

Madison County, Florida  
Nontechnical Soil Descriptions



Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units. These descriptions are written in terminology that nontechnical users of soil survey information can understand and are used to create reports. By linking the description to the soil survey map units these reports can be generated by conservation planners and other NRCS employees for distribution to land users. These descriptions are available through both Toolkit and NASIS.

In this subsection nontechnical descriptions are available through four categories they are Agronomic, Ecological Community, Urban, and Water Quality. Separate map unit to description links are provided for each category.

**AGRONOMIC**

The following agronomic categories are available and linked through the Land Capability Unit (LCU) that is listed below.

Category

- aSOI - Soil Characteristics
- bSAC - Soil Agronomic Characteristics
- cH2O - Seasonal High Water Table
- dCUL - Cultivation Limitations
- eERO - Erosion Control
- fIRR - Irrigation Needs
- hPAS - Pasture and Hayland
- iWMG - Water Table Management

<u>Map Symbol</u>	<u>Non hydric LCU</u>	<u>Hydric LCU</u>	<u>Drained LCU</u>	<u>Undrained LCU</u>
2	3w7			
3	4s7			
5	3s21			
6	4s21			
10	4s7			
11	6s2			
13	2s1			

<u>Map Symbol</u>	<u>Non hydric LCU</u>	<u>Hydric LCU</u>	<u>Drained LCU</u>	<u>Undrained LCU</u>
14	3s1			
15	4w5			
16	2e1			
17	3e1			
18	4e1			
21				5w4
22				5w8
23				4w7
26	3s20			
27	4s20			
28	3s5			
30	3w7			
34	4w5			
38	2e4			
48		5w8		
53	3s21			
55	3e3			
56	4e6			
57	6e3			
58	2s2			
61	3s4			
62	4s6			
63	6s2			
64	3s7			
65	2s2			
66	3s2			
67	6s25			
71	2e1			
72	3e1			
74		7w2		
77		6w3		
78	4s30			
79	2w1			
80	3s22			

Map Units without an LCU listed are either not suited to these uses or suitability is so variable that it must be determined on-site.

## **ECOLOGICAL COMMUNITY**

The following categories are available below.

kRNG - Rangeland  
IWLD - Wildlife Suitability  
mWOD - Woodland Suitability

EC 4 (Longleaf Pine-Turkey Oak Hills) - Map Units: 3, 10, 11, 26, 27, 53

EC 5 (Mixed Hardwood and Pines) - Map Units: 2, 5, 6, 13, 14, 16, 17, 18, 28, 30, 38, 55, 56, 57, 58, 61, 62, 63, 64, 65, 66, 67, 71, 72, 78, 79, 80

EC 7 (North Florida Flatwoods) - Map Units: 15, 22, 34

EC 12 (Wetlands Hardwood Hammock) - Map Unit: 23

EC 17 (Cypress Swamp) - Map Unit: 48

EC 20 (Bottomland Hardwoods) - Map Unit: 21

EC 21 (Swamp Hardwoods) - Map Unit: 77

EC 22 (Shrub Bogs - Bay Swamps) - Map Unit: 74

Map Units without an Ecological Community listed are not suited to these uses or suitability is so variable that it must be determined on-site.

## **URBAN USES**

The following additional nontechnical descriptions are available for urban interpretations:

oURB - Urban Use Statement  
pSEP - Septic Tank Absorption Fields  
qLRS - Local Roads and Streets

01 - Map Unit 77  
02 - Map Unit 74  
03 - Map Units 15, 21, 22, 23, 34, 48  
04 - Map Unit 38, 79  
05 - Map Unit 80  
06 - Map Units 28, 30  
08 - Map Units 55, 56, 57

10 - Map Units 65, 66

12 - Map Units 3, 5, 6, 10, 11, 13, 14, 16, 17, 18, 26, 27, 53, 58, 61, 62, 63, 64, 71, 72

15 - Map Unit 67

Map units without a link listed are either not suited to these uses or suitability is so variable that it must be determined on-site.

## **WATER QUALITY**

The last group of nontechnical description in this subsection of this FOTG is that group dealing with water quality, specifically pesticide and nutrient management. The link between the statements and the map units is listed below.

sWQ - Water Quality Statement

tPES - Pesticide Management Statement

uNUT - Nutrient Management Statement

02 - Map Units – 3, 5, 6, 10, 11, 13, 14, 26, 27, 53, 58, 61, 62, 63, 64, 78, 80

03 - Map Units – 2, 15, 16, 17, 18, 22, 23, 30, 34, 38, 48, 67, 71, 72, 77, 79

04 - Map Units 21, 55, 56, 57, 66

## Nontechnical Soil Descriptions

### 2e1 Map Units 16, 71

"aSOI", "2e1", "This map unit consists of gently sloping, well drained soils of the uplands. They have sandy or loamy surface layers less than 20 inches thick, and moderately permeable, loamy or clayey subsoil layers. These soils are prime farmland."

"bSAC", "2e1", "These soils have a well aerated root zone more than 60 inches thick. The available water capacity averages moderate to high in the root zone. These soils have moderate natural fertility and crops respond well to fertilization. Rainfall is readily absorbed and retained in the soil. Runoff during rain is moderate to rapid on unprotected areas and the erosion hazard is moderate."

"cH2O", "2e1", "In normal years these soils have no seasonal high water table within 72 inches."

"dCUL", "2e1", "These soils have moderate limitations for growing cultivated crops because of the hazard of erosion. A wide variety of cultivated crops is well adapted. Such crops as corn and soybeans grow well where properly managed. Moderate erosion control measures are needed. Maximum yields require good seed-soil contact, fertilizing, and liming. Nutrient management maximize yields."

"eERO", "2e1", "Moderate erosion control measures are needed on these soils. These include a system of well-designed terraces with stabilized outlets and contour cultivation of row crops in alternate strips with cover crops. Crop rotations are needed that include cover crops at least half the time. Soil-Improving cover crops and all crop residues should be left on the soil. Conservation tillage or no-till best protect the soil."

"fIRR", "2e1", "Crops produced on these soils are not normally irrigated."

"hPAS", "2e1", "These soils are well suited to pastures and hay crops. Pasture grasses such as hybrid bermudagrass and the improved bahiagrasses are well adapted. Clovers and other legumes are also adapted. They grow well where properly managed. They require nutrient management and controlled grazing to maintain vigorous plants for highest yields and good soil cover."

"iWMG", "2e1", "Water table management is not normally practiced on these soils."

## 2e4 Map Unit 38

"aSOI", "2e4", "This map unit consists of gently sloping, moderately well drained soils on terraces and uplands. They have sandy surface layers less than 20 inches thick, and moderately slowly or slowly permeable loamy or clayey subsoils. These soils are prime farmland."

"bSAC", "2e4", "The root zone is limited by a seasonal high water table. The available water capacity is moderate in the root zone. Natural fertility is low, but crops respond well to fertilization. Internal drainage rate is slow, but the soils respond well to artificial drainage. Some drainage or a raised seedbed is needed for highest yields of most crops. Rainfall runoff from unprotected areas is moderate and the hazard of erosion is moderate."

"cH2O", "2e4", "In normal years these soils have a seasonal high water table at a depth of between 18 and 36 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "2e4", "These soils have moderate limitations for cultivated crops because of the hazard of erosion. The variety of crops that are well adapted is somewhat limited by occasional wetness. Such crops as corn, soybeans, and peanuts grow moderately where properly managed. Moderate erosion control measures are needed. Maximum yields require proper seedbeds and nutrient management."

"eERO", "2e4", "Tile drains to remove water during wet seasons are needed for crops such as tobacco. Moderate erosion control measures are needed on these soils. These include a system of well- designed terraces with stabilized outlets and contour cultivation of row crops in alternate strips with cover crops. Crop rotations are needed that include cover crops at least half the time. Soil improving cover crops and all crop residues should be left on the soil. Conservation tillage or no-till best protect the soil."

"hPAS", "2e4", "These soils are well suited to improved pastures and hay crops. Clovers, hybrid bermudagrass, and bahiagrasses are well adapted. They grow well where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields and a good ground cover."

"iWMG", "2e4", "Ditches and/or tile drains, to remove excess surface water during rains, are needed to prevent crop damage for most crops produced on these soils. Some crops require more intensive water control measures. Tile drains can also be used to provide supplemental water through subirrigation."

## **2s1 Map Unit 13**

"aSOI", "2s1", "This map unit consists of nearly level and gently sloping, well drained soils on uplands. They have sandy surface and subsurface layers 20 to 40 inches thick, and moderately to moderately rapidly permeable loamy subsoil layers."

"bSAC", "2s1", "These soils have a well aerated root zone more than 72 inches thick. The available water capacity averages low to moderate in the root zone. Natural fertility is low and crop response to fertilization is moderate. Rainfall is rapidly absorbed with little runoff. The erosion hazard is slight."

"cH2O", "2s1", "In normal years these soils have no seasonal high water table within 72 inches."

"dCUL", "2s1", "These soils have moderate limitations for cultivated crops due to droughtiness. They can be cultivated safely with ordinary farming methods, but droughtiness and rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. With good management such crops as corn, soybeans, peanuts, and tobacco can be grown. Yields can be maximized with nutrient management."

"eERO", "2s1", "Row crops should be planted on the contour in alternate strips with cover crops. Crop rotations should include cover crops at least half the time. These cover crops and all residues of other crops should be returned to the soil."

"fIRR", "2s1", "Crops produced on these soils are not normally irrigated and good yields can be achieved without irrigation but yields can be increased with irrigation. Irrigation of some high value crops such as tobacco is usually feasible where irrigation water is readily available."

"hPAS", "2s1", "These soils are well suited to pastures. Deep rooting plants such as hybrid bermudagrass and bahiagrass are well adapted. They produce well where nutrient management is practiced. Controlled grazing is important to maintain vigorous plants for maximum yields and good cover."

"iWMG", "2s1", "Water table management is not normally practiced on these soils."

## **2s2 Map Unit 58, 65**

aSOI", "2s2", "This map unit consists of nearly level and gently sloping, well drained to moderately well drained soils on uplands. They have sandy surface and subsurface layers 20 to 40 inches thick, and moderately slowly to slowly permeable loamy and clayey subsoil layers."

"bSAC", "2s2", "These soils have a well aerated root zone that is limited at about 45 inches by slowly permeable subsoils or by wetness. The available water capacity averages low to moderate in the root zone. Natural fertility is low and crop response to fertilization is moderate. Rainfall is rapidly absorbed with little runoff. The erosion hazard is slight."

"cH2O", "2s2", "In normal years these soils have a seasonal high water table at a depth of between 36 and 48 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "2s2", "These soils have moderate limitations for cultivated crops due to droughtiness during dry seasons and wetness during wet seasons. They can be cultivated safely with ordinary good farming methods, but droughtiness and rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. With good management such crops as corn, soybeans, peanuts and tobacco can be grown. Nutrient management maximizes yields."

"eERO", "2s2", "Row crops should be planted on the contour in alternate strips with cover crops. Crop rotations should include cover crops at least half the time. Soil improving cover crops and all residues of other crops should be left on the field."

"fIRR", "2s2", "Crops produced on these soils are not normally irrigated; however, yields can be increased with irrigation. Irrigation is feasible where water is readily available."

"hPAS", "2s2", "These soils are well suited to pastures. Hybrid bermudagrass and bahiagrasses are well adapted. They produce well where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields and good cover."

"iWMG", "2s2", "Water table management is not normally practiced on these soils."

## **2w1 Map Unit 79**

"aSOI", "2w1", "This map unit consists of nearly level moderately well drained soils on uplands. They have sandy or loamy surface layers less than 20 inches thick, and moderately permeable, loamy subsoil layers. These soils are prime farmland."

"bSAC", "2w1", "A well aerated root zone is slightly limited by a seasonal high water table in wet seasons. The soils have a moderate available water capacity in the root zone. Natural fertility is low and crops respond moderately well to fertilization. The internal drainage rate under natural conditions is slow and response to artificial drainage is moderate."

"cH2O", "2w1", "In normal years these soils have a seasonal high water table at a depth of between 18 and 36 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "2w1", "These soils have moderate limitations for growing cultivated crops. The variety of adapted cultivated crops is somewhat limited by occasional wetness. Crops such as corn and peanuts are adapted when they are properly managed. Crop rotations should include cover crops on the land at least half the time. Crop residue should be left on the soil. Maximum yields require good seedbed preparation and nutrient management."

"eERO", "2w1", "Crops produced on these soils do not normally need special erosion control practices."

"fIRR", "2w1", "Crops produced on these soils are not normally irrigated."

"hPAS", "2w1", "These soils are well suited to pastures and hay crops. Improved pasture plants such as clovers, hybrid bermudagrass, and improved bahiagrass are well adapted. They grow well when they are well-managed. They require nutrient management and controlled grazing to maintain vigorous plants for highest yields."

"iWMG", "2w1", "Ditches and/or tile drains, to remove excess surface water during rains, are needed to prevent crop damage for most crops. Some crops such as tobacco require more intensive water control measures. Tile drains can also be used to supply water to plants during periods of low rainfall by subirrigation."

### **3e1 Map Units 17, 72**

"aSOI", "3e1", "This map unit consists of sloping, well drained soils on side slopes of uplands. They have sandy or loamy surface layers less than 20 inches thick, and moderately permeable, loamy or clayey subsoil layers. These soils are prime farmland."

"bSAC", "3e1", "These soils have a well aerated root zone more than 60 inches thick. The available water capacity is moderate to high in the root zone. They have moderate natural fertility and crops respond well to fertilization. Rainfall is readily absorbed and retained in the soil. Runoff after rains is rapid on unprotected areas and the erosion hazard is severe."

"cH2O", "3e1", "In normal years these soils have no seasonal high water table within 72 inches."

"dCUL", "3e1", "These soils have severe limitations for growing cultivated crops because of the hazard of erosion. A wide variety of cultivated crops is well adapted. Such crops as corn and soybeans grow well when properly managed. Maximum yields require good soil tilth and nutrient management."

"eERO", "3e1", "Intensive erosion control measures are needed. These measures include a system of well designed terraces with stabilized outlets and contour cultivation of row crops in alternate strips with cover crops. Crop rotations are needed that include cover crops at least two-thirds of the time. Soil improving cover crops and all crop residues should be left on the soil. Conservation tillage or no-till best protect the soil."

"fIRR", "3e1", "Crops produced on these soils are not normally irrigated."

"hPAS", "3e1", "These soils are well suited to pastures and hay crops. Pasture grasses such as hybrid bermudagrass and the improved bahiagrasses are well adapted. Clovers and other legumes are also well adapted. They grow well where properly managed and require nutrient management and controlled grazing to maintain vigorous plants for highest yields and good soil cover to reduce the hazard of erosion."

"iWMG", "3e1", "Water table management is not normally practiced on these soils."

### **3e3 Map Unit 55**

"aSOI", "3e3", "This map unit consists of gently sloping, well drained or moderately well drained soils on side slopes of upland ridges. They have sandy surface layers less than 20 inches thick, and slowly permeable clayey or loamy subsoil layers."

"bSAC", "3e3", "The soils have a well aerated root zone 22 to 36 inches thick. It is limited by firm, slowly permeable subsoil. These soils have low natural fertility and crops have only fair response to fertilization. The available water capacity is moderate. Rainfall is readily absorbed into the soil, but slow permeability of the subsoil limits the amount that can be absorbed during any one heavy rain. Runoff from rain is rapid and the erosion hazard is severe."

"cH2O", "3e3", "In normal years these soils have no seasonal high water table within 72 inches."

"dCUL", "3e3", "These soils have severe limitations for cultivated crops because of the hazard of erosion. They are not well suited to most cultivated crops. They have only fair suitability for such crops as corn and soybeans. Maximum yields require good soil tilth and nutrient management."

"eERO", "3e3", "Intensive erosion control measures are needed. These measures should include well designed terraces with stabilized outlets. They should also include contour cultivation of row crops grown in alternate strips with close growing crops. Crop rotations should include close growing crops on the land at least two-thirds of the time. Soil building cover crops and all crop residues should be left on the land. Conservation tillage or no-till best protects the soil."

"fIRR", "3e3", "Crops produced on these soils are not normally irrigated."

"hPAS", "3e3", "The soils are well suited to pastures. Such plants as clovers, hybrid bermudagrass, and improved bahiagrasses are well adapted. They grow well where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields and good soil cover for erosion control."

"iWMG", "3e3", "Water table management is not normally practiced on these soils."

### **3s1 Map Unit 14**

"aSOI", "3s1", "This map unit consists of sloping, well drained soils on side slopes of the uplands. They have sandy surface and subsurface layers 20 to 40 inches thick, and moderately to moderately rapidly permeable loamy subsoil layers."

"bSAC", "3s1", "These soils have a well aerated root zone more than 72 inches thick. The available water capacity averages low to moderate in the root zone. Natural fertility is low and crop response to fertilization is moderate. Rainfall is rapidly absorbed on well vegetated areas. Runoff from unprotected areas is moderate and the hazard of erosion on these areas is moderate."

"cH2O", "3s1", "In normal years these soils have no seasonal high water table within 72 inches."

"dCUL", "3s1", "These soils have severe limitations for cultivated crops due to droughtiness and erosion. Droughtiness and rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. The steepness of slopes further limits the suitability by making cultivation more difficult and increasing the hazard of erosion. Yields can be maximized with nutrient management."

"eERO", "3s1", "Intensive erosion control measures such as cultivating row crops on the contour in alternate strips with cover crops are needed. Crop rotations should include cover crops at least two-thirds of the time. These cover crops and all residues of other crops should be returned to the soil."

"fIRR", "3s1", "Irrigation of some high value crops is usually feasible where irrigation water is readily available."

"hPAS", "3s1", "These soils are moderately well suited to pastures. Deep rooting plants such as hybrid bermudagrass and bahiagrass are well adapted. They produce well where nutrient management is practiced. Controlled grazing is important to maintain vigorous plants for maximum yields and to provide good cover to minimize erosion."

"iWMG", "3s1", "Water table management is not normally practiced on these soils."

### **3s2 Map Unit 66**

aSOI", "3s2", "This map unit consists of sloping, well or moderately well drained soils on low ridges. They have sandy surface and subsurface layers that are 20 to 40 inches thick, and moderately slowly permeable to slowly permeable loamy and clayey subsoil layers."

"bSAC", "3s2", "These soils have a well aerated root zone that is limited at about 45 inches by slowly permeable subsoils or by wetness. The available water capacity averages low to moderate in the root zone. Natural fertility is low and crop response to fertilization is moderate. Rainfall is rapidly absorbed on well vegetated areas. Runoff from unprotected areas is moderate and the hazard of erosion on these areas is moderate."

"cH2O", "3s2", "In normal years these soils have a seasonal high water table at a depth of between 36 and 48 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "3s2", "These soils have severe limitations for cultivated crops due to droughtiness and erosion. Droughtiness and rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. The steepness of slopes further limits the suitability by making cultivation more difficult and increasing the hazard of erosion. Yields can be maximized with nutrient management."

"eERO", "3s2", "Intensive erosion control measures such as cultivating row crops on the contour and in alternate strips with cover crops are needed. Crop rotations should include cover crops at least two-thirds of the time. These cover crops and all residues of other crops should be returned to the soil."

"fIRR", "3s2", "Irrigation of some high value crops such as tobacco is usually feasible where irrigation water is readily available."

"hPAS", "3s2", "These soils are moderately well suited to pastures. Hybrid bermudagrass and bahiagrasses are well adapted but yields are reduced during periodic droughts. They produce well where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields, minimize the effects of droughts and to maintain good ground cover to minimize erosion."

"iWMG", "3s2", "Water table management is not normally practiced on these soils."

### 3s4 Map Unit 61

"aSOI", "3s4", "This map unit consists of nearly level and gently sloping, well drained soils on upland ridges. The soils have sandy surface and subsurface layers 40 to 80 inches thick and loamy subsoils that have rapid to moderate permeability."

"bSAC", "3s4", "These soils have a well aerated root zone that is thicker than 80 inches. The available water capacity averages very low to low in the root zone. Natural fertility is low to moderate and crop response to fertilization is moderate. Rainfall is rapidly absorbed and there is little runoff. The hazard of erosion is slight."

"dCUL", "3s4", "These soils have severe limitations to cultivated crops. Droughtiness and rapid leaching of plant nutrients reduce the number of well adapted crops and the potential yields of plants that are adapted. The control of erosion is also a management concern. Nutrient management maximizes yields."

"eERO", "3s4", "Some erosion control measures are needed such as cultivating row crops on the contour in strips alternating with close growing, soil building crops. Crop rotations should include close growing, soil improving crops on the land at least two-thirds of the time. Soil improving cover crops and all crop residues should be left on the land."

"fIRR", "3s4", "Good yields of cultivated crops require irrigation: however irrigation is feasible for only a few high value crops and only where irrigation water is readily available. Where water for irrigation is readily available, increased yields of citrus crops makes irrigation feasible."

"gCIT", "3s4", "These soils are well suited to citrus crops where they are in places that are relatively free from freezing in winter. Trees should be planted so a good ground cover of close growing vegetation is maintained between the trees to protect the soils from blowing. Good yields of citrus fruit such as oranges and grapefruit can normally be obtained without irrigation. Nutrient management is needed for highest yields."

"hPAS", "3s4", "These soils are well suited to pastures and hay crops. Deep rooting hybrid bermudagrass and bahiagrasses grow well where nutrient management is practiced. These soils require light and frequent fertilizing and carefully controlled grazing to maintain vigorous plants. Production is occasionally reduced by extended droughts."

"h2O", "3s4", "In normal years these soils do not have a seasonal high water table within 72 inches."

"iWMG", "3s4", "Water table management is not normally practiced on these soils."

### **3s5 Map Unit 28**

"aSOI", "3s5", "This map unit consists of nearly level and gently sloping, somewhat poorly drained to moderately well drained soils on broad low ridges. They have sandy layers that are rapidly permeable to depths of more than 80 inches."

"bSAC", "3s5", "The root zone of these soils is limited by a seasonal high water table in wet seasons as well as droughtiness. The available water capacity is low to very low in all layers. Natural fertility is low and crop response to fertilization is moderate to low. Rainfall is rapidly absorbed and there is little runoff. The hazard of erosion is slight."

"cH2O", "3s5", "In normal years these soils have a seasonal high water table at a depth of between 18 and 40 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "3s5", "These soils have severe limitations for cultivated crops. Droughtiness and rapid leaching of plant nutrients limit the choice of plants and reduces potential yields of adapted crops. Soil management should include row crops on the contour in alternate strips with close growing crops. Crop rotations should include close growing crops on the land at least two-thirds of the time. Nutrient management maximizes yields. Soil improving cover crops and all crop residues should be left on the land."

"eERO", "3s5", "Crops produced on these soils do not normally need special erosion control practices."

"fIRR", "3s5", "Irrigation of high value crops is usually feasible where irrigation water is readily available."

"hPAS", "3s5", "These soils are moderately well suited to pastures and hay. Plants such as hybrid bermudagrass and bahiagrasses are well adapted. These soils require nutrient management to maximize yields. Controlled grazing is needed to maintain vigorous plants for maximum yields."

"iWMG", "3s5", "Tile or other kinds of drains are needed for some crops that are damaged by high water table during the growing season. Tile drains can also be used for subirrigation during periods of low rainfall."

### **3s7 Map Unit 64**

"aSOI", "3s7", "This map unit consists of nearly level and gently sloping, moderately well drained soils that occur on narrow to broad ridges and isolated knolls. They have very rapidly permeable sandy layers to depths of more than 80 inches."

"bSAC", "3s7", "The root zone of these soils is limited by a seasonal high water table in wet seasons and by droughtiness during periods of low rainfall. The available water capacity is low in the root zone. Natural fertility is low and crop response to fertilization is low to moderate. Rainfall is rapidly absorbed and there is little runoff. The hazard of erosion is slight."

"cH2O", "3s7", "In normal years these soils have a seasonal high water table at a depth of between 40 and 60 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "3s7", "These soils have severe limitations for most cultivated crops due to droughtiness and the rapid leaching of plant nutrients. These factors also limit the choice of plants and reduces potential yields of adapted crops. Crop rotations should include close growing crops on the land at least two-thirds of the time. Nutrient management maximizes yields. Soil improving cover crops and all crop residues should be left on the ground."

"fIRR", "3s7", "Irrigation of high value crops is usually feasible where irrigation water is readily available."

"hPAS", "3s7", "These soils are moderately well suited to pastures. Hybrid bermudagrass and bahiagrasses are adapted. White clover and lespedezas are also adapted. These soils produce good yields where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields."

"iWMG", "3s7", "Tile, or other types of drains, are needed for some crops such as tobacco that are damaged by high water table during the growing season. Tiles can also be used as a source for subirrigation during periods of low rainfall."

### **3s20 Map Unit 26**

"aSOI", "3s20", "This map unit consists of gently sloping, well drained soils on upland ridges. They have sandy surface and subsurface layers that are 40 to 80 inches thick, and moderately permeable loamy subsoil layers."

"bSAC", "3s20", "These soils have a well aerated root zone that is not limited above a depth of about 72 inches. The available water capacity averages low to moderate in the root zone. Natural fertility is low and crop response to fertilization is moderate. Rainfall is rapidly absorbed on well vegetated areas. Runoff from unprotected areas is slight and the hazard of erosion on these areas is slight to moderate."

"cH2O", "3s20", "In normal years these soils do not have a seasonal high water table within a depth of 72 inches."

"dCUL", "3s20", "These soils have severe limitations for cultivated crops due to droughtiness. Droughtiness and the rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. Yields can be maximized with nutrient management. Crop rotations should include cover crops at least two-thirds of the time. These cover crops and all residues of other crops should be returned to the soil."

"eERO", "3s20", "Moderate erosion control measures such as cultivating row crops on the contour and in alternate strips with cover crops are needed."

"fIRR", "3s20", "Irrigation of some high value crops is usually feasible where irrigation water is readily available."

"hPAS", "3s20", "These soils are moderately well suited to pastures. Hybrid bermudagrass and bahiagrasses are well adapted but yields are reduced during periodic droughts. They produce well where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields, minimize the effects of droughts and to maintain good ground cover to minimize erosion."

"iWMG", "3s20", "Water table management is not normally practiced on these soils."

### **3s21 Map Units 5, 53**

"aSOI", "3s21", "This map unit consists of sloping, well drained soils on upland ridges. They have sandy surface and subsurface layers that are 40 to 80 inches thick, and moderately permeable loamy subsoil layers."

"bSAC", "3s21", "These soils have a well aerated root zone that is limited by a seasonal high water table in wet season and droughtiness during periods of low rainfall. The available water capacity averages low to moderate in the root zone. Natural fertility is low and crop response to fertilization is moderate. Rainfall is rapidly absorbed on well vegetated areas. Runoff from unprotected areas is slight and the hazard of erosion on these areas is slight to moderate."

"cH2O", "3s21", "In normal years these soils have a seasonal high water table at a depth of between 48 and 72 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "3s21", "These soils have severe limitations for cultivated crops due to droughtiness. Droughtiness and the rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. Yields can be maximized with nutrient management. Crop rotations should include cover crops at least two-thirds of the time. These cover crops and all residues of other crops should be returned to the soil."

"eERO", "3s21", "Moderate erosion control measures such as cultivating row crops on the contour in alternate strips with cover crops are needed."

"fIRR", "3s21", "Irrigation of some high value crops is usually feasible where irrigation water is readily available."

"hPAS", "3s21", "These soils are moderately well suited to pastures. Hybrid bermudagrass and bahiagrasses are well adapted but yields are reduced during periodic droughts. They produce well where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields, minimize the effects of droughts and to maintain good ground cover to minimize erosion."

"iWMG", "3s21", "Water table management is not normally practiced on these soils."

### **3s22 Map Unit 80**

"aSOI", "3s22", "This map unit consists of nearly level and gently sloping, somewhat poorly drained to well drained soils on flood plains broad. These soils are occasionally flooded. They have sandy layers that are rapidly permeable to depths of more than 20 inches."

"bSAC", "3s22", "The root zone of these soils is limited by a seasonal high water table in wet seasons as well as droughtiness during periods of low rainfall. The available water capacity is low to very low in all layers. Natural fertility is low and crop response to fertilization is moderate to low. Rainfall is rapidly absorbed and there is little runoff. The hazard of erosion is slight."

"dCUL", "3s22", "These soils have severe limitations for cultivated crops. Droughtiness, flooding, and the rapid leaching of plant nutrients limit the choice of plants and reduces potential yields of adapted crops. If cropped, soil management should include row crops on the contour in alternate strips with close growing crops. Crop rotations should include close growing crops on the land at least two-thirds of the time. Nutrient management maximize yields. Soil improving cover crops and all crop residues should be left on the land."

"eERO", "3s22", "Crops produced on these soils do not normally need special erosion control practices."

"fIRR", "3s22", "Irrigation of high value crops is usually feasible where irrigation water is readily available."

"hPAS", "3s22", "These soils are only moderately suited to pastures and hay. Plants such as hybrid bermudagrass and bahiagrasses are adapted. These soils require nutrient management to maximize yields. Controlled grazing is needed to maintain vigorous plants for maximum yields."

"cH2O", "3s22", "In normal years these soils have a seasonal high water table at a depth of between 40 and 60 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth. They are occasionally flooded for periods of brief duration"

"iWMG", "3s22", "Water table management is not normally practiced on these soils."

### **3w7 Map Unit 2, 30**

"aSOI", "3w7", "This map unit consists of nearly level and gently sloping, somewhat poorly drained soils on low ridges within the flatwoods and broad flats of the uplands. They have rapidly permeable sandy layers to depths of 20 to 60 inches over moderately to moderately rapidly permeable subsoil."

"bSAC", "3w7", "The root zone of these soils is limited by a seasonal high water table in wet seasons and by droughtiness during periods of low rainfall. The available water capacity is low in the root zone. Natural fertility is low but the response to fertilizers is moderate. Rainfall is rapidly absorbed and there is little runoff. The hazard of erosion is moderate on that part of the map unit between 2 to 5 percent slopes which has been assigned to this capability class."

"cH2O", "3w7", "In normal years these soils have a seasonal high water table at a depth of between 18 and 40 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "3w7", "These soils have severe limitations for most cultivated crops due to wetness in wet seasons, droughtiness during periods of low rainfall, rapid leaching of plant nutrients and the hazard of erosion on slopes greater than 2 percent. These factors also limit the choice of plants and reduces potential yields of adapted crops. Maximum yields require proper seedbeds and nutrient management. Soil improving cover crops and all crop residues should be left on the ground. Erosion control measures are needed on that part of the map unit between 2 to 5 percent slopes which has been assigned to this capability class."

"eERO", "3w7", "Erosion control measures are needed on these soils on slopes above 2 percent. These include contour cultivation of row crops in alternate strips with cover crops. Crop rotations are needed that include cover crops at least two-thirds of the time. Soil improving cover crops and all crop residues should be left on the soil. Conservation tillage or no-till best protect the soil."

"fIRR", "3w7", "Irrigation of high value crops is usually feasible where irrigation water is readily available."

"hPAS", "3w7", "These soils are moderately suited to pastures. Hybrid bermudagrass and bahiagrasses are adapted. White clover and lespedezas are also adapted. These soils produce good yields where nutrient management is practiced. Controlled grazing is needed to maintain vigorous plants for maximum yields."

"iWMG", "3w7", "Tile, or other types of drains, are needed for some crops such as tobacco that are damaged by high water table during the growing season. Tiles can also be used as a source for subirrigation during periods of low rainfall."

#### **4e1 Map Units 18**

"aSOI", "4e1", "This map unit consists of strongly sloping, well drained soils on the side slopes of upland ridges. They have sandy or loamy surface layers less than 20 inches thick and moderately permeable loamy or clayey subsoil layers."

"bSAC", "4e1", "These soils have a well aerated root zone more than 72 inches thick. The available water capacity averages moderate to high in the root zone. They have moderate natural fertility and crops respond well to fertilization. Rainfall is readily absorbed and retained in the soils. Runoff from unprotected areas during rain is very rapid. The erosion hazard is very severe."

"cH2O", "4e1", "In normal years these soils do not have a seasonal high water table within 72 inches of the surface."

"dCUL", "4e1", "These soils are poorly suited to row crops because slopes are too steep and the hazard of erosion is too great to be safely cultivated. Crops such as corn, soybeans, and peanuts are only moderately suited. The slopes are too steep to be effectively terraced and erosion control measures are limited to the use of vegetative cover. All crops grown on these soils require nutrient management for best yields."

"eERO", "4e1", "Intensive erosion control measures are needed. Such measures include contour cultivation of row crops with alternating strips of close growing crops and crop rotations that include close growing vegetation on the land at least three-fourths of the time. All crop residues should be left on the land."

"fIRR", "4e1", "Crops produced on these soils are not normally irrigated"

"hPAS", "4e1", "These soils are moderately well suited to improved pastures. Hybrid bermudagrass and improved bahiagrasses are well adapted. Nutrient management and controlled grazing are needed for best yields and to assure a complete vegetative cover to prevent severe erosion."

"iWMG", "4e1", "Water table management is not normally practiced on crops produced on these soils."

#### **4e6 Map Unit 56**

"aSOI", "4e6", "This map unit consists of sloping, well drained soils on side slopes of upland ridges. They have loamy surface layers less than 20 inches thick and slowly permeable subsoil layers."

"bSAC", "4e6", "These eroded soils have a well aerated root zone 22 to 36 inches thick. It is limited by a slowly permeable firm subsoil. The available water capacity is low to moderate in the surface layers and moderate to high in the subsoil layers. The soils have low natural fertility and crop response to fertilization is only fair. Runoff from rain is very rapid on unprotected areas and the erosion hazard is very severe."

"cH2O", "4e6", "In normal years these soils do not have a seasonal high water table within 72 inches of the surface."

"dCUL", "4e6", "These soils are poorly suited to row crops because slopes are too short or steep and the hazard of additional erosion is too great to be safely cultivated. Crops such as corn, soybeans, and peanuts are only moderately suited. The slopes are too steep to be effectively terraced and erosion control measures are limited to the use of vegetative cover. All crops grown on these soils require nutrient management for best yields."

"eERO", "4e6", "Intensive erosion control measures are needed. Such measures include contour cultivation of row crops with alternating strips of close growing crops and crop rotations that include close growing vegetation on the land at least three-fourths of the time. All crop residues should be left on the land."

"fIRR", "4e6", "Crops produced on these soils are not normally Irrigated"

"hPAS", "4e6", "These soils are moderately suited to improved pastures. Hybrid bermudagrass and improved bahiagrasses are moderately well adapted. Nutrient management and controlled grazing are needed for best yields and to assure a complete vegetative cover to prevent severe erosion."

"iWMG", "4e6", "Water table management is not normally practiced on crops produced on these soils."

#### **4s6 Map Unit 62**

"aSOI", "4s6", "This map unit consists of sloping, moderately well drained soils on side slopes of ridges. They have rapidly permeable sandy layers to depths of 80 inches or more."

"bSAC", "4s6", "The root zone of these soils is limited by droughtiness during periods of low rainfall. The available water capacity is low very low in the root zone. Natural fertility is low and crop response to fertilization is low to moderate. Rainfall is rapidly absorbed but there is a hazard of high runoff on unprotected areas. The hazard of erosion is moderate."

"cH2O", "4s6", "In normal years these soils have a seasonal high water table at a depth of between 40 and 72 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "4s6", "These soils have severe limitations for most cultivated crops due to droughtiness and the rapid leaching of plant nutrients. These factors also limit the choice of plants and reduces potential yields of adapted crops. Nutrient management maximizes yields. Soil improving cover crops and all crop residues should be left on the ground."

"eERO", "4s6", "Erosion control measures are needed. These should include cultivation of row crops on the contour in alternate strips with close growing crops. Crop rotations should include close growing crops on the land at least three-fourths of the time. Terraces may create gully erosion problems. Soil improving cover crops and all crop residues should be left on the land. Irrigation of cultivated crops is usually not feasible because of slope and the hazard of erosion. However, irrigation is feasible for a few high value crops. Increased yields of crops are realized where water for irrigation is readily available. The rate of water application should be low enough to prevent runoff and erosion."

"fIRR", "4s6", "Irrigation of cultivated crops is usually not feasible because of slope and the hazard of erosion. However, irrigation is feasible for a few high value crops such as tobacco and, where water for irrigation is readily available, increased yields of crops are realized. The rate of water application should be low enough to prevent runoff and erosion."

"hPAS", "4s6", "These soils are moderately well suited to pastures and hay. Plants such as hybrid bermudagrass and bahiagrasses are well adapted. These soils require nutrient management to maximize yields. Controlled grazing is needed to maintain vigorous plants for maximum yields."

"iWMG", "4s6", "Water table management is not normally practiced on cultivated crops grown on these soils."

#### **4s7 Map Units 3, 10**

"aSOI", "4s7", "This map unit consists of nearly level and gently sloping, well drained to excessively drained soils on to broad ridges. These soils have very rapidly permeable sandy layers to depths of more than 80 inches."

"bSAC", "4s7", "The root zone of these soils well aerated to a depth of 80 inches or more. Root development is limited by droughtiness. The available water capacity is low to very low in the root zone. Natural fertility is low and crop response to fertilization is low to moderate. Rainfall is rapidly absorbed and there is little runoff. The hazard of erosion is slight."

"cH2O", "4s7", "In normal years these soils do not have a seasonal high water table within a depth of 80 inches."

"dCUL", "4s7", "These soils have very severe limitations for most cultivated crops due to droughtiness and the rapid leaching of plant nutrients. These factors also limit the choice of plants and reduces potential yields of adapted crops. Crop rotations should include close growing crops on the land at least two-thirds of the time. Irrigation and nutrient management are requirements for acceptable yields. Soil improving cover crops and all crop residues should be left on the ground."

"fIRR", "4s7", "Although irrigation is a requirement for acceptable yields, due to the low water holding capacity of these soils, irrigation of all crops except a high value crops is not usually feasible. Locating a reliable and economical source of irrigation water is another management concern."

"hPAS", "4s7", "These soils are moderately suited to pastures. Deep-rooting plants such as Hybrid bermudagrass and bahiagrasses are adapted but yields are restricted due to droughtiness. Nutrient management is a required practice. Controlled grazing is needed to maintain vigorous plants for maximum yields."

"iWMG", "4s7", "Water table management is not normally practiced on these soils."

#### **4s20 Map Unit 27**

"aSOI", "4s20", "This map unit consists of sloping, well drained soils on upland ridges. They have sandy surface and subsurface layers that are 40 to 80 inches thick, and moderately permeable loamy subsoil layers."

"bSAC", "4s20", "These soils have a well aerated root zone that is not limited above a depth of about 72 inches. The available water capacity averages low to moderate in the root zone. Natural fertility is low and response to fertilization is moderate. Rainfall is rapidly absorbed on well vegetated areas. Runoff from unprotected areas is slight and the hazard of erosion on these areas is moderate."

"cH2O", "4s20", "In normal years these soils do not have a seasonal high water table within a depth of 72 inches."

"dCUL", "4s20", "These soils have severe limitations for cultivated crops due to droughtiness. Droughtiness and the rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. Erosion is an additional hazard. Yields can be maximized with nutrient management."

"eERO", "4s20", "Moderate erosion control measures such as cultivating row crops the contour in alternate strips with cover crops are needed. Crop rotations should include cover crops at least two-thirds of the time. These cover crops and all residues of other crops should be returned to the soil."

"fIRR", "4s20", "Irrigation of some high value crops is usually feasible where irrigation water is readily available."

"hPAS", "4s20", "These soils are moderately suited to pastures. Hybrid bermudagrass and bahiagrasses are well adapted but yields are reduced during periodic droughts. They produce well when they are fertilized and limed. Controlled grazing is needed to maintain vigorous plants for maximum yields, minimize the effects of droughts and to maintain good ground cover to minimize erosion."

"iWMG", "4s20", "Water table management is not normally practiced on these soils."

#### **4s21 Map Unit 6**

"aSOI", "4s21", "This map unit consists of sloping, well drained soils on upland ridges. They have sandy surface and subsurface layers that are 40 to 80 inches thick, and moderately permeable loamy subsoil layers."

"bSAC", "4s21", "These soils have a well aerated root zone that is limited by a seasonal high water table in wet season and droughtiness during periods of low rainfall. The available water capacity averages low to moderate in the root zone. Natural fertility is low and response to fertilization is moderate. Rainfall is rapidly absorbed on well vegetated areas. Runoff from unprotected areas is slight and the hazard of erosion on these areas is moderate."

"cH2O", "4s21", "In normal years these soils have a seasonal high water table at a depth of between 48 and 72 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "4s21", "These soils have severe limitations for cultivated crops due to droughtiness. Droughtiness and the rapid leaching of plant nutrients limit the choice of crops and the potential yields of adapted crops. The hazard of erosion is an additional management concern. Yields can be maximized with nutrient management."

"eERO", "4s21", "Moderate erosion control measures such as cultivating row crops on the contour in alternate strips with cover crops are needed. Crop rotations should include cover crops at least two-thirds of the time. These cover crops and all residues of other crops should be returned to the soil"

"fIRR", "4s21", "Irrigation of some high value crops such as tobacco is usually feasible where irrigation water is readily available."

"hPAS", "4s21", "These soils are moderately suited to pastures. Hybrid bermudagrass and bahiagrasses are well adapted but yields are reduced during periodic droughts. They produce well when they are fertilized and limed. Controlled grazing is needed to maintain vigorous plants for maximum yields, minimize the effects of droughts and to maintain good ground cover to minimize erosion."

"iWMG", "4s21", "Water table management is not normally practiced on these soils."

### **4s30 Map Unit 78**

"aSOI", "4s30", "This map unit consists of nearly level and gently sloping, well drained to excessively drained soils on to broad ridges. These soils have very rapidly permeable sandy layers to depths of more than 80 inches."

"bSAC", "4s30", "The root zone of these soils well aerated to a depth of 80 inches or more. Root development is limited by droughtiness. The available water capacity is low to very low in the root zone. Natural fertility is low and crop response to fertilization is low to moderate. Rainfall is rapidly absorbed and there is little runoff. The hazard of erosion is slight."

"cH2O", "4s30", "In normal years these soils do not have a seasonal high water table within a depth of 72 inches. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth. They are occasionally flooded for periods of brief duration."

"dCUL", "4s30", "These soils have very severe limitations for most cultivated crops due to droughtiness and the rapid leaching of plant nutrients. These factors also limit the choice of plants and reduces potential yields of adapted crops. Crop rotations should include close growing crops on the land at least two-thirds of the time. Irrigation and nutrient management are requirements for acceptable yields. Soil improving cover crops and all crop residues should be left on the ground."

"fIRR", "4s30", "Although irrigation is a requirement for acceptable yields, due to the low water holding capacity of these soils, irrigation of all crops except a high value crops such as seed peanuts is not usually feasible. Locating a reliable and economical source of irrigation water is another management concern."

"hPAS", "4s30", "These soils are moderately suited to pastures. Deep-rooting plants such as Hybrid bermudagrass and bahiagrasses are adapted but yields are restricted due to droughtiness. Nutrient management is a required practice. Controlled grazing is needed to maintain vigorous plants for maximum yields."

"iWMG", "4s30", "Water table management is not normally practiced on these soils."

#### **4w5 Map Units 15, 34**

"aSOI", "4w5", "This map unit consists of nearly level, poorly drained soils on flatwoods, hammocks, and other flat areas. They have sandy layers more than 72 inches thick and a spodic horizon within 30 inches of the surface."

"bSAC", "4w5", "The root zone is limited by a seasonal high water table that comes to near the surface in wet seasons. The available water capacity averages moderate in the root zone. Natural fertility is low but crop response to fertilization is good. Internal drainage is slow but response to artificial drainage is moderate to rapid. The hazard of erosion is slight."

"cH2O", "4w5", "In normal years these soils have a seasonal high water table at a depth of between 6 and 18 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "4w5", "These soils have severe limitations for cultivated crops because of wetness. With a total water management system these soils are suited to such crops as corn and soybeans. Management should include crop rotations that keep the soil in close growing cover crops at least two-thirds of the time. The cover crops and all other crop residue should be returned to the soil. Maximum yields require good soil tilth and nutrient management."

"eERO", "4w5", "Crops produced on these soils do not normally need special erosion control practices."

"fIRR", "4w5", "Crops produced on these soils are not normally irrigated."

"hPAS", "4w5", "These soils are well suited to pastures and hay crops. Improved grasses such as improved bahiagrasses are well adapted. Several varieties of clovers are also well adapted where properly managed. High yields require nutrient management, water table management, and controlled grazing to prevent overgrazing."

"iWMG", "4w5", "A total water table management system should remove excess water rapidly and provide a means of applying subirrigation. Tile drains, open ditches, and/or tail-race recovery systems may be needed to maintain the preferred water table depths. To obtain adequate drainage, the spacing of tile drains is important. Tile drains may be used for subirrigation during periods of low rainfall."

### **4w7 Map Unit 23**

"aSOI", "4w7", "This map unit consists of nearly level, poorly drained soils on flatwoods, hammocks, and other flat areas. They have sandy surface and subsurface layers 20 to 60 inches thick over moderately to moderately rapidly permeable loamy layers."

"bSAC", "4w7", "The root zone is limited by a seasonal high water table that comes to near the surface in wet seasons. The available water capacity averages moderate in the root zone. Natural fertility is low but crop response to fertilization is good. Internal drainage is slow but response to artificial drainage is moderate to rapid. The hazard of erosion is slight."

"cH2O", "4w7", "In normal years these soils have a seasonal high water table at a depth of between 6 and 18 inches for 1 to 4 months. In other months the water table is below these depths. Rarely, only during periods of high rainfall and only for a few days, is the water table above the normal seasonal high water table depth."

"dCUL", "4w7", "These soils have severe limitations for cultivated crops because of wetness. With a total water management system these soils are suited to such crops as corn and soybeans. Management should include crop rotations that keep the soil in close growing cover crops at least two-thirds of the time. The cover crops and all other crop residue should be returned to the soil. Maximum yields require good soil tilth and nutrient management."

"eERO", "4w7", "Crops produced on these soils do not normally need special erosion control practices."

"fIRR", "4w7", "Crops produced on these soils are not normally irrigated."

"hPAS", "4w7", "These soils are well suited to pastures and hay crops. Improved grasses such as improved bahiagrasses are well adapted. Several varieties of clovers are also well adapted where properly managed. High yields require nutrient management, water table management, and controlled grazing to prevent overgrazing."

"iWMG", "4w7", "A total water table management system should remove excess water rapidly and provide a means of applying subirrigation. Tile drains, open ditches, and/or tail-race recovery systems may be needed to maintain the preferred water table depths. To obtain adequate drainage, the spacing of tile drains is important. Tile drains may be used for subirrigation during periods of low rainfall."

## **5w4 Map Unit 21**

"aSOI", "5w4", "This map unit consists of nearly level, poorly drained and very poorly drained soils in depressions. They have sandy or loamy upper layers less than 20 inches thick, and slowly permeable clayey subsoil layers. They are covered with shallow water much of the time."

"bSAC", "5w4", "Wetness and ponding severely limits the use of the root zone of these soils for agronomic crops."

"cH2O", "5w4", "In normal years these hydric soils have a seasonal high water table within 6 inches of the surface for 2 to 6 months or more. In other months the water table is usually below these depths. These soils are also ponded frequently for long duration. Most often ponding occurs in the winter and spring, but it may occur during any wet season."

"dCUL", "5w4", "These hydric soils are not suited to cultivated crops without an extensive water table management system."

"eERO", "5w4", "Erosion is not a management concern for crops produced on these hydric soils."

"fIRR", "5w4", "If cultivated, highest yields require irrigation either subirrigated through the extensive water table management system or by sprinklers."

"hPAS", "5w4", "These hydric soils are not suited to pasture or hay crops without an extensive water table management system."

"iWMG", "5w4", "If these hydric soils are cultivated, an extensive water table management system is needed for crop and pasture production on these soils. It should remove excess water rapidly and provide a means of applying subirrigation. Dikes and a pumping systems are needed for ponding control and tile drains and open ditches are needed to maintain the preferred water table depth. Rarely are drainage and ponding protection economically feasible and environmentally sound."

## **5w8 Map Units 22, 48**

"aSOI", "5w8", "This map unit consists of nearly level, poorly to very poorly drained soils in depressions. They have sandy layers more than 20 inches thick. These soils are all covered with shallow water much of the time."

"bSAC", "5w8", "Wetness and ponding severely limits the use of the root zone of these soils for agronomic crops."

"cH2O", "5w8", "In normal years these hydric soils have a seasonal high water table within 6 inches of the surface for 2 to 6 months or more. In other months the water table is usually below these depths. These soils are also frequently covered with shallow water for long duration. Most often flooding occurs in the winter and spring, but it may occur during any wet season."

"dCUL", "5w8", "These hydric soils are not suited to cultivated crops without an extensive water table management system."

"eERO", "5w8", "Erosion is not a management concern on crops produced on these hydric soils."

"fIRR", "5w8", "If cultivated, highest yields require irrigation either subirrigated through the extensive water table management system or by sprinklers."

"hPAS", "5w8", "These hydric soils are not suited to pasture or hay crops without an extensive water table management system."

"iWMG", "5w8", "If these hydric soils are cultivated, an extensive water table management system is needed for crop and pasture production on these soils. It should remove excess water rapidly and provide a means of applying subirrigation. Dikes and a pumping systems are needed for flood control and tile drains and open ditches are needed to maintain the preferred water table depth. Rarely are drainage and flood protection economically feasible and environmentally sound."

### **6e3 Map Unit 57**

"aSOI", "6e3", "This map unit consists of strongly sloping, well drained soils on upland knolls and side slopes of short ridges. These soils have a past history of erosion. They have sandy or loamy surface layers less than 10 inches thick, and slowly permeable clayey subsoil layers."

"bSAC", "6e3", "The soils have a well aerated root zone more than 60 inches thick that is restricted by a firm, slowly permeable subsoil. Available water capacity averages low to moderate in the root zone. Natural fertility is moderate. The soils absorb water rapidly where protected by a vegetative cover, but runoff from unprotected areas is very rapid. The hazard of erosion is very severe."

"cH2O", "6e3", "In normal years these soils do not have a seasonal high water table within 72 inches of the surface."

"dCUL", "6e3", "These soils are not suited to cultivated crops. Slopes are too steep and too easily eroded. These soils should be maintained in permanent vegetative covers."

"eERO", "6e3", "If these soils are cultivated, erosion control measures that would adequately protect the soil and water resource base are difficult to install and/or maintain."

"fIRR", "6e3", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "6e3", "These soils are poorly suited to pastures and hay crops. Adapted grasses such as hybrid bermudagrass and bahiagrass grow moderately well under careful management but harvestable yields are low because of the need to maintain a dense cover by use of a very restricted grazing program."

"iWMG", "6e3", "Water table management is not a normal practice on these soils because of the lack of cultivation and an available water source."

### **6s2 Map Unit 11, 63**

"aSOI", "6s2", "This map unit consists of sloping to strongly sloping excessively drained soils on side slopes of the uplands. They have rapidly permeable sandy layers to depths of more than 80 inches."

"bSAC", "6s2", "These soils have a well aerated root zone more than 80 inches thick. Available water capacity averages very low in the root zone. Natural fertility is low and response to fertilization is low. Rainfall is absorbed on protected areas and there is little runoff. The hazard of sheet erosion is moderate on unprotected areas and the hazard of gully erosion is severe where runoff water is concentrated."

"cH2O", "6s2", "In normal years these soils do not have a seasonal high water table within a depth of 72 inches."

"dCUL", "6s2", "These soils are not suitable for cultivated crops because of droughtiness, steepness of slope, and susceptibility to gully erosion."

"eERO", "6s2", "If these soils are cultivated, erosion control measures that would adequately protect the soil and water resource base are difficult to install and/or maintain."

"fIRR", "6s2", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "6s2", "These soils are moderately suited for pastures. Deep rooting plants such as hybrid bermudagrass and bahiagrass are well adapted but yields are reduced by periodic droughts. Nutrient management is needed. Grazing should be controlled to permit plants to maintain vigor for highest yields."

"iWMG", "6s2", "Water table management is not normally practiced on these soils."

### **6s25 Map Unit 67**

"aSOI", "6s25", "This map unit consists of nearly level to steep soils on areas used as dikes for water control. The soil materials are from adjacent canals and are variable; however, they are deep and predominately stratified sandy and limestone material."

"bSAC", "6s25", "This soil is not normally used for agricultural operations."

"cH20", "6s25", "In normal years these soils do not have a seasonal high water table within 72 inches of the surface."

"dCUL", "6s25", "These soils are too steep and erodible to be suited to cultivated crops."

"eERO", "6s25", "If these soils are cultivated, erosion control measures that would adequately protect the soil and water resource base are difficult to install and/or maintain."

"fIRR", "6s25", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "6s25", "These soils are poorly suited to pastures due to steepness of the soil and the hazard of erosion."

"iWMG", "6s25", "Water table management is not a normal practice on these soils because of the lack of cultivation."

### **6w3 Map Unit 77**

"aSOI", "6w3", "This capability unit consists of nearly level, very poorly drained soils that occur in depressions. These soils are mineral soils."

"bSAC", "6w3", "The root zone is restricted by a water table that is at or above the surface during wet seasons. The internal drainage is slow and response to artificial drainage is poor. The available water capacity is medium. Permeability is rapid to moderately rapid in the surface layers and slow to very slow in the subsoils. Natural fertility is low to medium, and organic matter content is low."

"cH2O", "6w3", "In normal years these hydric soils have a seasonal high water table within 6 inches of the surface for 2 to 6 months or more. In other months the water table is usually below these depths. These soils are also ponded frequently for long duration with water approximately 2 feet above the surface. Most often ponding occurs in the winter and spring, but it may occur during any wet season."

"dCUL", "6w3", "These soils are not suited to cultivated crops without extensive water table and ponding control management systems. Wetness, restricted rooting zone, slow internal drainage, and difficulty in obtaining adequate drainage outlets severely limit their use for cultivated crops. Water table management systems are hard to establish and maintain."

"eERO", "6w3", "Erosion is not a management concern on crops produced on these hydric soils if they happen to be cultivated."

"fIRR", "6w3", "If cultivated, highest yields require irrigation either subirrigated through the extensive water table management system or by sprinklers."

"hPAS", "6w3", "These hydric soils are not suited to pasture or hay crops without an extensive water table management system."

"iWMG", "6w3", "Because of the slow internal movement of water, and the usual lack of good outlets in areas where these soils occur, good water table management systems are difficult to establish and maintain. These systems normally require an extensive system of canals and ditches. A diking and/or pumping system for control of ponding water is also needed."

#### **7w2 Map Unit 74**

"aSOI", "7w2", "This map unit consists of nearly level, very poorly drained organic soils in depressions and floodplains. These are hydric soils."

"bSAC", "7w2", "The root zone is limited by water that is above the surface in wet seasons. The available water capacity averages high in the root zone. Natural fertility is high. The internal drainage rate is very slow in the natural condition and seepage water seeps from the soil in wet seasons."

"cH2O", "7w2", "In normal years these soils have a seasonal high water table within 6 inches of the surface for 2 to 6 months of most years. During other months the water table is deeper. These soils are also subject to frequent ponding and/or flooding. Only rarely is the water table below the surface for an extended period."

"dCUL", "7w2", "These soils are not suited to cultivated crops without extensive water table and flood control management systems. Wetness, restricted rooting zone, slow internal drainage, and difficulty in obtaining adequate drainage outlets severely limit their use for cultivated crops. Water table management systems are hard to establish and maintain."

"eERO", "7w2", "Due to the lack of these soils being cultivated, erosion control is not a management concern."

"fIRR", "7w2", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "7w2", "These hydric soils are not suited to pasture or hay crops without an extensive water table management system. Due to the difficulty of installing these measures and the lack of outlets in most areas, they have seldom, if ever, been used for pasture."

"iWMG", "7w2", "Water table management is not a normal practice on these soils because of the lack of cultivation."

## **ECOLOGICAL COMMUNITIES**

kRNG - Rangeland

IWLD - Wildlife

mWOD - Woodland

### **Longleaf Pine - Turkey Oak Hills - Map Units 3, 10, 11, 26, 27, 53**

"kRNG", "04", "This Longleaf Pine - Turkey Oak Hills range site provides poor quality and low quantity forage and has limited potential for producing native forage. Sites in excellent condition produce 2000 to 4000 pounds per acre annually. Ten to 35 acres or more are usually needed per animal unit. Little forage will be available if the tree canopy cover exceeds 60%. Forage is usually 75% grasses and grass-like plants, 15% trees and shrubs, and 10% forbs."

"IWLD", "04", "This Longleaf Pine - Turkey Oak Hills site is suited to deer and turkey, especially as escape cover. Many birds inhabit the area including warblers, towhees, flycatchers, scrub jays, and quail. Native legumes furnish food (seeds) for the birds. Fruits of palmetto, gopher apple, and various species of oak are also a good food source. Timber harvest and other disturbances increase wildlife food by increasing the amount and types of herbaceous plants and by sprout production."

"mWOD", "04", "This Longleaf Pine - Turkey Oak Hills site has a moderately high potential for commercial production of wood and timber. The soils create moderate equipment limitations and moderate seedling mortality problems. Commercial species suited to planting and their potential annual growth in cords are as follows; Sand pine, 1.2 to 1.0. Slash pine, 1.2 to 1.0. Loblolly pine, 1.0 to 0.8. Longleaf pine, 0.6 to 0.5."

**Mixed Hardwood and Pine – Map Units 2, 5, 6, 13, 14, 16, 17, 18, 28, 30, 38, 55, 56, 57, 58, 61, 62, 63, 64, 65, 66, 67, 71, 72, 78, 79, 80**

"kRNG", "05", "This Mixed Hardwood and Pine range site provides good quality and high quantity forage especially in its early stages of succession before canopy cover becomes excessive and reduces forage value. Sites in excellent condition produce 3000 to 4500 pounds per acre annually. Eight to 23 acres or more are usually needed per animal unit. Little forage will be available if the tree canopy cover exceeds 60%. Forage is usually 50% grasses and grass-like plants, 30% trees and shrubs, and 20% forbs."

"IWLD", "05", "This Mixed Hardwood and Pine site is well suited to deer, turkey, squirrel, and many songbirds. Hardwood mast (acorns, nuts, fruits, buds, and berries) furnish a good source of wildlife food. Mature hardwoods and snags provide good nesting sites for birds. Habitat is good for raccoons, opossums, quail, and dove; fair for reptiles, and poor for most amphibians."

"mWOD", "05", "This Mixed Hardwood and Pine site has a high potential for commercial production of wood and timber. The soils create no serious management problems. Commercial species suited to planting and their potential annual growth in cords are as follows: Slash pine, 1.5 to 1.4. Loblolly pine, 1.2 to 1.1. Longleaf pine, 0.8 to 0.7."

**North Florida Flatwoods - Map Units 15, 22, 34**

"kRNG", "07", "This North Florida Flatwoods range site has the potential for producing significant amounts of high quality forage from chalky bluestem, indiagrass, and panicums. Sites in excellent condition produce 3000 to 5500 pounds per acre annually. Five to 15 acres or more are usually needed per animal unit. Little forage will be available if the tree canopy cover exceeds 60%. Forage is usually 75% grasses and grass-like plants, 15% trees and shrubs, and 10% herbaceous plants."

"IWLD", "07", "The North Florida Flatwoods community is well suited for deer, quail and turkey. It is fair for squirrels and well suited for many songbirds, particularly warblers. It is also well suited for bobcat, skunks, opossums, and raccoons. It is poorly suited for dove."

"mWOD", "07", "This community has a moderate potential productivity for commercial wood production. There are moderate equipment limitations and seedling mortality due to wet soil conditions. The commercial species suitable for planting is slash pine."

### **Wetlands Hardwood Hammock – Map Unit 23**

"kRNG", "12", "This Wetlands Hardwood Hammock site is sometimes used for woodland grazing but it has little or no range value."

"IWLD", "12", "This Wetlands Hardwood Hammock site is well suited to diverse wildlife population including deer, turkey, squirrel, black bear, feral and wild hogs, woodpeckers, owls, and many other furbearers. Hardwood mast (acorns, nuts, fruits, buds, and berries) furnish a good source of wildlife food. Habitat is poor for quail and dove; fair for many songbirds; and, because of the moist to wet soils, excellent for reptiles and amphibians."

"mWOD", "12", "This Wetland Hardwood Hammock site, when managed for hardwood production, produces high quality products. It also has a potential for commercial production of wood and timber. The soils must be drained for production of commercial conifers and many areas have been drained and planted to pine. Commercial pine species planted include slash pine and loblolly pine; however, this site is best suited to hardwoods and should be used for that purpose."

### **Cypress Swamp - Map Unit 48**

"kRNG", "17", "This Cypress Swamp site has little or range value."

"IWLD", "17", "This community is very important for wildlife refuge areas and as a turkey roosting area. It is well suited for waterfowl and wading birds. Aquatic animals may be found in large numbers. The permanent residents of cypress heads are relatively few, but much of the wildlife of the flatwoods is dependant on these ponds for breeding purposes."

"mWOD", "17", "Commercial wood production is not recommended. Extensive drainage would be required, thereby destroying this community."

### **Bottom Land Hardwoods - Map Unit 21**

"kRNG", "20", "This Bottomland Hardwood site has little range value and is seldom used for grazing. Cattle use some of the woody species occasionally, but very little forage is available. Overstocking by cattle can reduce reproduction of some woody plants."

"IWLD", "20", "This community host a large variety of wildlife. It is well suited for squirrel, deer, and birds such as chickadees, titmice, flycatchers, owls, towhee, turkey, vireos, warbler, cedar waxwing, woodpeckers and wren. The various species of hardwood vegetation provide good food and cover."

"mWOD", "20", "This community has a high potential productivity for commercial woodland production on areas with adequate surface drainage. There are severe equipment limitations and seedling mortality due to the poorly to very poorly drained soil conditions. Slash and loblolly pine are suitable for planting in areas with adequate surface drainage. Most areas are better suited to natural regeneration."

### **Swamp Hardwoods - Map Unit 77**

"kRNG", "21", "This Swamp Hardwoods site has little or no range value."

"IWLD", "21", "This community hosts a large variety of wildlife. It is especially well suited for waterfowl, reptiles, amphibians, and mammals. Animals found in this community must withstand the flooding which occurs periodically. Gray squirrel, mink, raccoon, and river otter are the most commonly found mammals. Many birds inhabit this area including chickadees, titmice, yellow-billed cuckoo, wood duck, limpkin, flycatchers, owls, turkey, woodcock, hooded warbler, cedar waxwing, woodpeckers, and wren. The various species of hardwood vegetation provide good food and cover for these species."

"mWOD", "21", "This Swamp Hardwoods community is generally not used for commercial woodland production except for limited harvest of hardwoods. However, this community does have a high potential for commercial woodland production on areas with adequate surface drainage. There are severe equipment limitations and seedling mortality due to the poorly to very poorly drained soil conditions. Slash pine is suitable for planting in areas with adequate surface drainage."

### **Shrub Bogs-Bay Swamps - Map Unit 74**

"kRNG", "22", "This Shrub Bog - Bay Swamp site has little or no range value. It does offer protection for animals during wet, cold weather."

"IWLD", "22", "This ecological community's primary value to game animals is the escape cover furnished to deer, turkey, and quail by the thick growth. This cover is also good habitat for a variety of frogs, salamanders, crayfish, predatory snakes, and raccoon."

"mWOD", "22", "This ecological community is generally not used for commercial woodland production except for limited harvest of hardwoods. However, this community does have a high to moderate potential for commercial woodland production on areas with adequate surface drainage. There are severe equipment limitations and seedling mortality due to the poorly to very poorly drained soil conditions. Slash pine is suitable for planting in areas with adequate surface drainage."

## URBAN USES

oURB – Urban Use Statement  
pSEP – Septic Tank Absorption Fields  
qLRS – Local Roads and Streets

### Map Unit 77

"oURB", "01", "This soil is generally unsuited to most urban uses because of flooding. Dwellings and small buildings can be constructed on pilings, however, access may be limited during flood events and structural integrity of the building may be threatened by currents and floating debris. Landscaping considerations should include use of species that are adapted to withstanding flood water."

"pSEP", "01", "This soil has very severe limitations for septic tank absorption fields. Flooding interferes with absorption of effluent from septic tanks and poses risks of contamination to adjacent surface waters."

"qLRS", "01", "This soil has severe limitations for local roads and streets. Road surfaces and bases may be eroded by floodwaters and travel is dangerous or impractical during flood events."

### Map Unit 74

"oURB", "02", "This soil is generally unsuited to most urban uses because of ponding and low bearing strength of the soil. Dwellings and small buildings can be constructed on pilings driven to suitable depths, however, access may be limited during periods when water tables are highest. Drainage may be impractical in many areas because of a lack of suitable outlets. Landscaping considerations should include use of species that are adapted to ponded water and organic soils."

"pSEP", "02", "This soil has severe limitations for septic tank absorption fields. Ponded water tables and organic soil materials interfere with the absorption of effluent from septic tanks and pose risks of contamination to adjacent surface waters."

"qLRS", "02", "This soil has severe limitations for local roads and streets. Road and street surfaces may subside, crack or ripple if sufficient fill is not used as a base. When possible, organic soil material should be removed and filled with suitable soil material to prevent subsidence and damage to road surfaces."

### **Map Units 15, 21, 22, 23, 34, 48**

"oURB", "03", "This soil is poorly suited to most urban uses because of a seasonal high water table at or near the soil surface. Housing pads, driveways, and other home site areas can be elevated using suitable fill. Area drainage can be installed to lower the water table if suitable outlets are available. Fill may also be used to elevate sites for small commercial buildings. Landscaping considerations should include use of species that are adapted to wetness."

"pSEP", "03", "This soil has severe limitations for septic tank absorption fields. High water tables interfere with the absorption of effluent from septic tanks and pose risks of contamination to adjacent surface waters. Septic tank absorption fields can be mounded to maintain the system above the seasonal high water table."

"qLRS", "03", "This soil has severe limitations for local roads and streets. For any construction, care should be taken not to impede natural drainage or impound water on the site and adjacent areas. Well designed culvert placement beneath any fill and use of existing water conveying landscapes can help minimize disturbance to natural drainage."

### **Map Units 38, 79**

"oURB", "04", "Suitability is poor for most urban uses because of a seasonal high water table within 40 inches of the soil surface, and fine textured soil material near the soil surface. House or small building pads can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. Landscaping considerations should include use of species that are adapted to wetness and fine textured soils."

"pSEP", "04", "This soil has severe limitations for septic tank absorption fields. High water table and fine textured soil material interfere with the absorption of effluent from septic tanks and creates a risk of contamination to adjacent surface waters and system failure. Absorption fields can be mounded or fine textured soil layers can be excavated and replaced with suitable soil material. Absorption field laterals should be installed downslope from dwellings."

"qLRS", "04", "This soil has severe limitations for local roads and streets. They can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. An engineer or soil scientist should be consulted to determine the shrink-swell potential of near surface soil material. Additional design precautions can be planned if shrink-swell is determined to be a concern."

## Map Unit 80

"oURB", "05", "Suitability is poor for most urban uses because of a seasonal high water table and bedrock within 40 inches of the soil surface, fine textured soil material near the soil surface. House or small building pads can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. Landscape considerations should include use of species that are adapted to wetness, alkalinity, and fine textured soils. "

"pSEP", "05", "This soil has severe limitations for septic tank absorption fields. High water table, bedrock, and fine textured soil material interfere with the absorption of effluent from septic tanks and creates a risk of contamination to adjacent surface waters and system failure. Absorption fields can be mounded or fine textured soil layers can be excavated and replaced with suitable soil material. Absorption field laterals should be installed downslope from dwellings."

"qLRS", "05", "This soil has severe limitations for local roads and streets. They can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. An engineer or soil scientist should be consulted to determine the shrink-swell potential of near surface soil material. Additional design precautions can be planned if shrink-swell is determined to be a concern."

## Map Units 28, 30

"oURB", "06", "Suitability is poor for most urban land uses because of a seasonal high water table within 40 inches of the soil surface. House and small building pads can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. Irrigation can be helpful in establishing plants and for maintenance during dry periods. Landscaping considerations should include use of species that are adapted to wetness."

"pSEP", "06", "This soil has severe limitations for septic tank absorption fields. High water tables interfere with the absorption of effluent from septic tanks. This poses risks of contamination to adjacent surface waters and system failure. Septic tank absorption fields can be mounded to maintain the system above the seasonal high water table. Absorption field laterals should be installed on a slight downslope gradient. Absorption fields should be placed downslope from dwellings."

"qLRS", "06", "This soil has severe limitations for local roads and streets. They can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. An engineer or soil scientist should be consulted to determine the shrink-swell potential of near surface soil material. Additional design precautions can be planned if shrink-swell is determined to be a concern."

### **Map Units 55, 56, 57**

"oURB", "08", "Suitability is moderate for most urban uses because of fine textured soil material near the soil surface. House or small building pads can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. Landscaping considerations should include use of species that are adapted to fine textured soils."

"pSEP", "08", "This soil has severe limitations for septic tank absorption fields which can be overcome. Fine textured soil material interfere with the absorption of effluent from septic tanks and poses a risk of contamination to adjacent surface waters and system failure. Absorption fields can be mounded or fine textured soil layers can be excavated and replaced with suitable soil material. Absorption field laterals should be installed downslope from dwellings."

"qLRS", "08", "This soil has severe limitations for local roads and streets. They can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. An engineer or soil scientist should be consulted to determine the shrink-swell potential of near surface soil material. Additional design precautions can be planned if shrink-swell is determined to be a concern."

### **Map Units 65, 66**

"oURB", "10", "Suitability is moderate for most urban uses because of fine textured soil material within 20 to 40 inches of the surface. Landscaping considerations should include use of species that are adapted to some droughtiness during parts of the year and fine textured soil material. Irrigation can be helpful in establishing and maintaining lawns and landscaping plants."

"pSEP", "10", "Fine textured soil material within 20 to 40 inches of the soil surface interferes with the absorption of effluent from septic tanks. This poses risks of contamination to adjacent surface waters and system failure. Absorption fields can be mounded slightly to maintain the system above fine textured soil layers. Excavation and replacement of unsuited soil material and absorption field area expansion are other alternatives. Absorption field laterals should be installed downslope from dwellings."

"qLRS", "10", "This soil has moderate limitations for local roads and streets. They can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. An engineer or soil scientist should be consulted to determine the shrink-swell potential of near surface soil material. Additional design precautions can be planned if shrink-swell is determined to be a concern."

### **Map Units 3, 5, 6, 10, 11, 13, 14, 16, 17, 18, 26, 27, 53, 58, 61, 62, 63, 64, 71, 72**

"oURB", "12", "This soil is well suited to most urban uses. There are no significant limitations. Landscaping considerations should include use of species that are adapted to droughty soil conditions. Irrigation can be helpful in establishing and maintaining lawns and landscaping plants."

"pSEP", "12", "Septic tank absorption field laterals should be installed on a slight downslope gradient."

"qLRS", "12", "This soil has no significant limitations important in the construction of local roads and streets."

### **Map Unit 67**

"oURB", "15", "This soil survey map unit is so variable that no general suitability for urban land use can be given. On-site investigation by a soil scientist and/or engineer is recommended for any urban land use."

"pSEP", "15", "This soil survey map unit is so variable that no general interpretations for the installation of any type on-site sewage disposal system can be given. On-site investigation by a soil scientist and/or engineer is recommended."

"qLRS", "15", "This soil survey map unit is so variable that no general interpretations for the construction of local roads and streets can be given. On-site investigations by a soil scientist and/or engineer is recommended."

## **WATER QUALITY: PESTICIDE AND NUTRIENT MANAGEMENT**

sWQ - Water Quality Statement

tPES - Pesticide Management Statement

uNUT - Nutrient Management Statement

### **Map Units – 3, 5, 6, 10, 11, 13, 14, 26, 27, 53, 58, 61, 62, 63, 64, 78, 80**

"sWQ", "02", "These soils have a medium or high potential for pesticide leaching to the groundwater and a low potential for pesticide runoff from the field(s) to surface water. They have a medium or high potential for nitrogen leaching to the groundwater and a low potential for phosphorous runoff to surface runoff."

"tPES", "02", "The Florida Pest Control Guide from the Cooperative Extension Service contains a list of pesticides suited to each pest. This list also contains Relative Leaching Potential Index (RLPI) values. While any approved pesticide listed in the guide can be used, the applicator should consider for use pesticides with a larger RLPI value and Health Advisory Level (HAL or HALEQ) value. Read and follow pesticide labels."

"uNUT", "02", "A soil test will be used as a guide to determine plant nutrient needs. In addition, a listing of nitrogen and phosphorous requirements by crop type is available from the Cooperative Extension Service. Nutrients shall be added at the rate needed by the crop grown or according to the producer's goals, whichever is lower."

**Map Units – 2, 15, 16, 17, 18, 22, 23, 30, 34, 38, 48, 67, 71, 72, 77, 79**

"sWQ", "03", "These soils have a medium or high potential for pesticide leaching to groundwater and a medium to high potential for pesticide runoff to surface water. They have a medium or high potential for nitrogen leaching to the groundwater and a medium or high potential for phosphorous runoff to surface runoff."

"tPES", "03", "The Florida Pest Control Guide from the Cooperative Extension Service contains a list of pesticides suited to each pest. This list also contains Relative Leaching Potential Index (RLPI) and Relative Runoff Potential Index (RRPI) values. While any approved pesticide listed in the guide can be used, the applicator should consider for use pesticides with a larger RLPI value, RRPI value, Health Advisory Level (HAL or HALEQ) value, and Aquatic Toxicity value. Read and follow pesticide labels."

"uNUT", "03", "A soil test will be used as a guide to determine plant nutrient needs. In addition, a listing of nitrogen and phosphorous requirements by crop type is available from the Cooperative Extension Service. Nutrients shall be added at the rate needed by the crop grown or according to the producer's goals, whichever is lower."

**Map Units 21, 55, 56, 57, 66**

"sWQ", "04", "These soils have a low potential for pesticide leaching to groundwater and a medium or high potential for pesticide runoff to surface water. They have a medium or high potential for nitrogen leaching to groundwater and a medium or high potential for phosphorous runoff to surface runoff."

"tPES", "04", "The Florida Pest Control Guide from the Cooperative Extension Service contains a listing of pesticides suited to each pest. This list also contains Relative Runoff Potential Index (RRPI) values. While any approved pesticide listed in the guide can be used, the applicator should consider for use pesticides with a larger RRPI value and a larger Aquatic Toxicity value. Read and follow pesticide labels."

"uNUT", "04", "A soil test will be used as a guide to determine plant nutrient needs. In addition, a listing of nitrogen and phosphorous requirements by crop type is available from the Cooperative Extension Service. Nutrients shall be added at the rate needed by the crop grown, or according to the producer's goals, whichever is lower."