

USACE Natural Resource Management

Mammals



Virginia Big-eared Bat

FAST FACTS

REASONS FOR CURRENT STATUS: The Virginia big-eared bat was listed together with the Ozark big-eared bat by the U.S. Fish and Wildlife Service (USFWS) as an endangered species in 1979 due to small population size, reduced and limited distribution, and vulnerability to human disturbance. As noted by the USFWS, even slight disturbances can cause adults to abandon caves and/or young, or force them to use energy reserves needed to survive hibernation. Five caves in West Virginia were designated as critical habitat for the species at the time of listing.

MANAGEMENT AND PROTECTION:

A 2018 5-year review found that a total population of 19,574 Virginia big-eared bats were documented within 10 major hibernacula. Of those 10 hibernacula, 6 caves had long-term protection. However, nearly 70% of the known population hibernates in a single cave which does not have designated long-term protection.

A draft recovery plan for the species was made available in 2019. This plan provides important guidance to not only the Service, but States, other federal agencies, and partners on methods to minimize threats to the species.

The Ozark and Virginia big-eared bats do not have overlapping ranges. (USFWS)

HABITAT NEEDS: The Virginia big-eared bat is a nonmigratory bat species that inhabits caves year-round. The species is known or believed to occur in Kentucky, North Carolina, Tennessee, Virginia, and West Virginia.

- Caves for this species are typically located in karst regions (landscape characterized by limestone caves and sinkholes).
- Wintering cave sites are often different than summer maternity or bachelor roost sites.
- The surrounding landscape is dominated by oak-hickory or beech-maple-hemlock forests. (USFWS)
 - Research has demonstrated that the species lives mainly on moths, but can also eat small insects.

Appearance: Considered a medium-sized bat, the Virginia big-eared bat weighs less than half an ounce and has fur that ranges in color from light to dark brown. As suggested by its name, this species' ears are large measuring more than 1 inch long and are connected across the forehead. Total body length for the species is just under 4 inches with distinctive facial glands on either side of the snout.

Photos: USFWS, Kentucky Department of Fish and Wildlife, Virginia Department of Wildlife Resources

Natural Resource Management (NRM)

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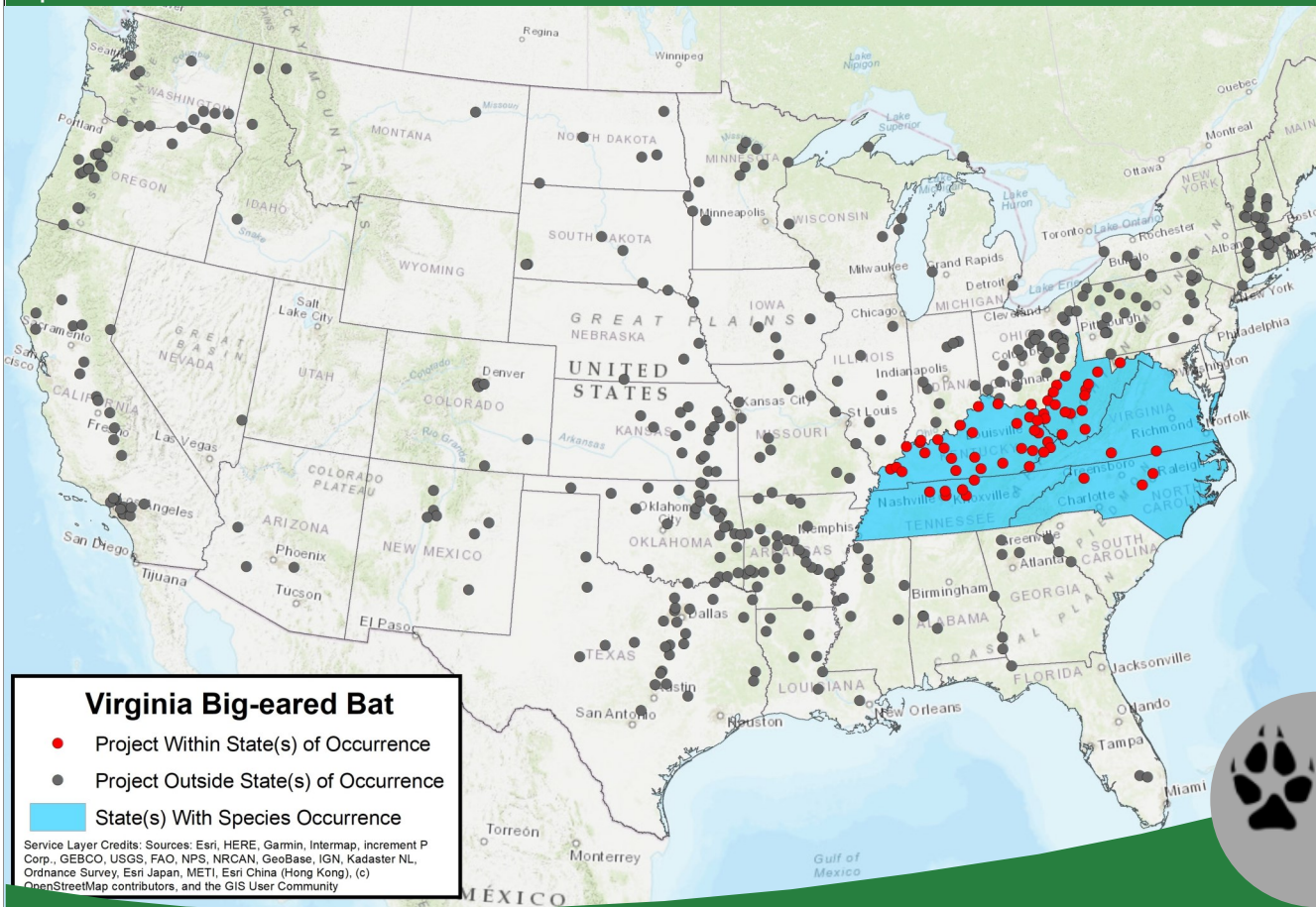
USACE NATURAL RESOURCE MANAGEMENT ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$76,000 since 2006 on efforts related to the Virginia big-eared bat. The costs associated with this species have been incurred by numerous business lines including Regulatory, Planning and Program Management, Flood Risk Management, Recreation, and Environmental Stewardship.

WHAT IS USACE NRM DOING: With a limited geographic range, only a single NRM project in the Louisville District reported the potential for the species occurrence during the FY20 NRM Assessment.

A technical report published by ERDC in 2002, focused on the Virginia big-eared bat as part of an examination of cave and crevice-dwelling bats on USACE projects. As noted within the report, the continued protection of caves—should any be discovered on USACE lands—is critical to the continued existence of the species.



Photo Above: Cave Run Lake, Kentucky, is located within the range of the Virginia big-eared bat and has reported the potential for the species to occur over project lands.



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Source: Map provided by Ashleigh Boss, ORISE Fellow, Institute for Water Resources

