erosion; high salinity.	Moderate hazard of soil blowing.
Severe: very rapid permeability.	Severe: poor stability and resistance to piping; hazard of erosion.	Very rapid permeability; unstable ditchbanks.	Low available water capacity; hazard of erosion; slope.	Severe hazard of soil blowing.
Severe: moderately rapid permeability.	Moderate: poor to fair resistance to piping; hazard of erosion.	Unstable ditchbanks...	Moderate available water capacity; high water intake rate; hazard of erosion.	Moderate hazard of soil blowing.
Severe: bedrock at depth of 20 to 40 inches.	Severe where bedrock is at depth of 20 to 24 inches, moderate where bedrock is at depth of 24 to 40 inches: poor resistance to piping; hazard of erosion.	Rapid permeability; unstable ditchbanks.	Low available water capacity; high water intake rate.	Moderate hazard of soil blowing.
Severe: gypsic earth at depth of 3 to 18 inches.	Severe where gypsic earth is at depth of 20 to 24 inches, moderate where gypsic earth is at depth of 24 to 40 inches: poor resistance to piping; hazard of erosion.	Moderate permeability..	Low available water capacity; gypsic earth at a depth of 20 to 40 inches.	Gypsic earth at depth of 20 to 40 inches.
Severe: gypsiferous materials at depth of 14 to 36 inches.	Severe where gypsiferous materials at depth of 14 to 24 inches, moderate where gypsiferous materials at depth of 24 to 36 inches: poor resistance to piping and erosion.	All features favorable..	Moderately permeable; hazard of erosion.	Moderate hazard of soil blowing; gypsiferous materials at depth of 14 to 36 inches.

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TABLE 5.—*Interpretations of engineering*

Soil series and map symbols	Suitability as source of—		
	Topsoil	Road fill	Sand and gravel
Patrole: Pa.....	Poor: high to very high salinity.	Fair: high shrink-swell potential; poor traffic-supporting capacity.	Improbable source.....
Pecos: Pe.....	Poor: silty clay texture; high to very high salinity.	Poor: high shrink-swell potential; poor traffic-supporting capacity.	Improbable source.....
Pyote: PY.....	Poor: loamy fine sand texture.	Good.....	Fair: excessive fines, poorly graded sands.
Sharvana: SH.....	Fair: 12 to 20 inches of fine sandy loam.	Poor: cemented to indurated caliche at depth of 12 to 20 inches.	Improbable source.....
Toyah: To.....	Poor: high salinity.....	Fair: fair traffic-supporting capacity.	Improbable source.....
Upton: UP.....	Poor: 20 to 35 percent coarse fragments.	Good.....	Improbable source.....
Verhalen: VC.....	Poor: clay texture.....	Poor: high shrink-swell potential; poor traffic-supporting capacity.	Improbable source.....
*Wickett: WS, WT..... For Sharvana parts of WS and WT, see Sharvana series.	Poor: loamy fine sand texture..	Good.....	Poor: excessive fines.....

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properties of the soils—Continued

Degree of limitations and soil features affecting farm ponds		Soil features affecting—		
Reservoir areas	Embankments	Agricultural drainage	Irrigation	Terraces and diversions
Moderate: moderately slow permeability.	Moderate: poor resistance to piping and erosion.	Moderately slow permeability; subject to perched water table.	Moderately slow permeability; high to very high salinity.	Nearly level.
Slight.....	Moderate: fair slope stability..	Very slow permeability.	Very slow water intake rate; slow internal drainage; salinity.	Nearly level; subject to soil cracking.
Severe: moderately rapid permeability.	Moderate: poor resistance to piping and erosion.	Moderately rapid permeability.	High water intake rate; erodible; slope.	Severe hazard of soil blowing.
Severe: cemented to indurated caliche at depth of 12 to 20 inches.	Severe: cemented to indurated caliche at depth of 12 to 20 inches.	Moderate permeability; cemented to indurated caliche at depth of 12 to 20 inches.	Low available water capacity; cemented to indurated caliche at depth of 12 to 20 inches.	Cemented to indurated caliche at depth of 12 to 20 inches.
Moderate: moderate permeability.	Moderate: poor resistance to piping and erosion.	All features favorable..	Moderate permeability; high salinity.	Nearly level.
Severe: permeable, calcareous substratum.	Severe: 7 to 20 inches of material.	Moderately permeable; cemented caliche at depth of 7 to 20 inches.	Low available water capacity; cemented caliche at depth of 7 to 20 inches.	Cemented caliche at depth of 7 to 20 inches.
Slight.....	Moderate: high compressibility; poor slope stability.	Slow permeability.....	Slow water intake rate..	Subject to cracking.
Severe: moderately rapid permeability.	Generally moderate: poor resistance to piping and erosion; 24 to 40 inches deep to weakly cemented caliche. Poor where 20 to 24 inches deep to weakly cemented caliche.	Moderately rapidly permeable; weakly cemented caliche at depth of 20 to 40 inches.	Low available water capacity; high water intake rate, erodible.	Severe hazard of soil blowing.