Clinch and Powell

Conservation Opportunity Area

The Clinch and Powell Conservation Opportunity Area (COA) is characterized by rolling ridges and valleys, and most of the land use activity within the area is agricultural in nature. Most of the larger streams in this area meander roughly parallel to the ridges, which were created by the geologic processes of folding and faulting. The streams contain extensive cobble and gravel shoal areas. The smaller streams in this COA are characterized by limestone rubble with bedrock riffles and silty sand pool areas. These geological features increase productivity by adding nutrients to the soil and waters of this region, enhancing wildlife species diversity.

The Clinch and Powell area encompasses approximately 434 square miles and two of the most biologically diverse rivers in the United States. The headwaters of these rivers begin in the state of Virginia, and cross-state collaborations such as the Clinch Powell Clean Rivers Initiative are important to ensure protection of water quality and restore species populations. Over 900 acres of this COA are publicly owned and provide outdoor recreational opportunities to an array of user groups. TWRA's Region 4 quail focal area is also located here.

This COA provides habitat for multiple GCN species, some of which are federally protected. For example, there are more than 20 federally listed species, a large portion of which are mollusks found primarily within the Clinch and Powell Rivers.

Public Lands within the COA

Cumberland Gap National Historic Park, Cumberland Trail State

The Clinch and Powell Rivers are two of the most biologically diverse rivers in the United States. This region has rolling ridges, valleys, and agriculture as the primary land use.

Top to bottom: Wavy-rayed Lampmussel - Jeffrey Basinger, Freshwaters Illustrated; Fluted Kidneyshell Mussel - USFWS: Powell River - TWRA/next page:

Clinch and Powell
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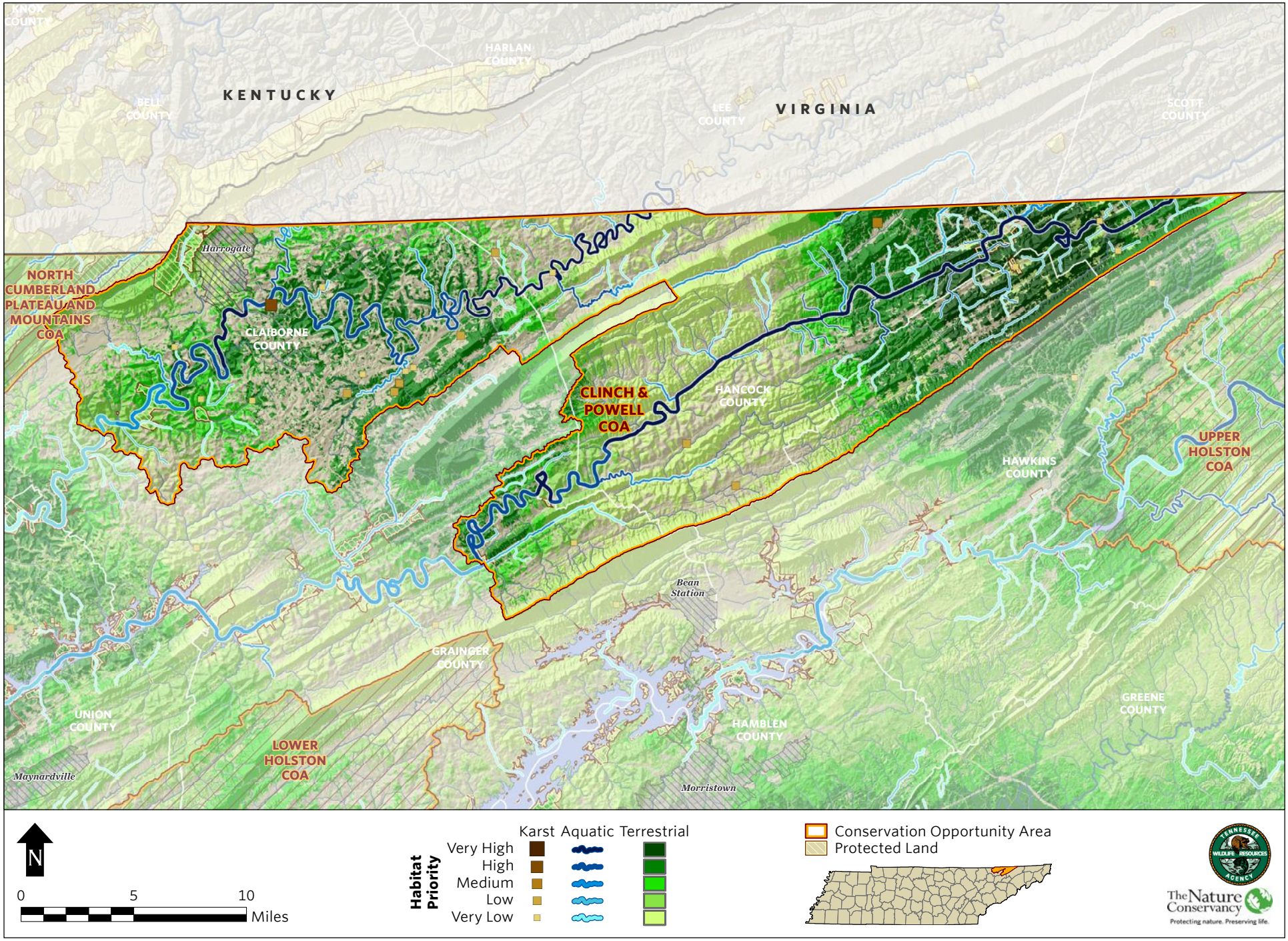
Partnerships

To implement priority conservation and management strategies, TWRA will build on relationships with the US Fish & Wildlife Service, the Office of Surface Mining, Reclamation and Enforcement, the Tennessee Valley Authority, the Tennessee Department of Environment and Conservation, Tennessee Division of Forestry, The Nature Conservancy, the Clinch and Powell RC&D, the Clinch-Powell Clean Rivers Initiative, and the Tennessee Clean Water Network. TWRA will also seek to educate local governments and private developers about sensitive habitats and water quality issues.

	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 in or near critical habitat units by restoring degraded forests and other areas.	acres
+	Restore acres or stream miles of habitat through natural process restoration.	acres/miles
+	Increase acres of fire-dependent grasslands and forest that are managed with prescribed fire.	acres
+	Develop and implement integrated pest management plan to aid in the control of native and exotic pests.	acres
+	Improve knowledge of the geographical distribution and ecological requirements of GCN species and/or habitat changes through scientific surveys.	projects
+	Increase acres of protected habitat through purchase of land - whether fee title or easements - to secure critical habitat units and areas for restoration and management.	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 municipalities in planning/zoning processes with potential impacts on GCN species.	plans
+	Increase GCN species populations (propagation/translocation).	animals
−	Avoid negative impacts from fossil fuel extraction activities by participating in environmental reviews and ensuring compliance with environmental regulations in neighboring states.	reviews

To learn more about the Clinch and Powell Conservation Opportunity Area, please contact:
Scott Dykes, Wildlife Diversity Coordinator, Region 4 (423) 587-7037

Clinch & Powell Conservation Opportunity Area



	CLINCH AND POWELL COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common Names**
Amphibian	Cryptobranchus alleganiensis (Hellbender)
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	Anas rubripes (American Black Duck)
Bird	Aquila chrysaetos (Golden Eagle)
Bird	Bonasa umbellus (Ruffed Grouse)
Bird	Caprimulgus carolinensis (Chuck-will's-widow)
Bird	Chaetura pelagica (Chimney Swift)
Bird	Chordeiles minor (Common Nighthawk)
Bird	Circus cyaneus (Northern Harrier)
Bird	Colinus virginianus (Northern Bobwhite)
Bird	Euphagus carolinus (Rusty Blackbird)
Bird	Falco peregrinus (Peregrine Falcon)
Bird	Geothlypis Formosa (Kentucky Warbler)
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	Riparia riparia (Bank Swallow)
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 cyanoptera (Blue-winged Warbler)
Bivalve	Actinonaias ligamentina (Mucket)
Bivalve	Actinonaias pectorosa (Pheasantshell)
Bivalve	Alasmidonta marginata (Elktoe)
Bivalve	Cumberlandia monodonta (Spectaclecase)
Bivalve	Cyprogenia stegaria (Fanshell)
Bivalve	Dromus dromas (Dromedary Pearlymussel)
Bivalve	Epioblasma brevidens (Cumberlandian Combshell)
Bivalve	Epioblasma capsaeformis (Oyster Mussel)
Bivalve	Epioblasma triquetra (Snuffbox)
Bivalve	Fusconaia cor (Shiny Pigtoe)
Bivalve	Fusconaia cuneolus (Finerayed Pigtoe)
Bivalve	Fusconaia subrotunda (Longsolid)
Bivalve	Hemistena lata (Cracking Pearlymussel)
Bivalve	Lampsilis abrupta (Pink Mucket)
Bivalve	Lasmigona complanata complanata (White Heelsplitter)
Bivalve	Lasmigona holstonia (Tennessee Heelsplitter)
Bivalve	Lemiox rimosus (Birdwing Pearlymussel)
Bivalve	Ligumia recta (Black Sandshell)

	CLINCH AND POWELL COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common Names**
Bivalve	Medionidus conradicus (Cumberland Moccasinshell)
Bivalve	Obovaria subrotunda (Round Hickorynut)
Bivalve	Plethobasus cooperianus (Orangefoot Pimpleback)
Bivalve	Plethobasus cyphyus (Sheepnose)
Bivalve	Pleurobema cordatum (Ohio Pigtoe)
Bivalve	Pleurobema oviforme (Tennessee Clubshell)
Bivalve	Pleurobema plenum (Rough Pigtoe)
Bivalve	Pleurobema rubrum (Pyramid Pigtoe)
Bivalve	Pleuronaia barnesiana (Tennessee Pigtoe)
Bivalve	Pleuronaia dolabelloides (Slabside Pearlymussel)
Bivalve	Ptychobranchus subtentum (Fluted Kidneyshell)
Bivalve	Quadrula cylindrica cylindrica (Rabbitsfoot)
Bivalve	Quadrula cylindrica strigillata (Rough Rabbitsfoot)
Bivalve	Quadrula intermedia (Cumberland Monkeyface)
Bivalve	Quadrula sparsa (Appalachian Monkeyface)
Bivalve	Strophitus undulatus (Creeper)
Bivalve	Toxolasma lividum (Purple Lilliput)
Bivalve	Villosa iris (Rainbow)
Bivalve	Villosa perpurpurea (Purple Bean)
Bivalve	Villosa taeniata (Painted Creekshell)
Bivalve	Villosa vanuxemensis (Mountain Creekshell)
Crustacean	Cambarus angularis (Angled Crayfish)
Crustacean	Orconectes forceps (Surgeon Crayfish)
Fish	Acipenser fulvescens (Lake Sturgeon)
Fish	Ammocrypta clara (Western Sand Darter)
Fish	Chrosomus tennesseensis (Tennessee Dace)
Fish	Erimystax cahni (Slender Chub)
Fish	Erimystax dissimilis (Streamline Chub)
Fish	Erimystax insignis (Blotched Chub)
Fish	Etheostoma acuticeps (Sharphead Darter)
Fish	Etheostoma cinereum (Ashy Darter)
Fish	Etheostoma denoncourti (Golden Darter)
Fish	Etheostoma tippecanoe (Tippecanoe Darter)
Fish	Etheostoma vulneratum (Wounded Darter)
Fish	Notropis asperifrons (Burrhead Shiner)
Fish	Notropis rubellus (Rosyface Shiner)
Fish	Noturus flavipinnis (Yellowfin Madtom)
Fish	Noturus stanauli (Pygmy Madtom)
Fish	Percina aurantiaca (Tangerine Darter)
Fish	Percina burtoni (Blotchside Logperch)
Gastropod	Io fluvialis (Spiny Riversnail)
Gastropod	Triodopsis claibornensis (Claiborne Threetooth)
Insect	Gomphus consanguis (Cherokee Clubtail)
Mammal	Neotoma magister (Allegheny Woodrat)
Mammal	Ochrotomys nuttalli (Golden Mouse)
Mammal	Sorex fumeus (Smoky Shrew)
Mammal	Sorex hoyi (American Pygmy Shrew)
Mammal	Synaptomys cooperi (Southern Bog Lemming)
Plant	Aureolaria patula (Spreading False-foxglove)
Plant	Berberis canadensis (American Barberry)
Plant	Cimicifuga rubifolia (Appalachian Bugbane)
Plant	Juglans cinerea (Butternut)
Plant	Lilium canadense (Canada Lily)

	CLINCH AND POWELL COA GCN SPECIES (TN)
Taxa Group	**Scientific & Common Names**
Plant	Panax quinquefolius (American Ginseng)
Plant	Phlox subulata (Moss Phlox)
Plant	Platanthera flava var. herbiola (Tubercled Rein-orchid)
Plant	Spiranthes lucida (Shining Ladies'-tresses)
Reptile	Terrapene carolina (Eastern Box Turtle)
Subterranean - Arachnid	Kleptochthonius affinis ((a cave obligate pseudoscorpion))
Subterranean - Arachnid	Kleptochthonius undescribed sp. (cave pseudoscorpions)
Subterranean - Arachnid	Nesticus paynei ((a cave obligate spider))
Subterranean - Arachnid	Phanetta subterranea (Subterranean sheet-web spider)
Subterranean - Arachnid	Porrhomma cavernicola (Appalachian Cave Spider)
Subterranean - Crustacean	Amerigoniscus nicholasi ((a cave obligate isopod))
Subterranean - Crustacean	Bactrurus angulus (Cumberland Gap Cave Amphipod)
Subterranean - Crustacean	Caecidotea nickajackensis (Nickajack Cave Isopod)
Subterranean - Crustacean	Caecidotea recurvata (Southwestern Virginia Cave Isopod)
Subterranean - Crustacean	Caecidotea sp. (cave isopods)
Subterranean - Crustacean	Stygobromus finleyi (Finley's Cave Amphipod)
Subterranean - Crustacean	Stygobromus mackini (Southwestern Virginia Cave Amphipod)
Subterranean - Flatworm	Sphalloplana consimilis (Powell Valley Planarian)
Subterranean - Flatworm	Sphalloplana sp. ((flatworms))
Subterranean - Insect	Litocampa cookei (Cooke’s Cave Dipluran)
Subterranean - Insect	Litocampa inexspectata ((a bristletail))
Subterranean - Insect	Pseudanophthalmus engelhardti (Engelhart's Cave Beetle)
Subterranean - Insect	Pseudanophthalmus longiceps (Long-headed Cave Beetle)
Subterranean - Insect	Pseudanophthalmus pallidus (Pale Cave Beetle)
Subterranean - Insect	Pseudanophthalmus rotundatus ((a cave obligate beetle))
Subterranean - Millipede	Pseudotremia deprehendor ((a cave obligate millipede))
Subterranean - Millipede	Pseudotremia n. sp. ((a cave obligate millipede))
Subterranean - Millipede	Pseudotremia nodosa ((a cave obligate millipede))
Subterranean - Millipede	Pseudotremia sp. (cave millipeds)
Subterranean - Millipede	Pseudotremia valga ((a cave obligate millipede))

CLINCH AND POWELL 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	65478
South-Central Interior Mesophytic Forest	21628
Allegheny-Cumberland Dry Oak Forest and Woodland	17356
Southern Appalachian Low-Elevation Pine Forest	9549
South-Central Interior Small Stream and Riparian	891
Appalachian (Hemlock)-Northern Hardwood Forest	762
Southern and Central Appalachian Cove Forest	661
Southern Appalachian Montane Pine Forest and Woodland	326
Semi-natural habitats	
Old Field / Successional	74
Aquatic Habitat Type	**Total stream miles of very high, high, and medium ranked habitat**
Headwaters & Streams	87
Small River	38
Medium River	87