Northwest Cumberland Plateau

Conservation Opportunity Area

The Northwest Cumberland Plateau Conservation Opportunity Area (COA) incorporates a region of diverse topography, elevation and geology. Plateau surface elevations average 1800 feet (550m) and are relatively flat. The plateau escarpment is extremely dissected along the margins of the plateau, with nearly vertical rock faces, rock outcrops and boulder fields. This area supports a large number of caves and karst areas due to the limestone bedrock. Karst habitats are extremely diverse with springs, seeps and sinkholes.

Numerous species of Greatest Conservation Need (GCN) can be found throughout this COA. Wetlands support breeding populations of Mountain Chorus Frog and Four-toed Salamander, and migratory habitat for Golden Eagles. Populations of Eastern Woodrat and roosting sites for Eastern Small-footed Bats can be found along the plateau escarpment. Caves located throughout the conservation opportunity area support wintering populations of endangered Indiana and Gray bats, and wet caves support the Southern Cave Crayfish. Streams provide habitat for the Obey Crayfish, Hairyfoot Crayfish, and Mussels such as Cumberland Moccasinshell and Fluted Kidney Shell.

The major threat to aquatic habitats is acid water runoff from historic coal mines throughout the COA. Iron pyrite exposed during these operations oxidizes with rain water, creating toxic runoff that at one time had deadened the river. Incompatible forestry practices can degrade and fragment terrestrial habitats, threatening the associated fauna.

Public Lands within the COA

Alpine Mountain Wildlife Management Area (WMA), Alvin C. York State Park, Pickett State Forest and WMA, Pogue Creek Canyon State Natural Area, Skinner Mountain WMA

Numerous rare or sensitive species find a home in the karst, wetland, and riverine habitats of the this region, which is still recovering from historic mining practices.

Top to bottom: Southern Cave Crayfish - Carl Williams, TWRA; Mountain Chorus Frog - Josh Campbell, TWRA/next page: Pogue Creek Canyon - Byron Jorjorian

Northwest Cumberland Plateau Conservation Opportunity Area

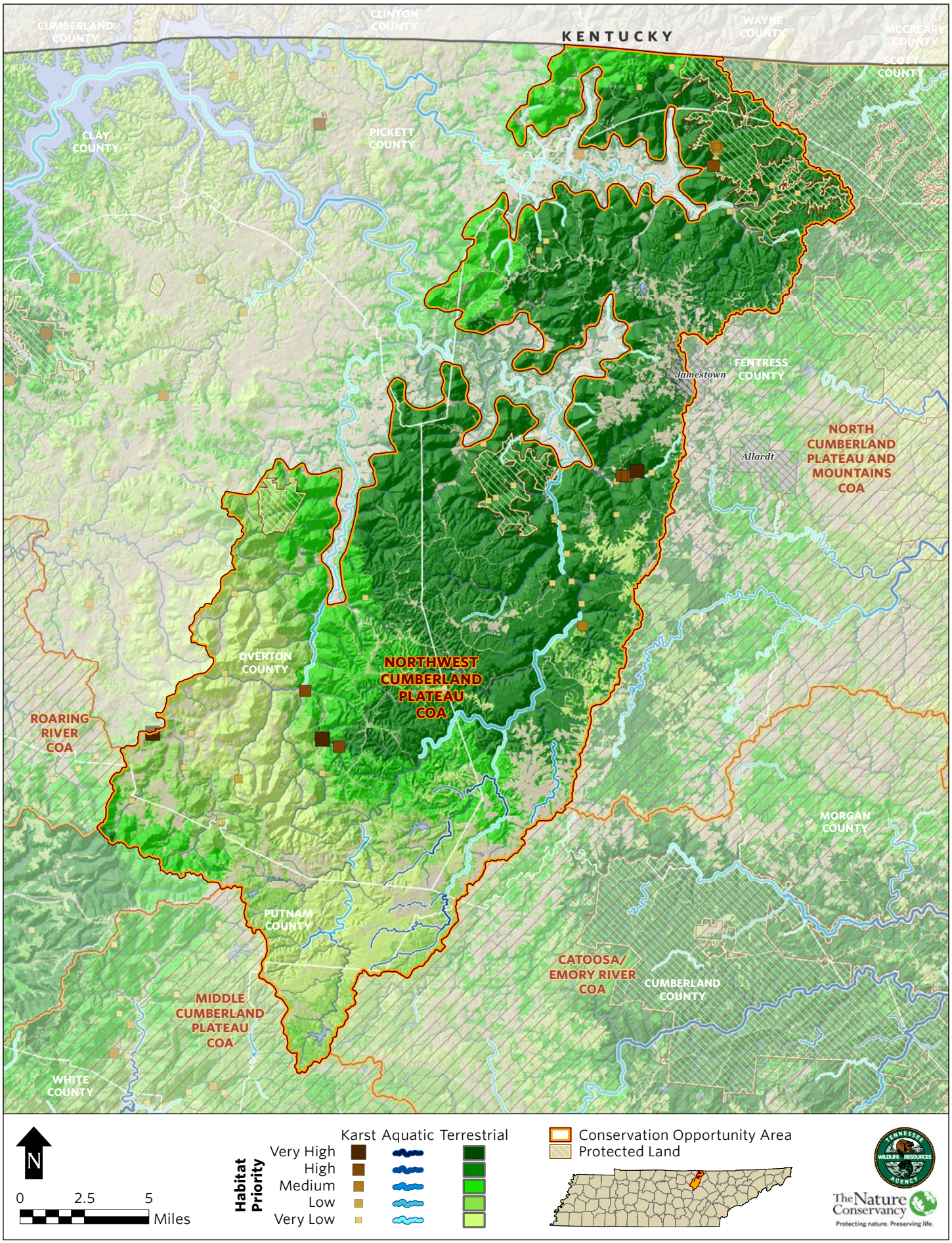
Partnerships

TWRA will develop partnerships aimed at restoring surface water pH levels that have been acidified by runoff from historic coal mines; fostering best management practices associated with timber harvests; and protecting fragile caves and other subterranean habitats. TWRA will develop and expand partnerships with the U.S. Fish and Wildlife Service, Natural Resources Conservation Service, Tennessee Dept. of Environment and Conservation, The Nature Conservancy, and private land owners.

	Desired Change	Units
+	Increase the application of Best Management Practices to benefit GCN species and habitats on private lands using government funded incentive programs	number
+	Increase forest acres/stream miles of critical habitat by restoring to appropriate ecological system conditions.	acres/miles
+	Improve/restore historic fossil fuel extraction sites to appropriate ecological system conditions.	acres
−	Decrease acres of habitat negatively affected by undesirable native and exotic plant and animal species.	acres
−	Remove lowhead dams and other obstructions to reclaim free-flowing waters	structures
+	Increase understanding of GCN species' geographical distribution, life history, and ecological needs to improve management aimed at promoting survival over the long-term.	projects
+	Increase acreage of permanently protected habitat to benefit GCN species.	acres
+	Increase and improve the awareness, education, and cooperation of stakeholders/citizens pertaining to GCN species and habitat.	number
−	Decrease the negative effects of development on GCN species and habitats by providing data to planning entities in environmental or land use planning.	plans
−	Avoid and mitigate impacts from coal mining and oil and natural gas exploration by participating in environmental reviews.	reviews
+	Restore GCN species populations in key habitat areas where numbers are low through propagation/translocation.	animals

To learn more about the Northwest Cumberland Plateau Conservation Opportunity Area, please contact: Chris Simpson, Wildlife Diversity Coordinator, Region 3 (931) 484-9571

Northwest Cumberland Plateau Conservation Opportunity Area Tennessee State Wildlife Action Plan 2015



	NORTHWEST CUMBERLAND PLATEAU COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Amphibian	Aneides aeneus (Green Salamander)
Arachnid	Callioplus pantoplus ((an amaurobiid spider))
Bat	Corynorhinus rafinesquii (Rafinesque's Big-eared Bat)
Bat	Myotis grisescens (Gray Bat)
Bat	Myotis leibii (Eastern Small-footed Bat)
Bat	Myotis lucifugus (Little Brown Bat)
Bat	Myotis septentrionalis (Northern Myotis)
Bat	Myotis sodalis (Indiana Bat)
Bat	Perimyotis subflavus (Tri-colored Bat)
Bird	Accipiter striatus (Sharp-shinned Hawk)
Bird	Ammodramus henslowii (Henslow's Sparrow)
Bird	Ammodramus savannarum (Grasshopper Sparrow)
Bird	Anas rubripes (American Black Duck)
Bird	Aquila chrysaetos (Golden Eagle)
Bird	Bonasa umbellus (Ruffed Grouse)
Bird	Calidris pusilla (Semipalmated Sandpiper)
Bird	Caprimulgus carolinensis (Chuck-will's-widow)
Bird	Caprimulgus vociferus (Whip-poor-will)
Bird	Cardellina canadensis (Canada Warbler)
Bird	Chaetura pelagica (Chimney Swift)
Bird	Chordeiles minor (Common Nighthawk)
Bird	Circus cyaneus (Northern Harrier)
Bird	Cistothorus platensis (Sedge Wren)
Bird	Colinus virginianus (Northern Bobwhite)
Bird	Empidonax traillii (Willow Flycatcher)
Bird	Euphagus carolinus (Rusty Blackbird)
Bird	Falco peregrinus (Peregrine Falcon)
Bird	Geothlypis Formosa (Kentucky Warbler)
Bird	Grus americana (Whooping Crane)
Bird	Haliaeetus leucocephalus (Bald Eagle)
Bird	Helmitheros vermivorum (Worm-eating Warbler)
Bird	Hylocichla mustelina (Wood Thrush)
Bird	Icteria virens (Yellow-breasted Chat)
Bird	Icterus spurius (Orchard Oriole)
Bird	Lanius ludovicianus (Loggerhead Shrike)
Bird	Melanerpes erythrocephalus (Red-headed Woodpecker)
Bird	Nycticorax nycticorax (Black-crowned Night-heron)
Bird	Parkesia motacilla (Louisiana Waterthrush)
Bird	Protonotaria citrea (Prothonotary Warbler)
Bird	Riparia riparia (Bank Swallow)
Bird	Scolopax minor (American Woodcock)
Bird	Setophaga caerulescens (Black-throated Blue Warbler)
Bird	Setophaga cerulea (Cerulean Warbler)
Bird	Setophaga discolor (Prairie Warbler)
Bird	Setophaga dominica (Yellow-throated Warbler)
Bird	Setophaga fusca (Blackburnian Warbler)
Bird	Sturnella magna (Eastern Meadowlark)
Bird	Tyto alba (Barn Owl)
Bird	Vermivora chrysoptera (Golden-winged Warbler)
Bird	Vermivora cyanoptera (Blue-winged Warbler)
Bivalve	Medionidus conradicus (Cumberland Moccasinshell)
Bivalve	Ptychobranchus subtentum (Fluted Kidneyshell)
Crustacean	Cambarus crinipes (Hairyfoot Crayfish)

	NORTHWEST CUMBERLAND PLATEAU COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Crustacean	Cambarus obeyensis (Obey Crayfish)
Gastropod	Fumonelix wetherbyi (Clifty Covert)
Gastropod	Stenotrema angellum (Kentucky Slitmouth)
Mammal	Martes pennanti (Fisher)
Mammal	Neotoma magister (Allegheny Woodrat)
Mammal	Spilogale putorius (Eastern Spotted Skunk)
Plant	Ageratina luciae-brauniae (Lucy Braun's White Snakeroot)
Plant	Bryoxiphium norvegicum (Sword Moss)
Plant	Carex hirtifolia (Pubescent Sedge)
Plant	Castanea dentata (American Chestnut)
Plant	Hymenophyllum tayloriae (Taylor's Filmy Fern)
Plant	Juglans cinerea (Butternut)
Plant	Lilium canadense (Canada Lily)
Plant	Lilium philadelphicum (Wood Lily)
Plant	Lophocolea appalachiana ((a liverwort))
Plant	Microlejeunea globosa (Cardot's Lejeunea)
Plant	Minuartia cumberlandensis (Cumberland Sandwort)
Plant	Panax quinquefolius (American Ginseng)
Plant	Pellia appalachiana ((a liverwort))
Plant	Scopelophila cataractae (Agoyan Cataract Moss)
Plant	Spiranthes lucida (Shining Ladies'-tresses)
Plant	Tetrodontium brownianum (Little Georgia)
Reptile	Crotalus horridus (Timber Rattlesnake)
Reptile	Ophisaurus attenuatus longicaudus (Eastern Slender Glass Lizard)
Reptile	Terrapene carolina (Eastern Box Turtle)
Subterranean - Arachnid	Appaleptoneta sp. 1 ((a cave leptonetid spider))
Subterranean - Arachnid	Bishopella sp. Probably laciniosa (harvestman)
Subterranean - Arachnid	Calymmaria persica (Cave-loving funnel-web spider)
Subterranean - Arachnid	Hesperochernes mirabilis (Southeastern Cave Pseudoscorpion)
Subterranean - Arachnid	Kleptochthonius pluto ((a cave obligate pseudoscorpion))
Subterranean - Arachnid	Kleptochthonius sp. (Sells cave pseudoscorpion)
Subterranean - Arachnid	Liocranoides sp. (Two-clawed spider)
Subterranean - Arachnid	Meta ovalis (American cave orb weaver)
Subterranean - Arachnid	Nesticus stygius ((a cave obligate spider))
Subterranean - Arachnid	Phanetta subterranea (Subterranean sheet-web spider)
Subterranean - Arachnid	Poecilophysis weyerensis ((a cave mite))
Subterranean - Crustacean	Bryocamptus (Limocamptus) sp. (copepods)
Subterranean - Crustacean	Caecidotea stygia ((a cave obligate isopod))
Subterranean - Crustacean	Cambarus tenebrosus (Cavespring Crayfish)
Subterranean - Crustacean	Crangonyx sp. (amphipods)
Subterranean - Crustacean	Diacyclops sp. (Indiana Groundwater Copepod)
Subterranean - Crustacean	Haplophthalmus danicus ((a terrestrial cave isopod))
Subterranean - Crustacean	Ligidium elrodii hancockensis ((a cave obligate isopod))
Subterranean - Crustacean	Miktoniscus barri ((a cave obligate isopod))
Subterranean - Crustacean	Orconectes australis (Southern Cave Crayfish)
Subterranean - Crustacean	Orconectes barri (Cumberland Plateau Cave Crayfish)
Subterranean - Crustacean	Pseudocandona jeanneli (Jeannel's Cave Ostracod)
Subterranean - Crustacean	Sagittocythere barri (Ectocommensal Ostracod)
Subterranean - Crustacean	Stygobromus exilis (Central Kentucky Cave Obligate)
Subterranean - Crustacean	Stygobromus sp. 24 ((a cave obligate amphipod))
Subterranean - Fish	Typhlichthys subterraneus (Southern Cavefish)
Subterranean - Flatworm	Sphalloplana percoeca ((a cave obligate planarian))
Subterranean - Gastropod	Carychium exile (Ice Thorn)

	NORTHWEST CUMBERLAND PLATEAU COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Subterranean - Gastropod	Glyphyalinia sp. (terrestrial snails)
Subterranean - Gastropod	Glyphyalinia wheatleyi (Wheatley's glyph)
Subterranean - Gastropod	Helicodiscus barri (Raccoon Coil)
Subterranean - Gastropod	Helicodiscus hadenoecus (Cricket Coil)
Subterranean - Gastropod	Helicodiscus sp. (terrestrial snails)
Subterranean - Insect	Aleochara lucifuga ((a rove beetle))
Subterranean - Insect	Aloconota laurentiana ((a rove beetle))
Subterranean - Insect	Anillinus sp. 5 (Flag Trail Cave Beetle)
Subterranean - Insect	Arrhopalites benitus ((a springtail))
Subterranean - Insect	Arrhopalites marshalli (Marshall's Cave Springtail)
Subterranean - Insect	Arrhopalites pavo ((a cave springtail))
Subterranean - Insect	Arrhopalites pygmaeus ((a springtail))
Subterranean - Insect	Atheta troglophila ((a troglophilic rove beetle))
Subterranean - Insect	Batrisodes clypeospecus ((a cave obligate beetle))
Subterranean - Insect	Bembidion lacunarium (ground beetle)
Subterranean - Insect	Ceratophysella sp. (springtails)
Subterranean - Insect	Ceuthophilus stygius (cave cricket)
Subterranean - Insect	Darlingtonea kentuckensis ((a ground beetle))
Subterranean - Insect	Hadenoecus opilionides ((a cave obligate cricket))
Subterranean - Insect	Lesteva pallipes (rove beetle)
Subterranean - Insect	Litocampa cookei (Cooke's Cave Dipluran)
Subterranean - Insect	Litocampa sp. 1 (undescribed cave dipluran)
Subterranean - Insect	Litocampa sp. 6 (Buffalo Cove Cave Dipluran)
Subterranean - Insect	Litocampa sp. 7 (Mill Hollow Cave Dipluran)
Subterranean - Insect	Litocampa sp. 8 (Mountain Eye Cave Dipluran)
Subterranean - Insect	Megaselia cavernicola (cave hump-backed fly)
Subterranean - Insect	Nelsonites walteri ((a cave obligate beetle))
Subterranean - Insect	Platynus tenuicollis (ground beetle)
Subterranean - Insect	Pseudanophthalmus beakleyi ((a cave obligate beetle))
Subterranean - Insect	Pseudanophthalmus robustus ((a cave obligate beetle))
Subterranean - Insect	Pseudanophthalmus sp. (cave ground beetles)
Subterranean - Insect	Pseudanophthalmus sp. (Sells cave ground beetle)
Subterranean - Insect	Pseudanophthalmus sp. 29 (Falling Springs Cave Beetle)
Subterranean - Insect	Pseudanophthalmus sp. 30 (Ace in the Hole Cave Beetle)
Subterranean - Insect	Pseudanophthalmus valentinei ((a cave obligate beetle))
Subterranean - Insect	Pseudosinella alba (White springtail)
Subterranean - Insect	Pseudosinella christianseni (Christiansen's Cave Springtail)
Subterranean - Insect	Pseudosinella hirsuta (Hirsute Cave Springtail)
Subterranean - Insect	Pseudosinella orba ((a cave obligate springtail))
Subterranean - Insect	Psyllipsocus ramburi ((a cave barklice))
Subterranean - Insect	Rhadine caudata (ground beetle)
Subterranean - Insect	Sinella cavernarum ((a springtail))
Subterranean - Insect	Spelobia tenebrarum (Cave dung fly)
Subterranean - Insect	Stenoponia americana (flea)
Subterranean - Insect	Tomocerus bidentatus (Two-toothed springtail)
Subterranean - Insect	Tomocerus dubius (springtail)
Subterranean - Insect	Tomocerus flavescens (Golden springtail)
Subterranean - Insect	Trechus cumberlandus (Cumberland Ground Beetle)
Subterranean - Millipede	Pseudotremia garlandae (Garland's Cave Millipede)
Subterranean - Millipede	Pseudotremia manni (Mann's Cave Millipede)
Subterranean - Millipede	Pseudotremia roebuckorum (Roebuck's Cave Millipede)
Subterranean - Millipede	Pseudotremia sp. (cave millipeds)
Subterranean - Millipede	Pseudotremia sp. 5 (Three Forks cave milliped)

	NORTHWEST CUMBERLAND PLATEAU COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Subterranean - Millipede	Scoterpes copei ((a cave obligate millipede))
Subterranean - Millipede	Scoterpes ventus (Eastern Tennessee Cave Millipede)

NORTHWEST CUMBERLAND PLATEAU COA HABITATS (TN)	
Terrestrial Habitat Type	**Total acres of very high, high, and medium ranked habitat**
Natural habitats	
Southern Ridge and Valley / Cumberland Dry Calcareous Forest	97227
South-Central Interior Mesophytic Forest	44571
Allegheny-Cumberland Dry Oak Forest and Woodland	31257
Southern Interior Low Plateau Dry-Mesic Oak Forest	11524
Appalachian (Hemlock)-Northern Hardwood Forest	10411
Southern Appalachian Low-Elevation Pine Forest	6354
South-Central Interior Small Stream and Riparian	2876
Cumberland Acidic Cliff and Rockhouse	117
Central Interior Acidic Cliff and Talus	4
Semi-natural habitats	
Old Field / Successional	1559
Pasture	409
Cropland	8
Aquatic Habitat Type	**Total stream miles of very high, high, and medium ranked habitat**
Headwaters and Streams	28