It was the Christmas Eve of 1779, when James Robertson and his party arrived to form the first permanent settlement of Nashville. Fort Nashborough was erected upon the bluff between what was to become the southeast corner of the Square and Spring Street in Nashville. This location was selected to include a spring at the eastern end of Spring Street, which is now called Church Street. In case of an Indian attack, water from the spring was brought into the fort by a little wooden trough which emptied into a small pond used for watering stock. The early settlers used this spring for many years, even after the stockaded fort was no longer needed. In 1787, it was reported that the spring formed "quite a cascade" over the bluff, but just before the Civil War it nearly ceased.

Two springs supplied the first inhabitants of Nashville with water. One spring was located near what is today the intersection of First Avenue North and Church Street; the other spring was located under the bluff where the Methodist Publishing House was located from 1856 until 1906. Servants had to carry the water in wooden buckets and pails to the homes of their masters.

In February of 1862, Federal troops came to occupy the city for the remainder of the great conflict between the North and the South. The Yankee troops were blasting rock in the vicinity of the spring along Front Street -- First Avenue North. For some reason, they touched off one unusually heavy charge that rattled windows as far as Capitol Hill. That was the end of the old spring. Its waters never rose to the surface again, but when the river was at low stage, a small stream could be seen trickling from the bluff near the water line.

Nashville's first attempt to establish a public water supply must be classified as a failure. On April 1, 1823, Samuel Stacker, a local saw and grist mill operator, was employed to install a pump for the city at the foot of Spring (Church) Street. The plan was to pump water into a reservoir which the city had erected. For water mains, he used black locust and cedar logs with a hole drilled through the center. The supply line was to extend from this storage point to the Public Square. Stacker was competent to do the work, but he overlooked the cost of excavating the rock for the ditches. Most of the Nashville area has a limestone substrate. He did get water to the reservoir, which the public considered to be a great triumph, but he had spent his $6,000 contract price. Incidentally, sections of this wooden water pipe were unearthed when the Nashville Gas Company constructed new lines under Fourth Avenue North in 1973. Some of these pipe sections are on display at the Metro Water Services Administration Building on Second Avenue in Nashville.

After two years of work and having run out of funds and patience before completing the contract, the city rescinded Mr. Stacker's contract and purchased the unfinished works for $2,500. The city then made a new contract with Avery and Ward on April 1, 1826. The terms of this last contract were never made public. The wooden pipes were extended to the Square, but the pump house burned on March 9, 1830, after a little more than three years of service. Again the city was without water except for spring water, which was carried in pails or purchased from the carts of delivery men. A twenty-five gallon keg of water could be bought for 12 1/2 cents (one bit).

It was suggested that a reservoir be built on Campbell's Hill (the present site of the Capitol), and that water be taken from a spring. The city fathers wisely decided to rely on river water, and they purchased four acres of land on a bluff of the river one mile south of the Public Square (present site of General Hospital).

On October 1, 1830, the Council appointed a Water Committee, and on January 19, 1831, Albert Stein, a German engineer, was appointed to direct and superintend the execution and completion of a Nashville water works. His plan was to supply the city with water from the Cumberland River, north of the city, by means of a reservoir and a steam engine. He erected this second waterworks system on the grounds of our present General Hospital. The pumping station was located on the lower bluffs behind the hospital where the Tennessee Central Railroad tracks were later installed. Stein had trouble getting the necessary cast iron pipe and placed an order with several companies who failed to furnish it. Finally, the order was placed with Joseph and Samuel Stacker, the man who went broke trying to build the first pumping

station. Stacker had returned to Pittsburgh and persuaded his brother to join him in building a blast furnace in Stewart County, Tennessee. He mastered the art of casting pipe from pig iron and was able to deliver the pipe and fittings to Nashville.

The following is a list of known cast iron water mains that have been in continuous service since 1832: 300 feet of 6 inch cast iron main in Church Street (formerly Spring Street) from 2nd Avenue North to 3rd Avenue North.

3,645 feet of 18 inch cast iron main extending from the former reservoir grounds at the location where the old General Hospital was located; running to Academy Place, Lindsley Avenue, 2nd Avenue South, and Ash Street.

Unknown footage of 12 inch cast iron main in 5th Avenue South from Ash Street to Church Street.

The system was completed in the fall of 1833, at a total cost for ground, superintendents, engine, etc., of $55,000. In celebration, a parade of 1,000 people, led by city officials, members of the state legislature, and a brass band, walked from the Square to the pumping station. Cannons were fired to celebrate the event and eloquent speakers extolled the plant as evidence of the city's progress. The plant functioned satisfactorily for many years, but muddy water from the Cumberland River was an ever-present problem. In the early days of the system, the silt had been allowed to settle out while the water was stored in the reservoir. Over a period of time, this silt build-up became a serious situation. In dealing with this, Superintendent James Wyatt utilized an ingenious method using the sand and gravel of the river to naturally filter the water. This worked well for about twenty (20) years or until about 1900.

In 1865, the sanitary conditions in Nashville could only have been described as filthy. With the large army of Union soldiers, army contractors, camp followers, ex-slaves, and citizens, there were approximately 100,000 people living in the city at the time. This overcrowding created unsanitary conditions, with which the authorities could not cope. There were many cheap and dirty eating joints, filthy flop houses, barrelhouses (disreputable saloons), brothels, and slums swarming with rats. A request by the Nashville Academy of Medicine to the city authorities to appoint a Board of Health with the powers and funds to clean up the city was ignored until a plague of Asiatic cholera broke out in the city.

It had become apparent in 1887 that a new reservoir was necessary, as the old reservoir was not at an elevation to supply the highest points in the city without considerable difficulty. A new reservoir, now known as the Eighth Avenue South Reservoir, was constructed of cut limestone quarried in the vicinity of the present Rose Park. It was located on Kirkpatrick's Hill, the former site of Fort Casino, which had been used by the Federal troops during the Battle of Nashville in 1864. This reservoir, known as the main reservoir, was begun in 1887 and completed on August 24, 1889. It had a 51 million gallon capacity and a total cost of $364,525.21. It is a prominent object, visible from all parts of the surrounding territory. The structure is divided into two compartments, each having a capacity of 25.5 million gallons. Raw, muddy water was pumped into the west compartment for settling. The east basin was used for storage.

By 1888, in spite of the construction of a new reservoir, the addition of more pumps and the erection of another standpipe, it was obvious that a radical change was necessary in the city's water system to supply the needs of the people. The decision was made to locate the new pumping station at the "Upper Island" near the natural filtering galleries. Another reason for locating the station here was to take water above the contaminated flow of Brown's Creek. The pumping station, built of handmade bricks, was begun at this location in 1888 and completed in 1889. The original installation was powered by steam and had a capacity of 10 MGD. (In 1953 the pumping station converted from steam to electric-powered equipment.) It is now called the George Reyer Pumping Station in honor of Captain George Reyer, who was superintendent of the Water Works for 41 years until his death in 1932.

Chemical treatment of the water, using alum and hypochlorite of lime, was begun in 1908. These as the agents facilitated settling of the mud and sterilization of the water. Liquid chlorine was first used at this reservoir in 1920, replacing the hypochlorite of lime.

On Tuesday, November 5, 1912, at 12:10 a.m., the day Woodrow Wilson was elected President for his first term, a large section of the southeast quadrant of the Eighth Avenue South Reservoir broke away. This allowed 25 million gallons of water to rush towards the State Fairgrounds. Many houses were washed from their foundations, and considerable damage resulted from the sudden flooding in the vicinity, but no lives were lost. The estimated property damage was from $75,000 to $100,000. The cost of repairing the reservoir was about $100,000.

The Eighth Avenue South Reservoir, like the George Reyer Pumping Station, has been in continuous use since completion.

Progress in improving the water system came slowly in the early years. In 1921, a grit chamber was installed near the pumping station. In 1928, the first filtration plant was placed into service with a capacity of 28 million gallons per day. For the first time since the main reservoir had been built 40 years before, it could now be used for the storage of clear sterilized water. An addition was made to the filtration plant in 1932, raising its capacity to 42 million gallons per day. In 1953, the third expansion was made, which included an additional aerator, grit chamber, mixing basins and two additional Walker process clarifiers. Fluoridation of the city water supply was begun in February 1953. It has continued since that date.

The final improvement program was completed in 1963, which raised the total capacity of the plant to a rated capacity of 71 million gallons of drinkable water per day. Basically, the plant of today consists of two grit chambers, eleven pairs of mixing basins, three vertical flow clarifiers, 30 filtering units, two wash water storage tanks, and chemical storage and feeding equipment. Presently, the plant is in the process of being upgraded to 90 million gallons per day. Project completion is estimated to be in September, 2000.

Similar improvements to the Geroge Reyer pumping station have been made through the years. In 1945, the station pumping units were powered by three 520 horse-power boilers which provided steam for driving the turbines and pumping engines. In 1953, the station was modernized by removing the coal-fired steam boilers and steam turbines and converting the entire station to electrically powered equipment. In 1963, a further improvement and expansion program was undertaken in which the older and obsolete units were replaced with new equipment. The building has duplicate pumping capacity totaling approximately 140 million gallons per day of raw river water. Much of the equipment has been in continuous service since 1928. Today, the station is equipped with seven electrically powered, high-lift pumping units for finished water. This furnishes a total pumping capacity of 139 million gallons of finished water per day.

In 1978, the K. R. Harrington Water Treatment Plant at 3181 Heartland Drive in Donelson was put into service. It is located where the Stones River empties into the Cumberland River. The treatment plant capacity is 90 MGD. In conjunction with the Omohundro Drive Water Treatment Plant, the water treatment section has a daily capacity output of 162 MGD of drinkable water. On an average day, both plants pump 78 million gallons. If one plant is out of service, the other can supply the entire city's water needs.

These two treatment plants provide all the water for the City of Nashville and its surrounding neighbors who purchase water from us. In addition to the treatment plant responsibilities, the water plant operations section has the responsibility to maintain and operate approximately 156 water and sewerage pumping stations which are scattered throughout the 540 square-mile area of the county. The section is also responsible for 45 reservoirs located at strategic locations within the community.

Water sent from both plants to the consumers is tested daily in the Central Laboratory and twelve times monthly by the State Department of Public Health. In addition to the daily tests of water leaving the plant, samples are taken weekly from approximately 150 points in the distribution system. The plant is operated by highly trained personnel who are on duty twenty-four hours per day.