Elk River

Conservation Opportunity Area

The Elk River flows south and west from Tennessee into Alabama and has two major dams creating two lakes: Woods Reservoir and Tims Ford Lake. Slack water provided by the Woods Reservoir is used as a cooling source for scientific testing conducted by Arnold Engineering Development Center, and both dams provide numerous recreational opportunities for the public. The cold water released by Tims Ford Dam provides suitable habitat for a regionally important trout fishery. The Elk River is also a biologically diverse river system, home to numerous species of fish, mussels, and aquatic snails.

In the latter 20th century, the Boulder Darter fish species was almost eliminated from the Elk River system, likely due to impoundments on both the Elk River and Shoal Creek, cold water release from the dams, siltation, and pollution. A propagation and reintroduction program began in the early 1990s. Even though the Boulder Darter still occurs in small numbers, biologists consider this population restoration program successful because multiple age classes and young of the year have been found in the river itself as well as additional Elk River tributary streams since reintroduction efforts began.

To address threats to the Elk River's aquatic species, government agencies and others have developed incentive programs to restore riparian habitat.

To address threats to the Elk's numerous species of rare, threatened, and endangered fish and mussels, numerous government agencies and non-governmental organizations have developed incentive programs to restore habitat along the Elk River and improve river quality. These programs include streamside plantings for stream bank stabilization, facilities to keep cattle out of streams, and the planting of grass filter strips to minimize sediment runoff from agricultural areas. Improved temperature and dissolved oxygen levels from water releases out of Tims Ford Dam are also helping restore downstream habitat conditions on the Elk.

Top to bottom: Results from a mussel inventory - Pandy English, TWRA; Tims Ford Lake - Kathy/next page: Agricultural runoff in Tennessee - Tim McCabe, USDA NRCS

Public Lands within the COA

Flintville Hatchery Wildlife Management Area, Tims Ford State Park

Elk River Watershed
Conservation Opportunity Area

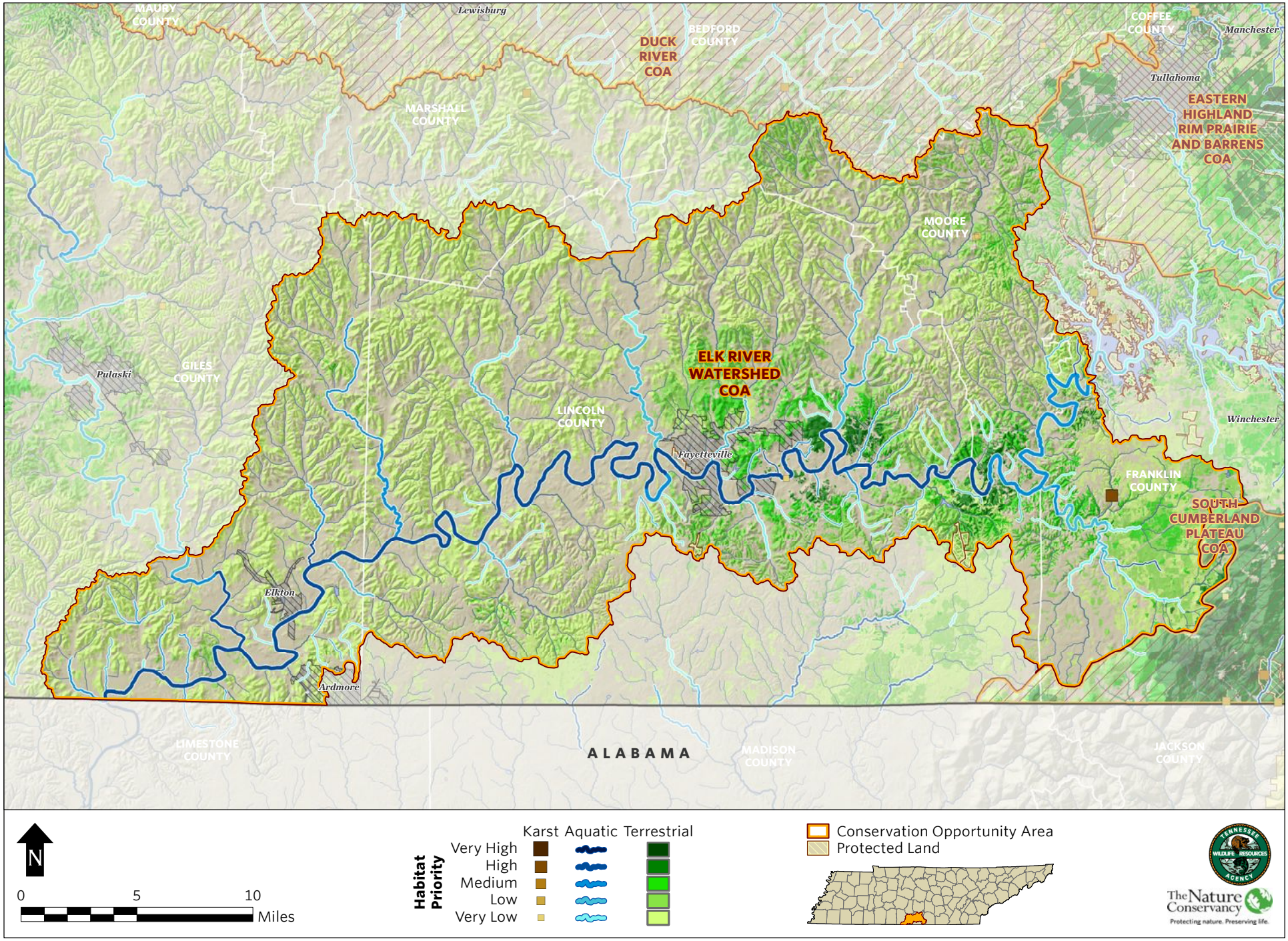
Partnerships

TWRA will implement strategies to reduce or eliminate threats to aquatic habitat through public outreach efforts designed to educate landowners about the Elk River's importance and incentive programs for improved streamside management. In addition to ongoing ongoing partnerships with TVA on dam releases, opportunities to assist the TN Dam Removal Partnership on projects in the watershed may exist in the future. TWRA will develop and foster partnerships with the U.S. Fish and Wildlife Service, Natural Resources Conservation Service/National Water Quality Initiative, Tennessee Valley Authority, Tennessee Dept. of Environment and Conservation, Tennessee Valley Authority, The Nature Conservancy, universities, and private landowners.

	Desired Change	Units
+	Increase restoration of critical land units and aquatic resources on private lands using government-funded incentive programs	number
+	Improve aquatic habitat by restoring in-stream flows to impounded streams within critical units of aquatic, subterranean, and terrestrial habitat.	miles
+	Restore riparian buffers and physical stream habitat in priority locations throughout the watershed	miles
+	Increase acres of habitat under permanent conservation management to benefit GCN species.	acres
+	Conduct a multi-media public outreach campaign to increase private landowner participation in government-funded incentive programs to benefit the Elk River.	number
+	Improve population viability of native freshwater fish and mussel species.	animals
+	Improve and protect ecologically important instream flows through development of instream flow standards that establish protective flow/water levels required for target species during critical periods and for maintenance of habitat quality.	plans
+	Improve and protect ecologically important instream flows through strategic alliances with U.S. Army Corps of Engineers, TN Valley Authority, water utility boards, and other institutions to address water management issues that affect target species and habitats.	plans

To learn more about the Elk River Watershed Conservation Opportunity Area, please contact:
Josh Campbell, Wildlife Diversity Coordinator, Region 2 (615) 781-6626

Elk River Conservation Opportunity Area



	ELK RIVER COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Amphibian	Cryptobranchus alleganiensis (Hellbender)
Amphibian	Necturus maculosus (Mudpuppy)
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 savannarum (Grasshopper Sparrow)
Bird	Anas rubripes (American Black Duck)
Bird	Aquila chrysaetos (Golden Eagle)
Bird	Calidris pusilla (Semipalmated Sandpiper)
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	Colinus virginianus (Northern Bobwhite)
Bird	Egretta caerulea (Little Blue Heron)
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	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 cerulea (Cerulean Warbler)
Bird	Setophaga discolor (Prairie Warbler)
Bird	Sturnella magna (Eastern Meadowlark)
Bird	Vermivora chrysoptera (Golden-winged Warbler)
Bird	Vermivora cyanoptera (Blue-winged Warbler)
Bivalve	Epioblasma brevidens (Cumberlandian Combshell)
Bivalve	Fusconaia cor (Shiny Pigtoe)
Bivalve	Hemistena lata (Cracking Pearlymussel)
Bivalve	Obovaria subrotunda (Round Hickorynut)
Bivalve	Pleurobema oviforme (Tennessee Clubshell)
Bivalve	Pleuronaia dolabelloides (Slabside Pearlymussel)
Bivalve	Quadrula cylindrica cylindrica (Rabbitsfoot)
Bivalve	Villosa iris (Rainbow)
Crustacean	Orconectes forceps (Surgeon Crayfish)
Fish	Acipenser fulvescens (Lake Sturgeon)
Fish	Carpiodes velifer (Highfin Carpsucker)
Fish	Erimystax dissimilis (Streamline Chub)

	ELK RIVER COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Fish	Erimystax insignis (Blotched Chub)
Fish	Etheostoma cinereum (Ashy Darter)
Fish	Etheostoma wapiti (Boulder Darter)
Fish	Fundulus julisia (Barrens Topminnow)
Fish	Hemitremia flammea (Flame Chub)
Fish	Notropis rubellus (Rosyface Shiner)
Mammal	Neotoma magister (Allegheny Woodrat)
Plant	Allium burdickii (Narrow-leaf Ramps)
Plant	Arenaria lanuginosa (Wooly Sandwort)
Plant	Clematis glaucophylla (White-leaved Leatherflower)
Plant	Clematis morefieldii (Morefield's Leather-flower)
Plant	Cotinus obovatus (American Smoketree)
Plant	Drosera brevifolia (Dwarf Sundew)
Plant	Juglans cinerea (Butternut)
Plant	Lilium canadense (Canada Lily)
Plant	Lonicera flava (Yellow Honeysuckle)
Plant	Neviusia alabamensis (Alabama Snow-wreath)
Plant	Onosmodium molle ssp. subsetosum (Smooth False Gromwell)
Plant	Panax quinquefolius (American Ginseng)
Plant	Paysonia densipila (Duck River Bladderpod)
Plant	Prenanthes crepidinea (Nodding Rattlesnake-root)
Plant	Silphium brachiatum (Cumberland Rosinweed)
Plant	Stellaria fontinalis (Water Stitchwort)
Plant	Trillium pusillum (Least Trillium)
Plant	Viburnum bracteatum (Limerock Arrowwood)
Plant	Zigadenus leimanthoides (Death-camas)
Reptile	Crotalus horridus (Timber Rattlesnake)
Reptile	Terrapene carolina (Eastern Box Turtle)
Subterranean - Arachnid	Bishopella sp. Probably laciniosa (harvestman)
Subterranean - Arachnid	Hesperochernes mirabilis (Southeastern Cave Pseudoscorpion)
Subterranean - Arachnid	Phanetta subterranea (Subterranean sheet-web spider)
Subterranean - Arachnid	Porrhomma cavernicola (Appalachian Cave Spider)
Subterranean - Crustacean	Caecidotea bicrenata ((a cave obligate isopod))
Subterranean - Crustacean	Caecidotea bicrenata bicrenata ((a cave obligate isopod))
Subterranean - Crustacean	Cambarus tenebrosus (Cavespring Crayfish)
Subterranean - Crustacean	Orconectes australis (Southern Cave Crayfish)
Subterranean - Crustacean	Stygobromus exilis (Central Kentucky Cave Obligate)
Subterranean - Fish	Typhlichthys subterraneus (Southern Cavefish)
Subterranean - Gastropod	Glyphyalinia specus (Hollow Glyph)
Subterranean - Insect	Aleochara sp. ((a rove beetle))
Subterranean - Insect	Ceuthophilus sp. (cave crickets)
Subterranean - Insect	Lesteva pallipes (rove beetle)
Subterranean - Insect	Litocampa davisi ((a bristletail))
Subterranean - Insect	Litocampa valentinei ((a cave obligate bristletail))
Subterranean - Insect	Macrocera nobilis (fungus gnat)
Subterranean - Insect	Megaselia cavernicola (cave hump-backed fly)
Subterranean - Insect	Platynus tenuicollis (ground beetle)
Subterranean - Insect	Pseudanophthalmus sp. (Caney Hollow cave ground beetle)
Subterranean - Insect	Pseudosinella aera ((a cave obligate springtail))
Subterranean - Insect	Pseudosinella christianseni (Christiansen's Cave Springtail)
Subterranean - Insect	Pseudosinella hirsuta (Hirsute Cave Springtail)
Subterranean - Insect	Pseudosinella sp. ((a springtail))
Subterranean - Insect	Pseudosinella spinosa (Spinose Cave Springtail)

	ELK RIVER COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common names**
Subterranean - Insect	Psyllipsocus ramburi ((a cave barklice))
Subterranean - Insect	Ptomaphagus fecundus ((a cave obligate beetle))
Subterranean - Insect	Spelobia tenebrarum (Cave dung fly)
Subterranean - Insect	Tomocerus bidentatus (Two-toothed springtail)
Subterranean - Millipede	Cambala sp. (millipeds)
Subterranean - Millipede	Scoterpes jackdanieli ((a cave obligate millipede))
Subterranean - Millipede	Scoterpes sp. (cave millipeds)
Subterranean - Millipede	Scoterpes ventus (Eastern Tennessee Cave Millipede)

ELK RIVER COA HABITATS (TN)	
Terrestrial Habitat Type	**Total acres of very high, high, and medium**
Natural habitats	
Southern Interior Low Plateau Dry-Mesic Oak Forest	13335
South-Central Interior Mesophytic Forest	10312
Southern Ridge and Valley / Cumberland Dry Calcareous Forest	1825
Allegheny-Cumberland Dry Oak Forest and Woodland	1593
Eastern Highland Rim Prairie and Barrens	497
South-Central Interior Small Stream and Riparian	381
Southern Appalachian Low-Elevation Pine Forest	331
South-Central Interior Large Floodplain	279
Semi-natural habitats	
Cropland	989
Old Field / Successional	416
Aquatic Habitat Type	**Total stream miles of very high, high, and medium ranked habitat**
Headwaters and Streams	53
Small River	15
Medium River	99