

# CONSERVATION AND MANAGEMENT OF AQUATIC AND RIPARIAN WILDLIFE



Forestry and Natural Resources  
College of Agriculture, Food and Environment

A McIntire-Stennis supported project

The occurrence and health of aquatic animals and those living in close proximity to water, known as riparian species, act as barometers of the impacts of land use on ecosystems. In some instances, these species become threatened or endangered due to negative impacts associated with land use. Understanding threats to aquatic and riparian biodiversity, quantifying how populations respond to these threats, and developing conservation and/or management strategies to bolster populations is a focus of work at the Department of Forestry and Natural Resources at the University of Kentucky. Specifically, our McIntire-Stennis supported research has examined the response of salamanders to land-use reclamation, quantified the impacts of emerging infectious disease on snake populations, examined the causes of unknown declines in freshwater mussels, and evaluated the effectiveness of wetland restoration on imperiled amphibians.

Results from this research assist with the development of management tools and provide decision support for natural resource managers. Additionally, the project provides educational and research opportunities for undergraduate and graduate students as well as the general public.

## COLLABORATION



This research requires a broad range of partners including the USDA Forest Service, US Fish and Wildlife Service, US Geological Survey National Wildlife Health Center, University of Kentucky Center for Applied Energy Research, Kentucky Department of Fish and Wildlife Resources, and Smithsonian Institution.



## About McIntire-Stennis

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.



## IMPACT

This emerging research on aquatic and riparian species is providing critical information to inform practices to allow for sustainable use of forest resources.



**28 students & 32 publications**

that in the last 5 years have been developed to directly aid in the management of our forests and rural landscapes.



**\$740,000**

of competitive research funds have been secured to address critical species work.



**3,500**

K-12 students educated in the last 5 years in Kentucky.