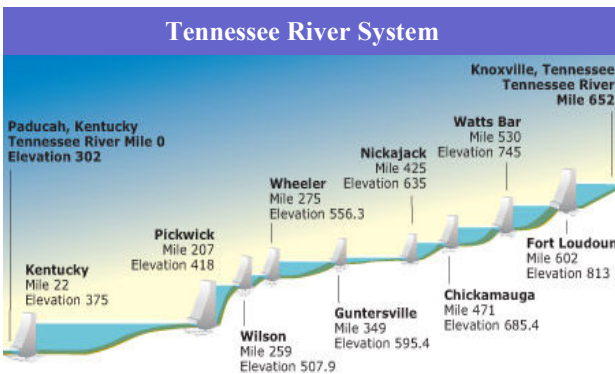


Dams and Locks

How the System Works



Nine main-river dams form a "staircase" of quiet, pooled water and controlled current—a continuous chain of reservoirs that stretches along the entire length of the Tennessee River. From its beginning just above Knoxville, the Tennessee drops a total of 513 feet in elevation before it empties into the Ohio River near Paducah.

TVA's reservoir operations help to maintain a steady water level that guarantees year-round passage for vessels requiring a nine foot "draft"—that is, the amount of water it takes for them to float. Even deeper water for more than half the river's length makes for improved towing efficiency.

Nine main and four auxiliary locks on the Tennessee River make it possible for both recreational and commercial vessels to pass easily from one reservoir to another. Much like an elevator, these locks raise or lower barges and other boats from one water level to the next. Once a vessel is inside a lock, the gates close and the water is pumped in or allowed to drain out of the lock. On average, this process takes about 45 minutes. When the water level inside the lock is equal to the level of the next reservoir, gates at the other end of the lock are opened and the vessel continues its voyage.

The largest lock, at Pickwick Dam, is 110 feet wide and 1,000 feet long. The lock at Kentucky Dam is the busiest on the entire system, handling over 32 million tons of river freight per year. Almost all of these locks are in operation 24 hours a day, 365 days a year—and all are available for use without charge.

Throughout the years and in many different ways, navigation has made—and continues to make—a real difference in the lives of citizens all across the Tennessee Valley.

Formed in 1967, the Tennessee River Valley Association promotes commercial navigation as a catalyst to economic growth in the Tennessee Valley. As a non-partisan unified voice, the TRVA supports legislation that is economically beneficial to the entire region. Our members include towing companies, barge lines, port and terminal operators, municipalities and other concerned citizens from across the southeastern United States.

TRVA actively advocates on behalf of the U.S. Army Corps of Engineers operations & maintenance and construction budgets. TRVA strives to insure the continued development, improvement, and modernization of this valuable infrastructure asset that provides so many benefits to communities in our region.

Participation in the membership of the Tennessee River Valley Association provides an opportunity to join with other community leaders dedicated to the economic vitality of the Tennessee Valley.

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TRVA is a not-for-profit 501(c)(4) public interest organization

Navigation

ON THE TENNESSEE RIVER



Putting the Waterway to Work For the People of the Valley

TRVA
 Tennessee River Valley Association

History

Taming the Tennessee for Transportation



During the early years of commercial navigation, steamboats on the Tennessee had to contend with low water, swift currents, and rocky shoals.

Ever since Native Americans and fur traders first loaded canoes, the Tennessee River has been an important mode of transportation. The river provided a much quicker and easier way of transporting people and goods than the overland route. But it came with its own set of problems; low water and navigation hazards such as swift currents and rocky shoals. Later on, flatboats and steamboats had to deal with the same problems encountered by the early settlers. Periodic floods and droughts made travel up and down the river even more difficult.

As the population of the Valley grew, so did the region's commerce. The lure of reliable water transportation was finally strong enough to justify the challenge of improving the river for navigation. That task fell to the Tennessee Valley Authority (TVA), created by an act of Congress in 1933. Along with flood control and hydropower generation, navigation was one of the main objectives for which the new agency was to manage the river—putting it to work for the people of the Valley. By 1945, the navigation channel was essentially completed; a system of dams and locks set the stage for decades of thriving river traffic. Today, an estimated 34,000 barges carry about 50 million tons of goods up and down the Tennessee River annually.



The River's main navigable channel is 652 miles long. It officially begins a mile above Knoxville, TN and eventually empties into the Ohio River at Paducah, KY. Commercial navigation also extends into three tributaries: 61 miles up the Clinch River, 29 miles up the Little Tennessee, and 21 miles up the Hiwassee River. Another 150 miles of channel—too shallow for commercial traffic—is marked for recreational use.