

# Tennessee Wildlife Action Plan

## What is a wildlife action plan?

Congress asked each state to develop a wildlife action plan, known technically as a comprehensive wildlife conservation strategy. These proactive plans examine the health of wildlife and prescribe actions to conserve wildlife and vital habitat before they become more rare and more costly to protect.

## Tennessee snapshot

**Geography:** Terrestrial habitats range from the wetlands and bottomland hardwoods of western Tennessee, cedar glade and grassland barrens of middle Tennessee to the high elevation spruce-fir forests of the mountainous east. Aquatic environments range from the oxbows and sloughs of the Mississippi River to the spring and subterranean habitats of the Middle Tennessee barrens and Cumberland Plateau to the cold mountain streams of the Appalachian Mountains.

**Landscape:** The Mississippi River Valley is the pathway of one of the largest avian migrations in North America. The Tennessee and Cumberland River drainages are unrivaled nationally in the diversity of fish, muskies, and other types of freshwater aquatic fauna. The subterranean landscape of the Interior Low Plateau and adjoining Cumberland Plateau is one of the most extensive in the country housing hundreds of rare and unique species, with many more yet to be discovered.

**Wildlife highlights:** Over 300 species of birds utilize habitats within Tennessee. Tennessee is home to 77 amphibians (frogs, toads and salamanders) with the

Appalachian mountains considered the world's epicenter of lungless salamander diversity. Furthermore, 55 reptiles (snakes lizards and turtles) and 77 mammals, including 12 species of bats, inhabit Tennessee. The diversity of aquatic habitats supports an unparalleled array of aquatic species. Seventy-six species of crayfish, 99 species of aquatic snails, 130 species of freshwater mussels and over 325 species of fish all call Tennessee home.



Tree Frog/Robert English

## Tennessee's planning approach

The Tennessee Wildlife Resources Agency (TWRA) used this planning opportunity to undertake the most comprehensive analysis of the state's wildlife conservation needs to date. The plan was produced primarily with assistance from The Nature Conservancy and assistance from other partners such as the Tennessee Wildlife Federation, Tennessee Ornithological Society, World Wildlife Fund, and other state and federal agencies. Tennessee's Wildlife Action Plan utilizes species occurrences coupled with information about rarity, viability, mobility, and habitat preference to evaluate units of habitat across the state. By utilizing GIS technology, species and habitat information is available for analysis at multiple geographic scales.

*"It is my belief that Tennessee's State Wildlife Action Plan answers Congress's call to address the conservation of the full array of our state's wildlife. The Plan's grounding in scientific data and innovative use of technology makes it an important tool for state and local conservation planning and development."*

*– Phil Bredesen, Governor, State of Tennessee*

*"The centerpiece of the Tennessee Comprehensive Wildlife Conservation Strategy is the development of a geographically based, comprehensive GIS database that will be used to inform and help guide management decisions in conserving our state's rare and imperiled fish and wildlife."*

*– Gary T. Myers, Director, Tennessee Wildlife Resources Agency*

## Primary challenges to conserving wildlife in Tennessee



Wading Bird/Byron Jorjorian

A total of 37 potential sources of stress were identified as affecting Greatest Conservation Need (GCN) species and habitats. Incompatible land use and development were consistently identified as major sources of stress to GCN species. Additionally, the lack of distributional data for many of the GCN species is a substantial impediment to fully utilizing the tools developed within this Wildlife Action Plan.

Incompatible land use practices often result in erosion and loss of land, water quality degradation, and loss of terrestrial and aquatic habitat. In many instances the landowner is unaware of solutions,

or unable to implement best management practices. Technical advice and assistance must be provided to meet the needs of private landowners.

Tennessee's human population is projected to grow by 1.5 million people by the year 2025. This projected growth will require communities to plan for and meet the needs of its citizens while conserving and managing the land, water and wildlife resources that enhance the quality of life within and near those same communities.

Tennessee's Wildlife Action Plan provides a GIS model that evaluates priorities for wildlife and habitats. (See the habitat priority maps p. 4.) It is essential for species distributional data and land cover information to be maintained and updated in order to fully utilize the model's ability to evaluate habitat.

## Working together for Tennessee's wildlife

In developing its Comprehensive Wildlife Conservation Strategy, TWRA actively solicited input from a broad

*"We believe the state wildlife action plan will provide us and our partners with the implementation tools we need to protect wildlife and their habitats throughout Tennessee. We know from our work that what helps our wildlife, helps all of us."*  
 -Scott Davis, State Director, The Nature Conservancy, Tennessee Chapter

Wildlife	Total number of species	Species of conservation concern*	Federal or state listing as threatened, endangered, in need of management, or other category
Mussels	132	77	41 (all are federally listed; 36 are state listed)
Snails	374	120	3 (all are fed. & state listed)
Crayfish and other crustaceans	101	52	12 (only 1 is federally listed; all 12 are state listed)
Insects	Unknown	120	3 (all 3 are federally listed; 0 are state listed)
Fish	>325	85	69 (only 20 are federally listed; all are state listed)
Amphibians	70	24	11 (none are federally listed; all 11 are state listed)
Reptiles	61	17	7 (only 1 is federally listed, all 7 are state listed)
Birds	>300	81	25 (only 3 have full federal listing; 24 are state listed)
Mammals	89	29	20 (only 4 are federally listed; 19 are state listed)
Other invertebrates	Unknown	59	1 (this species is only federally listed)
<b>Totals</b>	<b>1,452</b>	<b>664</b>	<b>192</b>

\*Greatest Conservation Needs were determined by a species' rarity, legal status, distribution, and population trend.

### Wildlife highlights

Highlight habitats	Wildlife (examples)	Issue (examples)	Action (examples)
<b>Terrestrial habitat: Wetlands and bottomland forests of the Mississippi River</b>	Barking Treefrog  Mississippi kite	<ul style="list-style-type: none"> <li>• Incompatible land use practices</li> <li>• Residential, commercial and industrial development</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize existing and develop new landowner incentive and assistance programs to implement best land management practices.</li> <li>• Restoration of wetlands and bottomland hardwood forests.</li> <li>• Participate and assist in the review of county urban growth plans.</li> <li>• Develop strategic alliances with local government, planners and developers to address development issues.</li> </ul>
<b>Aquatic System: Cumberland River System</b>	Ashy darter  Cumberland Bean pearlymussel	<ul style="list-style-type: none"> <li>• Construction of dams and impoundments</li> </ul>	<ul style="list-style-type: none"> <li>• Develop strategic alliances with regulatory agencies and local water boards to address the issues of water management.</li> <li>• Develop standards for minimum stream flows to protect GCN species.</li> </ul>
<b>Subterranean system: A Highland Rim Cave</b>	Bigmouth cave salamander  Southern cave fish	<ul style="list-style-type: none"> <li>• Incompatible forestry practices</li> <li>• Municipal wastewater Treatment / Stormwater runoff</li> </ul>	<ul style="list-style-type: none"> <li>• Map Karst systems to delineate subterranean watersheds</li> <li>• Develop formal management agreements with private landowners to provide species and habitat management assistance.</li> <li>• Develop strategic alliances with regulatory agencies and local water boards to address the issues of water management.</li> </ul>

### Recommended actions to conserve Tennessee's wildlife

array of federal and state agencies, interest groups, and the public. A Steering Committee was established with representatives from agencies and non-governmental organizations that were considered to be important stakeholders for wildlife conservation in Tennessee. The Nature Conservancy and World Wildlife Fund, both internationally known for their roles in wildlife and habitat conservation, were members of the Steering Committee, as were the Tennessee Ornithological Society and the Tennessee Wildlife Federation. The Steering Committee held four meetings during the course of the planning effort to provide guidance and oversight to development of the Wildlife Action Plan.

Four additional partner meetings were held across the state. Attending these meetings were representatives of five federal agencies, two additional state departments, two state universities and 10 nongovernmental organizations (NGOs). Nongovernmental representatives attending ranged from the League of Women Voters to Tennessee Citizens for Wilderness Planning to individuals involved in wildlife rehabilitation.

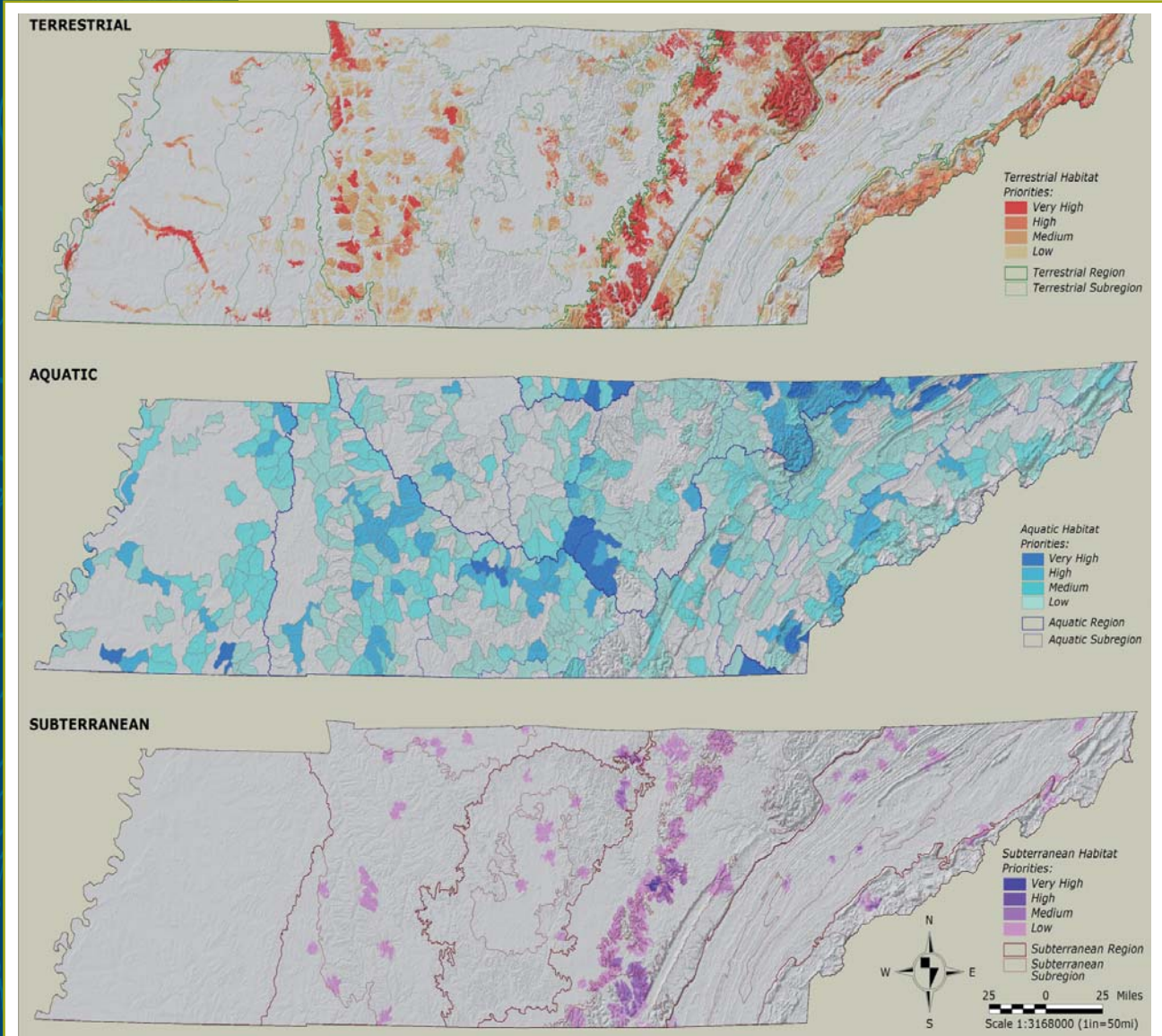
TWRA also established an informational web site and questionnaire about the CWCS planning process. To promote the website, 8,500 informational cards were mailed to hunting and fishing license agents asking that the cards be provided to the public. Numerous public presen-

*“Tennessee’s State Wildlife Action Plan provides a framework for partners from government, conservation groups, communities and businesses to work together in a coordinated fashion on the ground to benefit species and habitats.”*

*- Wendy Smith,  
Director, Southeast Rivers  
and Streams Program,  
World Wildlife Fund*

tations, magazine and newspaper articles were produced that reached circulations across the state. TWRA also produced two segments on its television show Tennessee Wildside.

Finally, four mid-week, evening public meetings were held across the state which included a Wildlife Action Plan presentation and a question and answer session.



Priority areas for wildlife of greatest conservation need in Tennessee/TWRA

### Assn. of Fish & Wildlife Agencies

David Chadwick  
 Wildlife Diversity Associate  
 444 North Capitol St. NW,  
 Suite 725  
 Washington, DC 20001  
 Tel: 202.624.7890  
 chadwick@fishwildlife.org  
 www.teaming.com • www.fishwildlife.org

### State Contact

Richard Kirk, Nongame and Endangered  
 Species Coordinator  
 Tennessee Wildlife Resources Agency  
 Ellington Agricultural Center, PO Box  
 40747  
 Nashville, TN 37204  
 Tel: 615.781.6619  
 Richard.kirk@state.tn.us  
[http://www.state.tn.us/twra/wildlife/cwcs/  
 cwcsindex.html](http://www.state.tn.us/twra/wildlife/cwcs/cwcsindex.html)