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HISTORY OF HUNTSVILLE

WATER WORKS

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By virtue of its establishment in 1823, the Huntsville Water Works has the distinction of being the oldest public water system in the United States west of the Appalachians. Drawing water from the Big Spring, and in recent years from other sources, the system has served Huntsville continuously for 150 years.

1823-1836

The earliest record on the water works was made on February 15, 1823. On that day Hunter Peel, an English civil engineer who came to Huntsville in 1816, executed an agreement with the Board of Trustees to furnish the town with water. Peel believed that a water system with a reservoir of water on the public square would serve two purposes. It would be of great convenience for public use and it would also greatly improve the town's ability to fight fires.

As set forth in the contract, Peel was to supply residents "with good spring water to be conveyed in hydrants into a reservoir on the public square." Under the franchise Peel was given exclusive right to convey the water "provided always that he shall within one year from this date cause good spring water to be conveyed in strong hydrants (cedar log conduits) iron

bound at their juncture, to a waterproof reservoir of good thick plant, containing at least 1,000 cubic feet (7,500 gallons) to be by him built on the public square of said town."

Leroy Pope, original purchaser of much of the land on which Huntsville was located, owned the Big Spring. On April 14, 1823, Pope executed a contract with Peel granting him the right to erect a dam across the stream from the spring and to construct there a house "not exceeding thirty feet long by twenty-four wide to house the water works." Peel, who was county engineer at the time, formed a partnership with James Barclay, a machinist, and Huntsville's first water works was under way.

Peel and Barclay's first water plant consisted of an awkward looking wooden self-propelled turbine wheel turned by the spring flow which pumped water through cedar log pipes to the reservoir on the Square.

The first cedar log pipes used were very crude. They were up to fourteen feet in length and how they were hollowed out is still a mystery. The cedar pipes apparently used after 1827 were all bored with an auger.

Peel and Barclay apparently experienced difficulties in keeping the system operating and there were extended periods when the reservoir remained empty. Dissatisfaction with Peel's operation resulted in his losing his franchise which was granted to a Joshua Cox in 1825. Cox's operation of the water works was no better than Peel's, and in 1826 he sold the system to Thomas A. Ronalds of New York. Ronalds hired Sam D. Morgan as supervisor and commenced a significant improvement of the facilities. These improvements included a new dam, engine house, new cedar log pipes, and a more powerful pump. In 1828, after much agitation, the town council contracted with Ronalds to construct, adjacent to the courthouse, a new larger reservoir at a cost of \$900. The new

reservoir was a wooden tank eighteen feet square and ten feet high, with a capacity of 24,300 gallons. It was enclosed by a two story brick structure, the upper portion of which was a meeting room for the town council. In addition to providing the new reservoir, Ronalds agreed to erect fire plugs at each corner of the public square "for the exclusive use of the fire engines of said town with three and one-half inch pipes (made from cedar logs) leading from the Reservoir thereto, such Fire Plugs are to be kept in such good order and repair that a plentiful supply of water can at all times be had therefrom for the extinguishments of Fire."

1836-1858

Ronalds and Morgan operated the water system until 1836. At that time, Dr. Thomas Fearn and his brother George Fearn, who was on the council, acquired the water works. In a contract executed with the Aldermen of Huntsville, Dr. Fearn and George Fearn agreed to completely rebuild the water system. The improvements included the installation of an iron pump at the spring and cast iron pipes 5" in diameter to the four corners of the public square. This marked the first use of cast iron pipe in the water system. The mayor and council agreed "to construct within five years, a reservoir upon some suitable site to be provided by them so as to admit an elevation of water therein forty feet above the surface of the public square." The reservoir was to be sixty feet by sixty feet and ten feet deep, and the city agreed to construct an iron main of 5" diameter to connect the reservoir to the water works pump at the Spring. In 1842, a new reservoir was constructed on a lot 150 feet square situated between Echols Street and McClung Street. The reservoir was dug ten feet deep and was seventy feet in

diameter. It had a capacity of 287,523 gallons of water. The elevation of the new reservoir and the new five inch main made possible a great expansion of the area which could be adequately served with water. In Dr. Fearn's Waterworks account book of 1842, were listed a total of 111 customers. In 1843, William W. Pope, who had acquired ownership of the Big Spring from his father, Leroy Pope, deeded it to the City for one dollar. In compliance with certain terms of the gift, the city embarked upon a beautification program of the property. William Frye's painting of the Big Spring area is said to have been inspired by the improvements made at the Spring.

Dr. Fearn continued to operate the water works and in 1854, the town council named a committee of three to inquire into the propriety of purchasing the water works from him. As a result of this study, in 1858, the city purchased the water works for the sum of \$10,000, to be paid in ten equal annual installments.

1859-1892

On July 1, 1859, an ordinance was adopted by the town council "to establish a tax for the use of water from the Water Works of the Town of Huntsville." The rates for residential users were based on the valuation of the house. "For each dwelling valued at no more than eight thousand dollars, the water tax shall be twelve dollars and fifty cents per annum." For commercial users, specific annual rates were set forth.

In 1860, the city constructed a new building to house the water works at the Spring. This masonry building with various alterations, including a smoke stack, served until a new pumping station was built nearby on Gallatin Street in 1899.

One of Huntsville's most exciting events took place in 1887, the opening of the famous Monte Sano Hotel.

One of the local newspapers, The Huntsville Independent, reported on May 26, 1887, that the work of connecting the Monte Sano Hotel with the city water works at the Big Spring was practically completed. A force pump was installed at the Spring and water was pumped up the mountain for the use of the hotel.

During the years of the Civil War and the Reconstruction days, there was very little expansion or improvement in the water system. However, by 1887 Huntsville was beginning to grow and it was apparent that the water system would have to be expanded and improved. After securing the permission of the state legislature, the city in March, 1887, sold \$15,000 in municipal bonds for the purpose of expanding the water system, and embarked on the greatest expansion program ever undertaken up to that time. The report of the water works inspector in 1889, gives an interesting accounting of the customers being served: 591 hydrants, 162 water closets, 63 baths, 24 urinals, 87 sprinklers, and 7 soda founts; a total of 934 services.

As part of the effort to attract a major new industry to Huntsville, the city in 1891, agreed to provide free 500,000 gallons of water per day for ten years to the Dallas Manufacturing Company.

The Huntsville Daily Mercury on December 21, 1892, had this comment:

The Board (of Aldermen) has now provided well for our citizens, and no more 'kicking' will be heard from patrons who have complained of being unable to get water early in the morning. The Chairman of the Water Works Committee was instructed to employ an extra man for work -- keeping the machinery (pump) at work constantly till the new standpipe is erected."

This incident pointed up the critical need for more storage capacity than the old dug reservoir of 1842 provided. Early in 1893 a new standpipe (reservoir) was erected on top of Echols Hill on land donated by

Colonel W. H. Echols. This new reservoir had a capacity of 600,000 gallons.

The increased pressure and volume of water provided by the major expansion in the 1890's made possible some interesting new uses of water from the system. At least one barber shop used a water motor for propelling the ceiling fans back and forth. A similar fan was used in the Monroe home on Greene Street. In 1904, the W. L. Halsey Grocery Company installed an elevator powered by water, and in 1813, the printing presses in the Monroe printing shop were water powered. These uses were economically feasible only because the water used was sold on a flat rate and not metered. The year 1898 brought civic attention to the need for beautification of the Big Spring area. After the old pump house was torn down, significant improvements were made in the appearance of the Spring area. The old dam was removed, the basin was widened, and the banks of the stream walled with white limestone. Three bridges were built and a fountain was installed in the basin at the head of the Spring.

The contamination of the water supply from the Spring first became a matter of concern in 1898, with an outbreak of typhoid fever. It resulted in the paving of the public square as a means of some protection to the underlying stream of water. After frequent typhoid outbreaks, the water department 1914 installed its first chlorinator. This was a very inefficient device and was of little value in purifying water pumped into the city's mains. In 1917, a severe outbreak of typhoid resulted in a survey by Dr. Carl A. Grote, Huntsville's first health officer. Open toilets located over rock crevices behind the old Market House located on the southwest corner of Clinton and Washington Streets were considered to be the cause of the pollution and a new sewer line was installed. An efficient drip-type chlorinator was installed in 1918,

after which typhoid resulting from contamination from the city's water system became virtually non-existent.

Although chlorination of the water had effectively eliminated the threat of typhoid, the fear of pollution of the water supply continued to be a source of concern to health authorities. In 1950, the city was ordered by the State Health Department to look for another source of water other than the Big Spring. After investigation by the Alabama and U. S. Geological Survey, it was determined that the Dallas Well and Lincoln Well, located about a mile northeast of the Big Spring, actually were tapping the same underground source, which fed the Big Spring. The two wells were acquired in 1955, and pumping from the Big Spring was discontinued in 1957.

An interesting economic aspect of the city's operation of the water system is the fact that for some thirty years prior to 1950, the revenues from the sale of water was the biggest single source of income for the city's general fund.

In 1954, as the city was faced with the need for tremendous modernization and expansion of the water system, it was decided to place the operation under a newly created Water Works Utility Board, thus ending ninety-six years of operation of the water system by the city council. Members of Huntsville Water Works Utility Board were appointed by the city council. It was at this time that the Water Department and the newly formed Natural Gas Department were placed under the direction of the General Manager of the Electric Department and the total operation became known as Huntsville Utilities.

By the early 1960's, because of Huntsville's enormous growth, it became apparent that sources other than wells must be used to meet the city's water needs. In 1964, a water purification plant was constructed near the Tennessee River. The plant which

was enlarged in 1967, can purify and pump into the city water system 18,000,000 gallons daily. By 1973, on the 150th anniversary of the establishment of this historic old water system, it had become one of the country's finest, with 652 miles of mains and a storage capacity of 32,000,000 gallons.