

CHAPTER 4

CONSERVATION ACTIONS

Conserving Alabama’s extraordinary wildlife resources requires a multifaceted approach that addresses both immediate and long-term challenges. This State Wildlife Action Plan (SWAP) utilizes the NatureServe Conservation Actions framework to identify and prioritize actions to support Species of Greatest Conservation Need (SGCN). These conservation actions include land and water protection through easements, preserves, and policy safeguards; land and water management such as prescribed fire, invasive species control, and habitat restoration; and species management measures like reintroductions, population monitoring, and ex-situ conservation where necessary. Equally important are education and awareness initiatives that engage citizens, foster stewardship, and expand conservation partnerships, as well as strong law and policy frameworks that guide sustainable land use, resource protection, and enforcement. This SWAP also promotes incentives and partnerships that encourage landowners, industries, and communities to adopt conservation practices, alongside robust research and monitoring to track outcomes and adapt strategies. Finally, capacity building ensures Alabama has the institutional strength, funding, and collaboration needed to secure lasting conservation success. Together, these actions provide a clear roadmap for safeguarding Alabama’s wildlife.

SWAP **Element 4** provides the “action blueprint” of the SWAP. Conservation Actions describe the specific strategies needed to protect Alabama’s SGCN and the habitats that support them (Table 4.1).

Table 4.1 Conservation actions and strategy descriptions.

CODE	CONSERVATION ACTIONS	DESCRIPTIONS
1	Habitat Restoration & Management	Improved management of public and other accessible lands for SGCN species.
2	Land Acquisition & Protection	Land purchase for protection via Forever Wild or other mechanisms; conservation easements.
3	Capacity Building through Alliances & Partnerships	Partnering with other organizations and individuals to enhance impact; improve access for management; find funding.
4	Education & Outreach	Formal and informal - can include communication and public relations;

		training and technical assistance; landowner outreach; formal education.
5	Regulatory Actions through Law & Policy	Compliance and enforcement, policies and regulations; Development of best management practices.
6	Species Management & Reintroduction	Breeding and reintroduction, translocation, or other restorative practices.
7	Land Use Planning & Strategic Development	Partnerships to facilitate more sustainable development, or to prevent development in sensitive areas to protect SGCNs.
8	Data Collection & Analysis	Compile authoritative datasets to better monitor SGCN species status, threats, and recovery - species occurrences, remote sensing data, etc.
9	Surveys, Research, & Status Monitoring	Monitor species populations and habitat to better understand their status and trends.
10	Invasive and Exotic Species Control	Removal and management of invasive species impacting SGCN populations; disease management.

Building on the threats identified in **Element 3**, this section outlines broad, landscape-scale efforts and targeted species-specific measures. The highest priority actions are indicated in bold for each taxa group (Tables 4.2-4.10). A single conservation action was not designated as a priority due to an equal conservation priority for plant SGCN; an action of “11” is used to indicate this undesignated highest priority (Table 4.10).

Table 4.2 Amphibian species of greatest conservation need (SGCN) conservation actions.												
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	EX	X	X		X	X	X		X	X	X
<i>Desmognathus auriculatus</i>	Southern Dusky Salamander	EX	X			X	X			X	X	
<i>Lithobates sevosus</i>	Dusky Gopher Frog	EX	X	X		X	X	X		X	X	X

Table 4.2 Amphibian species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Cryptobranchus alleganiensis</i>	Hellbender	P1	X			X	X	X		X	X	
<i>Desmognathus pascagoula</i>	Pascagoula Dusky Salamander	P1	X	X		X	X	X		X	X	X
<i>Dryophytes andersonii</i>	Pine Barrens Treefrog	P1	X			X	X			X	X	
<i>Lithobates areolatus</i>	Crawfish Frog	P1	X	X		X	X	X		X	X	X
<i>Lithobates capito</i>	Gopher Frog	P1	X			X	X	X		X	X	
<i>Lithobates heckcheri</i>	River Frog	P1		X		X				X		X
<i>Necturus alabamensis</i>	Black Warrior Waterdog	P1	X	X		X			X		X	
<i>Pseudacris ocularis</i>	Little Grass Frog	P1	X	X	X	X		X		X	X	X
<i>Ambystoma texanum</i>	Small-mouthed Salamander	P2	X			X		X	X	X	X	X
<i>Ambystoma tigrinum tigrinum</i>	Eastern Tiger Salamander	P2	X			X				X	X	
<i>Amphiuma pholeter</i>	One-toed Amphiuma	P2	X	X	X	X	X	X	X	X	X	
<i>Aneides aeneus</i>	Green Salamander	P2	X	X		X			X		X	
<i>Desmognathus aeneus</i>	Seepage Salamander	P2	X	X		X		X		X	X	
<i>Eurycea sphagicola</i>	Bog Dwarf Salamander	P2	X			X	X	X			X	X
<i>Gyrinophilus pallescens</i>	Tennessee Cave Salamander	P2	X	X		X				X	X	
<i>Lithobates sylvaticus</i>	Wood Frog	P2		X		X	X		X	X	X	
<i>Necturus maculosus</i>	Mudpuppy	P2	X			X			X	X	X	
<i>Pseudacris montanus</i>	Mud Salamander	P2	X			X				X	X	

Table 4.2 Amphibian species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Phaeognathus hubrichti</i>	Red Hills Salamander	P2		X		X			X	X	X	
<i>Siren reticulata</i>	Reticulated Siren	P2	X	X		X		X		X	X	
<i>Siren sphagnicola</i>	Seepage Siren	P2	X	X		X	X	X	X	X	X	
<i>Anaxyrus quercicus</i>	Oak Toad	P3	X			X					X	
<i>Desmognathus ocoee</i>	Ocoee Salamander	P3	X	X		X		X	X	X	X	
<i>Eurycea aquatica</i>	Brown-backed Salamander	P3		X	X	X	X	X		X	X	
<i>Eurycea quadridigitata</i>	Dwarf Salamander	P3				X				X	X	
<i>Gyrinophilus porphyriticus</i>	Spring Salamander	P3	X			X					X	
<i>Hemidactylium scutatum</i>	Four-toed Salamander	P3	X			X				X	X	
<i>Necturus beyeri</i>	Western Waterdog	P3	X	X		X				X	X	
<i>Necturus moleri</i>	Apalachicola Waterdog	P3	X			X			X	X	X	
<i>Necturus mounti</i>	Escambia Waterdog	P3	X			X			X	X	X	
<i>Plethodon serratus</i>	Southern Red-backed Salamander	P3				X			X		X	
<i>Pseudacris brachyphona</i>	Mountain Chorus Frog	P3	X			X			X	X	X	
<i>Pseudacris ornata</i>	Ornate Chorus Frog	P3	X			X	X			X	X	
<i>Siren lacertina</i>	Greater Siren	P3	X			X	X			X	X	

Table 4.3 Bird species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Antigone canadensis pulla</i>	Mississippi Sandhill Crane	EX	X			X						X
<i>Campephilus principalis</i>	Ivory-billed Woodpecker	EX		X								
<i>Corvus corax</i>	Common Raven	EX										
<i>Thryomanes bewickii</i>	Bewick's Wren	EX		X								
<i>Thryomanes bewickii bewickii</i>	Appalachian Bewick's Wren	EX										
<i>Anarhynchus nivosus</i>	Snowy Plover	P1										
<i>Anarhynchus wilsonia</i>	Wilson's Plover	P1										
<i>Calidris canutus rufa</i>	Red Knot	P1	X	X	X	X	X		X	X	X	X
<i>Centronyx henslowii</i>	Henslow's Sparrow	P1	X	X	X	X	X	X	X	X	X	X
<i>Charadrius melodus</i>	Piping Plover	P1	X	X	X	X	X			X	X	
<i>Charadrius nivosus nivosus</i>	Southeastern Snowy Plover	P1	X	X		X			X	X	X	X
<i>Egretta rufescens</i>	Reddish Egret	P1	X	X	X	X			X	X	X	X
<i>Falco sparverius paulus</i>	Southeastern American Kestrel	P1	X					X		X	X	
<i>Haematopus palliatus</i>	American Oystercatcher	P1	X	X	X	X				X	X	
<i>Laterallus jamaicensis jamaicensis</i>	Eastern Black Rail	P1	X	X	X	X		X		X	X	X
<i>Rynchops niger</i>	Black Skimmer	P1	X	X	X	X	X	X	X	X	X	X
<i>Setophaga cerulea</i>	Cerulean Warbler	P1	X			X			X	X	X	
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	P2	X	X	X	X	X	X	X	X	X	X
<i>Ammospiza maritima</i>	Seaside Sparrow	P2	X	X	X	X	X		X	X	X	
<i>Ammospiza</i>	Louisiana	P2	X	X	X	X			X	X	X	X

Table 4.3 Bird species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>maritima fisheri</i>	Seaside Sparrow											
<i>Ammospiza nelsoni</i>	Nelson's Sparrow	P2	X	X			X		X	X	X	X
<i>Anas fulvigula</i>	Mottled Duck	P2	X							X	X	
<i>Aquila chrysaetos</i>	Golden Eagle	P2	X	X					X	X	X	
<i>Botaurus exilis</i>	Least Bittern	P2	X	X				X		X	X	X
<i>Chordeiles minor</i>	Common Nighthawk	P2	X	X	X	X	X		X	X	X	
<i>Colinus virginianus</i>	Northern Bobwhite	P2	X	X		X	X		X	X	X	
<i>Coturnicops noveboracensis</i>	Yellow Rail	P2	X		X	X	X		X	X	X	
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	P2	X	X	X	X	X	X	X	X	X	
<i>Euphagus carolinus</i>	Rusty Blackbird	P2	X	X		X	X		X	X	X	
<i>Gelochelidon nilotica</i>	Gull-billed Tern	P2	X	X	X	X	X	X	X	X	X	X
<i>Lanius ludovicianus</i>	Loggerhead Shrike	P2	X	X		X			X	X	X	X
<i>Peucaea aestivalis</i>	Bachman's Sparrow	P2	X	X	X	X			X	X	X	X
<i>Rallus elegans</i>	King Rail	P2	X	X	X	X			X	X	X	X
<i>Sterna hirundo</i>	Common Tern	P2	X	X		X		X	X	X	X	
<i>Sternula antillarum</i>	Least Tern	P2	X	X			X			X	X	
<i>Tringa semipalmata</i>	Eastern Willet	P2	X	X						X	X	
<i>Ammospiza leconteii</i>	Le Conte's Sparrow	P3	X	X	X	X	X	X	X	X	X	X
<i>Anas rubripes</i>	American Black Duck	P3										
<i>Antrostomus carolinensis</i>	Chuck-will's-widow	P3	X	X					X	X	X	

Table 4.3 Bird species of greatest conservation need (SGCN) conservation actions.												
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Protonotaria citrea</i>	Prothonotary Warbler	P3	X	X						X	X	
<i>Rallus crepitans</i>	Clapper Rail	P3								X		
<i>Scolopax minor</i>	American Woodcock	P3	X	X				X			X	
<i>Spiza americana</i>	Dickcissel	P3	X	X						X	X	
<i>Spizella pusilla</i>	Field Sparrow	P3	X		X	X				X	X	
<i>Sturnella magna</i>	Eastern Meadowlark	P3	X	X	X	X					X	
<i>Thalasseus sandvicensis</i>	Sandwich Tern	P3	X	X								
<i>Tyto furcata</i>	American Barn Owl	P3	X	X	X	X			X		X	
<i>Vermivora cyanoptera</i>	Blue-winged Warbler	P3	X			X				X	X	

Table 4.4 Mammal species of greatest conservation need (SGCN) conservation actions.												
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Bison bison</i>	American Bison	EX	X									
<i>Canis rufus</i>	Red Wolf	EX	X									
<i>Cervus elaphus</i>	Elk	EX	X									
<i>Puma concolor</i>	Cougar	EX	X									
<i>Myotis grisescens</i>	Gray Myotis	P1	X	X			X		X	X	X	X
<i>Myotis lucifugus</i>	Little Brown Myotis	P1	X	X						X	X	X
<i>Myotis septentrionalis</i>	Northern Myotis	P1	X	X					X	X	X	X
<i>Myotis sodalis</i>	Indiana Myotis	P1	X	X						X	X	X
<i>Perimyotis subflavus</i>	Tri-colored Bat	P1	X	X							X	X
<i>Peromyscus polionotus ammobates</i>	Alabama Beach Mouse	P1	X			X	X		X		X	X
<i>Peromyscus polionotus</i>	Perdido Key Beach Mouse	P1	X			X	X		X		X	X

Table 4.4 Mammal species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>trissyllepsis</i>												
<i>Sylvilagus obscurus</i>	Appalachian Cottontail	P1	X			X				X	X	X
<i>Trichechus manatus</i>	West Indian Manatee	P1			X	X	X				X	
<i>Ursus americanus floridanus</i>	Florida Black Bear	P1	X	X		X	X			X		
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	P2	X									
<i>Geomys pinetis</i>	Southeastern Pocket Gopher	P2	X									
<i>Lasiurus cinereus</i>	Hoary Bat	P2	X									
<i>Lasiurus intermedius</i>	Northern Yellow Bat	P2	X									
<i>Microtus ochrogaster</i>	Prairie Vole	P2	X	X			X		X	X	X	X
<i>Myotis austroriparius</i>	Southeastern Myotis	P2	X	X						X	X	X
<i>Myotis leibii</i>	Eastern Small-footed Myotis	P2	X	X					X	X	X	X
<i>Neotoma magister</i>	Allegheny Woodrat	P2	X	X						X	X	X
<i>Sorex fumeus</i>	Smoky Shrew	P2	X	X							X	X
<i>Sorex hoyi</i>	American Pygmy Shrew	P2	X			X	X		X		X	X
<i>Spilogale putorius</i>	Eastern Spotted Skunk	P2	X			X	X		X		X	X
<i>Sylvilagus palustris</i>	Marsh Rabbit	P2	X			X				X	X	X
<i>Zapus hudsonius</i>	Meadow Jumping Mouse	P2			X	X	X				X	
<i>Blarina brevicauda</i>	Northern Short-tailed Shrew	P3	X	X		X	X			X		
<i>Eptesicus fuscus</i>	Big Brown Bat	P3	X	X						X	X	

Table 4.4 Mammal species of greatest conservation need (SGCN) conservation actions.												
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Lasionycteris noctivagans</i>	Silver-haired Bat	P3	X	X			X	X	X	X	X	
<i>Neogale frenata</i>	Long-tailed Weasel	P3	X	X	X		X		X	X	X	
<i>Neogale vison</i>	American Mink	P3	X	X						X	X	
<i>Neotoma floridana haematoreia</i>	Southern Appalachian Woodrat	P3	X	X	X	X					X	
<i>Ondatra zibethicus</i>	Common Muskrat	P3	X	X					X	X	X	X
<i>Peromyscus maniculatus</i>	Deer Mouse	P3	X							X	X	X
<i>Peromyscus polionotus</i>	Oldfield Mouse	P3		X							X	
<i>Sciurus niger</i>	Eastern Fox Squirrel	P3	X								X	
<i>Ursus americanus</i>	American Black Bear	P3									X	

Table 4.5 Reptile species of greatest conservation need (SGCN) conservation actions.												
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Heterodon simus</i>	Southern Hog-nosed Snake	EX	X	X		X		X		X	X	
<i>Caretta caretta</i>	Loggerhead Sea Turtle	P1	X	X	X	X	X		X	X	X	
<i>Chelonia mydas</i>	Green Sea Turtle	P1	X	X	X	X	X		X		X	
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle	P1	X		X	X	X	X	X	X	X	
<i>Drymarchon couperi</i>	Eastern Indigo Snake	P1	X	X	X	X	X	X		X	X	
<i>Farancia erytrogramma</i>	Rainbow Snake	P1	X	X		X				X	X	
<i>Lepidochelys kempii</i>	Kemp's Ridley Sea Turtle	P1	X		X	X	X	X		X	X	
<i>Malaclemys terrapin pileata</i>	Mississippi	P1	X	X		X	X	X		X	X	

Table 4.5 Reptile species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
	Diamond- backed Terrapin											
<i>Micrurus fulvius</i>	Harlequin Coralsnake	P1	X				X			X	X	
<i>Ophisaurus mimicus</i>	Mimic Glass Lizard	P1	X	X		X		X		X	X	
<i>Pituophis melanoleucus lodingi</i>	Black Pinesnake	P1	X	X		X		X			X	
<i>Pseudemys alabamensis</i>	Alabama Red-bellied Cooter	P1	X	X		X	X	X	X	X	X	
<i>Sternotherus depressus</i>	Flattened Musk Turtle	P1	X	X		X	X	X	X	X	X	
<i>Crotalus adamanteus</i>	Eastern Diamond-backed Rattlesnake	P2	X	X	X	X	X	X	X		X	
<i>Deirochelys reticularia reticularia</i>	Eastern Chicken Turtle	P2	X	X		X	X	X	X	X	X	
<i>Gopherus polyphemus</i>	Gopher Tortoise	P2	X	X	X	X	X	X	X	X	X	
<i>Graptemys barbouri</i>	Barbour's Map Turtle	P2	X	X	X	X	X			X	X	
<i>Graptemys ernsti</i>	Escambia Map Turtle	P2	X	X	X	X				X	X	
<i>Lampropeltis getula</i>	Common Kingsnake	P2	X	X		X	X	X		X	X	X
<i>Lampropeltis nigra</i>	Eastern Black Kingsnake	P2	X								X	
<i>Lampropeltis rhombomaculata</i>	Northern Mole Kingsnake	P2	X	X		X				X	X	
<i>Nerodia clarkii clarkii</i>	Gulf Saltmarsh Watersnake	P2	X	X						X	X	
<i>Nerodia floridana</i>	Florida Green Watersnake	P2	X							X	X	X
<i>Ophisaurus attenuatus longicaudus</i>	Eastern Slender Glass Lizard	P2	X	X		X				X	X	
<i>Pituophis</i>	Northern Pinesnake	P2	X			X				X	X	

Table 4.5 Reptile species of greatest conservation need (SGCN) conservation actions.

Scientific Name	Common Name	Rank	Conservation Actions									
			1	2	3	4	5	6	7	8	9	10
<i>Lampropeltis triangulum</i>	Milksnake	P3	X	X		X	X			X	X	
<i>Macrochelys temminckii</i>	Alligator Snapping Turtle	P3	X	X			X			X	X	
<i>Nerodia cyclopion</i>	Mississippi Green Watersnake	P3										
<i>Sternotherus carinatus</i>	Razor-backed Musk Turtle	P3	X	X						X	X	
<i>Sternotherus minor</i>	Loggerhead Musk Turtle	P3		X						X	X	

Table 4.6 Crayfish species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.6 Crayfish species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.6 Crayfish species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Procambarus clemmeri</i>	Cockscomb Crayfish	P2								X	X	
<i>Procambarus evermanni</i>	Panhandle Crayfish	P2							X		X	
<i>Procambarus hagenianus hagenianus</i>	Southeastern Prairie Crayfish	P2									X	
<i>Procambarus hayi</i>	Straightedge Crayfish	P2	X							X	X	
<i>Procambarus lagniappe</i>	Lagniappe Crayfish	P2								X	X	
<i>Procambarus lecontei</i>	Mobile Crayfish	P2								X	X	
<i>Procambarus planirostris</i>	Flatnose Crayfish	P2								X	X	
<i>Procambarus viaeviridis</i>	Vernal Crayfish	P2								X	X	
<i>Cambarellus shufeldtii</i>	Cajun Dwarf Crayfish	P3	X				X				X	
<i>Cambarus bartonii cavatus</i>	Appalachian Brook Crayfish	P3					X		X		X	
<i>Cambarus englishi</i>	Tallapoosa Crayfish	P3	X						X		X	
<i>Cambarus hamulatus</i>	Prickly Cave Crayfish	P3							X	X	X	
<i>Cambarus longirostris</i>	Longnose Crayfish	P3	X			X			X	X	X	X
<i>Cambarus tenebrosus</i>	Cavespring Crayfish	P3	X			X			X			X
<i>Cambarus unestami</i>	Blackbarred Crayfish	P3	X						X		X	X
<i>Creaserinus burrisi</i>	Burrowing Bog Crayfish	P3	X			X			X		X	
<i>Creaserinus byersi</i>	Lavender Burrowing Crayfish	P3	X			X			X		X	
<i>Faxonius placidus</i>	Bigclaw Crayfish	P3							X		X	
<i>Lacunicambarus miltus</i>	Rusty Grave Digger	P3							X		X	
<i>Orconectes australis</i>	Southern Cave Crayfish	P3			X	X			X	X	X	

Table 4.6 Crayfish species of greatest conservation need (SGCN) conservation actions.												
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Procambarus bivittatus</i>	Ribbon Crayfish	P3								X	X	
<i>Procambarus hubbelli</i>	Jackknife Crayfish	P3								X	X	
<i>Procambarus hybus</i>	Smoothnose Crayfish	P3								X	X	
<i>Procambarus lewisi</i>	Spur Crayfish	P3								X	X	
<i>Procambarus marthae</i>	Crisscross Crayfish	P3								X	X	
<i>Procambarus okaloosae</i>	Okaloosa Crayfish	P3								X	X	
<i>Procambarus paeninsulanus</i>	Peninsula Crayfish	P3								X	X	
<i>Procambarus shermani</i>	Gulf Crayfish	P3								X	X	
<i>Procambarus verrucosus</i>	Grainy Crayfish	P3									X	
<i>Procambarus zonangulus</i>	Southern White River Crawfish	P3								X	X	

Table 4.7 Fish species of greatest conservation need (SGCN) conservation actions.												
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Ammocrypta vivax</i>	Scaly Sand Darter	EX	X							X	X	
<i>Allohistium cinereum</i>	Ashy Darter	EX	X									
<i>Hiodon alosoides</i>	Goldeye	EX	X									
<i>Lepisosteus platostomus</i>	Shortnose Gar	EX	X	X								
<i>Noturus crypticus</i>	Chucky Madtom	EX	X	X	X							
<i>Scaphirhynchus platyrhynchus</i>	Shovelnose Sturgeon	EX	X				X					
<i>Acipenser fulvescens</i>	Lake Sturgeon	EXCA U	X					X		X	X	
<i>Erimonax monachus</i>	Spotfin Chub	EXCA U						X				
<i>Acantharchus pomotis</i>	Mud Sunfish	P1	X	X					X	X	X	

Table 4.7 Fish species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.7 Fish species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>warriorensis</i>												
<i>Miniellus albizonatus</i>	Palezone Shiner	P1	X	X	X		X	X	X	X	X	
<i>Miniellus melanostomus</i>	Blackmouth Shiner	P1	X	X	X					X	X	
<i>Nothonotus camurum</i>	Bluebreast Darter	P1			X		X	X	X			
<i>Nothonotus wapiti</i>	Boulder Darter	P1	X	X	X	X	X	X	X	X	X	
<i>Notropis ariommus</i>	Popeye Shiner	P1								X	X	
<i>Noturus munitus</i>	Frecklebelly Madtom	P1	X	X	X	X	X	X	X	X	X	
<i>Paranotropis buchanani</i>	Ghost Shiner	P1	X	X					X	X	X	
<i>Paranotropis cahabae</i>	Cahaba Shiner	P1	X	X	X	X	X		X	X	X	
<i>Percina burtoni</i>	Blotchside Logperch	P1	X	X	X		X	X	X	X	X	
<i>Percina crypta</i>	Halloween Darter	P1	X	X			X		X	X	X	
<i>Percina phoxocephala</i>	Slenderhead Darter	P1	X	X	X		X		X	X	X	
<i>Percina sipsi</i>	Bankhead Darter	P1	X		X		X		X	X	X	
<i>Phenacobius mirabilis</i>	Suckermouth Minnow	P1	X	X					X	X	X	
<i>Pteronotropis cummingsae</i>	Dusky Shiner	P1	X	X	X		X	X	X	X	X	
<i>Pteronotropis euryzonus</i>	Broadstripe Shiner	P1	X	X	X		X	X	X	X	X	
<i>Pteronotropis welaka</i>	Bluenose Shiner	P1	X	X	X		X		X	X	X	
<i>Sander sp. cf. vitreus</i>	"Southern Walleye"	P1	X				X	X			X	
<i>Scaphirhynchus suttkusi</i>	Alabama Sturgeon	P1	X		X	X	X	X	X	X	X	
<i>Speoplatyrhinus poulsoni</i>	Alabama Cavefish	P1		X	X	X						

Table 4.7 Fish species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Acipenser desotoi</i>	Gulf Sturgeon	P2	X		X		X		X	X	X	
<i>Elassoma evergladei</i>	Everglades Pygmy Sunfish	P2								X	X	
<i>Erimystax dissimilis</i>	Streamline Chub	P2	X	X		X				X	X	
<i>Etheostoma bellator</i>	Warrior Darter	P2	X	X	X	X	X		X	X	X	
<i>Etheostoma ditrema</i>	Coldwater Darter	P2		X	X		X		X	X	X	
<i>Etheostoma tuscumbia</i>	Tuscumbia Darter	P2	X	X	X	X	X	X	X	X	X	
<i>Etheostoma zonistium</i>	Bandfin Darter	P2	X	X	X		X		X	X	X	
<i>Hiodon tergisus</i>	Mooneye	P2	X				X			X	X	
<i>Micropterus chattahoochee</i>	Chattahoochee Bass	P2									X	
<i>Noturus eleutherus</i>	Mountain Madtom	P2	X	X	X		X		X	X	X	
<i>Noturus miurus</i>	Brindled Madtom	P2	X	X	X		X		X	X	X	
<i>Noturus sp. cf. flavus</i>	"Highlands Madtom"	P2		X	X		X		X	X	X	
<i>Percina aurolineata</i>	Goldline Darter	P2	X	X	X	X	X	X	X	X	X	
<i>Percina brevicauda</i>	Coal Darter	P2	X		X		X	X	X	X	X	
<i>Percina evides</i>	Gilt Darter	P2	X	X	X		X		X	X	X	
<i>Percina tanasi</i>	Snail Darter	P2			X	X				X	X	
<i>Phenacobius uranops</i>	Stargazing Minnow	P2	X	X	X		X		X	X	X	
<i>Pteronotropis grandipinnis</i>	Apalachee Shiner	P2	X	X						X	X	
<i>Alburnops petersoni</i>	Coastal Shiner	P3								X	X	
<i>Alosa chrysochloris</i>	Skipjack Herring	P3	X							X	X	
<i>Ameiurus serracanthus</i>	Spotted Bullhead	P3	X					X	X	X	X	
<i>Atractosteus spatula</i>	Alligator Gar	P3	X					X		X	X	

Table 4.7 Fish species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Campostoma pauciradii</i>	Bluefin Stoneroller	P3	X							X	X	
<i>Crystallaria asprella</i>	Crystal Darter	P3	X	X						X	X	
<i>Cycleptus elongatus</i>	Blue Sucker	P3						X		X	X	
<i>Cycleptus meridionalis</i>	Southeastern Blue Sucker	P3								X	X	
<i>Cyprinella whipplei</i>	Steelcolor Shiner	P3									X	
<i>Enneacanthus gloriosus</i>	Bluespotted Sunfish	P3	X	X							X	
<i>Enneacanthus obesus</i>	Banded Sunfish	P3								X	X	
<i>Erimystax insignis</i>	Blotched Chub	P3	X		X							
<i>Etheostoma crossopterygion</i>	Fringed Darter	P3			X					X	X	
<i>Etheostoma lynceum</i>	Brighteye Darter	P3	X		X			X	X	X	X	
<i>Fundulus bifax</i>	Stippled Studfish	P3	X	X			X		X	X	X	
<i>Fundulus cingulatus</i>	Banded Topminnow	P3								X	X	
<i>Fundulus confluentus</i>	Marsh Killifish	P3								X	X	
<i>Fundulus dispar</i>	Starhead Topminnow	P3								X	X	
<i>Fundulus jenkinsi</i>	Saltmarsh Topminnow	P3	X	X			X	X	X	X	X	
<i>Fundulus pulvereus</i>	Bayou Killifish	P3								X	X	
<i>Hybognathus hayi</i>	Cypress Minnow	P3							X	X	X	
<i>Ichthyomyzon greeleyi</i>	Mountain Brook Lamprey	P3								X	X	
<i>Ictiobus cyprinellus</i>	Bigmouth Buffalo	P3								X	X	
<i>Ictiobus niger</i>	Black Buffalo	P3										
<i>Leptolucania ommata</i>	Pygmy Killifish	P3	X	X			X		X	X	X	

Table 4.7 Fish species of greatest conservation need (SGCN) conservation actions.

Scientific Name	Common Name	Rank	Conservation Actions									
			1	2	3	4	5	6	7	8	9	10
<i>Lethenteron appendix</i>	American Brook Lamprey	P3								X	X	
<i>Lythrurus fumeus</i>	Ribbon Shiner	P3								X	X	
<i>Macrhybopsis etnieri</i>	Coosa Chub	P3		X					X	X	X	
<i>Macrhybopsis pallida</i>	Pallid Chub	P3							X	X	X	
<i>Micropterus cahabae</i>	Cahaba Bass	P3	X	X	X	X	X	X	X	X	X	X
<i>Miniellus uranoscopus</i>	Skygazer Shiner	P3	X							X	X	
<i>Moxostoma carinatum</i>	River Redhorse	P3								X	X	
<i>Moxostoma macrolepidotum</i>	Shorthead Redhorse	P3								X	X	
<i>Nothonotus douglasi</i>	Tuskaloosa Darter	P3	X	X	X				X	X	X	
<i>Notropis micropteryx</i>	Highland Shiner	P3								X	X	
<i>Notropis photogenis</i>	Silver Shiner	P3								X	X	
<i>Paranotropis</i> sp. cf. <i>spectrunculus</i>	"Sawfin Shiner"	P3		X	X				X	X	X	
<i>Percina austroperca</i>	Southern Logperch	P3	X	X			X		X	X	X	
<i>Percina lenticula</i>	Freckled Darter	P3			X				X	X	X	
<i>Pteronotropis merlini</i>	Orangetail Shiner	P3							X	X	X	
<i>Pteronotropis signipinnis</i>	Flagfin Shiner	P3										
<i>Typhlichthys subterraneus</i>	Southern Cavefish	P3		X	X	X						

Table 4.8 Mussel species of greatest conservation need (SGCN) and relevant conservation actions.

[illegible]

Table 4.8 Mussel species of greatest conservation need (SGCN) and relevant conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTION										
			1	2	3	4	5	6	7	8	9	10	11
<i>sloatianus</i>	Bankclimber												
<i>Epioblasma aureola</i>	Golden Riffleshell	EX											X
<i>Epioblasma obliquata</i>	Catspaw	EX	X		X	X	X	X	X	X	X		
<i>Lasmigona subviridis</i>	Green Floater	EX	X	X	X		X	X	X	X	X		X
<i>Obovaria olivaria</i>	Hickorynut	EX	X	X	X	X	X	X	X	X	X	X	
<i>Obovaria retusa</i>	Ring Pink	EX	X	X	X	X	X	X	X	X	X		
<i>Ortmanniana pectorosa</i>	Pheasantshell	EX	X	X	X		X	X	X		X		
<i>Paetulunio fabalis</i>	Rayed Bean	EX											X
<i>Pegias fabula</i>	Littlewing Pearlymussel	EX											X
<i>Plethobasus cooperianus</i>	Orangefoot Pimpleback	EX	X		X	X	X	X	X	X	X		
<i>Pleurobema clava</i>	Clubshell	EX	X	X	X	X	X	X	X	X	X		
<i>Pleurobema hartmanianum</i>	Cherokee Pigtoe	EX											X
<i>Pleurobema stabile</i>	Coosa Pigtoe	EX	X	X	X		X	X	X		X		
<i>Potamilus leptodon</i>	Scaleshell	EX	X		X		X	X	X	X	X		
<i>Ptychobranhus subtentus</i>	Fluted Kidneyshell	EX											X
<i>Theliderma intermedia</i>	Cumberland Monkeyface	EX	X	X	X		X	X	X		X		
<i>Theliderma sparsa</i>	Appalachian Monkeyface	EX	X	X			X	X	X		X		X
<i>Epioblasma capsaeformis</i>	Oyster Mussel	EX CAU	X	X	X			X	X	X	X		
<i>Epioblasma penita</i>	Southern Combshell	EX CAU											X
<i>Lemiox rimosus</i>	Birdwing Pearlymussel	EX CAU											X
<i>Medionidus parvulus</i>	Coosa Moccasinshell	EX CAU	X	X	X	X	X	X	X	X	X		
<i>Venustaconcha trabalis</i>	Cumberland Bean	EX CAU											X
<i>Alasmidonta</i>	Southern Elktoe	P1	X	X				X	X	X	X		

Table 4.8 Mussel species of greatest conservation need (SGCN) and relevant conservation actions.

[illegible]

Table 4.8 Mussel species of greatest conservation need (SGCN) and relevant conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTION										
			1	2	3	4	5	6	7	8	9	10	11
<i>Medionidus conradicus</i>	Cumberland Moccasinshell	P1	X	X	X	X	X	X	X	X	X	X	
<i>Medionidus penicillatus</i>	Gulf Moccasinshell	P1	X	X	X		X	X	X	X	X		
<i>Obovaria arkansasensis</i>	Southern Hickorynut	P1	X	X			X	X		X	X		X
<i>Obovaria choctawensis</i>	Choctaw Bean	P1	X	X	X	X	X	X	X	X	X		
<i>Obovaria subrotunda</i>	Round Hickorynut	P1											X
<i>Obovaria unicolor</i>	Alabama Hickorynut	P1											X
<i>Ortmanniana abrupta</i>	Pink Mucket	P1											X
<i>Ortmanniana ligamentina</i>	Mucket	P1											X
<i>Plethobasus cicatricosus</i>	White Wartyback	P1											X
<i>Plethobasus cyphus</i>	Sheepnose	P1	X		X	X	X	X	X	X	X		
<i>Pleurobema atearni</i>	Canoe Creek Clubshell	P1	X	X	X		X	X	X		X		
<i>Pleurobema beadleianum</i>	Mississippi Pigtoe	P1											X
<i>Pleurobema cordatum</i>	Ohio Pigtoe	P1	X		X		X	X	X	X	X		
<i>Pleurobema georgianum</i>	Southern Pigtoe	P1	X	X	X		X	X	X		X		
<i>Pleurobema hanleyianum</i>	Georgia Pigtoe	P1											X
<i>Pleurobema oviforme</i>	Tennessee Clubshell	P1											X
<i>Pleurobema perovatum</i>	Ovate Clubshell	P1	X		X	X	X	X	X	X	X		
<i>Pleurobema plenum</i>	Rough Rigtoe	P1	X	X	X	X	X	X	X		X		
<i>Pleurobema pyriforme</i>	Oval Pigtoe	P1	X	X	X	X	X	X	X		X	X	

Table 4.8 Mussel species of greatest conservation need (SGCN) and relevant conservation actions.

[illegible]

Table 4.8 Mussel species of greatest conservation need (SGCN) and relevant conservation actions.

[illegible]

Table 4.9 Snail species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS									
			1	2	3	4	5	6	7	8	9	10
<i>Elimia nassula</i>	Round-ribbed Elimia	P1					X			X		
<i>Elimia teretria</i>	Auger Elimia	P1								X	X	
<i>Elimia ucheensis</i>	Creek Elimia	P1								X	X	
<i>Elimia vanuxemiana</i>	Cobble Elimia	P1							X	X	X	
<i>Fontigens nickliniana</i>	Watercress Snail	P1								X	X	
<i>Leptoxis compacta</i>	Oblong Rocksnail	P1					X			X	X	
<i>Leptoxis coosaensis</i>	Painted Rocksnail	P1	X				X			X	X	X
<i>Leptoxis picta</i>	Spotted Rocksnail	P1								X	X	
<i>Leptoxis plicata</i>	Plicate Rocksnail	P1					X			X		
<i>Lepyrium showalteri</i>	Flat Pebblesnail	P1					X			X		
<i>Lioplax cyclostomaformis</i>	Cylindrical Lioplax	P1					X		X	X	X	
<i>Lioplax pilsbryi</i>	Choctaw Lioplax	P1								X	X	
<i>Lithasia salebrosa</i>	Muddy Rocksnail	P1					X			X	X	
<i>Marstonia pachyta</i>	Armored Marstonia	P1					X		X	X	X	
<i>Pleurocera corpulenta</i>	Corpulent Hornsnail	P1	X				X			X	X	
<i>Pseudotryonia grahamae</i>	Salt Spring Hydrobe	P1		X						X		
<i>Rhodacmea cahawbensis</i>	Cahaba Ancyloid	P1	X				X		X	X		
<i>Rhodacmea filosa</i>	Wicker Ancyloid	P1	X					X	X	X	X	
<i>Stiobia nana</i>	Sculpin Snail	P1					X			X		
<i>Clappia cahabensis</i>	Cahaba Pebblesnail	P2					X		X	X	X	X
<i>Elimia acuta</i>	Acute Elimia	P2							X	X	X	
<i>Elimia ampla</i>	Ample Elimia	P2					X		X	X	X	
<i>Elimia boykiniana</i>	Flaxen Elimia	P2								X	X	
<i>Elimia dickinsoni</i>	Statelike Elimia	P2								X	X	
<i>Elimia exusta</i>	Fire Elimia	P2								X	X	
<i>Elimia olivula</i>	Caper Elimia	P2								X	X	
<i>Elimia perstriata</i>	Engraved Elimia	P2					X			X	X	
<i>Leptoxis ampla</i>	Round Rocksnail	P2			X		X			X		

Table 4.9 Snail species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.9 Snail species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Najas filifolia</i>	Narrowleaf Naiad	EX				X			X	X	X		
<i>Najas gracillima</i>	Thread Like Naiad	EX											X
<i>Phoebanthus tenuifolius</i>	Pineland False Sunflower	EX	X								X		
<i>Polygonella fimbriata</i>	Sandhill Jointweed	EX											X
<i>Polygonum glaucum</i>	Seabeach Knotweed	EX											X
<i>Sabulina michauxii</i>	Rock Sandwort	EX											
<i>Sabulina paludicola</i>	Godfrey's Sandwort	EX											
<i>Spiranthes brevibras</i>	Short Lipped Ladies' Tresses	EX	X	X				X			X		X
<i>Thermopsis fraxinifolia</i>	Ashleaf Golden Banner	EX											
<i>Aconitum uncinatum</i>	Blue Monkshood	P1	X										X
<i>Agalinis auriculata</i>	Auriculate False Foxglove	P1											X
<i>Agalinis gattingeri</i>	Gattinger's False Foxglove	P1	X										X
<i>Agalinis georgiana</i>	Georgia False Foxglove	P1	X	X									
<i>Agrimonia incisa</i>	Incised Groovebur	P1	X										
<i>Allium speculae</i>	Little River Canyon Onion	P1	X		X	X			X		X		
<i>Ampelaster carolinianus</i>	Carolina Aster	P1											X
<i>Andropogon arctatus</i>	Pinewoods Bluestem	P1		X									
<i>Arabis georgiana</i>	Georgia Rockcress	P1	X	X				X					

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>warei</i>	Hairsedge												
<i>Callirhoe papaver</i>	Woods Poppy Mallow	P1	X										
<i>Callirhoe triangulata</i>	Clustered Poppy Mallow	P1											X
<i>Calopogon multiflorus</i>	Many Flower Grass Pink	P1	X	X				X	X		X		
<i>Carex acidicola</i>	Acid Loving Sedge	P1	X		X	X		X			X		
<i>Carex austrodeflexa</i>	Southern Sedge	P1											X
<i>Carex australucorum</i>	Southern Blue Ridge Sedge	P1											X
<i>Carex baltzellii</i>	Baltzell's Sedge	P1	X										
<i>Carex barrattii</i>	Barratt's Sedge	P1	X										
<i>Carex exilis</i>	Coastal Sedge	P1	X										
<i>Carex fissa</i> var. <i>aristata</i>	Hammock's Sedge	P1											
<i>Carex godfreyi</i>	Godfrey's Sedge	P1											X
<i>Carex oklahomensis</i>	Oklahoma Sedge	P1											X
<i>Carex thornei</i>	Thorne's Sedge	P1	X					X	X		X		
<i>Carex timida</i>	Timid Sedge	P1	X	X	X	X					X	X	
<i>Carex vestita</i>	Velvet Sedge	P1								X			X
<i>Castilleja kraliana</i>	Cahaba Paintbrush	P1	X		X	X			X		X		
<i>Celastrus scandens</i>	Climbing Bittersweet	P1											X
<i>Chasmanthium nitidum</i>	Shiny Spikegrass	P1											X
<i>Chrysopsis godfreyi</i>	Godfrey's Golden Aster	P1	X										
<i>Chrysosplenium americanum</i>	American Golden Saxifrage	P1											X
<i>Cirsium muticum</i>	Swamp Thistle	P1	X										
<i>Cirsium</i>	Nuttall's Thistle	P1	X	X		X		X		X			

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
	Quillwort												
<i>Isoetes graniticola</i>	Granite Loving Quillwort	P1	X										
<i>Isoetes hyemalis</i>	Winter Quillwort	P1	X										
<i>Isoetes louisianensis</i>	Louisiana Quillwort	P1	X										
<i>Isotrema macrophyllum</i>	Pipevine	P1											
<i>Juglans cinerea</i>	Butternut	P1											X
<i>Juncus dudleyi</i>	Dudley's Rush	P1											X
<i>Juncus paludosus</i>	Swamp Rush	P1								X			
<i>Juniperus communis var. depressa</i>	Ground Juniper	P1						X					X
<i>Lachnocaulon engleri</i>	Engler's Bogbutton	P1	X										
<i>Lathyrus palustris</i>	Vetchling Peavine	P1											X
<i>Leavenworthia crassa</i>	Fleshy Fruit Gladecress	P1	X	X	X				X		X		
<i>Leavenworthia torulosa</i>	Necklace Gladecress	P1									X		
<i>Leptogramma burksiorum</i>	Alabama Streak Sorus Fern	P1											
<i>Liatris cylindracea</i>	Slender Blazing Star	P1											X
<i>Liatris oligocephala</i>	Cahaba Torch	P1	X	X		X			X		X		
<i>Lilium iridollae</i>	Panhandle Lily	P1	X										
<i>Lindera melissifolia</i>	Pondberry	P1	X	X				X		X	X		
<i>Lindera subcoriacea</i>	Bog Spicebush	P1	X										
<i>Linum harperi</i>	Harper's Grooved Flax	P1											
<i>Linum macrocarpum</i>	Flax	P1	X	X	X			X	X		X		

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Lithospermum decipiens</i>	Alabama Marbleseed	P1	X										
<i>Lobelia boykinii</i>	Boykin's Lobelia	P1	X	X	X	X		X	X		X		
<i>Lycium carolinianum</i>	Christmas Berry	P1	X										
<i>Lycopodium clavatum</i>	Running Pine	P1											X
<i>Lygodesmia aphylla</i>	Rose Rush	P1											X
<i>Lysimachia fraseri</i>	Fraser's Loosestrife	P1	X										
<i>Macranthera flammea</i>	Flame Flower	P1	X										
<i>Magnolia fraseri</i>	Fraser's Magnolia	P1		X	X			X		X			X
<i>Matelea alabamensis</i>	Alabama Anglepod	P1	X	X	X			X	X		X		
<i>Melanthium woodii</i>	Wood's False Hellebore	P1	X	X				X	X	X	X		
<i>Melica nitens</i>	Three Flower Melic Grass	P1	X	X				X	X	X	X		X
<i>Micranthes careyana</i>	Carey Saxifrage	P1											
<i>Mitreola angustifolia</i>	Narrowleaf Hornpod	P1									X		
<i>Monotropsis odorata</i>	Sweet Pinesap	P1	X										
<i>Oenothera curtissii</i>	Curtiss' Evening Primrose	P1									X		
<i>Orbexilum lupinellus</i>	Lupine Scurfpea	P1	X										
<i>Orbexilum simplex</i>	Single Stem Scurfpea	P1											X
<i>Orthochilus ecristatus</i>	Crestless Eulophia	P1	X	X				X			X		

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Platanthera integra</i>	Yellow Fringeless Orchid	P1											X
<i>Platanthera nivea</i>	Snowy Orchis	P1	X	X				X	X	X	X		
<i>Pleea tenuifolia</i>	Rush Featherling	P1	X								X		
<i>Polanisia tenuifolia</i>	Slenderleaf Clammyweed	P1	X	X				X	X	X	X		
<i>Polygala baldunii</i>	White Milkwort	P1											X
<i>Polygala leptostachys</i>	Georgia Milkwort	P1	X										
<i>Polygala senega</i>	Senega Snakeroot	P1											X
<i>Polygonella macrophylla</i>	Large Leaf Jointweed	P1	X										
<i>Primula frenchii</i>	French's Shooting Star	P1	X										
<i>Pterocaulon virgatum</i>	Wand Blackroot	P1	X	X		X		X	X	X	X		
<i>Pycnanthemum curvipes</i>	Mountain Mint	P1	X										
<i>Pycnanthemum nudum</i>	Coastal Plain Mountain Mint	P1	X	X				X	X	X	X	X	X
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	P1											X
<i>Quercus minima</i>	Dwarf Live Oak	P1	X	X	X			X			X		X
<i>Quercus oglethorpensis</i>	Oglethorpe's Oak	P1	X	X	X	X		X		X	X		
<i>Quercus similis</i>	Bottomland Post Oak	P1						X			X		X
<i>Ranunculus longirostris</i>	Eastern White Water Crowfoot	P1											X
<i>Rhexia aristosa</i>	Awned Meadowbeauty	P1	X										
<i>Rhexia parviflora</i>	White Meadowbeauty	P1	X	X	X			X	X		X		

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Sagittaria secundifolia</i>	Kral's Water Plantain	P1	X			X			X		X		
<i>Salix floridana</i>	Florida Willow	P1	X										
<i>Sarracenia alabamensis</i> ssp. <i>alabamensis</i>	Alabama Canebrake Pitcher Plant	P1											
<i>Sarracenia alabamensis</i> ssp. <i>wherryi</i>	Wherry's Sweet Pitcher Plant	P1											
<i>Sarracenia oreophila</i>	Green Pitcher Plant	P1	X	X				X					
<i>Sarracenia rubra</i> ssp. <i>gulfensis</i>	Gulf Coast Red Pitcher Plant	P1											
<i>Sceptridium jenmanii</i>	Alabama Grapefern	P1	X							X			
<i>Schoenus nigricans</i>	Blacksedge	P1											
<i>Schwalbea americana</i>	American Chaffseed	P1	X			X							
<i>Sedum pusillum</i>	Granite Rock Stonecrop	P1	X										
<i>Sideroxylon thornei</i>	Georgia Bully	P1	X										
<i>Silene regia</i>	Royal Catchfly	P1											X
<i>Silphium glutinosum</i>	Sticky Rosinweed	P1	X										
<i>Silphium perplexum</i>	Old Cahaba Rosinweed	P1	X			X		X	X		X		
<i>Sisyrinchium calciphilum</i>	Glade Blue Eyed Grass	P1	X										
<i>Solanum pseudogracile</i>	Dune Nightshade	P1											X
<i>Solanum pumilum</i>	Dwarf Horse Nettle	P1	X	X				X		X	X		
<i>Solidago arenicola</i>	Locust Fork Goldenrod	P1	X								X		
<i>Solidago leavenworthii</i>	Leavenworth's Goldenrod	P1											X
<i>Solidago porteri</i>	Porter's	P1	X			X							

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Trifolium reflexum</i>	Buffalo Clover	P1	X										
<i>Trilisa paniculata</i>	Hairy Chaffhead	P1	X	X		X		X	X	X	X		X
<i>Trillium grandiflorum</i>	Large Flower Trillium	P1											X
<i>Trillium reliquum</i>	Relict Trillium	P1	X										
<i>Utricularia olivacea</i>	Dwarf Bladderwort	P1	X										
<i>Utricularia resupinata</i>	Northeastern Bladderwort	P1											X
<i>Verbena hastata</i>	Blue Vervain	P1											X
<i>Verbesina walteri</i>	Carolina Crownbeard	P1	X										
<i>Viburnum ashei</i>	Ashe's Arrowwood	P1	X	X				X	X	X	X		X
<i>Viburnum obovatum</i>	Small Leaf Viburnum	P1	X	X				X	X	X	X		X
<i>Viburnum rafinesqueanum</i>	Downy Arrowwood	P1											X
<i>Vitis mustangensis</i>	Mustang Grape	P1											X
<i>Waldsteinia lobata</i>	Piedmont Barren Strawberry	P1	X										
<i>Warea sessilifolia</i>	Sessile Leaf Warea	P1	X										
<i>Xerophyllum asphodeloides</i>	Turkeybeard	P1	X										
<i>Xyris brevifolia</i>	Shortleaf Yellow Eyed Grass	P1											X
<i>Xyris chapmanii</i>	Chapman's Yellow Eyed Grass	P1	X										
<i>Xyris flabelliformis</i>	Savanna Yellow Eyed Grass	P1											X
<i>Xyris isoetifolia</i>	Quillwort Yellow Eyed Grass	P1	X										
<i>Xyris spathifolia</i>	Ketona Yellow Eyed Grass	P1	X	X	X			X			X		

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
	Bush												
<i>Calamovilfa arcuata</i>	Cumberland Sandgrass	P2	X										
<i>Calliphysalis carpenteri</i>	Carpenter's Groundcherry	P2	X										
<i>Callirhoe alcaeoides</i>	Clustered Poppy Mallow	P2											X
<i>Calopogon oklahomensis</i>	Oklahoma Grass Pink	P2											X
<i>Canna flaccida</i>	Bandana of the Everglades	P2											X
<i>Carex austrina</i>	Southern Sedge	P2											X
<i>Carex austrocaroliniana</i>	Tarheel Sedge	P2											X
<i>Carex brysonii</i>	Bryson's Sedge	P2							X	X			
<i>Carex dasycarpa</i>	Velvet Sedge	P2											X
<i>Carex eburnea</i>	Ebony Sedge	P2											X
<i>Carex impressinervia</i>	Impressed Nerve Sedge	P2	X						X	X	X		
<i>Carex mesochorea</i>	Midland Sedge	P2											X
<i>Castilleja coccinea</i>	Scarlet Indian Paintbrush	P2											X
<i>Chamaecrista horizontalis</i>	Florida Senna	P2	X	X	X			X	X		X		
<i>Chelone lyonii</i>	Pink Turtlehead	P2	X										
<i>Cirsium lecontei</i>	LeConte's Thistle	P2	X										
<i>Claytonia caroliniana</i>	Carolina Spring Beauty	P2											X
<i>Coelorachis tessellata</i>	Lattion Jointgrass	P2	X	X				X					
<i>Comandra umbellata</i>	Eastern Bastard Toadflax	P2	X		X								X
<i>Coreopsis pulchra</i>	Woodland Tickseed	P2	X	X	X	X		X	X		X		
<i>Crataegus aemula</i>	Rome Hawthorn	P2	X		X						X		

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Eleocharis rostellata</i>	Beaked Spikerush	P2	X										
<i>Elodea canadensis</i>	Broad Waterweed	P2											X
<i>Equisetum arvense</i>	Field Horsetail	P2											X
<i>Erythronium albidum</i>	White Trout Lily	P2											X
<i>Eurybia spectabilis</i>	Showy Aster	P2	X										
<i>Fimbristylis perpusilla</i>	Harper's Fimbristylis	P2	X										
<i>Fothergilla major</i>	Mountain Witch Alder	P2										X	X
<i>Galium lanceolatum</i>	Torrey's Wild Licorice	P2											X
<i>Hedeoma drummondii</i>	Drummond's Pennyroyal	P2	X	X		X		X			X		X
<i>Helianthus eggertii</i>	Eggert's Sunflower	P2											X
<i>Helianthus porteri</i>	Confederate Daisy	P2	X										X
<i>Heuchera longiflora</i>	Long Flower Alumroot	P2	X										
<i>Hexastylis speciosa</i>	Harper's Heartleaf	P2	X	X	X			X	X		X		
<i>Hibiscus coccineus</i>	Brilliant Hibiscus	P2											X
<i>Hottonia inflata</i>	Featherfoil	P2											X
<i>Huperzia lucidula</i>	Shining Clubmoss	P2											X
<i>Huperzia porophila</i>	Rock Clubmoss	P2	X										
<i>Hydrophyllum appendiculatum</i>	Appendage Waterleaf	P2											X
<i>Ilex amelanchier</i>	Serviceberry Holly	P2	X										
<i>Iva microcephala</i>	Small Head Marsh Elder	P2	X	X		X		X	X				X

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Rhynchospora thornei</i>	Thorne's Beakrush	P2	X										
<i>Ribes cynosbati</i>	Prickly Gooseberry	P2											X
<i>Rubus allegheniensis</i>	Allegheny Blackberry	P2											X
<i>Rudbeckia auriculata</i>	Eared Coneflower	P2	X										
<i>Rudbeckia heliopsidis</i>	Sun Facing Coneflower	P2	X	X	X								
<i>Rudbeckia mollis</i>	Soft Hair Coneflower	P2	X										
<i>Rudbeckia triloba</i> var. <i>pinnatiloba</i>	Pinnate Leaf Coneflower	P2											
<i>Sabatia brevifolia</i>	Short Leaved Pink	P2											
<i>Sageretia minutiflora</i>	Small Flower Buckthorn	P2	X										
<i>Sagittaria isoetiformis</i>	Slender Arrowhead	P2											X
<i>Salvia chapmanii</i>	Chapman's Nettle Leaf Sage	P2	X										
<i>Sarracenia leucophylla</i>	Whitetop Pitcher Plant	P2	X										
<i>Sarracenia rosea</i>	Rose Pitcher Plant	P2	X										
<i>Schisandra glabra</i>	Bay Starvine	P2	X										
<i>Schizachyrium maritimum</i>	Gulf Bluestem	P2	X										
<i>Schoenoplectus deltarum</i>	Delta Bulrush	P2	X										
<i>Schoenoplectus subterminalis</i>	Water Bulrush	P2											X
<i>Scutellaria alabamensis</i>	Alabama Skullcap	P2	X										
<i>Scutellaria glabriuscula</i>	Glabrous Skullcap	P2	X	X		X							

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Cotinus obovatus</i>	American Smoketree	P3											X
<i>Crataegus alabamensis</i> var. <i>ravenelii</i>	Ravenel's Hawthorn	P3											
<i>Crataegus alleghaniensis</i>	Allegheny Hawthorn	P3											
<i>Crataegus calpodendron</i>	Pear Hawthorn	P3											
<i>Crataegus frugiferens</i>	Fruitful Allegheny Hawthorn	P3											
<i>Crataegus lacrimata</i>	Pensacola Hawthorn	P3											
<i>Crataegus opaca</i>	Riverflat Hawthorn	P3											
<i>Crataegus pruinosa</i> var. <i>gattingeri</i>	Gattinger's Frosted Hawthorn	P3											
<i>Crataegus quaesita</i> var. <i>egens</i>	Sand Barren Hawthorn	P3											
<i>Crataegus quaesita</i> var. <i>floridana</i>	Jacksonville Hawthorn	P3											
<i>Crataegus sargentii</i>	Sargent's Hawthorn	P3											
<i>Crataegus sororia</i>	Sister Hawthorn	P3											
<i>Crataegus visenda</i>	Bristol Hawthorn	P3											
<i>Croomia pauciflora</i>	Croomia	P3	X										
<i>Dalea gattingeri</i>	Gattinger's Prairie Clover	P3											X
<i>Danthonia epilis</i>	Bog Wild Oatgrass	P3											X
<i>Delphinium alabamicum</i>	Alabama Larkspur	P3	X	X									
<i>Desmodium ochroleucum</i>	Cream Tick Trefoil	P3	X	X				X	X		X	X	

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

[illegible]

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.

SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Quercus macrocarpa</i>	Bur Oak	P3	X	X				X					X
<i>Rhododendron austrinum</i>	Orange Azalea	P3			X	X		X			X		X
<i>Rhododendron minus</i>	Carolina Rhododendron	P3		X	X			X		X	X		X
<i>Rhynchospora crinipes</i>	Mosquito Beakrush	P3											X
<i>Rhynchospora microcephala</i>	Small Head Beakrush	P3											X
<i>Rhynchospora stenophylla</i>	Chapman Beakrush	P3											X
<i>Rhynchospora tracyi</i>	Tracy's Beakrush	P3											X
<i>Sabatia capitata</i>	Rose Gentian	P3	X										
<i>Silene caroliniana</i> var. <i>wherryi</i>	Wherry's Catchfly	P3											
<i>Silphium brachiatum</i>	Cumberland Rosinweed	P3	X	X				X					
<i>Silphium mohrii</i>	Mohr's Rosinweed	P3											X
<i>Solidago brachyphylla</i>	Dixie Goldenrod	P3	X										
<i>Solidago buckleyi</i>	Buckley's Goldenrod	P3	X										
<i>Spiranthes longilabris</i>	Giant Spiral Ladies' Tresses	P3											X
<i>Stellaria corei</i>	Chickweed	P3											X
<i>Stenanthium texanum</i>	Crow Poison	P3											X
<i>Stewartia malacodendron</i>	Silky Camellia	P3	X										
<i>Stylisma aquatica</i>	Water Southern Morning Glory	P3											X
<i>Symphyotrichum kralii</i>	Kral's Aster	P3		X					X				X

Table 4.10 Plant species of greatest conservation need (SGCN) conservation actions.													
SCIENTIFIC NAME	COMMON NAME	RANK	CONSERVATION ACTIONS										
			1	2	3	4	5	6	7	8	9	10	11
<i>Symphyotrichum simmondsii</i>	Simmond's Aster	P3											X
<i>Thalictrum debile</i>	Southern Meadowrue	P3	X		X	X			X		X		
<i>Thalictrum macrostylum</i>	Piedmont Meadowrue	P3											X
<i>Trillium pusillum</i> var. <i>ozarkanum</i>	Ozark Wakerobin	P3											
<i>Trillium recurvatum</i>	Prairie Trillium	P3											X
<i>Trillium rugelii</i>	Southern Nodding Trillium	P3	X										
<i>Trillium vaseyi</i>	Vasey's Trillium	P3											X
<i>Uvularia floridana</i>	Florida Bellwort	P3	X										
<i>Veronicastrum virginicum</i>	Culver's Root	P3											X
<i>Viola egglestonii</i>	Eggleston's Violet	P3	X	X									X
<i>Xyris scabrifolia</i>	Harper's Yellow Eyed Grass	P3											X
<i>Xyris stricta</i>	Pineland Yellow Eyed Grass	P3											X

In summary, the conservation actions outlined in **Element 4** provide Alabama with a strategic, science-based path forward for protecting its SGCN and the habitats on which they depend. By combining habitat restoration, targeted species management, collaborative partnerships, and continued research, Alabama can address both immediate threats and long-term challenges to the resource. These actions are not only essential for preventing further declines, but also for sustaining the ecological integrity, cultural heritage, and economic benefits that wildlife provides to communities across the state. Successful implementation will require broad cooperation among agencies, conservation organizations, landowners, and citizens, ensuring that Alabama's extraordinary natural legacy endures for generations to come.