

Map Symbol	Map Unit Name	Nontechnical Descriptions
1	BUXIN CLAY, OCCASIONALLY FLOODED	This somewhat poorly drained, level soil is on the flood plain of the Red River. It is subject to occasional flooding for long periods. The soil is clayey throughout. Natural fertility is high. A seasonal high water table is near the surface in winter and spring. Water and air move very slowly through the soil. Cracks form when the soil dries. The soil has a very high shrink-swell potential.
2	ARMISTEAD CLAY	This level, somewhat poorly drained soil is on natural levees on the alluvial plain. It has a clayey surface layer and loamy subsoil. Natural fertility is high. Permeability is slow in the surface layer and moderately slow in the subsoil. The soil has a seasonal high water table in winter and spring. The shrink-swell potential is low in the subsoil.
3	BEAUREGARD SILT LOAM, 1 TO 3 PERCENT SLOPES	This moderately well drained, very gently sloping soil is on broad areas on uplands. It is loamy throughout. Runoff is slow, and water and air move slowly through the subsoil. The soil is wet for long periods because of slow runoff and a seasonal high water table.
4	BERNALDO FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	This well drained, very gently sloping or gently sloping soil is on low stream terraces. It is loamy throughout, or it has a sandy surface layer and a loamy subsoil. Runoff is medium. Water and air move at a moderate rate through the subsoil. The soil dries quickly after rains. Plants are damaged by a lack of moisture during dry periods in summer and fall.
5	BONN SILT LOAM	This level, poorly drained soil is on low terraces. It is loamy throughout and contains a high concentration of sodium in the subsoil. Natural fertility is low. Permeability is very slow. The soil has a seasonal high water table for long periods in winter and spring.
6	WOODTELL FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	This moderately well drained, very gently sloping to gently sloping soil is on uplands. It has a loamy surface layer and a clayey subsoil. The soil is acid throughout and has low fertility. Runoff is medium, and water moves very slowly through the subsoil. The shrink-swell potential is high or very high in the subsoil. In places, the soil is moderately eroded.
7	WOODTELL FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	This moderately well drained, gently sloping to moderately sloping soil is on side slopes on uplands. It has a loamy surface layer and a clayey subsoil. Natural fertility is low. Permeability is very slow. The subsoil has a very high shrink-swell potential.
8	WOODTELL FINE SANDY LOAM, 8 TO 20 PERCENT SLOPES	This moderately well drained, moderately sloping to strongly sloping soil is on side slopes on uplands. It has a loamy surface layer and a clayey subsoil. Runoff is rapid. Water and air move slowly or very slowly through the subsoil. The soil is acid throughout and has low fertility. The subsoil has a high shrink-swell potential. In places, the soil is moderately eroded.

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9	BETIS LOAMY FINE SAND, 1 TO 5 PERCENT SLOPES	This somewhat excessively drained, very gently sloping or gently sloping, sandy soil is on uplands. It has a very low available water capacity and very low natural fertility. Runoff is slow. Water moves rapidly through the soil.
10	BETIS LOAMY FINE SAND, 5 TO 12 PERCENT SLOPES	This somewhat excessively drained, strongly sloping to steep, sandy soil is on uplands. It has a very low available water capacity and very low natural fertility. Runoff is slow. Water moves rapidly through the soil.
11	CASPIANA SILTY CLAY LOAM	This well drained, level soil is on older natural levees on flood plains. It formed in alluvium deposited by the Red River. The soil is loamy throughout and has high natural fertility. Runoff is slow. In places, water collects in low spots for short periods after rains. Water and air move through the subsoil at a moderate rate. Adequate water is available to plants in most years.
12	CASPIANA SILT LOAM	This well drained, level or nearly level soil is on older natural levees on the flood plain of streams. It is loamy throughout and has high or moderately high natural fertility. Runoff is slow or medium. Water and air move through the subsoil at a moderate rate. Adequate water is available to plants in most years. The seasonal high water table is generally more than 6 feet below the surface, but in low places, it can rise to within 4 to 6 feet of the soil surface.
13	KEITHVILLE VERY FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES	This is a moderately well drained, gently sloping soil on uplands. It is loamy in the surface layer and in the upper part of the subsoil. The lower part of the subsoil is clayey. Natural fertility is low. Permeability is slow or very slow through the lower part of the subsoil. Runoff is medium. The soil has a seasonal high water table. It has a high shrink-swell potential in the subsoil.
14	GALLION SILT LOAM	This well drained, level or nearly level soil is on older natural levees on the flood plain of streams. It is loamy throughout and has high or moderately high natural fertility. Runoff is slow or medium. Water and air move through the subsoil at a moderate rate. Adequate water is available to plants in most years. The seasonal high water table is generally more than 6 feet below the surface, but in low places, it can rise to within 4 to 6 feet of the soil surface.
15	GALLION SILTY CLAY LOAM	This well drained, level soil is on older natural levees on flood plains. It formed in alluvium deposited by the Red River. The soil is loamy throughout and has high natural fertility. Runoff is slow. In places, water collects in low spots for short periods after rains. Water and air move through the subsoil at a moderate rate. Adequate water is available to plants in most years.

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16	GORE SILT LOAM, 1 TO 5 PERCENT SLOPES	This moderately well drained, very gently sloping to gently sloping soil is on uplands. It has a loamy surface layer and a clayey subsoil. The soil is acid throughout and has low fertility. Runoff is medium, and water moves very slowly through the subsoil. The shrink-swell potential is high or very high in the subsoil. In places, the soil is moderately eroded.
17	MESSER VARIANT-GUYTON VARIANT COMPLEX, GENTLY UNDULATING	This complex consists of areas of moderately well drained Messer Variant and poorly drained Guyton Variant. The soils are on parallel ridges and swales on terraces. Slopes range from 0 to 1 percent in the swales and up to 3 percent on the ridges. Both soils have a clayey surface layer and a loamy subsoil. Natural fertility is low. The soils have a seasonal high water table in winter and spring.
18	GUYTON SOILS, FREQUENTLY FLOODED	These poorly drained, level soils are on alluvial plains of streams that drain the uplands. The mapped areas are about 60 percent Guyton soils and 20 percent soils that are better drained. The soils are subject to frequent flooding during any month of the year. They are loamy throughout and have low natural fertility. In most of the soils, a seasonal high water table is near the surface in winter and spring.
19	BRILEY LOAMY FINE SAND, 1 TO 5 PERCENT SLOPES	This well drained, gently sloping soil is on uplands. It has thick sandy surface and subsurface layers and a loamy subsoil. Natural fertility is low. Runoff is slow. Water and air move rapidly through the sandy surface and subsurface layers, and they move at a moderate rate through the loamy subsoil. The available water capacity is low.
20	MORELAND CLAY, GENTLY UNDULATING	This somewhat poorly drained, clayey soil is on short irregular slopes in a ridge-and-swale topography on the flood plain. The soil is clayey throughout. Natural fertility is medium or high. Runoff is medium on the ridges. Water accumulates for short periods in the swales after rains. A seasonal high water table is near the surface in winter and spring. This soil has a very high shrink-swell potential.
21	FORBING SILT LOAM, 1 TO 3 PERCENT SLOPES	This moderately well drained, very gently sloping to gently sloping soil is on uplands. It has a loamy surface layer and a clayey subsoil. The soil is acid throughout and has low fertility. Runoff is medium, and water moves very slowly through the subsoil. The shrink-swell potential is high or very high in the subsoil. In places, the soil is moderately eroded.
22	MORELAND SILT LOAM	This somewhat poorly drained, level soil is on the flood plain of the Red River. It has a loamy surface layer and a clayey subsoil. Natural fertility is high. Runoff is slow. Water and air move very slowly through the subsoil. A seasonal high water table is near the surface for long periods in winter and spring. The shrink-swell potential is very high in the subsoil.

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23	MORELAND SILTY CLAY LOAM	This somewhat poorly drained, level soil is on the flood plain of the Red River. It has a loamy surface layer and a clayey subsoil. Natural fertility is high. Runoff is slow. Water and air move very slowly through the subsoil. A seasonal high water table is near the surface for long periods in winter and spring. The shrink-swell potential is very high in the subsoil.
24	MORELAND CLAY	This somewhat poorly drained, level soil is on flood plains. It formed in Red River alluvium. The soil has a clayey surface layer and a clayey subsoil. Natural fertility is high. Runoff is slow. Water and air move very slowly through the subsoil. A seasonal high water table is near the surface for long periods in winter and spring. The shrink-swell potential is very high in the subsoil.
25	FORBING SILT LOAM, 3 TO 8 PERCENT SLOPES	This moderately well drained, gently sloping to moderately sloping soil is on side slopes on uplands. It has a loamy surface layer and a clayey subsoil. Natural fertility is low. Perneability is very slow. The subsoil has a very high shrink-swell potential.
26	DARDEN LOAMY FINE SAND, 1 TO 5 PERCENT SLOPES	This somewhat excessively drained, very gently sloping or gently sloping, sandy soil is on uplands. It has a very low available water capacity and very low natural fertility. Runoff is slow. Water moves rapidly through the soil.
27	NORWOOD SILT LOAM	This well drained, level soil is on natural levees on the Red River flood plain. It is loamy and alkaline throughout. Natural fertility is high. Movement of air and water through the soil is moderate. Runoff is slow. This soil dries quickly after rains.
28	SACUL FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES	This moderately well drained, gently sloping soil is on ridgetops on uplands. It has a loamy surface layer and a clayey subsoil. Runoff is medium. Water and air move slowly or very slowly through the subsoil. The soil is acid throughout and has low fertility. The subsoil has a high shrink-swell potential. In places, the soil is moderately eroded.
29	NORWOOD SILTY CLAY LOAM	This well drained, level soil is on natural levees on the Red River flood plain. It is loamy and alkaline throughout. Natural fertility is high. Movement of air and water through the soil is moderate. Runoff is slow, and excess water accumulates for short periods after rains. This soil dries moderately slowly after rains.
30	SACUL FINE SANDY LOAM, 5 TO 15 PERCENT SLOPES	This moderately well drained, moderately sloping to strongly sloping soil is on side slopes on uplands. It has a loamy surface layer and a clayey subsoil. Runoff is rapid. Water and air move slowly or very slowly through the subsoil. The soil is acid throughout and has low fertility. The subsoil has a high shrink-swell potential. In places, the soil is moserately eroded.

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31	RUSTON FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES	This well drained, very gently sloping to gently sloping soil is on uplands. It is loamy and acid throughout. Natural fertility is low. Runoff is medium. Water and air move through the soil at a moderate rate. Plant roots penetrate this soil easily. The soil dries quickly after rains. In places, the soil is moderately eroded.
32	SMITHDALE FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	This well drained, strongly sloping or moderately steep soil is on side slopes on uplands. It is loamy and acid throughout. Natural fertility is low. Runoff is rapid. Movement of water and air through the soil is moderate. In places, the soil is moderately eroded.
33	SEVERN VERY FINE SANDY LOAM	This well drained, loamy soil is on parallel ridges and swales on natural levees on the Red River flood plain. It is protected from flooding by man-made levees. The soil is loamy throughout and has high fertility. Runoff is slow. Movement of water and air through the soil is moderate.
34	SEVERN VERY FINE SANDY LOAM, GENTLY UNDULATING	This well drained, loamy soil is on parallel ridges and swales on natural levees on the Red River flood plain. It is protected from flooding by man-made levees. The soil is loamy throughout and has high fertility. Runoff is slow. Movement of water and air through the soil is moderate.
35	SEVERN VERY FINE SANDY LOAM, OCCASIONALLY FLOODED	This well drained, undulating soil is on parallel ridges and swales on natural levees on the Red River alluvial plain. The soil is subject to occasional flooding for brief to very long periods. This soil is loamy throughout and has high fertility. Runoff is slow. Movement of water and air through the soil is moderate.
36	SEVERN VERY FINE SANDY LOAM, FREQUENTLY FLOODED	This well drained, undulating soil is on ridges and swales on the Red River alluvial plain. It is on the unprotected side of the man-made levee and is subject to frequent flooding. This soil is loamy throughout and has high fertility. Runoff is slow. Movement of water and air through the soil is moderate.
37	METCALF-MESSER COMPLEX	This complex consists of somewhat poorly drained Metcalf soil and moderately well drained Messer soil. The Messer soil is on low mounds and the Metcalf soil is in areas between mounds. The Metcalf soil has a loamy surface layer. The subsoil is loamy in the upper part and clayey in the lower part. The Messer soil is loamy throughout. Natural fertility is low in both soils. Permeability is very slow in the Metcalf soil and slow in the Messer soil. Both soils have a seasonally high water table in winter and spring.

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38	GUYTON-MESSER COMPLEX	These Guyton and Messer soils are in a landscape of broad flats and many pimple mounds. Messer soil is on the mounds, and Guyton soil is on the flats. Slopes range from less than 1 percent on the flats to 5 percent on the mounds. The Guyton soil is poorly drained, and the Messer soil is moderately well drained. Both soils are loamy throughout and have a seasonal high water table during the winter and spring. Permeability is slow in both soils. Natural fertility is low.
39	WRIGHTSVILLE-MESSER COMPLEX	This complex consists of poorly drained Wrightsville soil and moderately well drained Messer soil. The Messer soil is on low mounds and the Wrightsville soil is in areas between the mounds. The Wrightsville soil has a loamy surface layer and a clayey and loamy subsoil. The Messer soil is loamy throughout. Natural fertility is low in both soils. Permeability is very slow in the Wrightsville soil and slow in the Messer soil. Both soils have a seasonal high water table in winter and spring.
40	BOWIE FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES	This moderately well drained, very gently sloping to gently sloping soil is on uplands. It is loamy throughout and has plinthite in the lower part of the subsoil. Natural fertility is low. Runoff is medium, and water and air move moderately slowly through the soil.
41	METH FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	This well drained, very gently sloping to gently sloping soil is on uplands. It has a loamy surface layer and a clayey subsoil. Natural fertility is low. Runoff is medium. Water and air move very slowly through the subsoil. The subsoil has a high shrink-swell potential. In places, the soil is moderately eroded.
42	METH FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	This well drained, moderately sloping to strongly sloping soil is on uplands. It has a loamy or gravelly surface layer and a clayey subsoil. Natural fertility is low. Runoff is rapid. Water and air move very slowly through the subsoil. The subsoil has a high shrink-swell potential. In places, the soil is moderately eroded.
43	MORELAND-URBAN LAND COMPLEX	This complex consists of level, somewhat poorly drained Moreland soil and Urban land. This complex is on the alluvial plain of the Red River. The Moreland soil is clayey and alkaline throughout. Permeability is very slow. Natural fertility is high. The shrink-swell potential is very high. The soil has a seasonal high water table in winter and spring. The Urban land is covered by concrete, asphalt, buildings, or other impervious surfaces.

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44	NORWOOD-URBAN LAND COMPLEX	This complex consists of the level, well drained Norwood soil and Urban lsnd. It is on natural levees on the Red River alluvial plain. The Norwood soil is loamy and alkaline throughout. Permeability is moderate. Natural fertility is high. The shrink-swell potential is low. The Urban land is covered by concrete, asphalt, buildings, or other impervious surfaces.
45	WOODTELL-URBAN LAND COMPLEX, 3 TO 8 PERCENT SLOPES	This complex consists of the gently sloping to moderately sloping, moderately well drained Woodtell soil and Urban land on side slopes on uplands. The Woodtell soil has a loamy surface layer and a clayey subsoil. Permeability is very slow. Natural fertility is low. The shrink-swell potential in the subsoil is high. The Urban land is covered by concrete, asphalt, buildings, or other impervious surfaces.
46	WOODTELL-URBAN LAND COMPLEX, 8 TO 20 PERCENT SLOPES	This complex consists of the strongly sloping to moderately steep, moderately well drained Woodtell soil and Urban land. It is on side slopes on uplands. The Woodtell soil has a loamy surface layer and a clayey subsoil. Permeability is very slow. Natural fertility is low. The shrink-swell potential in the subsoil is high. The Urban land is covered by concrete, asphalt, buildings, or other impervious surfaces.
47	URBAN LAND	Urbanland consists of areas where more than 85 percent of the surface is covered by asphalt, concrete, buildings, or other impervious surfaces. Examples are parking lots, oil storage tank farms, industrial parks, and shopping centers.
48	KEITHVILLE-URBAN LAND COMPLEX, 2 TO 5 PERCENT SLOPES	This complex consists of the gently sloping, moderately well drained Keithville soil and Urban land. It is on ridgetops on uplands. The Keithville soil has loamy surface and subsurface layers. The subsoil is loamy in the upper part and clayey in the lower part. Permeability is very slow in the subsoil. Natural fertility is low. The shrink-swell potential in the subsoil is high. The Keithville soil has a seasonal high water table in winter and spring. The Urban land is covered by concrete, asphalt, buildings, or other impervious surfaces.
49	FORBING-URBAN LAND COMPLEX, 2 TO 8 PERCENT SLOPES	This complex consists of the gently sloping to moderately sloping, moderately well drained Forbing soil and Urban land. It is on uplands. The Forbing soil has a loamy surface layer and a clayey subsoil. Permeability is very slow. Natural fertility is low. The shrink-swell potential in the subsoil is very high. The Urban land is covered by concrete, asphalt, buildings, and other impervious surfaces.

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50	GUYTON-URBAN LAND COMPLEX	This complex consists of the level, poorly drained Guyton soil and Urban land on the alluvial plain of minor streams. The Guyton soil is loamy throughout. It has a seasonal high water table for long periods in winter and spring. Permeability is slow. Natural fertility is low. The Urban land is mainly concrete lined ditch channels, buildings, or hard surfaced roads.
51	RUSTON-URBAN LAND COMPLEX, 2 TO 8 PERCENT SLOPES	This complex consists of the gently sloping to moderately sloping, well drained Ruston soil and Urban land on uplands. The Ruston soil is loamy throughout. Permeability is moderate. Natural fertility is low. The Urban land is covered by concrete, asphalt, buildings, and other impervious surfaces.