

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'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.

Public Lands within the COA

Flintville Hatchery Wildlife Management Area, Tims Ford State Park



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



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

Elk River Watershed Conservation Opportunity Area

Partnerships

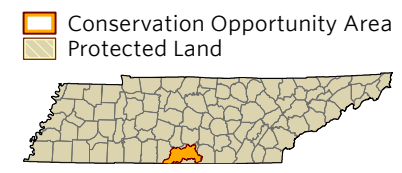
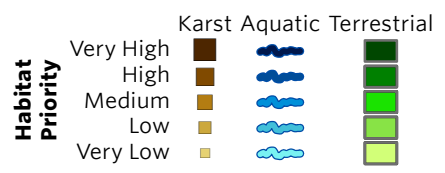
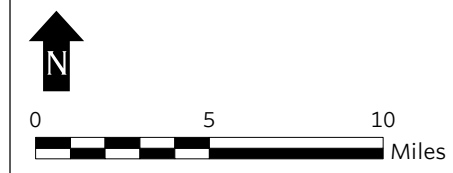
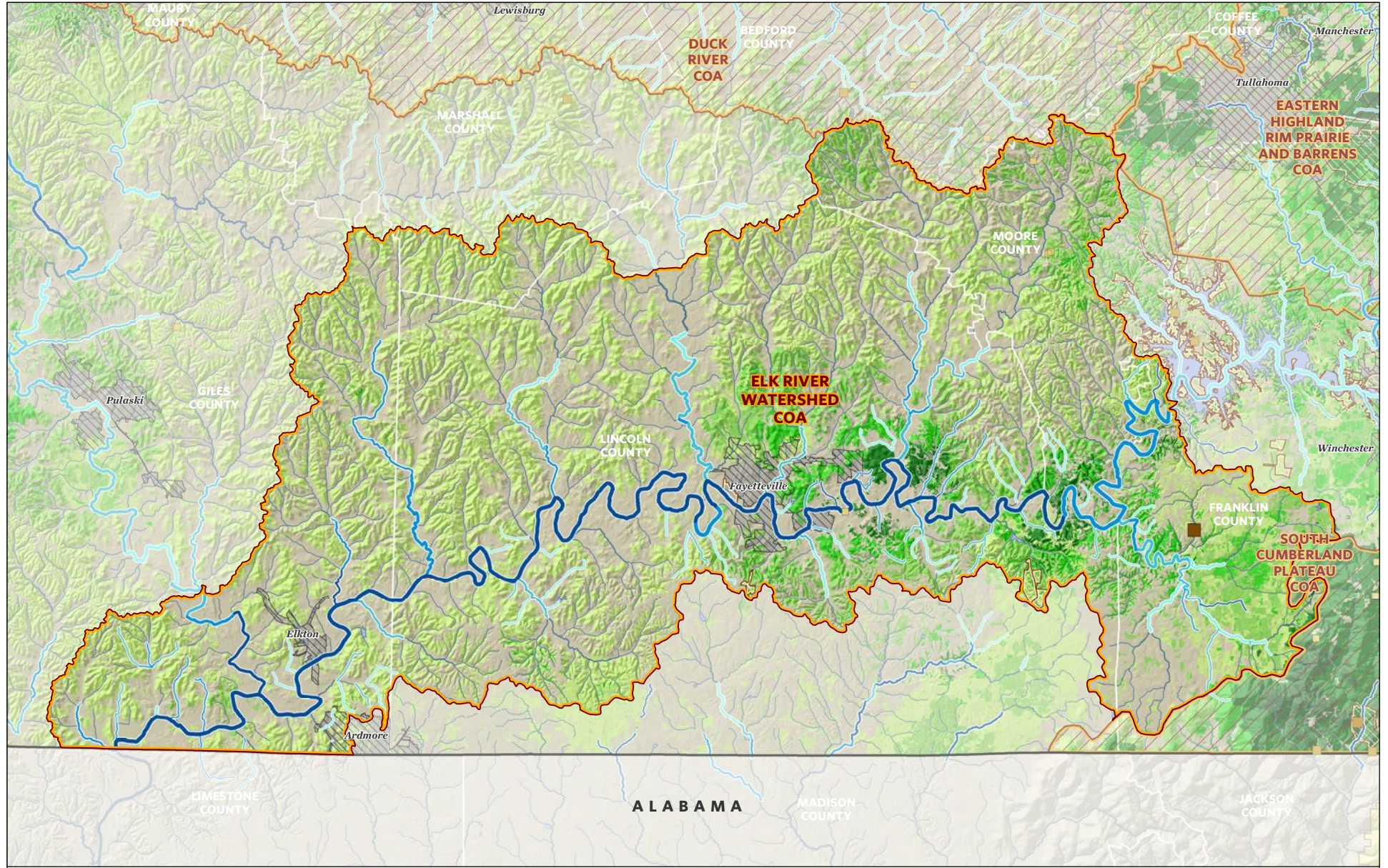
TWRA will implement strategies to reduce or eliminate threats to aquatic habitat through public outreach efforts designed to educate landowners about the Elk River’s importance and incentive programs for improved streamside management. In addition to ongoing ongoing partnerships with TVA on dam releases, 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:
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Elk River Conservation Opportunity Area



ELK RIVER COA GCN SPECIES (TN)	
Taxa Group	Scientific & Common names
Amphibian	<i>Cryptobranchus alleganiensis</i> (Hellbender)
Amphibian	<i>Necturus maculosus</i> (Mudpuppy)
Bat	<i>Corynorhinus rafinesquii</i> (Rafinesque's Big-eared Bat)
Bat	<i>Myotis grisescens</i> (Gray Bat)
Bat	<i>Myotis leibii</i> (Eastern Small-footed Bat)
Bat	<i>Myotis lucifugus</i> (Little Brown Bat)
Bat	<i>Myotis septentrionalis</i> (Northern Myotis)
Bat	<i>Myotis sodalis</i> (Indiana Bat)
Bat	<i>Perimyotis subflavus</i> (Tri-colored Bat)
Bird	<i>Accipiter striatus</i> (Sharp-shinned Hawk)
Bird	<i>Ammodramus savannarum</i> (Grasshopper Sparrow)
Bird	<i>Anas rubripes</i> (American Black Duck)
Bird	<i>Aquila chrysaetos</i> (Golden Eagle)
Bird	<i>Calidris pusilla</i> (Semipalmated Sandpiper)
Bird	<i>Caprimulgus vociferus</i> (Whip-poor-will)
Bird	<i>Cardellina canadensis</i> (Canada Warbler)
Bird	<i>Chaetura pelagica</i> (Chimney Swift)
Bird	<i>Chordeiles minor</i> (Common Nighthawk)
Bird	<i>Circus cyaneus</i> (Northern Harrier)
Bird	<i>Colinus virginianus</i> (Northern Bobwhite)
Bird	<i>Egretta caerulea</i> (Little Blue Heron)
Bird	<i>Euphagus carolinus</i> (Rusty Blackbird)
Bird	<i>Falco peregrinus</i> (Peregrine Falcon)
Bird	<i>Geothlypis Formosa</i> (Kentucky Warbler)
Bird	<i>Grus americana</i> (Whooping Crane)
Bird	<i>Haliaeetus leucocephalus</i> (Bald Eagle)
Bird	<i>Hylocichla mustelina</i> (Wood Thrush)
Bird	<i>Icteria virens</i> (Yellow-breasted Chat)
Bird	<i>Icterus spurius</i> (Orchard Oriole)
Bird	<i>Lanius ludovicianus</i> (Loggerhead Shrike)
Bird	<i>Melanerpes erythrocephalus</i> (Red-headed Woodpecker)
Bird	<i>Nycticorax nycticorax</i> (Black-crowned Night-heron)
Bird	<i>Parkesia motacilla</i> (Louisiana Waterthrush)
Bird	<i>Protonotaria citrea</i> (Prothonotary Warbler)
Bird	<i>Riparia riparia</i> (Bank Swallow)
Bird	<i>Scolopax minor</i> (American Woodcock)
Bird	<i>Setophaga cerulea</i> (Cerulean Warbler)
Bird	<i>Setophaga discolor</i> (Prairie Warbler)
Bird	<i>Sturnella magna</i> (Eastern Meadowlark)
Bird	<i>Vermivora chrysoptera</i> (Golden-winged Warbler)
Bird	<i>Vermivora cyanoptera</i> (Blue-winged Warbler)
Bivalve	<i>Epioblasma brevidens</i> (Cumberlandian Combshell)
Bivalve	<i>Fusconaia cor</i> (Shiny Pigtoe)
Bivalve	<i>Hemistena lata</i> (Cracking Pearlymussel)
Bivalve	<i>Obovaria subrotunda</i> (Round Hickorynut)
Bivalve	<i>Pleurobema oviforme</i> (Tennessee Clubshell)
Bivalve	<i>Pleuonaia dolabelloides</i> (Slabside Pearlymussel)
Bivalve	<i>Quadrula cylindrica cylindrica</i> (Rabbitsfoot)
Bivalve	<i>Villosa iris</i> (Rainbow)
Crustacean	<i>Orconectes forceps</i> (Surgeon Crayfish)
Fish	<i>Acipenser fulvescens</i> (Lake Sturgeon)
Fish	<i>Carpionodes velifer</i> (Highfin Carpsucker)
Fish	<i>Erimystax dissimilis</i> (Streamline Chub)

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

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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