

Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units. These descriptions are written in terminology that nontechnical users of soil survey information can understand.

Nontechnical soil descriptions are a powerful tool for creating reports. These high quality, easy to read reports can be generated by conservation planners and others for distribution to land users. Soil map unit descriptions and the map unit interpretation database are the basis for these descriptions.

Map Symbol	Description
AA	ALAGA-SMITHDALE-LUCY ASSOCIATION, 5 TO 40 PERCENT SLOPES
	<p>This soil is unsuited for cropland; the erosion hazard is too severe. The potential for pastureland is poor. The steep slopes, low fertility, limited choice of plants, and droughtiness are unfavorable features for this use. Erosion is a hazard during pasture establishment. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. A complete fertilizer and lime are needed.</p>
	<p>The somewhat excessively drained Alaga soil and the well drained Lucy and Smithdale soils are on uplands. The landscape is narrow, moderately sloping to strongly sloping ridgetops and moderately steep to steep side slopes. Alaga soils are on side slopes. They are sandy throughout. Lucy and Smithdale soils are on ridgetops and upper side slopes. Lucy soils are sandy in the upper part and loamy in the lower part. Smithdale soils are loamy throughout. Natural fertility is low in all of the soils.</p>
	<p>Soils in this group are well drained and sandy with a high potential for productivity. Equipment limitations and seedling mortality are moderate. They are best suited for southern pines. Site index for loblolly and slash pine is 90, shortleaf 80.</p>
	<p>These are well drained, loamy soils with a moderately high potential for productivity. There are no serious management problems. They are best suited for southern pines. Site index for loblolly pine is 80, shortleaf is 70.</p>
	<p>Soils in this group are well drained and sandy with moderately high potential for productivity. Equipment limitations and seedling mortality are moderate. These soils are best suited for southern pines. Site index for loblolly and slash pine is 80; shortleaf pine is 70.</p>
Ag	ALLIGATOR CLAY, OCCASIONALLY FLOODED
	<p>The potential for cropland is very poor due to subsidence, acidity and low bearing strength. The potential for pastureland is poor to fair due to acidity and low bearing strength. Seedbed preparation is very difficult. This soil will support good growth of bermudagrass. Moisture is adequate.</p>
	<p>This level, poorly drained, clayey soil is on alluvial plains. It is subject to occasional flooding. The soil is clayey throughout. It has a seasonal high water table that is near the soil surface for long periods in winter and spring. Permeability is very</p>

Map Symbol	Description
At	<p>slow. Natural fertility is medium or high. The shrink-swell potential is very high.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p> <p>ALLIGATOR CLAY, FREQUENTLY FLOODED</p> <p>The potential for cropland is very poor. Flooding is too severe for most crops. The potential for pastureland is poor. Flooding restricts choice of plants. Common bermudagrass and bahiagrass can be grown but grazing time has to be restricted during flood periods.</p> <p>This level, poorly drained or somewhat poorly drained soil is at low elevations on the alluvial plain. It is flooded frequently for very long periods. This soil is clayey throughout or it has a loamy surface layer and a clayey subsoil. Natural fertility is high. Surface runoff is very slow. Water and air move very slowly through the soil. The seasonal high water table is near the soil surface. This soil has a very high shrink-swell potential. Slopes are less than 1 percent.</p> <p>Soils in this group are wet, frequently flooded clayey soils with a moderately high potential for productivity. Equipment limitations and seedling mortality are severe due primarily to excess water. These soils are best suited for bottomland hardwood. Silvicultural operations should be restricted to dry weather periods and more seedlings than the recommended rate should be planted to ensure a stand. Site index for green ash is 70, cottonwood 90, oaks and sweetgum is 80.</p>
Ba	<p>BAYOUDAN CLAY, 5 TO 40 PERCENT SLOPES</p> <p>This soil is not suited for crop production due to the steep slopes. The potential for pastureland is poor. A limited number of pasture plants are adapted. Most crops respond somewhat poorly to fertilizers. Lime is generally needed. This soil is very erodible.</p> <p>This moderately well drained soil is on uplands. The landscape is hilly uplands where ridgetops are narrow and strongly sloping and side slopes are steep. Landslides are common. The soil is acid and clayey</p>

Map Symbol	Description
Br	<p data-bbox="483 247 1360 331">throughout. Permeability is very slow. Surface runoff is rapid or very rapid. Fertility is low. The soil has very high shrink-swell potential.</p> <p data-bbox="483 369 1360 541">These are well drained to slightly wet, clayey soils with a moderately high potential for productivity. Slight to moderate erosion hazard and moderate equipment limitations due to clay subsoil. These soils are best suited for southern pine. Site index for loblolly and slash pine is 80, shortleaf pine is 70.</p> <p data-bbox="483 579 1010 600">BURSLEY SILT LOAM, RARELY FLOODED</p> <p data-bbox="483 638 1360 903">The potential for cropland is fair and the potential for pastureland is good. Suitable crops include corn, millet, grain sorghum, ryegrass, soybeans, and truck crops. Pasture plants are bermudagrasses, bahiagrass, and crimson clover. The short irregular slopes on this soil restricts the use of some farm equipment. Conservation tillage or terraces with contour farming are needed to reduce erosion. Most crops respond well to lime and complete fertilizer.</p> <p data-bbox="483 940 1360 1234">This soil is level and poorly drained. It is subject to rare flooding. The soil is on broad flats and in slightly depressional areas on terraces. Typically, the soil is acid and loamy throughout. Natural fertility is low. Permeability is slow or moderately slow. Water runs off the surface at a slow rate and stands in low places for short to long periods after rains. A seasonal high water table is near the surface for long periods in winter and spring. The shrink-swell potential is low or moderate.</p> <p data-bbox="483 1272 1360 1474">Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p>
Bs	<p data-bbox="483 1512 1101 1533">BURSLEY SILTY CLAY LOAM, RARELY FLOODED</p> <p data-bbox="483 1570 1360 1835">The potential for cropland is fair and the potential for pastureland is good. Suitable crops include corn, millet, grain sorghum, ryegrass, soybeans, and truck crops. Pasture plants are bermudagrasses, bahiagrass, and crimson clover. The short irregular slopes on this soil restricts the use of some farm equipment. Conservation tillage or terraces with contour farming are needed to reduce erosion. Most crops respond well to lime and complete fertilizer.</p> <p data-bbox="483 1873 1328 1894">This soil is level and poorly drained. It is subject</p>

Map Symbol	Description
	<p>to rare flooding. The soil is on broad flats and in slightly depressional areas on terraces. Typically, the soil is acid and loamy throughout. Natural fertility is low. Permeability is slow or moderately slow. Water runs off the surface at a slow rate and stands in low places for short to long periods after rains. A seasonal high water table is near the surface for long periods in winter and spring. The shrink-swell potential is low or moderate.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p>
Co	<p>CALHOUN SILT LOAM</p> <p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p> <p>This nearly level, poorly drained soil is on broad flats and in narrow depressional areas on the terrace uplands. It has silt loam surface and subsurface layers and a silty clay loam subsoil. Natural fertility is low to medium. Runoff is slow or very slow, and water stands in low places for long periods after rains. Water and air move slowly through the soil. A seasonal high water table ranges from near the surface to about 2 feet below the surface during December through April. The shrink-swell potential is moderate in the subsoil. Slopes are mainly less than 1 percent.</p> <p>This group consists of wet, occasionally to frequently flooded loamy soils with a high potential for productivity. Equipment limitations are severe and seedling mortality is moderate to severe. This is due primarily to excess water. These soils are well suited for either southern pine or hardwood. Silvicultural operations should be restricted to dry weather periods. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for loblolly and slash pine is 90, cottonwood 90-100, green ash, water oak and sweetgum 90.</p>

Map Symbol	Description
Cs	<p>CALHOUN SILT LOAM, RARELY FLOODED</p> <p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p> <p>This soil is level and poorly drained. It is subject to rare flooding. The soil is on broad flats and in slightly depressional areas on terraces. Typically, the soil is acid and loamy throughout. Natural fertility is low. Permeability is slow or moderately slow. Water runs off the surface at a slow rate and stands in low places for short to long periods after rains. A seasonal high water table is near the surface for long periods in winter and spring. The shrink-swell potential is low or moderate.</p> <p>This group consists of wet, occasionally to frequently flooded loamy soils with a high potential for productivity. Equipment limitations are severe and seedling mortality is moderate to severe. This is due primarily to excess water. These soils are well suited for either southern pine or hardwood. Silvicultural operations should be restricted to dry weather periods. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for loblolly and slash pine is 90, cottonwood 90-100, green ash, water oak and sweetgum 90.</p>
Cw	<p>CALLOWAY SILT LOAM</p> <p>The potential for cropland is fair and the potential for pastureland is good. The suitable crops are soybeans and small grains. The suitable pasture plants are bahiagrass, common bermudagrass, white clover, vetch, and fescue. Proper row arrangement, field ditches, and vegetated outlets are needed to remove excess surface water. Crops respond to lime and a complete fertilizer.</p> <p>This nearly level, somewhat poorly drained soil is on low ridges and knolls on the terrace uplands. It is loamy throughout, and it has a fragipan in the subsoil that restricts water movement and plant root penetration. Natural fertility is low or medium. Runoff is slow or medium. A seasonal high water table is perched on the fragipan during the winter and spring. Slopes range from 0.5 to 2 percent.</p>

Map Symbol	Description
	<p>These are slightly to moderately wet, acid, loamy and clayey soils. The potential for productivity is high. Equipment limitations are moderate due to excess water. Silvicultural operations should be restricted to dry weather periods. These soils are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p>
Cy	<p>CALLOWAY SILT LOAM, RARELY FLOODED</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Proper row direction is needed to help control erosion. Crop residue management will also help reduce erosion. Most crops respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This nearly level, somewhat poorly drained soil is on terraces. It is subject to rare flooding. The soil is loamy throughout; and it has a fragipan in the subsoil. Permeability is slow. Natural fertility is medium. A seasonal high water table is perched on the fragipan in winter and spring. The soil has a moderate shrink-swell potential.</p> <p>These are slightly to moderately wet, acid, loamy and clayey soils. The potential for productivity is high. Equipment limitations are moderate due to excess water. Silvicultural operations should be restricted to dry weather periods. These soils are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p>
De	<p>DUNDEE SILT LOAM, 0 TO 1 PERCENT SLOPES</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass, ryegrass, dallisgrass, tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Land leveling will improve surface drainage. Crop residue management will help reduce erosion. Most crops respond well to fertilizer. Lime may be needed.</p> <p>This level, somewhat poorly drained soil is in high positions on natural levees of streams and former streams. The soil has a silt loam surface layer and a silty clay loam subsoil. It has medium to high natural fertility. Water runs slowly off the surface, and it moves through the soil at a moderately slow rate. A</p>

Map Symbol	Description
Dh	<p>seasonal high water table is in the soil for long periods in winter and spring. The shrink-swell potential is moderate in the subsoil.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p> <p>DUNDEE SILT LOAM, GENTLY UNDULATING</p>
Dn	<p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Proper row direction is needed to help control erosion. Crop residue management will also help reduce erosion. Most crops respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This gently undulating, somewhat poorly drained soil is on the alluvial plain. It is subject to rare flooding. The landscape is parallel ridges and swales. The soil is loamy throughout. Permeability is moderately slow. Natural fertility is medium. The soil has a seasonal high water table in winter and spring.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p> <p>DUNDEE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass and ryegrass. The clay content in the surface layer restricts the use of farm equipment during wet periods. A drainage system is needed to remove excess surface water. Crop residue management will help reduce erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This level, somewhat poorly drained soil is on the natural levees of streams on the alluvial plain. The</p>

Map Symbol	Description
	<p>soil has a silty clay loam surface layer and subsoil. Runoff is slow, and water stands in low places for short periods after rains. Permeability is moderately slow. Natural fertility is medium. A seasonal high water table is in the soil for long periods in winter and spring. The shrink-swell potential is moderate in the subsoil.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p>
Ds	<p>DUNDEE-ALLIGATOR COMPLEX, GENTLY UNDULATING</p> <p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p> <p>These gently undulating soils are on low parallel ridges and swales on alluvial plains. The soil on the ridges is somewhat poorly drained. It is loamy throughout. The soil in the swales is poorly drained. It is clayey throughout. Permeability is moderately slow or very slow. Both soils have a seasonal high water table in winter and spring. Natural fertility is medium.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>

Map Symbol	Description
Fa	<p>FAUSSE CLAY</p> <p>The soil is poorly suited to cropland or pastureland unless protected from flooding. Flooding restricts the choice of crops grown. Suitable crops include soybeans and grain sorghum. Suitable pasture plants are common bermudagrass, bahiagrass, and dallisgrass. Except during flood periods, excess surface water can be removed by surface field ditches.</p> <p>These level, very poorly drained soils are in low, depressional areas on the alluvial plain. They formed in alluvium and are clayey throughout their profiles. These soils are ponded or flooded most of the time. Water and air move very slowly through the soils. The soils have high fertility. The shrink-swell potential is very high, but the soils seldom dry enough to shrink and crack. Slopes are less than 1 percent.</p> <p>Soils in this group are very wet, mineral and organic. The water table is at or above the surface most of the time. They have a moderate potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. The nature of these soils will dictate that silvicultural operations be limited to extremely dry weather periods, if at all. More seedlings than the recommended rate should be planted to ensure a stand. These soils are best suited for water tolerant hardwoods and cypress. Site index for green ash and water tupelo is 60.</p>
Fd	<p>FORESTDALE SILTY CLAY LOAM</p> <p>The potential for cropland and pastureland is good. Suitable crops are soybeans and cotton. Pasture plants are common bermudagrass, bahiagrass, ryegrass, tall fescue and white clover. These soils can be worked only within a narrow range of moisture content. A drainage system is needed. Land grading and smoothing will improve drainage. Most crops respond well to fertilizers. Lime may be needed.</p> <p>This nearly level, poorly drained soil is on the alluvial plain. It has a loamy surface layer and a clayey subsoil. Natural fertility is low to medium. Runoff is slow or very slow. Water and air move very slowly through the subsoil. A seasonal high water table is about 0.5 to 2 feet below the surface during December through April. The shrink-swell potential is high in the subsoil. Slopes are less than 1 percent.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily</p>

Map Symbol	Description
	<p>to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p>
Fo	<p>FORESTDALE SILTY CLAY LOAM, OCCASIONALLY FLOODED</p> <p>The potential for cropland is very poor due to subsidence, acidity and low bearing strength. The potential for pastureland is poor to fair due to acidity and low bearing strength. Seedbed preparation is very difficult. This soil will support good growth of bermudagrass. Moisture is adequate.</p> <p>This level, poorly drained soil is on low stream terraces. It is subject to occasional flooding. The soil has a loamy surface layer and a clayey and loamy subsoil. Permeability is very slow. Natural fertility is medium. The soil has a seasonal high water table for long periods in winter and spring.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p>
Gt	<p>GUYTON SILT LOAM</p> <p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p> <p>This soil is level and poorly drained. It is subject to rare flooding. The soil is on broad flats and in slightly depressional areas on terraces. Typically, the soil is acid and loamy throughout. Natural fertility is low. Permeability is slow or moderately slow. Water runs off the surface at a slow rate and stands in low places for short to long periods after rains. A seasonal high water table is near the surface for long periods in winter and spring. The shrink-swell potential is low or moderate.</p> <p>This group consists of wet, occasionally to frequently flooded loamy soils with a high potential for productivity. Equipment limitations are severe and seedling mortality is moderate to severe. This is due</p>

Map Symbol	Description
Gy	<p>primarily to excess water. These soils are well suited for either southern pine or hardwood. Silvicultural operations should be restricted to dry weather periods. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for loblolly and slash pine is 90, cottonwood 90-100, green ash, water oak and sweetgum 90.</p> <p>GUYTON SILT LOAM, FREQUENTLY FLOODED</p> <p>The potential for cropland is very poor. Flooding is too severe for most crops. The potential for pastureland is poor. Flooding restricts choice of plants. Common bermudagrass and bahiagrass can be grown but grazing time has to be restricted during flood periods.</p> <p>This level, poorly drained soil is on flood plains. It is subject to frequent flooding. The soil is loamy throughout. It has low natural fertility. Surface runoff and permeability are slow. A seasonal high water table ranges from the surface to a depth of about 1.5 feet.</p> <p>This group consists of wet, occasionally to frequently flooded loamy soils with a high potential for productivity. Equipment limitations are severe and seedling mortality is moderate to severe. This is due primarily to excess water. These soils are well suited for either southern pine or hardwood. Silvicultural operations should be restricted to dry weather periods. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for loblolly and slash pine is 90, cottonwood 90-100, green ash, water oak and sweetgum 90.</p>
Hb	<p>HEBERT SILT LOAM</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass, ryegrass, dallisgrass, tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Land leveling will improve surface drainage. Crop residue management will help reduce erosion. Most crops respond well to fertilizer. Lime may be needed.</p> <p>This level, somewhat poorly drained soil is in high positions on natural levees of streams and former streams. The soil has a silt loam surface layer and a silty clay loam subsoil. It has medium to high natural fertility. Water runs slowly off the surface, and it moves through the soil at a moderately slow rate. A seasonal high water table is in the soil for long</p>

Map Symbol	Description
He	<p>periods in winter and spring. The shrink-swell potential is moderate in the subsoil.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p> <p>HEBERT SILTY CLAY LOAM</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass and ryegrass. The clay content in the surface layer restricts the use of farm equipment during wet periods. A drainage system is needed to remove excess surface water. Crop residue management will help reduce erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This level, somewhat poorly drained soil is on the natural levees of streams on the alluvial plain. The soil has a silty clay loam surface layer and subsoil. Runoff is slow, and water stands in low places for short periods after rains. Permeability is moderately slow. Natural fertility is medium. A seasonal high water table is in the soil for long periods in winter and spring. The shrink-swell potential is moderate in the subsoil.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p>
Hh	<p>HEBERT SILT LOAM, UNDULATING, OCCASIONALLY FLOODED</p> <p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p> <p>This gently undulating, somewhat poorly drained soil is</p>

Map Symbol	Description
	<p>in low areas on the flood plain. It is subject to occasional flooding. The landscape is low to high ridges and swales between ridges. Slopes are short and choppy and range from 0 to 5 percent. The soil is loamy throughout. Permeability is moderately slow. Natural fertility is medium. The soil has a seasonal high water table in winter and spring. The shrink-swell potential in the subsoil is moderate.</p> <p>Soils in this group are moderately wet, loamy and clayey with a high potential for productivity. Equipment limitations are moderate and seedling mortality is slight to moderate. This is due primarily to excess water. These soils are best suited for southern hardwood. Site index for green ash is 80, cottonwood 110, oaks and sweetgum 90.</p>
Lo	<p>LORING SILT LOAM</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass, ryegrass, tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Land leveling will improve surface drainage. Crop residue management will help reduce soil erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This level, moderately well drained soil formed in loess. It is loamy throughout, and it has a fragipan in the subsoil that restricts root development and the amount of water available to plants. The soil is acid and has low or moderately low natural fertility. Surface runoff is slow. Water and air move through the upper part of the subsoil at a moderate rate and through the fragipan at a slow rate. A seasonal high water table is perched on the fragipan for long periods during December through March.</p> <p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. They are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p>
Lr	<p>LORING SILT LOAM, RARELY FLOODED</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass and ryegrass. The clay content in the surface layer restricts the use of farm equipment during wet periods. A drainage system is</p>

Map Symbol	Description
	<p>needed to remove excess surface water. Crop residue management will help reduce erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This nearly level, moderately well drained soil is on low terraces. It is subject to rare flooding. The soil is loamy throughout, and it has a fragipan in the subsoil. Permeability is moderately slow. Natural fertility is medium. Water is perched above the fragipan during winter and spring of most years.</p> <p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. They are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p>
MP	<p>MEMPHIS-KISATCHIE-OUULA ASSOCIATION, 5 TO 40 PERCENT SLOPES</p> <p>This soil is unsuited for cropland; the erosion hazard is too severe. The potential for pastureland is poor. The steep slopes, low fertility, limited choice of plants, and droughtiness are unfavorable features for this use. Erosion is a hazard during pasture establishment. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. A complete fertilizer and lime are needed.</p> <p>These well drained soils are on uplands. The landscape is very narrow, moderately sloping to strongly sloping ridgetops and moderately steep to steep side slopes. The Memphis soil is on ridgetops. It is loamy throughout. The Oula and Kisatchie soils are on side slopes. The Oula soil is clayey throughout. The Kisatchie soil has a loamy surface layer and a clayey subsoil. It is underlain by siltstone at a moderate depth. Slopes range from 5 to 40 percent.</p> <p>These soils are well drained and loamy with a high potential for productivity. Moderate equipment limitations and erosion hazard associated with slope steepness. These soils are suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p> <p>These are well drained to slightly wet, clayey soils with a moderately high potential for productivity. Slight to moderate erosion hazard and moderate equipment limitations due to clay subsoil. These soils are best suited for southern pine. Site index for loblolly and slash pine is 80, shortleaf pine is 70.</p> <p>Soils in this group are shallow with rocks that restrict root depths. The potential for productivity</p>

Map Symbol	Description
MS	<p>is low. The erosion hazard is moderate to severe, equipment limitations is moderate, and the seedling mortality is slight to moderate. These soils are best suited for southern pines. Site index for loblolly and slash pines is less than 65, shortleaf and longleaf is less than 55.</p> <p>MEMPHIS-SMITHDALE ASSOCIATION, 5 TO 40 PERCENT SLOPES</p> <p>This soil is poorly suited to cropland and moderately well suited to pasture. It is limited mainly by poor tilth, low fertility, and a severe erosion hazard. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. Residue left on or near the surface helps to conserve moisture, maintain tilth, control erosion. Lime and fertilizer are generally needed.</p> <p>These well drained soils are on uplands. The landscape is very narrow, moderately sloping to strongly sloping ridgetops and moderately steep to steep side slopes. The soils are loamy throughout. Permeability is moderate. Surface runoff is rapid to very rapid. Natural fertility is medium or low. Slopes range from 5 to 40 percent.</p> <p>These are well drained, loamy soils with a high potential for productivity. There are no serious management problems. They are best suited for southern pines. Site index for loblolly and slash pines is 90 and shortleaf pine is 80.</p> <p>These soils are well drained and loamy with a high potential for productivity. Moderate equipment limitations and erosion hazard associated with slope steepness. These soils are suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p>
Me	<p>MEMPHIS SILT LOAM, 0 TO 2 PERCENT SLOPES</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass, ryegrass, tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Land leveling will improve surface drainage. Crop residue management will help reduce soil erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This nearly level, well drained soil is on the terrace uplands. It is loamy throughout the profile. Natural fertility is medium or moderately low. Surface runoff</p>

Map Symbol	Description
Mh	<p>is medium. Water and air move through the subsoil at a moderate rate. The seasonal high water table is below a depth of 6 feet or more throughout the year. The shrink-swell potential is low.</p> <p>These soils are well drained, loamy soils with a very high potential for productivity. There are no serious management problems. These soils are suited for either southern pines or hardwood. Site index for green ash is 100, cotton wood 110-120, oak and sweetgum 100, loblolly and slash pine 90-110.</p> <p>MEMPHIS SILT LOAM, 2 TO 5 PERCENT SLOPES</p>
Mm	<p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Proper row direction is needed to help control erosion. Crop residue management will also help reduce erosion. Most crops respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>This very gently sloping to gently sloping, well drained soil is on the terrace uplands. It formed in loess, and it is loamy throughout. The upper 20 inches of the profile are medium acid or strongly acid. Natural fertility is medium. Surface runoff is medium to rapid. Water and air move through the soil at a moderate rate. This soil is not wet during any season. It has a low shrink-swell potential.</p> <p>These soils are well drained, loamy soils with a very high potential for productivity. There are no serious management problems. These soils are suited for either southern pines or hardwood. Site index for green ash is 100, cotton wood 110-120, oak and sweetgum 100, loblolly and slash pine 90-110.</p> <p>MEMPHIS SILT LOAM, 5 TO 12 PERCENT SLOPES</p> <p>This soil is poorly suited to cropland and moderately well suited to pasture. It is limited mainly by poor tilth, low fertility, and a severe erosion hazard. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. Residue left on or near the surface helps to conserve moisture, maintain tilth, control erosion. Lime and fertilizer are generally needed.</p> <p>This moderately sloping, well drained soil is on side slopes on the terrace uplands. It formed in loess, and it is loamy throughout. The upper 20 inches of the</p>

Map Symbol	Description
	<p>profile are neutral to strongly acid. Natural fertility is medium. Surface runoff is rapid. Water and air move through the soil at a moderate rate. This soil is not wet during any season. It has a low shrink-swell potential.</p> <p>These soils are well drained, loamy soils with a very high potential for productivity. There are no serious management problems. These soils are suited for either southern pines or hardwood. Site index for green ash is 100, cotton wood 110-120, oak and sweetgum 100, loblolly and slash pine 90-110.</p>
Mt	<p>MORELAND CLAY</p> <p>The potential for cropland and pastureland is good. Suitable crops are soybeans, cotton, grain sorghum, and rice. Pasture plants are common bermudagrass, bahiagrass, ryegrass, tall fescue, and white clover. This soil can be worked only within a narrow range of moisture content. A drainage system is needed. Crop residue management will help reduce erosion. Most crops, respond well to nitrogen. Lime and other fertilizers generally are not needed.</p> <p>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.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
Ne	<p>NECESSITY SILT LOAM, RARELY FLOODED</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Proper row direction is needed to help control erosion. Crop residue management will also help reduce erosion. Most crops respond well to nitrogen fertilizers. Lime and other fertilizers generally are</p>

Map Symbol	Description
	<p>not needed.</p> <p>This nearly level, somewhat poorly drained soil is on terraces. It is subject to rare flooding. The soil is loamy throughout; and it has a fragipan in the subsoil. Permeability is slow. Natural fertility is medium. A seasonal high water table is perched on the fragipan in winter and spring. The soil has a moderate shrink-swell potential.</p> <p>These are slightly to moderately wet, acid, loamy and clayey soils. The potential for productivity is high. Equipment limitations are moderate due to excess water. Silvicultural operations should be restricted to dry weather periods. These soils are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p>
No	<p>NORWOOD SILT LOAM</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass, ryegrass, tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Land leveling will improve surface drainage. Crop residue management will help reduce soil erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>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.</p> <p>These are well drained, loamy soils with a very high potential for productivity. There are no serious management problems. These soils are best suited for bottomland hardwoods. Site index for green ash is 90, cottonwood 110, sweetgum 100-110, and oaks 90.</p>
OA	<p>OULA-PROVIDENCE-SMITHDALE ASSOCIATION, 5 TO 40 PERCENT SLOPES</p> <p>This soil is unsuited for cropland; the erosion hazard is too severe. The potential for pastureland is poor. The steep slopes, low fertility, limited choice of plants, and droughtiness are unfavorable features for this use. Erosion is a hazard during pasture establishment. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. A complete fertilizer and lime are needed.</p>

Map Symbol	Description
	<p>The well drained Oula and Smithdale soils and moderately well drained Providence soil are on uplands. The landscape is very narrow, moderately sloping to strongly sloping ridgetops and moderately steep to steep side slopes. Oula and Smithdale soils are on side slopes. Providence soil is on ridgetops. The Oula soil is clayey throughout. The Smithdale and Providence soils are loamy throughout. The Providence soil has a fragipan in the subsoil. Natural fertility is low or medium. Slopes range from 5 to 40 percent.</p> <p>These are well drained, loamy soils with a high potential for productivity. There are no serious management problems. They are best suited for southern pines. Site index for loblolly and slash pines is 90 and shortleaf pine is 80.</p> <p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. They are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p> <p>These are well drained to slightly wet, clayey soils with a moderately high potential for productivity. Slight to moderate erosion hazard and moderate equipment limitations due to clay subsoil. These soils are best suited for southern pine. Site index for loblolly and slash pine is 80, shortleaf pine is 70.</p>
OP	<p>OULA-PROVIDENCE ASSOCIATION, 5 TO 25 PERCENT SLOPES</p> <p>This soil is poorly suited to cropland and moderately well suited to pasture. It is limited mainly by poor tilth, low fertility, and a severe erosion hazard. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. Residue left on or near the surface helps to conserve moisture, maintain tilth, control erosion. Lime and fertilizer are generally needed.</p> <p>The well drained Oula soil and moderately well drained Providence soil are on uplands. The landscape is narrow, moderately sloping to strongly sloping ridgetops and moderately steep side slopes. The Oula soil is on side slopes. It has a loamy surface layer and a clayey subsoil. The Providence soil is on ridgetops. It is loamy throughout and has a fragipan in the subsoil. Natural fertility is medium or low. Slopes range from 5 to 25 percent.</p> <p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. They are well suited for either southern pines or hardwood. Site index for loblolly</p>

Map Symbol	Description
	<p>and slash pine is 90, oaks and sweetgum 90.</p> <p>These are well drained to slightly wet, clayey soils with a moderately high potential for productivity. Slight to moderate erosion hazard and moderate equipment limitations due to clay subsoil. These soils are best suited for southern pine. Site index for loblolly and slash pine is 80, shortleaf pine is 70.</p>
Pa	<p>PERRY SILTY CLAY LOAM</p> <p>The potential for cropland and pastureland is good. Suitable crops are soybeans and cotton. Pasture plants are common bermudagrass, bahiagrass, ryegrass, tall fescue and white clover. These soils can be worked only within a narrow range of moisture content. A drainage system is needed. Land grading and smoothing will improve drainage. Most crops respond well to fertilizers. Lime may be needed.</p> <p>This level or nearly level, poorly drained soil is on flood plains. The surface layer is loamy and the subsoil is clayey. Cracks form during dry periods, and they seal over during wet periods. Natural fertility is high. Runoff is slow. A seasonal high water table is within 2 feet of the soil surface during December to April. Flooding is rare. The soil dries slowly once wetted. The shrink-swell potential is high or very high in the subsoil. Slopes are less than 1 percent.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
Pd	<p>PERRY CLAY, OCCASIONALLY FLOODED</p> <p>The potential for cropland is very poor due to subsidence, acidity and low bearing strength. The potential for pastureland is poor to fair due to acidity and low bearing strength. Seedbed preparation is very difficult. This soil will support good growth of bermudagrass. Moisture is adequate.</p> <p>This level, poorly drained, clayey soil is on alluvial plains. It is subject to occasional flooding. The soil is clayey throughout. It has a seasonal high water table that is near the soil surface for long periods in winter and spring. Permeability is very slow. Natural fertility is medium or high. The</p>

Map Symbol	Description
	<p>shrink-swell potential is very high.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
Pe	<p>PERRY CLAY, FREQUENTLY FLOODED</p> <p>The potential for cropland is very poor. Flooding is too severe for most crops. The potential for pastureland is poor. Flooding restricts choice of plants. Common bermudagrass and bahiagrass can be grown but grazing time has to be restricted during flood periods.</p> <p>This level, poorly drained or somewhat poorly drained soil is at low elevations on the alluvial plain. It is flooded frequently for very long periods. This soil is clayey throughout or it has a loamy surface layer and a clayey subsoil. Natural fertility is high. Surface runoff is very slow. Water and air move very slowly through the soil. The seasonal high water table is near the soil surface. This soil has a very high shrink-swell potential. Slopes are less than 1 percent.</p> <p>Soils in this group are wet, frequently flooded clayey soils with a moderately high potential for productivity. Equipment limitations and seedling mortality are severe due primarily to excess water. These soils are best suited for bottomland hardwood. Silvicultural operations should be restricted to dry weather periods and more seedlings than the recommended rate should be planted to ensure a stand. Site index for green ash is 70, cottonwood 90, oaks and sweetgum is 80.</p>
Pg	<p>PITS, GRAVEL</p> <p>This soil is not suited for crop production due to the steep slopes. The potential for pastureland is poor. A limited number of pasture plants are adapted. Most crops respond somewhat poorly to fertilizers. Lime is generally needed. This soil is very erodible.</p> <p>These areas consist of gravel pits, sand pits, and borrow pits. Borrow pits are areas from which soil material has been removed for use in constructing roads and developing commercial and residential areas.</p>

Map Symbol	Description
Pr	PROVIDENCE SILT LOAM, 1 TO 6 PERCENT SLOPES
	<p>The potential for cropland is fair and the potential for pastureland is good. The suitable crops are soybeans and small grains. The suitable pasture plants are bahiagrass, common bermudagrass, white clover, vetch, and fescue. Proper row arrangement, field ditches, and vegetated outlets are needed to remove excess surface water. Crops respond to lime and a complete fertilizer.</p>
	<p>This gently sloping or moderately sloping, moderately well drained soil is on the terrace uplands. It is loamy throughout, and it has a fragipan in the subsoil. The fragipan restricts root penetration and the movement of air and water. Natural fertility is low to medium. Runoff is medium. A seasonal high water table is perched on the fragipan during the winter and spring. The shrink-swell potential is low.</p>
	<p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. They are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p>
Ra	RILLA SILT LOAM
	<p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass, ryegrass, tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Land leveling will improve surface drainage. Crop residue management will help reduce soil erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p>
	<p>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.</p>
	<p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. These soils are best suited for southern hardwoods. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>

Map Symbol	Description
Rn	<p>ROXANA VERY FINE SANDY LOAM</p> <p>The potential for cropland and pastureland is excellent. Suitable crops are cotton, soybeans, corn, grain sorghum, and truck crops. Pasture plants are bermudagrasses, bahiagrass, ryegrass, tall fescue, and white clover. Traffic pans develop easily, but can be broken by chiseling or deep plowing. Land leveling will improve surface drainage. Crop residue management will help reduce soil erosion. Most crops, respond well to nitrogen fertilizers. Lime and other fertilizers generally are not needed.</p> <p>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.</p> <p>These are well drained, loamy soils with a very high potential for productivity. There are no serious management problems. These soils are best suited for bottomland hardwoods. Site index for green ash is 90, cottonwood 110, sweetgum 100-110, and oaks 90.</p>
Rp	<p>ROXANA, VERY FINE SANDY LOAM, FREQUENTLY FLOODED</p> <p>The potential for cropland is very poor due to subsidence, acidity and low bearing strength. The potential for pastureland is poor to fair due to acidity and low bearing strength. Seedbed preparation is very difficult. This soil will support good growth of bermudagrass. Moisture is adequate.</p> <p>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.</p> <p>These are well drained, loamy soils with a very high potential for productivity. There are no serious management problems. These soils are best suited for bottomland hardwoods. Site index for green ash is 90, cottonwood 110, sweetgum 100-110, and oaks 90.</p>
SP	<p>SMITHDALE-OULA-PROVIDENCE ASSOCIATION, 5 TO 40 PERCENT SLOPES</p> <p>This soil is unsuited for cropland; the erosion hazard is too severe. The potential for pastureland is poor. The steep slopes, low fertility, limited choice of plants, and droughtiness are unfavorable features for this use. Erosion is a hazard during pasture</p>

Map Symbol	Description
	<p>establishment. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. A complete fertilizer and lime are needed.</p> <p>The well drained Oula and Smithdale soils and moderately well drained Providence soil are on uplands. The landscape is very narrow, moderately sloping to strongly sloping ridgetops and moderately steep to steep side slopes. Oula and Smithdale soils are on side slopes. Providence soil is on ridgetops. The Oula soil is clayey throughout. The Smithdale and Providence soils are loamy throughout. The Providence soil has a fragipan in the subsoil. Natural fertility is low or medium. Slopes range from 5 to 40 percent.</p> <p>These are well drained, loamy soils with a high potential for productivity. There are no serious management problems. They are best suited for southern pines. Site index for loblolly and slash pines is 90 and shortleaf pine is 80.</p> <p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. They are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p> <p>These are well drained to slightly wet, clayey soils with a moderately high potential for productivity. Slight to moderate erosion hazard and moderate equipment limitations due to clay subsoil. These soils are best suited for southern pine. Site index for loblolly and slash pine is 80, shortleaf pine is 70.</p>
SR	<p>SMITHDALE-LUCY-PROVIDENCE ASSOCIATION, 5 TO 25 PERCENT SLOPES</p> <p>This soil is unsuited for cropland; the erosion hazard is too severe. The potential for pastureland is poor. The steep slopes, low fertility, limited choice of plants, and droughtiness are unfavorable features for this use. Erosion is a hazard during pasture establishment. Suitable pasture plants are bermudagrasses, bahiagrass, and crimson clover. A complete fertilizer and lime are needed.</p> <p>The well drained Smithdale and Lucy soils and the moderately well drained Providence soil are on uplands. Smithdale and Lucy soils are on moderately steep side slopes. The Providence soil is on moderately sloping to strongly sloping ridgetops. The Smithdale and Providence soils are loamy throughout. The Providence soil has a fragipan in the subsoil. The Lucy soil is sandy in the upper part of the profile and loamy in the middle and lower parts. Slopes range from 5 to 25</p>

Map Symbol	Description
	<p>percent.</p> <p>These are well drained, loamy soils with a high potential for productivity. There are no serious management problems. They are best suited for southern pines. Site index for loblolly and slash pines is 90 and shortleaf pine is 80.</p> <p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. They are well suited for either southern pines or hardwood. Site index for loblolly and slash pine is 90, oaks and sweetgum 90.</p> <p>Soils in this group are well drained and sandy with a high potential for productivity. Equipment limitations and seedling mortality are moderate. They are best suited for southern pines. Site index for loblolly and slash pine is 90, shortleaf 80.</p>
SW	<p data-bbox="483 852 1341 873">SWEATMAN-SMITHDALE ASSOCIATION, 5 TO 40 PERCENT SLOPES</p> <p data-bbox="483 911 1341 1056">This soil is not suited for crop production due to the steep slopes. The potential for pastureland is poor. A limited number of pasture plants are adapted. Most crops respond somewhat poorly to fertilizers. Lime is generally needed. This soil is very erodible.</p> <p data-bbox="483 1094 1357 1388">These well drained soils are on uplands. The landscape is narrow, moderately sloping to strongly sloping ridgetops and moderately steep to steep side slopes. The Sweatman soil is on middle and lower side slopes. It has a loamy surface layer and a clayey subsoil. Permeability is moderately slow. The Smithdale soil is on ridgetops and upper side slopes. It is loamy throughout. Permeability is moderate. Natural fertility is low in both soils. Surface runoff is rapid or very rapid.</p> <p data-bbox="483 1425 1357 1570">These are well drained, loamy soils with a high potential for productivity. There are no serious management problems. They are best suited for southern pines. Site index for loblolly and slash pines is 90 and shortleaf pine is 80.</p> <p data-bbox="483 1608 1357 1774">These are well drained to slightly wet, clayey soils with a moderately high potential for productivity. Slight to moderate erosion hazard and moderate equipment limitations due to clay subsoil. These soils are best suited for southern pine. Site index for loblolly and slash pine is 80, shortleaf pine is 70.</p>

Map Symbol	Description
Sh	<p>SHARKEY CLAY</p> <p>The potential for cropland and pastureland is good. Suitable crops are soybeans, cotton, grain sorghum, and rice. Pasture plants are common bermudagrass, bahiagrass, ryegrass, tall fescue, and white clover. This soil can be worked only within a narrow range of moisture content. A drainage system is needed. Crop residue management will help reduce erosion. Most crops, respond well to nitrogen. Lime and other fertilizers generally are not needed.</p> <p>This nearly level, poorly drained, soil is on broad flats on the alluvial plain. It is clayey throughout. Natural fertility is medium or high. Runoff is slow or very slow. Water and air move very slowly through the soil. The shrink-swell potential is high or very high. A seasonal high water table is within 2 feet of the soil surface during December through April. Flooding is rare, but it can occur during unusually wet periods. Slopes are less than 1 percent.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
Sk	<p>SHARKEY CLAY, OCCASIONALLY FLOODED</p> <p>The potential for cropland is very poor due to subsidence, acidity and low bearing strength. The potential for pastureland is poor to fair due to acidity and low bearing strength. Seedbed preparation is very difficult. This soil will support good growth of bermudagrass. Moisture is adequate.</p> <p>This level, poorly drained, clayey soil is on alluvial plains. It is subject to occasional flooding. The soil is clayey throughout. It has a seasonal high water table that is near the soil surface for long periods in winter and spring. Permeability is very slow. Natural fertility is medium or high. The shrink-swell potential is very high.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings</p>

Map Symbol	Description
Sm	<p>than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p> <p>SHARKEY CLAY, FREQUENTLY FLOODED</p> <p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p> <p>This level, poorly drained or somewhat poorly drained soil is at low elevations on the alluvial plain. It is flooded frequently for very long periods. This soil is clayey throughout or it has a loamy surface layer and a clayey subsoil. Natural fertility is high. Surface runoff is very slow. Water and air move very slowly through the soil. The seasonal high water table is near the soil surface. This soil has a very high shrink-swell potential. Slopes are less than 1 percent.</p> <p>Soils in this group are wet, frequently flooded clayey soils with a moderately high potential for productivity. Equipment limitations and seedling mortality are severe due primarily to excess water. These soils are best suited for bottomland hardwood. Silvicultural operations should be restricted to dry weather periods and more seedlings than the recommended rate should be planted to ensure a stand. Site index for green ash is 70, cottonwood 90, oaks and sweetgum is 80.</p>
Sn	<p>SHARKEY CLAY, OVERWASH</p> <p>The potential for cropland is very poor. Flooding is too severe for most crops. The potential for pastureland is poor. Flooding restricts choice of plants. Common bermudagrass and bahiagrass can be grown but grazing time has to be restricted during flood periods.</p> <p>This nearly level, poorly drained, soil is on broad flats on the alluvial plain. It is clayey throughout. Natural fertility is medium or high. Runoff is slow or very slow. Water and air move very slowly through the soil. The shrink-swell potential is high or very high. A seasonal high water table is within 2 feet of the soil surface during December through April. Flooding is rare, but it can occur during unusually wet periods. Slopes are less than 1 percent.</p>

Map Symbol	Description
---------------	-------------

These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.

Ss SOSTIEN CLAY, OCCASIONALLY FLOODED

The potential for cropland is very poor due to subsidence, acidity and low bearing strength. The potential for pastureland is poor to fair due to acidity and low bearing strength. Seedbed preparation is very difficult. This soil will support good growth of bermudagrass. Moisture is adequate.

This very gently sloping, poorly drained soil formed in clayey spoil material that was dredged and pumped from bottom land areas. It is subject to occasional flooding. The soil is clayey throughout the profile. Permeability is very slow. Natural fertility is high. The soil has a seasonal high water table for long periods in winter and spring. The shrink-swell potential is very high.

Soils in this group are wet, frequently flooded clayey soils with a moderately high potential for productivity. Equipment limitations and seedling mortality are severe due primarily to excess water. These soils are best suited for bottomland hardwood. Silvicultural operations should be restricted to dry weather periods and more seedlings than the recommended rate should be planted to ensure a stand. Site index for green ash is 70, cottonwood 90, oaks and sweetgum is 80.

St STERLINGTON SILT LOAM

The potential for cropland and pastureland is fair. The short irregular slopes and wetness in swales are unfavorable factors for this use. Suitable crops are soybeans and cotton. Suitable pasture plants are bermudagrasses, bahiagrass, dallisgrass, ryegrass, tall fescue and white clover. Drainage is needed in swales. Crop residue management will help reduce soil erosion. Most crops respond well to fertilizer.

The potential for cropland is very poor. Flooding is too severe for most crops. The potential for pastureland is poor. Flooding restricts choice of plants. Common bermudagrass and bahiagrass can be

Map Symbol	Description
Ta	<p>grown but grazing time has to be restricted during flood periods.</p> <p>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.</p> <p>Soils in this group are well drained and loamy with a high potential for productivity. There are no serious management problems. These soils are best suited for southern hardwoods. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
	<p>TENSAS SILTY CLAY</p> <p>The potential for cropland and pastureland is good. Suitable crops are soybeans and cotton. Pasture plants are common bermudagrass, bahiagrass, ryegrass, tall fescue and white clover. These soils can be worked only within a narrow range of moisture content. A drainage system is needed. Land grading and smoothing will improve drainage. Most crops respond well to fertilizers. Lime may be needed.</p> <p>This level, somewhat poorly drained soil is on alluvial plains. The soil is acid throughout. It is clayey in the surface layer and the upper part of the subsoil. The lower part of the subsoil is loamy. Natural fertility is medium. Surface runoff is medium. Permeability is very slow. A seasonal high water table is in this soil for long periods in winter and spring. Flooding is rare. The soil has a very high shrink-swell potential. Slopes are less than 1 percent.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
Te	<p>TENSAS SILTY CLAY, OCCASIONALLY FLOODED</p> <p>The potential for cropland is very poor due to subsidence, acidity and low bearing strength. The potential for pastureland is poor to fair due to</p>

Map Symbol	Description
	<p>acidity and low bearing strength. Seedbed preparation is very difficult. This soil will support good growth of bermudagrass. Moisture is adequate.</p> <p>This is a level, somewhat poorly drained soil on the natural levees of distributary channels. It is subject to occasional flooding. The surface layer and upper part of the subsoil are clayey. The lower part of the subsoil is loamy. Natural fertility is medium. Permeability is very slow. The soil has a seasonal high water table in winter and spring. The shrink-swell potential is very high.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
Tn	<p>TENSAS-ALLIGATOR COMPLEX, UNDULATING</p> <p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p> <p>These soils are undulating and are on narrow ridges and in swales on alluvial plains. Slopes range from 0 to 5 percent. The Tensas soil is on the ridges. It is somewhat poorly drained. The surface layer and upper part of the subsoil are clayey. The lower part of the subsoil is loamy. The Alligator soil is in swales. It is poorly drained and clayey throughout the profile. Both soils have a seasonal high water table in winter and spring. Natural fertility is medium.</p> <p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>

Map Symbol	Description
Ts	TENSAS-ALLIGATOR COMPLEX, UNDULATING, OCCASIONALLY FLOODED
	<p>The potential for cropland and pastureland is fair. Wetness is the main limitation. Suitable crops are soybeans, corn, truck crops and grain sorghum. Pasture plants are small grains, ryegrass, common bermudagrass, bahiagrass, vetch and tall fescue. Drainage is needed when this soil is cultivated. Drop residue on the surface will reduce erosion, help maintain organic matter and reduce crusting. Most crops respond well to lime and a complete fertilizer.</p>
	<p>These undulating, somewhat poorly drained and poorly drained soils are on low parallel ridges and swales within alluvial plains. They are subject to occasional flooding. The Tensas soil is on ridges. It is clayey in the upper part and loamy in the lower part. The Alligator soil is in swales. It is clayey throughout. Permeability is very slow in both soils. Natural fertility is medium. Both soils have a seasonal high water table for long periods in winter and spring.</p>
	<p>These are wet, clayey soils with a high potential for productivity. Equipment limitations and seedling mortality are severe. This is due primarily to excess water. Silvicultural operations should be restricted to dry weather periods. Only tree species adapted to wet clay soils should be planted. Plant more seedlings than the recommended rate on these soils to ensure a stand. Site index for green ash is 80, cottonwood 100, oaks and sweetgum 90.</p>
UD	UDIFLUVENTS, LOAMY
	<p>The potential for cropland and pastureland is good. Suitable crops are soybeans and cotton. Pasture plants are common bermudagrass, bahiagrass, ryegrass, tall fescue and white clover. These soils can be worked only within a narrow range of moisture content. A drainage system is needed. Land grading and smoothing will improve drainage. Most crops respond well to fertilizers. Lime may be needed.</p>
	<p>This map unit consists of well drained to somewhat poorly drained soils on spoil banks on the alluvial plains. The soil material varies from loamy to clayey. Natural fertility is medium. Runoff ranges from slow to rapid, and permeability is moderate to very slow. Depth to a seasonal high water table is variable. Slopes range from 1 to 20 percent.</p>
	<p>These are well drained, loamy soils with a very high potential for productivity. There are no serious management problems. These soils are best suited for</p>

Map Symbol	Description
	bottomland hardwoods. Site index for green ash is 90, cottonwood 110, sweetgum 100-110, and oaks 90.
