

**Version 1.0 Extended Eastwide Data Base Manual, Tennessee 1999  
By Victor A. Rudis (Draft December 15, 2000)**

**STATE**            The two-digit State Code from the following list: (Version 6.4 fips codes)

<u>Code</u>	<u>State</u>	<u>Code</u>	<u>State</u>
01	Alabama	37	North Carolina
05	Arkansas	40	Oklahoma
12	Florida	45	South Carolina
13	Georgia	47	Tennessee
21	Kentucky	48	Texas
22	Louisiana	51	Virginia
28	Mississippi		

**GLUCUR**            Present Land Use of the Condition Codes: 20, 25, 40, 45, 60 (=61 to 98, except 91), and 91  
**GLUCURX**        Detailed Present Land Use of the Condition as below  
**GLUCURC1**      Detailed Present Land Use, condition 1 (at plot center), as below, -9 otherwise

Detailed land use codes: a 2-digit code indicating the ground level use:

<u>Code</u>	<u>Land-use</u>	<u>Code</u>	<u>Land-use</u>
20	Timberland	66	Other Farmland
25	Reserved Timberland	67	Urban and other
40	Other Forest Land	68	Marsh
45	Reserved Other Forest Land	91	Census Water
61	Cropland	92	Non-Census Water
62	Improved Pasture	97	Access denied (any size)
63	Natural Rangeland	98	Inaccessible, (dangerous environmental conditions, (any size)
64	Idle Farmland		

**GLUOLD**            Past Land Use of the Condition: Codes: 20, 25, 40, 45, 91, and 60 (for 61 to 99, except 91).  
**GLUOLDX**        Detailed Past Land Use of the Condition as below  
**GLUOLDC1**      Detailed Past Land Use, condition 1 (at plot center), as below, -9 if the record is not from condition 1

Detailed past land use codes: a 2-digit code indicating the ground level use:

<u>Code</u>	<u>Land-use</u>	<u>Code</u>	<u>Land-use</u>
20	Timberland	66	Other Farmland
25	Reserved Timberland	67	Urban and other
40	Other Forest Land	68	Marsh
45	Reserved Other Forest Land	91	Census Water
61	Cropland	92	Non-Census Water
62	Improved Pasture	99	Access denied or Inaccessible
63	Natural Rangeland		(dangerous environmental conditions)
64	Idle Farmland		

**RDDIS2**            Distance to Improved Road

Distance from plot center (subplot 1) to the nearest improved road. An improved road is a road of any width that is maintained as evidenced by pavement, gravel, grading, or ditching.

<u>Code</u>	<u>Distance to road</u>
01	0 - 100 feet
02	101 - 200 feet
03	201 - 300 feet
*	*
*	*
52	5,101 - 5,200
53	> 5,200

**URBDIS1**        Distance to Urban or Built-up Land ( 10 acres or more in area)

Distance from plot center (subplot 1) to the nearest evidence of urban or built-up land. Urban or built-up land is 10 acres or more in size comprised of areas of intensive use with much of the land covered by manmade structures. Included are towns,

villages, strip developments along highways, power and communication facilities (excluding rights-of-way), industrial complexes, and institutions.

Urban or built-up land is further defined as any 10-acre area (660 ft. x 660 ft.) composed of a mixture of land uses where urban or built-up land uses comprise more than 50 percent of the land area. Included are residential or commercial strips.

Residential or commercial strips are at least 100 feet wide and 10 acres in size (4400 x 100, 2200 x 200, 1500 x 300, 1100 x 400, 900 x 500, 700 x 600) with uniform spacing of structures, often with lawns, driveways, and parking lots.

Active surface mines, active sand and gravel pits, and other areas TEMPORARILY devoid of vegetation due to man's activities are not considered urban or built-up land. Similarly, naturally formed talus slopes and rock outcrops, mine tailings and soil pushed aside from surface mine operations, and bare soil associated with crop tillage are not urban or built-up land. Buildings, permanent product storage bins, and equipment parking areas are considered urban or built-up land.

The presence or absence of a store in a strip development has no bearing on this classification. The urban or built-up land need not be a town or village, but merely "urban or built-up." Where a strip development consists of a mixture of farmsteads and residences, or farmsteads or other urban or built-up land consider farmsteads as built-up land. (Farmstead—a tract of land, usually with a house, barn, etc., on which crops or livestock are raised). A farmstead is otherwise considered agricultural land.

Guidelines for boundaries between urban or built-up land and non-urban areas:

- a. When clear—between new homes, lawns, commercial buildings, parking lots, etc., and farm-related buildings, adjacent agricultural fields, extensive forested areas, large bodies of water, etc.
- b. When not clear (e.g., mixed land uses, with urban or built-up land 50 percent or more of the land area)—between the nearest home, building, lawn, parking lot, or other structure, and the adjacent area not in urban use.

<u>Code</u>	<u>Distance to urban or built-up land</u>
01	0 - 100 feet
02	101 - 200 feet
03	201 - 300 feet
*	*
*	*
*	*
52	5,101 - 5,200
53	> 5,200

**AGRDIS1**      **Distance to Agricultural Land (10 acres or more in area)**

The distance from the plot center (subplot 1) to the nearest evidence of agricultural land.

**Agricultural Land**—Land used primarily for the production of crops or livestock. Evidence includes geometric field and road patterns and the traces produced by livestock or mechanized equipment. Included are cropland, idle farmland, improved pasture, and other farmland, e.g., confined feeding areas, horse farms, nurseries, orchards, and vineyards.

<u>Code</u>	<u>Distance to agricultural land</u>
01	0 - 100 feet
02	101 - 200 feet
03	201 - 300 feet
*	*
*	*
*	*
52	5,101 - 5,200
53	> 5,200

**FORSZ1**      **Size of Contiguous Forest Land**

The size of contiguous forestland from plot center (subplot 1). If plot center (subplot 1) is non-forest, enter zero.

**Contiguous Forest Land**—Forested areas with tree cover 120 feet wide. Boundaries are non-forested areas 120 feet wide. Boundaries are not defined by ownership, forest type, or age class. Rights-of-way (powerline, pipeline, woods road, and improved road) are not boundaries unless the cleared area between trees is 120 feet in width.

<u>Code</u>	<u>Acres</u>
0	Plot center lands in non-forest
5	1 - 10
30	11 - 50
75	51 - 100
300	101 - 500
1500	501 - 2,500
3750	2,501 - 5000
8210	> 5,000

**HUMNART**      **Human Debris (on the four 24 ft. subplots)**

Debris is trash, refuse, or debris associated with human activities. This item codes debris type to assess dispersal characteristics and degree of permanence: materials that decay slowly, others rapidly, and other lighter-weight materials that disperse farther from deposition areas. The item helps classify areas with and without human intrusions for scenic values and potential recreational experiences. This applies to forested conditions only. Boundary paint and tree marking paint are not coded.

Record the lowest numbered item below that is found on any of the four subplots. Do not make an assessment of amount of material, only the presence or absence.

<u>Code</u>	
0	None—the plot has no evidence of man-caused activity.
1	Noncombustible synthetic—includes glass, metal, aluminum beverage or food containers, discarded metal machinery, metal pesticide containers, etc.
2	Combustible synthetics—includes plastics, styrofoam, tires, treated wood, nursery shade cloth, etc.
3	Combustible organic material from man-caused activities—includes yard wastes, livestock feed, wood debris from land-clearing (slash) and logging operations, compost operations, etc.

**OWNER**      **Ownership**

The general procedure for recording ownership data for plot locations is 1) Determine if a plot location samples forestland. 2) Carefully locate the plot location on county courthouse tax maps cross checking the location with the plot location on aerial photography. It is very important that the plot location on the current aerial photo is the same as on the previous survey aerial photo—occasionally there is an error because the current location was not transposed correctly. Also remember the layout of the current plot design since a subplot or portion of a subplot may sample a small piece of forestland and will require ownership data. Codes are as follows:

<u>Code</u>	<u>Ownership Class</u>	<u>Code</u>	<u>Ownership Class</u>
09	National Parks	15	State
11	National Forests	16	County and Municipal
12	BLM Lands	20	Forest Industry
13	Indian Lands	60	Non-Industrial Private (corporate)
14	Other Federal	70	Non-Industrial Private (individual)

**TYPCUR**      **Present Forest Type**

The forest type based on percent stocking of all live trees (not overtopped) in the sampled condition. Forest type is selected on the basis of plurality (the largest proportion in stands of mixed composition) of stocking of the species listed in the type name. If more than one species is included in the type name, the type may be assigned when any combination of the name species comprises a plurality of the stocking. It is not necessary that the stand include all of the named species. For example, a stand composed predominantly of white oak and red oak that occurs on a dry upland site would be coded the white oak-red oak-hickory type (Code 53), although hickory may be absent. In addition, those stands where hardwoods (usually oaks) comprise a plurality of the stocking but where pines or eastern redcedar make up 25 to 50 percent of the stocking will be given one of the oak-pine codes.

The species composition in the overstory, especially the dominant and codominant trees, should be given primary consideration when assigning a forest type. Factors such as associated species and physiographic class should be considered when distinguishing between similar forest types. There will inevitably be transitional areas between forest types encountered in the field. Field crews should use their best judgment in assigning a type to the stand in question. If a stand has recently been

clearcut and site prepared, assign the type the area will most likely be present when regenerated. In the event that the tallied trees do not describe the forest type of the stand accurately, then provide a note on the tally sheet explaining how the type code was selected.

Do not assign a broad forest type group code (such as 40 for oak-pine group or 60 for oak-gum-cypress group)—only specify a local forest type code for each plot. Frequently, stands are encountered where mixed hardwoods occur and the delineation between whether the area should be categorized in the oak-hickory group or oak-gum-cypress group becomes difficult. In these cases, the field crews should try to first determine if the area is an upland site (oak-hickory group) or a bottomland site (oak-gum-cypress group and elm-ash-cottonwood group), and then assign the proper local type. It should be kept in mind that upland sites do occur in the coastal plain. Likewise, bottomland sites are found in both the piedmont and mountains.

It should be noted that the descriptions of regional distribution are general guidelines and do not exclude the possibility of occurrence in other geographic areas.

Code	Forest Type
03	<i>White pine</i> —Eastern white pine comprises a majority of the stocking and characteristically occurs in pure stands. <u>Associates</u> —pitch pine, red maple, white oak, yellow birch, white ash, northern red oak, hemlock, chestnut oak, and yellow-poplar. <u>Sites</u> —wide variety, but best development is on well-drained sands and sandy loams. <u>Regional distribution</u> —mountain units and occasionally piedmont units.
04	<i>White pine-hemlock</i> —Eastern white pine and eastern hemlock, in combination, comprise a majority of the stocking, but neither species alone represents more than half the total. <u>Associates</u> —American beech, basswood, red maple, yellow birch, black cherry, white ash, northern red oak, white oak, chestnut oak, and yellow-poplar. <u>Sites</u> —cool moist sites such as coves, ravines, and north slopes. <u>Regional distribution</u> —mountain units.
05	<i>Hemlock</i> —Eastern hemlock is pure or provides a majority of the stocking. <u>Associates</u> —American beech, yellow birch, basswood, red maple, black cherry, white ash, white pine northern red and white oak. <u>Sites</u> —cool locations, moist ravines, and north slopes. <u>Regional distribution</u> —mountain units.
<u>Spruce-Fir Group</u> Forests in which spruce, or true firs, singly or in combination comprise a plurality of the stocking. (Common associates include white cedar, tamarack, maple, birch, and hemlock).	
11	<i>Balsam fir</i> —Balsam fir characteristically occurs as a pure type or comprises a majority of the stocking. <u>Associates</u> —red spruce, yellow birch, American beech, red maple, and hemlock. <u>Sites</u> —upper slopes and mountain tops. <u>Regional distribution</u> —mountain units.
13	<i>Red spruce-balsam fir</i> —Red spruce and balsam fir comprise a majority of the stocking. <u>Associates</u> —red maple, white pine, and hemlock. <u>Sites</u> —thin soiled upper slopes and moderately well drained to poorly drained flats. Include in this type pure stands of red spruce. <u>Regional distribution</u> —mountain units.

Longleaf-Slash Pine Group Forests in which longleaf or slash pine, singly or in combination, comprises a plurality of the stocking. (Common associates include other southern pines, oak, and gum.)

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| 21 | <i>Longleaf pine</i> —Longleaf pine occurs as a pure type or comprises a majority of the trees in the overstory. <u>Associates</u> —slash, loblolly and shortleaf pine, southern red oak, blackjack oak, water oak, persimmon, and sweetgum. <u>Sites</u> —those areas that can and do burn on a periodic basis—usually occurs on middle and upper slopes with a low severity of hardwood and brush competition. <u>Regional distribution</u> —coastal plain and piedmont units. |
| 22 | <i>Slash pine</i> —Slash pine is pure or provides a majority of the stocking. <u>Associates</u> —on moist sites; a wide variety of moist-site hardwoods, pond pine, and pondcypress. On dry sites; a wide variety of dry-site hardwoods, longleaf, loblolly, and sand pine. <u>Sites</u> —both moist and well-drained flatwoods, and bays. <u>Regional distribution</u> —coastal plain and piedmont units from North Carolina to Texas.  |

Loblolly-Shortleaf Pine Group Forests in which loblolly pine, shortleaf pine, or other southern yellow pines (except slash and longleaf), singly or in combination, comprise a plurality of the stocking. (Common associates include other southern yellow pines, oak, blackgum, and sweetgum.)

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| 31 | <i>Loblolly pine</i> —Loblolly pine is pure or provides a majority of the stocking. <u>Associates</u> —on well drained sites; longleaf, shortleaf, and Virginia pine, and a wide variety of drier site hardwoods. On poorly-drained sites; wide variety |
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of moist site hardwoods, pond pine and slash pine. Sites—a variety of sites, but usually those with abundant but not excessive soil moisture. Regional distribution—extensively in coastal plain and piedmont units, occasionally in mountain units.

- 32 *Shortleaf pine*—Shortleaf pine provides a majority of the stocking. This type seldom occurs as a pure type except for very young stands or those occurring on very dry sites. Associates—white oak, southern red oak, scarlet oak, black oak, hickory, post oak, blackjack oak. Sites—commonly found on the drier, coarse-textured soils typical of upland ridges and south facing slopes. Regional distribution—mountain and piedmont units, and occasionally coastal plain units.
- 33 *Virginia pine*—Virginia pine occurs in pure stands or makes up a majority of the stocking. Associates—shortleaf pine, white oak, chestnut oak, southern red oak, black oak, sweetgum, red maple, and pitch pine. Sites—dry sites, often found on abandoned fields. Regional distribution—mountain and piedmont units.
- 34 *Sand pine*—Sand pine occurs in pure stands or provides a majority of the stocking. Associates—dwarf live oak, dwarf post oak, turkey oak, persimmon, and longleaf pine. Sites—dry, acidic, infertile sands. Regional distribution—found chiefly in the central peninsula and panhandle of Florida although planted stands extend into the sandhills of Georgia, South Carolina, and Alabama.
- 35 *Eastern redcedar*—Eastern redcedar is pure or comprises the majority of the stocking. Association—(may vary due to the widespread nature of the type) Virginia pine, dry-site hardwoods, and shortleaf pine. Sites—abandoned fields and old pastures. Regional distribution—can occur in all survey units.
- 36 *Pond pine*—Pond pine is pure or provides a majority of the stocking. Associates—loblolly pine, sweetgum, baldcypress, slash pine, sweetbay, loblolly-bay, and redbay. Sites—poorly drained, peaty soils typical of coastal flatwoods, bays and pocosins. Regional distribution—coastal plain units.
- 37 *Spruce pine*—Spruce pine comprises a majority of the stocking. Associates—any of the moist site softwood or hardwood species. Sites—moist or poorly drained areas. Regional distribution—this type is rarely encountered and is found almost exclusively in the coastal plain.
- 38 *Pitch pine*—Pitch pine may occur as a pure type or make up a majority of the stocking. Associates—chestnut, black, scarlet, white, and post oak. Sites—infertile ridges and mountain slopes. Regional distribution—mountain units.
- 39 *Table Mountain pine*—Table-mountain pine makes up a majority of the stocking. Associates—chestnut, scarlet, and black oaks, and pitch pine. Sites—infertile, dry, often rocky slopes and mountain tops. Regional distribution—mountain units.

Oak–Pine Group Forests where hardwoods (usually upland oaks) comprise a plurality of stocking, and pines comprise 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow-poplar.)

- 41 *White pine–northern red oak–white ash*—Eastern white pine, northern red oak, and white ash are the predominant species comprising the type. Associates—eastern hemlock, black cherry, basswood, and American beech. Sites—deep, fertile, well drained soil. Regional distribution—mountain and piedmont units.
- 42 *Eastern redcedar–hardwood*—Eastern redcedar and several hardwoods including red and white oak, hickories, and black walnut predominate. Associates—shortleaf, loblolly, and Virginia pine, black locust, winged elm, dogwood, and hackberry. Sites—dry uplands and abandoned fields. Regional distribution—can occur across all survey units.
- 43 *Longleaf pine–scrub oak*—Longleaf pine and scrub oaks—primarily turkey, bluejack, blackjack, and dwarf post oak—comprise the type. Associates—southern scrub oaks in the understory. Sites—common on sandhills where soils are dry, infertile, and coarse textured. Regional distribution—coastal plain and piedmont units.
- 44 *Shortleaf pine–oak*—Shortleaf pine and one or more species of oak dominate the stocking. Associates—post, southern red, scarlet, blackjack, white, and black oaks. Sites—sites where soils are coarse textured, dry, and infertile. Regional distribution—mountain and piedmont units, occasionally coastal plain units.
- 45 *Virginia pine–southern red oak*—Virginia pine and a mixture of oaks comprise the type. The oaks include southern red, scarlet, black, chestnut, white, post, and blackjack. Associates—shortleaf pine, pitch pine, dogwood, yellow-poplar, red maple, and hickories. Sites—primarily old fields and other upland sites. Regional distribution—mountain and piedmont units.

- 46 *Loblolly pine-hardwood*—Loblolly pine in combination with a mixture of hardwoods comprise the type. Associates—a wide variety of hardwood species depending on moisture regimes, also slash and pond pine. Sites—range from coastal swamps to dry locales at higher elevations. Regional distribution—coastal plain and piedmont units; some mountain units.
- 47 *Slash pine-hardwood*—Slash pine and a variable mixture of hardwoods comprise the type. Associates—codominant with the slash pine component are sweetbay, black-gum, loblolly-bay, pondcypress, pond pine, Atlantic white-cedar, red maple, ash, and water oak. Sites—undrained or poorly drained depressions such as bays or pocosins, and along pond margins. Regional distribution—primarily coastal plain units.
- 49 *Other oak-pine*—A type for those unnamed pine-hardwood combinations that meet the requirements for oak-pine.

Oak-Hickory Group Forests in which upland oaks or hickories, singly or in combination, comprise a plurality of the stocking. The exception is those types where pine comprises 25 to 50 percent of the stocking, in which case the stand would be classified oak-pine. (Common associates include yellow-poplar, elm, maple, and black walnut.)

- 51 *Post oak-black oak*—Post oak and black oak comprise a majority of the stocking. Associates—blackjack oak, hickory, southern red oak, white oak, scarlet oak, short-leaf pine, Virginia pine, blackgum, sourwood, red maple, winged elm, dogwood, and eastern redcedar. Sites—dry uplands and ridges. Regional distribution—piedmont and mountain units.
- 52 *Chestnut oak*—Chestnut oak occurs in pure stands or makes up a majority of the stocking. Associates—scarlet oak, white oak, black oak, post oak, pitch pine, blackgum, sweetgum, red maple, red oak, shortleaf pine, and Virginia pine. Sites—rocky outcrops with thin soil, ridge tops. Regional distribution—primarily mountain and piedmont units.
- 53 *White oak-red oak-hickory*—White oak, northern red oak, southern red oak, and hickory together comprise a majority of the stocking. Associates—scarlet oak, white ash, sugar and red maple, walnut, basswood, locust, American beech, sweetgum, upland blackgum, yellow poplar, and dogwood. Sites—wide variety of well-drained upland soils. Regional distribution—piedmont and mountain units; occasionally upland sites in coastal plain.
- 54 *White oak*—White oak comprises a majority of the stocking, and occasionally occurs as a pure stand. Associates—black oak, northern red oak, hickory, white ash, and yellow-poplar. Sites—generally occurs on sites drier than the white oak-red oak-hickory type-usually moderately dry to moderately moist. Regional distribution—piedmont and mountain units.
- 55 *Northern red oak*—Northern red oak comprises a majority of the stocking, and occasionally occurs as a pure stand. Associates—black oak, scarlet oak, chestnut oak, and yellow-poplar. Sites—occurs mostly on rolling land and slopes with loamy soil-spotty distribution on ridge crests and north slopes in mountains. Regional distribution—piedmont and mountain units.
- 56 *Yellow-poplar-white oak-northern red oak*—The three species comprise the majority of the stocking. Associates—black oak, hemlock, blackgum, and hickory. Sites—those areas of high site quality such as northern slopes, coves, and moist flats. Regional distribution—mountain and piedmont units.
- 57 *Southern scrub oak*—This forest cover type consists of a mixture of scrub oaks that may include several of the following species: turkey oak, bluejack oak, blackjack oak, dwarf post oak, and dwarf live oak. Sites—dry sandy ridges—the type frequently develops on areas formerly occupied by longleaf pine. Regional distribution—common throughout all coastal plain units and into the lower piedmont.
- 58 *Sweetgum-yellow-poplar*—Sweetgum and yellow-poplar together comprise a majority of the overstory. Sweetgum usually occurs with greater frequency. This type frequently develops from serious disturbances such as logging. Young hardwood stands that develop on recent cutover sites that result in a mixture of sweetgum, red maple, yellow-poplar, or black cherry that occur on what the field crews determine to be an upland condition should be included in this type. Associates—red maple, loblolly pine, willow oak, water oak, laurel oak, black cherry, and elm. Sites—frequently found on cutover sites and abandoned fields. Regional distribution—can occur in all units, particularly common in coastal plain units.
- 59 *Mixed hardwoods*—A type comprised of any mixture of hardwoods typical of an upland site, usually containing some oak. Those stands comprised of water oak, laurel oak, or willow oak, singly or in combination, that occur on an upland site, should be included in this type. Also include in this type category pure stands of live oak occurring on an upland area. Sites—wide variety of upland sites. Regional distribution—all survey units.

Oak–Gum–Cypress Group Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or cypress, singly or in combination, comprise a plurality of the stocking except where pines comprise 25 to 50 percent in which case the stand would be classified oak-pine.

- 61 *Swamp chestnut oak–cherrybark oak*—Swamp chestnut oak and cherrybark oak comprise a majority of the stocking. Associates—white ash, hickory, white oak, shumard oak, blackgum, sweetgum, American elm, winged elm, yellow-poplar, and American beech. Sites—alluvial flood plains of major rivers; areas that are usually moist but seldom covered with standing water. Regional distribution—primarily coastal plain and piedmont units.
- 62 *Sweetgum–water oak–willow oak*—Sweetgum and either water oak or willow oak comprises a plurality of the stocking. Include in this type those stands comprised of water oak, laurel oak, or willow oak, singly or in combination, where the field crews determine that the type occurs on a bottomland site. Associates—green ash, red maple, blackgum, overcup oak, and occasionally baldcypress. Sites—wide variety of low, moist sites such as drains, poorly drained flatwoods, and along swamp margins. Regional distribution—mostly coastal plain units, occasionally piedmont units.
- 63 *Sugarberry (hackberry)–American elm–green ash*—The three species comprise the majority of the stocking. Associates—water oak, willow oak, laurel oak, sweetgum, water hickory, and boxelder. Sites—very typical of river margins and moist bottoms. Regional distribution—coastal plain and piedmont units.
- 65 *Overcup oak–water hickory*—Overcup oak and water hickory together comprise a majority of the stocking. Associates—green ash, hackberry, American elm, red maple, and persimmon. Sites—low-lying, poorly drained flats with clay or silty clay soils. Regional distribution—primarily coastal plain units.
- 66 *Atlantic white cedar*—This type characteristically occurs in pure dense stands. Associates—blackgum, sweetbay, pond pine, slash pine, and loblolly bay. Dense underbrush such as titi and fetterbush often develops in the understory. Sites—moist, peaty, infertile sites such as bays, river swamps, and stream banks. Regional distribution—coastal plain units.
- 67 *Cypress–water tupelo*—Baldcypress together with water tupelo comprise the majority of the stocking. A pure stand of either one of the two species would be included in this type category along with those stands of blackgum and water tupelo typical of the deep swamps and wet river margins found extensively in the coastal plain region. Also include pure stands of pondcypress. Associates—green ash, red maple, and sweetgum. Sites—limited to those very wet sites where surface water is present throughout the growing season in years of normal rainfall. Regional distribution—coastal plain units.
- 68 *Sweetbay–blackgum–red maple*—Combinations of any of the three species provide a majority of the stocking. Associates—any of the moist site hardwood species along with pond pine, slash pine, Atlantic white cedar, and pondcypress. Sites—sites where the soil is normally saturated or moist throughout the growing season such as branch heads, drains, bays, and borders of swamps. Regional distribution—coastal plain units.

Elm–Ash–Cottonwood Group Bottomland forests in which elm, ash, or cottonwood, singly or in combination, comprises a plurality of the stocking. (Common associates include willow, sycamore, American beech, and maple).

- 72 *River birch–sycamore*—River birch and sycamore occur together in the overstory, commonly occurring along rivers and streams. The type is characterized by dense stocking of river birch with sycamore being more conspicuous due to its usually larger size. Associates—red maple, willow and other moist site hardwoods. Sites—moist soils along margins of creeks and rivers. Regional distribution—spotty occurrence across all units.
- 73 *Cottonwood*—Cottonwood occurs as a pure type or comprises a majority of the stocking. Associates—willow, white ash, green ash, and sycamore. Sites—along stream banks where bare moist soil is available. Regional distribution—this type is rarely encountered in the southeast region, usually occurring in small stands along river and stream margins. This type can occur in all survey units.
- 74 *Willow*—Black willow and other species of willow comprise a majority of the stocking. Associates—cottonwood, green ash, sycamore, pecan, American elm, red maple, and boxelder. Sites—on sites with exposed, moist soil such as stream banks and pond margins. In Central and South Florida this type frequently perpetuates itself in abandoned phosphate pits where the condition is now classified as unproductive forest. Regional distribution—can occur across all survey units.

- 75 *Sycamore-pecan-American elm*—Sycamore, pecan, American elm comprise a plurality of the stocking but the composition varies from mixed stands to pure stands of one of the type species. Associates—boxelder, green ash, hackberry, cottonwood, willow, sweetgum, and river birch. Sites—alluvial floodplains of major rivers. Regional distribution—coastal plain and piedmont units.

Maple-Beech-Birch Group Forests in which maple, American beech, or yellow birch, singly or in combination, comprises a plurality of the stocking. (Common associates include hemlock, elm, basswood and white pine).

- 81 *Sugar maple-beech-yellow birch*—Sugar maple, American beech, and yellow birch are the major species comprising the majority of the stocking. Include in this type pure stands of black cherry and sugar maple along with any of the wide variety of northern hardwood associates. Associates—basswood, red maple, hemlock, northern red oak, white ash, white pine, black cherry, American elm, and eastern hophornbeam. Sites—moist, fertile, loamy soils. Regional distribution—mountain units.

Tropical Hardwood Group This type consists of shrubs, ferns, and epiphytes that occur on land slightly higher than surrounding freshwater or saltwater marshes.

- 93 *Mangrove*—Forests in which mangrove comprises a majority of the stocking. This type is now classified as unproductive forest and will not be recorded on commercial forest inventory samples. Associates—cabbage palm on some of the higher sites in the area. Sites—predominantly salt marshes; mangrove frequently develops its own island or shoreline made up of a dense mat of root structures. Regional distribution—restricted to South Florida, the Keys, Puerto Rico, and the Virgin Isle.
- 94 *Palm*—Cabbage palm comprises a plurality of the stocking. This type can occur as a pure stand. Associates—slash pine, dwarf live oak, live oak, laurel oak, water oak, baldcypress, pondcypress, red maple, redcedar, redbay, and loblolly pine. Sites—coastal dunes and floodplains of major rivers north of Florida; in Florida the type occurs on moist sites such as marsh islands, marshy shorelines, and floodplains. Regional distribution—coastal plain units from North Carolina to the Southern tip of Florida, the Keys, Puerto Rico, and the Virgin Isle.
- 95 *Other tropical*—Forests in which other tropical species, singly or in combination, comprise a majority of the stocking. The species may include melaleuca, Australian pine, sable palm, and any of the miscellaneous citrus species encountered in the southern region of Florida. Associates—wide variety of species indigenous to south Florida. Sites—wide variety. Regional distribution—restricted exclusively to South Florida, the Keys, Puerto Rico, and the Virgin Isle.

Non-stocked Group

- 99 *Non-stocked*—Record if the condition is less than 10% stocked.

**STDAGE** Stand Age

Determine stand age by averaging the age of at least three **dominant** or **codominant** trees in the condition. To obtain total tree age, add the following number of years to the age determined from a breast height increment core: longleaf – 7 years; other pines – 3 years; hardwoods – 2 years.

Procedures for determining stand age (the selection of trees to bore) will vary depending upon Stand Structure (Item 35). If the condition is less than 10% stocked (non-stocked), enter zero (0) for stand age.

For stands in which the dominant and codominant trees are in the same story or vertical zone, base stand age upon an average age of dominant and codominant trees in that zone. Record “Single-storied” for Stand Structure.

For stands with two distinct stories, record the average of the dominant/codominant trees in the predominant vertical strata (e.g., the one occupying the greatest percentage of the growing space). *Example:* A harvesting operation has occurred in a stand, leaving approximately 40% of the area occupied with large, residual trees and 60% by regeneration that became established in the open areas after cutting. Record the age of the young stand since it occupies more area than the older, large trees.

**HRVMGT1, 2, 3** Treatment Since Last Inventory

Code up to three treatments since last survey. If coding more than one treatment, code the treatments in the order in which they occurred. For example, if an area was clearcut, site prepared, and planted, code “010607”.

Code      Treatment

- 00 No treatment
- 01 Clearcut harvest – The removal of the majority of the merchantable trees in a stand; residual stand stocking is under 50%.
- 02 Partial harvest – Removals primarily consisting of highest quality trees. Residual consists of lower quality trees because of high grades or select cuts.
- 03 Seed-tree/shelterwood harvest – Crop trees are harvested leaving seed-source trees either in a shelterwood or seed-tree.
- 04 Commercial thinning – The removal of trees (usually poletimber size) from poletimber-sized stands leaving sufficient stocking of growing-stock trees to feature in future stand development. Also included are thinning in sawtimber-sized stands where pole-sized (or log-sized) trees have been removed to improve the quality of trees featured in a final harvest.
- 05 TSI – The cleaning, release, or other stand improvement applied to an immature stand which leaves sufficient stocking
- 06 Site preparation – Clearing, prescribed burning, spraying, chipping, drainage prior to artificial regeneration.
- 07 Artificial regeneration (reforestation) – The establishment of trees through planting or direct seeding of *forestland*. Collectively, the new trees established since the previous inventory should account for at least 50% stocking (based on number of stems) in order to record regeneration.
- 08 Artificial regeneration (afforestation) – The establishment of trees through planting or direct seeding of *non-forest* land. Collectively, the new trees established since the previous inventory should account for at least 50% stocking (based on number of stems) in order to record regeneration.
- 09 Natural regeneration – The establishment of trees on forest land from natural seed sources or sprouting from residual stumps. Collectively, the new trees established since the previous inventory should account for at least 50% stocking (based on number of stems) in order to record regeneration.
- 10 Other cutting – All other miscellaneous cutting that has little or no impact on present or future stand conditions. Includes cutting for firewood, fenceposts, and salvage cuts typified by sparse cutting.

**Stocking percents for trees tallied on varying numbers of subplots**

Tree size	4 Subplots in single condition (1/6-acre)	3 Subplots in single condition (1/8-acre)	2 Subplots in single condition (1/12-acre)	1 Subplot in single condition (1/24-acre)
Seedling	12.5	16.7	25.0	50.0
2	13.4	17.8	26.7	53.5
4	16.3	21.8	32.7	65.3
6	1.8	2.4	3.5	7.1
8	2.5	3.3	5.0	10.0
10	3.9	5.2	7.7	15.5
12	5.2	7.0	10.4	20.9
14	6.7	8.9	13.3	26.7
16	8.3	11.1	16.7	33.3
18	10.0	13.3	20.0	40.0
20+	11.7	15.7	23.5	47.0

Note: Stocking percents for trees less than 5.0 inches d.b.h. are based on a 1/300-acre microplot (6.8 foot radius) at the center of each subplot.

**DSTRB1, 2, 3 Disturbance**

Code up to three disturbance agents that are currently impacting or that have impacted the condition since the previous survey. If more than one disturbance has occurred, code by order of greatest **detrimental** impact to the stand in terms of mortality, growth, or quality.

<u>Code</u>	<u>Definition</u>
0	None evident
1	Fire – evidence of either prescribed or wild fire
2	Grazing – evidence of livestock use, including dung, tracks, trails, etc.
3	Diseases
4	Insects
5	Weather – include wind, ice, flooding, or other weather events excluding hurricanes and tornadoes.
6	Animals – exclude insects or livestock – (example: deer, beaver, etc.)
7	Other man-caused disturbance – turpentining, road construction, trash pits, man-caused flooding, drainage, etc.
8	Hurricane
9	Tornado