Summary Table: Characteristics of Ecoregions of Tennessee

65. SOUTHEASTERN PLAINS

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
65a. Blackland Prairie	50	Irregular plains and undulating lowland; low gradient streams with clay, sand, and silt substrates.	500-600 / 50-100	Quaternary dark gray clay or clay loam over Cretaceous-age chalk, marl, and calcareous clay.	Ultisols (Hapludults), Alfisols (Hapludalfs, Paleudalfs), bottomland Entisols (Fluvaquents, Udifluvents)	Oktibbeha, Silerton, Dulac, Sumter	Thermic / Udic	52	210	29/50 68/91	Oak-hickory forest; Blackbelt forest of sweetgum, oak, cedar; patches of bluestem prairie.	Cropland and pasture, with small patches of mixed hardwoods and pine.
65b. Flatwoods/ Alluvial Prairie Margins	36	Undulating plains and lowland; sluggish, low gradient, sandy bottomed streams.	400-500 / 25-50	Quaternary massive clay decomposition residuum and alluvial silt, sand, and gravel; Tertiary massive, blocky clay and glauconitic sand.	Alfisols (Hapludalfs, Paleudalfs), Ultisols (Hapludults)	Tippah, Luverne, Smithdale, Wilcox, Falkner	Thermic / Udic, Aquic	52	210	29/50 68/91	Oak-hickory, oak-hickory-pine forest; bottomland hardwoods.	Pasture, hay, and cropland, with areas of mixed hardwoods and pine.
65e. Southeastern Plains and Hills	4590	Dissected irregular plains, some low hills with broad tops; fairly wide stream bottoms with broad, level to undulating terraces; low to moderate gradient mostly sandy bottomed streams.	400-650 / 100-200	Quaternary ferruginous sand, clayey fine sand, and massive clay decomposition residuum; chert-pebble gravel and sand; some colluvial and alluvial loess; Tertiary sand, clay, silty clay, and lignite; Cretaceous sand.	Alfisols (Paleudalfs, Fragiudalfs), Ultisols (Hapludults, Paleudults), some bottomland Entisols (Fluvaquents)	Lexington, Smithdale, Providence, Dulac, Waverly, Bibb, Iuka, Freeland	Thermic / Udic, some Aquic	48-52	200-210	26/47 67/90	Oak-hickory, oak-hickory-pine forest; some bottomland hardwoods (sycamore, sweetgum, tupelo, oaks, cypress).	Mostly deciduous forest and mixed forest intermixed with areas of pasture and fields of hay, soybeans, corn, sorghum, wheat, and cotton.
65i. Fall Line Hills	9	Dissected open hills with rounded tops; low to moderate gradient streams with sandy substrates.	450-685 / 100-200	Quaternary medium to coarse sand decomposition residuum; Cretaceous fine-grained sand.	Ultisols (Paleudults, Hapludults)	Silerton, Smithdale, Waynesboro, Pickwick	Thermic / Udic	53	207	29/50 67/90	Oak-hickory-pine forest.	Deciduous forest and mixed forest.
65j. Transition Hills	413	Dissected open hills, broad to rounded tops and steep side slopes; low to moderate gradient streams with sand and some gravel.	400-1000 / 200-400	Quaternary chert gravel and sand, medium to coarse sand decomposition residuum, minor chert-fragment solution residuum; Cretaceous fine grained sand, and chert gravel in silt and sand.	Ultisols (Paleudults, Hapludults, Fragiudults)	Silerton, Savannah, Dickson, Lax, Saffell, Brandon	Thermic / Udic	53	205	28/48 66/90	Oak-hickory-pine forest.	Mixed forest, deciduous forest, pine plantations; some cropland and pasture in narrow valley bottoms and on gently sloping hilltops.

66. BLUE RIDGE MOUNTAINS

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
66d. Southern Igneous Ridges and Mountains	235	Low to high mountains with rounded domes or long linear ridges and steep, long side slopes; high gradient, bedrock and boulder-bottomed cool, clear streams.	2000-6200 / 2000-3000	Quaternary granitic boulder colluvium; Precambrian granite, gneiss, and metavolcanics.	Inceptisols (Dystrochrepts), Ultisols (Hapludults)	Unaka, Ashe, Edneyville, Evard	Mesic / Udic	48-60	150-170	20/45 57/82	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple); mixed mesophytic (beech, buckeye, basswood, tulip poplar); Northern hardwoods (maple, birch, beech, hemlock).	Mostly forested and public land (Cherokee National Forest); some private land, with small clearings for pasture or orchards on less steep land.
66e. Southern Sedimentary Ridges	799	Low rounded mountains, some with long linear ridges and steep slopes; high gradient, bedrock and boulder-bottomed cool, clear streams.	1000-4500 / 2000-3000	Quaternary sandy shaly colluvium; Cambrian shale, sandstone, siltstone, quartzite, conglomerate.	Inceptisols (Dystrochrepts), Ultisols (Hapludults)	Wallen, Jefferson, Ditney, Unicoi, Cataska	Mesic / Udic	44-48 in north; 52-56 in south	150-200	22/47 59/84	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple); mixed mesophytic (beech, buckeye, basswood, tulip poplar); Northern hardwoods (maple, birch, beech, hemlock).	Forested; large areas of public land (Cherokee National Forest); recreation, hunting, and forestry.
66f. Limestone Valleys and Coves	139	Relatively flat to rolling valleys and coves with broad, long foot slopes, benches, and alluvial fans at base of surrounding high mountains; moderate gradient streams with cobble and boulders.	1500-2500 / 100-300	Quaternary cherty clay solution residuum; Cambrian and Ordovician limestone and dolomite.	Ultisols (Paleudults, Hapludults), Alfisols (Hapludalfs)	Keener, Lonon, Northcove, Statler, Bledsoe	Thermic / Udic	45-55	160-190	23/46 60/85	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple).	Small farms and rural residential; hay and pasture, with some tobacco patches; small wooded areas on fringes.
66g. Southern Metasedimentary Mountains	1338	Low to high mountains, gently rounded to steep slopes; high gradient, bedrock and boulder-bottomed cool, clear streams.	1000-6600 / 2000-4000	Quaternary bouldery colluvium; Precambrian sandstone, siltstone, shale, conglomerate, quartzite, graywacke, arkose, phyllite, slate, and schist.	Inceptisols (Dystrochrepts, Haplumbrepts), Ultisols (Hapludults)	Sylco, Ditney, Jeffrey, Brookshire, Junaluska, Spivey, Cataska, Keener, Lostcove, Unicoi	Mesic / Udic	55-75	170-200	24/47 61/86	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple); northern hardwoods (maple, birch, beech, hemlock); Southeastern spruce-fir forests (Fraser fir, red spruce, rhododendron).	Forested; large areas of public land (Cherokee National Forest, Great Smoky Mountains National Park); tourism, recreation, hunting, and some forestry.

67. RIDGE AND VALLEY

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
67f. Southern Limestone / Dolomite Valleys and Low Rolling Hills	5324	Undulating to rolling valleys with rounded hills, some steep ridges in the north; caves and springs; moderate to low gradient streams with bedrock, cobble, gravel, and sandy substrates.	700-2000 / 100-700	Quaternary cherty clay solution residuum; Ordovician dolomite and limestone, cherty in places.	Ultisols (Paleudults)	Fullerton, Dewey, Decatur, Bodine, Waynesboro	Thermic / Udic	40-54	190-220	26/45 66/87	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple); bottomland oak and mesophytic forests; cedar barrens.	Cropland and pasture, mixed forest, some pine plantations, rural residential, urban and industrial.
67g. Southern Shale Valleys	1433	Undulating to rolling valleys, some low, rounded hills and knobs; moderate to low gradient streams with bedrock, cobble, gravel, and sandy substrates.	800-1500 / 100-400	Quaternary sandy shaly decomposition residuum; Ordovician and Cambrian shale, limestone, siltstone.	Inceptisols (Eutrochrepts, Dystrochrepts), Ultisols (Hapludults), Alfisols (Hapludalfs)	Dandridge, Bays, Needmore, Montevallo, Townley	Thermic, Mesic / Udic	40-54	190-220	26/46 66/88	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple).	Pasture with small fields of hay, corn, tobacco; small farms and rural residential; minor patches of mixed forest, some pine plantations.
67h. Southern Sandstone Ridges	326	Tall, steep ridges, some narrow intervening valleys; high to moderate gradient streams with mostly rocky substrates.	900-3000 / 800-1200	Quaternary quartzite-block loamy colluvium; Ordovician, Silurian, Devonian and Mississippian sandstone, shale, siltstone, conglomerate.	Inceptisols (Dystrochrepts), Ultisols (Hapludults)	Wallen, Jefferson, Gilpin	Mesic / Udic	44-54	180-200	24/43 64/85	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple); some mixed mesophytic forest (beech, tulip poplar, oaks, buckeye, basswood).	Deciduous and some mixed forest; minor pasture and cropland in narrow valley bottoms.
67i. Southern Dissected Ridges and Knobs	585	Ridges, hills, and knobs, lower and more dissected than 67h; small, moderate to high gradient streams with rock, cobble, and gravel substrates.	800-2000 / 300-600	Quaternary sandy shaly decomposition residuum; Cambrian and Ordovician shale, siltstone, sandstone, quartzose limestone.	Inceptisols (Dystrochrepts, Eutrochrepts), Ultisols (Hapludults)	Lehew, Litz, Muskingum, Montevallo, Wallen, Dandridge, Tellico, Steekee	Mesic / Udic	44-54	180-210	25/44 65/86	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple); some mixed mesophytic forest (beech, tulip poplar, oaks, buckeye, basswood).	Mostly mixed forest, some pasture and cropland on less sloping land.

68. SOUTHWESTERN APPALACHIANS

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
68a. Cumberland Plateau	3184	Undulating and rolling tableland and some open low mountains; somewhat weakly dissected.	1200-2000 / 300-800	Quaternary sandy decomposition residuum; Pennsylvanian conglomerate, sandstone, siltstone, shale.	Ultisols (Hapludults), Inceptisols (Dystrochrepts)	Lily, Ramsey, Lonewood, Gilpin	Mesic / Udic	48-60	180-200	24/44 63/85	Mixed oak forest on uplands; mixed mesophytic forest (maple, buckeye, beech, tulip poplar, oak) in ravines and gorges.	Mostly forested; timber and coal mining activities; some cropland and pasture; tourism; public recreation and wildlife areas.
68b. Sequatchie Valley	250	Undulating to hilly 4 mile wide linear valley, some level bottomland and low terraces; small alluvial fans; moderate to low gradient streams and several springs.	600-1000 / 100-300	Quaternary cherty clay solution residuum; Ordovician limestone and dolomite, Mississippian and Ordovician cherty limestone and shale.	Ultisols (Paleudults, Hapludults)	Waynesboro, Etowah, Sequatchie, Pailo, Fullerton	Thermic / Udic	52-60	190-210	25/45 65/88	Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple).	Cropland and pasture, with hay, soybeans, small grain, corn, and tobacco; mostly mixed forest on central ridge.
68c. Plateau Escarpment	1379	Long, steep mountainsides, some nearly vertical cliffs near top of escarpment; ravines and gorges; high velocity, high gradient streams and many waterfalls.	800-2400 / 900-1500	Quaternary colluvium with huge blocks; Pennsylvanian sandstone, siltstone, shale, conglomerate; Mississippian limestone, sandstone, shale.	Ultisols (Paleudults, Hapludults), Inceptisols (Dystrochrepts)	Bouldin, Ramsey, Gilpin, Allen, Jefferson, Varilla	Mesic / Udic	52-60	180-200	24/44 63/85	Mixed oak and chestnut oak on upper slopes; mixed mesophytic forest (beech, tulip poplar, maple, basswood, buckeye, ash, hemlock) on lower slopes.	Forested; steep slopes limit road building and forestry; minor cropland and pasture in lower stream bottoms.

69. CENTRAL APPALACHIANS

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
69d. Cumberland Mountains	896	Low mountains with long, steep slopes, narrow to rounded uneven crests, and narrow, winding valleys; highly dissected by moderate to high gradient, bedrock-dominated, clear-water streams.	1200-3500 / 1500-2000	Quaternary sandstone- and shale-clast loamy colluvium; Pennsylvanian shale, sandstone, siltstone, and coal.	Inceptisols (Dystrochrepts), Ultisols (Hapludults)	Jefferson, Shelocta, Gilpin, Petros, Ramsey, Lily, Alticrest, Muskingum	Mesic / Udic	50-55	180	21/43 61/85	Mixed mesophytic forest (maple, buckeye, beech, tulip poplar, oak).	Deciduous and mixed forest; extensive coal mining; forestry.

71. INTERIOR PLATEAU

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
71e. Western Pennyroyal Karst	857	Irregular plains, mostly gently rolling and weakly dissected; karst sinkholes and depressions; few permanent streams, mostly gravel and bedrock substrates.	500-750 / 60-200	Quaternary cherty clay solution residuum; Mississippian limestone.	Alfisols (Paleudalfs), Ultisols (Paleudults, Fragiudults)	Pembroke, Crider, Baxter, Mountview, Dickson	Thermic / Udic	48-51	190-200	23/43 66/88	Oak-hickory forest and bluestem prairie.	Mostly cropland and pasture: tobacco, livestock, with some corn, soybeans, and small grains; small patches of mixed and deciduous forest; large military reservation.
71f. Western Highland Rim	5871	Highly dissected open hills, rolling to steep; narrow winding to moderately broad ridges; some level bottomland along major streams and rivers; moderate gradient streams with gravel, sand, and bedrock substrates.	400-1000 / 300-500	Quaternary cherty clay and chert fragment solution residuum; Mississippian chert and cherty limestone, calcareous silicastone, some shale.	Ultisols (Paleudults, Fragiudults, Hapludults), Alfisols (Paleudalfs), Inceptisols (Dystrochrepts, Eutrochrepts)	Mountview, Dickson, Baxter, Brandon, Hawthorne, Sulphura, Lax, Saffell	Thermic / Udic	50-56	185-205	24/46 65/89	Oak-hickory forest; somewhat transitional between the more xeric oak-hickory forest to the west and the more mesic mixed mesophytic forest to the east.	Mostly deciduous forest; some pasture and cropland on flatter stream and river valley terraces; primarily hay, cattle, and some corn and tobacco.
71g. Eastern Highland Rim	2923	Weakly dissected plateau or tablelands; moderately dissected open hills and knobs to the north; some sinkholes and depressions; low to moderate gradient gravel- and bedrock-bottomed streams; springs.	800-1300 / 100-500	Quaternary cherty clay and chert fragment solution residuum; Mississippian chert and cherty limestone, calcareous silicastone, minor shale, some sandstone on knobs in north.	Ultisols (Fragiudults, Paleudults), Alfisols (Paleudalfs)	Dickson, Mountview, Baxter, Waynesboro, Cumberland, Decatur	Thermic / Udic	52-56	190-210	25/46 65/88	Mostly oak-hickory, but transitional between the more xeric oak-hickory forest to the west and the more mesic mixed mesophytic forest to the east; several areas of bottomland hardwoods.	Cropland and pasture, with nurseries, hay, and small acreages of corn, cotton, soybeans, small grains, and tobacco; farm woodlots and deciduous forest; urban.
71h. Outer Nashville Basin	4414	Open hills, gently rolling to steep; some plains with hills; highly dissected escarpments; moderate gradient bedrock- and gravel-bottomed streams.	500-1200 / 300-500	Quaternary phosphatic sand solution residuum and cherty silty clay, locally phosphatic, solution residuum; Ordovician limestone and shaly limestone; Mississippian chert and cherty limestone on higher hills and knobs; some Devonian (Chattanooga) shale.	Ultisols (Paleudults, Hapludults), Alfisols (Hapludalfs), Inceptisols (Dystrochrepts, Eutrochrepts)	Dellrose, Mimosa, Stiversville, Hampshire, Armour, Maury, Barfield, Hawthorne, Sulphura	Thermic / Udic	48-54	190-210	25/47 66/89	Mostly oak-hickory, but transitional between the more xeric oak-hickory forest to the west and the more mesic mixed mesophytic forest to the east.	Mosaic of urban, pasture, mixed forest, and cropland; generally deciduous forest on ridge caps, pasture and red cedar stands on hillsides; small fields of corn, tobacco, hay, and garden crops on foot slopes and bottom land.
71i. Inner Nashville Basin	1670	Smooth to rolling plain, with some small knobs and hills; low gradient clear water streams on bedrock substrate.	500-900 / 60-400	Quaternary thin clayey solution residuum; Ordovician limestone, low in phosphates.	Alfisols (Hapludalfs), Mollisols (Rendolls), Inceptisols (Eutrochrepts)	Talbott, Bradyville, Gladeville, Inman, Mimosa	Thermic / Udic	48-53	190-210	25/46 66/90	Oak-hickory forest; cedar glades (poverty grass, red cedar, winged elm, hackberry, oaks).	Urban and residential; pasture and cropland of hay, with some corn and small grains; beef cattle and dairying; patches of mixed woodland and stands of red cedar.

73. MISSISSIPPI ALLUVIAL PLAIN

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
73a. Northern Mississippi Alluvial Plain	854	Flat plains and levees of the Mississippi River floodplain; a few low-gradient streams, mostly channelized; oxbow lakes, ponds, swamps, tectonic lakes (Reelfoot, Open).	200-300 / 25-50	Quaternary alluvial sand, silt, clay, gravel.	Entisols (Fluvaquents, Udifluvents), Inceptisols (Haplaquepts), Mollisols (Argiudolls, Hapludolls), Alfisols (Endoaqualfs)	Commerce, Robinsonville, Sharkey, Tunica, Reelfoot, Bowdre, Forestdale	Thermic / Udic, Aquic	49-52	200-230	27/45 70/90	Southern floodplain/bottomland hardwood forests (oak, tupelo, bald cypress).	Extensive cropland of soybeans, cotton, corn, sorghum, vegetables, and hay; some deciduous forest and forested wetlands.

74. MISSISSIPPI VALLEY LOESS PLAINS

Level IV Ecoregion	Area (square miles)	Physiography	Elevation / Local Relief (feet)	Geology: Surficial and bedrock	Soil: Order (Great Groups)	Soil: Common Soil Series	Soil: Temperature / Moisture Regimes	Climate: Precipitation Mean annual (inches)	Climate: Frost Free Mean annual (days)	Climate: Mean Temperature January min/max; July min/max, (F)	Potential Natural Vegetation	Land Use and Land Cover
74a. Bluff Hills	486	Irregular plains with dissected hills and ridges; steeper hillsides and narrow hollows to the west, smoother terrain to the east; moderate to low gradient silt and sand bottomed streams, some with occasional gravel.	250-500 / 100-200	Quaternary loess more than 60 feet deep; Tertiary sand, silt, clay and lignite of the Jackson Formation along western bluffs; Coastal plain gravel exposed at base of bluffs.	Alfisols (Hapludalfs, Fragiudalfs), Entisols (Udifluvents, Fluvaquents), Inceptisols (Eutrochrepts)	Memphis, Loring, Adler, Natchez	Thermic / Udic	50-52	200-230	27/45 70/90	Oak-hickory forests, with some areas richer in mesophytes such as beech and sugar maple.	Deciduous forest; pasture and cropland (hay, soybeans, cotton, corn, wheat) on small farms on gentler slopes.
74b. Loess Plains	4023	Irregular plains, level to gently rolling, with wide, flat bottomlands and floodplains; low gradient silt and sand bottomed streams, most have been channelized.	250-500 / 50-100	Quaternary loess with alluvial silt and sand in bottomlands.	Alfisols (Fragiudalfs, Hapludalfs, Epiaqualfs), Entisols (Fluvaquents, Udifluvents)	Grenada, Loring, Memphis, Collins, Waverly, Falaya, Routon	Thermic / Udic, Aquic	50-52	200-230	27/45 70/90	Oak-hickory forests; southern floodplain/bottomland hardwood forests (oak, tupelo, bald cypress).	Cropland of soybeans, cotton, corn, grain sorghum, and some pasture; deciduous forest and forested wetlands on larger bottomlands.

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