



Roaring River © Chuck Sutherland

Keeping Waterways Clear and Connected

Securing clean, naturally flowing waters is a priority in Tennessee

Tennesseans are often surprised to learn that we reside within a global hotspot for aquatic biodiversity. In fact, rivers and streams in the Southeast United States support two-thirds of our nation's fish species, more than 90 percent of its mussel species and nearly one-half of our planet's crayfish species—many endemic to the region and found nowhere else in the world.

However, these waterways, including in Tennessee, are compromised not only by pollution, but by thousands of dams and road crossings. These barriers disrupt the quality, natural flow and connectivity among important wildlife corridors and sources of drinking water, navigation and recreation.

"Our rivers and streams function similarly to our circulatory systems, with small capillaries feeding into veins that feed into large arteries," says Rob Bullard,



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The Nature Conservancy's Tennessee and Cumberland Rivers program director. "Similar to our bodies, a blockage in one place can affect how everything works."

In response, TNC is working as part of the Tennessee Aquatic Connectivity Team, TACT, comprised of engineers and representatives from agencies, nonprofits, and other sectors who are sharing expertise and leveraging resources to assess barriers to rivers and streams

around the state.

"We are working strategically to inventory and identify which places need immediate attention," adds Bullard, who says that priorities for removal include barriers that are no longer serving a purpose, are failing, and/or are a threat to the health and safety of people and wildlife. "To date, we have identified priorities among 2,000 dams and 10,000 road crossings that will make the biggest impact on water quality and the unique biodiversity found in rivers and streams around Tennessee."

Support this Work

We are grateful to several private individuals and organizations for leveraging donations dedicated to advancing efforts to connect aquatic habitats around Tennessee. Visit nature.org/tngiving to support this work today.



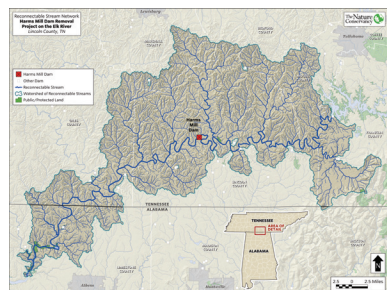
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Top Priority: Harms Mill Dam

Removing an outdated dam benefits river health and species found nowhere else in the world

In an effort to reconnect targeted dammed and diverted waterways around the state, The Nature Conservancy is working with the U.S. Fish and Wildlife Service, the National Fish and Wildlife Foundation, Tennessee Valley Authority and the Tennessee Wildlife Resources Agency (TWRA) to advance removal of Harms Mill Dam on the Elk River in Middle Tennessee. Currently in the design phase, the project ranks in the top five out of 2,000 dam removal priorities identified in the state.

“We can’t overstate the significance of removing this dam, it is the only major barrier located on the mainstem of the Elk River, separating a network of 804 linear miles of streams below the dam from 780 miles upstream,” says Rob Bullard, TNC’s Tennessee and Cumberland Rivers program director.



Scientists determined that 19 species listed as federally endangered or threatened will benefit from the Harms Mill Dam removal.

Pigtoe, which until turning up just downstream from the dam in 2021, had not been seen on the river for more than 25 years,” says Jason Wisniewski, mollusk conservation coordinator at TWRA. “Removing the dam will benefit these mussels, and many other fragile species, while improving the health of the river.”

Currently, the partners are working to determine how to remove the dam with the least disturbance to wildlife. The first of its kind on the Elk, this project follows in the footsteps of removing a dam on the Roaring River in 2017—the largest to date in Tennessee—and other efforts around Nashville.

“Removing Harms Mill eliminates a major barrier for the lifecycles of several aquatic species, like the federally endangered Shiny

NATURE TENNESSEE

SPECIES SPOTLIGHT: Boulder Darter

While only three inches in length, the small and unassuming Boulder Darter (*Nothonotus wapiti*) attracts worldwide attention because of its limited range—only a 30-mile stretch of the Elk River and some of its tributaries. Over the years, water pollution flowing from wastewater facilities and other sources compromised habitat for this federally endangered fish in one of those tributaries—Shoal Creek, where the species has not been seen for more than a century. The situation has been exacerbated by Harms Mill Dam, on the Elk River, which hinders the darters from reaching suitable habitat upstream.



© Conservation Fisheries

Today, Shoal Creek serves as a restoration site for Boulder Darters collected from healthy habitat located just downstream from Harms Mill Dam.

“We use the darters as breeders for the restoration efforts,” says J.R. Shute, co-director at Conservation Fisheries, a Knoxville-based non-profit that propagates imperiled fish species in aquariums before returning them to native river systems throughout the Southeast. “It is a reason why we look forward to providing input on the best times of year, and in the lifecycle of this fish species, to pursue the Harms Mill Dam removal with the least disturbance to wildlife.”