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Soils in Alabama

Introduction

A basic knowledge of soils is vital in preparing sound development plans. The type of vegetation to be grown for erosion control and landscaping requires knowledge about the soils of the site and selection of erosion and sediment control practices is influenced by soil characteristics. In general, erosion and sediment control and stormwater management can be accomplished more cost effectively if soils are considered.

Information about the soils of an area can be obtained from the Web Soil Survey at http://websoilsurvey.nrcs.usda.gov. However, for detailed planning, the survey should be verified by an on-site investigation. For design purposes an on-site investigation is imperative.

Using a Soil Survey

A soil survey includes soil maps, soil descriptions, and interpretations for many different uses of the soils. Soil surveys information for all 67 counties of the state is available at the Web Soil Survey (http://websoilsurvey.nrcs.usda.gov) or the local Natural Resources Conservation Service office.

In a soil survey, boundaries of the different kinds of soils are delineated, showing their location and extent in relation to streams, roads, and other landscape features. The soils are named according to a nationwide uniform procedure that was developed by the Soil Survey Staff of the U.S. Department of Agriculture and published as *Soil Taxonomy*. The primary basis for identifying different classes in this system are the properties of soils as found in the field that can be measured quantitatively.

The soils identified on a map in a soil survey are named in terms of soil series. Soil series are made up of soils that have similar properties. This means that the horizons or layers are similar in thickness, arrangement, and other important characteristics.

Interpretation tables with information similar to that shown in Table Soils-4 are a part of all recent soil surveys. Interpretation tables list properties and typical site conditions that are important in erosion control, sediment control and stormwater management planning. These include depth to bedrock, hydrologic group, liquid limit, permeability, plasticity index, slope, soil erodibility factor (K factor), soil reaction (pH), and texture. The interpretation tables also give other ratings, and limitations that are important for site selection and development, such as seasonal high water table, shrink-swell potential, risk of corrosion, engineering classification, and hydrologic soil groups.

In order to make accurate interpretations limitations of the survey must be understood. First, the data generally do not represent soil material below 5 or 6 feet. Also, small areas that differ from the dominant soil identified may not be delineated on the map because the scale of the map limits the size of areas that can be shown. The ranges given for soil properties are often too wide for the design needs of a small development. Therefore, to evaluate most specific soil characteristics an on-site investigation is essential.

Information that is needed on critical soil properties below 80 inches will need to be obtained through soil borings and evaluations by an experienced soil professional.

Some Properties of Soils

Some of the properties of soils commonly mapped in Alabama are described in this section. Related values for some of these properties are shown in Table Soils-4.

Additional information on soils can be found in Section II of the *Field Office Technical Guide* at the local Natural Resources Conservation Service office.

Depth to Bedrock

Soil survey interpretations in of the soil map unit in Web Soil Survey of the Natural Resources Conservation Service Survey (http://websoilsurvey.nrcs.usda.gov) generally provide an estimate of depth to and hardness of bedrock, the solid (fixed) rock underlying the soil. This information is helpful in determining time and cost of excavation as well as potential erodibility of the subsoil material. Hardness classes, "soft" and "hard", indicate the ease of excavating into the bedrock. "Soft" rock is likely to be sufficiently soft, thinly bedded, or fractured so that excavation can be made with trenching machines, backhoes, small rippers, or other equipment common in construction of pipelines, sewer lines, cemeteries, dwellings, or small buildings. "Hard" rock is likely to require blasting or special equipment beyond what is considered normal in this type of construction.

Bedrock at shallow depths limits plant growth by restricting root penetration. In most soils there is a negative correlation between depth to bedrock and water holding capacity.

Hydrologic Soil Group (HSG)

Hydrologic soil group (HSG) identifies soils having the same runoff potential under similar storm and cover conditions. Soil properties that determine the hydrologic groups include the following: seasonal high water table, water intake rate and permeability after wetting, and depth to a slowly permeable layer. The influence of ground cover is not considered. Soils are placed into four groups (A, B, C, and D) and three dual classes (A/B, B/D, C/D). In the definition of classes, the infiltration rate is controlled by surface conditions. Transmission rate is the rate water moves in the soil, controlled by the permeability of deeper horizons.

Group A - (low runoff potential) - These soils have high infiltration rates even when thoroughly wetted, consisting chiefly of deep, well-drained to excessively drained sands or gravels. These soils have a high rate of water transmission.

Group B - These soils have moderate infiltration rates when thoroughly wetted, consisting chiefly of moderately deep to deep, moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission.

Group C - These soils have slow infiltration rates when thoroughly wetted. Group C soils commonly have a layer that impedes the downward movement of water or can consist of moderately fine to fine-textures particles. These soils have a slow rate of water transmission.

Group D - (high runoff potential) - These soils have very slow infiltration rates when thoroughly wetted and consist chiefly of clay soils with high swelling potential. These soils frequently have a permanent high water table or a slowly permeable layer at or near the surface. Other soils in this group consist of shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Dual hydrologic groups, A/D, B/D, and C/D are indicated for certain wet soils that can be drained. The first letter applies to the drained condition, the second to the undrained condition. Only soils that are rated D in their natural condition are assigned to a dual group.

Permeability

Permeability is a major factor influencing erosion. It refers to the soil's ability to transmit water or air and depends on both the size and volume of pores. Deep, permeable soils are less erodible because more rainfall soaks in, reducing surface runoff. Because permeability varies with depth, excavation can expose layers that are more or less permeable than the original surface. Compaction reduces permeability.

Plasticity Index (PI) and Liquid Limit (LL)

Both the plasticity index (PI) and liquid limit (LL) indicate the affect of water on the strength and consistency of soil. The PI and LL of a soil are most important in fine-grained soils. Soils with greater plasticity generally have a higher cohesion and resistance to erosion than soils with a lower plasticity. These indexes are used in both the Unified and the American Association of State Highway and Transportation Officials (AASHTO) soil classification systems, which are described in more detail later. They are also used as indicators in making general predictions of soil behavior.

Slope

The erosion potential for sheet, rill and gully erosion increases with slope length and gradient. Long and steep slopes have a high potential for soil loss from surface runoff. Soil surveys include ranges for slope steepness but do not include values for slope length.

Soil Erodibility Factor (K)

The soil erodibility factor, K, provides a measure of the susceptibility of soil particles to sheet and rill erosion by runoff from rain storms or irrigation. The principle factors affecting K are texture, organic matter, structure, and permeability. The ability of a soil to erode increases with increasing K values. Subsoils exposed during construction, however, may be too deep to be included in the table.

Soil Reaction (pH)

Soil reaction represents the degree of acidity or alkalinity of a soil, expressed as pH. The pH in soils normally is directly related to parent material. The principal value of soil pH measurement is the knowledge it gives about associated soil characteristics, such as phosphorous availability or the base saturation. A pH of approximately 6 to 7 indicates readily available plant nutrients.

Leaching removes bases, causing a pH decline. Therefore, the amount of rainfall, rate of percolation, return movement of moisture by capillary action, and evaporation affect pH. The pH is higher in many of the soils of the Prairie than most other soils in Alabama.

Soil reaction is also used as an indicator of corrosivity. In general, soils that are either very alkaline or very acid are likely to be highly corrosive to steel. Soils that are acid are likely to be corrosive to concrete.

Texture and Classifications

ASSHTO System

The ASSHTO system classifies soils according to the properties that affect roadway construction and maintenance. The fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in silt and clay. Soils in group A-7 are fine grained. Highly organic soils are in Group A-8 and are classified on the basis of visual inspection.

Unified System

The Unified System classifies soils according to suitability for construction material and considers grain-size distribution, plasticity index, liquid limit, and organic matter content. This classification is based on that portion of soil having particles smaller than 3 inches in diameter. Classes include coarse-grained soils (GW, GP, GM, GC, SW, SP, SM, SC), fine-grained soils (ML, CL, OL, MH, CH, OH) and highly organic soils (PT). Borderline soils require a dual classification symbol such as GW-GC. A description for each class in the Unified System is given in Table Soils-1.

Table Soils-1 Classification of Materials for the Unified System

Group Symbol	Description of Material Classification
Coarse-grained	
GW	Well-graded gravels and gravel sand mixture little or no fines. 50°s or more retained on No. 4 sieve. More than 95% retained on No. 200 sieve. Clean.
GP	Poorly-graded gravels and gravel sand mixtures, little or no fines. 50% or more retained on No. 4 sieve. More than 95% retained on No. 200 sieve. Clean.
GM	Silty gravels, gravel-sand-silt mixtures. 50% or more retained on No. 4 sieve. More than 50% retained on No. 200 sieve.
GC	Clayey gravels, gravel-sand-clay mixtures. 50% or more retained on No.4 sieve. More than 50% retained on No. 200 sieve.
SW	Well-graded sands and gravelly sands with little or no fines. More than 50% passes No. 4 sieve. More than 95% retained on No. 200 sieve. Clean.
SP	Poorly graded sands and gravelly sands, little or no fines. More than 50% passes No. 4 sieve. More than 95% retained on No. 200 sieve. Clean.
SM	Silty sands, sand-silt mixtures. More than 50% passes No. 4 sieve. More than 50% retained on No. 200 sieve.
SC	Clayey sands, sand-clay mixtures. More than 50% passes No. 4 sieve. More than 50% retained on No. 200 sieve.
Fine-grained	
OL	Organic silts and organic silty clays of low plasticity. Liquid limit of 50% or less. 50% or more passes No. 200 sieve.
ML	Inorganic silts, very fine sands, rock flour, silty or clayey sands. Liquid limit of 50% or less. 50% or more passes No. 200 sieve.
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays. Liquid limit 50% or less. 50% or more passes No. 200 sieve.
MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts. Liquid limit greater than 50%. 50% or more passes No. 200 sieve.
CH	Inorganic clays of high plasticity, fat clays. Liquid limit greater than 50%. 50% or more passes No. 200 sieve.
OH	Organic clays of medium to high plasticity. Liquid limit greater than 50%. 50% or more passes No. 200 sieve.
Highly organic	
PT	Peat, muck, and other highly organic soils.

NOTE: These are boundary classifications. Soils possessing characteristics of two groups are designated by combinations of group symbols. For example, GW-GC is a will-graded, gravel-sand mixture with clay binder. All sieve sizes on this table are U.S. Standard.

USDA System

Soil survey interpretations indicate the USDA texture for each soil, expressed as a relative proportion by weight of soil particle size classes finer than 2 mm. Soil texture is defined by the proportions of different size groups of particles. The size limits of the different soil particles are listed in Table Soils-2.

Table Soils-2 Size limits of Soil Particles

Soil Particle	Size
Cobble	250 – 76.0.mm
Gravel	76 - 2.00 mm
Sand	2.00 - 0.05 mm
Silt	0.05 - 0.002 mm
Clay	< 0.002 mm

The basic texture classes, in decreasing particle size, are sands, loams, and clays. On the basis of these classes, additional class names are used such as loamy sand, sandy clay, and silty clay. Sands, loamy sands, and sandy loams may be further subdivided as very coarse, coarse, fine, or very fine. The physical properties and chemical composition of larger soil particles differ from smaller soil particles. Since most physical and chemical reactions occur on the surface of small particles, clay affects soil properties to a much greater extent than do larger particles. Sand and rock fragments retain water and nutrients poorly, because the voids between particles allow water and air to move freely.

Silt particles are barely visible to the naked eye and are intermediate in many properties between sand and clay. Silt is characterized by its plasticity and stickiness. Silt content is an important characteristic for determining erodibility because silt-sized particles are easily detached and transported in runoff. The small particle size makes silt difficult to capture in traps or basins.

There are two major types of clays, kaolinite and smectitic. Kaolinite (referred to as a 1:1 clay) is the most common clay in Alabama soils. It is relatively inactive and fairly stable. Smectitic (referred to as a 2:1 clay) is a very active clay that shrinks when dry and swells when wet. These characteristics affect the permeability of soils and are very important to their use and management. Clayey soils retain water that is available for plant growth, but these soils are often dense, hard, wet, airtight, acidic, and infertile. They can restrict root growth even though other factors are favorable.

Texture modifiers and terms used to describe texture are given in Table Soils-3.

Table Soils-3 Texture Terms and Modifiers

Texture Modifier	
CB	Cobbly
CBV	Very cobbly
CBX	Extremely cobbly
CN	Channery
CNV	Very channery
CNX	Extremely channery
GR	Gravelly
GRC	Coarse gravelly
GRF	Fine gravelly
GRV	Very gravelly
GRX	Extremely gravelly
MK	Mucky
PT	Peaty
SR	Stratified
ST	Stony
STV	Very stony
STX	Extremely stony

Texture Terms	
COS	Coarse sand
S	Sand
FS	Fine sand
VFS	Very fine sand
LCOS	Loamy coarse sand
LS	Loamy sand
LFS	Loamy fine sand
LVFS	Loamy very fine sand
COSL	Coarse sandy loam
SL	Sandy loam
FSL	Fine sandy loam
VFSL	Very fine sandy loam
L	Loam
SIL	Silt loam
SI	Silt
SCL	Sandy clay loam
CL	Clay loam
SICL	Silty clay loam
SC	Sandy clay
SIC	Silty clay
C	Clay

Terms Used in Lieu of Texture	
BR	Bedrock
G	Gravel
MARL	Marl
MPT	Mucky-peat
MUCK	Muck
PEAT	Peat
SG	Sand and Gravel
VAR	Variable

Note: These are boundary classifications. Soils possessing characteristics of two or more groups are designated by combinations of group symbols. For example, SR-S-FS is a stratified sand/fine sand.

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (IN)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
ABELL	0-10	3.6-5.5	.28	B	0-15	L	CL,ML,SC,SM	A-4,A-6
	10-45	3.6-5.5	.28		8-22	L,CL,SCL	CL,SC	A-4,A-6
	45-60	3.6-5.5	.17		0-7	SR-S FSL	SC-SM,SM,SP-SM	A-1,A-2 A-3,A-4
ABERNATHY	0-14	5.1-6.0	.37	B	4-15	SIL	CL,CL-ML,ML	A-4,A-6
	14-28	5.1-6.0	.37		4-15	SIL,SICL	CL,CL-ML,ML	A-4,A-6
	28-60	5.1-6.0	.37		9-20	SICL,SIC	CL	A-4,A-6,A-7
ADATON	0-6	4.5-5.5	.43	D	NP-10	SIL,L	ML,CL,CL-ML	A-4
	6-66	4.5-5.5	.32		11-30	SIL,SICL,SIC	CL,CH	A-6,A-7
AGRICOLA	0-8	5.1-6.5	.28	B	0-12	SL,L	ML,SC,SC-SM,SM	A-2,A-4,A-6
	8-12	5.1-6.5	.28		16-30	C,SC,CL	CH,CL,MH,ML	A-6,A-7
	12-29	5.1-6.5	.28		16-30	C,SC,CL	CH,CL,MH,ML	A-6,A-7
	29-35	5.1-6.5	.28		7-22	SCL,CL,L	CL,ML,SC	A-4,A-6
	35-50	5.1-6.5	.28		7-22	SCL,CL,L	CL,ML,SC	A-4,A-6
	50-60	5.1-6.5	.28			BR		
ALAGA	0-6	3.6-6.0	.10	A	NP	S,FS	SM,SP-SM	A-2,A-1-B A-3
	0-6	3.6-6.0	.10		NP-4	LS,LFS	SM,SW-SM,SP-SM	A-2,A-1-B
	6-80	3.6-6.0	.10		NP-4	LS,LFS,FS	SM,SW-SM,SP-SM	A-2
ALAMUCHEE	0-5	4.5-5.5	.28	B	NP-7	L,FSL,SL	ML,CL-ML,SM,SM-SC	A-2,A-4
	0-5	4.5-5.5	.37		8-25	SIL,SICL	CL,ML,MH	A-4,A-6,A-7
	5-52	4.5-5.5	.28		5-20	SCL,CL,L	CL,CL-ML,SC,SM-SC	A-4,A-6
	52-65	4.5-5.5	.28		5-20	L,SL,SCL	CL,CL-ML,SC,SM-SC	A-2,A-4,A-6
ALBANY	0-48	3.6-6.5	.10	C	NP	LS,LFS	SM	A-2
	0-48	3.6-6.5	.10		NP	S,FS	SM,SP-SM	A-2
	48-56	4.5-6.0	.20		NP	SL	SM	A-2
	56-88	4.5-6.0	.24		NP-17	SCL,SL,FSL	SC,SM,SM-SC	A-2,A-4,A-6
ALBERTVILLE	0-6	4.5-5.5	.20	C	NP-7	SL,FSL	MC,ML,SM-SC	A-4
	0-6	4.5-5.5	.28		NP-7	SIL,L	CL-ML,ML	A-4
	6-15	4.5-5.5	.32		11-16	SIL,S1CL,CL	CL	A-6
	15-47	4.5-5.5	.37		14-40	SICL,SIC,C	CL,CH	A-6,A-7
	47-66					BR		
ALCOA	0-7	4.5-6.0	.24	B	11-20	CL	CL,ML	A-6,A-7
	0-7	4.5-6.0	.28		5-10	L,SIL	CL-ML,CL,ML	A-4
	7-20	4.5-5.5	.24		11-20	CL	CL,ML	A-6,A-7
	20-74	4.5-5.5	.24		14-23	CL,C,SC	CL,MH,ML,CH	A-6,A-7
ALLEN	0-12	4.5-5.5	.15	B	NP-10	GR-L,GR-FSL,GR-SL	ML,CL-ML,SM,SM-SC	A-2,A-4
	0-12	4.5-5.5	.20		5-20	CL,SCL	CL-ML,CL,SM-SC,SC	A-4,A-6
	0-12	4.5-5.5	.28		NP-10	L,FSL,SL	ML,CL-ML,SM,SM-SC	A-4
	12-35	4.5-5.5	.20		4-19	CL,SCL,L	CL-ML,CL,SC	A-4,A-6 A-7-b
	35-70	4.5-5.5	.20		5-22	CL,SCL,C	CL-ML,CL,SC,SM-SC	A-4,A-6 A-7-b
ALPIN	0-3	4.5-6.5	.10	A	NP	FS,S,LS	SP-SM,SM	A-3,A-2-4
	3-54	4.5-6.5	.10		NP	FS,S	SP-SM	A-3,A-2-4
	54-99	4.5-6.0	.10		NP	FS,S	SP-SM,SM	A-2-4
ALTAVISTA	0-12	3.6-6.0	.17	C	NP	LS,LFS	SM	A-2
	0-12	3.6-6.0	.24		NP-7	FSL,L,SL	ML,CL-ML,SM,SM-SC	A-4
	0-12	3.6-6.0	.32		4-12	SIL,VFSL	CL-ML,CL	A-4,A-6
	12-42	3.6-6.0	.24		5-28	CL,SCL,L	CL,CL-ML,SC,SM-SC	A-4,A-6,A-7
	42-60						VAR	
AMERICUS	0-7	4.5-5.5	.10	A	NP	LS,S,LFS	SM,SP-SM	A-2
	7-47	4.5-5.5	.17		NP	LS,LFS	SM	A-2
	47-72	4.5-5.5	.20		NP-7	SL,LS,FSL	SM,SM-SC	A-2

[1]The *Field Office Technical Guide* of the Natural Resources Conservation Service should be checked for values specific to the county, especially values relating to the surface layer.

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification--- USDA	Unified	AASHTO
AMY	0-18	4.5-5.5	.43	D	NP-5	SIL,L,VFSL	ML	A-4
	18-52	4.5-5.5	.43		8-20	SIL,SICL	CL	A-4,A-6
	52-68	4.5-5.5	.43		NP-20	FSL,SIL,SICL	ML,SM,CL-ML,CL	A-4,A-6
ANGIE	0-10	4.5-6.5	.32	D	NP-10	FSL,SL	SM,ML,CL-ML,SM-SC	A-4,A-2
	0-10	4.5-6.5	.49		5-10	VFSL,SIL	ML,CL-ML	A-4
	10-65	3.6-5.5	.32		18-29	SICL,SIC,C	CH,CL	A-7-6
ANNEMAINE	0-9	4.5-6.5	.28	C	NP-5	FSL,L,SL	SM,SM-SC,ML,CL-ML	A-4
	0-9	4.5-6.5	.37		5-20	SIL	CL,CL-ML	A-4,A-6
	9-16	4.5-5.5	.37		10-25	C,CL,SIC	CL	A-6,A-7
	16-37	4.5-5.5	.37		20-35	C,SIC,SICL	CH,MH,CL,ML	A-7
	37-49	4.5-5.5	.37		8-15	SCL,L,CL	SC,CL	A-4,A-6
	49-90	4.5-5.5	.32		NP-10	SCL,FSL,SL	SM,SM-SC,SC	A-2,A-4
ANNISTON	0-7	4.5-5.5	.24	B	NP-10	GR-L,GR-SIL	ML,CL,CL-ML	A-4
	0-7	4.5-5.5	.28		NP-7	SL,FSL	SM,ML,SM-SC	A-4
	0-7	4.5-5.5	.32		NP-13	L,SIL	ML,CL,CL-ML	A-4,A-6
	7-80	4.5-5.5	.32		10-28	CL,C	ML,CL	A-6,A-7
APISON	0-7	4.5-5.5	.37	B	3-10	L,SIL	ML,CL,CL-ML	A-4
	7-28	4.5-5.5	.37		4-18	CL,L,SICL	CL-ML,CL	A-4,A-6
	28-61					BR		
APPLING	0-9	4.5-5.5	.24	B	NP-5	FSL,SL,LS	SM	A-2
	0-9	4.5-5.5	.28		6-20	SCL	CL,SC,CL-ML,SM-SC	A-6,A-4
	0-9	4.5-5.5	.15		NP	GR-SL,GR-COSL	SM	A-2,A-1-B
	9-35	4.5-5.5	.28		15-30	SC,CL,C	MH,ML,CL	A-7
	35-46	4.5-5.5	.28		8-22	SC,CL,SCL	SC,CL	A-4,A-6,A-7
	46-65					VAR		
ARAGON	0-6	4.5-5.5	.32	C	NP-7	FSL,L	ML,CL-ML,SM,SM-SC	A-4
	0-6	4.5-5.5	.32		2-7	SIL	ML,CL-ML	A-4
	6-15	3.6-5.5	.32		3-12	CL,L,SCL	ML,CL,CL-ML	A-4,A-6
	15-42	3.6-5.5	.28		15-35	C,SIC	CH,MH	A-7
	42-52	3.6-5.5	.32		11-30	SIC,SCL,C	ML,CL,MH,CH	A-6,A-7
	52-65					BR		
ARDILLA	0-9	4.5-6.0	.15	C	NP-7	LS,LFS,COS	SM,SP-SM,SM-SC	A-2-4,A-1
	0-9	4.5-6.0	.24		NP-7	SL,FSL	SM,SM-SC	A-2-4
	9-30	4.5-6.0	.28		4-15	SCL,SL	SM,SM-SC,SC	A-4,A-2-6 A-6
	30-60	4.5-5.5	.28		7-20	SCL,SC	SM,SC	A-4,A-6,A-5 A-7
ARGENT	0-5	3.6-6.0	.24	D	NP-10	SL,FSL	SM,SC,SM-SC	A-2,A-4
	0-5	3.6-6.0	.24		5-20	L,CL	CL,CL-ML	A-4,A-6,A-7
	0-5	3.6-6.0	.32		3-20	SIL,SICL	CL,CL-ML,ML	A-6,A-4
	5-64	3.6-6.0	.32		11-40	C,SC,SIC	CL,CH	A-6,A-7
	64-76	5.6-8.4	.32		6-28	SCL,CL,SICL	CL,CL-ML,SC,SM-SC	A-4,A-6,A-7
	76-80					VAR		
ARMOUR	0-17	5.1-6.0	.37	B	11-18	SICL	CL	A-6
	0-17	5.1-6.0	.43		5-10	SIL	CL-ML,CL,ML	A-4
	17-48	5.1-6.0	.37		8-18	SICL,SIL	CL	A-4,A-6
	48-75	5.1-6.0	.37		9-23	SICL,SIC,C	ML,MH,GM,GC	A-4,A-6,A-7
ARMUCHEE	0-8	4.5-5.5	.28	C	5-15	SH-SIL,SH-SICL	CL,ML,CL-ML	A-4,A-6
	0-8	4.5-5.5	.37		5-15	SIL,SICL	CL,ML,CL-ML	A-4,A-6
	8-17	4.5-5.5	.37		13-35	SH-SIC,SH-SICL	MH,ML,CL,CH	A-6,A-7
	17-24	4.5-5.5	.32		11-30	SHV-SIC,SHV-SICL	GM,GC,CL,CH	A-2,A-6,A-7
	24-60					BR		
ARUNDEL	0-6	3.6-5.5	.28	C	NP	SL,SL	ML,SM	A-4,A-2-4
	0-6	3.6-5.5	.28		NP	LFS,LS	SM	A-2,A-4
	0-6	3.6-5.5	.37		NP-10	SIL,L	ML,CL,CL-ML	A-4
	6-38	3.6-4.4	.32		22-41	SICL,SIC,C	CL,CH	A-7
	38-45					BR		
ATKINS	0-14	4.5-6.0	.37	B/D	-15	SIL	CL,CL-ML,ML	A-4,A-6
	14-75	4.5-5.5	.32		8-22	SIL,L,CL,SCL	CL	A-4,A-6,A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification--- USDA	Unified	AASHTO
ATMORE	0-13	3.6-5.5	.32	B/D	NP-7	FSL,VFSL	SM,ML,CL-ML,SM-SC	A-4
	0-13	3.6-5.5	.37		NP-7	L,SIL	ML	A-4
	13-48	3.6-5.5	.37		NP-7	L,SIL,FSL	ML,CL-ML	A-4
	48-70	3.6-5.5	.32		2-18	SIL,CL,SICL	ML,CL,SM,SC	A-4,A-6
AUGUSTA	0-9	4.5-6.0	.17	C	NP-4	LS,LFS	SM,CL-ML	A-2-4
	0-9	4.5-6.0	.20		NP-7	SL,FSL	SM,SM-SC,ML	A-2,A-4
	0-9	4.5-6.0	.24		NP-10	SIL,L	ML,CL-ML	A-4
	9-60	4.5-6.0	.24		5-25	SCL,CL,L	CL,CL-ML	A-4,A-6,A-7
	60-70					VAR		
AXIS	0-7	6.1-8.4	24	D	NP-7	SL,FSL,VFSL	CL-ML,SC,SM,SM-SC	A-4
	0-7	6.1-8.4	24		4-10	MK-SL,MK-SCL	CL-ML,SC,SM-SC	A-4
	0-7	6.1-8.4	37		4-10	L,SIL	CL,CL-ML	A-4
	7-40	6.1-8.4	10		4-10	SL,L,SIL	CL-ML,SC,SM-SC,CL	A-4
	40-72	6.1-8.4	10		NP-7	SL,L,SCL	ML,CL-ML,SM,SM-SC	A-4
BADIN	0-5	4.5-5.5	.37	C	5-15	L	CL,CL-ML, ML	A-4, A-6
	5-20	4.5-5.5	.24		15-35	SiC,SiCL,C	CH,CL	A-7
	20-28	4.5-5.5	.32		10-25	L,CL	ML,CL	A-6,A-7
	28-80					BR		
BAMA	0-14	4.5-6.0	.24	B	NP-10	FSL,SL,L	SM,SC,SM-SC,CL-ML	A-4
	14-41	4.5-5.5	.32		2-15	L,SCL	SM,SC,SM-SC,CL-ML	A-4,A-6
	41-74	4.5-5.5	.32		8-18	L,SCL,CL	SC,CL	A-4,A-6
BANKHEAD	0-4	4.5-5.5	.15	B	NP	LS	SM	A-2
	0-4	4.5-5.5	.17		NP	CN-FSL,CN-SL,GR-SL	SM,GM	A-2,A-4
	0-4	4.5-5.5	.20		NP	FSL,SL	SM	A-2,A-4
	4-26	4.5-5.5	.17		NP-3	SL,CN-SL,CB-SL	SM,GM	A-2,A-4
	26-30					BR		
BARBOURVILLE (Congaree)	0-12	4.5-7.3	.24	B	NP-7	FSL	SC-SM,SM	A-2,A-4
	12-30	4.5-7.3	.37		3-22	FSL,L,SICL,SIL	CL,ML,SC,SM	A-4,A-6,A-7
	30-60	4.5-5.5	.15		NP	GR-L	GM,ML,SM	A-1,A-2,A-4
BARFIELD	0-6	6.1-7.8	.17	D	12-35	ST-SICL,ST-SIC,ST-C	CL,CH,MH	A-6,A-7
	6-18	6.1-7.8	.17		22-40	ST-SICL,ST-SIC	CL,CH,MH	A-7
	18-22					BR		
BARFIELD	0-6	6.1-7.8	.24	D	12-35	SICL,SIC,C	CL,CH,MH	A-6,A-7
	6-18	6.1-7.8	.17		14-40	SIC,C,SICL	CH,MH,CL	A-7,A-6
	18-22					BR		
BASIN	0-9	3.6-5.5	.28	C	NP	FSL,SL,L	SM,ML	A-4
	9-22	3.6-5.5	.28		NP-7	L,FSL	SM,ML,CL-ML,SM-SC	A-4
	22-60	3.6-5.5	.28		5-12	L,SL,SCL	CL-ML,SM-SC,CL,SC	A-4,A-6
BASSFIELD	0-7	4.5-5.5	.17	B	NP-3	LS	SM	A-2
	0-7	4.5-5.5	.20		NP-3	SL,FSL,L	SM,ML	A-2,A-4
	7-42	4.5-5.5	.20		NP-10	SL,L	SM,SC,SM-SC	A-2,A-4
	42-80	4.5-5.5	.17		NP-3	LS,S	SP-SM,SM	A-2,A-3
BAXTER	0-10	4.5-5.5	.28	B	3-10	GR-SIL	CL,CL-ML,GC,GC-GM	A-2,A-4
	10-40	4.5-5.5	.24		8-17	GR-SICL	CL,GC,ML,SC	A-2,A-4,A-6, A-7
	40-60	4.5-5.5	.20		20-42	GR-C,GR-SIC	GM,MH,ML,SM	A-2,A-7
BAXTERVILLE	0-9	4.5-5.5	.24	B	NP-10	SL,FSL,L	SM,SC,SM-SC	A-4
	9-29	4.5-5.5	.37		12-18	SL,SCL	CL	A-6
	29-68	4.5-5.5	.37		12-25	CL,SCL,L	CL	A-6,A-7
BAYBORO	0-14	3.6-5.5	.10	D	NP-7	MK-FSL,MK-L	OL,SM,CL-ML,SM-SC	A-4,A-2
	0-14	3.6-5.5	.15		NP-7	FSL	SM-SC,SM,CL-ML,ML	A-4,A-2
	0-14	3.6-5.5	.17		3-20	L,CL	CL,ML,CL-ML	A-6,A-7,A-4
	14-64	4.5-5.5	.32		20-40	CL,SC,C	CL,CH	A-7,A-6
BAYOU	0-18	4.5-5.5	.20	D	NP-7	SL,L	SM,SM-SC,ML,CL-ML	A-2,A-4
	18-43	4.5-5.5	.20		NP-7	SL,L	SM,SM-SC,ML,CL-ML	A-2,A-4
	43-66	3.6-6.0	.32		8-15	SCL,CL	SC,CL	A-4,A-6

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
BEACHES	0-6		.05	D	NP	COS,S,FS	SP	A-1,A-3
	6-60		.05		NP	COS,S,FS	SP	A-1,A-3
BEASON	0-7	4.5-6.0	.37	C	5-15	SIL,SICL	ML,CL,CL-ML	A-4,A-6
	7-18	4.5-5.5	.32		11-20	SICL,SIL	CL	A-6
	18-60	4.5-5.5	.32		11-25	SICL,SIC,C	CL	A-6,A-7
	60-80					VAR		
BEATRICE	0-3	3.6-6.0	.28	D	NP	SL,FSL	SM,ML	A-4
	0-3	3.6-6.0	.37		5-15	L,SIL	CL-ML,CL	A-4,A-6
	3-50	3.6-5.0	.32		24-42	C	MH	A-7
	50-72					SR-C-SCL		
BENOLOVENCE	0-12	4.5-6.0	.20	B	NP-4	LS	SM	A-4
	12-47	4.5-6.0	.20		3-7	FSL,SL	CL-ML,SC-SM,SM	A-2-4,A-4
	47-80	4.5-6.0	.20		8-15	SCL,SL	CL,SC	A-2-4,A-4,A-6
BENNDALE	0-5	4.5-5.5	.17	B	NP	LS	SM	A-2
	0-5	4.5-5.5	.20		NP-7	SL,SL	ML,SM,CL-ML,SM-SC	A-4,A-2-4
	0-5	4.5-5.5	.20		NP-7	L	ML,CL-ML	A-4
	5-33	4.5-5.5	.28		3-7	L,SL,FSL	ML,SM,CL-ML,SM-SC	A-4
	33-68	4.5-5.5	.32		3-15	L,SL,SCL	ML,SM,CL-ML,SM-SC	A-4,A-6
	68-73	4.5-5.5	.28		NP-5	L,SL,LS	SM,ML,CL-ML,SM-SC	A-2,A-4
BETHERA	0-7	3.6-6.0	.24	D	0-6	FSL,SL	SM,ML,SM-SC,CL-ML	A-4
	0-7	3.6-6.0	.28		12-26	CL	CL,CH	A-6,A-7
	0-7	3.6-6.0	.28		8-14	L,SIL	CL	A-4,A-6
	7-68	3.6-6.0	.32		12-30	C,CL,SC	CL,CH,ML,MH	A-6,A-7
	68-80	3.6-6.0	.32		8-30	C,SC,SCL	CL,CH	A-7,A-6,A-4
BETHEHEM	0-4	4.5-6.0	.15	B	NP-6	GRSL,GRL	SM	A-1, A-2-4
	4-12	4.5-6.0	.28		12-30	C,CL, GRC	SM,SC,SM-SC,CL-ML	A-6,A-7
	12-24	4.5-6.0	.28		12-30	C,CL, GRC	SC,CL	A-6,A-7
	24-30	4.5-6.0	.28		12-30	C,CL, GRC	SM,SC,SM-SC,CL-ML	A-6,A-7
	30-80					BR		
BEWLEYVILLE	0-8	4.5-6.5	.37	B	11-18	SICL	CL	A-6
	0-8	4.5-6.5	.43		2-7	SIL	ML,CL-ML	A-4
	8-28	4.5-5.5	.37		11-22	SICL,SIL	CL	A-6,A-7
	28-72	4.5-5.5	.37		12-32	C,CL,SICL	CL,ML,MH,CN	A-6,A-7
BIBB	0-12	4.5-5.5	.15	D	NP	S,LS	SM,SP-SM	A-2,A-3,A-1-B
	0-12	4.5-5.5	.20		NP-7	SL,FSL	SM,SM-SC,ML CL-ML	A-2,A-4
	0-12	4.5-5.5	.28		NP-7	L,SIL	ML,CL-ML	A-4
	12-37	4.5-5.5	.37		NP-7	SL,L,SIL	SM,SM-SC,ML CL-ML	A-2,A-4
	37-60	4.5-5.5	.15		NP	S,FS,LS	SM,SP-SM	A-2,A-3,A-1-B
BIGBEE	0-17	4.5-6.0	.10	A	NP	S,FS	SM,SP-SM	A-2-4,A-3
	0-17	4.5-6.0	.10		NP	LS,LFS	SM	A-2-4
	17-80	4.5-6.0	.17		NP	S,FS	SP-SM,SM	A-2-4,A-3
BINNSVILLE	0-8	7.4-8.4	.37	D	22-32	SICL,SIC	CL,CH	A-7
	8-12	7.4-8.4	.37		22-32	SICL,SIC	CL,CH	A-7
	12-48					BR		
BIRMINGHAM	0-5	4.5-6.5	.24	B	NP-7	CB-L,CB-SL,CB-SIL	GM-GC,GM,SM-SC,SM	A-2,A-4
	5-29	4.5-6.5	.28		4-16	CB-L,CB-CL	SC,SM-SC,GC,GM-GC	A-4,A-2,A-6
	29-49					BR		
	49-55					BR		
BLADEN	0-14	3.6-5.5	.24	D	NP	FSL,SL	SM	A-2,A-4
	0-14	3.6-5.5	.37		NP-10	L,SIL	CL,ML,CL-ML	A-4
	14-41	3.6-5.5			23-45	C,SC	CL,CH	A-7
	41-62	3.6-5.5			8-35	C,SC,CL	CL,CH,SC	A-4,A-6,A-7
	62-80					VAR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
BLANTON	0-58	4.5-6.0	.10	A	NP	LS,LFS	SM	A-2-4
	0-58	4.5-6.0	.10		NP	S,FS,COS	SP-SM,SM	A-3,A-2-4
	0-58	4.5-6.0	.05		NP	GR-S	SP-SM	A-1, A-2-4 A-3
	58-62	4.5-5.5	.15		NP-3	SL,LS,LCOS	SM	A-2-4
	62-80	4.5-5.5	.20		3-22	SCL,SL,SC	SC,SM-SC,SM	A-4,A-2-4 A-6
BODINE	0-8	3.6-5.5	.24	B	NP-7	CRV-SIL,CRV-L	GM,GM-GC	A-1,A-2
	0-8	3.6-5.5	.28		NP-7	CR-SIL,CR-L,CR-SL	ML,CL-ML,GM,SM	A-4,A-2 A-1-B
	0-8	3.6-5.5	.28		NP-7	ST-SIL,ST-L,STV-SIL	SM,SM-SC,GM,GM-GC	A-4,A-2,A-1
	8-24	3.6-5.5	.24		3-15	CR-SIL,CR-SICL,ST-SIL	GM-GC,GC,SC,SM-SC	A-1,A-2 A-4,A-6
	24-72	3.6-5.5	.24		8-16	CR-SICL,CR-CL,CRV-SIL	GC,GM,SC,SM	A-2
BOMAR	0-7	4.5-6.0	.37	C	2-10	SIL,L,SICL	CL,ML,CL-ML	A-4
	7-33	4.5-5.5	.32		11-25	SICL,SIC,CL	CL	A-6,A-7
	33-73	3.6-5.0	.32		11-25	SIC,SICL,CL	CL	A-6,A-7
	73-80	3.6-5.0	.28		11-25	CL,SICL,SIC	CL	A-6,A-7
BONIFAY	0-57	4.5-6.5	.10	A	NP	LS,LFS	SM	A-2-4
	0-57	4.5-6.5	.10		NP	S,FS	SP-SM	A-3,A-2-4
	57-63	4.5-6.5	.24		NP-12	SL,SCL,FSL	SM-SC,SC,SM	A-2-4,A-4 A-6
	63-73	4.5-6.5	.24		5-22	SCL,SC	SM-SC,SC	A-2,A-4,A-6 A-7
BONNEAU	0-22	4.5-6.0	.15	A	NP	LS,LFS	SM	A-2
	0-22	4.5-6.0	.15		NP	S,FS	SM,SP-SM	A-2,A-3
	22-50	4.5-5.5	.20		4-21	SL,SCL,FSL	SC,SM-SC	A-2,A-6,A-4
	50-74	4.5-5.5	.20		4-18	SL,SCL,SC	CL,SC,SM-SC,CL-ML	A-4,A-6,A-2
BOSWELL	0-5	4.5-5.5	.28	D	NP	FSL,SL	SM,ML	A-4
	0-5	4.5-5.5	.37		11-35	CL,SICL,C	CL,CH	A-6,A-7
	0-5	4.5-5.5	.43		3-12	SIL,L	ML,CL,CL-ML	A-4,A-6
	5-70	4.5-5.5	.32		25-40	C,SIC,SICL	CH	A-7
BRADYVILLE	0-6	5.1-6.5	.37	C	12-22	SICL	CL	A-6,A-7
	0-6	5.1-6.5	.43		3-15	SIL	ML,CL,CL-ML	A-4,A-6
	6-20	5.1-6.0	.32		18-28	SICL,SIC,C	CL,MH,CH	A-7,A-6
	20-48	5.1-7.8	.28		26-40	SIC,C	CH,MH	A-7
	48-52					BR		
BRANTLEY	0-6	4.5-6.5	.28	C	NP-7	FSL,L	SM,SM-SC,ML,CL-ML	A-4
	0-6	4.5-5.5	.28		9-16	CL	CL,ML	A-6,A-7,A-4
	6-35	4.5-6.0	.28		16-22	C,CL,SC	CL,ML	A-7
	35-52	4.5-5.5	.24		7-15	SCL,CL	SC,SM,CL,ML	A-4,A-6
	52-72	4.5-5.5	.20		NP-9	FSL,LFS,SCL	SM,SC,ML	A-2,A-4
BRAXTON	0-6	5.1-6.0	.28	C	7-18	CR-SIL,CR-SICL	CL-ML,CL,GC,GM-GC	A-4,A-6
	0-6	5.1-6.0	.32		7-18	SIL,SICL	CL-ML,CL	A-4,A-6
	6-24	5.1-6.0	.20		20-32	C,SIC	CL,MH,CH	A-7
	24-80	5.1-6.5	.20		22-34	C	CL,CH,MH	A-7
BREMO	0-10	5.1-6.5	.28	C	NP-10	GR-SIL,GR-L	ML,CL,GM,CL-ML	A-2,A-4
	0-10	5.1-6.5	.28		NP-10	SIL,L	ML,CL-ML,CL	A-4
	10-17	5.1-6.5	.20		6-14	GRV-SIL,GRV-L,GR-SIL	CL,CL-ML,GC,SC	A-2,A-4,A-6
	17-25	5.1-6.5	.20		NP-6	GRV-SIL,GRV-L,GR-SL	GM,GM-GC,GP-GM	A-1,A-2,A-4
	25-29					BR		
BREWTON	0-21	4.5-5.5	.24	C	NP-5	FSL,L	SM,SM-SC	A-2,A-4
	21-60	4.5-5.5	.28		NP-7	SL,FSL,L	SM,SM-SC	A-2,A-4
	60-96					SR-S-C		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
BRILLIANT	0-7	5.6-7.3	.24	B	NP-16	CNV-SL,CNV-L,CNV-SIL	SM,SC,SM-SC,GM	A-2-4,A-2-6 A-1
	0-7	5.6-7.3	.24		NP-16	CNX-SL,CNX-L,CNX-SIL	SM,SC,SP-SM,SM-SC	A-2-4,A-2-6 A-1
	0-7	5.6-7.3	.24		NP-7	CN-SL,CN-L,CN-SIL	SM,SM-SC,GM,GM-GC	A-4,A-2-4
	7-72	5.6-7.3	.24		NP-16	CNX-SL,CNX-L,CNX-SIL	SM,SC,SM-SC,SP-SM	A-2-4,A-2-6 A-1
BROOKSVILLE	0-16	5.1-6.5	.37	D	25-32	SICL,SIC	CL,CH	A-7
	16-80	6.6-8.4	.32		36-65	SIC,C	CH	
BRUNO	0-8	5.1-8.4	.15	A	NP	LS, LFS	SM	A-2
	0-8	5.1-8.4	.17		NP-3	SL,L,FSL	SM,ML	A-4,A-2
	8-42	5.1-8.4	.15		NP	S,LS,LFS	SP-SM,SM	A-2
	42-60	5.1-8.4	.10		NP	S	SP-SM,SM	A-2,A-3
BUNCOMBE	0-10	6.1-6.5	.10	A	NP	LS,LFS,S	SM,SP-SM	A-2,A-3
	10-55	4.5-6.0	.10		NP	LS,LFS,S	SM,SP-SM	A-2,A-3
	55-65					VAR		
BYARS	0-13	3.6-5.5	.20	D	NP-7	SL,FSL	SM,SM-SC,ML,CL-ML	A-4
	0-13	3.6-5.5	.28		11-23	SICL,CL,L	CL	A-6,A-7-6
	0-13	3.6-5.5	.37		11-23	SIL	CL,ML	A-6,A-7-6
	13-43	3.6-5.5	.32		17-42	C,CL,SC	CL,CH	A-7-5,A-7-6 A-6
	43-73	3.6-5.5	.32		8-20	C,SICl,SIC	CL,ML	A-6,A-7,A-4
	73-80					VAR		
CADEVILLE	0-7	3.6-6.0	.32	D	NP-7	FSL	SM,CL-ML,ML,SM-SC	A-4
	0-7	3.6-6.0	.37		2-19	L	ML,CL CL-ML	A-4,A-6
	0-7	3.6-6.0	.49		2-19	VFSL,SIL	ML,CL ML,CL	A-4,A-6
	7-23	3.6-5.5	.32		22-35	SIC,C	CH,CL	A-7-6
	23-64	3.6-5.5	.32		12-30	C,SIC,SICL	CH,CL	A-7-6,A-6
CAHABA	0-9	4.5-6.0	.15	B	NP	LS,LFS	SM	A-2
	0-9	4.5-6.0	.24		NP	SL,FSL	SM	A-4,A-2-4
	0-9	4.5-6.0	.28		NP-7	L	ML,CL-ML	A-4
	9-53	4.5-6.0	.28		8-15	SCL,L,CL	SC,CL	A-4,A-6
	53-80	4.5-6.0	.24		NP	S,LS,SL	SM,SP-SM	A-2-4
CANE	0-5	5.6-6.5	.20	C	NP-7	GR-L,GR-FSL,GR-SL	SM	A-2,A-4
	0-5	5.6-6.5	.28		NP-7	L,FSL,SL	ML,SM	A-4
	5-25	4.5-6.0	.37		3-12	SIL,L,CL	ML,CL-ML,CL	A-4,A-6
	25-62	4.5-6.0	.37		3-15	SIL,L,CL	ML,CL-ML,CL	A-4,A-6
CANTON BEND	0-7	5.1-6.5	.24	C	NP-6	FSL,SL	ML,SM,CL-ML,SM-SC	A-2,A-4
	0-7	5.1-6.5	.43		NP-10	L,SIL	CL,CL-ML,ML	A-4
	7-52	5.1-5.5	.37		11-25	SICL,CL,SIC	CL	A-6,A-7
	52-80	5.1-5.5	.32		NP-7	L,FSL,SL	SM-SC,SM,CL-ML,ML	A-2,A-4
CANTUCHE	0-4	3.6-5.5	.20	D	4-11	CNV-L,CNV-SIL,CNV-SL	SC,SM-SC,CL,CL-ML	A-4,A-6
	4-9	3.6-5.5	.20		4-11	CNX-L,CNX-SIL,CNV-L	SC,SM-SC,CL,CL-ML	A-4,A-6
	9-20					BR		
CAPSHAW	0-7	5.1-6.0	.37	C	3-10	SIL,L	ML,CL,CL-ML	A-4
	7-19	5.1-6.0	.37		11-20	SICL,SIC,SIL	ML,CL	A-6,A-7
	19-46	5.1-6.0	.24		18-36	C,SIC,SICL	CL,CH,MH	A-7
	46-60	5.6-7.8	.24		18-36	C,SICL,CL	MH,CH,CL	A-7
CAPTINA	0-9	4.5-6.5	.43	C	4-10	SIL	CL,CL-ML	A-4
	9-25	3.6-6.0	.43		10-20	SIL,SICL	CL	A-6
	25-39	3.6-6.0	.37		10-20	SIL,SICL,CR-SIL	SC,CL	A-6
	39-58	3.6-6.0	.32		10-20	SIL,CR-SICL,CRV-SICL	GC,SC,CL	A-2,A-6
	58-80	3.6-6.0	.32		25-45	SICL,CR-SIC,CRX-C	GC,GP-GC,CL,SC	A-2,A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (IN)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
CARNEGIE	0-5	4.5-6.0	.28	C	NP-5	SL,LS,GR-SL	SM,SM-SC	A-2
	0-5	4.5-6.0	.32		NP-7	SCL	SM,SM-SC,CL-ML,ML	A-4
	5-20	4.0-5.5	.32		13-25	SC,SCL	CL	A-6,A-7
	20-32	4.0-5.5	.28		13-25	SC,C	CL	A-6,A-7
	32-65	4.0-5.5	.28		13-25	SC,C	CL	A-7,A-6
CARTECAY	0-9	5.1-6.5	.24	C	NP	SL,LS	SM	A-2,A-4
	0-9	5.1-6.5	.24		NP-5	VFSL,FSL	SM,SM-SC,ML	A-2,A-4
	0-9	5.1-6.5	.32		NP-15	L,SIL,SICL	ML,CL,CL-ML	A-4,A-6
	9-40	5.1-6.5	.24		NP-10	SL,FSL,L	SM,SC,SM-SC	A-2,A-4
	40-60	5.1-6.5	.15		NP	LS,S,SL	SM,SP-SM	A-2,A-1,A-3
CASEMORE	0-3	4.5-7.3	.28	C	4-9	L	SM,ML	A-4
	3-7	4.5-7.3	.28		4-9	L	ML, SM	A-4
	7-30	4.5-7.3	.24		13-25	SCL,L,CL	CL,SC,ML	A-6,A-4
	30-80	4.5-7.5	.24		13-25	SCL,L,CL	CL,SC,ML	A-6,A-4
CATALPA	0-6	6.1-8.4	.28	C	24-30	SICL,SIC,C	CL,CH	A-7
	6-60	6.1-8.4	.28		28-50	SIC,C,SICL	CH	A-7
CATAULA	0-7	5.1-6.5	.17	B	NP-7	LS	SM,SM-SC	A-2
	0-7	5.1-6.5	.28		NP-7	SL,FSL	SM,SM-SC	A-2,A-4
	0-7	5.1-6.5	.32		9-20	SCL,CL	CL,ML,SC,SM	A-4,A-6,A-7
	7-27	4.5-6.0	.24		11-30	C,CL,SC	MH,ML,CL	A-7,A-6
	27-55	4.5-6.0	.24		2-30	SCL,SC,CL	MH,ML	A-5,A-7
	55-75	4.5-6.0	.32		2-20	SCL,CL,L	CL,ML,CL-ML,SC	A-4,A-6
CECIL	0-7	4.5-6.0	.28	B	NP-7	SL,FSL,L	SM,SM-SC	A-2,A-4
	0-7	4.5-6.0	.28		3-15	SCL,CL	SM,SC,CL,ML	A-4,A-6
	0-7	4.5-6.0	.15		NP-4	GR-SL,GR-L,GR-FSL	SM,GM	A-2,A-1-B
	7-11	4.5-5.5	.28		3-15	SCL,CL	SM,SC,ML,CL	A-4,A-6
	11-50	4.5-5.5	.28		9-37	C,CL	MH,ML	A-7,A-5
	50-75					VAR		
CEDA	0-9	5.6-6.5	.17	B	NP-7	GR-FSL,GRV-FSL	SM,GM,SM-SC,GM-GC	A-1,A-2,A-4
	0-9	5.6-6.5	.28		2-7	GR-L,GRV-L	SM,GM,ML,GM-GC	A-1,A-2,A-4
	0-9	5.6-6.5	.28		2-7	GR-SIL,GRV-SIL	ML,SM,GM,GM-GC	A-2,A-4
	9-65	5.6-6.5	.28		NP-18	GRV-L,CB-CL,GRV-FSL	GM,GP-GM,GM-GC	A-1,A-2,A-4 A-6
CEDARBLUFF	0-9	5.1-6.0	.28	C	NP	FSL,L	ML,SM	A-4
	0-9	5.1-6.0	.37		5-20	SIL	CL-ML,CL	A-6,A-4
	9-18	5.1-6.0	.32		5-10	CL,L	CL-ML,ML,CL	A-4
	18-33	5.1-5.5	.32		11-25	CL,L	CL	A-6
	33-66	5.1-5.5	.32		11-35	CL,L,C	CL,CH	A-6,A-7-6
CHASTAIN	0-5	4.5-6.5	.28	D	12-40	SIC,CL,C	ML,CL,MH,CH	A-6,A-7
	0-5	4.5-6.0	.32		3-18	SICL,SIL,L	ML,CL,CL-ML	A-4,A-6,A-7
	5-52	4.5-6.0	.37		12-40	SICL,SIC,C	CL,CH,ML,MH	A-6,A-7
	52-72	4.5-6.0	.10		NP	LS,S,FS	SP,SM,SP-SM	A-2,A-3
CHATOM	0-3	4.5-5.5	.32	C	2-7	FSL,SL	SC-SM,SM	A-2-4
	3-11	4.5-5.5	.49		NP-7	FSL,LFS,SL,VFSL	SC-SM,SM	A-2-4,A-4
	11-27	4.5-5.5	.28		13-27	CL,L,SCL	CL	A-6,A-7
	27-73	4.5-5.5	.32		13-32	C,CL,L,SCL	CH,CL	A-6,A-7
	73-80	4.5-5.5	.32		13-39	C,CL,SC,SCL	CH,CL	A-6, A-7-6
CHEAHA	0-4	4.5-5.5	.20	D	NP-7	ST-FSL,ST-SL	SM,ML,GM	A-4,A-2-4
	0-4	4.5-5.5	.24		NP-7	ST-L,ST-SIL	SM,ML,GM	A-4,A-2-4
	4-35	4.5-5.5	.28		NP-10	ST-SCL,ST-CL,ST-SIL	ML,SM,GM,CL-ML	A-4,A-2-4
	35-50					BR		
CHENNEBY	0-16	4.5-6.0	.32	C	8-20	SICL	CL,ML,MH,CH	A-6,A-7,A-4
	0-16	4.5-6.0	.37		3-15	L,SIL	CL,ML,CL-ML	A-4,A-6
	16-55	4.5-6.0	.32		8-20	L,SIL,SICL	CL,ML,MH,CH	A-4,A-6,A-7
	55-72	4.5-6.0	.24		NP-8	SR-SL,SICL	SM,ML,SC,CL	A-2-4,A-4

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
CHEWACLA	0-8	4.5-6.5	.24	C	NP-7	FSL,SL	SM,SM-SC	A-2,A-4
	0-8	4.5-6.5	.28		4-20	SIL,L	ML,CL,CL-ML	A-4,A-6,A-7
	8-24	4.5-6.5	.32		4-22	SIL,SICL,CL	ML,CL	A-4,A-6,A-7
	24-34	4.5-6.5	.28		NP-15	SCL,L,SL	SM,SM-SC,ML,CL	A-4,A-7-6,A-6
	34-58	4.5-7.8	.32		4-28	SIL,CL,SICL	ML,MH,CL,CH	A-4,A-6,A-7
	58-70					VAR		
CHIPLEY	0-6	3.6-6.0	.10	C	NP	S,FS	SP-SM	A-3,A-2-4
	6-77	4.5-6.5	.10		NP	S,FS	SP-SM	A-3,A-2-4
CHISCA	0-5	3.6-5.5	.28	D	NP-7	L,FSL,SL	ML,SM,CL-ML,SM-SC	A-4
	0-5	3.6-5.5	.37		NP-15	SIL,SICL,CL	ML,CL,CL-ML	A-6,A-4
	5-13	3.6-5.5	.32		20-40	SIC,C	CL,CH,MH	A-7
	13-32	3.6-5.5	.32		30-60	C	CH,MH	A-7
	32-55	4.5-8.4	.32		20-40	C,SIC	CL,CH,MH	A-7
	55-65					BR		
CHOCCOLOCCO	0-6	4.5-6.0	.28	B	NP-7	FSL,SL	SM	A-2,A-4
	0-6	4.5-6.0	.32		NP-8	L,SIL	ML	A-4
	6-42	4.5-6.0	.37		7-14	SICL,SIL,L	ML	A-4,A-6,A-7
	42-60	4.5-6.0	.32		NP-7	SL,L	SM,ML,SM-SC,CL-ML	A-2,A-4
CHOWAN	0-3	3.5-6.0	.32	D	4-24	SIL	CL-ML,MH,ML	A-4,A-6,A-7-5
	3-74	3.5-6.0	.32		6-30	L,SIL,SICL	CL,MH,ML	A-4,A-6,A-7-5
	74-99	3.5-5.0				SP	PT	
CHRISTIAN	0-5	3.6-5.5	.32	C	12-30	CL	CH,CL	A-6,A-7
	5-36	3.6-5.5	.28		14-37	SICL,SIC,C	CH,CL,MH,ML	A-7
	36-40					VAR		
CHRYSLER	0-7	4.5-5.5	.28	C	NP-7	FSL,L,SL	SM,ML	A-4
	0-7	4.5-5.5	.37		5-20	SIL	CL,CL-ML	A-4,A-6
	7-72	4.5-5.5	.32		15-35	SICL,SIC,C	CL,ML,CH,MH	A-7
	72-96					VAR		
CLARENDON	0-15	4.5-6.5	.15	C	NP-3	LS,LFS,S	SM,SP-SM	A-2
	0-15	4.5-6.5	.20		NP-10	SL,FSL	SM,SC,SM-SC	A-2,A-4
	15-40	4.5-5.5	.20		5-15	SCL	SC,CL,SM-SC,CL-ML	A-4,A-6
	40-80	4.5-5.5	.15		NP-15	SCL,SL,SC	SC,CL,SM-SC,CL-ML	A-2,A-4,A-6
CLARKSVILLE	0-7	3.6-5.5	.28	B	0-30	GR-SICL	SM,CL-ML,GM,ML	A-1-B,A-2 A-4
	7-30	3.6-5.5	.24		20-38	GR-SICL,GR-SIL,ST-SIL	GC,GC-GM,SC,SC-SM	A-1,A-2,A-4 A-6
	30-60	3.6-6.5	.24		26-42	GR-SICL,GR-CL,GRV-SIL	GC,GM,SC,SM	A-2
CLOUDLAND	0-22	4.5-5.0	.28	C	NP-7	FSL,SL	SM,ML,CL-ML,SM-SC	A-2-4,A-4
	0-22	4.5-6.0	.37		NP-7	L,SIL	CL-ML,ML	A-4
	22-36	4.5-5.5	.32		4-20	L,CL,SICL	CL,CL-ML	A-6,A-4 A-7-6
	36-62	4.5-5.5	.28		4-20	L,CL,SICL	CL,CL-ML	A-6,A-4 A-7-6
CLYMER	0-4	4.5-5.5	.20	D	0-7	ST-FSL	GM,ML,SM	A-2-4,A-4
	4-35	4.5-5.5	.28		0-10	ST-SCL,ST-CL,ST-SIC	CL-ML,GM,ML,SM	A-2-4,A-4
	35-80					BR		
COLBERT	0-8	4.5-6.5	.32	D	7-25	SIL,L	CL	A-4,A-6,A-7
	0-8	4.5-6.5	.37		NP-15	L,SIL	ML,CL,CL-ML	A-4,A-6
	8-26	4.5-6.5	.32		15-35	SICL,SIC,C	CL,CH,ML,MH	A-6,A-7
	26-44	4.5-6.5	.32		25-50	SIC,C	MH,CH	A-7
	44-55	6.1-7.8	.32		25-50	SICL,SIC,C	CL,CH	A-7
	55-59					BR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification ------- USDA	Unified	AASHTO
COLFAX	0-12	4.5-5.5	.17	C	NP-10	SL,FSL	SM,SM-SC	A-2,A-4
	0-12	4.5-5.5	.32		NP-10	L,SIL	ML,CL,CL-ML	A-4
	12-30	4.5-5.5	.28		7-25	SCL,CL,L	SC,CL	A-4,A-6, A-7-6
	30-46	4.5-5.5	.28		NP-20	SL,FSL,CL	ML,CL,SM,SC	A-2,A-4,A-6
	46-50	4.5-5.5	.28		NP-10	SL	SM,SC,SM-SC	A-2,A-4
	50-54					BR		
COLUMBUS	0-6	4.5-5.5	.37	C	3-10	SIL,L	ML,CL-ML,CL	A-4
	6-52	4.5-5.5	.20		8-15	CL,L,SCL	CL,SC	A-4,A-6
	52-76	4.5-5.5	.17		NP-4	SL,LS,S	SM,SP-SM	A-2,A-4
COLWELL	0-7	4.5-6.0	.24	B	NP-15	SL	SM,SC-SM	A-4,A-6
	7-10	4.5-6.0	.24		6-15	L	CL-ML,SC,SC-SM	A-6,A-4
	10-80	4.5-6.0	.17		7-25	CL,SCL,C	CH,SC,CL	A-7,A-4,A-6
COMPASS	0-16	4.5-5.5	.15	B	NP	LS,LFS	SM	A-2-4
	16-33	4.5-5.5	.20		NP-3	SL,FSL	SM	A-2-4
	33-57	4.5-5.5	.28		NP-15	SL,FSL,SCL	SM,SM-SC,SC	A-2-4,A-2-6,A-6
	57-74	4.5-5.5	.24		11-23	SC,C	SC,CL	A-6,A-7
CONASAUGA	0-4	3.6-6.0	.37	C	12-28	SICL,CL	CL	A-6,A-7
	0-4	3.6-6.0	.43		NP-8	SIL,L	CL-ML,ML,CL	A-4
	4-10	3.6-6.0	.32		4-15	SIL,SICL,CL	CL-ML,CL	A-4,A-6
	10-19	3.6-6.0	.32		18-35	SICL,SIC,C	CL,CH	A-7
	19-30	3.6-6.5	.32		23-40	C,SIC	CL,CH,MH	A-7
	30-60					BR		
CONECUH	0-5	3.6-5.5	.15	D	NP	LS,LFS	SM	A-2,A-4
	0-5	3.6-5.5	.28		NP-5	SL,FSL,SCL	SM,ML,CL-ML,SM-SC	A-4
	0-5	3.6-5.5	.37		5-15	L,SIL	CL-ML,CL	A-4,A-6
	5-9	3.6-5.5	.32		10-30	CL,C,SICL	ML,MH,CL,CH	A-7,A-6
	9-50	3.6-5.5	.32		15-35	C,SIC	ML,MH,CH	A-7
	50-63					VAR		
CONGAREE	0-8	4.5-7.3	.24	B	NP-7	FSL,SL	SM,SM-SC	A-2,A-4
	0-8	4.5-7.3	.37		3-10	L,SIL	CL-ML,ML,CL	A-4
	8-38	4.5-7.3	.37		3-22	SICL,FSL,L	SC,ML,CL,SM	A-4,A-6,A-7
	38-80					VAR		
CONSUL	0-6	4.5-6.0	.32	D	23-40	C	CH,MH	A-7
	6-52	4.5-6.0	.28		25-60	C	CH,MH	A-7
	52-65	4.5-7.8	.28		25-60	C	CH,MH	A-7
COROLLA	0-72	5.6-7.8	.10	D	NP	S,FS	SW,SP-SM,SP	A-2,A-3
COTACO	0-10	4.5-6.5	.24	C	NP-7	FSL	SC-SM,SM	A-2,A-4
(Chewacla)	10-30	4.5-6.5	.32		4-22	CL,SICL,SIL	CL,ML	A-4,A-6,A-7
	30-60	4.5-7.8	.32		4-28	CL,SICL,SIL	CH,CL,MH,ML	A-4,A-6,A-7
COWARTS	0-8	4.5-5.5	.10	C	NP	GR-LS,GR-LFS	SM	A-2
	0-8	4.5-5.5	.20		NP-5	GR-SL,GR-FSL	SM,SM-SC	A-2,A-4
	8-19	4.5-5.5	.28		NP-15	FSL,SL,SCL	SM-SC,SC,SM	A-2,A-4,A-6
	19-25	4.5-5.5	.28		11-25	SCL,SC,CL	SM,SC	A-6,A-7,A-2-6
	25-60	4.5-5.5	.24		5-20	SL,SCL,CL	SM-SC,SC,CL-ML,CL A-6,A-7	A-2,A-4
COWARTS	0-8	4.5-5.5	.15	C	NP	LS,LFS	SM	A-2
	0-8	4.5-5.5	.24		NP-5	FSL,SL	SM,SM-SC	A-2,A-4
	8-19	4.5-5.5	.28		5-15	FSL,SL,SCL	SM-SC,SC	A-2,A-4,A-6
	19-25	4.5-5.5	.28		11-23	SCL,SC,CL	SM,SC	A-6,A-7,A-2-6
	25-60	4.5-5.5	.28		5-20	SL,SCL,CL	SM-SC,SC,CL-ML,CL	A-2,A-4
COWPEN	0-4	4.0-5.0	.37	D	6-12	FSL,L	CL	A-4
	4-26	4.0-5.0	.20		21-44	C,CL,SIC	CH	A-7-6
	26-47	4.0-5.5	.24		28-47	C,SIC	CH	A-7-6
	47-61	4.0-5.5	.24		28-44	C,SIC	CH	A-7-6
	61-80	4.0-5.5	.32		28-40	C,SIC	CH	A-7-6

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
COXVILLE	0-11	3.6-5.5	.24	D	3-15	FSL,SL,L	SM,ML,CL-ML,CL	A-4,A-6,A-7
	11-72	3.6-5.5	.32		12-35	CL,SC,C	CL,CH	A-6,A-7
	72-80					VAR		
CRAVEN	0-9	3.6-5.5	.37	C	15-35	CL,SICL	CL,CH	A-6,A-7
	0-9	3.6-6.5	.32		NP-15	L,FSL,SIL	ML,CL,SM,SC	A-4,A-6
	9-54	3.6-5.5	.32		24-43	C,SIC,SICL	CH	A-7
	54-80	3.6-5.5	.32		NP-15	SCL,SL,LS	SM,SM-SC,SC	A-2,A-4,A-6
CROSSVILLE	0-8	4.5-5.5	.28	B	NP-7	L,SL,SIL	ML,CL-ML,SM,SM-SC	A-4
	8-27	4.5-5.5	.20		4-12	L,CL,SCL	CL,CL-ML,SM-SC,SC	A-4,A-6,A-2
	27-30	4.5-5.5	.20		NP-5	SL,LS,S	SM-SC,SM	A-2,A-4
CREVASSE	0-10	5.6-8.4	.15	A	NP	S,FS	SP-SM,SM	A-2-4,A-3
	0-10	5.6-8.4	.17		NP	LFS,LS	SM	A-2
	10-60	5.6-8.4	.15		NP	S,LS,LFS	SP-SM,SM	A-2,A-3
CUMBERLAND	0-8	5.1-6.0	.32	B	8-17	CL,SICL	CL,ML	A-4,A-6,A-7
	0-8	5.1-6.0	.37		3-12	SIL,L	ML,CL-ML,CL	A-4,A-6
	8-14	5.1-6.0	.37		8-17	CL,SICL	CL,ML	A-4,A-6,A-7
	14-48	5.1-6.0	.24		8-35	C,CL,SICL	ML,MH,CH	A-5,A-7
	48-64	5.1-6.5	.24		8-36	C,CL	ML,MH,CH	A-5,A-7
DAVIDSON	0-7	4.5-6.5	.28	B	3-15	L	CL,CL-ML,ML	A-4,A-6
	0-7	4.5-6.5	.28		5-18	CL,SCL	CL,SC,CL-ML,SM-SC	A-6,A-4
	7-12	4.5-6.0	.32		11-25	CL	CL	A-6
	12-53	4.5-6.0	.24		12-33	C	CL,CH,ML,MH	A-7,A-6
	53-72	4.5-6.0	.28		7-30	C,CL,SCL	CL,ML,MH	A-4,A-6,A-7
DECATUR	0-7	4.5-6.0	.28	B	8-22	SIC,C	ML,CL	A-4,A-6,A-7
	0-7	4.5-6.0	.32		NP-12	L,SIL	CL,ML,CL-ML	A-4,A-6
	0-7	4.5-6.0	.32		7-18	SICL	CL,ML	A-4,A-5,A-6
	7-20	4.5-6.0	.28		8-22	SICL,SIC,C	ML,CL	A-7,A-4 A-6,A-5
	20-72	4.5-6.0	.24		11-28	C	CL,ML,MH,CH	A-7,A-6
DEERFORD	0-10	4.5-6.5	.49	D	NP-7	SIL,SL	ML,CL-ML	A-4
	10-49	5.1-8.4	.49		11-25	SICL,SIL	CL	A-6,A-7-6
	49-80	6.6-8.4	.49		5-25	SIL,SICL	CL,CL-ML	A-6,A-4,A-7-6
DELLROSE	0-8	4.5-6.0	.24	B	5-15	CR-SIL,CR-L	CL-ML,SC,CL,GC	A-4,A-6
	8-54	4.5-6.0	.24		8-18	CR-SICL,CR-SIL	ML,CL,GC,SC	A-4,A-6,A-7
	54-70	4.5-6.0	.24		20-35	C	MH,CH	A-7
DEMOPOLIS	0-5	7.4-8.4	24	D	12-20	CB-SIL,CB-L,CB-SICL	CL	A-6,A-7-6
	5-12	7.4-8.4	24		7-15	CB-L,CB-CL,CBV-SICL	GC,GP-GC	A-2
	12-60					BR		
DEMOPOLIS	0-6	7.4-8.4	.20	C	4-14	CN-L,CN-CL,CN-SICL	GC,GM-GC,GP-GC	A-2,A-1
	0-6	7.4-8.4	.37		6-20	L,CL,SICL	CL,CL-ML	A-4,A-6,A-7
	0-6	7.4-8.4	.43		6-20	SIL	CL,CL-ML	A-4,A-6
	6-13	7.4-8.4	.32		4-14	CN-L,CN-CL,CNX-SICL	GC,GM-GC,GP-GC	A-2,A-1
	13-65					BR		
DEWEY	0-6	4.5-5.5	.28	B	12-20	SICL,SIC,C	CL	A-6
	0-6	4.5-5.5	.32		5-11	SIL,L	CL-ML,CL	A-4,A-6
	6-25	4.5-5.5	.24		12-20	C,SIC,SICL	CL	A-6
	25-50	4.5-5.5	.24		12-34	C,SIC	CH,CL,MH,ML	A-6,A-7
	50-72	4.5-5.5	.24		12-34	C,SIC,CR-C	CH,CL,MH,ML	A-6,A-7
DICKSON	0-7	4.5-5.5	.43	C	2-7	SIL	CL-ML,ML	A-4
	7-25	4.5-5.5	.43		5-17	SIL,SICL	CL-ML,CL	A-4,A-6
	25-45	4.5-5.5	.43		7-20	SIL,SICL	CL,CL-ML	A-4,A-6,A-7
	45-65	4.5-5.5	.28		12-30	C,CR-SICL,CR-C	MH,ML,GC,CL	A-6,A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
DOCENA	0-4	4.5-6.0	.28	C	4-20	FSL,SL	SM,ML	A-4
	0-4	4.5-6.0	.32		NP-7	SIL,L	ML,CL,CL-ML	A-4,A-6
	4-40	4.5-6.0	.28		5-16	SIL,SICL	ML,CL	A-4,A-6,A-7
	40-58	4.5-6.0	.32		6-25	SIL,SICL,L	ML,CL,MH	A-4,A-6,A-7
	58-65					VAR		
DOGUE	0-10	3.5-5.5	.37	C	NP-10	L,SIL,VFSL	ML,CL,SM,SC	A-4
	0-10	3.5-5.5	.28		NP-10	FSL,SL	SM,SC,SC-SM	A-2,A-4
	10-47	3.5-5.5	.28		16-40	CL,C,SC	CL,CH,SC	A-6,A-7
	47-65	3.5-5.5	.17		NP-10	SR-S-SCL	SM,SC,SP-SM,SC-SM	A-2,A-4,A-1
DOROVAN	0-3	3.6-4.4		D		MPT,MUCK	PT	-
	3-74	3.6-4.4				MUCK	PT	-
	74-99	4.5-5.5			NP-7	S,LS,L	SP-SM,SM-SC,SM	A-1,A-3
								A-4,A-2-4
DOTHAN	0-13	4.5-6.0	.15	B	NP	LS,LFS	SM	A-2
	0-13	4.5-6.0	.24		NP-5	FSL,SL	SM,SP-SM	A-2,A-4
	13-33	4.5-5.5	.28		NP-16	SCL,SL	SM-SC,SC,SM	A-2,A-4,A-6
	33-60	4.5-5.5	.28		5-23	SCL,SC	SM-SC,CL,SC,CL-ML	A-2,A-4
DOUBLEGATES	0-1	4.0-5.5	.55	C/D	2-9	SIL	CL-ML,ML	A-4
	1-14	4.0-5.5	.64		2-10	SIL	CL-ML,ML	A-4
	14-48	4.0-5.5	.49		13-24	SICL,SL	CL	A-6,A-7-6
	48-80	4.0-5.5	.37		17-28	CL,SICL	CL	A-6,A-7-6
								A-6,A-7
DOWELLTON	0-12	5.1-7.3	.32	D	6-15	SIL,SICL	CL-ML,CL,ML	A-4,A-6
	12-16	5.1-7.3	.32		22-40	SIC,C	CL,CH,MH	A-7
	16-48	5.1-7.8	.32		28-40	C	CH,MH	A-7
	48-52					BR		
DUCKSTON	0-8	3.6-8.4	10	A/D	NP	S,FS	SP-SM,SP	A-2,A-3
	8-80	3.6-8.4	10		NP	S,FS	SP-SM,SP	A-2,A-3
DULAC	0-6	4.5-5.5	.43	C	15-25	SICL	CL	A-6,A-7
	0-6	4.5-5.5	.49		2-7	SIL	ML,CL-ML	A-4
	6-23	4.5-5.5	.43		11-25	SIL,SICL	CL	A-6,A-7
	23-37	4.5-5.5	.43		11-25	SIL,SICL	CL	A-6,A-7
	37-72	4.5-5.5	.20		25-50	C,SIC	CH,MH	A-7
DUNBAR	0-8	4.5-5.5	.32	D	NP	LS,LFS	SM,SP-SM	A-2,A-3
	0-8	4.5-5.5	.32		3-15	SL,FSL,L	SM-SC,SC,SM	A-2-4
	8-14	4.5-5.5			8-22	L,SCL,CL	CL-ML,CL,SC	A-4,A-6
	14-80	4.5-5.5			12-25	SC,CL,C	CL,CH,ML,MH	A-6-7
DUNDEE	0-5	4.5-6.0	.17	C	NP	LS,SL	SM	A-2-4
	0-5	4.5-6.0	.37		NP-7	FSL,L,VFSL	ML,CL-ML	A-4
	0-5	4.5-6.0	.43		3-11	SIL,SICL	CL,CL-ML,ML	A-4,A-6
	5-29	4.5-6.0	.32		12-22	SICL,CL,SCL	CL	A-6,A-7
	29-60	4.5-7.3	.37		NP-8	L,VFSL,SIL	CL,CL-ML,ML	A-4
DUNNING	0-5	6.1-8.4	.32	D	10-24	SIC	MH,ML	A-6,A-7
	5-45	6.1-8.4	.32		18-34	SIC,C	CH,CL	A-7
	45-49					BR		
DURHAM	0-16	4.5-6.0	.17	B	NP-3	LCOS,LS	SM	A-2
	0-16	4.5-6.0	.24		NP-7	SL,FSL	SM,SM-SC	A-2,A-4
	16-36	4.5-5.5	.20		10-25	SCL,CL	SC,CL	A-2,A-6,A-7
	36-42	4.5-5.5	.20		13-28	CL,SC,SCL	SC,CL	A-6,A-7
	42-48	4.5-5.5	.20		NP-10	SCL,SL	SM,SC,SM-SC	A-2,A-4
	48-60	4.5-5.5	.17		NP-7	LS,SL,SCL	SM,SM-SC	A-2,A-4
EGAM	0-22	5.6-7.3	.32	C	4-20	SICL,SIL,L	CL,ML,CL-ML	A-6,A-7,A-4
	22-56	5.6-7.3	.32		15-30	SIC,SICL,C	CL,MH,CH	A-7,A-6
	56-75	5.6-8.4	.37		8-30	SICL,C,SL	CL,ML,CH,CH	A-4,A-6,A-7
ELLISVILLE	0-6	4.5-6.0	.37	B	4-15	SICL,SIL,L	CL,CL-ML,SC,SM-SC	A-6,A-4
	6-75	4.5-6.0	.32		8-15	SIL,SICL	CL	A-6,A-4

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.1.	Textural Classification USDA	Unified	AASHTO
EMORY	0-8	5.1-6.0	.37	B	4-15	SIL,SICL	CL,ML,CL-ML	A-4,A-6
	8-42	5.1-6.0	.37		4-15	SIL,SICL	CL,ML,CL-ML	A-4,A-6
	42-60	5.1-6.0	.37		9-20	SICL,SIL,SIC	CL	A-4,A-6,A-7
EMPORIA	0-15	4.5-6.0	.28	C	NP-15	L,FSL,SL	CL,SC,SM,ML	A-2,A-4,A-6
	0-15	4.5-6.0	.28		NP-7	LFS,LS	SM,SM-SC	A-2,A-1,A-4
	15-32	4.5-6.0	.28		8-30	SCL,SL,CL	SC,CL	A-2,A-4 A-6,A-7
	32-57	4.5-6.0	.20		8-30	SCL,CL,SC	SC,CL,CH	A-2,A-4 A-6,A-7
	57-70	4.5-6.0	.20		NP-25	SR-SL-CL	SM,SC,ML,CL	A-1,A-2 A-4,A-6
ENDERS	0-5	3.6-5.5	.32	C	2-10	GR-FSL,GR-L,GR-SIL	ML,SM,SM-SC,CL-ML	A-2,A-4
	0-5	3.6-5.5	.37		2-10	FSL,L,SIL	ML,SM,SM-SC,CL-ML	A-4
	5-8	3.6-5.5	.43		11-17	CL,SICL,L	CL	A-6
	8-39	3.6-5.5	.37		35-45	SIC,C	CH	A-7
	39-46	3.6-5.5	.37		35-45	SIC,SH-SIC	CH	A-7
	46-62					BR		
ENNIS	0-10	4.5-6.0	.28	B	NP-12	CR-L,CR-SL,CR-SIL	CL-ML,ML,SM,GM	A-4,A-6
	10-60	4.5-6.0	.28		NP-15	CR-L,CR-CL,CR-SIL	ML,SM,GM,CL-ML	A-4,A-6,A-2
ENON	0-4	5.1-7.3	.17	C	5-12	VGR-SL	GM,SM	A-4,A-6
	4-12	5.1-7.3	.28		8-22	L,VGR SCL,SL,GR SL	SC,GC	A-2,A-4, A-6,A-7
	12-50	5.1-7.3	.20		29-85	C	CH	A-7
	50-80	5.1-7.3	.28		5-15	L,SCL,CL	CL,CH,SC	A-4
ENOREE	0-7	5.1-7.3	.17	D	NP-7	LS	SM,SM-SC	A-2
	0-7	5.1-7.3	.20		NP-7	SL,FSL	SM,SM-SC	A-2,A-4
	0-7	5.1-7.3	.32		2-20	SIL,L,SICL	CL,ML,CL-ML	A-4,A-6,A-7
	7-27	5.1-7.3	.20		NP-10	SL,L,SCL	SM,SM-SC,ML,CL-ML	A-2,A-4
	27-50	5.1-7.3	.20		NP-10	SL,L,LS	SM,SM-SC,ML,CL-ML	A-2,A-4
ESCAMBIA	0-13	3.6-5.5	.24	C	NP-7	FSL,VFSL,SL	SM,SM-SC,ML,CL-ML	A-4
	0-13	3.6-5.5	.32		NP-7	L,SIL	CL-ML,ML,SM,SM-SC	A-4
	13-35	3.6-5.5	.24		4-15	FSL,L,SIL	SC,SM-SC,CL,CL-ML	A-4,A-6
	35-72	3.6-5.5	.28		4-20	FSL,L,SIL	SC,CL,SM-SC,CL-ML	A-4,A-6
ESTO	0-8	3.6-5.5	.17	B	NP	LS,LFS	SM,SP-SM	A-2
	0-8	3.6-5.5	.28		NP-6	FSL,SL,L	SM,SM-SC,ML,CL-ML	A-4,A-2
	8-13	3.6-5.5	.32		12-25	CL,SC,SCL	CL,SC	A-6,A-7
	13-62	3.6-5.5	.32		18-52	CL,C,SC	CL,CH	A-7
ETOWAH	0-7	4.5-5.5	.32	B	10-15	SICL,CL	CL	A-6
	0-7	4.5-5.5	.32		5-12	CR-SIL,CR-L,CR-SICL	CL-ML,ML,CL	A-4,A-6
	0-7	4.5-5.5	.37		3-10	SIL,L,FSL	ML,CL,SM-SC,CL-ML	A-4
	7-38	4.5-5.5	.32		10-15	SICL,CL,SIL	CL	A-6
	38-70	4.5-5.5	.32		15-25	SICL,CL,C	CL,ML,MH	A-6,A-7
EULONIA	0-13	4.5-6.5	.15	C	NP-4	LS,LFS	SM,SM-SC	
	0-13	4.5-6.5	.24		NP-10	SL,FSL	SM,SC,SM-SC	A-2,A-4
	13-48	4.5-6.5	.24		8-37	SC,C,CL	SC,CL	A-6,A-7,A-4
	48-58	4.5-6.0	.20		3-15	SCL,SL	SC,SM,SM-SC	A-2,A-4,A-6
	58-80					VAR		
EUNOLA	0-10	4.5-5.5	.15	C	NP	LS,LFS,FS	SM,SP-SM	A-2,A-4 A-2-4
	0-10	4.5-5.5	.20		NP	SL,FSL	SM	A-2,A-4
	10-26	4.5-5.5	.28		NP-1!	SCL,CL,FSL	SM,SC,SM-SC,CL	A-4,A-2,A-6
	26-52	4.5-5.5	.32		2-15	SCL,SC,CL	SM,SC,ML,CL	A-4,A-6
	52-56	4.5-5.5	.24		NP-1i	SL,SCL	SM,SC,SM-SC	A-2,A-4
	56-65	4.5-5.5	.20		NP	S,LS,FS	SM,SP-SM	A-2,A-3
EUSTIS	0-6	4.5-5.5	.10	A	NP	LS,LFS	SP-SM,SM	A-3,A-2-4
	0-6	4.5-5.5	.10		NP	S,FS	SP-SM,SM	A-3,A-2-4
	6-24	4.5-5.5	.17		NP	S,FS,LFS	SP-SM,SM	A-3,A-2-4
	24-76	4.5-5.5	.17		NP	LFS,LS	SM	A-2-4
	76-98	4.5-5.5	.17		NP	S,FS	SP-SM	A-3,A-2-4

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
EUTAW	0-9	4.5-6.0	.32	D	23-40	SIC,C	CH,MH	A-7
	0-9	4.5-6.0	.37		23-32	SICL	CH,MH	A-7
	9-58	4.5-6.0	.28		25-60	C	CH,MH	A-7
	58-80	4.5-7.8	.28		25-60	C	CH,MH	A-7
FACEVILLE	0-5	4.5-5.5	.17	B	NP	LS,LFS	SM	A-2
	0-5	4.5-5.5	.28		NP-7	SL,FSL	SM,SM-SC	A-2,A-4
	0-5	4.5-5.5	.32		NP-7	SCL	SM,CL-ML,ML,SM-SC	A-4
	5-11	4.5-5.5	.37		NP-13	SCL,SC	SC,ML,CL,SM	A-4,A-6
	11-72	4.5-6.0	.37		11-25	SC,C,CL	CL,SC,CH,ML	A-6,A-7
FALAYA	0-50	4.5-5.5	.49	D	NP-10	SIL,SI	ML,CL-ML,CL	A-4
	50-65	4.5-5.5	.43		7-16	SIL,SICL	ML,CL	A-4,A-6,A-7
FALKNER	0-6	4.5-6.0	.43	C	11-20	SICL	CL	A-6,A-7
	0-6	4.5-6.0	.49		5-10	SIL	CL-ML,CL	A-4
	6-21	4.5-6.0	.43		15-30	SIL,SICL	CL	A-6,A-7
	21-65	4.5-6.5	.24		30-50	SIC,C	CH	A-7
FAUNSDALE	0-2	6.6-8.4	.37	D	23-33	CL,SICL	CL,CH	A-7
	0-2	6.6-8.4	.37		33-49	SIC,C	CH	A-7
	2-14	6.6-8.4	.37		30-49	CL,SICL,SIC	CH	A-7
	14-36	6.6-8.4	.32		30-49	CL,SICL,SIC	CH	A-7
	36-49	6.6-8.4	.32		33-49	SIC,C	CH	A-7
	49-65	6.6-8.4	.32		33-49	SIC,C,GR-SIC	CH	A-7
FIRESTONE	0-5	4.5-5.5	.32	C	2-15	GR-SIL,GR-L	ML,CL-ML,CL	A-4,A-6
	0-5	4.5-5.5	.37		2-15	SIL,L	ML,CL-ML,CL	A-4,A-6
	5-9	4.5-5.5	.32		5-30	SICL,CL,SIC	CL,ML,CH,MH	A-6,A-7,A-4
	9-32	4.5-5.5	.32		25-5	C	MH,CH	A-7
	32-36	4.5-6.0	.32		20-45	C,SIC	MH,CH	A-7
	36-60					BR		
FLOMATON	0-9	4.5-6.0	.10	A	NP-4	GR-LS,GR-S	GM,GP-GM,SM,SP-SM	A-1
	0-9	4.5-6.0	.10		NP-4	GRV-LS,GRV-S	GM,GP-GM,SM,SP-SM	A-1
	9-72	4.5-6.0	.17		NP-7	GRV-LS,GR-LS,GR-SL	GP,GM-GC,SM-SC,GM	A-1,A-2
FLORALA	0-8	4.5-5.5	.17	C	NP	LS,LFS	SM	A-2-4
	0-8	4.5-5.5	.20		NP-7	FSL,SL	SM,SM-SC	A-2,A-4
	8-36	4.5-5.5	.24		NP-7	FSL,SL	SM	A-2,A-4
	36-72	4.5-5.5	.28		4-15	FSL,SL,SCL	SC,SM-SC	A-4,A-6
FORESTDALE	0-6	4.5-6.0	.37	D	12-30	SICL	CL,CH	A-6,A-7
	0-6	4.5-6.0	.43		5-15	SIL,VFSL,L	CL,CL-ML	A-4,A-6
	6-26	4.5-6.0	.28		20-40	SIC,C,SICL	CH,CL	A-7
	26-60	4.5-7.8	.37		5-30	SICL,SIL,VFSL	CL,CL-ML	A-6,A-7,A-4
FREEMANVILLE	0-10	5.1-6.0	.24	B	NP-5	FSL,L,SL	SM,SP-SM	A-1,A-2,A-4
	10-17	5.1-6.0	.28		4-15	L,CL,SCL	SC,CL,CL-ML,SM-SC	A-4,A-6
	17-72	4.5-5.5	.28		11-25	C,CL,SC	SC,CL	A-6,A-7
FREEST	0-6	4.5-5.5	.28	C	NP-8	SL,FSL,L	SM,CL,ML,CL-ML	A-4
	6-15	4.5-6.0	.32		7-20	L,SCL	CL	A-4,A-6
	15-8	4.5-7.3	.28		20-30	CL,C,SIC	CL,CH	A-7
FRIPP	0-5	5.1-7.8	.10	A	NP	FS,S	SP,SP-SM	A-3
	5-80	5.6-7.8	.10		NP	FS,S	SP,SP-SM	A-3
FRUITDALE	0-7	4.0-5.1	.17	A	3-9	SL	SC,SC-SM,SM	A-2-4,A-4
	7-19	4.0-5.1	.28		2-7	FSL,SL	SC,SC-SM,SM	A-2-4,A-4
	19-44	4.0-5.1	.20		12-22	CL,L,SCL,SL	CL,SC	A-2-6,A-2-7,A-6,A-7
	44-71	4.0-5.1	.32		9-21	CL,FSL,L,SCL,SL	CL	A-6
	71-80	4.0-5.3	.28		3-17	FSL,L,SCL,SL	SC,SC-SM,SM	A-2-4,A-4,A-6
FRUITHURST	0-10	4.5-5.5	.24	C	NP-7	GR-L,GR-SL,GR-LS	SM,ML,CL-ML	A-4
	0-10	4.5-5.5	.28		NP-7	GR-SIL	ML,CL-ML	A-4
	10-39	4.5-5.5	.32		11-25	L,CL	ML,CL	A-6,A-7
	39-50					BR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
FRUITHURST	0-10	4.5-5.5	.28	C	NP-7	L,FSL ,SL	ML,CL-ML,SM,SM-SC	A-4
	0-10	4.5-5.5	.32		NP-7	SIL	ML,CL-ML	A-4
	10-39	4.5-5.5	.32		11-25	L,CL	ML,CL	A-6,A-7
	39-50					BR		
FULLERTON	0-15	4.5-5.5	.24	B	3-17	CR-SICL	CL,ML,SC,GC	A-2,A-6,A-4
	0-15	4.5-5.5	.28		3-10	CR-SIL,CR-L,CR-FSL	GM-GC,CL-ML,CL,GC	A-2,A-4
	15-19	4.5-5.5	.24		8-17	CR-SICL	CL,GC,SC,ML	A-2,A-4 A-6,A-7
	19-90	4.5-5.5	.20		20-42	CR-C,CR-SIC	MH,ML,GM,SM	A-2,A-7
FUQUAY	0-34	4.5-6.0	.10	B	NP	S,FS	SP-SM,SM	A-1,A-2,A-3
	0-34	4.5-6.0	.15		NP	LS,LFS	SP-SM,SM	A-2,A-3
	34-45	4.5-6.0	.20		NP-13	SL,FSL,SCL	SM,SC,SM-SC	A-2,A-4,A-6
	45-96	4.5-6.0	.20		4-12	SCL	SC,SM-SC,CL-ML	A-2,A-4,A-6
	96-99					VAR		
GARNER	0-5	5.6-7.8	.32	D	18-37	CL,C	CL,CH	A-6,A-7-6
	5-65	5.6-8.4	.32		31-51	C	CH	A-7-6
GAYLESVILLE	0-14	3.6-6.0	.37	D	8-15	SICL,SIL,L	CL,ML	A-4,A-6,A-7
	0-14	5.6-7.3	.37		NP-7	SIL,L,FSL	ML,CL-ML	A-4
	14-33	3.6-6.0	.28		11-20	SIC,C,CL	CL,ML	A-6,A-7
	33-72	3.6-6.0	.28		20-35	SIC,C	CL,CH	A-7
GEORGEVILLE	0-6	4.5-6.0	.43	B	NP-11	SIL,L,VFSL	ML	A-4,A-6
	0-6	4.5-6.0	.49		11-20	SICL,CL	CL,ML	A-6,A-7
	6-10	4.5-5.5	.32		8-20	SICL,CL	CL,ML	A-6,A-7,A-4
	10-53	4.5-5.5	.28		15-35	C,SIC,SICL	MH,ML	A-7
	53-63	4.5-5.5	.32		NP-12	SICL,L,SIL	ML,CL,CL-ML	A-4,A-6
GEORGEVILLE	0-6	4.5-6.0	.24	B	NP-10	GR-L,GR-SIL,GR-VFSL	GM,ML,SM	A-4
	0-6	4.5-6.0	.24		NP-5	SY-SIL,SY-L,SY-VFSL	ML	A-4
	6-10	4.5-5.5	.32		8-20	SICL,CL	CL,ML	A-6,A-7,A-4
	10-53	4.5-5.5	.28		15-35	C,SIC,SICL	MH,ML	A-7
	53-63	4.5-5.5	.32		NP-12	SICL,L,SIL	ML,CL,CL-ML	A-4,A-6
GILEAD	0-5	4.5-5.5	.17	C	NP	LS,GR-LS	SP-SM,SM	A-2
	0-5	4.5-5.5	.20		NP-4	SL,GR-SL	SM	A-2,A-4
	5-8	4.5-5.5	.24		4-16	SL,SCL	SM-SC,SC	A-2,A-4 A-6
	8-42	4.5-5.5	.28		18-30	SC,CL,C	SC,CL	A-6,A-7
	42-72	4.5-5.5	.24		11-20	SL,SCL	SC,CL	A-2,A-6
	72-80					VAR		
GOLDSBORO	0-15	3.6-5.5	.17	B	NP	LS,LFS	SM	A-2
	0-15	3.6-6.0	.20		NP-14	SL,FSL	SM,SM-SC,SC	A-2,A-4,A-6
	15-45	3.6-5.5	.24		4-18	SCL,SL	SM-SC,SC,CL-ML,CL	A-2,A-4,A-6
	45-65	3.6-5.5	.24		6-32	SCL,CL,SC	SC,CL,CL-ML,CH	A-4,A-6,A-7-6
	65-76					VAR		
GORGAS	0-6	4.5-6.5	.15	D	NP-7	LS	SM-SC,SM,ML,GM	A-4,A-2-4 A-1-B
	0-6	4.5-6.5	.20		NP-7	SL,FSL,L	SM,ML,SM-SC,CL-ML	A-4,A-2
	6-14	4.5-5.5	.17		NP-7	SL,GR-SL,L	SM,ML,GM,GM-GC	A-4,A-2
	14-18					BR		
GRADY	0-5	3.6-5.5	.10	D	NP-10	SL,FSL	SM,SM-SC	A-2,A-4
	0-5	3.6-5.5	.10		NP-10	SL,FSL,FSL	SM,SM-SC,SC	A-2,A-4
	0-5	3.6-5.5	.24		NP-15.	L,CL	ML,CL-ML,CL	A-4,A-6
	5-11	3.6-5.5	.10		11-20	CL,SCL,L	CL	A-6
	11-62	3.6-5.5	.10		12-24	C,SC	CL,CH,MH	A-6,A-7
GRASMERE	0-20	4.5-6.0	.32	B	11-20	SICL,SIC	ML,CL	A-6,A-7
	20-31	4.5-6.0	.43		11-20	SIL,SICL	ML,CL	A-6
	31-66	4.5-6.0	.37		13-22	SICL,SIC,C	ML,MH	A-7
GREENDALE	0-9	5.1-6.5	.32	B	3-12	SIL,L	CL-ML,ML,CL	A-4,A-6
	0-9	5.1-6.5	.28		3-12	CR-SIL	CL,GC,GM-GC,CL-ML	A-4,A-6
	9-56	5.1-6.0	.28		3-15	CR-SIL,CR-L,CR-SICL	CL,GC,GM-GC,CL-ML	A-4,A-6

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
GREENVILLE	0-9	4.5-6.0	.15	B	NP	LS,LFS	SM,SP-SM	A-2
	0-9	4.5-6.0	.24		NP-10	SL,FSL	SM,SC,SM-SC,CL-ML	A-2,A-4
	0-9	4.5-6.0	.24		6-15	L,SCL,CL	CL,SC,CL-ML,SM-SC	A-4,A-6
	9-80	4.5-6.0	.17		7-25	CL,SC,C	CL,SC,ML	A-6,A-7,A-4
GRITNEY	0-7	4.5-5.5	.15	C	NP	LS,LFS	SP-SM,SM	A-2-4
	0-7	4.5-5.5	.20		NP-6	SL,FSL	SM,SM-SC	A-2-4,A-4
	7-12	4.5-5.5	.32		15-25	SCL,SC,CL	SC,CL	A-6,A-7
	12-31	4.5-5.5	.32		22-40	SC,C,CL	CH,CL,SC	A-7
	31-50	4.5-5.5	.28		20-35	SCL	CH,CL,SC	A-7
	50-68					VAR		
GROVER	0-9	4.5-6.5	.24	B	NP-10	SL,FSL,COSL	SM,SM-SC,SC	A-4
	0-9	4.5-6.5	.28		7-20	SCL	SC,CL	A-4,A-6
	9-38	4.5-5.5	.20		12-30	SCL,CL	SM,ML,MH	A-6,A-7
	38-68	4.5-5.5	.32		NP-7	SL,L,SCL	SM,SM-SC	A-4
GUIN	0-9	4.5-6.0	.10	A	NP-4	GR-SL	GM,GP-GM,SM,SP-SM	A-1
(Flomaton)	9-72	4.5-6.0	.17		NP-7	GR-LS,GR-SL,VGR-LS	GC-GM,GM,GP-GM,SC-SM	A-1,A-2
GUTHRIE	0-8	3.6-5.0	.43	D	2-7	SIL	ML,CL-ML	A-4
	8-32	3.6-5.0	.43		5-15	SIL,SICL	ML,CL-ML,CL	A-4,A-6
	32-53	3.6-5.0	.43		5-20	SIL,SICL	CL,CL-ML	A-4,A-6,A-7
	53-68	3.6-5.0	.43		4-25	SICL,SIL	CL,CL-ML	A-6,A-7,A-4
GWINNETT	0-7	5.1-6.5	.17	B	NP-15	GR-SL,GR-SCL	SM,SC,SM-SC	A-2,A-4,A-6
	0-7	5.1-6.5	.28		NP-12	SL,L	SM,SC,SM-SC,ML	A-2,A-4,A-6
	0-7	5.1-6.5	.28		4-12	SCL,CL	SC,ML,SM-SC,CL-ML	A-4,A-6
	7-35	5.1-6.5	.28		16-30	C,SC	MH,ML,CL,CH	A-7,A-6
	35-45					BR		
HALSO	0-3	3.6-5.5	.28	D	NP	SL,FSL,L	SM,ML	A-4
	0-3	3.6-5.5	.32		5-15	SIL,CL	CL-ML,CL	A-4,A-6
	3-5	3.6-5.5	.32		10-30	CL,C,SICL	ML,MH,CL,CH	A-7,A-6
	5-33	3.6-5.5	.32		15-35	C,SIC	ML,MH	A-7
	33-48	3.6-5.5	.24		4-16	CNV-CL,CNV-C,CN-SCL	GC,CL,CL-ML,GM-GC	A-2,A-4,A-6
	48-60							
HAMBLEN	0-6	4.5-7.3	.28	C	NP-5	FSL	SM-SC,SM	A-2,A-4
	0-6	4.5-7.3	.32		3-14	SIL,L	CL,CL-ML,ML	A-4,A-6
	6-45	4.5-7.3	.32		3-17	SIL,L,CL	CL,CL-ML,ML	A-4,A-6
	45-60	4.5-7.3	.32		3-17	SIL,L,CL	CL,CL-ML,ML,GC	A-4,A-6,A-2
HANCEVILLE	0-8	4.5-6.5	.24	B	NP-10	FSL,L,SL	SM,SC,CL,ML	A-4
	8-54	4.5-5.5	.24		11-25	CL,SC,C	CL	A-6,A-7
	54-63	4.5-5.5	.24		5-20	CL,SCL,FSL	CL,CL-ML,ML	A-4,A-6,A-7
	63-90					BR		
HANNON	0-3	5.1-7.3	.32	D	20-30	CL	CL	A-7
	3-18	5.1-7.3	.32		35-50	C,SIC	CH	A-7
	18-30	5.6-7.8	.32		35-50	C,SIC	CH	A-7
	30-45	7.4-8.4	.32		30-45	CL,C,SIC	CH,CL	A-7
	45-65	7.9-8.4	.28		15-30	CL,SR-SLC	CH,CL	A-6,A-7
HARD LABOR	0-2	4.5-6.0	.24	B	NP-7	LS	SC-SM, SM	A-2
	2-9	4.5-6.0	.24		NP-7	LS, SL	SM,SM-SC	A-6,A-4
	9-15	4.5-6.0	.24		NP-7	LS, SL	SC-SM, SM	A-2,A-1-B
	15-45	4.5-6.0	.28		8-13	SC,CL,C	CL	A-7
	45-80	4.5-6.0	.28		8-22	SC,CL,SCL	CL,SC	A-4,A-6,A-7
HARLESTON	0-9	3.6-5.5	.20	C	NP-7	SL,FSL,L	ML,SM,CL-ML,SM-SC	A-2,A-4
	0-9	4.5-5.5	.17		NP	LS,LFS	SM	A-2
	9-60	4.5-5.5	.32		5-10	SL,L	SC,CL,CL-ML,SM-SC	A-2,A-4
	60-T2	4.5-5.5	.32		5-13	SL,L,SCL	SC,CL,CL-ML,SM-SC	A-2,A-4,A-6
HARTSELLS	0-13	3.6-5.5	.20	B	NP-7	SL,FSL	SM,SM-SC	A-2,A-4
	0-13	3.6-5.5	.28		NP-7	L	SM,ML,SM-SC,CL-ML	A-4
	13-30	3.6-5.5	.32		NP-15	FSL,L,SCL	SC,SM,CL-ML,CL	A-4,A-6
	30-36	3.6-5.5	.32		NP-15	SL,L,SCL	SM-SC,SC,CL-ML,CL	A-2,A-4,A-6
	36-40					BR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.1.	Textural Classification USDA	Unified	AASHTO
HECTOR	0-6	5.1-6.5	.24	D	NP-7	FSL,L	SM,ML,SM-SC,CL-ML	A-4,A-2
	0-b	5.1-6.5	.10		NP-7	GRV-FSL,GRV-L	GM,GM-GC	A-2,A-1-B
	0-b	5.1-6.5	.17		NP-7	GR-FSL,GR-L	SM,ML,GM,GM-GC	A-4,A-2
	6-15	4.5-5.5	.17		NP-7	FSL,GR-FSL,GR-L	SM,ML,GM,GM-GC	A-4,A-2
	15-19					BR		
HEIDEL	0-11	4.5-5.5	.17	B	NP-3	LS,LFS	SM	A-2-4
	0-11	4.5-5.5	.20		NP-4	FSL,SL	SM	A-4
	11-46	4.5-5.5	.20		3-7	FSL,SL,L	CL-ML,SM-SC,SM	A-4
	46-80	4.5-5.5	.20		8-15	SCL,FSL,L	CL,SC	A-4,A-6
HELENA	0-12	3.6-6.0	.15	C	NP	LS,LCOS	SM	A-1-B
	0-12	3.6-6.0	.24		NP-9	SL,FSL,L	SM,SM-SC,SC	A-2,A-4
	0-12	3.6-6.0	.28		15-25	SCL,CL	CL,SC	A-6,A-7
	12-19	3.6-5.5	.28		15-26	SCL,CL	CL,SC	A-6,A-7
	19-43	3.6-5.5	.28		24-50	CL,SC,C	CH	A-7
	43-60					VAR		
HELENA	0-12	4.5-6.0	.10	C	NP	GR-LCOS,GR-LS,GR-S	SM,SP-SM,GM,GP-GM	A-1-B
	0-12	4.5-6.0	.15		NP-9	GR-FSL,GR-L,GR-COSL	SM,SC,GM,GC	A-2,A-4
	0-12	4.5-6.0	.20		15-25	GR-CL,GR-SCL	CL,SC,GC	A-6,A-7
	12-19	3.6-5.5	.28		15-26	SCL,CL	CL,SC	A-6,A-7
	19-43	3.6-5.5	.28		24-50	CL,SC,C	CH	A-7
	43-60					VAR		
HERMITAGE	0-8	4.5-5.5	.28	B	12-20	SICL	CL	A-6
	8-26	4.5-5.5	.24		12-20	C,SIC,SICL	CL	A-6
	26-42	4.5-5.5	.24		12-34	C,SIC	CH,CL,MH,ML	A-6,A-7
	42-60	4.5-5.5	.24		12-34	C,SIC,GR-C	CH,CL,MH,ML	A-6,A-7
HENDERSON	0-13	4.5-5.5	.20	C	NP-7	GR-SL	SC-SM,SM	A-1,A-2
	13-49	4.5-5.5	.28		18-30	GR-SC	CH,CL	A-6,A-7
	49-65	4.5-5.5	.32		25-32	CH-C,GR-SC	CH,CL	A-7
HERNDON	0-9	4.5-6.5	.24	B	NP-5	ST-L,ST-SIL,ST-VFSL	ML	A-4
	0-9	4.5-6.5	.49		11-20	SICL	CL,ML	A-6,A-7
	0-9	4.5-6.5	.43		NP-12	L,SIL,VFSL	ML,CL CL-ML	A-4,A-6
	9-48	3.6-5.5	.28		13-30	SICL,SIC,C	MH,ML	A-7
	48-68	3.6-5.5	.32		9-36	SIL,L,FSL	MH,ML	A-7,A-5
HIWASSEE	0-7	4.5-6.5	.24	B	5-23	GR-CL,GR-L,GR-SCL	CL,ML,CL-ML	A-4,A-6,A-7-6
	7-61	4.5-6.5	.28		12-36	C,SIC,CL	CL,ML,MH	A-6,A-7-5,A-7-6
	61-70	4.5-6.5	.28		4-20	SL,L,SCL	SM,ML,SM-SC	A-4,A-6,A-7-5
HIWASSEE	0-7	4.5-6.5	.28	B	NP-7	SL,FSL	SM,SM-SC	A-4,A-2
	0-7	4.5-6.5	.28		3-23	CL,SCL,L	CL,ML,CL-ML	A-7-6,A-6,A-4
	0-7	4.5-6.5	.32		4-20	SIL	ML,MH	A-4,A-5,A-6
	7-61	4.5-6.5	.28		12-36	C,SIC,CL	CL,ML,MH	A-6,A-7-5,A-7
	61-70	4.5-6.5	.28		4-20	SL,L,SCL	SM,ML,SM-SC	A-4,A-6,A-7-5
HOLLYWOOD	0-4	6.1-8.4	32	D	11-25	CL,SICL,SIC	CL	A-6,A-7
	4-72	6.6-8.4	37		25-45	SIC,C	CH	A-7
	72-80					BR		
HOLSTON	0-8	4.5-5.5	.28	B	NP-6	L,FSL,SL	ML,CL-ML,SM,SM-SC	A-4,A-2
	8-44	4.5-5.5	.32		3-10	L,CL,SCL	ML,CL-ML,SM,SM-SC	A-4,A-2
	44-75	4.5-5.5	.32		7-22	CL,L,GR-CL	ML,CL,GC,SC	
	A-4,A-6,A-7,A-2							
HOULKA	0-8	4.5-5.5	.28	D	25-35	SCL,CL,SICL	CH,CL	A-7
	0-8	4.5-5.5	.32		32-45	SIC,C	CH,CL	A-7
	8-60	4.5-5.5	.32		30-50	C,SIC,CL	CH	A-7
HOUSTON	0-10	6.1-8.4	37	D	23-37	C	CH,MH	A-7
	10-42	6.1-8.4	32		25-48	C	CH,MH	A-7
	42-72	6.6-8.4	32		30-45	C	CH,MH	A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
HULETT	0-13	4.5-6.0	15	B	NP-7	GR-FSL,GR-SL,GR-L	SM,SM-SC,ML	A-2,A-4
	0-13	4.5-6.0	32		NP-7	FSL,SL,L	SM,SM-SC,ML	A-2,A-4
	0-13	4.5-6.0	32		4-17	SCL,CL	ML,CL,CL-ML	A-4,A-6
	13-36	4.5-5.5	28		14-30	CL,C	MH,ML	A-7
	36-60					BR		
HUMPHREYS	0-8	4.5-6.0	28	B	3-10	CR-SIL,CR-L,GR-SIL	ML,CL-ML,CL,GM-GC	A-4
	8-42	4.5-6.0	24		10-16	CR-SICL,CR-CL,GR-SIL	CL,GC,SC	A-6
	42-60	4.5-6.0	24		8-15	CR-SICL,CR-CL,CRV-CL	CL,GC,SC	A-4,A-6,A-2
HUNTINGTON	0-7	4.5-6.0	.20	B	4-15	FSL	CL,CL-ML,SC,SC-SM	A-4,A-6
	7-60	4.5-6.0	.32		8-15	SIL,SICL	CL	A-4,A-6
HYDE	0-17	3.6-5.5	.17	B/D	NP-7	L,SIL,VFSL	ML	A-4
	0-17	3.6-5.5	.17		2-14	MK-L	OL,ML,CL-ML	A-4,A-6,A-7
	17-54	3.6-5.5	.43		7-20	CL,L,SICL	CL	A-6,A-4,A-7
	54-72					VAR		
IREDELL	0-7	5.1-7.3	.24	C/D	2-10	GR-L,ST-L	SM,SC,ML,GM	A-2-4,A-4
	0-7	5.1-7.3	.28		NP-9	FSL,SL	SM,SM-SC,SC	A-2-4,A-4
	0-7	5.1-7.3	.32		5-12	L,SIL,CL	ML,CL-ML,CL	A-4,A-6
	7-24	5.6-7.3	.20		29-85	C	CH	A-7
	24-27	6.1-7.8	.28		20-39	L,SCL,CL	CL,CH,SC	A-7
	27-62					VAR		
IRVINGTON	0-6	4.5-6.5	.28	C	NP-6	FSL,SL,L	ML,SM,CL-ML,SM-SC	A-2,A-4
	6-33	4.5-5.5	.28		3-12	L,SCL,CL	ML,CL,CL-ML,SC	A-4,A-6
	33-61	4.5-5.5	.28		4-12	L,SCL,CL	CL,CL-ML SC,SM-SC	A-4,A-6
	61-82	4.5-5.5	.24		4-20	SCL,CL,SC	CL,SC,CL-ML,SM-SC	A-4,A-6
IUKA	0-13	5.1-6.0	.17	C	NP	LS,LFS	SM	A-2
	0-13	5.1-6.0	.24		NP-7	FSL,SL	SM,SM-SC,ML,CL-ML	A-4,A-2
	0-13	5.1-6.0	.37		NP-7	L,SIL	ML,CL-ML	A-4
	13-22	4.5-5.5	.28		NP-7	FSL,L,SL	SM,SM-SC,ML,CL-ML	A-4
	22-60	4.5-5.5	.20		NP-7	SL,FSL,L	SM,ML	A-2,A-4
IZAGORA	0•11	3.6-6.0	.17	C	NP	LS,LFS	SM,SP-SM	A-2,A-4
	0-11	3.6-6.0	.28		NP-5	VFSL,FSL,SL	SM,SM-SC,ML,CL-ML	A-4
	0-11	3.6-6.0	.37		NP-10	L,SIL	CL,CL-ML,ML	A-4
	11-46	3.6-5.5	.32		8-25	L,CL,SICL	CL	A-4,A-6,A-7
	46-91	3.6-5.5	.32		20-40	CL,C	CL,CH	A-6,A-7
JEFFERSON	0-8	4.5-5.5	.28	B	0-6	L	CL-ML,ML,SC-SM,SM	A-2,A-4
	8-48	4.5-5.5	.32		3-10	L,CL,SCL	CL-ML,ML,SC-SM,SM	A-2,A-4
	48-60	4.5-5.5	.32		7-22	CL,L,GR-CL	CL,GC,ML,SC	A-2,A-4
								A-6,A-7
JOHNSBURG	0-8	4.5-5.5	.43	C	2-10	SIL	CL-ML,ML	A-4
	8-22	4.5-5.5	.43		5-16	SIL,SICL	CL,CL-ML	A-4,A-6
	22-57	4.5-5.5	.43		5-20	SIL,SICL	CL,CL-ML	A-4,A-6,A-7
	57-60	4.5-5.5	.37		12-22	SIL,SICL,C,CR-SICL	CL,GC,ML	A-6,A-7
JOHNSTON	0-30	4.5-5.5	.17	D	2-14	MK-L	OL,ML,CL-ML	A-4,A-5
								A-7-5
	0-30	4.5-5.5	.20		NP-10	L,SL,FSL	ML,SM	A-2,A-4
	30-34	4.5-5.5	.17		NP	SR-LS-S	SM,SP-SM	A-2,A-3
	34-60	4.5-5.5	.17		NP-10	SR-FSL-SL	SM	A-2,A-3
JONES	0-12	5.6-6.5	.17	B	NP	LS,LFS	SM	A-2
	0-12	5.6-6.5	.20		NP-4	FSL,SL	SM,SM-SC	A-2
	12-52	5.1-6.5	.24		NP-7	SL,FSL	SM,SM-SC	A-2
	52-73	5.1-6.5	.10		NP	LS,SL	SM	A-2
KALMIA	0-14	4.5-6.0	.15	B	NP	LS,LFS	SM,SM-SC	A-2
	0-14	4.5-6.0	.20		NP-10	SL,FSL	SM,SC,SM-SC	A-2,A-4
	14-32	4.5-5.5	.24		4-15	SCL,L,SL	SC,SM-SC	A-2,A-4,A-6
	32-60	4.5-5.5	.10		NP	LS,S	SM,SP-SM,SP	A-2,A-3

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
KAUFMAN	0-6	5.6-8.4	.32	D	33-62	C,SIC	CH	A-7-6,A-7-5
	6-35	5.6-8.4	.32		45-71	C	CH	A-7-6,A-7-5
	35-80	5.6-8.4	.32		45-71	C	CH	A-7-6,A-7-5
KETONA	0-6	6.1-8.4	.32	D	10-24	SIL,SICL,SIC	ML,MH	A-6,A-7
	6-50	6.1-8.4	.32			SIC,C	CL,CH	A-7
	50-54					BR		
KINSTON	0-12	4.5-6.0	.24	B/D	NP-10	FSL	SM,SC,SM-SC	A-2,A-4
	0-12	4.5-6.0	.37		4-15	L,SIL	ML,CL,CL-ML	A-4,A-6
	12-60	4.5-5.5	.32		8-22	L,CL,SCL	CL	A-4,A-6,A-7
	60-72					VAR		
KIPLING	0-3	3.6-6.0	.28	D	NP-7	FSL	SM-SC,SM,ML,CL-ML	A-4
	0-3	3.6-6.0	.32		NP-10	SIL,L	ML,CL-ML,CL	A-4
	0-3	3.6-6.0	.32		15-25	CL,SICL	CL	A-6,A-7
	3-62	3.6-8.4	.32		22-45	SIC,C,SICL	CH,CL	A-7,A-6
	62-72	5.1-8.4	.32		26-50	C,SIC	CH,CL	A-7
KIRKVILLE	0-9	4.5-5.5	.15	C	NP	LS	SM	A-2
	0-9	4.5-5.5	.28		NP-5	SL,FSL	ML,SM,CL-ML,SM-SC	A-2,A-4
	0-9	4.5-5.5	.37		NP-5	L,SIL	SM,ML,CL-ML,SM-SC	A-2,A-4
	9-72	4.5-5.5	.28		NP-5	L,SL,FSL	ML,SM,CL-ML,SM-SC	A-2,A-4
KOLOMOKI	0-8	4.5-6.5	.17	B	NP	LS,FSL	SM,SP-SM	A-2
	0-8	4.5-6.5	.24		NP-6	FSL,SL,SCL	SM,ML,CL-ML	A-2,A-4
	8-28	4.5-6.0	.32		14-22	SC,C	CL	A-6,A-7
	28-35	4.5-6.0	.28		7-15	SC,SCL	ML,SC,CL,SM	A-4,A-6
	35-42	4.5-6.0	.24		NP-10	SCL,SL	SM,SC,SM-SC	A-4,A-2
	42-65	4.5-6.0	.20		NP	LS,S	SM,SP-SM	A-2
LAFITTE	0-75	3.6-8.4		D		MUCK	PT	A-8
	75-80					VAR		
LAKELAND	0-43	4.5-6.0	.10	A	NP	S,FS	SP-SM	A-3,A-2-4
	43-80	4.5-6.0	.10		NP	S,FS	SP,SP-SM	A-3,A-2-4
LATONIA	0-4	4.5-5.5	.20	B	NP	SL,FSL	SM	A-2-4,A-4
	0-4	4.5-5.5	.17		NP	LFS,LS	SM	A-2-4
	4-32	4.5-5.5	.20		NP	SL,L,FSL	SM	A-2-4,A-4
	32-74	4.5-5.5	.17		NP	S,SL	SM,SP-SM	A-2-4
LAUDERDALE	0-3	3.6-5.0	.49	D	6-9	SIL	CL,CL-ML	A-4
	3-16	3.6-5.0	.43		13-25	CL,SICL,	CL	A-6
	16-80					BR		
LAWRENCE	0-9	4.5-5.5	.43	C	2-10	SIL	CL-ML,ML	A-4
	9-24	4.5-5.5	.43		5-16	SIL,SICL	CL,CL-ML	A-4,A-6
	24-64	4.5-5.5	.43		5-20	SIL,SICL	CL,CL-ML	A-4,A-6,A-7
	64-80	4.5-5.5	.37		12-22	GR-SIL,C,GR-SICL	CL,GC,ML	A-6,A-7
LEADVALE	0-8	4.5-5.5	.43	C	2-10	SIL,L,FSL	ML,CL-ML,CL	A-4
	8-23	4.5-5.5	.43		3-14	SIL,SICL,L	CL-ML,CL,ML	A-4,A-6
	23-48	4.5-5.5	.43		3-18	SIL,SICL	CL-ML,CL,ML	A-4,A-6,A-7
	48-58	4.5-5.5	.24		12-26	SICL,SIC,C	CL,MH,ML,CH	A-6,A-7
LEAF	0-9	3.6-5.5	.28	D	5-12	FSL,L	ML	A-4,A-6
	0-9	3.6-5.5	.32		5-15	SIL,VFSL	ML,CL	A-4,A-6
	9-72	3.6-5.5	.32		20-38	SICL,SIC,C	CL,CH	A-7
LEE	0-7	4.5-6.5	.28	D	3-10	CR-SIL,GR-L,SIL	CL-ML,GM-GC,ML	A-4
	7-34	4.5-5.5	.28		3-10	CR-SIL,GR-L	CL-ML,GM-GC,GM,ML	A-4
	34-60	4.5-5.5	.28		3-10	CR-SIL,CR-L	CL-ML,GM-GC,SM-SC	A-4,A-2,A-1
LEEFIELD	0-23	4.5-6.0	.10	C	NP	LS,S,FS	SM,SW-SM,SP-SM	A-2
	23-33	4.5-5.5	.15		NP-16	SL,SCL	SC,SM,SM-SC	A-2,A-4,A-6
	33-75	4.5-5.5	.10		NP-20	SL,SCL	SC,SM,SM-SC	A-2,A-4,A-6

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
LEEPER	0-8	5.6-8.4	.28	D	NP-10	FSL	SM	A-2,A-4
	0-8	5.6-8.4	.32		25-35	SICL,CL	CH,CL	A-7
	0-8	5.6-8.4	.32		26-40	SIC,C	CH,MH	A-7
	8-50	5.6-8.4	.32		30-50	C,SIC,SICL	CH	A-7
LEESBURG	0-6	4.5-5.5	.15	B	NP	GR-SL,GR-FSL,GR-L	SM,GM,ML	A-2,A-4,A-1
	0-6	4.5-5.5	.15		NP-7	CB-SL,CB-FSL,CB-L	SM,SM-SC,ML,CL-ML	A-2,A-4
	0-6	4.5-5.5	.15		NP-7	ST-SL,ST-FSL,ST-L	SM,SM-SC,ML,CL-ML	A-2,A-4
	6-24	4.5-5.5	.32		NP-10	GR-L,GR-CL,GR-SICL	SM,ML,CL-ML,CL	A-4
	24-40	4.5-5.5	.32		8-20	GR-CL,GR-SICL,GR-SCL	SC,CL	A-4,A-6
	40-65	4.5-5.5	.32		12-25	GR-CL,GR-SICL,GR-C	SC,CL	A-6,A-7
LENOIR	0-8	3.6-5.5	.28	D	4-10	FSL	SM-SC,SC,CL-ML,CL	A-4
	0-8	3.6-5.5	.37		4-10	L,SIL,VFSL	ML,CL,CL-ML	A-4
	8-75	3.6-5.5	.32		11-35	C,SIC,CL	CL,CH	A-6,A-7
LEON	0-15	3.6-5.5	.10	B/D	NP	FS,S	SP,SP-SM	A-3,A-2-4
	0-15	3.6-6.5	.10		NP	S,FS	SP,SP-SM	A-3,A-2-4
	15-23	3.6-5.5	.15		NP	FS,S,LS	SM,SP-SM,SP	A-3,A-2-4
	23-80	3.6-5.5	.10		NP	FS,S	SP,SP-SM	A-3,A-2-4
LEVY	0-8	3.6-5.5	.20	D	8-30	MK-SICL,MK-C	CL,CH,ML,MH	A-6,A-7,A-4
	0-8	3.6-5.5	.37		12-35	SICL,SIC,C	CL,CH	A-6,A-7
	8-44	3.6-5.5	.32		15-35	SIC,C,SICL	CL,CH	A-6,A-7
	44-60					VAR		
LINDSIDE (Chenneby)	0-18	4.5-6.0	.37	C	3-15	SIL	CL,CL-ML,ML	A-4,A-6
	18-30	4.5-6.0	.32		8-20	L,SICL,SIL	CH,CL,MH,ML	A-4,A-6,A-7
	30-60	5.1-6.5	.20		NP-4	SL	ML,SM	A-2,A-4
LINKER	0-5	3.6-5.5	.20	B	NP-7	ST-FSL,ST-L	SM,ML	A-4
	0-5	3.6-5.5	.24		NP-7	GR-FSL,GR-L	ML,GM,SM	A-2,A-4
	0-5	3.6-5.5	.28		NP-7	FSL,L	SM,ML	A-4
	5-25	3.6-5.5	.32		NP-18	FSL,SCL,L	CL,SC,SM,ML	A-4,A-6
	25-35	3.6-5.5	.28		NP-18	GR-SCL,GR-FSL,SCL	CL,SC,GC,ML	A-4,A-6
	35-37					UWB		
LLOYD	0-4	5.1-6.0	.24	B	8-21	L,SL,SCL	SC,CL,SC-SM	A-4,A-6
	4-43	5.1-6.0	.28		12-36	C, SIC,CL	MH,ML	A-7-5,A-7-6
	43-56	5.1-6.0	.28		4-20	SICL,L,SCL	SC-SM,SM,ML,CL	A-4,A-6,A-7
	56-80	5.1-6.0	.28		4-20	SIL,SL,L,SCL	ML,CL,SC-SM,SM	A-4,A-6,A-7
LOBELVILLE	0-9	4.5-6.0	.28	C	NP-7	CR-SIL,CR-L,GR-SIL	ML,CL-ML,GM,GM-GC	A-4
	9-42	4.5-6.0	.28		3-12	CR-SIL,CR-L,CR-SICL	CL-ML,ML,GM,GM-GC	A-4,A-6
	42-65	4.5-6.0	.28		3-12	CR-SIL,CR-L,CR-SL	ML,CL-ML,GM,GM-GC	A-4,A-2 A-6,A-1
LOCKHART	0-6	5.1-6.5	.15	B	NP	GR-LS,GR-SL	GM,GP-GM,SM,SP-SM	A-1,A-2
	6-54	5.1-6.5	.17		5-15	GR-SCL,GR-L	GC,GM-GC,SC,SM-SC	A-2,A-4,A-6
	54-72					VAR		
LOCUST	0-8	4.5-5.5	.32	C	NP-7	FSL,SL	SM,ML	A-4,A-2
	0-8	4.5-5.5	.37		4-8	L,SIL	ML,SM	A-4
	8-24	4.5-5.5	.37		12-20	L,SIL,CL	CL	A-6
	24-64	4.5-5.5	.37		2-12	CL,L,SL	CL,ML,CL-ML	A-4,A-6
	64-70	4.5-5.5	.28		2-12	CR-CL,CR-L,CR-SL	SM,SC,SM-SC	A-1,A-2
LORMAN	0-5	4.5-5.5	.24	D	6-10	FSL	ML,CL-ML	A-4
	5-9	4.5-5.5	.24		6-11	FSL,L	ML,CL-ML	A-4
	9-18	4.5-5.5	.32		29-42	C,SIC	CH	A-7
	18-60	4.5-8.0	.32		29-42	C,SIC	CH	A-7
	60-80	4.5-8.4	.32		13-40	C,CL,SICL,SIC	CL,CH	A-6,A-7
LOUISA	0-4	4.5-6.0	.17	B	NP	GR-L,GR-SL,GR-FSL	SM	A-1,A-2,A-4
	0-4	4.5-6.0	.28		NP	L,SL,FSL	SM,ML	A-2,A-4
	4-15	4.5-6.0	.24		NP	GR-L,GR-SL	SM	A-2,A-4
	15-60					BR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
LOUISBURG	0-7	4.5-6.0	.24	B	NP-6	SL,FSL	SM,SM-SC	A-2
	0-7	4.5-6.0	.10		NP	LS,LCOS	SM	A-2,A-1-B
	7-24	4.5-6.0	.24		NP-7	SL	SM,SM-SC	A-2,A-4
	24-60					BR		
LOUISBURG	0-7	4.5-6.0	.10	B	NP	GR-LS,GR-LCOS	SM,SP-SM	A-2,A-1-B
	0-7	4.5-6.0	.24		NP-6	GR-SL,GR-FSL,GR-COSL	SM,SM-SC	A-2,A-1-B
	7-24	4.5-6.0	.24		NP-7	SL,GR-SL	SM,SM-SC	A-2,A-4
	24-60					BR		
LOUISBURG	0-7	4.5-6.0	.10	B	NP	ST-SL,ST-LS,ST-LCOS	SM	A-2,A-1-B
	0-7	4.5-6.0	.10		NP	STV-SL	SM	A-2,A-1
	7-24	4.5-6.0	.24		NP-7	ST-SL	SM,SM-SC	A-2,A-4
	24-60					BR		
LUCEDALE	0-8	5.1-6.5	24	B	NP-3	SL,L,FSL	SM,ML	A-2,A-4
	8-60	4.5-5.5	24		4-15	SCL,CL,L	CL-ML,SC,CL,SM-SC	A-4,A-6,A-2
LUCY	0-24	5.1-6.0	.10	A	NP	LS,LFS	SM,SP-SM	A-2
	0-24	5.1-6.0	.10		NP	S,FS	SM,SP-SM	A-2
	24-35	4.5-5.5	.24		NP-15	SL,FSL,SCL	SM,SC,SM-SC	A-2,A-4,A-6
	35-70	4.5-5.5	.28		3-20	SCL,CL,SC	SC,SM-SC,SM	A-2,A-6,A-4
LUVERNE	0-7	3.6-5.5	.15	C	NP	LS,LFS	SM	A-2,A-4
	0-7	3.6-5.5	.24		NP	SL,FSL	ML,SM	A-4,A-2
	0-7	3.6-5.5	.28		3-16	SCL,CL	SM,ML,CL,SC	A-6,A-4
	7-30	3.6-5.5	.28		12-34	CL,SC,C	ML,MH	A-7,A-6
	30-40	3.6-5.5	.28		2-14	CL,SCL	ML,MH,SM	A-4,A-5,A-7
	40-80	3.6-5.5	.28		3-16	SR-LS-SCL	SM,ML	A-2,A-4 A-6,A-7
LYERLY	0-6	4.5-6.5	.37	D	3-10	L	ML,CL CL-ML	A-4
	0-6	4.5-6.5	.43		5-15	SIL,SICL	CL,CL-ML	A-4,A-6
	6-22	4.5-6.5	.32		30-60	C	CH	A-7-6
	22-32	5.1-7.3	.32		40-60	C	CH	A-7-6
	32-36					BR		
LYNCHBURG	0-10	3.6-5.5	.15	C	NP-4	LS,LFS	SM,SP-SM	A-2
	0-10	3.6-5.5	.20		NP-7	SL,FSL,L	SM,ML	A-2,A-4
	10-62	3.6-5.5	.20		4-18	SCL,SL,CL	SM-SC,SC,CL,CL-ML	A-2,A-4,A-6
MACON	0-9	4.5-6.0	.28	B	NP-4	FSL,L	SM,ML	A-4
	9-24	4.5-6.0	.28		11-17	CL,SCL,L	CL,SC	A-6
	24-75	4.5-6.0	.24		12-23	CL,SCL,SC	SC,CL	A-6,A-7
MADISON	0-6	4.5-6.0	.15	B	NP-7	GR-FSL,GR-SL	SM	A-2,A-4
	0-6	4.5-6.0	.24		NP-8	FSL,SL	SM	A-2,A-4
	0-6	4.5-6.0	.28		7-20	CL,SCL	CL	A-4,A-6
	6-30	4.5-5.5	.32		12-35	C,CL,SC	MH,ML	A-7
	30-35	4.5-6.0	.28		7-20	L,SCL,CL	CL	A-4,A-6
	35-66					VAR		
MALBIS	0-7	4.5-6.0	.24	B	NP-5	FSL,L,SL	SM,ML	A-4
	7-26	4.5-5.5	.28		5-11	L,SCL,CL	CL-ML,CL	A-4,A-6
	26-54	4.5-5.5	.28		4-15	SCL,CL,L	ML,CL	A-4,A-6,A-7
	54-71	4.5-5.5	.28		4-15	SCL,CL	ML,CL	A-4,A-5 A-6,A-7
MANTACHIE	0-11	4.5-4.5	.28	C	NP-5	FSL,SL,L	CL-ML,SM-SC,SM,ML	A-4
	0-11	4.5-5.5	.28		5-15	CL	CL-ML,CL	A-4,A-6
	0-11	4.5-5.5	.37		NP-10	SIL	ML,CL-ML,CL	A-4
	11-61	4.5-5.5	.28		5-15	L,CL,SCL	CL,SC,SM-SC,CL-ML	A-4,A-6
MARIETTA	0-10	5.6-'7.8	.28	C	5-10	L,FSL	CL,CL-ML,SM-SC,SC	A-4
	0-10	5.6-7.8	.28		5-10	SIL,VFSL	CL,CL-ML	A-4
	10-46	5.6-7.8	.28		8-20	SICL,SCL,L	CL,SC	A-6,A-4
	46-62	5.6-7.8	.28		15-30	SICL,SC,L	CL,CH,SC	A-7,A-6

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
MARLBORO	0-9	5.1-6.5	.15	B	NP-4	LS,LFS	SM	A-2
	0-9	5.1-6.5	.20		NP-7	SL,FSL,VFSL	SM,ML	A-2,A-4
	9-60	4.5-6.0	.20		b-20	SC,CL,C	CL,ML,CL-ML	A-4,A-6,A-7
	60-72	4.5-6.0	.20		b-20	SCL,SC,C	CL,ML,SM,SC	A-4,A-6,A-7
MARVYN	0-7	4.5-6.0	.15	B	NP	LS,LFS	SM	A-2
	0-7	4.5-6.0	.24		NP-5	SL,FSL	SM,SM-SC	A-2,A-4
	7-30	4.5-6.0	.32		3-15	SCL,SL	ML,SM	A-4,A-2
								A-6,A-7
	30-53	4.5-6.0	.32		4-19	SCL,SC	ML,MH,SM	A-4,A-5,A-7
	53-72	4.5-6.0	.32		NP-10	LS,SL,SCL	SM,ML	A-1,A-2,A-4
MASADA	0-10	4.5-5.5	.32	C	NP-15	FSL,L	ML,SM,SC,CL	A-4,A-6
	10-55	4.5-5.5	.24		15-35	CL,C,GR-C	CH,CL	A-7,A-6
	55-72	4.5-5.5	.24		7-20	L,CL,GR-SCL	CL,ML	A-6,A-7,A-4
MASHULAVILLE	0-26	4.5-5.5	.24	B	NP-7	SL,FSL	SM,SM-SC	A-2-4,A-4
	0-26	4.5-5.5	.32		NP-7	L,SIL	ML,CL-ML	A-4
	26-62	4.5-5.5	.28		8-20	L,CL,S1L	CL,SC	A-6,A-4
MAUBILA	0-8	3.6-5.5	.15	C	NP	FL-LS,FL-LFS	SM,SP-SM	A-2
	0-8	3.6-5.5	.17		NP-6	FL-SL	SM,SP-SM,SM-SC	A-2
	8-15	3.6-5.5	.28		12-25	SCL,CL	SC,CL	A-6,A-7
	15-55	3.6-5.5	.32		20-45	CL,C,SIC	CL,CH	A-6,A-7
								A-7-6
	55-69	3.6-5.5	.32		20-45	C,SIC,CL	CH,CL	A-6,A-7
								A-7-6
MAUREPAS	0-72	5.6-8.4		D		MUCK	PT	A-8
MAURY	0-6	5.1-6.0	.32	C	7-18	CL	CL	A-4,A-6
	6-24	5.1-6.0	.20		20-32	C,SIC	CH,CL	A-7
	24-80	5.1-6.5	.20		22-34	C	CH,CL	A-7
MAXTON	0-12	4.5-6.0	.15	B	NP	LS,LFS	SM,SP-SM	A-2
	0-12	4.5-6.0	.20		NP-7	SL,FSL	SM,SM-SC	A-2
	12-33	4.5-5.5	.24		4-15	SCL,SL	SC,SM-SC	A-4,A-6,A-2
	33-60	4.5-5.5	.10		NP	SR-LS-S	SM,SP-SM,SP	A-2,A-3
MAYHEW	0-7	4.5-6.0	.37	D	15-28	SICL,SIL,L	CL	A-6,A-7
	7-40	4.5-6.0	.32		25-50	SICL,SIC,C	CH,CL	A-7
	40-80	4.5-6.0	.32		25-50	SIC,C,SICL	CH,CL	A-7
MAYTAG	0-7	6.1-8.4	.32	D	20-35	SIC,C	CH,MH	A-7
	0-7	6.1-8.4	.32		3-25	SICL,CL	CL,ML,CL-ML	A-4,A-6,A-7
	7-53	6.6-8.4	.32		30-60	SIC,C,SICL	CH,MH	A-7
	53-65	7.4-8.4	.32		30-60	SIC,C,SICL	CH,MH	A-7
MCCORY	0-3	4.5-7.3	.24	D	NP-7	FSL	SM,SC-SM	A-4
	0-3	4.5-7.3	.17		NP-3	LFS	SM	A-2
	3-15	4.5-7.3	.20		NP-7	FSL,LFS	SM,SC-SM	A-2,A-4
	15-43	6.6-8.4	.32		5-15	SCL,FSL,L	SC,CL,CL-ML,SC-SM	A-4,A-6
	43-52	6.6-8.4	.24		NP-7	LFS,FSL	SM,SC-SM	A-4,A-2
MCLAURIN	0-14	4.5-5.5	.17	B	NP-4	LS,LFS	SM	A-2
	0-14	4.5-5.5	.20		NP-4	SL,FSL	SM	A-4
	14-38	4.5-5.5	.20		NP-11	SL,FSL,L	SM,SC,SM-SC	A-4
	38-49	4.5-5.5	.20		NP-4	LFS,LS,SL	SM	A-2,A-4
	49-60	4.5-5.5	.20		6-15	SL,SCL,L	SC,ML,CL,SM	A-4,A-6
MCQUEEN	0-8	3.6-6.5	.28	C	NP-7	FSL,SL	SM,ML,CL-ML,SM-SC	A-4
	0-8	3.6-6.5	.37		NP-10	SIL,L,SICL	ML,CL-ML	A-4
	8-34	3.6-5.5	.37		10-25	SIC,CL,C	CL	A-7,A-6
	34-56	3.6-5.5	.37		8-20	CL,SICL,SCL	CL	A-6,A-4,A-7
	56-70	3.6-5.5	.32		NP-20	SCL,CL,SL	CL,SM-SC,SC,ML	A-2,A-4,A-6

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.1.	Textural Classification USDA	Unified	AASHTO
MECKLENBURG	0-8	5.6-7.3	.17	C	NP-12	GR-L,GR-SL,GR-FSL	GM,SM,GP-GM,SP-SM	A-2,A-1
	0-8	5.6-7.3	.24		NP-15	L,FSL,SL	ML,SM,CL-ML,CL	A-4,A-6
	0-8	5.6-7.3	.28		11-25	CL,SCL	CL	A-6,A-7-6
	8-25	5.6-7.3	.28		20-43	C	CH,MH	A-7
	25=36	5.6-7.3	.32		8-25	L,SCL,CL	CL	A-4,A-6,A-7
	36-60					VAR		
MEGGETT	0-8	4.5-6.5	.24	D	NP	FSL,SL,LS	SM	A-2,A-4
	0-8	4.5-6.5	.28		5-15	L,CL	ML,CL-ML,CL	A-4,A-6
	8-16	5.1-8.4	.32		11-30	C,SC,CL	CH,MH,CL	A-6,A-7
	16-52	6.1-8.4	.32		11-30	C,SC,CL	CH,MH,CL	A-6,A-7
	52-65	6.1-8.4	.28		7-25	SC,SCL,C	SC,SM,ML,MH	A-4,A-6,A-7
	65-72					SR-S-C		
MELVIN	0-7	5.6-7.8	.43	D	4-10	SIL	CL,CL-ML,ML	A-4
	0-7	5.6-7.8	.43		NP-7	L,FSL	ML,SM,CL-ML	A-4
	0-7	5.6-7.8	.43		15-22	SICL	CL	A-6,A-7
	7-40	5.6-7.8	.43		5-20	SIL,SICL	CL,CL-ML	A-4,A-6
	40-60	5.6-7.8	.43		5-20	SIL,SICL,L	CL,CL-ML	A-4,A-6
MIMOSA	0-6	4.5-6.0	.28	C	25-35	SIC	CH,MH	A-7
	0-6	4.5-6.0	.37		7-20	SIL,SICL	CL,ML	A-4,A-6,A-7
	0-6	4.5-6.0	.28		7-20	CR-SIL,CR-SICL	CL,ML	A-4,A-6,A-7
	6-12	4.5-6.0	.28		18-28	SICL,SIC,C	ML,CL,MH,CH	A-7
	12-55	4.5-6.0	.24		25-35	C,SIC	CH,MH	A-7
	55-59					BR		
MINTER	0-5	4.5-5.5	.32	D	15-28	CL,SICL	CL,CH	A-6,A-7
	0-5	4.5-5.5	.37		8-18	L,SIL	CL,ML	A-4,A-6
	5-72	4.5-5.5	.32		18-32	CL,SIC,C	CL,CH	A-6,A-7
MINVALE	0-13	4.5-5.5	.28	B	NP-10	CR-SIL,CR-L,CR-SICL	ML,CL,GM,GC	A-4
	0-13	4.5-5.5	.37		NP-10	SIL,L,SICL	ML,CL,CL-ML	A-4
	13-30	4.5-5.5	.28		5-15	CR-SICL,CR-S1L,CR-L	CL,CL-ML,GC,GM-GC	A-4,A-6
	30-72	4.5-5.5	.28		7-23	CR-SICL,CR-SIC,CR-C	CL,ML,GC,SC	A-4,A-6,A-7
MONOGAHELA	0-7	4.5-5.5	.32	C	0-7	FSL	ML,SM	A-2,A-4
	7-18	4.5-5.5	.37		12-20	L,SIL,CL	CL	A-6
	18-50	4.5-5.5	.37		2-12	CL,L	CL,CL-ML,ML	A-4,A-6
MONTEVALLO	0-6	4.5-6.0	.20	D	NP-10	CNV-SIL,CNV-L,CNX-L	GM-GC,GC,SM-SC,SC	A-2,A-4 A-1-B
	0-6	4.5-6.0	.28		NP-10	CN-SIL,CN-L	SM-SC,SC,CL-ML,CL	A-4
	6-16	4.5-6.0	.32		2-15	CNV-S1L,CNX-L	GM-GC,GC,SM-SC,SC	A-2,A-4,A-6
	16-36					BR		
MOOREVILLE	0-6	4.5-5.5	.28	C	15-30	SCL,CL	CL,SC	A-6,A-7
	0-6	4.5-5.5	.37		5-10	L,SIL,FSL	CL-ML,CL,SM-SC,SC	A-4
	6-50	4.5-5.5	.28		15-30	SCL,CL,L	CL,SC	A-6,A-7
	50-60	4.5-5.5	.28		15-30	L,SCL,CL	SC,CL	A-6,A-7
MONTAIN PARK	0-4	4.5-5.5	.24	B	1-6	GRSL	SC-SM,SM	A-2-4, A-4
	4-10	4.5-5.5	.24		4-12	GRSL	SC-SM,SM	A-4, A-2-4
	10-23	4.5-5.5	.32		6-14	GRSCL,CL	CL	A-6
	23-32	4.5-5.5	.32		4-10	SL,SCL	SC,CL	A-4
	32-46					BR		
	46-55	4.5-5.5	.32		1-5	SL	SM,SC-SM	A-2-4,A-4
	55-80					BR		
MOUNTAINBURG	0-6	5.1-6.0	.24	0	NP	FSL,SL	SM	A-2
	0-6	5.1-6.0	.20		NP	GR-FSL,GR-SL,GR-L	GM,SM	A-1,A-2
	0-6	5.1-6.0	.15		NP	GRV-FSL,GRV-SL,GRV-L	GM	A-1,A-2
	6-18	4:5-5.5	.17		NP-10	GRV-SCL,GRV-SL,GRV-L	GM,GC,GP-GM,GM-GC	A-1,A-2
	18-20					BR		
MOUNTVIEW	0-8	4.5-5:5	.43	B	2•7	SIL	ML,CL-ML	A-4
	8-30	4.5-5.5	.43		10-23	SIL,SICL	CL	A-6,A-7
	30-78	4.5-5.5	.32		11-32	C,CR-C,CR-SICL	CL,ML,MH,CH	A-6,A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.1.	Textural Classification USDA	Unified	AASHTO
MUCKALEE	0-6	5.1-7.3	.20	D	NP	LS,LFS	SM	A-2
	0-6	5.1-7.3	.20		NP-4	SL,FSL	SM	A-2,A-4
	0-6	5.1-7.3	.20		4-15	L	ML,CL,CL-ML	A-4,A-6
	6-64	5.6-8.4	.20		NP-4	SL,LS	SM	A-2,A-4
MUSE	0-11	5.1-6.0	.37	C	3-7	SIL	CL-ML,ML	A-4
	11-25	3.6-5.5	.32		14-40	L,SICL,SIC,C	CH,CL	A-6,A-7
	25-35	3.6-5.5	.32		15-30	SICL,SIC,CL	CH,CL	A-7
	35-60	3.6-5.5	.32		8-17	SICL,GR-SICL,CN-CL	ML	A-4,A-6,A-7
MUSELLA	0-4	5.1-6.5	.20	B	NP-10	GR-CL,GR-SCL	SM,SC,SM-SC	A-2,A-4
	0-4	5.1-6.5	.32		NP-10	CL,SCL,L	SM,SC,SM-SC,ML	A-4
	0-4	5.6-6.5	.20		NP-10	ST-CL,ST-SCL	SM,SC,SM-SC	A-2,A-4
	4-14	5.1-6.5	.32		11-20	GR-CL,CL	ML,CL,SM,SC	A-6,A-7
	14-18	5.1-6.5	.28		8-15	GRV-CL	SM,SC,GC	A-4,A-6
	18-60					BR		
MUSKINGUM	0-8	4.5-6.5	.20	D	0-7	FSL	CL-ML,ML,SC-SM,SM	A-2,A-4
	8-18	4.5-5.5	.17		0-7	SL,GR-SL,L	GC-GM,GM,ML,SM	A-2,A-4
	18-22					BR		
MYATT	0-10	4.5-5.5	.20	D	NP-4	LS,LFS	SM,SM-SC	A-2
	0-10	4.5-6.0	.28		NP-5	FSL,SL,VFSL	SM,SM-SC,ML,CL-ML	A-2,A-4
	0-10	4.5-6.0	.32		NP-5	SIL,L	ML,CL-ML	A-4
	10-50	3.6-5.5	.28		NP-10	L,SCL,CL	SM,SC,ML,CL	A-4
	50-72	3.6-5.5	.24		5-20	GR-FSL,SCL,CL	SM-SC,SC,CL-ML,CL	A-6,A-4,A-2
NAHUNTA	0-12	4.5-6.0	.43	C	NP-10	VFSL,L,SIL	ML,CL-ML,CL	A-4
	12-79	3.6-5.5	.43		8-30	L,CL,SICL	CL	A-4,A-6,A-7
NANKIN	0-8	4.5-5.5	.17	C	NP	LS,LFS	SM,SP-SM	A-2
	0-8	4.5-5.5	.28		NP-4	SL,FSL	SM,SM-SC	A-2,A-4
	0-8	4.5-5.5	.32		NP-7	SCL	SM,SM-SC,ML,CL-ML	A-4
	8-13	4.5-5.5	.24		4-15	SCL,SL	SC,SM,SM-SC	A-2,A-4,A-6
	13-38	4.5-5.5	.24		7-20	SC,C,SCL	SC,CL,ML,CL-ML	A-4,A-6,A-7
	38-65	4.5-5.5	.24		4-16	SCL,SL	SC,SM-SC,CL CL-ML	A-2,A-4,A-6
NAUV00	0-11	4.5-6.0	.24	B	3-16	SCL	SM,SM-SC,SC	A-4,A-6
	0-11	4.5-6.0	.28		NP-8	FSL,L,SL	SM-SC,CL-ML,SC,CL	A-4,A-2
	11-30	4.5-6.0	.32		8-24	L,SCL,CL	SC,CL,ML	A-4,A-6,A-7
	30-42	4.5-6.0	.32		4-15	FSL,L,SCL	SM-SC,CL-ML,SC,CL	A-4,A-6
	42-60					BR		
NECTAR	0-7	5.1-6.0	.28	C	NP-4	FSL,SL	SM,ML	A-4
	0-7	5.1-6.0	.37		3-7	L,SIL	CL-ML,ML	A-4
	7-27	3.6-5.5	.32		14-40	SICL,SIC,C	CL,CH	A-6,A-7
	27-49	3.6-5.5	.32		15-30	SICL,SIC,CL	CL,CH	A-7
	49-55	3.6-5.5	.28		8-17	SICL,GR-SICL,CN-CL	ML	A-4,A-6,A-7
	55-65					BR		
NELLA	0-8	4.5-5.5	15	B	NP-8	CB-L,CB-FSL,CB-SCL	ML,CL,SM,SC	A-4
	0-8	4.5-5.5	15		NP-8	GR-L,GR-FSL,GR-SL	ML,CL,GM,SM	A-4,A-2
	8-36	4.5-5.5	15		6-20	CB-CL,GR-CL,CB-SCL	CL,SC,CL-ML,SM-SC	A-4,A-6,A-2
	36-70	4.5-5.5	15		8-27	CB-CL,GR-SCL,CB-C	SC,SM,CL,ML	A-4,A-6,A-7
NOLICHUCKY	0-7	4.5-6.5	15	B	3-10	GR-L,GR-SL,GR-SIL	SM-SC,SC,GC,GM-GC	A-4,A-2 A-1-B
	0-7	4.5-6.5	28		3-10	L,SL,SIL	SM-SC,SC,CL,CI-ML	A-4,A-2
	7-15	4.5-5.5	20		8-15	CL,GR-CL,L	SC,GC,CL	A-4,A-2,A-6
	15-56	4.5-5.5	20		15-22	CL,GR-CL,SCL	CL,SC,GC	A-6,A-7,A-2
	56-75	4.5-5.5	20		17-30	CL,C,GR-CL	CL,CH,SC,GC	A-6,A-7,A-2
NORFOLK	0-14	3.6-6.0	.17	B	NP	LS,LFS	SM	A-2
	0-14	3.6-6.0	.20		NP-14	SL,FSL	SM,SM-SC,SC	A-2
	14-38	3.6-5.5	.24		4-15	SL,SCL,CL	SC,SM-SC,CL,CL-ML	A-2,A-4,A-6
	38-70	3.6-5.5	.24		4-23	SCL,CL,SC	SC,SM-SC,CL,CL-ML	A-4,A-6 A-7-6
	70-99					VAR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification---USDA	Unified	AASHTO
NOTCHER	0-7	5.1-7.3	.17	B	NP	GR-FSL,GR-L,GR-SL	SM	A-2,A-4
	0-7	5.1-7.3	.24		NP	FSL,L,SL	SM	A-2,A-4
	7-44	4.5-5.5	.28		7-20	SCL,CL,GR-L	SC,CL	A-4,A-6
	44-76	4.5-5.5	.28		11-23	SCL,CL	CH,CL,SC,SM	A-6,A-7
NUGENT	0-8	4.5-6.5	.10	A	NP	LS,S,LFS	SM,SP-SM	A-2
	0-8	4.5-6.5	.24		NP-3	FSL,SL	SM,ML	A-4
	0-8	4.5-6.5	.37		NP-7	SIL,L	ML,CL-ML	A-4
	8-60	4.5-6.5	.17		NP-3	SR-LS-FSL	SM,SP-SM	A-2
OCHLOCKONEE	0-6	4.5-5.5	.17	B	NP	LS,LFS	SM	A-2,A-4
	0-6	4.5-5.5	.20		NP-5	FSL,SL	SM,ML,SM-SC,CL-ML	A-4,A-2
	0-6	4.5-5.5	.24		NP-7	SIL,L	ML,CL-ML	A-4
	6-44	4.5-5.5	.20		NP-9	FSL,SL,SIL	SM,ML,SC,CL	A-4
	44-72	4.5-5.5	.17		NP-9	LS,SL,SIL	SM,ML,CL,SC	A-4,A-2
OCILLA	0-28	4.5-5.5	.10	C	NP	LCOS,S,FS	SM,SP-SM	A-2,A-3
	0-28	4.5-5.5	.10		NP	LS,LFS	SM,SP-SM	A-2,A-3
	0-28	4.5-5.5	.10		NP	S,FS	SM,SP-SM	A-2,A-3
	28-59	4.5-5.5	.24		NP-18	SL,SCL,FSL	SM,CL,SC,ML	A-2,A-4,A-6
	59-67	4.5-5.5	.24		7-20	SCL,SC,SL	SC,CL	A-4,A-6,A-7
OKEELALA	0-12	4.5-5.5	.15	B	0	LS	SM	A-2
	12-52	4.5-5.5	.24		7-16	SL,SCL,SL	CL,ML,SC,SM	A-4,A-6
	52-80	4.5-5.5	.15		0	SL,SC,FSL	SM,SP-SM	A-2-4,A-3
OKEETEE	0-7	4.5-6.5	.17	D	NP	LS,LFS	SM	A-2
	0-7	4.5-6.5	.24		NP-7	SL,FSL,L	SM,ML	A-2,A-4
	7-50	5.1-6.5	.32		20-30	C,SC	CH,CL	A-7
	50-78	5.1-8.4	.24		8-30	C,SC,SCL	CH,CL	A-4,A-6,A-7
	78-85					VAR		
OKOLONA	0-8	6.6-8.4	.37	D	25-32	SICL,SIC,C	CL,CH	A-7
	8-65	6.6-8.4	.32		36-65	SIC,C	CH	A-7
	65-80					WB		
OKTIBBEHA	0-4	4.5-6.5	.32	D	12-28	CL,SICL	CL	A-6,A-7
	0-4	4.5-6.5	.32		19-34	C,SIC	CL,ML,CH	A-7
	4-41	4.5-6.5	.32		30-40	C	CH	A-7
	41-70	6.6-8.4	.32		25-30	C,SIC	CL	A-7
OOLTEWAH	0-10	4.5-6.0	.37	C	3-15	SIL	CL,ML	A-4,A-6
	10-30	4.5-6.0	.32		8-20	L,SIL,SICL	CH,CL,MH,ML	A-4,A-6,A-7
	30-60	4.5-6.0	.24		0-8	SR-SL SICL	CL,ML,SC,SM	A-2-4,A-4
ORA	0-7	3.6-5.5	.28	C	NP-5	SL,FSL	SM-SC,SM,ML,CL-ML	A-4,A-2
	0-7	3.6-5.5	.37		NP-5	SIL,L	ML,CL-ML	A-4
	7-26	3.6-5.5	.37		8-22	CL,SCL,L	CL	A-6,A-4,A-7
	26-56	3.6-5.5	.32		8-25	SCL,L,SL	CL	A-6,A-7,A-4
	56-70	3.6-5.5	.37		11-30	SCL,L,SL	CL	A-6,A-7
ORANGEBURG	0-7	4.5-6.0	.10	B	NP	LS,LFS,S	SM	A-2
	0-7	4.5-6.0	.20		NP	SL,FSL	SM	A-2
	0-7	4.5-6.0	.24		3-16	SCL	SM,SM-SC,SC	A-4,A-6
	7-12	4.5-6.0	.20		NP-4	SL	SM	A-2
	12-54	4.5-5.5	.24		3-19	SCL,SL	SC,CL,SM,SM-SC	A-6,A-4
	54-64	4.5-5.5	.24		8-21	SCL,SC	SC,CL	A-6,A-4,A-7
OSIER	0-8	3.6-6.0	.10	A/D	NP	S,LS,FS	SP-SM	A-2,A-3
	0-8	3.6-6.0	.15		NP	FSL,LFS	SM	A-2
	8-48	3.6-6.0	.10		NP	S,LS,LFS	SP-SM,SM	A-2,A-3
	48-75	3.6-6.0	.05		NP	COS,S,FS	SP,SP-SM	A-1,A-3 A-2-4

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
PACOLET	0-3	4.5-6.5	.15	B	NP-3	LS	SM	A-2
	0-3	4.5-6.5	.20		NP-7	SL,FSL,L	SM,SM-SC	A-2,A-1-B A-4
	0-3	4.5-6.5	.24		4-17	CL,SCL	SM-SC,SC	A-4,A-6
	3-29	4.5-6.0	.28		11-30	SC,CL,C	ML,MH	A-6,A-7
	29-52	4.5-6.0	.28		5-15	CL,SCL,SL	CL,CL-ML,SM-SC,SC	A-2,A-4,A-6
	52-70	4.5-6.0	.28		NP-6	SL,FSL,L	SM,SM-SC	A-4,A-2-4
PACOLET	0-3	4.5-6.0	.20	B	4-17	GR-CL,GR-SCL	SM,SM-SC,SC	A-4,A-6
	0-3	4.5-6.5	.15		NP-3	GR-SL,GR-FSL	SM	A-2
	3-29	4.5-6.0	.28		11-30	SC,CL,C	ML,MH	A-6,A-7
	29-52	4.5-6.0	.28		5-15	CL,SCL,SL	CL,CL-ML,SM-SC,SC	A-2,A-4,A-6
	52-70	4.5-6.0	.28		NP-6	SL,FSL,L	SM,SM-SC	A-4,A-2-4
PACTOLUS	0-40	3.6-5.5	.10	A	NP	LS,LFS,S	SM,SP-SM	A-2,A-3
	40-80	3.6-5.5	.10		NP	S LS,LFS	SP-SM,SM	A-2,A-3
PALMERDALE	0-5	3.6-5.5	.24	B	NP-10	CNX-SL,CNX-L,CNX-SIL	GC,SM,GM SC	A-1,A-2 A-3,A-4
	0-5	3.6-5.5	.24		3-16	CNV-SIL,CNV-SICL	GM,SC,GC,SM	A-2,A-4 A-6,A-1
	5-80	3.6-5.5	.24		3-16	CNV-SIL,CNV-L,CNX-L	GC,SM,GM,SC	A-2,A-4 A-6,A-1
PAMLICO	0-24	3.6-4.4	-	D		MUCK	PT	
	24-48	3.6-5.5	.10		NP	FS,LFS,S	SM,SP-SM	A-2,A-3
	48-72	3.6-5.5	.24		2-15	FSL,SCL	SM,SC	A-4,A-2-6
PANSEY	0-10	4.5-5.5	.17	D	NP	LFS,LS	SM	A-2,A-4
	0-10	4.5-5.5	.20		NP-4	FSL,SL	SM,ML	A-2,A-4
	10-20	4.5-5.5	.24		NP-6	SL,SCL	SM	A-2,A-4
	20-35	4.5-5.5	.28		NP-14	SCL	SM-SC,SM,SC	A-2,A-4,A-6
	35-70	4.5-5.5	.28		NP-14	SCL,SC	SM-SC,SM,SC	A-2,A-4,A-6
PAXVILLE	0-15	3.6-6.5	.10	B	NP-7	MK-LFS,MK-FSL,MK-L	SM,ML	A-2,A-4
	0-15	3.6-6.5	.15		NP-4	LS,LFS	SM	A-2
	0-15	3.6-6.5	.20		NP-7	SL,FSL,L	SM,ML	A-2,A-4
	15-40	3.6-5.5	.15		5-15	SCL,SL,L	CL-ML,CL,SM-SC,SC	A-2,A-4,A-6
	40-48	3.6-5.5	.10		NP-4	SL,LS,FSL	SM,SP-SM	A-2,A-3
	48-99	3.6-5.5	.10		NP	LS,S,FS	SM,SP-SM	A-2,A-3,A-1
PELHAM	0-27	3.6-5.5	.10	B/D	NP	COS,LCOS	SM,SP-SM	A-2,A-3
	0-27	3.6-5.5	.10		NP	LS,LFS	SM	A-2
	0-27	3.6-5.5	.10		NP	S,FS	SM,SP-SM	A-2
	27-56	3.6-5.5	.24		2-12	SCL,SL,FSL	SM,SC,SM-SC	A-2,A-4,A-6
	56-68	3.6-5.5	.24		3-20	SCL,SL,SC	SC,SM,ML,CL	A-2,A-4 A-6,A-7
PEARMON	0-8	4.5-6.5	.37	D	0-15	L	CL,CL-ML,ML	A-4,A-6
	8-25	4.5-6.5	.32		15-35	SICL,SIC,C	CH,CL,MH,ML	A-6,A-7
	25-54	4.5-6.5	.32		25-50	SIC,C	CH,MH	A-7
	54-58					BR		
PETAL	0-9	4.5-5.5	.20	C/D	8-12	FSL	SC	A-4
	9-27	4.5-5.5	.28		17-21	SCL	CL	A-6
	27-62	4.5-5.5	.24		28-49	C,CL,SIC	CH,CL	A-7-6
	62-81	4.5-5.5	.24		37-53	C	CH	A-7-6
PHEBA	0-8	4.5-5.5	.43	C	NP-8	SIL,L,FSL	ML,CL,CL-ML	A-4
	8-21	4.5-5.5	.49		NP-8	SIL,L	ML,CL,CL-ML	A-4
	21-60	4.5-5.5	.43		11-16	SIL,L,SICL	CL	A-6
PHILO	0-15	4.5-6.0	.37	C	3-15	L	CL,CL-ML,ML	A-4,A-6
	15-36	4.5-6.0	.32		8-20	L,SIL,SICL	CH,CL,MH,ML	A-4,A-6,A-7
	36-50	4.5-6.0	.24		0-8	SR-SL SICL	CL,ML,SC,SM	A-2-4,A-4
PICKWICK	0-6	4.5-5.5	.37	B	11-8	SICL	CL,ML	A-6,A-7
	0-6	4.5-5.5	.43		2-11	SIL	ML,CL-ML,CL	A-4,A-6
	6-32	4.5-5.5	.37		11-17	SICL,SIL	CL	A-6,A-7
	32-80	4.5-5.5	.37		12-22	SICL,CL,C	CL,ML,MH	A-6,A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
PIKEVILLE	0-12	4.5-5.5	24	B	NP-4	FSL,SL,L	SM,ML	A-4
	12-30	4.5-5.5	37		4-17	SCL,L,GR-L	SC,CL,SM-SC,CL-ML	A-4,A-6
	30-40	4.5-5.5	10		2-18	GR-SL,GR-L,GR-SCL	SC,SM,GM	A-1-B,A-2 A-6
	40-90	4.5-5.5	10		2-16	GRV-SL,GRV-L,GRV-SCL	GN-GM,GM,SW-SM,SM	A-1,A-2
PINEBARREN	0-2	4.5-5.5	.32	C/D	NP-2	LFS	SM,	A-2-4,A-4
	2-6	4.5-5.5	.37		NP-6	FSL,LFS,LS	SC-SM,SM	A-2-4,A-4
	6-21	4.5-5.5	.43		NP-9	FSL	SC-SM,SM	A-2-4,A-4
	21-27	4.5-5.0	.37		9-15	GR-SCL,GR-SL,SCL,SL	SC	A-2-4,A-6
	27-35	4.0-5.0	.20		13-32	C,GR-SCL,VGR-CL,SC	GC,SC	A-2-6,A-2-7,A-6,A-7
	35-46	4.0-5.0	.24		13-32	C,GR-CL,GR-SCL,SC	GC,SC	A-2-6,A-2-7,A-6,A-7
	46-62	4.0-5.0	.20		21-36	C,GR-C,GR-CL,SC	CH,CL,GC	A-6,A-7-6
	62-80	4.0-5.0	.37		18-32	C,CL,GR-SCL,SC	CH,CL,GC	A-6,A-7-6
PINE FLAT	0-8	5.1-6.5	.15	B	NP	LFS,LS	SM	A-2
	0-8	5.1-6.5	.20		NP	FSL,SL	SM	A-2,A-4
	8-37	5.1-6.0	.20		NP-5	FSL,SL,L	SM,SM-SC	A-2-4,A-4
	37-80	4.5-6.0	.20		NP-5	SCL,L,SL	SM,SM-SC	A-2-4,A-4
PIRUM	0-11	4.5-5.5	17	B	NP-3	STV-FSL,STV-L	SM,ML	A-4
	0-11	4.5-5.5	20		NP-3	ST-FSL,ST-L,CB-L	SM,ML	A-4
	11-36	4.5-5.5	32		5-15	SCL,CL,L	CL,CL-ML	A-4,A-6
	36-40					BR		
PLUMMER	0-8	3.6-4.4	.10	B/D	-	MUCK	PT	A-8
	0-8	3.6-5.5	.10		NP	LS,LFS	SM	A-2-4
	0-8	3.6-5.5	.10		NP	S,FS	SM,SP-SM	A-2-4,A-3
	8-50	3.6-5.5	.10		NP	S,FS,LS	SM,SP-SM	A-2-4,A-3
	50-72	3.6-5.5	.15		NP-10	SL,SCL,FSL	SM,SC,SM-SC	A-2-4,A-4
POARCH	0-7	4.5-5.5	.20	B	NP-5	FSL,SL	SM,SM-SC	A-4,A-2-4
	0-7	4.5-5.5	.24		NP-5	L,VFSL	ML,CL-ML	A-4
	7-32	4.5-5.5	.24		NP-1Q	L,FSL,SIL	ML,CL-ML,CL	A-4
	32-66	4.5-5.5	.24		2-10	L,FSL,SIL	ML,CL,CL-ML	A-4
PONZER	0-24	3.6-4.4		D	-	MUCK	PT	
	24-52	3.6-7.8	.24		NP-20	L,SCL,SIL	SM,ML,SC,CL	A-2,A-4,A-6
	52-72					VAR		
POPE	0-10	4.5-7.3	.37	B	3-10	L	CL,CL-ML,ML	A-4
	10-44	4.5-7.3	.37		3-22	SICL,FSL,L	CL,ML,SC,SM	A-4,A-6,A-7
	44-60					VAR		
POTTSVILLE	0-5	4.5-6.0	.28	D	0-10	CN-SIL	CL,CL-ML,SC,SC-SM	A-4
	5-9	4.5-6.0	.32		2-15	CNV-SIL,CNX-L	GC,GC-GM,SC,SC-SM	A-1-B,A-2 A-4,A-6
	9-13					BR		
PRENTISS	0-26	4.5-5.5	.28	C	NP-10	FSL,SL	SC,SM-SC,SM	A-4
	0-26	4.5-5.5	.37		NP-10	L,SIL	ML,CL,CL-ML	A-4
	26-73	4.5-5.5	.24		4-12	L,SL,FSL	CL-ML,CL,SC,SM-SC	A-6,A-4
PRIM	0-7	7.4-8.4	.15	D	8-20	CBX-L,CBX-SICL,CBX-CL	CL,GC,SC	A-4,A-6,A-7
	0-7	7.4-8.4	.24		8-20	CBV-L,CBV-SICL,CBV-CL	CL,GC,SC	A-4,A-6,A-7
	7-15	7.4-8.4	.32		8-20	CBV-L,CBX-SL,CBX-CL	CL,SC	A-4,A-6 A-7,A-2
	15-50					BR		
PRUITTON	0-9	4.5-6.0	.37	B	3-10	SIL,L	ML,CL,CL-ML	A-4
	9-38	4.5-6.0	.32		3-15	SIL,L	ML,CL,CL-ML	A-4,A-6
	38-52	4.5-6.0	.24		0-11	CR-SL,CR-L,CR-SIL	ML,CL,SM,SC	A-1,A-2 A-4,A-6
PURDY	0-9	3.6-5.5	.43	D	2-25	SIL,L,SICL	ML,CL	A-4,A-6,A-7
	9-42	3.6-5.5	.28		2-45	SIC,C,CL	ML,CL,CH	A-4,A-6,A-7
	42-50	3.6-5.5	.28		2-45	SIC,CL,C	ML,CL,CH	A-4,A-6,A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
QUITMAN	0-11	4.5-5.5	.17	C	NP-3	LFS	SM	A-2
	0-11	4.5-5.5	.28		NP-3	FSL,L,SIL	SM,ML	A-4,A-2
	11-18	4.5-5.5	.28		4-15	FSL,L,SCL	SC,CL,CL-ML,SM-SC	A-4,A-6
	18-65	4.5-5.5	.28		11-20	SCL,L,CL	CL,SC	A-6,A-7
RAINS	0-12	3.6-6.5	.15	B/D	NP-4	LS,LFS,S	SM	A-2
	0-12	3.6-6.5	.20		NP-10	SL,FSL	SM,ML	A-2,A-4
	0-12	4.5-6.5	.28		NP-12	VFSL,L	SM,ML,SC,CL	A-4,A-6
	12-40	3.6-5.5	.24		4-20	SCL,CL	SC,SM-SC,CL,CL-ML	A-2,A-4,A-6
	40-62	3.6-5.5	.28		4-28	SCL,CL,SC	SC,SM-SC,CL,CL-ML	A-4,A-6,A-7
	62-79	3.6-5.5	.28		3-18	SL,SCL,SC	SM,SC,ML,CL	A-2,A-4,A-6
	79-85					VAR		
RARDEN	0-5	4.5-5.5	.32	C	2-15	GR-L	CL,CL-ML,ML	A-4,A-6
	5-9	4.5-5.5	.32		5-30	SICL,CL,SIC	CH,CL,MH,ML	A-4,A-6,A-7
	9-32	4.5-5.5	.32		25-50	C	CH,MH	A-7
	32-36	4.5-6.0	.32		20-50	C,SIC	CH,MH	A-7
	36-60					BR		
RATTLESNAKE	0-5	4.5-5.7	.20	A	NP-2	LFS,LS	SM	A-2-4
FORKS	5-34	4.5-6.0	.02		NP-2	FS,LFS,LS,S	SM	A-2-4
	34-80	4.5-6.0	.02		NP-4	FS,LFS,LS,S	SM,SP-SM	A-2-4,A-3
RAYBURN	0-5	3.5-5.5	.43	D	6-18	SIL	CL	A-6
	5-8	3.5-5.5	.43		7-21	CL,FSL	CL,ML	A-4,A-6
	8-20	3.5-5.5	.24		29-44	C,SIC	CH	A-7-6
	20-52	3.5-5.5	.32		29-44	C,SIC	CH	A-7-6
	52-59	3.6-5.5	.28		19-41	C,CL,SIC	CH,CL	A-6,A-7-6
	59-80					BR		
RED BAY	0-6	4.5-6.0	.15	B	NP	LS,LFS	SM	A-2
	0-6	4.5-6.0	.20		NP-10	SCL	SM-SC,SC,SM	A-2,A-4
	0-6	4.5-6.0	.20		NP-4	SL,FSL,L	SM,SM-SC	A-2,A-4
	6-20	4.5-6.0	.15		NP-10	SL,SCL	SM,SC,SM-SC	A-2,A-4
	20-52	4.5-5.5	.17		4-16	SCL	SM-SC,SC	A-2,A-4,A-6
	52-72	4.5-5.5	.24		8-21	SCL,SC	SC,CL	A-6,A-4,A-7
REMBERT	0-5	4.5-6.5	.20	D	0-7	FSL,SL	SM,SM-SC	A-4
	0-5	4.5-6.5	.24		5-15	CL,SCL,L	CL,CL-ML	A-4,A-6
	5-33	4.5-5.5	.20		15-25	C,SC,CL	CL	A-6,A-7
	33-54	4.5-5.5	.17		4-15	SCL,CL,SC	SC,SM-SC,CL,CL-ML	A-2,A-4,A-6
	54-65	4.5-5.5	.17		NP-10	SCL,SL,LS	SC,SM,SM-SC	A-2,A-4
REMLAP	0-7	3.6-5.0	.32	C	8-22	SICL,SIL,L	ML,CL	A-4,A-6,A-7
	7-30	3.6-5.0	.24		30-44	C	MH	A-7
	30-80	3.6-5.0	.24		25-41	C	MH	A-7
RIVERVIEW	0-6	4.5-6.5	.20	B	NP	LS,LFS	SM	A-2,A-4
	0-6	4.5-6.5	.24		NP-7	SL,FSL	ML,SM,CL-ML,SM-SC	A-2,A-4
	0-6	4.5-6.5	.32		3-14	SIL,L,VFSL	CL,CL-ML,ML	A-4,A-6
	6-39	4.5-6.0	.24		3-20	SCL,SICL,L	CL,ML,CL-ML	A-4,A-6
	39-70	4.5-6.0	.17		NP-7	LFS,SL,S	SM,SM-SC	A-2,A-4
ROANOKE	0-7	3.6-5.5	.28	D	NP-7	FSL	SM,ML,CL-ML,SM-SC	A-2,A-4
	0-7	3.6-5.5	.37		10-20	SICL,CL	CL	A-6,A-7
	0-7	3.6-5.5	.37		5-16	SIL,L	SM-SC,CL-ML,CL,SC	A-4,A-6
	7-12	3.6-5.5	.24		14-20	CL,SICL	CL	A-6,A-7
	12-50	3.6-5.5	.24		22-40	C,SIC,CL	CH,CL	A-7
	50-72	3.6-6.5	.24		NP-40	SR-S-C	CL-ML,GM-GC,CH,SM	A-1,A-2,A-4
ROBERTSDALE	0-6	4.5-6.0	.24	C	NP-7	FSL,L	SM-SC,CL-ML,SM,ML	A-4
	6-21	4.5-5.5	.28		4-10	CL,SCL,L	CL-ML,CL,SC,SM-SC	A-4
	21-74	4.5-5.5	.28		4-12	SCL,CL,L	SC,CL,CL-ML,SM-SC	A-4,A-6
ROBERTSVILLE	0-4	6.1-8.4	.32	D	10-24	SIL	MH,ML	A-6,A-7
	4-60	6.1-8.4	.32		18-34	SIC,C	CH,CL	A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	PH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
RUMFORD	0-17	3.6-5.5	.17	B	NP	LFS,LS	SM	A-2,A-1
	0-17	3.6-5.5	.24		NP-6	FSL,SL	SM,SM-SC	A-2,A-4
	17-37	3.6-6.0	.17		NP-12	FSL,SL,SCL	SM,SC,SM-SC	A-2,A-4,A-6
	37-60	3.6-6.5	.17		NP-6	SR-SL-GR-S	SM,SP,GP,GM	A-1,A-2 A-3,A-4
RUSTON	0-16	4.5-6.5	.15	B	NP-3	GR-FSL,GR-SL,GR-L	SM	A-2-4,A-1-B
	0-16	4.5-6.5	.20		NP-3	LFS	SM	A-2-4
	0-16	4.5-6.5	.28		NP-3	FSL,SL	SM,ML	A-4,A-2-4
	16-41	4.5-6.0	.28		11-20	SCL,L,CL	SC,CL	A-6
	41-47	4.5-6.0	.32		NP-7	FSL,SL,LS	SM,ML,CL-ML,SM-SC	A-4,A-2-4
	47-80	4.5-6.0	.28		11-20	SCL,L,CL	SC,CL	A-6
RUTAN	0-7	4.0-5.5	.15	A	NP-9	SL	SC,SM	A-2-4,A-4
	7-19	4.0-5.5	.20		NP-9	FSL,LFS,LS,SL	SC,SC-SM	A-2-4,A-4
	19-42	4.0-5.5	.20		3-9	FSL,SL	SC,SC-SM,SM	A-2-4,A-4
	42-53	4.0-5.5	.10		NP-6	LFS,LS	SC-SM,SM	A-2-4
	53-80	4.0-5.5	.20		NP-4	LFS,LS,S	SC-SM,SM,SP-SM	A-2-4
SACUL	0-10	4.5-5.5	.17	C	NP	LFS,LS	SP-SM,SM	A-2
	0-10	4.5-5.5	.20		NP-3	GR-FSL,GR-L,GR-SL	SM,ML	A-4
	0-10	4.5-5.5	.32		NP-3	SL,FSL,L	SM,ML	A-4
	10-44	4.5-5.5	.32		20-40	C,SIC	CH,CL	A-7
	44-72	4.5-5.5	.37		8-32	SICL,SIL,CL	CL,CH,SC	A-6,A-7,A-4
SAFFELL	0-8	4.5-5.5	.10	B	NP	GRV-LS,GRV-LFS	GM,GP-GM	A-1,A-2
	0-8	4.5-5.5	.15		NP-3	GRV-SL,GRV-FSL	GM	A-1,A-2
	8-14	4.5-5.5	.28		4-18	GR-FSL,GR-SCL,GR-L	GC,SC,SM-SC,GM-GC	A-2,A-1
	14-47	4.5-5.5	.28		4-18	GRV-SCL,GRV-FSL,GRV-L	GC,SC,SM-SC,GM-GC	A-2,A-1
	47-72	4.5-5.5	.17		NP-15	GR-SL,GRV-SL,GR-LS	GM,GC,SM,SC	A-1,A-2,A-3
SAFFELL	0-8	4.5-5.5	.20	B	NP-3	GR-FSL,GR-SL,GR-LFS	SM	A-1,A-2,A-4
	0-8	4.5-5.5	.28		NP-3	GR-SIL,GR-L	SM	A-2,A-4
	0-8	4.5-5.5	.24		NP-3	FSL,SL,LFS	SM,ML	A-2,A-4
	8-14	4.5-5.5	.28		4-18	GR-FSL,GR-SCL,GR-L	GC,SC,SM-SC,GM-GC	A-2,A-1
	14-47	4.5-5.5	.28		4-18	GRV-SCL,GRV-FSL,GRV-L	GC,SC,SM-SC,GM-GC	A-2,A-1
	47-72	4.5-5.5	.17		NP-15	GR-SL,GRV-SL,GR-LS	GM,GC,SM,SC	A-1,A-2,A-3
SANGO	0-11	4.5-5.5	.43	C	2-9	SIL	CL-ML,ML	A-4
	11-27	4.5-5.5	.43		5-16	SIL	CL-ML,CL	A-4,A-6
	27-66	4.5-5.5	.43		5-20	SIL,SICL	CL,CL-ML	A-4,A-6,A-7
	66-99	4.5-5.5	.28		12-3	C,CR-C,SICL	MH,CH,GC,CL	A-6,A-7
SAUCIER	0-12	3.6-5.5	.24	C	NP-4	FSL,SL	SM,ML,SM-SC	A-4
	0-12	3.6-5.5	.24		2-10	L	ML,CL-ML,CL	A-4
	12-48	3.6-5.5	.32		5-15	L,CL,SCL	CL,SM-SC,SC,CL-ML	A-6,A-4
	48-60	3.6-5.5	.32		6-25	SICL,CL,SCL	CL,SM-SC,SC,CL-ML	A-7,A-6,A-4
	60-72	3.6-5.5	.32		22-34	C,SIC,CL	CH,CL	A-7
SAVANNAH	0-11	3.6-5.5	.24	C	NP-4	FSL,SL	SM,ML	A-2-4,A-4
	0-11	3.6-5.5	.28		9-16	CL	CL	A-6,A-4
	0-11	3.6-5.5	.37		NP-7	L,SIL	ML,CL-ML	A-4
	11-28	3.6-5.5	.28		7-19	SCL,CL,L	CL,SC,CL-ML	A-4,A-6
	28-68	3.6-5.5	.24		7-19	L,CL,SCL	CL,SC,CL-ML	A-4,A-6,A-7
SAWYER	0-5	4.5-5.5	.43	C	NP-7	SIL,L	ML,CL-ML	A-4
	5-29	4.5-5.5	.37		10-20	SICL,L,SIL	CL	A-6,A-4
	29-80	4.5-5.5	.32		20-35	SIC,C	CH,CL	A-7
SCRANTON	0-7	4.5-6.5	.10	A/D	NP	S,FS	SP-SM,SM	A-2,A-3,A-1
	0-7	4.5-6.5	.15		NP	LS,LFS	SM,SP-SM	A-2,A-4
	7-41	4.5-6.0	.10		NP	LS,S,FS	SP-SM,SM	A-2,A-3,A-1
	41-72	4.5-6.0	.10		NP	S,FS	SP-SM,SM,SP	A-2,A-3,A-1
SEARCY	0-3	3.6-6.0	.20	C	NP-7	S,FSL	SM,ML,CL-ML	A-4,A-2
	0-3	3.6-6.0	.24		3-16	L,CL,SCL	CL,ML,SM-SC	A-4,A-6
	3-8	3.6-6.0	.24		11-17	CL,SCL,C	CL,SC	A-6,A-4
	8-37	3.6-6.0	.28		15-22	C,SC	CH,SC	A-7
	37-65	3.6-6.0	.28		20-35	C,SC,SIC	CH,SC	A-7

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
SEQUATCHIE	0-12	4.5-5.5	.32	B	2-10	L,FSL,SIL	ML,CL-ML,CL,SM	A-2,A-4
	12-46	4.5-5.5	.24		5-15	CL,L,SIL	CL-ML,CL	A-4,A-6
	46-72	4.5-5.5	.24		2-10	SL,L,FSL	ML,CL-ML,CL,SM	A-2,A-4
SEQUOIA	0-5	3.6-5.5	.32	C	12-30	SIC	CH,CL	A-6,A-7
	5-18	3.6-5.5	.28		14-37	SICL,SIC,C	CH,CL,MH,ML	A-7
	18-36					VAR		
	36-40					BR		
SHADYGROVE	0-6	4.5-5.5	.24	C	NP-7	FSL,SL	SM,SM-SC	A-2,A-4
	0-6	4.5-5.5	.37		5-16	SIL,L	CL-ML,CL	A-4,A-6
	0-6	4.5-5.5	.37		7-26	SIL,L	CL	A-4,A-6,A-7
	6-23	4.5-5.5	.32		22-40	C,CL,SC	CL,CH	A-7
	23-65	4.5-5.5	.24		22-40	FL-C,FLV-C,FLV-CL	GC,SC,CL,CH	A-7,A-2-7
SHATTA	0-6	5.1-6.5	.37	C	3-7	SIL,L,VFSL	ML,CL-ML	A-4
	6-30	4.5-6.0	.37		11-18	SICL,L,SIL	CL	A-6
	30-70	4.5-5.5	.37		8-14	L,SIL,SICL	CL	A-6,A-4
SHUBUTA	0-8	4.5-6.0	.17	C	NP	LS	SM	A-2
	0-8	4.5-6.0	.28		NP-10	SL,FSL,L	SM,ML,CL-ML,CL	A-2,A-4
	0-8	4.5-6.0	.28		10-18	CL,SCL	CL	A-6
	8-52	4.5-5.5	.28		16-40	C,SC,CL	CH,CL,SC	
	52-70	4.5-5.5	.28		15-40	C,SC,SCL	CH,CL,SC	A-6,A-7
SIPSEY	0-16	4.5-6.0	.15	B	NP	LS	SM	A-2
	0-16	4.5-6.0	.24		NP-7	FSL,SL	SM,SM-SC	A-2,A-4
	16-31	4.5-6.0	.32		NP-15	SL,L,SCL	SM-SC,SC,CL-ML,CL	A-4,A-6
	31-60					BR		
SMITHDALE	0-11	4.5-5.5	.17	B	NP	LS,LFS	SM	A-2
	0-11	4.5-5.5	.28		NP-5	SL,FSL,L	SM,SM-SC	A-4,A-2
	11-38	4.5-5.5	.24		7-16	CL,SCL,L	SM-SC,SC,CL,CL-ML	A-6,A-4
	38-80	4.5-5.5	.28		NP-11	L,SL	SM,ML,CL,SC	A-4
SMITHTON	0-10	4.5-5.5	.32	D	NP	FSL,SL	ML,SM	A-2,A-4
	0-10	4.5-5.5	.32		NP-7	L,VFSL	SM,ML,CL-ML	A-2,A-4
	10-38	4.5-5.5	.32		2-7	FSL,L	ML,CL-ML	A-4
	38-72	4.5-5.5	.37		5-15	FSL,L,SIL	CL-ML,CL	A-4,A-6
SPADRA	0-8	4.5-6.0	.37	B	NP-3	FSL,L,SIL	ML,SM	A-2,A-4
	8-39	4.5-6.0	.37		NP-15	L,SCL,CL	CL,CL-ML,ML	A-4,A-6
	39-72	4.5-6.0	.24		NP-10	FSL,SL,GR-FSL	ML,CL,SM,SC	A-4,A-2,A-1
SPRINGHILL	0-5	4.5-5.5	.15	B	NP	LS,LFS	SM	A-2
	0-5	4.5-5.5	.20		NP	SL,FSL	SM	A-2
	0-5	4.5-5.5	.24		3-16	SCL	SM,SM-SC,SC	A-4,A-6
	5-11	4.5-5.5	.20		NP-4	SL,FSL	SM	A-2
	11-45	4.5-5.5	.24		8-21	SL,SCL	SC,CL,SM-SC	A-6,A-4
	45-65	4.5-5.5	.20		3-16	LS,SL	SM,SM-SC	A-2,A-4
STALLINGS	0-12	3.5-5.5	.10	A/D	NP	LS,LFS,FS	SM	A-2-4
	0-12	3.5-5.5	.20		NP	SL,FSL	SM,SM-SC	A-2
	12-42	3.5-5.5	.20		NP-3	SL,FSL,LS	SM,SM-SC	A-4,A-6
	42-80	3.5-5.5	.10		NP	SL,LS,LFS	SM	A-2
STARR	0-10	5.1-6.5	.24	C	NP-7	SL, FSL	SM,SM-SC	A-4,A-2
	0-10	5.1-6.5	.28		3-12	L	ML,CL-ML,CL	A-4,A-6
	0-10	5.1-6.5	.28		3-23	SIL,SICL,SCL	ML,CL-ML,CL	A-4,A-6,A-7
	10-53	5.1-6.5	.28		3-23	CL,SIL,SICL	ML,CL-ML,CL	A-4,A-6,A-7
	53-70	5.1-6.5	.28		NP-15	GR-SI,SCL,CL	SM,SM-SC,SC	A-2,A-4,A-6
STASER	0-35	5.6-7.3	.32	B	3-15	SIL,L,FSL	CL,CL-ML,ML	A-4,A-6
	35-52	5.6-7.3	.28		5-15	SIL,L,FSL	CL,CL-ML,SC,SM-SC	A-4,A-6,A-2
STATE	0-10	3.6-5.5	.28	B	NP-15	SIL,L	SM,SC,ML,CL	A-4,A-6
	0-10	3.6-5.5	.28		NP-b	LS,LFS	SM,SM-SC	A-2,A-1
	0-10	3.6-5.5	.28		NP-7	FSL,SL	SM,ML,CL-ML,SM-SC	A-2,A-4
	10-45	3.6-5.5	.28		8-22	L,CL,SCL	CL,SC	A-4,A-6
	45-60	3.6-5.5	.17		NP-7	SR-S-FSL	SM,SM-SC,SP-SMA	A-1,A-2

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
STEENS	0-13	4.5-6.5	.28	C	NP-7	FSL	CL-ML,ML,SC-SM,SM	A-4
	13-60	4.5-6.5	.20		8-20	L,SCL	CL,SC	A-4,A-6
STEMLEY	0-7	5.1-6.5	.20	C	NP-4	CR-SL,CR-FSL	SM,SM-SC	A-2,A-1
	0-7	5.1-6.5	.24		NP-7	CR-L,CR-SIL	ML,SM,CL-ML,GM	A-4,A-2,A-1
	7-17	3.6-5.5	.28		12-20	CR-L,CR-SIL	SC,CL,GC	A-6,A-2
	17-33	3.6-5.5	.24		2-10	CR-L,CR-SIL,CR-SCL	GM-GC,GM,GC,SC	A-2,A-1
	33-65	3.6-5.5	.28		2-10	CR-L,CR-SIL,CR-SCL	CL,GM-GC,GM,SC	A-1,A-2,A-4
STERRETT	0-8	4.5-6.0	.24	D	NP-7	FSL,SL	ML,SM	A-4,A-2-4
	0-8	4.5-6.0	.37		NP-7	SIL,SICL	ML	A-4
	8-14	4.5-5.5	.32		3-20	SIL,L	ML,CL-ML,CL	A-4,A-6
	14-58	4.5-5.5	.32		5-20	L,CL,SICL	CL,CL-ML	A-4,A-6
	58-74	5.6-7.8	.32		3-20	L,SL,SCL	CL,SM,SC,ML	A-4,A-6
STOUGH	0-20	4.5-5.5	.28	C	NP-7	FSL,SL	SM-SC,SM,ML,CL-ML	A-4
	0-20	4.5-5.5	.37		NP-7	L	ML,CL-ML	A-4
	20-26	4.5-5.5	.37		NP-8	L,FSL,SL	ML,CL,CL-ML	A-4
	26-68	4.5-5.5	.37		8-15	SL,SCL,L	SC,CL	A-4,A-6
SUBRAN	0-6	4.5-6.5	.20	C	NP-7	FSL,SL	SM,ML,CL-ML	A-4,A-2
	0-6	4.5-6.5	.24		9-16	L,CL	CL,ML	A-4,A-6
	6-33	4.5-6.0	.28		16-40	CL,C	CL,CH	A-7
	33-65	4.5-6.0	.28		16-40	CL,C,SIC	CL,CH	A-7
SUCARNOOCHEE	0-22	6.6-8.4	.32	D	15-35	SIC,C	CL,CH,MH	A-7
	0-22	6.6-8.4	.32		7-25	SICL	CL	A-4,A-6,A-7
	22-32	6.6-8.4	.32		20-40	SIC,C	MH,CH,CL	A-7
	32-65	6.6-8.4	.32		25-45	SIC,C	CH,MH	A-7
SUFFOLK	0-11	3.6-5.5	.24	B	NP-6	LFS,LS	SM,SM-SC	A-1,A-2,A-4
	0-11	3.6-5.5	.28		NP-7	FSL,SL,L	SM,SM-SC,ML,CL-ML	A-2,A-4
	11-38	3.6-5.5	.24		10-25	SCL,CL,SL	SC,CL	A-2,A-6
	38-65	3.6-6.0	.17		NP-7	LFS,FSL,GR-S	SP,SM,SM-SC	A-1,A-2
SUGGSVILLE	0-4	4.5-5.5	.32	D	40-59	C	CH	A-7
	4-11	3.5-5.5	.32		44-61	C,SIC	CH	A-7
	11-42	3.5-6.5	.32		44-61	C,SIC	CH	A-7
	42-80					BR		
SULLIVAN	0-46	5.1-7.3	.32	B	3-10	L,SIL,FSL	ML,CL,CL-ML,SM	A-4
	46-58	5.1-7.3	.32		3-10	GR-FSL,GR-L,SIL	SM,SM-SC,SC,GM	A-4,A-2
SUMTER	0-10	6.6-8.4	.37	C	16-25	SIC,C,SICL	CL	A-7,A-6
	0-10	6.6-8.4	.37		4-20	SIL	ML,CL-ML,CL	A-6,A-4
	10-21	7.4-8.4	.37		16-32	SIC,C,SICL	CH,CL	A-7,A-6
	21-28	7.4-8.4	.32		16-32	CN-SICL,SICL,SIC	CH,CL	A-6,A-7
	28-60					BR		
SUNLIGHT	0-3	4.5-5.5	.24	D	NP-10	CN-SL,CN-SIL,CN-L	SM,ML,GM	A-4
	0-3	4.5-5.5	.28		NP-10	SL,SIL,L	SM,ML	A-4
	3-5	4.5-5.5	.24		4-15	CN-SL,CN-SICL,CN-L	SM-SC,GC,GM-GC,CL	A-4,A-6
	5-12	4.5-5.5	.17		4-15	CNV-SIL,CNV-SICL,CN-L	GC,GM-GC	A-2,A-4,A-6
	12-24					BR		
SUNSWEET	0-4	4.5-5.5	.20	C	NP	GR-SL,GR-LS	SM,GM	A-2,A-1-B
	0-4	4.5-5.5	.24		NP	SL,LS	SM	A-2,A-1-B
	4-11	4.5-5.5	.37		8-16	C,SC,SCL	CL,SC	A-6,A-7,A-4
	11-60	4.5-5.5	.28		13-24	C,SC	CL	A-6,A-7
SUSQUEHANNA	0-5	4.5-5.5	.17	D	NP	LS	SM	A-2
	0-5	4.5-5.5	.28		NP	FSL,SL	ML,SM	A-4
	0-5	4.5-5.5	.37		5-15	SIL,L	CL-ML,CL	A-4,A-6
	5-77	4.5-5.5	.32		28-56	C,SICL,SIC	CH	A-7
SYLACAUGA	0-5	4.5-6.0	.37	D	5-12	SIL,L,VFSL	CL,CL-ML	A-4,A-6
	5-50	4.5-6.0	.32		12-20	SIL,SICL,CL	CL	A-6
	50-60	4.5-6.0	.17		5-10	SR-S-GR-L	SM-SC,SC	A-2

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
TADLOCK	0-5	4.5-6.5	.24	B	NP-7	FSL,L	SM,SM-SC,ML,CL-ML	A-4
	5-72	4.5-6.5	.17		16-25	C,CL	CL	A-7
TAFT	0-9	4.5-5.5	.43	C	2-10	SIL	CL-ML,ML	A-4
	9-24	4.5-5.5	.43		5-16	SIL,SIC	CL-ML,CL	A-4,A-6
	24-64	4.5-5.5	.43		5-20	SIL,SICL	CL-ML,CL	A-4,A-6,A-7
	64-80	4.5-5.5	.37		12-22	SICL,C,CR-SICL	ML,GC,CL	A-6,A-7
TALBOTT	0-6	5.1-6.0	32	C	12-32	SICL,C,SIC	CL,CH,ML,MH	A-6,A-7
	0-6	5.1-6.0	37		8-16	SIL	CL,ML	A-4,A-6
	6-37	5.1-7.8	24		20-45	C,SIC	CL,MH,CH	A-6,A-7
	37-41				UWB			
TALLADEGA	0-9	4.5-5.5	.28	C	NP-10	CN-SIL,CN-L	SM,SC,SM-SC,GM	A-4,A-2,A-1
	0-9	4.5-5.5	.32		NP-10	SIL,L	SM,SC,ML,SM-SC	A-4
	9-22	4.5-5.5	.28		7-15	CN-CL,CN-SIL,CN-SICL	GM,GC,SC,SM	A-4,A-6,A-2
	22-26					VAR		
	26-30					BR		
TALLAPOOSA	0-4	4.5-5.0	.20	C	NP-7	GR-FSL,GR-SL	SM,GM	A-4,A-2
	0-4	4.5-5.0	.24		1-9	GR-L,GR-SIL	SM,GM	A-4,A-5
								A-2-5
	4-10	4.5-5.0	.37		8-14	GR-L,GR-SICL,GR-CL	SC,ML,CL,GC	A-4,A-6
	10-19	4.5-5.0	.20		NP-6	GR-L	SM,ML,GM	A-4
	19-60					BR		
TALLAPOOSA	0-4	4.5-5.0	.28	C	NP-7	FSL,SL	SM,ML,SM-SC,CL-ML	A-4,A-2
	0-4	4.5-5.0	.32		1-9	L,SIL	SM,ML	A-4,A-5
	4-10	4.5-5.0	.37		3-14	SICL,CL,L	ML,CL	A-4,A-6
	10-19	4.5-5.0	.20		NP-6	L	ML,SM	A-4
	19-60					BR		
TANYARD	0-6	5.1-6.0	.28	C	NP-7	SL,FSL	SM,ML	A-4
	0-6	5.1-6.0	.32		4-20	SIL,L	CL,CL-ML	A-4,A-6
	6-10	4.5-6.0	.32		4-20	L,SIL,CL	CL,CL-ML	A-4,A-6
	10-59	4.5-6.0	.28		12-28	SIL,L,SICL	CL	A-6,A-7
	59-72	5.6-7.8	.24		7-24	SCL,CL,L	SC,CL	A-4,A-6,A-7
TARBORO	0-40	4.5-6.5	10	A	NP	LS,S	SM,SP-SM,SW-SM	A-2,A-3,A-1
	40-80	4.5-6.5	10		NP	S,COS,LS	SP,SP-SM,SW-SM,SM	A-2,A-3,A-1
TASSO	0-8	4.5-5.5	.32	B	3-9	CR-SIL,CR-L	ML,CL,CL-ML	A-4
	0-8	4.5-5.5	.37		3-9	SIL,L	ML,CL-ML,CL	A-4
	8-23	4.5-5.5	.32		9-15	SIL,L,SICL	CL	A-4,A-6
	23-34	4.5-5.5	.32		9-15	SICL,CL,CR-SICL	CL	A-4,A-6
	34-60	4.5-5.5	.28		14-25	C,CL,SICL	CL,ML,MH,CH	A-6,A-7
TATE	0-7	5.1-6.0	.28	B	NP-13	L,FSL	CL,ML,SM,SC	A-4,A-6
	7-38	5.1-6.0			2-12	CL,SCL,L	CL,ML,CL-ML	A-4,A-6
	38-72	5.1-5.5			NP-7	GR-FSL	CL,ML,GM,GM-GC	A-1,A-3,A-4
TATUM	0-6	4.5-5.5	.15	B	NP-10	GR-FSL	ML,GC,SM	A-4
	0-6	4.5-5.5	.15		20-40	GR-SICL,GR-CL	CL,GC,SC,CH	A-7
	0-6	4.5-5.5	.20		NP-10	GR-SIL,GR-L,GR-VFSL	GM,ML,SM	A-4
	6-42	4.5-5.5	.28		20-45	SICL,SIC,GR-C	MH,GM,SM,GC	A-7
	42-46					BR		
TATUM	0-6	4.5-5.5	.20	B	NP-10	FSL	ML,CL,CL-ML,SM	A-4
	0-6	4.5-5.5	.32		12-20	SICL,CL	CL	A-6,A-7
	0-6	4.5-5.5	.37		5-15	SIL,L,VFSL	ML,CL,CL-ML	A-4,A-6
	6-42	4.5-5.5	.28		20-45	SICL,SIC,C	MH,CH	A-7
	42-46					BR		
TELLICO	0-8	4.5-5.5	.24	B	12-20	CL	CL	A-6,A-7
	0-8	4.5.5.5	.24		3-15	L,SL	CL,CL-ML,ML	A-4,A-6
	8-44	4.5-5.5	.28		15-27	CL,C,SC	CL,CH	A-6,A-7
	44-58	4.5-5.5	.28		4-20	SL,CL,CN-CL	GM-GC,SM-SC,SC,GC	A-4,A-6
								A-2,A-1
	58-62				BR			

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
TIBBIE	0-5	4.5-5.5	.37	C/D	NP-6	FSL	SM,SP-SM	A-2-4,A-4
	5-21	4.5-5.5	.43		NP-6	FSL	SM	A-2-4,A-4
	21-24	4.5-5.5	.43		3-9	FSL	SM,SP-SM	A-4
	24-42	4.0-5.5	.28		12-30	C,GR-CL,GR-SCL,SC	SM,SC,SM-SC	A-2-6,A-2-7
	42-60	4.0-5.5	.28		18-32	C,GR-CL,GR-SCL,SC	SC,SM,ML,CL	A-6,A7-6
	60-80	4.0-5.5	.20		18-32	C,SC,SCL	CH,CL,SC	A-7-6
TIFTON	0-10	4.5-6.0	.10	B	NP	LS,S,FS	SM,SP-SM	A-2
	0-10	4.5-6.0	.17		NP-6	SL,FSL,LFS	SM,SM-SC	A-2
	10-18	4.5-6.0	.24		NP-7	SL,GR-SL,FSL	SM,SM-SC	A-2
	18-33	3.6-6.0	.24		8-22	SCL,GR-SCL	SC,CL	A-2,A-6,A-4
	33-64	4.5-5.5	.17		8-23	SCL,SC	SC,CL	A-2,A-6 A-7,A-4
	64-85	4.5-5.5	.17		8-23	SCL,SC	SC,CL	A-4,A-6,A-7
TILDEN	0-7	3.6-5.5	.28	C	0-5	FSL	CL-ML,ML,SC-SM,SM	A-2,A-4
	7-26	3.6-5.5	.37		8-22	CL,SCL,L	CL	A-4,A-6,A-7
	26-56	3.6-5.5	.32		8-25	SCL,L,SL	CL	A-4,A-6,A-7
	56-70	3.6-5.5	.37		11-30	SCL,L,SL	CL	A-6,A-7
TILSIT	0-9	3.6-5.5	.43	C	NP-10	SIL,L	ML,CL,CL-ML	A-4
	9-24	3.6-5.5	.43		5-20	SIL,SICL,L	CL,CL-ML	A-4,A-6
	24-56	3.6-5.5	.43		5-25	SIL,SICL,L	CL,CL-ML	A-4,A-6,A-7
	56-65	3.6-5.5	.43		5-35	SIL,SICL,SIC	CL,CH,CL-ML	A-4,A-6,A-7
	65-80					BR		
TOINETTE	0-4	3.5-5.5	.10	A	NP-5	LFS,LS	SM	A-2-4
	4-31	3.5-5.5	.15		NP-4	LFS,LS	SM	A-2-4
	31-38	3.5-5.5	.24		2-6	LFS,LS,SL	SC-SM,SM	A-2-4,A-4
	38-51	3.5-5.5	.20		6-11	FSL,SL	SC,SC-SM	A-2-6,A-4
	51-58	3.5-5.5	.24		1-7	FSL,LFS,LS,SL	SC-SM,SM	A-2-4,A-4
	58-80	3.5-5.5	.10		NP-3	LFS,LS,S	SM	A-2-4
TOCCOA	0-10	5.1-6.5	.10	B	NP-4	SL,LS	SM	A-2,A-4
	0-10	5.1-6.5	.24		NP-4	FSL,L,SIL	SM,ML	A-2,A-4
	10-60	5.1-6.5	.10		NP-4	SL,L	SM,ML	A-2,A-4
TOWNLEY	0-6	3.6-5.5	.24	C	12-30	GR-CL,CN-CL,CN-C	CL,CH,GC,SC	A-6,A-7
	0-6	3.6-5.5	.28		NP-10	GR-SL,GR-L,GR-SIL	ML,CL,CL-ML,GM	A-2,A-4
	0-6	3.6-5.5	.28		NP-7	CN-SL,CN-L,CN-SIL	ML,CL-ML,SM,GM	A-2,A-4
	6-22	3.6-5.5	.28		14-37	SICL,SIC,C	CL,ML,CH,MH	A-7
	22-35					VAR		
	35-40					BR		
TOWNLEY	0-6	3.6-5.5	.28	C	NP-7	SL,FSL	SM,CL-ML,ML	A-2,A-4
	0-6	3.6-5.5	.32		12-30	SICL,CL,C	CL,CH	A-6,A-7
	0-6	3.6-5.5	.37		NP-10	L,SIL	ML,CL,CL-ML	A-4
	6-22	3.6-5.5	.28		14-37	SICL,SIC,C	CL,ML,CH,MH	A-7
	22-35					VAR		
	35-40					BR		
TOXEY	0-3	4.5-5.5	.32	D	30-40	C	CH,CL	A-7
	3-15	4.5-6.0	.32		45-60	C,SIC	CH	A-7
	15-24	6.1-8.4	.37		30-40	C,SIC,SICL	CH,CL	A-6,A-7
	24-80	7.4-8.4	.28		15-40	CL,SICL,C	CH,CL	A-6,A-7
TRINITY	0-6	7.4-8.4	.32	D	35-60	C	CH	A-7-6
	6-64	7.4-8.4	.32		35-60	C	CH	A-7-6
	64-75	7.4-8.4	.32		35-60	C	CH	A-7-6
TROUP	0-53	4.5-6.0	.10	A	NP	LS,LFS	SM,SP-SM	A-2,A-4
	0-53	4.5-6.0	.10		NP	S,FS,COS	SM,SP-SM	A-2
	53-80	4.5-5.5	.20		4-20	SCL,SL,FSL	SC,SM-SC,CL-ML,CL	A-4,A-2,A-6
TUMBLETON	0-4	4.5-6.5	.15	C	NP	GR-SL,GR-LS	SM	A-1,A-2,A-4
	0-4	4.5-6.5	.20		NP-6	SL,LS	SM,SM-SC,ML,CL-ML	A-2-4,A-4
	4-10	3.6-5.5	.32		15-25	SC,SCL	SC,CL	A-6,A-7
	10-49	3.6-5.5	.32		22-45	SC,C	CH,CL,SC	A-7,A-7-5
	49-56	3.6-5.5	.32		16-47	SC,C,SCL	CH,CL,SC,MH	A-6,A-7
	56-72					VAR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
TUPELO	0-8	4.5-6.0	.32	D	8-20	SICL,CL	CL,ML	A-4,A-6,A-7
	0-8	4.5-6.0	.37		3-10	SIL,L	CL-ML,CL,ML	A-4
	8-15	4.5-6.0	.32		9-27	SICL,SIC,SIL	CL,CH,MH	A-6,A-7,A-4
	15-65	5.1-8.4	.28		17-40	C,SIC,SICL	CH,MH,CL	A-7
TUSCUMBIA	0-4	5.1-8.4	.32	D	15-25	SIC,C	CL	A-7,A-6
	0-4	5.1-8.4	.32		15-25	SICL,CL,SCL	CL	A-6,A-7-6
	4-50	5.1-8.4	.28		30-50	C,SIC,SICL	CH	A-7
TUSOUITEE	0-13	4.5-6.5	.24	B	NP-7	FSL,SL	SM,SM-SC	A-2,A-4
	0-13	4.5-6.5	.28		NP-7	L,SIL	ML,CL-ML,CL,SM	A-4,A-5
	13-26	4.5-6.0	.20		6-15	L,SL,FSL	SM-SC,SM,ML,CL-ML	A-4,A-6
	26-47	4.5-6.0	.17		6-15	ST-L,ST-FSL,ST-SL	SM,SM-SC	A-2,A-4
	47-65	4.5-6.0	.15		NP-7	STV-L,STV-FSL,STV-SL	SM,SM-SC,GM	A-2,A-4,A-1
TYLER	0-11	4.5-5.5	.43	C	2-10	SIL	CL-ML,ML	A-4
	11-34	4.5-5.5	.43		5-16	SIL,SICL	CL,CL-ML	A-4,A-6
	34-60	4.5-5.5	.43		5-20	SIL,SICL	CL,CL-ML	A-4,A-6,A-7
	60-85	4.5-5.5	.37		12-22	SICL,C,CR-SICL	CL,GC,ML	A-6,A-7
UCHEE	0-26	4.5-5.5	.10	A	NP	LS,S,LFS	SM	A-2,A-1-B
	26-39	4.5-5.5	.24		6-20	SL,SCL	SC,SM-SC	A-2,A-4,A-6
	39-47	4.5-5.5	.28		18-38	SCL,SC,C	MH,CH,CL,SC	A-7
	47-66	4.5-5.5	.28		15-35	SL,SCL,SC	MH,CH,CL,SC	A-6,A-7 A-2-7
	66-84	4.5-5.5	.24		NP-7	SL,LS	SP-SM,SM,SM-SC	A-2,A-1-B
UNA	0-6	4.5-5.5	.32	D	20-40	C,SICL,SIC	CH,CL	A-7
	0-6	4.5-5.5	.32		3-22	CL,L,SCL	CL,ML,SC,CL-ML	A-6,A-4
	6-57	4.5-5.5	.28		20-40	C,SICL,SIC	CH,CL	A-7
URBO	0-9	4.5-5.5	.28	D	20-36	CL,SIC,C	CL,CH	A-7
	0-9	4.5-5.5	.49		15-25	SICL,SIL	CL	A-6
	9-71	4.5-5.5	.28		20-36	SIC,CL,SICL	CL,CH	A-7
VAIDEN	0-4	4.5-6.5	.32	D	20-30	SIC,C,SICL	MH,CH	A-7
	4-26	4.5-6.0	.32		30-50	C	CH,MH	A-7
	26-80	4.5-7.8	.32		30-52	C	CH	A-7
VANCE	0-5	4.5-6.0	.15	C	NP-7	GR-SL,GR-COSL	SM,GM,GM-GC,SM-SC	A-1,A-2
	0-5	4.5-6.0	.24		NP-7	FSL,SL,COSL	SM,SM-SC	A-2,A-4
	29-72					VAR		
VANCLEAVE	0-11	4.5-6.5	.20	D	NP-7	LS	SC-SM,SM	A-2,A-2-4
	11-22	4.5-6.5	.37		6-12	L,SL	cL,CL-ML,SC	A-4
	22-51	4.5-6.5	.28		6-20	L,SCL,SL	CL,CL-ML,SC,SC-SM	A-4,A-6
	51-71	4.5-6.5	.24		12-28	CL,FSL,SCL	CL	A-6
	71-90	4.5-6.5	.28		6-20	L,SCL,SL	CL,CL-ML,SC,SC-SM,	A-4,A-6
VARINA	0-14	4.5-6.5	15	C	NP-3	LS	SM,SP-SM	A-2
	0-14	4.5-6.5	17		NP-7	SL	SM,SM-SC	A-2,A-4
	14-38	4.5-5.5	28		11-25	SC,CL,C	SC,MH,ML,SM	A-6,A-7
	38-80	4.5-5.5	28		8-26	SC,CL,C	CL,SC,CH	A-4,A-6,A-7
WADLEY	0-10	4.5-6.0	.15	A	NP	LS	SM,SP-SM	A-2
	10-44	4.5-6.0	.15		NP	LS	SM,SP-SM	A-2
	44-80	4.5-6.0	.20		NP-17	SL,FSL,SCL	SC,SM-SC,CL-ML,CL	A-4,A-6,A-2
WAGRAM	0-24	4.5-6.0	.10	A	NP	FS,S	SP-SM,SM	A-1,A-2,A-3
	0-24	4.5-6.0	.15		NP	LS,LFS	SM,SP-SM	A-2,A-3
	24-75	4.5-6.0	.20		8-25	SCL,SL	SC	A-2,A-4 A-6,A-7
WAHEE	0-11	4.5-6.0	.24	D	NP-7	SL,FSL	SM,SM-SC	A-2,A-4
	0-11	4.5-6.0	.28		2-10	L,SIL,VFSL	ML,CL-ML,CL	A-4
	11-56	3.6-5.5	.28		16-54	C,CL,SIC	CL,CH	A-6,A-7
	56-65					VAR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	k	Hydr-Group	P.I.	Textural Classification USDA	Textural Classification unified	Textural Classification AASHTO
WATSONIA	0-3	4.5-6.5	.32	D	16-31	C,SIC	CL,CH	A-7,A-6
	3-12	4.5-6.5	.32		45-60	C,SIC	CH	A-7
	12-16	7.4-8.4	.37		40-60	C,SIC	CH	A-7
	16-30					MARL		
WAX	0-10	4.5-6.0	.32	C	NP-7	FSL	SM,SM-SC,ML	A-2,A-4
	0-10	4.5-6.0	.37		NP-7	L,SIL	SM,SM-SC,ML,CL-ML	A-4
	10-30	4.5-5.5	.37		6-18	CL,L,SICL	CL,CL-ML	A-6,A-4
	30-60	4.5-5.5	.15		4-10	CR-CL,CR-L,CR-SCL	GM-GC,SM-SC,GC,SC	A-2-4,A-4 A-1-B
WAYNESBORO	0-10	4.5-5.5	.28	B	2-9	L,FSL,CL	ML,CL-ML,CL,SM	A-4
	0-10	4.5-5.5	.37		5-15	SIL,SICL	CL-ML,CL	A-4,A-6
	10-16	4.5-5.5	.28		9-17	CL,L,SCL	CL,ML,SC	A-4,A-6,A-7
	16-60	4.5-5.5	.28		9-32	CL,SC,C	MH,CL,ML	A-4,A-6,A-7
WEDOWEE	0-10	4.5-5.5	.24	B	NP-6	SL,FSL,L	SM,SM-SC	A-4,A-2-4
	0-10	4.5-5.5	.15		NP-6	GR-SL,GR-FSL,GR-L	SM,SM-SC	A-4,A-2,A-1
	0-10	4.5-5.5	.28		5-15	SCL,CL	SC,CL,CL-ML,SM-SC	A-4,A-6
	10-14	4.5-5.5	.28		NP-15	L,SCL	SM,SC,CL,ML	A-4,A-6
	14-32	4.5-5.5	.28		10-25	SC,CL,C	SC,ML,CL,MH	A-6,A-7
	32-60	4.5-5.5	.28		5-15	SCL,CL,SL	SC,SM-SC,CL,CL-ML	A-2,A-4,A-6
WEHADKEE	0-8	4.5-6.5	.24	D	NP-10	FSL,L,SL	SM,SC,SM-SC	A-2,A-4
	0-8	4.5-6.5	.32		10-24	SIL,SICL	CL,MH,ML	A-6,A-7
	8-40	4.5-6.5	.32		7-25	L,SCL,CL	ML,CL,CL-ML	A-6,A-7,A-4
	40-50					VAR		
WEOGUFKA	0-4	4.5-6.0	.17	C	NP-10	CNV-SL,CNV-SIL,CNV-L	GMM,SM,ML	A-2,A-4
	0-4	4.5-6.0	.20		NP-10	CN-SL,CN-SIL,CN-L	SM,ML,GM	A-2,A-4
	4-10	4.5-5.5	.20		NP-10	CNV-L,CNV-S1CL,CNV-CL	GM,GM-GC,SM,SM-SC	A-2,A-1-B A-1-A
	10-28					BR		
	28-32					BR		
WESTON	0-9	4.5-6.0	.20	D	NP-3	LFS	SM	A-2,A-4
	0-9	4.5-6.0	.24		NP-3	FSL,SL	ML,SM	A-4
	9-44	4.5-5.0	.24		NP-5	SL,L,FSL	SM,SM-SC,ML,CL-ML	A-4
	44-54	4.5-5.0	.32		NP-15	SR-S-C	SM,ML,CL,CL-ML	A-4,A-6
WHITWELL	0-9	4.5-6.0	.32	C	3-10	L,SIL	ML,CL-ML,CL	A-4
	0-9	4.5-6.0	.32		3-10	SL	SM,SC,SM-SC	A-2,A-4 A-1-B
	9-72	4.5-5.5	.32		3-15	CL,L,SIL	CL,CL-ML,ML,SC	A-4,A-6
WICKHAM	0-9	4.5-6.0	.15	B	NP	LS,LFS	SM	A-2
	0-9	4.5-6.0	.24		NP-7	SL,FSL,L	SM,SM-SC,ML,CL-ML	A-4
	0-9	4.5-6.0	.24		5-15	SCL,CL	CL-ML,CL,SC,SM-SC	A-2,A-4,A-6
	9-40	4.5-6.0	.24		5-15	SCL,CL,L	CL-ML,CL,SC,SM-SC	A-2,A-4 A-7-6
	40-70					VAR		
WICKSBURG	0-26	4.5-6.0	.05	B	NP	GR-COS	SP,SP-SM	A-1
	0-26	4.5-6.0	.10		NP	LS,LFS	SM	A-2
	0-26	4.5-6.0	.10		NP	S,FS	SM,SP-SM	A-2,A-3
	26-30	4.5-5.5	.20		NP-15	SCL,CL	SC,SM-SC,CL,CL-ML	A-4,A-6
	30-65	4.5-5.5	.24		12-20	CL,SC,C	CL	A-6,A-7
WILCOX	0-5	4.5-5.5	.37	D	15-30	SICL,CL,SIL	CL,CH	A-7,A-6
	0-5	4.5-5.5	.37		25-40	SIC	CH	A-7
	5-50	3.6-5.5	.32		22-46	C,SIC,SICL	CH,MH	A-7
	50-57	3.6-5.5	.28		39-55	C	CH	A-7
	57-73					BR		

Table Soils-4 Soil Characteristics for Principal Soils in Alabama [1]

Name	Depth (In)	pH	K	Hydr. Group	P.I.	Textural Classification USDA	Unified	AASHTO
WILKES	0-6	5.1-6.5	.15	C	NP-7	STX-SL,STX-L	SM,SM-SC	A-2,A-4 A-1-B
	0-6	5.1-6.5	.17		NP-7	GR-SL,GR-L,GR-FSL	SM,SM-SC	A-2,A-4 A-1-B
	0-6	5.1-6.5	.17		NP-7	STV-SL,STV-L	SM,SM-SC	A-2,A-4 A-1-B
	6-13	5.6-7.8	.28		11-35	S1CL,ST-C,ST-SCL	CL,CH,MH	A-6,A-7
	13-48					BR		
WILKES	0-6	5.1-6.5	.24	C	NP-7	SL,L,FSL	ML,SM	A-2,A-4
	0-6	5.1-6.5	.28		10-25	SCL,CL	CL,SC	A-6,A-7
	6-13	6.1-7.8	.32		11-35	CL,C,SCL	CL,CH	A-6,A-7
	13-48					BR		
WILLIAMSVILLE	0-12	4.5-5.5	.32	C	3-10	FSL,SL,L	SM-SC,CL-ML,SC,ML	A-4
	0-12	4.5-5.5	.17		NP-3	LS	SM	A-2
	12-48	4.5-5.5	.24		20-36	C,SC,CL	CL,CH	A-6,A-7
	48-72	4.5-5.5	.24		8-20	SCL,L,SL	SC,CL	A-4,A-6
	72-80	4.5-5.5	.24		NP-3	LS,SL	SM	A-2,A-4
WOLFTEVER	0-7	4.5-5.5	.37	C	3-12	SICL,SIL	CL-ML,CL,ML	A-4,A-6
	7-15	4.5-5.5	.32		7-15	SIC,SICL,SIL	ML,CL	A-4,A-6
	15-53	4.5-5.5	.32		11-20	SIC,SICL,C	ML,MH	A-7
	53-89	4.5-5.5	.32		5-20	L,CL,SICL	CL-ML,CL	A-6,A-7,A-4
WORSHAM	0-8	4.5-5.5	.28	D	NP-9	FSL,SL	SM,SC,ML,CL	A-2,A-4
	0-8	4.5-5.5	.37		4-12	L,SIL	CL,CL-ML	A-4,A-6
	8-50	4.5-5.5	.28		22-40	SCL,SC,C	SC,CH,CL	A-2,A-7
	50-70	4.5-5.5	.28		8-30	SL,SCL,CL	SC,CL	A-2,A-4 A-6,A-7
WYNNVILLE	0-7	3.6-5.5	.24	C	NP-7	FSL,L,SL	SM,SM-SC,ML,CL-ML	A-4
	0-7	3.6-5.5	.28		2-14	SIL	ML,CL-ML,CL	A-4,A-6
	7-23	3.6-5.5	.24		3-10	L,SCL,SIL	SM-SC,SC,CL-ML,CL	A-4
	23-48	3.6-5.5	.20		3-13	L,SCL,SL	SM-SC,SC,CL-ML,CL	A-4,A-6
	48-72	3.6-5.5	.20		3-13	L,SCL,CL	SM-SC,SC,CL-ML,CL	A-4,A-6
YEMASSEE	0-12	3.6-6.0	.15	C	NP-4	LS,LFS	SM	A-2
	0-12	3.6-6.0	.20		NP-7	SL,FSL	SM	A-2,A-4
	12-50	3.6-5.5	.20		4-18	SCL,CL,FSL	CL,SC,CL-ML,SM-SC	A-2,A-4,A-6
	50-75	3.6-5.5	.20		NP-20	SCL,FSL,SC	SC,SM,CL-ML,SM-SC	A-2,A-4,A-6
	75-90					VAR		
YONGES	0-14	5.1-7.8	.15	D	NP-7	LFS	SM,ML	A-2,A-4
	0-14	5.1-7.8	.20		NP-7	SL,FSL	SM,SM-SC,ML	A-4
	0-14	5.1-7.8	.28		3-15	L,SIL	CL-ML,CL,ML	A-4,A-6
	14-42	5.1-8.4	.17		6-28	SCL,CL,SC	CL-ML,CL,SC,SM-SC	A-4,A-6,A-7
	42-60	6.1-8.4	.20		3-22	FSL,SCL	CL,ML,SC,SM	A-4,A-6

Standard Specification for

Geosynthetic Specification for Highway Applications

AASHTO Designation: M 288-17

AASHTO

Technical Section: 4e, Joints, Bearings, and Geosynthetics

Release: Group 2 (June 2017)

1. SCOPE

1.1. This is a materials specification covering geosynthetics for use in subsurface drainage, separation, stabilization, erosion control, temporary silt fence, paving, and soil (walls and slopes). This is a material purchasing specification and design review of use is recommended.

1.2. This specification sets forth a set of physical, mechanical, and endurance properties that must be met or exceeded by the geosynthetic being manufactured.

1.3. In the context of quality systems and management, this specification represents a manufacturing quality control (MQC) document. However, its general use is essentially as a recommended design document.

1.4. This specification is intended to assure both good quality and performance of geosynthetics used as listed in Section 1.1, but is possibly not adequate for the complete specification in a specific situation, especially in reinforcement applications. Additional tests, more restrictive values for the tests indicated, or values based on project specific design may be necessary under conditions of a particular application.

1.5. Minimum strength values provided in this specification are based on geosynthetic survivability from installation stresses. Designers should be aware that the classes and/or property requirements in this specification reflect this basic premise. Refer to Appendix X1 for most geosynthetic construction guidelines.

2. REFERENCED DOCUMENTS

2.1. *AASHTO Standards*:

- R 69, Determination of Long-Term Strength for Geosynthetic Reinforcement
- T 88, Particle Size Analysis of Soils
- T 90, Determining the Plastic Limit and Plasticity Index of Soils
- T 99, Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop
- T 289, Determining pH of Soil for Use in Corrosion Testing

2.2. *ASTM Standards*:[1]

The complete version of this standard is available for purchase in digitized form via the AASHTO Bookstore at:
https://bookstore.transportation.org/item_details.aspx?ID=3791

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Glossary

This glossary includes terms pertinent to erosion and sediment control and stormwater management and most of the terms are used in this handbook.

AASHTO classification - The official classification of soil materials and soil aggregate mixtures for highway construction used by the American Association of State Highway and Transportation Officials (AASHTD).

Abutment - The sloping sides of a valley that support the ends of a dam.

Acid soil - A soil with a preponderance of hydrogen ions (and probably of aluminum) in proportion to hydroxyl ions. Specifically, soil with a pH value less than 7.0. For most practical purposes, a soil with a pH value less than 6.6.

Acre-foot - The volume of soil or water that will cover 1 acre to a depth of 1 foot.

Alkaline soil - A soil that has a pH greater than 7.0, particularly above 7.3, throughout most or allof the root, zone. The term is commonly applied to only the surface layer or horizon of a soil.

Alluvial soils - Soils developed from transported and relatively recently deposited material (alluvium) characterized by a weak modification (or none) of the original material by soil-forming processes.

Alluvium - A general term for all detrital material deposited by water and includes gravel, sand, clay and mixtures of these. Unless otherwise noted, alluvium is unconsolidated.

Antecedent moisture conditions - The degree of wetness of a watershed at the beginning of a storm.

Anti-seep collar - A device constructed around a pipe or other conduit placed through a dam, levee, or dike for the purpose of preventing soil movement and piping failures.

Anti-vortex device - A facility placed at the entrance to a pipe conduit structure such as a drop inlet spillway or hood inlet spillway to prevent air from entering the structure when the pipe is flowing full.

Apron - A pad of non-erosive material designed to prevent scour holes developing at the outlet ends of culverts, outlet pipes, grade stabilization structures, and other water control devices.

Balled and burlapped plant - A tree or shrub that has been dug up and the soil around the tree roots has been retained by enclosing it with burlap.

Bare-root - Trees or seedlings that have been removed from the soil and have exposed roots.

Barrel - A conduit placed through a dam, levee, or dike to control the release of water.

Base flow - Stream discharge derived from groundwater sources as differentiated from surface runoff. Sometimes considered to include flows from regulated lakes or reservoirs.

Bearing capacity - The maximum load that a material can support before failing.

Bedrock - The more or less solid rock in place either on or beneath the surface of the earth. It may be soft, medium or hard and have a smooth or irregular surface.

Berm - A narrow shelf or flat area that breaks the continuity of a slope.

Borrow area - A source of earth fill material used in the construction of embankments or other earth fill structures.

Brownfield - The State of Alabama defines a “brownfield” as any abandoned, idled, or underused industrial and commercial property where expansion or redevelopment can be complicated by real or perceived contamination. Federal law expands this definition to include any real property, the expansion, redevelopment, or reuse of which may be complicated by the presences of a hazardous substance, pollutant, or contaminant. The Alabama Department of Environmental Management Land Division provides oversight of assessment and remediation activities concerning these types of sites through its Brownfield Redevelopment and Voluntary Cleanup Program.

Bunchgrass - A grass plant (species) that forms a distinct clump and does not spread by long, horizontal stems.

Buoyant weight - The downward force exerted by an object with a specific gravity greater than 1, when it is submerged in water.

Butt joint – a technique in which two fiber rolls are firmly pressed together, end to end, during the field installation process ensuring that there are no gaps between the adjacent rolls to minimize potential for water flow and erosion between the rolls.

Catch basin - A chamber usually built at the curb line of a street, for the admission of surface water to a storm sewer or subdrain, having at its base a sediment sump designed to retain grit and detritus below the point of overflow.

Channel stabilization - Protecting the sides and bed of a channel from erosion by controlling flow velocities and flow directions using jetties, drops or other structures and/or by lining the channel with a suitable liner such as vegetation, riprap, concrete or other similar material.

Chute - A high-velocity, open channel for conveying water down a steep slope without erosion, usually paved.
Clay - (1) Soil fraction consisting of particles less than - 0.002 mm in diameter. (2) A soil texture class which is dominated by clay or at least has a larger proportion of clay than either silt or sand.

Coir - A term used to refer to products such as erosion control blankets and wattles manufactured from the fibers of coconuts.

Compaction - In soil engineering, the process by which the soil grains are rearranged to decrease void space and bring them into closer contact with one another, thereby increasing the weight of solid material per cubic foot. In soil quality, a dense layer of soil, created by traffic, that impedes root penetration and moisture movement through the soil.

Conservation district - A special-purpose entity created under state enabling law to develop and carry out a program of soil, water, and related resource conservation, use, and development within its boundaries, usually a subdivision of state government with a local governing body but with limited authorities. Other names include soil conservation district, soil and water conservation district and natural resources district.

Containerized plant - A plant that is grown in a container for the purpose of being transplanted.

Contour - An imaginary line on the surface of the earth connecting points of the same elevation.

Critical area - A severely eroded sediment producing area that requires special management to establish and maintain vegetation in order to stabilize soil conditions.

Cut - Portion of land surface or area from which earth has been removed or will be removed by excavating; the depth below the original ground surface to the excavated surface.

Cut-and-fill - Process of earth grading by excavating part of a higher area and using the excavated material for fill to raise the surface of an adjacent lower area.

Cutoff trench - A long, narrow excavation (keyway) constructed along the center line of a dam, dike, levee or embankment and filled with relatively impervious material intended to reduce seepage of water through porous strata.

Dam - A barrier to confine or impound water for storage or diversion, to prevent gully erosion, or for retention of soil, sediment, or other debris.

Design highwater - The elevation of the water surface at peak flow conditions of the design flood.

Design life - The period of time for which a facility is expected to perform its intended function.

Design storm - A selected rainfall pattern of specified amount, intensity, duration, and frequency that is used as a basis for design.
Dewatering - The removal of water temporarily impounded in a holding basin.

Dibble bar - A tool used for planting trees consisting of either a flat or pointed blade and a bar with a handle for pushing the blade into the soil.

Dike - An embankment to confine or control water, often built along the banks of a river to prevent overflow of lowlands; a levee.

Discharge - Usually the rate, of .water flow; a volume of a fluid passing a point per unit time commonly expressed as cubic feet per second, cubic meters per second, gallons per minute, or millions of gallons per day.

Diversion - A channel with a supporting ridge on the lower side constructed at the top, across, or at the bottom of a slope for the purpose of controlling surface runoff.

Diversion dike - A barrier built to divert surface runoff.

Divide, drainage - The boundary between watersheds.

Drainageway - A natural or artificial depression that carries surface water to a larger watercourse or outlet such as a river, lake, or bay.

Drawdown - Lowering of the water surface in an open channel or lake or groundwater.

Drop inlet - Overall structure in which the water drops through a vertical riser connected to a discharge conduit or storm sewer.

Drop spillway - Overall structure in which the water drops over a vertical wall onto an apron at a lower elevation.

Drop structure - A structure for dropping water to a lower level and dissipating its surplus energy without erosion.

Earth dam - A dam constructed of compacted suitable soil materials.

Embankment - A man-made deposit of soil, rock, or other material often used to form an impoundment.

Emergency Spillway - Usually a vegetated earth channel used to safely convey flood discharges around an impoundment structure.

Energy Dissipator - A device used to reduce the energy of flowing water to prevent erosion.

Environment - The sum total of all the external conditions that may act upon a living organism or community to influence its development or existence.
Erodibility - Susceptibility to erosion.

Erosion - The wearing away of the land surface by water, wind, ice, gravity, or other geological agents. The following terms are used to describe different types of water erosion:

Accelerated erosion - erosion as a result of the activities of man.

Channel erosion - the erosion process whereby the volume and velocity of flow wears away the bed and/or banks of a well-defined channel.

Geologic erosion - the normal or natural erosion caused by geological processes acting over long geologic periods and resulting in the wearing away of mountains, the building up of floodplains, coastal plains, etc.

Gully erosion - the erosion process whereby runoff water accumulates in narrow channels and, over relatively short periods, removes the soil to considerable depths.

Rill erosion - an erosion process in which numerous small channels only several inches deep are formed; occurs mainly on recently disturbed and exposed soils.

Splash erosion - the spattering of small soil particles caused by the impact of raindrops on bare soils.

Sheet erosion - the removal of a fairly uniform thin layer of soil from the l surface layer by runoff water.

Evapotranspiration - The combined loss of water from an area by evaporation from the soil surface and by transpiration of plants.

Excess rainfall - The amount of rainfall that runs directly off an area.

Fertilizer - Any organic or inorganic material of natural or synthetic origin that is added to a soil to supply elements essential to plant growth.

Fertilizer analysis - The percentage composition of fertilizer, expressed in terms of nitrogen, phosphoric acid, and potash. For example, a fertilizer with a 6-12-6 analysis contains 6 percent nitrogen (N), 12 percent available phosphoric acid (P_2O_5) and 6 percent water-soluble potash (K_2O).

Filter fabric - A woven or non-woven, water-permeable material generally made of synthetic products such as polypropylene and used in erosion and sediment control applications to trap sediment or prevent the movement of fine soil particles.

Flood Peak - The highest stage or greatest discharge attained by a flood event. Thus, peak stage or peak discharge.
Flood plain - The lowland that borders a stream and is subject to flooding when the stream overflows its banks.

Flood stage - The stage at which overflow of the natural banks of a stream begins.

Floodway - A channel, either natural, excavated, or bounded by dikes and levees, used to carry flood flows.

Flume - A constructed channel lined with erosion-resistant materials used to convey water on steep grades without erosion.

Freeboard - A vertical distance between the elevation of the design high-water and the top of a dam, diversion ridge, or other water control device.

Frequency of storm (design storm frequency) - The anticipated period in years that will elapse before another storm of equal intensity and/or total volume will recur: a 10-year storm can be expected to occur on the average once every 10 years.

Froude no. (F) - A calculated no. for classifying water flow as critical (F=l), supercritical (F>l) or subcritical (f<l).

Gabion - A wire mesh cage, usually rectangular, filled with rock and used to protect channel banks and other sloping areas from erosion.

Gauge - A device for measuring precipitation, water level, discharge, velocity, pressure, temperature, etc., e.g., a rain gauge. A measure of the thickness of metal, e.g., diameter of wire or wall thickness of steel pipe.

Geotextile - A permeable textile of synthetic fibers used in earth-related projects.

Gradation - The distribution of the various sized particles that constitute a sediment, soil, or other material such as riprap.

Grade - (1) The slope of a road, a channel, or natural ground. (2) The finished surface of a canal bed, roadbed, top of embankment, or bottom of excavation; any surface prepared to a design elevation for the support of construction such as paving or the laying a conduit. (3) To finish the surface of a canal bed, roadbed, top of embankment, or bottom of excavation, or other land area to a smooth, even condition.

Grade stabilization structure - A structure for the purpose of stabilizing the grade of a gully or other watercourse, thereby preventing further head-cutting or lowering of the channel bottom, commonly referred to as a Drop Structure.

Gradient - Change of elevation, velocity, pressure, or other characteristics per unit length; slope.

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Grass - A member of the botanical family Gramineae, characterized by blade-like leaves that originate as a sheath wrapped around the stem.

Grass or legume, annual - A plant which germinates, grows, reproduces, and dies in one growing season or 1 year's time.

Grass or legume, cool-season - A grass or legume which is usually planted in the fall or occasionally late winter and it makes most of its growth during the cool season of the year, (fall, late winter and spring). Flowering and seed production occur in late spring. Cool-season species are usually dormant or make little growth during the hot summer months.

Grass or legume, perennial - A plant which under suitable conditions has the ability to live for more than 1 year. A perennial may become dormant at certain times of the year, but will resume growth at the end of its dormant period.

Grass or legume, warm-season - A grass or legume which is usually planted in the spring and makes it growth during the warm season (late spring and summer months). Flowering and seed production usually occur in late summer or early fall. Warm-season species are become in late fall and resume growth in the early spring.

Grassed waterway - A natural or constructed waterway, usually broad and shallow, covered with erosion-resistant, grasses and used to safely conduct surface water from an area. Usually referred to as a Grass Swale on construction sites.

Groundcover - Low-growing, herbaceous or woody plants that spread vegetatively to produce a dense, continuous cover.

Ground water - That water that moves through the plant root zone and under the influence of gravity continues moving downward until it enters the ground water reservoir.

Head - The height of water above any plain of reference. The energy, either kinetic or potential, possessed by each unit weight of a liquid, expressed as the vertical height through which a unit weight would have to fall to release the average energy possessed. Used in various compound terms such as pressure head or velocity head.

Head loss - Energy loss due to friction, eddies, changes in velocity, elevation or direction of flow.

Headwater - The source of a stream. The water upstream from a structure or point on a stream.

Hydraulic erosion control product (HECP) – a manufactured, temporary degradable, pre-packaged fibrous material that is mixed with water and hydraulically applied as a slurry designed to reduce soil erosion and assist in the establishment and growth of vegetation.

Hydrograph - A graph showing for a given point on a stream - the discharge, stage (depth), velocity, or other property of water with respect to time.

Hydrologic cycle - The circuit of water movement from the atmosphere to the earth and back to the atmosphere through various stages or processes such as precipitation, interception, runoff, infiltration, percolation, storage, evaporation, and transpiration.

Hydrologic soil group - Categories that reflect runoff and are good indicators of infiltration and how rapidly water moves through the soil.

Group	Soil Description
A	Deep, well drained sands and gravels with low runoff potential and high infiltration rates.
B	Soils that are moderately deep to deep, moderately drained, moderately fine to moderately coarse texture. Moderate runoff potential and moderate infiltration rates.
C	Soils with an impeding layer, or moderately fine to fine texture. High runoff potential and low infiltration rates.
D	Clay, or soils with high water table, or shallow over an impervious layer such as stone. Very high runoff potential and very low infiltration rates.

Hydrology - The science of the behavior of water in the atmosphere, on the surface of the earth, and underground.

Impact basin - A device used to dissipate the energy of flowing water to reduce erosion. Generally constructed of concrete partially submerged with baffles to dissipate velocities.

Impervious - Not allowing infiltration.

Impoundment - Generally, an artificial water storage area, as a reservoir, pit, dugout, sump, etc.

Infiltration - The gradual downward flow of water from the surface through soil to ground water and water table reservoirs.

Invert - The inside bottom of a culvert or other conduit.

Keyway - A cutoff trench dug beneath the entire length of a dam to cut through soil layers that may cause seepage and possible dam failure.

Laminar flow - Flow at relatively slow velocity in which fluid particles slide smoothly along straight lines everywhere parallel to the axis of a channel or pipe.

Legume - Any member of the pea or pulse family which includes peas, beans, peanuts, clovers, alfalfas, sweet clovers, lespedezas, vetches, black locust, and kudzu. Practically all legumes are nitrogen-fixing plants.
Liquid limit - The moisture content at which the soil passes from a plastic to a liquid state.

Mean depth - Average depth; cross-sectional area of a stream or channel divided by its surface or top width.

Mean velocity - The average velocity of a stream flowing in a channel conduit at a given cross-section or in a given reach. It is equal to the discharge divided by the cross-sectional area of the reach.

Mulch - A natural or artificial layer of plant residue or other materials covering the land surface which conserves moisture, holds soil in place, aids in establishing plant cover, and minimizes temperature fluctuations.

Natural drainage - The flow patterns of stormwater runoff over the land in its pre-development state.

Nonpoint source pollution - Pollution that enters a water body from diffuse origins on the watershed and does not result from discernible, confined, or discrete conveyances.

Normal depth - The depth of flow in an open conduit during uniform flow for the given conditions.

Open drain - A natural watercourse or constructed open channel that conveys drainage water.

Outfall - The point, location, or structure where runoff discharges from a drainageway or conduit to a receiving stream or body of water.

Outlet - The point of water disposal from a stream, river, lake, tidewater, or artificial drain.

Outlet channel - A waterway constructed or altered primarily to carry water from man-made structures, such as smaller channels, tile lines, and diversions.

Peak discharge - The maximum instantaneous flow from a given storm condition at a specific location.

Percolation - The movement of water through soil.

Percolation rate - The rate, usually expressed as inches/hour or inches/day, at which water moves through the soil profile.

Perennial stream - A stream that maintains water in its channel throughout the year.

Pervious - Allowing movement of water.

Pesticides - Chemical compounds used for the control of undesirable plants, animals, or insects. The term includes insecticides, herbicides, algaecides, rodenticides, nematicides, fungicides, and growth regulators.

pH - A numerical measure of hydrogen ion activity. The neutral point is pH 7.0. All pH values below 7.0 are acid and all above 7.0 are alkaline.

Physiographic region (Province) - Large-scale unit of land defined by its climate, geology, and geomorphic history and, therefore, relatively uniform in physiographic features.

Plastic index - The numerical difference between the liquid limit and the plastic limit of soil; the range of moisture content within which the soil remains plastic.

Plastic limit - The moisture content at which a soil changes from a semi-solid to a plastic state.

Plunge pool - A basin used to dissipate the energy of flowing water usually constructed to a design depth and shape. The pool may be protected from erosion by various lining materials.

Point source - Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, vessel or other floating craft, from which pollutants are or may be discharged. (Public Law 92-500, Section 5014).

Pollutant - Pollutant includes but is not limited to sediment, dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

Porosity - The volume of pore space in soil or rock.

Principal spillway - A dam spillway generally constructed of permanent material and designed to regulate the normal water level, provide flood protection and/or reduce the frequency of operation of the emergency spillway.

Qualified design professional - A person adequately trained, experienced and in some instances registered, to plan and/or design erosion and sediment control and stormwater measures applicable to site conditions where assistance is provided. Certified or registered professionals are bound by their ethics commitment to practice in only the areas that they have adequate expertise. Designing certain measures is restricted by state law to specific categories of

professionals, i.e. structural measures can only be designed in Alabama by professional engineers registered in Alabama.

Rainfall intensity - The rate at which rain is falling at any given instant, usually expressed in inches per hour.

Rational method - A means of computing storm drainage flow rates, Q, by use of the formula Q = CIA, where C is a coefficient describing the physical drainage area, I is the rainfall intensity and A is the area.

Reach - The smallest subdivision of the drainage system consisting of a uniform length of open channel. Also, a discrete portion of river, stream or creek.

Receiving stream - The body of water into which runoff or effluent is discharged.

Retention - The permanent storage of stormwater to prevent it from leaving the development site; Storage for temporary periods is referred to as detention.

Revetment - A constructed face or wall.

Revised Universal Soil Loss Equation 2 – An equation developed by the USDA Agricultural Research Service (USDA-ARS) and partners that predicts sheet and rill erosion rates on sloping landscapes. The equation may be applied to various land uses as a tool for planners to evaluate the effects of various vegetative, structural and management practices.

Rhizome - A modified plant stem that grows horizontally underground. A rhizomatous plant spreads (reproduces) vegetatively and can be transplanted with rhizome fragments.

Rill - A small intermittent watercourse with steep sides, only a few inches deep.

Riparian - Of, on, or pertaining to the banks of a stream, river, or pond.

Riparian rights - A principle of common law which requires that any user of waters adjoining or flowing through his lands must so use and protect them that he will enable his neighbor to utilize the same waters undiminished in quantity and undefiled in quality.

Riser - The inlet portions of a drop inlet spillway that extend vertically from the pipe conduit barrel to the water surface.

Rolled erosion control product (RECP) – a temporary degradable or long-term non-degradable material manufactured or fabricated into rolls designed to reduce soil erosion and assist in the growth, establishment, and protection of vegetation. Sometimes referred to as erosion control blanket or mat.

Runoff - That portion of precipitation that flows from a drainage area on the land surface, in open channel or in stormwater conveyance systems.

Sand - (1) Soil particles between 0.05 and 2.0 mm in diameter. (2) A soil textural class inclusive of all soils which are at least 70% sand and 15% or less clay.

Saturation - In soils, the point at which a soil or an aquifer will no longer absorb any amount of water without losing an equal amount.

Scarified seed - Seed which has been subjected to abrasive treatment to encourage germination.

Scour - The clearing and digging action of flowing water, especially the downward erosion caused by stream water in sweeping away mud and silt from the stream bed and outside bank of a curved channel.

Sediment - Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

Sediment delivery ratio - The fraction of the soil eroded from upland sources that actually reaches a stream channel or storage reservoir.

Sediment retention barrier – A measure constructed onsite on the contour similarly to a conventional silt fence to protect water quality by reducing turbidity of stormwater. It consists of two high-flow silt fences installed about 18” apart with straw loosely placed between the fences and either straw or a fabric such as jute placed on the ground surface downslope of the fences. An approved flocculant powder is added to the straw and straw/fabric prior to runoff events to remove fines from the runoff. A Buffer Zone must be downstream of the practice.

Sediment retention fiber roll (SRFR) - A manufactured device of a filler material encapsulated within a flexible containment material utilized in sediment and flow control applications such as sediment barriers, inlet protection and small sediment traps. Also, referred to as a sediment log and as a wattle.

Sediment pool - The reservoir space allotted to the accumulation of sediment during the life of the structure.

Seedbed - The soil prepared by natural or artificial means to promote the germination of seed and the growth of seedlings.

Seedling - A young plant grown from seed, either planted or a volunteer.

Sensitive Waters - A non-regulatory term to describe waters of the state that have been classified, designated, or otherwise identified to have increased significance or recognized uses such as waters classified as suitable for swimming and other whole body water contact sports

(S), public water supply (PWS), etc., waters designated as outstanding national resource waters (ONRW) or outstanding Alabama water (OAW), and water designated as a Tier 1 (impacted water), CWA Section 303(d) listed water, etc. where specialized planning and an increased level of BMP implementation may be warranted.

Shear stress - The coplanar surface stress applied by concentrated flowing stormwater to a swale surface. Swale surfaces have a maximum shear strength that can be withstood without failure of the surface.

Silt - (1) Soil fraction consisting of particles between 0.0002 and 0.05 mm in diameter. (2) A soil textural class indicating more than 80% silt.

Slope - Degree of deviation of a surface from the horizontal; measured as a numerical ratio or percent. Expressed as a ration, the first no. is the horizontal distance (run) and the second is the vertical distance (rise), e.g., 2:1. Slope can also be expressed as the rise over the run. For instance, a 2:1 slope is a 50 percent slope.

Sod - A surface layer of turf grass (including roots and surface soil) harvested in blocks or rolls and transported for establishment at another site.

Soil - The unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

Soil horizon - A horizontal layer of soil that, through processes of soil formation, has developed characteristics distinct from the layers above and below.

Soil permeability - The attribute of a soil that enables water or air to move through it. Usually expressed in inches/hour or inches/day.

Soil profile - A vertical section of the soil from the surface through all horizons.

Soil structure - The relation of particles or groups of particles which impart to the whole soil a characteristic manner of breaking; some types are crumb structure, block structure, platy structure, and columnar structure.

Soil texture - The physical structure or character of soil determined by the relative proportions of the soil separates (sand, silt and clay) of which it is composed.

Soil type - the lowest unit in the natural system of soil classification; a subdivision of soil series and consisting of or describing soils that are alike in all characteristics including the texture of the A horizon, i.e. the Bama series in a specific county may have two soil types of the Bama series: Bama fine sandy loam, 0-2 % slopes and Bama fine sandy loam 2-6% slopes.

Spillway - A passage such as a paved apron or channel for surplus water over or around or through a dam or similar structure. An open or closed channel, or both, used to convey excess

water from a reservoir. It may contain gates, either manually or automatically controlled, to regulate the discharge of excess water.

Sprig - The section of plant stem material (rhizome, shoot, or stolon) used in vegetative planting referred to as sprigging.

Stolon - Plant stem that grows horizontally on the oil surface.

Storm frequency - The time interval between major storms of predetermined intensity and volumes of runoff, e.g., a 5-year, 10-year or 20-year storm.

Storm sewer - A sewer that carries stormwater, surface drainage, street wash and other wash waters, but excludes sewage and industrial wastes, preferably called a storm drain.

Stormwater pollution prevention plan (SWPPP) – EPA description of a comprehensive site-specific plan of measures committed to address all water (pollutant) discharges and receiving waterbody quality related challenges and issues that are expected to be created by construction on a specific site. The ADEM Construction Best Management Practices Plan (CBMPP) is equivalent to SWPPP.

Streambanks - The usual boundaries, not the flood boundaries, of a stream channel. Right and left banks are named facing downstream.

Subcritical flow - Flow at relatively high velocity where the wave from a disturbance can more upstream. Froude No. less than 1.

Subsoil - The B horizons of soils with distinct profiles. In soils with weak profile development the subsoil can be defined as the soil below which roots do not normally grow.

Subsurface drain - A pervious backfilled trench usually containing stone and perforated pipe for intercepting groundwater or seepage.

Subwatershed - A watershed subdivision of unspecified size that forms a convenient natural unit.

Supercritical flow - Flow at relatively high velocity where - the wave from a disturbance will always be swept downstream. Froude no. is greater than 1.
Surface runoff - Precipitation that falls onto the surfaces of roots, streets, the ground, etc., and is not absorbed or retained by that surface, but collects and runs off.

Swale - An elongated depression on the land surface that is occasionally wet and is heavily vegetated. Swales conduct stormwater into primary drainage channels and may provide some groundwater recharge.

Tailwater depth - The depth of flow immediately downstream from a discharge structure.

Temporary cover - Temporary vegetative cover of rapid growing annual grasses, small grains, or legumes to provide initial, temporary cover for erosion control on disturbed sites.

Toe of dam - The base or bottom of the sloping faces of a constructed dam at the point of intersection with the natural ground surface. A dam has an inside toe (the impoundment or upstream side) and an outside toe (the downgradient side).

Toe of slope - The base or bottom of a slope at the point where the ground surface abruptly changes to a significantly flatter grade.

Topography - General term to include characteristics of the ground surface such as plains, hills, mountains, degree of relief, steepness of slopes, and other physiographic features.

Topsoil - The dark-colored surface layer or A horizon of a soil. When present it ranges in depth from a fraction of an inch to 2 or 3 ft.; equivalent to the plow layer of cultivated soils. Commonly used to refer to the surface soil layer(s), enriched in organic matter and having textural and structural characteristics favorable for plant growth.

Trash rack - A structural device used to prevent debris from entering a pipe spillway or other hydraulic structure.

Turbidity - Cloudiness of a liquid, caused by suspended particles (silt, clay, organic material, plankton etc.) that cause light rays to be scattered and absorbed rather than transmitted in straight lines through a sample. Small clay particles known as colloids remain in suspension for long periods of time and are a major contributor to turbidity where they exist.

Turf - Surface soil supporting a dense growth of grass and associated root mat.

Turf reinforcement mat (TRM) – a rolled erosion control product composed of non-degradable synthetic fibers, filaments, nets, wire mesh and/or other elements, including degradable components, designed to impart immediate erosion protection, enhance vegetation establishment and provide long-term erosion control by permanently reinforcing vegetation during and after establishment.

Unified soil classification system - A classification system based on the identification of soils according to their particle size, gradation, plasticity index, and liquid limit.

Uniform flow - A state of steady flow when the mean velocity and cross-sectional area remain constant in all sections of a reach.

Vegetative stabilization - Protection of erodible or sediment-producing areas with: permanent seeding, producing long-term vegetative cover, short-term seeding, producing temporary vegetative cover, or sodding, producing areas covered with a turf of a perennial sod-forming grass.

Watercourse - A definite channel with bed and banks within which concentrated water flows, either continuously or intermittently.

Water quality - A term used to describe the chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.

Waters of the State - [of Alabama] means waters of any river, stream, watercourse, pond, lake, coastal, groundwater or surface water, wholly or partially within the State, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce", Code of Alabama 1975, § 22-22-1(b)(2), as amended. Waters "include all navigable waters" as defined in 33 U.S.C. § 1362(7), as amended, which are within the State of Alabama.

Watershed - The region drained by or contributing water to a stream, lake, or other body of water.

Watershed area - The area of all land and water within the confines of a drainage divide.

Wattle (also referred to as a sediment retention fiber roll) – a manufactured device of a filler material encapsulated within a flexible containment material such as natural fiber, straw, or recycled products. Wattles are utilized in sediment and flow control applications such as sediment barriers, inlet protection and small sediment traps.

Weir - A device for measuring or regulating the flow of water.

Wetland - Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (from Army Corps of Engineers 1987 Wetlands Delineation Manual).

References and Other Resources

Documents Used as Resources in Updating the Alabama Handbook

These documents were used by the authors in developing the handbook. Some drawings and sketches were copied without any changes except page numbers.

Erosion Control Technology Council. http://www.ectc.org. and https://www.ectc.org/products

Georgia Soil and Water Conservation Commission, Manual for Erosion and Sediment Control in Georgia, Sixth Edition - January 2014.

Maryland Department of the Environment Water Management Administration, Maryland Stormwater Design Manual Volumes I & II, October 2000, Revised May 2009.

Mid-American Association of Conservation Districts, 1999. Protecting Water Quality – A field guide to erosion, sediment and stormwater best management practices for development sites in Missouri and Kansas.

North Carolina Department of Environment, Health, and Natural Resources, Division of Land Resources. Erosion and Sediment Control Planning and Design Manual, March 2009.

Pirone, 1978. Tree Maintenance.

Pirone, 1979. Tree Maintenance.

U.S.D.A. – Natural Resources Conservation Service. Alabama Field Office Technical Guide.

Documents Available Electronically to Use in Designing Best Management Practices

Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas, September 2018.
https://alconservationdistricts.gov/resources/erosion-and-sediment-control/

Best Management Practices: An Owner's Guide to Protecting Archaeological Sites
http://www.flheritage.com/archaeology/education/culturalmgmt/handbook.pdf
Low Impact Development Handbook for the State of Alabama. Alabama Department of Environmental Management, Alabama Cooperative Extension System and Auburn University, www.aces.edu/lid

TR-55, Urban Hydrology for Small Watersheds
ftp://ftp.wcc.nrcs.usda.gov/wntsc/H&H/other/TR55documentation.pdf

Stream Corridor Restoration
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044574.pdf

Soil Bioengineering for Upland Slope Protection and Erosion Reduction
http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17555.wba

Other Related Documents Available Electronically

Alabama Department of Environmental Management Regulations
http://www.adem.state.al.us/alEnviroRegLaws/default.cnt

Alabama Department of Environmental Management Construction Stormwater Program
NPDES program rules (ADEM Administrative Code 335-6-12) for regulated construction sites equal to or greater than one (1) acre in size, and noncoal, nonmetallic mining and dry mineral processing sites less than five (5) acres in size, can be viewed and downloaded at
http://www.adem.state.al.us/programs/water/constructionstormwater.cnt

Alabama Department of Environmental Management Coastal Program
http://www.adem.state.al.us/programs/coastal/default.cnt

Federal Highway Department Hydraulic Publications
http://www.fhwa.dot.gov/engineering/hydraulics/library_arc.cfm?pub_number=7&id=13

Resource Agencies

The following agencies have a role in various aspects of land disturbances.

Alabama Department of Environmental Management Field Operations Division Offices

ADEM Montgomery Office
1400 Coliseum Boulevard
Montgomery, AL 36110-2400
(334) 271-7700
Mailing Address
P.O. Box 301463
Montgomery, AL 36130-1463

Central Laboratory/Field Operations
1350 Coliseum Boulevard
Montgomery, AL 36110-2412

Birmingham Field Office
110 Vulcan Road
Birmingham, AL 35209
(205) 942-6168

Decatur Field Office
2715 Sandlin Road, S.W.
Decatur, AL 35603
(256) 353-1713

Mobile Central Field Office
2204 Perimeter Road
Mobile, AL 36615
(251) 450-3400

Mobile Coastal Field Office
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176

Alabama Historical Commission
468 South Perry Street
Montgomery, Alabama 36104
334-242-3184
http://www.preserveala.org

Alabama Soil and Water Conservation Committee
P.O. Box 304800
Montgomery, Alabama 36130-4800
Phone: 334/242-2620
Fax: 334-242-0551
https://alconservationdistricts.gov/

Geological Survey of Alabama
420 Hackberry Lane
Tuscaloosa, Alabama 35401
(205) 349-2852
http://www.gsa.state.al.us

Soil and Water Conservation Districts
A Soil and Water Conservation District is located in each county and usually listed in the phone book with the other local government offices.

U.S. Army Corps of Engineers

Mobile District	**Nashville District**
P.O. Box 2288	Estes Kefauver Federal Building & Courthouse Annex
Mobile, AL 36628-0001	801 Broadway
Phone: 251-690-3776	Nashville, TN 37214-2660
Fax: 251-690-2660	Phone: 615-736-7161

U.S. Dept. of Agriculture – Natural Resources Conservation Service
Alabama State Office
3381 Skyway Drive
P. O. Box 311
Auburn, AL 36830
1-800-342-9893
http://www.al.nrcs.usda.gov

In addition, a Field Office of the Natural Resources Conservation Service is located in most counties (if not, a contact can be made through the local soil and water conservation district office)

U.S. Dept. of Interior - Fish and Wildlife Service
Daphne Ecological Services Field Office
P.O. Drawer 1190
1208-B Main Street
Daphne AL 36526
251-441-5181 phone
251-441-6222 fax
http://www.fws.gov/daphne/

US Environmental Protection Agency
Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303
404-562-9900
1-800-241-1754
http://www2.epa.gov/aboutepa/about-epa-region-4-southeast

CAD Drawings

Drawings prepared using AutoCADD Civil 3D and located in related practices.

Check Dam – Wattle
Inlet Protection – Block and Gravel 1
Inlet Protection – Block and Gravel 2
Inlet Protection – Sand Bag
Inlet Protection – Silt Fence
Inlet Protection - Wattle

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Figure CD-2	Profile of Typical Rock Check Dams
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Appendix

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Local Information