



Project Title: Tennessee Wildlife Resources Agency Vulnerability Assessment of State Wildlife Action Plan Species of Greatest Conservation Need

Headline Title: West Tennessee Vulnerability Assessment

Brief Summary: The Tennessee Wildlife Resources Agency (TWRA) is collaborating with The Nature Conservancy to revise its Tennessee State Wildlife Action Plan (SWAP) before 2015, to include climate change as a priority issue of concern for sustaining biodiversity. Using [NatureServe's Climate Change Vulnerability Index \(CCVI\) tool](#), TWRA and the Gulf Coastal Plains & Ozarks Landscape Conservation Cooperative (GCPO LCC) initiated a pilot project in 2012 to assess the vulnerability of 119 species of Greatest Conservation Need (GCN) within the western TN region.

Location: western region of Tennessee

Partners: Tennessee Wildlife Resources Agency, The Nature Conservancy, GCPO LCC

Background: Natural resource managers are interested in managing wildlife habitat and conserving ecosystems to be adaptable to changing climatic conditions. Climate change vulnerability assessments are an essential tool used to anticipate which species and systems will be most affected by climate change, thus allowing for proactive management. The "[Best Practices for State Wildlife Action Plans](#), voluntary guidance to states for revision and implementation" issued in 2012 calls for incorporating climate change into SWAPs and conducting vulnerability assessments to inform the selection and prioritization of SGCN and conservation actions.

Project Goals: Conduct a pilot vulnerability assessment of 119 species of Greatest Conservation Need in Tennessee's western region to incorporate climate-related adaptation strategies into TWRA's revised State Wildlife Action Plan.

Strategy Goals Implemented: Goal 5: Increase knowledge and information on impacts and responses of fish, wildlife, and plants to a changing climate.

Climate Impacts Addressed: Impacts on species and habitats, specifically impacts of increased temperatures and drought.

Status of Project Implementation: The pilot assessment for western Tennessee GCN species is complete. The assessment will be expanded in 2014 to cover the remainder of the state for incorporation into Tennessee's 2015 SWAP update.

Project Outcomes: [Results of the study](#) indicate that most species assessed were not expected to be vulnerable to climate change. However, 15% of the species assessed were moderately or highly vulnerable, and of those, mollusks and amphibians were the most vulnerable taxa groups. These species, with their limited mobility and association with aquatic or wetland habitats, will be more vulnerable to rising temperatures in the 21st century, and their habitats will be more susceptible to future droughts. The



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CLIMATE ADAPTATION STRATEGY

results of this study will be instrumental to TWRA and other partners in better focusing their conservation activities and adaptation strategies to improve the resilience of rare species to future climate change.

Funding Sources: US Fish & Wildlife Service (GCPO LCC)

Photos/Attachments:

<http://www.flickr.com/photos/50838842@N06/5805707019/in/photolist-9R2LqT-arbYV8-9C8cLe-9C8cDx-9Cb8j7-7S6mU8-dNCMcd-hRWP2G-8XFV7e-8XJY4N-8XJXYL-8GEL2a-kHHqcb-cdf2LL-bo8G5s>

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Suggested Photo Caption: This gray tree frog (*Hyla versicolor*) is categorized as moderately vulnerable to climate change in western Tennessee.