Hiwassee

Conservation Opportunity Area

A 23-mile stretch of the Hiwassee River in Tennessee is designated a State Scenic River. Its headwaters begin in north Georgia before flowing north into North Carolina and then west into Tennessee. The river is renowned as an excellent trout fishery and a quality rafting destination. The portion of the river located downstream of the Appalachia Powerhouse is characterized as a cold water tailwater. As it flows westward, the river warms and slows down, creating habitat for a variety of fish and mussels. For planning purposes, this Conservation Opportunity Area (COA) also incorporates portions of the Cumberland Plateau escarpment. Many headwater streams that flow east off the escarpment into the Tennessee River harbor populations of the rare Laurel Dace.

One of the most robust breeding populations of Eastern Hellbenders in the entire country occurs in the upper Hiwassee River tailwater. It is one of the few places in Tennessee where adults of various year classes and juveniles can be found. At the confluence of the Hiwassee and Tennessee Rivers is Hiwassee Refuge, which attracts a variety of migrating waterfowl throughout the winter and is a stopping point for several Whooping Cranes as well as Sandhill Cranes.

One of the most robust breeding populations of Eastern Hellbenders in the entire country occurs in the upper Hiwassee River.

Major threats to the river include water quality issues arising from shoreline development, lack or loss of riparian buffers, and incompatible agricultural practices. The Eastern Hellbenders found in the upper portion of the tailwater are extremely sensitive to changes in water temperature.

Public Lands within the COA

Chickamauga Wildlife Management Area (WMA), Cumberland Trail State Park (SP), Gee Creek Wilderness, Hiwassee Refuge, Hiwassee/ Ocoee SP, Hiwassee State Scenic River, Laurel-Snow State Natural Area (SNA), Piney Falls SNA, South Cherokee National Forest, Yuchi Refuge

Top to bottom: Eastern Hellbender - Dave Herasimtschuk, Freshwaters Illustrated; Whitetail Shiner - Jeffrey Basinger, Freshwaters Illustrated/next page: Sandhill Crane - Chet Williams

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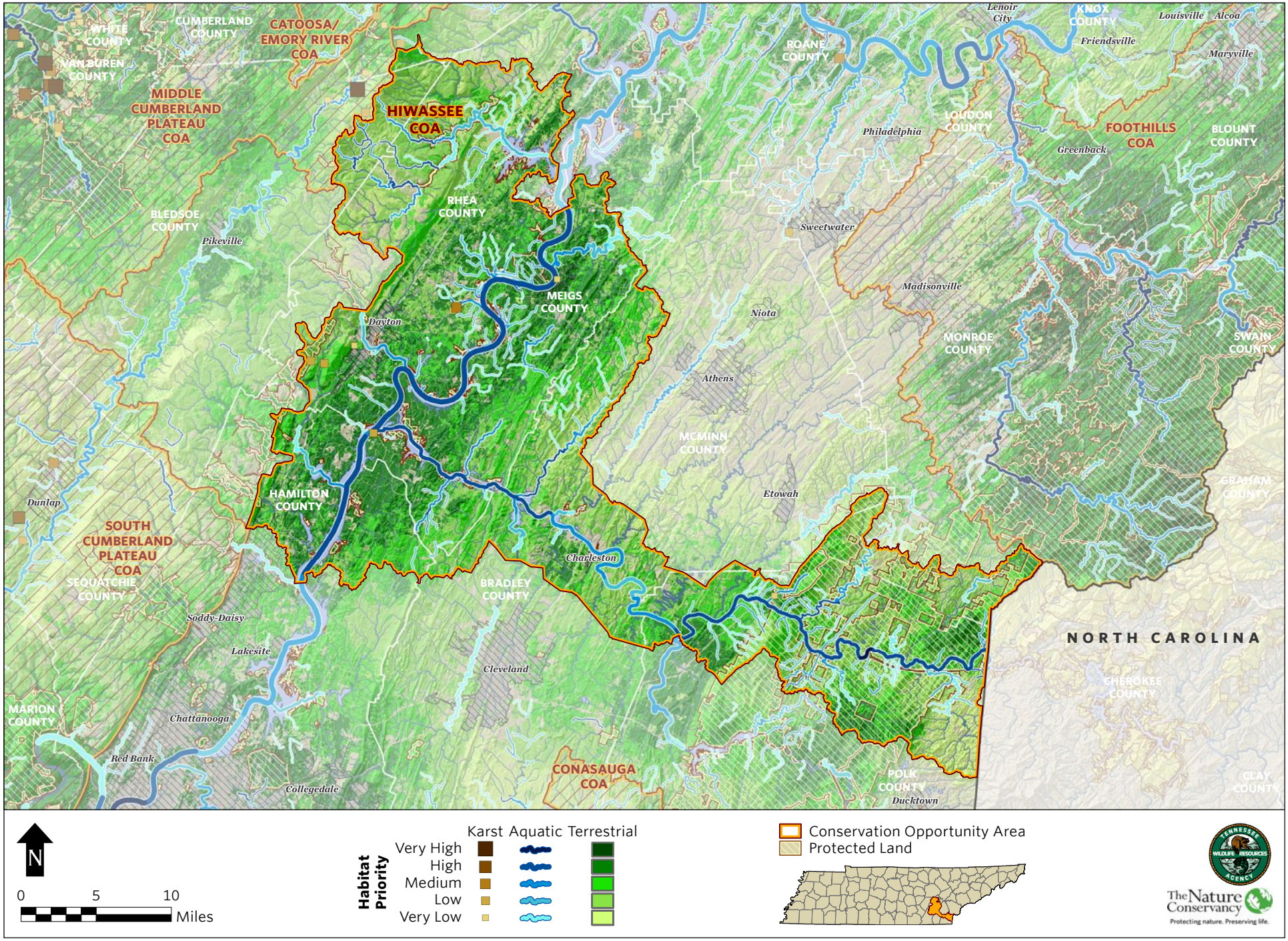
Partnerships

TWRA will foster partnerships to enhance, buffer, and protect aquatic habitat, including a water release plan with the Tennessee Valley Authority to balance water temperature within the tailwater and downstream. TWRA will develop and expand partnerships with the U.S. Fish and Wildlife Service, USDA Forest Service, Natural Resources Conservation Service, Tennessee Valley Authority, Tennessee Division of Forestry, The Nature Conservancy, the Tennessee Aquarium, Tennessee Parks and Greenways Foundation, The Land Trust for Tennessee, Middle Tennessee State University, and private landowners.

	Desired Change	Units
+	Increase the application of Best Management Practices, the restoration of critical land units and aquatic resources, and shoreline protection on private land using government-funded incentive programs	number
+	Restore riparian buffers and physical stream habitat in priority locations throughout the watershed.	miles
+	Increase acres of native ecosystems by restoring pastures and agricultural lands.	acres
+	Improve knowledge of the geographical distribution of GCN species and/or habitat changes through scientific surveys.	projects
+	Increase acreage of critical units of habitat under permanent conservation management.	acres
✓	Develop and/or participate in regional conservation planning initiatives sponsored by federal, state, and local agencies.	plans
✓	Develop a partnership and water release schedule with the Tennessee Valley Authority to maintain tailwater temperatures that support rare fauna.	plans
+	Improve conservation outcomes for GCN species and habitats through participation in environmental planning and permitting.	reviews

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

Hiwassee Conservation Opportunity Area



	HIWASSEE COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Amphibian	Cryptobranchus alleganiensis (Hellbender)
Amphibian	Desmognathus abditus (Cumberland Dusky Salamander)
Amphibian	Desmognathus aeneus (Seepage Salamander)
Amphibian	Hemidactylium scutatum (Four-toed Salamander)
Amphibian	Necturus maculosus (Mudpuppy)
Amphibian	Plethodon aureolus (Tellico Salamander)
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	Aimophila aestivalis (Bachman's Sparrow)
Bird	Ammodramus savannarum (Grasshopper Sparrow)
Bird	Anas rubripes (American Black Duck)
Bird	Aquila chrysaetos (Golden Eagle)
Bird	Asio flammeus (Short-eared Owl)
Bird	Bonasa umbellus (Ruffed Grouse)
Bird	Calidris mauri (Western Sandpiper)
Bird	Calidris pusilla (Semipalmated Sandpiper)
Bird	Caprimulgus carolinensis (Chuck-will's-widow)
Bird	Caprimulgus vociferus (Whip-poor-will)
Bird	Cardellina canadensis (Canada Warbler)
Bird	Certhia americana (Brown Creeper)
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	Ictinia mississippiensis (Mississippi Kite)
Bird	Ixobrychus exilis (Least Bittern)
Bird	Lanius ludovicianus (Loggerhead Shrike)
Bird	Limnothlypis swainsonii (Swainson's Warbler)
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 cerulea (Cerulean Warbler)
Bird	Setophaga discolor (Prairie Warbler)
Bird	Setophaga dominica (Yellow-throated Warbler)

	HIWASSEE COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Bird	Setophaga fusca (Blackburnian Warbler)
Bird	Sitta pusilla (Brown-headed Nuthatch)
Bird	Sphyrapicus varius (Yellow-bellied Sapsucker)
Bird	Sturnella magna (Eastern Meadowlark)
Bird	Troglodytes troglodytes (Winter Wren)
Bird	Tyto alba (Barn Owl)
Bird	Vermivora chrysoptera (Golden-winged Warbler)
Bird	Vermivora cyanoptera (Blue-winged Warbler)
Bivalve	Cyprogenia stegaria (Fanshell)
Bivalve	Epioblasma florentina walkeri (Tan Riffleshell)
Bivalve	Lampsilis abrupta (Pink Mucket)
Bivalve	Lasmigona holstonia (Tennessee Heelsplitter)
Bivalve	Pleurobema cordatum (Ohio Pigtoe)
Bivalve	Pleurobema oviforme (Tennessee Clubshell)
Bivalve	Pleurobema sintoxia (Round Pigtoe)
Bivalve	Pleuronaia barnesiana (Tennessee Pigtoe)
Bivalve	Pleuronaia dolabelloides (Slabside Pearlymussel)
Bivalve	Villosa iris (Rainbow)
Bivalve	Villosa trabalis (Cumberland Bean)
Bivalve	Villosa vanuxemensis (Mountain Creekshell)
Crustacean	Cambarus hiwasseensis (Hiwassee Crayfish)
Crustacean	Orconectes forceps (Surgeon Crayfish)
Fish	Acipenser fulvescens (Lake Sturgeon)
Fish	Carpiodes velifer (Highfin Carpsucker)
Fish	Chrosomus saylori (Laurel Dace)
Fish	Chrosomus tennesseensis (Tennessee Dace)
Fish	Etheostoma akatulo (Bluemask Darter)
Fish	Etheostoma vulneratum (Wounded Darter)
Fish	Percina aurantiaca (Tangerine Darter)
Fish	Percina burtoni (Blotchside Logperch)
Fish	Percina squamata (Olive Darter)
Fish	Percina tanasi (Snail Darter)
Gastropod	Elimia christyi (Knotty Elimia)
Gastropod	Glyphyalinia ocoae (Blue-gray Glyph)
Gastropod	Glyphyalinia pentadelphia (Pink Glyph)
Gastropod	Helicodiscus fimbriatus (Fringed Coil)
Gastropod	Leptoxis virgata (Smooth Mudalia)
Gastropod	Mesomphix rugeli (Wrinkled Button)
Gastropod	Paravitrea umbilicaris (Open Supercoil)
Gastropod	Somatogyrus sp. 2 (Hiwassee Pebblesnail)
Gastropod	Stenotrema cohuttense (Cohutta Slitmouth)
Gastropod	Ventridens decussatus (Crossed Dome)
Insect	Gomphus consanguis (Cherokee Clubtail)
Insect	Speyeria diana (Diana Fritillary)
Mammal	Martes pennanti (Fisher)
Mammal	Neotoma magister (Allegheny Woodrat)
Mammal	Ochrotomys nuttalli (Golden Mouse)
Mammal	Spilogale putorius (Eastern Spotted Skunk)
Mammal	Zapus hudsonius (Meadow Jumping Mouse)
Plant	Acer leucoderme (Chalk Maple)
Plant	Aureolaria patula (Spreading False-foxglove)
Plant	Boechera patens (Spreading Rockcress)
Plant	Cardamine flagellifera (Running Bittercress)

	HIWASSEE COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Plant	Carex manhartii (Manhart's Sedge)
Plant	Carex roanensis (Roan Mountain Sedge)
Plant	Carex ruthii (Ruth's Sedge)
Plant	Chrysogonum virginianum (Green-and-gold)
Plant	Coreopsis latifolia (Broad-leaved Tickseed)
Plant	Fothergilla major (Mountain Witch-alder)
Plant	Gelsemium sempervirens (Yellow Jessamine)
Plant	Heracleum maximum (Cow-parsnip)
Plant	Juglans cinerea (Butternut)
Plant	Marshallia obovata (Piedmont Barbara's-buttons)
Plant	Megaceros aenigmaticus (Megaceros)
Plant	Melanthium latifolium (Broadleaf Bunchflower)
Plant	Monotropsis odorata (Sweet Pinesap)
Plant	Panax quinquefolius (American Ginseng)
Plant	Pityopsis ruthii (Ruth's Golden-aster)
Plant	Prunus virginiana (Choke Cherry)
Plant	Sabatia capitata (Cumberland Rose Gentian)
Plant	Sacciolepis striata (Gibbous Panic-grass)
Plant	Scutellaria montana (Large-flowered Skullcap)
Plant	Scutellaria saxatilis (Rock Skullcap)
Plant	Stachys clingmanii (Clingman's Hedge-nettle)
Plant	Symplocos tinctoria (Horse-sugar)
Plant	Thermopsis fraxinifolia (Ash-leaved Bush-pea)
Plant	Trichomanes petersii (Dwarf Filmy-fern)
Plant	Trillium pusillum (Least Trillium)
Plant	Xerophyllum asphodeloides (Eastern Turkeybeard)
Reptile	Anolis carolinensis (Green Anole)
Reptile	Ophisaurus attenuatus longicaudus (Eastern Slender Glass Lizard)
Reptile	Terrapene carolina (Eastern Box Turtle)
Subterranean - Amphibian	Gyrinophilus gulolineatus (Berry Cave Salamander)
Subterranean - Amphibian	Gyrinophilus palleucus (Tennessee Cave Salamander)
Subterranean - Arachnid	Anthrobia mammouthia ((a cave obligate spider))
Subterranean - Arachnid	Bishopella sp. Probably laciniosa (harvestman)
Subterranean - Arachnid	Kleptochthonius charon ((a cave obligate pseudoscorpion))
Subterranean - Arachnid	Liocranoides sp. (Two-clawed spider)
Subterranean - Arachnid	Nesticus dilutus (Grassy Creek Cave Spider)
Subterranean - Arachnid	Phanetta subterranea (Subterranean sheet-web spider)
Subterranean - Crustacean	Caecidotea circulus ((a cave obligate isopod))
Subterranean - Crustacean	Caecidotea nickajackensis (Nickajack Cave Isopod)
Subterranean - Crustacean	Caecidotea sp. (cave isopods)
Subterranean - Crustacean	Cambarus hamulatus (Prickly Cave Crayfish)
Subterranean - Crustacean	Cambarus tenebrosus (Cavespring Crayfish)
Subterranean - Crustacean	Crangonyx antennatus (Appalachian cave amphipod)
Subterranean - Crustacean	Stygobromus exilis (Central Kentucky Cave Obligate)
Subterranean - Crustacean	Stygobromus sp. 22 (Swamp River Cave Amphipod)
Subterranean - Crustacean	Stygobromus sp. 34 ((a cave obligate amphipod))
Subterranean - Flatworm	Sphalloplana percoeca ((a cave obligate planarian))
Subterranean - Gastropod	Glyphyalinia sp. (terrestrial snails)
Subterranean - Gastropod	Helicodiscus sp. (terrestrial snails)
Subterranean - Insect	Arrhopalites sp. 3 near benitus ((undescribed cave springtail))
Subterranean - Insect	Atheta sp. ((a rove beetle))
Subterranean - Insect	Ceratophysella sp. (springtails)
Subterranean - Insect	Ceuthophilus sp. (cave crickets)

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Taxa Group	**Scientific & Common names**
Subterranean - Insect	Hadenoecini sp. (cave crickets)
Subterranean - Insect	Lesteva pallipes (rove beetle)
Subterranean - Insect	Litocampa cookei (Cooke's Cave Dipluran)
Subterranean - Insect	Megaselia cavernicola (cave hump-backed fly)
Subterranean - Insect	Pseudanophthalmus nortoni (Norton's Cave Beetle)
Subterranean - Insect	Pseudanophthalmus sp. (Aaron Tolletts cave beetle)
Subterranean - Insect	Pseudosinella aera ((a cave obligate springtail))
Subterranean - Insect	Pseudosinella collina ((a springtail))
Subterranean - Insect	Pseudosinella hirsuta (Hirsute Cave Springtail)
Subterranean - Insect	Spelobia tenebrarum (Cave dung fly)
Subterranean - Insect	Tomocerus bidentatus (Two-toothed springtail)
Subterranean - Insect	Tomocerus dubius (springtail)
Subterranean - Millipede	Ameractis satis ((a cave obligate milliped))
Subterranean - Millipede	Scoterpes sp. (cave millipeds)

HIWASSEE 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	105947
Allegheny-Cumberland Dry Oak Forest and Woodland	28149
Southern Appalachian Oak Forest	27046
South-Central Interior Mesophytic Forest	20599
Southern Appalachian Low-Elevation Pine Forest	15194
Southern and Central Appalachian Cove Forest	9018
South-Central Interior Small Stream and Riparian	4361
Appalachian (Hemlock)-Northern Hardwood Forest	4023
South-Central Interior Large Floodplain	1112
Southern Appalachian Montane Pine Forest and Woodland	77
Cumberland Acidic Cliff and Rockhouse	76
Semi-natural habitats	
Pasture	49094
Old Field / Successional	25538
Cropland	15683
Aquatic Habitat Type	**Total stream miles of very high, high, and medium ranked habitat**
Headwaters and Streams	121
Small River	11
Medium River	63
Large River	43