

## Threatened and Endangered Species Appendix

Distribution of Endangered and Threatened Species in the TVA Region by River Basins

Name	Common Name	Status <sup>1</sup>	Tennessee	Cumberland	Green	New	Lower Ohio
<b>MAMMALS</b>							
<i>Canis rufus</i>	Red wolf	LE	X				
<i>Glaucomys sabrinus coloratus</i>	Northern flying squirrel	LE	X			X	
<i>Myotis grisescens</i>	Gray bat	LE	X	X	X		
<i>Myotis sodalis</i>	Indiana myotis	LE	X	X	X	X	X
<i>Plecotus townsendii virginianus</i>	Townsend's big-eared bat	LE				X	
<b>BIRDS</b>							
<i>Falco peregrinus</i>	Peregrine falcon	LE	X	X			
<i>Haliaeetus leucocephalus</i>	Bald eagle	LE/PT	X	X			X
<i>Picoides borealis</i>	Red-cockaded woodpecker	LE	X	X	X		
<i>Sterna antillarum athalassos</i>	Interior least tern	LE					X
<i>Vermivora bachmanii</i>	Bachman's warbler	LE			X		
<b>REPTILES</b>							
<i>Alligator mississippiensis</i>	American alligator	LT				X	
<i>Graptemys oculifera</i>	Ringed map turtle	LT					
<i>Nerodia eryth rogaster neglecta</i>	Copperbelly water snake	PT					X
<i>Sternotherus depressus</i>	Flattened musk turtle	LT					
<b>FISHES</b>							
<i>Acipenser oxyrhynchus desotoi</i>	Gulf sturgeon	LT					
<i>Cyprinella caerulea</i>	Blue shiner	LT					
<i>Cyprinella monacha</i>	Spotfin chub	LT	X				
<i>Erimystax cahni</i>	Slender chub	LT	X				
<i>Etheostoma boschungii</i>	Slackwater darter	LT	X				
<i>Etheostoma chienense</i>	Relict darter	LE					
<i>Etheostoma etowahae</i>	Etowah darter	LE					
<i>Etheostoma n. sp.</i>	Bluemask darter (=jewel)	LE		X			
<i>Etheostoma percunurum</i>	Duskytail darter	LE	X	X			
<i>Etheostoma (Ulocentra) sp.</i>	Cherokee darter	LT					
<i>Etheostoma wapiti</i>	Boulder darter	LE	X				
<i>Notropis albizonatus</i>	Palezone shiner	LE	X	X			
<i>Noturus baileyi</i>	Smoky madtom	LE	X				
<i>Noturus flavipinnis</i>	Yellowfin madtom	LT	X				
<i>Noturus stanauli</i>	Pygmy madtom	LE	X				
<i>Percina antesella</i>	Amber darter	LE					
<i>Percina aurolineata</i>	Goldline darter	LT					
<i>Percina jenkinsi</i>	Conasauga logperch	LE					
<i>Percina tanasi</i>	Snail darter	LT	X				
<i>Phoxinus cumberlandensis</i>	Blackside dace	LT		X			
<i>Scaphirhynchus albus</i>	Pallid sturgeon	LE					
<i>Speoplatyrhinus poulsoni</i>	Alabama cavefish	LE	X				

<sup>1</sup> Status codes: LE - Listed Endangered; LT - Listed Threatened; PE - Proposed Endangered; PT - Proposed Threatened

<sup>2</sup> Ex = Extirpated

Mississippi Main Stem	Mississippi Tributaries	Pearl	Pascagoula	Mobile	Savannah	Santee	Habitat
							Forests, fields
						X	Spruce-fir/hardwood ecotone
	X			X			Caves, rivers, lakes
X	X			X			Caves, riparian areas
							Caves, nearby forests
	X			X		X	Cliffs, large rivers, reservoirs
X	X						Lakes, large rivers, wooded shorelines
	X	X	X	X			Mature/old growth pine forests
X							Large rivers, sandbars
				X			Swamp forests
		X					Lakes, swamps
		X					Large rivers
X							Forested wetlands, streams
				X			Small rivers
				X			Large rivers
				X			Small rivers, large creeks
							Small rivers, large creeks
							Small rivers
							Small creeks, springs
	X						Small creeks
				X			Small rivers
							Small rivers, large creeks
							Small rivers, large creeks
				X			Small creeks
							Small rivers, large creeks
							Small rivers, large creeks
							Large creeks
							Small rivers, large creeks
							Small rivers
				X			Small rivers
				X			Small rivers
				X			Small rivers
							Large rivers, small rivers
							Small creeks
X							Large rivers
							Cave streams

## Threatened and Endangered Species Appendix

Distribution of Endangered and Threatened Species in the TVA Region by River Basins (continued)

Name	Common Name	Status <sup>1</sup>	Tennessee	Cumberland	Green	New	Lower Ohio
CLAMS							
<i>Alasmidonta atropurpurea</i>	Cumberland elktoe	PE		X			
<i>Alasmidonta raveneliana</i>	Appalachian elktoe	LE	X				
<i>Conradilla caelata</i>	Birdwing pearl mussel	LE	X				
<i>Cyprogenia stegaria</i>	Fanshell	LE	X		X		
<i>Dromus dromas</i>	Dromedary pearl mussel	LE	X	X			
<i>Epioblasma brevidens</i>	Cumberland combshell	PE	X	X			
<i>Epioblasma capsaeformis</i>	Oyster mussel	PE	X				
<i>Epioblasma florentina florentina</i>	Yellow-blossom pearl mussel	LE	Ex <sup>2</sup>				
<i>Epioblasma metastrata</i>	Upland combshell	LE					
<i>Epioblasma obliquata obliquata</i>	Catspaw	LE		X	X		
<i>Epioblasma othcaloogensis</i>	Southern acornshell	LE					
<i>Epioblasma penita</i>	Southern combshell	LE					
<i>Epioblasma torulosa gubernaculum</i>	Green blossom pearl mussel	LE	X				
<i>Epioblasma torulosa rangiana</i>	Northern riffleshell	LE			X		
<i>Epioblasma torulosa torulosa</i>	Tubercled blossom pearl mussel	LE	Ex <sup>2</sup>	Ex <sup>2</sup>			Ex <sup>2</sup>
<i>Epioblasma turgidula</i>	Turgid blossom pearl mussel	LE	X				
<i>Epioblasma walkeri</i>	Tan riffleshell	LE	X	X			
<i>Fusconaia cor</i>	Shiny pigtoe pearl mussel	LE	X				
<i>Fusconaia cuneolus</i>	Fine-rayed pigtoe	LE	X				
<i>Hemistena lata</i>	Cracking pearl mussel	LE	X	X	X		
<i>Lampsilis abrupta</i>	Pink mucket	LE	X	X	X		X
<i>Lampsilis atilis</i>	Fine-lined pocketbook	LT					
<i>Lampsilis provalis</i>	Orange-nacre mucket	LT					
<i>Lampsilis virescens</i>	Alabama lamp mussel	LE	X				
<i>Medionidus acutissimus</i>	Alabama moccasinshell	LT					
<i>Medionidus parvulus</i>	Coosa moccasinshell	LE					
<i>Obovaria retusa</i>	Ring pink	LE	X	X	X		
<i>Pegias fabula</i>	Little-wing pearl mussel	LE	X	X			
<i>Plethobasus cicatricosus</i>	White wartyback	LE	X				
<i>Plethobasus cooperianus</i>	Orange-foot pimpleback	LE	X	X	X		X
<i>Pleurobema clava</i>	Clubshell	LE	X		X		
<i>Pleurobema curtum</i>	Black clubshell	LE					
<i>Pleurobema decisum</i>	Southern clubshell	LE					
<i>Pleurobema furvum</i>	Dark pigtoe	LE					
<i>Pleurobema georgianum</i>	Southern pigtoe	LE					
<i>Pleurobema gibberum</i>	Cumberland pigtoe	LE		X			
<i>Pleurobema marshalli</i>	Flat pigtoe	LE					
<i>Pleurobema perovatum</i>	Ovate clubshell	LE					
<i>Pleurobema plenum</i>	Rough pigtoe	LE	X	X	X		

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<sup>2</sup> Ex = Extirpated

Mississippi Main Stem	Mississippi Tributaries	Pearl	Pascagoula	Mobile	Savannah	Santee	Habitat
							Small rivers, creeks
							Small rivers, creeks
							Small rivers
							Rivers
							Rivers
							Small rivers
							Small rivers
							Large rivers
				X			Small rivers
							Large rivers
				X			Small rivers, creeks
				X			Small rivers, creeks
							Small rivers
							Small rivers, creeks
							Large rivers
	X						Creeks
							Small rivers, creeks
							Small rivers, creeks
							Small rivers, creeks
							Rivers, large creeks
							Rivers
				X			Small rivers, creeks
				X			Small rivers, creeks
							Creeks
				X			Small rivers, creeks
				X			Small rivers, creeks
							Rivers
							Creeks
							Large rivers
							Large rivers
							Rivers, large creeks
				X			Small rivers, creeks
				X			Small rivers, creeks
				X			Small rivers, creeks
				X			Small rivers, creeks
							Small rivers, creeks
				X			Small rivers, creeks
				X			Small rivers, creeks
							Rivers

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CLAMS continued							
<i>Pleurobema taitianum</i>	Heavy pigtoe	LE					
<i>Potamilus capax</i>	Fat pocketbook	LE					X
<i>Potamilus inflatus</i>	Inflated heelsplitter	LT					
<i>Ptychobranchus greenii</i>	Triangular kidneyshell	LE					
<i>Quadrula cylindrica strigillata</i>	Rough rabbitsfoot	PE	X				
<i>Quadrula fragosa</i>	Winged mapleleaf	LE	Ex <sup>2</sup>				
<i>Quadrula intermedia</i>	Cumberland monkeyface	LE	X				
<i>Quadrula sparsa</i>	Appalachian monkeyface	LE	X				
<i>Quadrula stapes</i>	Stirrupshell	LE					
<i>Toxolasma cylindrellus</i>	Pale lilliput	LE	X				
<i>Villosa perpurpurea</i>	Purple bean	PE	X				
<i>Villosa trabalis</i>	Cumberland bean	LE	X	X			
SNAILS							
<i>Anguispira picta</i>	Painted snake coiled forest snail	LT	X				
<i>Athearnia anthonyi</i>	Anthony's river snail	LE	X				
<i>Marstonia ogmorhapse</i>	Royal marstonia	LE	X				
<i>Mesodon clarki nantahala</i>	Noonday globe	LT	X				
<i>Tulotoma magnifica</i>	Tulatoma	LE					
ARTHROPODS							
<i>Microhexura montivaga</i>	Spruce-fir moss spider	PE	X				
<i>Palaemonias alabamiae</i>	Alabama cave shrimp	LE	X				
<i>Palaemonias ganteri</i>	Kentucky cave shrimp	LE			X		
<i>Lirceus usdagalun</i>	Lee County cave isopod	LE	X				
<i>Orconectes shoupi</i>	Nashville crayfish	LE		X			
FLOWERING PLANTS							
<i>Apios priceana</i>	Price potato-bean	LT	X	X			X
<i>Arabis perstellata var. ampla</i>	Rockcross	PE		X			
<i>Arenaria cumberlandensis</i>	Cumberland sandwort	LE		X			
<i>Astragalus bibullatus</i>	Ground-plum	LE		X			
<i>Betula uber</i>	Virginia roundleaf birch	LT	X				
<i>Clematis morefieldii</i>	Morefield's leather flower	LE	X				
<i>Clematis socialis</i>	Alabama leather flower	LE					
<i>Conradina verticillata</i>	Cumberland rosemary	LT	X	X			
<i>Dalea foliosa</i>	Prairie clover	LE	X	X			
<i>Echinacea laevigata</i>	Purple-coneflower	LE				X	
<i>Echinacea tennesseensis</i>	Tennessee coneflower	LE		X			
<i>Euphorbia purpurea</i>	Glade spurge	LT	X				
<i>Geum radiatum</i>	Spreading avens	LE	X				

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<sup>2</sup> Ex = Extirpated

Mississippi Main Stem	Mississippi Tributaries	Pearl	Pascagoula	Mobile	Savannah	Santee	Habitat
				X			Small rivers, creeks
							Rivers, creeks
				X			Small rivers
				X			Small rivers, creeks
							Small rivers
							Small rivers
				X			Small rivers
				X			Small rivers
							Creeks
							Small rivers, creeks
							Small rivers, creeks
							Forested bluffs
							Spring runs
							Cliffs
				X			Rivers
						X	Spruce-fir forests
							Caves
							Caves
							Caves
							Large creeks
				X			Hardwood forests, forest edges
							Calcareous slopes
							Sandstone overhangs
							Cedar glades
							Creek terraces
							Hardwood forests
				X			Forest edges, open woodlands
							Riverine gravel bars
							Cedar glades
							Cedar glades, open woods, limestone bluffs
							Cedar glades
							Rich or swampy woods
							High elevation acidic rock outcrops

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Name	Common Name	Status <sup>1</sup>	Tennessee	Cumberland	Green	New	Lower Ohio
FLOWERING PLANTS continued							
<i>Hedyotis purpurea</i> var. <i>montana</i>	Mountain bluet	LE	X				
<i>Helianthus eggertii</i>	Eggert sunflower	PT	X	X	X		
<i>Helonias bullata</i>	Swamp pink	LT	X				
<i>Isotria medeoloides</i>	Small whorled pogonia	LT	X				
<i>Lesquerella lyrata</i>	Lyre-leaf bladderpod	LT	X				
<i>Lesquerella perforata</i>	Spring Creek bladderpod	PE		X			
<i>Liatris helleri</i>	Blazing star	LT				X	
<i>Marshallia mohrii</i>	Barbara buttons	LT	X				
<i>Pityopsis ruthii</i>	Ruth golden aster	LE	X				
<i>Ptilimnium nodosum</i>	Harperella	LE	X				
<i>Sagittaria fasciculata</i>	Arrowhead	LE	X				
<i>Sagittaria secundifolia</i>	Arrowhead	LT	X				
<i>Sarracenia oreophila</i>	Green pitcher plant	LE	X				
<i>Sarracenia rubra</i> ssp. <i>jonesii</i>	Mountain sweet pitcher plant	LE	X				
<i>Schwalbea americana</i>	Chaffseed	LE					
<i>Scutellaria montana</i>	Mountain skullcap	LE	X				
<i>Sisyrinchium dichotomum</i>	Reflexed blue-eyed grass	LE					
<i>Solidago spithamea</i>	Blue ridge goldenrod	LT	X				
<i>Spiraea virginiana</i>	Virginia spiraea	LT		X			
<i>Trillium persistens</i>	Persistent trillium	LE					
<i>Xyris tennesseensis</i>	Yellow-eyed-grass	LE	X				
FERNS AND FERN ALLIES							
<i>Phyllitis scolopendrium</i> var. <i>americanum</i>	American harts-tongue fern	LT	X				
<i>Thelypteris pilosa</i> var. <i>alabamensis</i>	Alabama streak-sorus fern	LT					
LICHENS							
<i>Gymnoderma lineare</i>	Rock gnome lichen	PE	X				

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<sup>2</sup> Ex = Extirpated

Mississippi Main Stem	Tributaries	Pearl	Pascagoula	Mobile	Savannah	Santee	Habitat
						X	High elevation acidic rock outcrops
				X			Hardwood forests
						X	Bogs, meadows, edges of meandering streams
							Hardwood forests
							Cedar glades
							Flood plains, agricultural fields
						X	Acidic soils of high elevation outcrops
				X			Marshes, wet meadows
							Boulders in rivers
				X			Gravel bars, rocks in rivers
							Non-forested seepage areas
							Gravel bars, rocks in rivers
				X			Bogs, wet meadows, moist woodlands
							Mountain bogs and streamsides
				X			Open, sandy, acidic pine woods
				X			Hardwood, mixed forests
						X	Rich basic soils of clearings, woodland edges
						X	Acidic, sandy balds
							Riverine gravel bars
					X		Rich ravines
				X			Forested seeps
							Cave, sinkhole mouths
				X			Crevices of Pottsville sandstone
							High elevation cliffs

## Seventeen Categories of Natural Areas Appendix

### National Wildlife Refuges

Name	State
Wheeler National Wildlife Refuge	AL
Lake Isom National Wildlife Refuge	TN
Reelfoot Lake National Wildlife Refuge	TN
Tennessee National Wildlife Refuge	TN
Hatchie National Wildlife Refuge	TN
Chickasaw National Wildlife Refuge	TN
Noxubee National Wildlife Refuge	MS
Cross Creeks National Wildlife Refuge	TN
Blowing Wind Cave National Gray Bat Sanctuary	AL

### Wilderness Areas

Name	State
Kimberling Creek Wilderness Area	VA
Gee Creek Wilderness Area	TN
Beartown Wilderness Area	VA
Ellicott Rock Extension Wilderness Area	GA
Cohutta Wilderness Area	GA
Bald River Gorge Wilderness Area	TN
Joyce Kilmer-Slickrock Wilderness Area	NC
Ellicott Rock Wilderness Area	GA
Southern Nantahala Wilderness Area	NC
Citico Creek Wilderness Area	TN
Lewis Fork Wilderness Area	VA
Shining Rock Wilderness Area	NC
Big Frog Wilderness Area	TN
Little Dry Run Wilderness Area	VA
Little Wilson Creek Wilderness Area	VA
Sipsey Wilderness Area	AL
Linville Gorge Wilderness Area	NC

### Fish Hatcheries

Name	State
Buffalo Springs State Fish Hatchery	TN
Dale Hollow National Fish Hatchery	TN
Summerville State Fish Hatchery	AL
Flintville State Fish Hatchery	TN
Cohutta National Fish Hatchery	GA
Summerville State Fish Hatchery	GA
Lake Burton State Fish Hatchery	GA
Eagle Bend State Fish Hatchery	TN
Chattahoochee National Fish Hatchery	GA
Erwin National Fish Hatchery	TN

### State Scenic Rivers

Name	State
Tuckahoe Creek State Scenic River	TN
Harpeth State Scenic River	TN
Conasauga State Scenic River	TN
Chattooga National Wild And Scenic River	GA
Roaring River State Scenic River	TN
Hiwassee State Scenic River	TN
French Broad State Scenic River	TN
Spring Creek State Scenic River	TN
Hatchie State Scenic River	TN
Collins State Scenic River	TN
Blackburn Fork State Scenic River	TN
Buffalo State Scenic River	TN

### Outstanding Resource Waters

Name	State
Metropolis Lake	KY
Mammoth Cave Underground River System	KY
Murphys Pond	KY
Ohio River (Livingston County)	KY
Tennessee River	KY
Barren River	KY
Ohio River (McCracken County)	KY
Green River (Butler County)	KY
Green River (Edmonson County)	KY

### State Forests

Name	State
Pickett State Forest	TN
Bledsoe State Forest	TN
Scott State Forest	TN
Lewis State Forest	TN
Prentice Cooper State Forest	TN
Standing Stone State Forest	TN
Stewart State Forest	TN
Chickasaw State Forest	TN
Natchez Trace State Forest	TN
Cedars Of Lebanon State Forest	TN
Lone Mountain State Forest	TN
Franklin-Marion State Forest	TN
Chuck Swan State Forest	TN
Lebanon Forests State Forest	TN
Pennyryle State Forest	KY

**Pocket Wilderness Areas**

Name	State
North Chickamauga Creek Pocket Wilderness Area	TN
Virgin Falls Pocket Wilderness	TN
Laurel-Snow Pocket Wilderness	TN
Stinging Fork Falls Pocket Wilderness	TN

**Mussel Sanctuaries**

Name	State
Cumberland River No. 3 State Mussel Sanctuary	TN
Kentucky Reservoir No. 2 State Mussel Sanctuary	TN
Cumberland River No. 1 State Mussel Sanctuary	TN
Tennessee River Mussel Sanctuary	KY
Powell River State Mussel Sanctuary	TN
Guntersville Reservoir State Mussel Sanctuary	TN
Kentucky Reservoir No. 1 State Mussel Sanctuary	TN
Cumberland River No. 2 State Mussel Sanctuary	TN
Clinch River State Mussel Sanctuary	TN
Cumberland River Mussel Sanctuary	KY
Duck River State Mussel Sanctuary	TN
Nickajack Reservoir State Mussel Sanctuary	TN
Chickamauga Reservoir State Mussel Sanctuary	TN

**Federal Committee on Ecological Reserves Research Natural Areas**

Name	State
Berry Island FCER Research Natural Area	TN
Plott Cove FCER Research Natural Area	GA
Old Robinson Road FCER Research Natural Area	MS
Hematite FCER Research Natural Area	KY
Bluff City FCER Research Natural Area	AL
Walker Cover FCER Research Natural Area	NC
Black Mountain FCER Research Natural Area	NC
Dividing Ridge FCER Research Natural Area	KY
Bee Branch FCER Research Natural Area	AL
Pond Hollow FCER Research Natural Area	KY
Britton Ford FCER Research Natural Area	TN
Morgan Hill FCER Research Natural Area	MS
Goose Pond Upland Swamp FCER Research Natural Area	TN
Sinking Pond Upland Swamp FCER Research Natural Area	TN

**National Natural Landmarks**

Name	State
Chestnut Oak Disjunct National Natural Landmark	MS
Cedar Glade Natural Area National Natural Landmark	TN
Dismals National Natural Landmark	AL
Mt. Mitchell State Park National Natural Landmark	NC
Cathedral Caverns National Natural Landmark	AL
Beaverdam Creek Swamp National Natural Landmark	AL
Harrell Prairie Hill National Natural Landmark	MS
Reelfoot Lake National Natural Landmark	TN
Morgan Hill Research Natural Area	MS

**National Natural Landmarks (continued)**

Name	State
Bienville Pines Scenic Area National Natural Landmark	MS
May Prairie National Natural Landmark	TN
Big Bone Cave National Natural Landmark	TN
Taylor Hollow National Natural Landmark	TN
Piney Falls National Natural Landmark	TN
McAnultys Woods National Natural Landmark	TN
Cumberland Caverns National Natural Landmark	TN
Sinking Pond National Natural Landmark	TN
Newsome Sinks Karst Area National Natural Landmark	AL
Long Hope Creek Spruce Bog National Natural Landmark	NC
Savage Gulf National Natural Landmark	TN
Lost Sea National Natural Landmark	TN
Shelta Cave National Natural Landmark	AL
Grassy Cove Karst Area National Natural Landmark	TN
Conley Hole National Natural Landmark	TN
Goose Pond National Natural Landmark (Coffee County)	TN
Thumping Dick Cove National Natural Landmark	TN

**Critical Habitat Areas**

Name	State
Slender Chub Designated Critical Habitat	TN
Kentucky Cave Shrimp Designated Critical Habitat	KY
Conasauga Darter Designated Critical Habitat	GA
Indiana Bat Designated Critical Habitat	KY
Alabama Cavefish Designated Critical Habitat	AL
Spotfin Chub Designated Critical Habitat	TN
Smoky Madtom Designated Critical Habitat	TN
Slackwater Darter Designated Critical Habitat	AL
Yellowfin Madtom Designated Critical Habitat	TN
Amber Darter Designated Critical Habitat	GA

**Nature Preserves**

Name	State
Chaney Lake State Nature Preserve	KY
Sandy Mitchell Hollow TNC <sup>1</sup> Preserve	TN
Metropolis Lake State Nature Preserve	KY
Mill Creek Heronry TNC <sup>1</sup> Preserve	TN
Mantle Rock Nature Preserve	KY
Cressy Creek TNC Preserve	VA
Big Sheep Cliff Ridge TNC <sup>1</sup> Preserve	NC
Couchville Cedar Glade TNC <sup>1</sup> Preserve	TN
Flat Rock Glade State Nature Preserve	KY
Sunset Barrens Nature Preserve	KY
Raymond Athey Barrens State Nature Preserve	KY
Wash Morgan Hollow TNC <sup>1</sup> Preserve	TN
Taylor Hollow TNC <sup>1</sup> Preserve	TN

<sup>1</sup> The Nature Conservancy

**Nature Preserves (continued)**

Name	State
Little River Canyon National Preserve	AL
Pendleton Island TNC <sup>1</sup> Preserve	VA
Barnett Woods TNC Preserve	TN
Eller TNC Preserve	NC
Timber Ridge TNC Preserve	NC
Obion Creek Nature Preserve	KY
Jenkins Cranberry Bog TNC Preserve	TN
Logan County Glade State Nature Preserve	KY
Big Yellow Mountain TNC Preserve	NC
Aimee M. Rosenfield Memorial Preserve	KY
The Pinnacle TNC Preserve	VA
Woodburn Glade Nature Preserve	KY
Henry Wright TNC Preserve	NC
Hubbards Cave TNC Preserve	TN
Sneed Road Cedar Glade TNC Preserve	TN
Ochlawaha Bog TNC Preserve	NC
Mt. View Road Glade TNC Preserve	TN
Yarn Property TNC Preserve	GA
Terrapin Creek State Nature Preserve	KY
Roan Mountain TNC Preserve	NC
Powell River TNC Preserve	TN
Oak Ridge Barrens Preserve	TN

**Wildlife Observation Areas**

Name	State
Duck River Bottoms State Wildlife Observation Area	TN
Univ. Of Tenn. Arboretum State Wildlife Observation Area	TN
Eagle Bend Hatchery State Wildlife Observation Area	TN
Eastern State Wildlife Observation Area	TN
Chota Peninsula State Wildlife Observation Area	TN
Kingston Steam Plant State Wildlife Observation Area	TN
Big Hill Pond State Park State Wildlife Observation Area	TN
Cross Creeks National Wildlife Refuge Wildlife Observ. Area	TN
Blythe Ferry State Wildlife Observation Area	TN
Raccoon Mountain Pumped Storage State Wildlife Observ. Area	TN
Willow Grove/Lillydale State Wildlife Observation Area	TN
Nolichucky Reservoir State Wildlife Observation Area	TN
Savannah Bay/Chickamauga State Wildlife Observation Area	TN
Goose Pond State Wildlife Observation Area (Coffee County)	TN
Ijams Audubon Nature Center State Wildlife Observation Area	TN
Cove Lake State Park State Wildlife Observation Area	TN
Bledsoe Creek State Park State Wildlife Observation Area	TN
Signal Point State Wildlife Observation Area	TN
Old Hickory Trail State Wildlife Observation Area	TN
Herb Parsons Lake State Wildlife Observation Area	TN
Bays Mountain State Wildlife Observation Area	TN
Nickajack Cave State Wildlife Observation Area	TN
Monsanto Ponds Wildlife Observation Area	TN
Cyrpress Grove Nature Park Wildlife Observation Area	TN
Candies Creek/Chickamauga State Wildlife Observation Area	TN
Sugar Creek State Wildlife Observation Area	TN

**Wildlife Observation Areas (continued)**

Name	State
Lichterman Nature Center State Wildlife Observation Area	TN
Norris Songbird Trail State Wildlife Observation Area	TN
Erwin National Fish Hatchery State Wildlife Observation Area	TN
Elm Hill Sink Hole Wildlife Observation Area	TN
Dyson Ditch State Wildlife Observation Area	TN
Rankin Bottoms State Wildlife Observation Area	TN
Amnicola Marsh State Wildlife Observation Area	TN
Reelfoot Lake State Wildlife Observation Area	TN
Wilbur Lake State Wildlife Observation Area	TN
Alcoa Farm State Wildlife Observation Area	TN
Lake Graham State Wildlife Observation Area	TN
Mt. Roosevelt Overlook State Wildlife Observation Area	TN
Pace Point State Wildlife Observation Area	TN
Ft. Pillow Historic Area State Wildlife Observation Area	TN
Cheatham Reservoir Wildlife Management Area	TN
Percy Priest Wildlife Observation Area	TN
Radnor Lake State Wildlife Observation Area	TN
Cades Cove State Wildlife Observation Area	TN
Laurel Hill Lake State Wildlife Observation Area	TN

**TVA Natural Areas**

Name	State
Comby Ridge TVA Small Wild Area	TN
Riley Creek Islands TVA Habitat Protection Area	TN
Marble Bluff TVA Habitat Protection Area	TN
Possum Creek TVA Habitat Protection Area	TN
Whites Creek TVA Small Wild Area	TN
Chickamauga Shoreline TVA Habitat Protection Area	TN
Huff Branch TVA Habitat Protection Area	TN
Beech Island TVA Small Wild Area	TN
Chigger Point TVA Habitat Protection Area	TN
Big Ridge TVA Habitat Protection Area	TN
Fooshee Bend Islands TVA Habitat Protection Area	TN
Mink Creek TVA Habitat Protection Area	AL
Stowe Bluff TVA Habitat Protection Area	TN
Coffee Bluff TVA Habitat Protection Area	AL
Foster Falls TVA Small Wild Area	TN
Little Gizzard Creek TVA Small Wild Area	TN
Tribble Woods TVA Habitat Protection Area	TN
Metropolis Lake TVA Habitat Protection Area	KY
Hemlock Bluff TVA Small Wild Area	TN
Honey Bluff TVA Habitat Protection Area	AL
Clendenin Creek TVA Habitat Protection Area	TN
Lady Finger Bluff TVA Small Wild Area	TN
Sugar Grove TVA Habitat Protection Area	TN
Monks Corner TVA Small Wild Area	TN
Eagle Roost TVA Habitat Protection Area	TN
Blythe Ferry TVA Habitat Protection Area	TN
Grasshopper Creek TVA Habitat Protection Area	TN
Bayou Creek Ridge TVA Habitat Protection Area	KY
Cave Mountain TVA Small Wild Area	AL

**TVA Natural Areas (continued)**

<b>Name</b>	<b>State</b>
River Bluff TVA Small Wild Area	TN
Grassy Creek TVA Habitat Protection Area	TN
Stiners Woods TVA Habitat Protection Area	TN
Johnson Bend Islands TVA Habitat Protection Area	TN
Soddy Creek TVA Habitat Protection Area	TN
Fairview Slopes TVA Habitat Protection Area	TN
Armstrong Bend TVA Habitat Protection Area	TN
Butcher Bluff TVA Habitat Protection Area	TN
Norris Dam Cave TVA Habitat Protection Area	TN
Paint Rock Bluff TVA Small Wild Area	TN
Berry Island TVA Ecological Study Area	TN
Tellico Bluff TVA Ecological Study Area	TN
Three B TVA Habitat Protection Area	TN
Ware Branch Bend TVA Habitat Protection Area	TN
Honeycomb Creek TVA Small Wild Area	AL
Hematite Lake TVA Ecological Study Area	KY
Shellmound Road Bluff TVA Habitat Protection Area	TN
Nickajack Cave TVA Habitat Protection Area	TN
Little Cedar Mountain TVA Habitat Protection Area	TN
Thief Neck Island TVA Ecological Study Area	TN
Big Spring Creek TVA Small Wild Area	AL
Little Cedar Mountain TVA Small Wild Area	TN
Polecat Creek Slopes TVA Habitat Protection Area	TN
Marney Bluff TVA Habitat Protection Area	TN
Blue Springs Peninsula TVA Habitat Protection Area	TN
Murphy Hill TVA Habitat Protection Area	TN
Eaves Bluff TVA Habitat Protection Area	TN
Blowing Wind Cave TVA Habitat Protection Area	AL
Nickajack Cave TVA Small Wild Area	TN
Johnson Bottoms TVA Habitat Protection Area	TN
Panther Creek Swamp TVA Habitat Protection Area	KY
Alley Bluff TVA Habitat Protection Area	TN
Coon Gulf TVA Small Wild Area	AL
Dividing Ridge TVA Ecological Study Area	KY
Pond Hollow TVA Ecological Study Area	KY
Bear Creek TVA Habitat Protection Area	TN
Old First Quarters TVA Small Wild Area	AL
Rayburn Bridge TVA Habitat Protection Area	TN
Mccuiston Woods TVA Habitat Protection Area	KY
Long Island TVA Habitat Protection Area	TN
Cooper Falls TVA Habitat Protection Area	MS
Short Springs TVA Small Wild Area	TN
South Sauty Creek TVA Small Wild Area	AL
Big Ridge TVA Small Wild Area	TN
Fooshee Peninsula TVA Small Wild Area	TN

**State Parks**

<b>Name</b>	<b>State</b>
Marion Bridge TVA Habitat Protection Area	TN
Hungry Mother State Park	VA
Mousetail Landing State Rustic Park	TN
Tishomingo State Park	MS
Joe Wheeler State Park	AL
Pickwick Landing State Resort Park	TN
Reelfoot Lake State Resort Park	TN
Big Ridge State Rustic Park	TN
Meeman-Shelby Forest State Recreational Park	TN
Black Rock Mountain State Park	GA
Lake Lowndes State Park	MS
Lake Malone State Park	KY
Kenlake Resort State Park	KY
Fort Mountain State Park	GA
Tombigbee State Park	MS
Norris Dam State Resort Park	TN
Cedars Of Lebanon State Recreational Park	TN
Cumberland Mountain State Rustic Park	TN
Warriors Path State Recreation Park	TN
Rough River Dam Resort State Park	KY
Cossar State Park	MS
Shot Tower State Historical Park	VA
Blackburn State Park	GA
Monte Sano State Park	AL
Rickwood Caverns State Park	AL
Lake Barkley State Resort Park	KY
Bucks Pocket State Park	AL
Edgar Evins State Rustic Park	TN
Chickasaw State Rustic Park	TN
Long Hunter State Recreation Park	TN
Roan Mountain State Resort Park	TN
Rock Island State Rustic Park	TN
Panther Creek State Recreation Park	TN
T.O. Fuller State Recreation Park	TN
Grayson Highlands State Park	VA
Kentucky Dam Village State Resort Park	KY
Dale Hollow Lake State Park	KY
Mt. Mitchell State Park	NC
Cathedral Caverns State Park	AL
Lake Guntersville State Park	AL
Pennyrile Forest Resort State Park	KY
Breaks Interstate State Park	VA
Vogel State Park	GA
Roosevelt State Park	MS
Wall Doxey State Park	MS
Big Hill Pond State Park	TN
Henry Horton State Resort Park	TN
David Crockett State Recreation Park	TN
Trace State Park	MS
Indian Mountain State Camping Park	TN
Pickett State Rustic Park	TN
Bledsoe Creek State Camping Park	TN

**State Parks (continued)**

Name	State
Paris Landing State Resort Park	TN
Davy Crockett Birthplace State Historical Park	TN
Booker T. Washington State Recreation Park	TN
Cove Lake State Recreation Park	TN
Montgomery Bell State Resort Park	TN
Tims Ford State Rustic Park	TN
Standing Stone State Rustic Park	TN
Fall Creek Falls State Resort Park	TN
Natchez Trace State Resort Park	TN
Cloudland Canyon State Park	GA
J.P. Coleman State Park	MS
John W. Kyle State Park	MS
Bays Mountain Park State Natural Area	TN
Moccasin Creek State Park	GA
James H. Sloppy Floyd State Park	GA
Desoto State Park	AL
Columbus-Belmont Battlefield State Park	KY
Natural Tunnel State Park	VA
Ft. Mountain State Park	GA
George P. Cossar State Park	MS
Harrison Bay State Recreation Park	TN

**State Natural Areas (continued)**

Name	State
Gap Bog Registered State Natural Area	NC
Redbank Cove Registered State Natural Area	NC
Mt. Mitchell Park Registered State Natural Area	NC
Mt. Pisgah Registered State Natural Area	NC
Twin Arches State Natural Area	TN
Satulah Mountain Summit Registered State Natural Area	NC
Riverwoods State Natural Area	TN
James Avent Woodlot Registered State Natural Area	TN
Ames Plantation Registered State Natural Area	TN
Wildcat Hollow Registered State Natural Area	TN
Franklin Bog Registered State Natural Area	NC
Laurel-Snow State Natural Area	TN
Dunbar Cave State Natural Area	TN
Camp Branch Falls/Nantahala Gorge Registered State Natural Area	NC
Slagle Hollow Knobs/Steele Creek Park Registered State Nat. Area	TN
Barkley Prairie State Natural Area	KY
Browder Woods Registered State Natural Area	TN
Booger Swamp Registered State Natural Area	TN
Brady Mountain Registered State Natural Area	TN
Olive Preserve Registered State Natural Area	NC
Dripping Rock Bluff Registered State Natural Area	TN
Piney Falls State Natural Area	TN
Oak Ridge Barrens Registered State Natural Area	TN
Wright White Pine Stand Registered State Natural Area	TN
Metropolis Lake Registered State Natural Area	KY
Bear Creek Registered State Natural Area	TN
Grassy Pond Registered State Natural Area	TN
Steestachee Bald/Wesner Bald Registered State Natural Area	NC
Carmack Falls Registered State Natural Area	TN
Toxaway Creek/Rock Creek Registered State Natural Area	NC
Virgin Falls State Natural Area	TN
Short Mountain Registered State Natural Area	TN
Morrill Cave State Natural Area	TN
Fall Creek Falls State Natural Area	TN
Richland Balsam Registered State Natural Area	NC
Burgess Falls State Natural Area	TN
Hicks Gap State Natural Area	TN
North Fork Natural Area Registered State Natural Area	NC
Sinking Pond Registered State Natural Area	TN
Big Sheep Cliff Ridge Registered State Natural Area	NC
Sullenger Bend Registered State Natural Area	TN
Waterrock Knob Registered State Natural Area	NC
Memmingers Woods Registered State Natural Area	NC
Henry Wright Preserve Registered State Natural Area	NC
Great Smoky Mts. National Park/NC Registered State Nat. Area	NC
Bluebell Island Registered State Natural Area	TN
Julian Price Park Wetlands Registered State Natural Area	NC
Grandfather Mountain Corridor Registered State Natural Area	NC
Reelfoot Lake State Natural Area	TN
Scales Mountain Knobs Registered State Natural Area	TN
House Mountain State Natural Area	TN
Cedars Of Lebanon State Forest State Natural Area	TN

**State Natural Areas**

Name	State
Flat Rock Mountain Registered State Natural Area	NC
Basin Spring Registered State Natural Area	TN
Shortleaf Pine State Natural Area	MS
Trotters Woods Registered State Natural Area	TN
White Oak State Natural Area	MS
Big Yellow Mountain Registered State Natural Area	NC
Grandfather Mountain Registered State Natural Area	NC
Walterhill Floodplain State Natural Area	TN
Stinging Fork State Natural Area	TN
Bayou Creek Registered State Natural Area	KY
Radnor Lake State Natural Area	TN
Factory Road Glade Registered State Natural Area	TN
Warren Wilson College Biol. Reserve Registered State Nat. Area	NC
Natural Bridge State Natural Area	TN
Colditz Cove State Natural Area	TN
Falling Waters Falls State Natural Area	TN
Honey Creek State Natural Area	TN
Carter Caves State Natural Area	TN
Sandy Bottom Registered State Natural Area	NC
Zahnd State Natural Area	GA
Goose Pond Registered State Natural Area (Coffee County)	TN
Balsam Gap Registered State Natural Area	NC
Lesser Alcoa Marsh Registered State Natural Area	TN
Big Clifty Prairie State Natural Area	KY
Bear Creek Rookery State Natural Area	KY
Sweetwater Branch Registered State Natural Area	TN
Ochlawaha Bog Registered State Natural Area	NC

**State Natural Areas (continued)**

Name	State
Thompson Fossil Bed Registered State Natural Area	TN
Tanager Hill Registered State Natural Area	TN
The Craggies Registered State Natural Area	NC
Fork Ridge Balds/Mt. Hardy Registered State Natural Area	NC
Walker Branch Registered State Natural Area	TN
Frying Pan Gap Registered State Natural Area	NC
Back Slough/Laketon State Natural Area	KY
Tallahatchie State Natural Area	MS
Mosley Pond State Natural Area	KY
Malcolm Creek Rookery State Natural Area	KY
Rials Woods State Natural Area	KY
Forest Mill Pond Registered State Natural Area	TN
Hampton Creek Cove Class I State Natural Area	TN
Big Cypress Tree State Natural Area	TN
Joe Bryson Branch Registered State Natural Area	NC
Metal Ford Registered State Natural Area	TN
May Prairie State Natural Area	TN
Round Top Mountain State Natural Area	TN
Little Swan Creek Registered State Natural Area	TN
Pinky Falls Preserve Registered State Natural Area	NC
Horsepasture River Gorge/Windy Falls Registered State Nat. Area	NC
Hunter Bog Registered State Natural Area	TN
Little Buffalo River Bottoms Registered State Natural Area	TN
Short Mountain State Natural Area	TN
Pineola Bog Registered State Natural Area	NC
Warner Parks Registered State Natural Area	TN
Shelby Farms Forest State Natural Area	TN
Frozen Head State Natural Area	TN
Buck Creek Olivine Barrens Registered State Natural Area	NC
Stones River Mustard Field State Natural Area	TN
Sunk Lake State Natural Area	TN
Flat Laurel Registered State Natural Area	NC
Chestnut Bald/Silvermine Bald Registered State Natural Area	NC
Laurel Ridge Registered State Natural Area	NC
Flint River Bottoms Registered State Natural Area	TN
Wootens Bluff Registered State Natural Area	TN
Hawkins Cove State Natural Area	TN
Bone Cave State Natural Area	TN
Lacefield Falls Registered State Natural Area	TN
High Swan Natural Area Registered State Natural Area	NC
Grundy Forest State Natural Area	TN
Bays Mountain Park State Natural Area	TN
Piney Point State Natural Area	MS
McClures Bog Registered State Natural Area	NC
Dulany Bog Registered State Natural Area	NC
Savage Gulf State Natural Area	TN
Lake Barkley Rookery State Natural Area	KY
Big Ridge Registered State Natural Area	TN
Bottomland Hardwood State Natural Area	MS
Ozone Falls State Natural Area	TN
Greater Alcoa Marsh Registered State Natural Area	TN
Magendanz Falls Registered State Natural Area	TN

**State Natural Areas (continued)**

Name	State
Dennis Prairie State Natural Area	KY
Lick Creek State Natural Area	VA

**Wildlife Management Areas**

Name	State
Bean Switch Refuge State Wildlife Management Area	TN
Black Bayou Refuge State Wildlife Management Area	TN
Edgar Evins State Park Wildlife Management Area	TN
Ernest Rice Sr. State Wildlife Management Area	TN
Gallatin Steam Plant State Wildlife Management Area	TN
Haley-Jaqueth State Wildlife Management Area	TN
Horns Bluff Refuge State Wildlife Management Area	TN
Jackson Swamp State Wildlife Management Area	TN
Jarrell Switch State Wildlife Management Area	TN
Keyes-Harrison State Wildlife Management Area	TN
Maness Swamp Refuge State Wildlife Management Area	TN
Mustin Bottoms Refuge State Wildlife Management Area	TN
Obion River State Wildlife Management Area	TN
Pea Ridge State Wildlife Management Area	TN
White Lake Refuge State Wildlife Management Area	TN
Upper Sardis State Wildlife Management Area	MS
M.T.S.U. State Wildlife Management Area	TN
White Oak State Wildlife Management Area	TN
Bienville State Wildlife Management Area	MS
Caney Creek State Wildlife Management Area	MS
Catoosa State Wildlife Management Area	TN
Johns Mountain State Wildlife Management Area	GA
Oak Ridge State Wildlife Management Area	TN
Perryville State Wildlife Management Area	TN
Chickamauga State Wildlife Management Area	TN
Big Sandy State Wildlife Management Area	TN
Tradewater Wildlife Management Area	KY
Normandy State Wildlife Management Area	TN
Watts Bar State Wildlife Management Area	TN
Percy Priest State Wildlife Management Area	TN
Phipps Bend Refuge State Wildlife Management Area	TN
Freedom Hills State Wildlife Management Area	AL
Cove Creek Peninsula State Wildlife Management Area	TN
Cordell Hull Refuge State Wildlife Management Area	TN
Nolin Lake State Wildlife Management Area	KY
Tellico Lake State Wildlife Management Area	TN
Skyline State Wildlife Management Area	AL
Reelfoot Lake/Tenn. State Wildlife Management Area	TN
Chickasaw/Miss. State Wildlife Management Area	MS
Eastern State Wildlife Management Area	TN
Barkley Reservoir/Tenn. State Wildlife Management Area	TN
Barkley Lake Wildlife Management Area	KY
Aedc And Woods State Wildlife Management Area	TN
Tigrett State Wildlife Management Area	TN
Grenada Waterfowl Refuge State Wildlife Management Area	MS
Coopers Creek State Wildlife Management Area	GA

**Wildlife Management Areas (continued)**

<b>Name</b>	<b>State</b>
North Sauty Creek State Wildlife Management Area	AL
Hidden Valley State Wildlife Management Area	VA
Buffalo Springs State Wildlife Management Area	TN
Peal Land Wildlife Management Area	KY
Gallatin Steam Plant State Wildlife Management Area	TN
Pigeon Mountain State Wildlife Management Area	GA
Shelby Forest State Wildlife Management Area	TN
Cumberland Cove State Wildlife Management Area	TN
Cohutta State Wildlife Management Area	GA
Dale Hollow Lake Wildlife Management Area	KY
Land Between The Lakes/Tenn. State Wildlife Management Area	TN
Mallard-Fox Creek State Wildlife Management Area	AL
Fall Creek Falls State Wildlife Management Area	TN
Sevenmile Island State Wildlife Management Area	AL
Lick Creek State Wildlife Management Area	TN
Eagle Creek State Wildlife Management Area	TN
Cumberland Springs State Wildlife Management Area	TN
Cedar Hill Swamp State Wildlife Management Area	TN
Camden State Wildlife Management Area	TN
Alpine Mountain State Wildlife Management Area	TN
Cherokee (South) State Wildlife Management Area	TN
Chilhowee Mountain State Wildlife Management Area	TN
Hermitage State Wildlife Management Area	TN
Chuck Swan State Wildlife Management Area	TN
Anderson-Tully (Lower) State Wildlife Management Area	TN
Blythe Ferry State Wildlife Management Area	TN
Flintville Hatchery State Wildlife Management Area	TN
Rich Mountain State Wildlife Management Area	GA
Pennyrile Forest State Wildlife Management Area	KY
Swallow Creek State Wildlife Management Area	GA
Old Hickory State Wildlife Management Area	TN
Clinch Mountain State Wildlife Management Area	VA
Land Between The Lakes/Ky State Wildlife Management Area	KY
Swan Creek State Wildlife Management Area	AL
Ohio River Islands Wildlife Management Area	KY
Coleman River State Wildlife Management Area	GA
Raccoon Creek State Wildlife Management Area	AL
Henderson Island Refuge State Wildlife Management	TN
West Sandy State Wildlife Management Area	TN
Hiwassee Refuge State Wildlife Management Area	TN
Reelfoot Lake/Ky State Wildlife Management Area	KY
Volunteer Army Ammunition Plant State Wildlife Management Area	TN
Black Warrior State Wildlife Management Area	AL
Barren River Lake State Wildlife Management Area	KY
Prentice Cooper State Wildlife Management Area	TN
Lake Burton State Wildlife Management Area	GA
Jones Keeney Wildlife Management Area	KY
Yellow Creek State Wildlife Management Area	MS
West Kentucky State Wildlife Management Area	KY
Warwoman State Wildlife Management Area	GA
Ft. Campbell State Wildlife Management Area	KY

**Wildlife Management Areas (continued)**

<b>Name</b>	<b>State</b>
Choctaw State Wildlife Management Area	MS
Calhoun County State Wildlife Management Area	MS
Coosawattee State Wildlife Management Area	GA
Natchez Trace State Wildlife Management Area	TN
Kaler Bottoms Wildlife Management Area	KY
Chestatee State Wildlife Management Area	GA
Mud Creek State Wildlife Management Area	AL
Chattahoochee State Wildlife Management Area	GA
Okitibbee State Wildlife Management Area	MS
Blue Ridge State Wildlife Management Area	GA
Harmon Creek State Wildlife Management Area	TN
Winford Pond State Wildlife Management Area	KY
Chickasaw/Tenn. State Wildlife Management Area	TN
Old Hickory Lock 5 State Wildlife Management Area	TN
Pickett State Wildlife Management Area	TN
New Hope State Wildlife Management Area	TN
Cheatham State Wildlife Management Area	TN
Cordell Hull State Wildlife Management Area	TN
Standing Stone State Wildlife Management Area	TN
Gooch State Wildlife Management Area	TN
Lauderdale County State Wildlife Management Area	AL
Rankin Bottom State Wildlife Management Area	TN
Moss Island State Wildlife Management Area	TN
Doe Mountain State Wildlife Management Area	TN
Kingston Refuge State Wildlife Management Area	TN
Nathan Bedford Forrest State Wildlife Management Area	TN
Nolichucky State Wildlife Management Area	TN
Cheatham Reservoir Wildlife Management Area	TN
Rough River State Wildlife Management Area	KY
Talking Rock State Wildlife Management Area	GA
Little River State Wildlife Management Area	AL
John Bell Williams State Wildlife Management Area	MS
Crow Creek Refuge State Wildlife Management Area	AL
Kentucky Lake Wildlife Management Area	KY
Laurel Hill State Wildlife Management Area	TN
Sardis Waterfowl Refuge State Wildlife Management Area	MS
Cherokee (North) State Wildlife Management Area	TN
Crow Creek State Wildlife Management Area	AL
Lamarion State Wildlife Management Area	AL
Cheatham Reservoir State Wildlife Management Area	TN
Royal Blue State Wildlife Management Area	TN
Mt. Roosevelt State Wildlife Management Area	TN

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# Glossary

The development of Energy Vision 2020, using TVA's interactive planning process, requires the careful, consistent use of certain key terms and phrases. Below are definitions of terms used often in Volume 2, Technical Document 1, Comprehensive Affected Environment. (Terms in definitions which are themselves defined in the Glossary are printed in *italics*.)

## A

**Acid Deposition**—The wet or dry deposition of acid chemical compounds from the atmosphere.

**Acid Rain**—A complex chemical and atmospheric phenomenon that occurs when *emissions* of sulfur and nitrogen compounds and other substances are transformed by chemical processes in the atmosphere, often far from the original sources, and then deposited on Earth in either a wet or dry form. The wet forms, popularly called “acid rain,” can fall as rain, snow, or fog. The dry forms are acidic gases or *particulates*.

**Aesthetics**—The perception or appearance of visual features in relation to the sense of beauty.

**Agricultural Sector**—The group of non-residential customers engaged in the production of crops or livestock, forestry, fishing, hunting, or trapping.

**Air Toxins**—Various man-made and naturally occurring materials that are known or suspected of causing serious public health impacts, but for which no *National Ambient Air Quality Standards* exist.

**Alluvial**—Sediment deposited by flowing water.

**Ambient**—Surrounding.

**Ambient Air Quality Standards**—National standards set by the U.S. *Environmental Protection Agency* that are permissible concentration levels of certain pollutants (*new ozone, carbon monoxide, particulates (PM 10), sulfur dioxide, nitrogen dioxide, and lead*) in the *ambient air*.

**Anaerobic**—Life in the absence of air or free oxygen.

**Aquatic**—Characteristic of and/or pertaining to water.

**Aquifer**—A water-bearing rock, rock formation, or group of rock formations.

**Archaeological Resources**—Material remains of past human activity.

**Attainment Areas**—Those areas that meet all *National Ambient Air Quality Standards* as determined by monitoring of air pollutant levels.

## B

**Benthic Invertebrates**—An animal lacking a backbone or spinal column and living on lake bottoms.

**Benthos**—Organisms that live on or in the first few inches of mud, sand, gravel, or other materials that make up the bottom of streams and lakes, e.g. worms, snails, crayfish, mussels, clams.

**Biodiversity**—The diversity of life in all its forms and all its levels of organization. Also termed “biological diversity”.

**Biomagnification**—The bioaccumulation of chemicals in organisms beyond the concentration expected if the chemical was in equilibrium between the organism and its surroundings. Biomagnification can occur in both terrestrial and *aquatic* environments.

**Biomass**—Organic material. Often involves the harvesting of stands of close-growing whole trees, truck transport, tree storage, and drying using air heated by boiler flue gas and combustion of whole trees in a special deep-bed burner at the bottom of the furnace.

**Buffering Capacity**—Ability of a stream to absorb acids and bases without altering the stream *pH*.

## C

**Canopy**—Refers to the layer of foliage in a forest formed by the crowns of trees.

**Carbon Dioxide (CO<sub>2</sub>)**—A colorless, odorless, nonpoisonous gas that results from fossil fuel combustion and is normally a part of the *ambient air*. Increasing levels of *carbon dioxide* in the atmosphere are contributing to the *greenhouse effect*.

**Carbon Monoxide (CO)**—A colorless, odorless, poisonous gas produced by incomplete fossil fuel combustion.

**Cedar Glades**—Distinctive plant communities occurring where certain types of limestone weather to produce bare rock outcrops or thin layers of soil.

**CFCs**—*Chlorofluorocarbons*.

**CH<sub>4</sub>**—*Methane*.

**Chlorofluorocarbons (CFCs)**—A family of inert, nontoxic, and easily liquefied chemicals used in refrigeration, air conditioning, packaging, and insulation or as solvents and aerosol propellants. Because CFCs are not destroyed in the lower atmosphere, they drift into the upper atmosphere, where their chlorine components destroy *ozone*.

**Class I Areas**—Areas designated by the Prevention of Significant Deterioration section of the *Clean Air Act Amendments of 1977* that includes national parks and wilderness areas, providing special protection for air quality and air quality-related values.

**Clean Air Act Amendments of 1970**—Enabling legislation which instructs the *Environmental Protection Agency (EPA)* to set air quality standards for pollutants of concern.

**Clean Air Act Amendments of 1977**—Legislation that provides greater regulatory authority and sets specific provisions to protect national parks and wilderness areas designated as *Class I areas*.

**Clean Air Act Amendments of 1990**—Legislation that adds additional regulatory authority to enforce compliance in *nonattainment areas*. Also sets new requirements for *acid rain*, *hazardous air pollutants*, and monitors and reports air *emissions*.

**Climate Change Action Plan**—The principal utility industry component of the U.S. Department of Energy's Climate Change

Action Plan, provides for a voluntary reduction of *greenhouse gases* (primarily *carbon dioxide emissions*).

**CO**—*Carbon Monoxide*.

**CO<sub>2</sub>**—*Carbon Dioxide*.

**Community**—An assemblage of plants, animals, bacteria, and fungi that live in an environment and interact with one another, forming a distinctive living system with its own composition, structure, environmental relations, development, and functions.

**Criteria**—Used in integrated resource planning. They are derived from issues or concerns. Examples include concerns over future rates, acceptable levels of environmental impacts, etc.

## E

**Ecosystem**—Any unit that includes all organisms (i.e., the *community*) in a given area interacting with the physical environment. The flow of *energy* leads to a clearly defined trophic structure, biotic diversity and material cycles (i.e., exchange of materials between living and nonliving parts within the system).

**Effluent**—Wastewater—treated or untreated—that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.

**Electric and Magnetic Fields (EMF)**—Two types of *energy* fields which are emitted from any device that generates, transmits, and uses electricity.

**Embayment**—A body of water forming a bay.

**EMF**—*Electric and Magnetic Fields*.

**Emission**—Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities; from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.

**Endangered Species**—Any species in danger of extinction throughout all or a significant portion of its range or territory.

**Energy**—The amount of power consumed over a period of time, measured in watt hours, *kWh*, *MWh*, or *GWh*.

**Environmental Protection Agency (EPA)**—A federal agency established to permit coordinated and effective governmental action for protection of the environment by the systematic abatement and control of pollution through integration of research monitoring, standard setting, and enforcement activities.

**EPA**—*Environmental Protection Agency*.

**Erosion**—The process by which soil particles are detached and transported by water and gravity to some downslope or downstream point.

## F

**Fly Ash**—The small ash particles that are carried out of a combustor with the existing flue gas. These particles are collected by appropriate equipment prior to discharging the flue gas to the atmosphere.

**Forest Cover Type**—A descriptive classification of forest land based on present occupancy of an area by tree species (also known as “forest type”), such as:

- **Oak-hickory.** Forests in which upland oaks and/or hickory, make up the majority of trees.
- **Oak-pine.** Forests in which hardwoods (usually upland oaks) constitute the majority of trees but in which pines

account for 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow poplar.)

**Fossil Fuel Power Plant**—A plant using coal, oil, natural gas or other fossil fuel as its source of *energy*.

**G**  
**Geography**—Belonging to or characteristic of a particular region.

**Global Warming**—The theory that certain gases such as *carbon dioxide* ( $CO_2$ ), *methane* ( $CH_4$ ), and *chlorofluorocarbon* (CFC) in the earth's atmosphere effectively restrict radiation cooling, thus elevating the earth's *ambient* temperatures.

**Greenhouse Effect**—The build-up of *carbon dioxide* or other trace gases that allows light from the sun's rays to heat the Earth but prevents a counterbalancing loss of heat.

**Greenhouse Gas Emissions**—A gas whose presence in the upper atmosphere contributes to the *greenhouse effect* by allowing visible light to pass through the atmosphere while preventing heat radiating back from the Earth from escaping. Greenhouse gases from human produced sources include *carbon dioxide*, *nitrous oxide*, *methane*, and *chlorofluorocarbons* (CFCs). There also are even larger quantities of naturally occurring greenhouse gases, notably *ozone* and water vapor, whose concentrations may be affected by interactions with atmospheric pollutants.

**Groundwater**—Water within the earth or geologic stratum that supplies wells and springs.

**H**  
**Habitat**—The total environmental conditions on a unit of land including food, cover, and water within the home range.

**Habitat Diversity**—The variety and variability of habitat types, as well as their interrelationships on a given area and scale.

**HAP**—*Hazardous Air Pollutants*.

**Hardwoods**—Angiosperms, usually broadleaf and deciduous. Soft hardwoods are soft-textured hardwoods such as boxelder, red and silver maples, hackberry, sweetgum, yellow poplar, blackgum, sycamore, black cherry, and elm. Hard hardwoods are hard-textured hardwoods such as sugar maple, hickory, dogwood, persimmon, black locust, beech, ash, black walnut, and all commercial oaks.

**Hazardous Air Pollutants (HAP)**—Air pollutants that are not covered by *ambient* air quality standards but that present, or may present, a threat of adverse health or environmental effects. These include an initial list of 189 chemicals designated by Congress and subject to revision by the *Environmental Protection Agency*.

**Hazardous Waste**—A byproduct of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity) or appears on special *Environmental Protection Agency* lists.

**Haze**—Atmospheric moisture, dust, smoke, and vapor suspended to form a partly opaque condition.

**Heavy Metals**—Natural elements such as lead, mercury, cadmium, and nickel. They are mined from the earth and used

in numerous manufacturing processes and countless products.

**High-Level Waste**—Material that is highly radioactive. In a nuclear power plant high-level waste is *spent fuel*.

**Historic Site**—See *Archaeological Resources*.

**Hydroelectric Power Generation**—A dam creates an upper and a lower water reservoir. The height difference between the two reservoirs establishes potential *energy* that is used to generate electricity by allowing water from the upper reservoir to flow through a hydro *turbine* to the lower reservoir.

**I**  
**Impoundment**—A body of water or sludge confined by a dam, dike, floodgate, or other barrier.

**K**  
**Karst (Topography)**—The relief of an area underlaid by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

**Karst Region**—A particular geographic region of irregular limestone in which *erosion* has produced fissures, sinkholes, underground streams, and caverns.

**L**  
**Lacustrine**—Living or growing in lakes; of or related to lakes.

**Lead (Pb)**—A *heavy metal* that is hazardous to health if breathed or swallowed. Its use in gasoline, paints, and plumbing compounds has been sharply restricted by federal regulations, but enormous quantities of

lead already released into the environment are causing significant problems.

**Low-Level Waste**—Radioactive material that is slightly or moderately radioactively contaminated. Low-level radioactive waste consists largely of ordinary trash and other items that have come into contact with radioactive materials.

## M

**Mainstream Reservoirs**—Reservoirs on large rivers such as the Tennessee River.

**Manganese (Mn)**—A hard and brittle metallic element that resembles iron but is not magnetic.

**Mature Trees**—Stands of trees that have grown into the sawtimber class but have not yet begun to decline and die from natural processes.

**Methane (CH<sub>4</sub>)**—A *greenhouse gas* that is colorless, nonpoisonous, and flammable and is created by anaerobic decomposition of organic compounds.

**Mobile Sources**—Transportation air pollution sources, primarily automobiles and trucks.

**Multi-Attribute Trade-off Analysis/Technique**—An approach designed for interactive participation by a group to make dual comparisons among different attributes for many strategies. It provides an open framework for public involvement to investigate different attributes, futures, and strategies.

## N

**N<sub>2</sub>O**—*Nitrous Oxide*.

**NAAQS**—*National Ambient Air Quality Standards*.

**NAPAP**—*National Acid Precipitation Assessment Program*.

**National Acid Precipitation Assessment Program (NAPAP)**—A 10-year scientific study conducted by the federal government from 1980 to 1990 to determine the effects of, and sources contributing to, *acid deposition*.

**National Ambient Air Quality Standards (NAAQS)**—Uniform, national air quality standards established by the *Environmental Protection Agency* that restrict *ambient* levels of certain pollutants to protect public health (primary standards) or public welfare (secondary standards). Standards have been set for *ozone*, *carbon monoxide*, *particulates (PM10)*, *sulfur dioxide*, *nitrogen*, *nitrogen dioxide*, and *lead*.

**Native Species**—Species normally indigenous to an area; not introduced by man.

**Natural Resources**—The elements of the natural environment that are evaluated as resources (i.e., water resources, forests).

**Nitrogen Dioxide (NO<sub>2</sub>)**—The result of *nitric oxide* combining with oxygen in the atmosphere. A major component of photochemical smog.

**Nitrogen or Nitrous Oxide (NO<sub>x</sub>)**—A product of combustion by mobile and stationary sources and a major contributor to the formation of *ozone* in the *troposphere* and *acid deposition*.

**NO<sub>2</sub>**—*Nitrogen Dioxide*.

**Nonattainment Area**—A geographic area that does not meet one or more of the *National Ambient Air Quality Standards* for the *criteria* pollutants designated in the Clean Air Act.

**Non-Point Sources**—Pollution sources that are diffuse and do not have a single

point of origin or are not introduced into a receiving stream from a specific outlet. The pollutants are generally carried off the land by storm water runoff.

**NO<sub>x</sub>**—*Nitrogen Oxide or Nitrous Oxide*.

## O

**Ozone (O<sub>3</sub>)**—A substance found in the stratosphere and the *troposphere*. In the stratosphere (the atmospheric layer beginning 7 to 10 miles above the Earth's surface) ozone is a form of oxygen found naturally that provides a protective layer shielding the Earth from ultraviolet radiation. In the *troposphere* (the layer extending up 7 to 10 miles from the Earth's surface), ozone is a chemical oxidant and a major component of photochemical smog.

Ozone can seriously affect the human respiratory system and is one of the most widespread of all the *criteria* pollutants. Ozone in the *troposphere* is produced through complex chemical reactions of *nitrogen oxides*, which are among the primary pollutants emitted by combustion sources; hydrocarbons, released into the atmosphere through the combustion, handling, and processing of hydrocarbon products and sunlight.

## P

**Palustrine**—Relating to marshes or wetlands.

**Particulate**—Minute separate particles.

**Particulate Collection Devices**—Environmental control systems (i.e., electrostatic precipitators, baghouses) designed to remove suspended particulate matter (i.e., *fly ash*) from coal-fired boiler flue gas.

**Parts per Million**—The number of parts of a given substance or pollutant in a million parts of a base material; a measure of concentration.

**PCBs**—Polychlorinated byphenals.

**pH**—A measure of the acidity or alkalinity of a solution. pH is represented on a scale of 0 to 14, with 7 being a neutral state, 0 most acid, and 14 most alkaline.

**Physiographic Provinces**—Systematic description of areas with some point of physical geology in common.

**Plume**—A flowing, often somewhat conical, trail of *emissions* from a continuous *point source*.

**Point Sources**—A stationary location or fixed facility from which pollutants are discharged or emitted. Also, any single identifiable source of pollution, for example, a pipe, ditch, ship, ore pit, or factory smokestack.

**PM10**—Minute separate particles equal to 10 microns or less.

**Prevention of Significant Deterioration (PSD)**—An *Environmental Protection Agency* program in which state or federal permits are required that are intended to restrict *emissions* for new or modified sources in places where air quality is already better than required to meet primary and secondary *ambient air quality standards*.

**Primary Particulate Matter**—Particles emitted directly from a source.

## R

**Radionuclides**—Radioactive nuclides.

**Regional Haze**—A type of visibility impairment which is the result of dispersed and intermixed pollutants from many sources.

**Residential**—The group of customers to whom electricity is sold for household purposes, including space heating, water heating, air conditioning, lighting, and appliances in single-family, multifamily, and mobile homes.

**River Substrate**—A layer of material or substance in a river.

## S

**Scrubber**—A device that removes *sulfur dioxide* from flue gas using lime or limestone.

**Scrubber Sludge**—The *effluent* from a scrubber that is then discharged and is stored in a solid landfill, principally as a calcium sulfate.

**Secondary Particulate Matter**—Particles formed in the atmosphere from emitted gases.

**Sedimentation**—The action or process of depositing sediment.

**Seedling**—Live trees of species less than 1.0 inch in diameter at 4.5 feet above ground that are expected to survive and develop.

**Sensitive Species**—Species that are listed with states as needing special management.

**Short Rotation Woody Crops**—Plants grown on a relatively short rotation schedule for the explicit purpose of harvesting for use in power production.

**SO<sub>2</sub>**—*Sulfur Dioxide*.

**Soil**—A dynamic natural medium composed of mineral and organic materials in which plants grow.

**Sorbent**—A substance that takes up and holds or absorbs.

**Species**—A class of individuals having common attributes and designated by a common name.

**Spent Fuel**—Nuclear fuel that can no longer economically sustain a chain reaction.

**Streams**—A continually, frequently, or infrequently flowing body of water that follows a defined course. The three classes of streams are:

- **Ephemeral.** A channel that carries water only during and immediately following rainstorms. Also known as a “dry wash.”
- **Intermittent.** A watercourse that flows in a well-defined channel during the wet seasons of the year, but not the entire year.
- **Perennial.** A watercourse that flows throughout the year or nearly so (90 percent of time) in a well-defined channel.

**Succession**—A process of biotic community development that involves changes in species, structure, and community processes over time.

**Sulfur Dioxide (SO<sub>2</sub>)**—A heavy, pungent, colorless, gaseous air pollutant formed primarily by the combustion of fossil-fuel plants.

**Surface Water**—Streams, rivers, ponds, lakes, and man-made reservoirs.

**Surrogate Measure**—A substitute measure that varies in the same way as the pollutant and environmental effects it represents.

## T

**Tailwater**—Water downstream from a dam, including those waters released from the dam.

**Thermal Rejection**—Release of heat.

**Thermal Stratification**—Layering of water with different temperatures, where it is warmer near the surface and colder near the bottom.

**Threatened Species**—Any species which is likely to become an endangered species within the foreseeable future.

**Topography**—The physical features of a place or region. Commonly refers to land forms and variation in elevation.

**Troposphere**—Lower atmosphere.

**TSP**—Total suspended *particulate* matter.

**Turbine**—A machine for directly converting the kinetic and/or thermal *energy* of a flowing fluid (air, hot gas, steam, or water) into useful rotational *energy*.

**V**

**Visibility Impairment or Degradation**—*Aesthetic* damage where the ability to discern form, color, or texture is reduced and therefore the scenic value is also diminished. Or, as stated in 40 CFR 51.30, visibility impairment is “...any humanly perceptible change in visibility (visual range, contrast, coloration) from that which would have existed under natural conditions.”

**Visual Quality Zones (VQZs)**—Areas of the landscape denoted by specified distances from the observer. Used as a frame of reference in which to discuss landscape characteristics or activities of man, sometimes referred to as “distance zones.”

**Volatile Organic Compounds (VOCs)**—Any organic compound that participates in atmospheric photochemical reactions except for those designated by the *Environmental Protection Agency* administrator as having negligible photochemical reactivity.

**W**

**Water Quality**—A term used to describe the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

**Watershed**—The entire area that contributes to a drainage or stream.

**Wetland**—Area with soils saturated with water during the growing seasons and supporting plants characteristic of wet conditions.

**Z**

**Zebra Mussel**—An imported mussel which interferes with, among other things, water intake structures.

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