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Soil lines are generalized from the NRCS STATSGO database 2004 NAD 83, USA Albers Equal Area Conic USGS.

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Map and text reviewed by B. L. Harris, Professor of Soil Science and Associate Director of Texas Water Resources Institute, Texas A&M; and Jon E. Brandt, P.G., Soil Scientist, Austin, Texas.

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For more detailed soil information go to: http://websoilsurvey.nrcs.usda.gov

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Soil, a natural body composed of minerals, organic matter, liquids, and gases, occurs on Earth’s surface and supports plant growth. Soils form in environments ranging from desert landscapes to coastal flats permanently covered by water up to 2.5 m deep. Soil formation is related to five factors: parent material, climate, topography, living organisms, and time. The soil under your feet determines organisms, and time. The state of Texas is divided into 15 major land resource areas, each of which is a grouping of similar soils, vegetation, climate, and topography.

Southern Desertic Basins, Plains, and Mountains soils formed in an area of linear mountain ranges and broad desert basins bordered by sloping alluvial and piedmont slopes known as the Basin and Range. Shallow soils, including Brewster, Lajitas, and Mainstay soils, formed on mountainous terrain in igneous bedrock. Soils that are shallow to a root-restrictive layer of cemented caliche (CaCO3) occur in gravelly sediments weathered from igneous sources, such as Delnorte and Boracho soils, and from limestone sources, such as Philder soils. Very deep soils formed in basins sediments from limestone, such as Armesa and Reyab soils, and from mixed sources, such as Reakor soils. Liv soils, moderately deep to igneous bedrock, formed in gravelly igneous sediments. Very deep, loamy Musquiz soils occur on broad plains.

Southern High Plains soils formed on a nearly level plain on an elevated plateau, commonly bordered by moderately steep escarpments on west and east margins. Numerous playa basins dot the plains. The area is characterized by deep, well-developed soils, with clay increasing in subsoil horizons and accumulations of calcium carbonate. Sherm, Darrozett, Pullman, Loffton, and Randall soils have clayey subsoil horizons and shrink-swell properties. Aucott, Otton, and Gruver are loamy soils having dark surface horizons (higher organic matter), whereas Amarillo, Dallam, Rickmore, and Vingo are loamy soils having less organic matter. Patricia, Brownfield, Jalmar, and Triomas soils have sandy surface horizons. Naturioli and Perwell are sandy, less-developed soils. Conley, Sunray, Spurlock, and Veal soils are calcareous throughout, and Mobee and Berda soils are loamy and occur along flanking escarpments.

Central Rolling Red Plains soils formed on an erosional surface characterized by rolling plains having ancient stream terraces associated with stream dissection. Soils (most red) formed in gently dipping Triassic and Permian sedimentary deposits and alluvium weathered from outcropping bedrock. Miles, Delwin, and Springfield are well-developed soils having sandy surface horizons. Woodward and Vernon soils are moderately deep to sandstone and mudstone bedrock, respectively. Loamy Tillman and Hollister soils are very deep with shrink-swell properties.

Texas North Central Prairies soils formed on a dissected plateau with narrow, steep-sided valleys carved by generally southeastward flowing streams. Soil parent materials are primarily sedimentary rocks of Pennsylvanian age. Bonita, Bluegrove, Callahan, Stoneburg, and Thrack soils, moderately deep to sandstone, silstone, or claystone, occur on gently sloping to steep, broad ridges and plains. Deep Trace soils and very deep Ancon soils formed on similar landscapes. Very deep Kirkland soils formed in clayey alluvium over siltstone or claystone.

Edwards Plateau soils formed on mesas and plateaus of erosion-resistant limestone containing deeply incised canyons, limestone ridges and hills, and gently sloping valley floors. Tarrant, Lozier, Ector, Langtry, Brackett, Eckrall, and Real soils are shallow to limestone and differ in texture, mineralogy, or organic matter content. Conger, Kavett, Optin, and Zorra soils have a root-restrictive layer of cemented caliche (CaCO3) over limestone bedrock. Very deep soils occurring on broad plateaus and in alluvial-fan valley-fill sediments include loamy, calcareous Reagan soils. Clayey Tobosa soils occur on alluvial plains, broad uplands, and depressions.

Texas Central Basin soils formed on an erosional surface of outcropping Precambrian igneous and metamorphic rocks and sedimentary rocks of Cambrian and Cretaceous age. The landscape is dominated by hills of granite, gneiss, and schist that are incised by southeastern-flowing rivers. Shallow Keeve soils formed over granite and gneiss on gently sloping to steep hillslopes. Moderately deep Ligon soils formed in schist and gneiss on gently sloping, broad, convex ridges.

Rio Grande Plain soils formed on a broad coastal plain consisting of sediments of Tertiary and Quaternary age. The southern extent of this nearly level plain is within the ancestral valley cut by the Rio Grande. The coastal-plain landscape is dissected by generally southeastward flowing streams. Weesatche, Duval, Sarno, Hidalgo, Brennam, Pernitas, Uvalde, Pryor, Elindio, and Mcallen soils are deep and very deep, well-developed, loamy soils that occur on nearly level to moderately sloping plains and broad ridges. Olmos, Delmita, and Randado soils, shallow to a root-restrictive layer of cemented caliche (CaCO3), formed in gravelly Pleistocene sediments. Langtry soils are shallow, Montell and Catarrina soils are clayey sodium-affected soils, and Maverick soils are clayey and moderately deep to weathered shale bedrock. Falfluries, Sarita, and Nueces soils are very deep, sandy soils on the sand-sheet prairie that covers the southeast parts of the South Texas Coastal Plain.

Cross Timbers soils formed on a rolling landscape with low to moderate relief dissected by numerous narrow streams. Outcropping sandstones, shales, and limestones of Cretaceous age cover the landscape, and unconsolidated sands and gravels fill the rivers and streams. Duffau, Gasil, and Windhorst soils are deep, highly weathered soils that formed in interbedded sandstone and shale. These soils formed on convex uplands and are very susceptible to erosion. Chaney, Crosswell, and Callisburg soils have clayey subsoils and are deep to claystone or shale.

Grand Prairie soils formed on gently rolling to hilly, dissected limestone plateaus and in adjacent, gently sloping valleys. Steep slopes border valleys along major streams, and most soils formed in flat-lying limestones and calcareous shales of Cretaceous age. Shallow soils—including Aledo, Brackett, Purves, and Real—occur on hills and ridges and differ in texture, mineralogy, and organic matter content. Moderately deep Bolar soils occur on similar landscapes. Clayey Saner soils, which formed in shale parent materials, have shrink-swell properties.