

NEW RESERVOIR RECOMMENDED FOR PUBLIC HEALTH

Nashville suffered severe cholera outbreaks in 1849, 1850, 1854, 1866, and 1873.

Cholera is a bacterial disease that is spread through contact with contaminated feces. Lack of sanitation and lack of clean water, along with overcrowding, provides the perfect conditions for a public health crisis. The symptoms of cholera include vomiting and profuse watery diarrhea, which, if untreated, can cause death by dehydration within 24 hours.

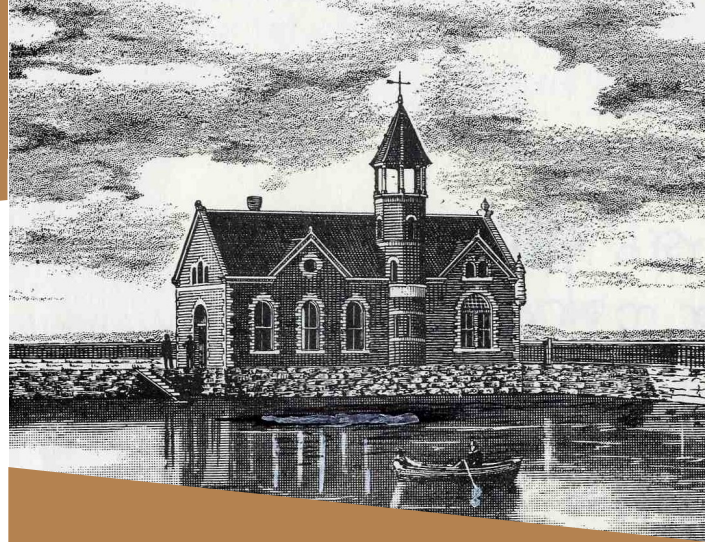
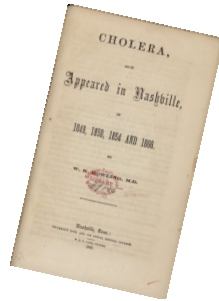
After the 1866 outbreak of Asiatic Cholera, the Nashville Medical Society sounded the alarm, and the result was the establishment of the Board of Health of Nashville.

Both the 1877 and 1879 Board of Health Reports proposed a new plan for improving the water supply of Nashville.

In 1884 Vanderbilt Professor, Olin H. Landreth, analyzed several potential sites for suitable water quality and long-term planning. In Landreth's 1884 *Report on Water Supply of Nashville, Tenn.* he concluded:

"I recommend, ... that the pumping station be placed on the bank of the Cumberland 900 feet above the present mouth of Browns Creek; that the water be led to the suction well of the pumps from a crib placed on or near the south bank of the river opposite the upper end of the island; [and] that the water be forced through a 36-inch main to the reservoir on Curry's Hill."

He went on to recommend that the reservoir be a 2-compartment reservoir for settling and distributing with a minimum 6-day storage capacity and to install a future pumping station along the Cumberland River above the Stones River confluence.



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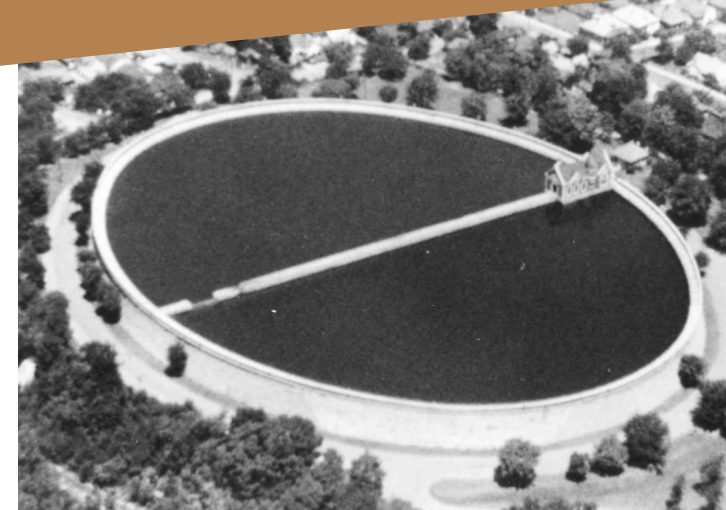
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NASHVILLE'S 8TH AVENUE RESERVOIR



THE CITY RESERVOIR

NOVEMBER 5, 1912



At 12:10 a.m., Tuesday, November 5, 1912, the southeast quadrant of the 8th Avenue Reservoir broke away. This allowed 25 million gallons of water to flow toward the State Fairgrounds. Many houses were washed from their foundations and considerable damage resulted from the sudden flooding in the vicinity but fortunately, no lives were lost. Estimated property damage was \$75 - \$100,000. The cost of repairing the reservoir was \$100,000.

For some time before the break in the reservoir occurred, observers noticed that a large stream of water was running down the gutter on Eighth Avenue. Some engineers claimed the cause of the break was slipping of the clay strata, causing the wall to slide. It is more likely that the leaking water gradually dissolved the clay, which allowed the thin ledges of stone to settle until the wall broke. The wall did not fail from water pressure.

Currently, seepage and ground movement near the reservoir is monitored daily and inspections are done yearly to check for possible settlement.

In 1887, J. A. Jowett, the City Engineer, prepared the plans and specifications to construct City Reservoir on Kirkpatrick's Hill, the site of Fort Casino during the 1864 Battle of Nashville. Whitsett and Adams won the competitive contract and began construction of Nashville's second reservoir in 1887. The reservoir, completed August 24, 1889, cost \$364,525.21.

The contractor constructed City Reservoir out of cut limestone quarried near the present Rose Park. The squared-stone masonry walls taper from 22.9 feet wide at the bottom to eight feet wide at the top. The walls stand 33 feet, nine inches high. The interior of the elliptical-shaped reservoir measures 603 feet by 463.4 feet. A center dividing wall separates two basins, each holding approximately 25.5 million gallons.

When the reservoir was first constructed, the City did not have a filtration plant; water treatment consisted of allowing the mud to settle to the bottom of the reservoir basin. The two-compartment reservoir design allowed the west side to

function as a settling basin. As mud settled out of the stored water, the clear water at the top of the basin flowed through a channel, or weir, in the cross wall to the east basin. The cleaner, settled water flowed to the community through a series of cast iron and wooden pipes.

A gatehouse on top of the reservoir houses valves and served as a shelter for the custodian. A nine-foot walkway, with sidewalls, runs around the top of the reservoir.

The City Reservoir, now known as the 8th Avenue Reservoir, is the largest of Metro Water Services' reservoirs with a capacity of 51 million gallons. The National Park Service placed the City Reservoir on the National Register of Historic Places on March 30, 1978. Although no longer used as a settling basin, the 8th Avenue Reservoir is still in use today to store clean water, treated at one of our two treatment plants, for distribution to the community.

MASSIVE WALLS OF CITY RESERVOIR CRUMBLE WITHOUT MINUTE'S WARNING

