

THE AUGUSTA WATER DISTRICT IS IN THE
"OLD TIMER" GROUP

One of the oldest continuing businesses in Augusta is the business of supplying water for household use, manufacturing purposes and the extinguishment of fires, and the Augusta Water District operates this business.

The first business of this kind of record was the Augusta Water Company, organized by a group of citizens in 1870. These men dammed up the small brook West of the State House and laid pipes made of hollow logs through several streets on the West side of the river between the State House and Bridge Street with one or two branches to Water Street. A few hydrants were installed on State and Water Streets and numerous houses were connected with the mains by means of lead pipes.

As more people demanded water piped into their houses, the available supply from this small brook was soon inadequate and the pond behind the dam was frequently refilled by pumping from the river into a Water Street hydrant by means of the city's steam fire engine. The quality of the water was not too good, since during the summer many of the small fry used the reservoir for an ideal swimming pool and much of the sewage of the city flowed past the point where the fire engine pumped into the mains, so a new company

was formed with more capital and the roots of the present system under the personal supervision of William H. Williams of Augusta.

This was in 1866, more than sixty years ago and most of the water mains laid at that time are still in use, although the source of supply has long since been abandoned.

A pumping station and simple filter plant were built on land of the cotton mill and a pipe laid in the river above the dam. The water above the dam was of much better quality than the brook water. The river water flowed for about twenty miles open to the sun and weather during most of the year and Waterville was a much smaller city than now so that there was less waste from that source.

At the same time an earthen embankment reservoir was built on the hill west of the City Farm, having a capacity of six million gallons. Other parts of the system constructed at this time included twenty-one miles of main pipe, all except about fifteen miles of which being cast iron and mostly still in use, eighty-six hydrants, 419 services and a single pipe line to the National Soldiers Home at Togus. A few years later a three hundred thousand gallon standpipe was erected at Togus for water storage and a second pipe laid part of the way to that point to increase the

amount of water which would flow by gravity.

With the exception of the line to Togus, all of the distribution system was located within the thickly settled limits of Augusta, which at the time had a population of only about twelve thousand people, instead of the more than 20,000 at present. A larger proportion of the total lived in rural area, beyond the reach of water lines.

By the early years of this century, service had been slightly extended to accommodate a few more people on the outskirts of the system. On the East side, Pettingills Corner was the limit to the North, Pearl Street to the East, the State Hospital to the South and only a short distance out Eastern Avenue to the East.

On the West side pipes extended down State Street about to the Hallowell line, Sewall Street to a little south of Capitol, Western Avenue to Gannett's, Winthrop Street to Prospect, Mount Vernon Avenue to a little beyond Mill Street and Northern Avenue to Franklin Street.

About ten miles of pipe had been added, 38 hydrants, and services had increased nearly four times to over 1,500.

Little had been done to improve the quality of the water supplied however, and the river had become more and more a source of disease. Early in the 1900's several severe typhoid epidemics occurred and were traced to the water supplied from that source which was contaminated by sewage from upriver.

Since the officials of the company either were reluctant or unable to improve the situation from a financial standpoint, steps were taken to form a new organization to purchase the plant from the owners and make such improvements as were possible.

A new form of political subdivision had been devised a few years earlier by Mr. Harvey D. Eaton of Waterville, then a young lawyer with a great imagination. He devised the "district" form of local organization which he had persuaded the citizens of Waterville to adopt for the purposes of supplying themselves with water. This idea was adopted in Augusta and a charter for the Augusta Water District was granted by the Legislature of 1903. The District included Wards One, Two, Three, Four, Six, Seven and Eight in Augusta, constituting "a body politic and corporate under the name of the Augusta Water District, for the purposes of supplying the inhabitants of said District and of the towns of Chelsea, Vassalboro, China and Manchester, and such municipalities, together with the City of Augusta, with pure water for domestic and municipal purposes."

John F. Hill, George E. Macomber and Thomas J. Lynch were elected to the Board of Trustees and commenced negotiations for the purchase of the plant and franchises of the Augusta Water Company. No agreement was reached and the property was condemned and a price fixed at \$427,135.20. This amount was soon paid from the proceeds of a \$700,000 bond issue, which also provided sufficient money for investigations of new sources of supply and also to construct the necessary plant to bring the new supply to Augusta.

Several sources were investigated, among them being Silver Lake, Spring Brook, Webber Pond, Cobbosseecontee Lake, Maranacook Lake, China Lake, Carleton Pond and several other smaller bodies of water.

Carleton Pond was finally selected, as being high enough to provide a large proportion of the water by gravity, of ample size and excellent quality. Lake Cobbosseecontee was considered as an auxiliary supply and the work of developing these waters was commenced. A dam was built at the outlet of Carleton Pond and a fish hatchery belonging to the State of Maine was purchased and its equipment moved to Belgrade, a pumping station was built on the shore of Cobbosseecontee near Island Park which contained two electric pumps for drawing water from Carleton Pond and a steam pump for Cobbosseecontee. A 24" cast iron suction line was laid

from off the end of Welch's Point to the pumping station, a 20" cast iron main from the pumping station to the reservoir, a total of over eight miles of pipe. The intake from Carleton Pond was laid about 500 feet from the dam into the lake in about 22 feet of water.

Power for the electric pumps was purchased from the Kennebec Light and Heat Company, predecessor of the Central Maine Power Company. Coal for the boiler for the steam pump was carried to the station on the electric cars, a spur track having been run into the station yard for this purpose.

The works for taking water from Cobbosseecontee were completed on January 18, 1906 and placed in operation and the Kennebec River forever abandoned as a supply of drinking water for the citizens of Augusta. In February of the same year the line to Carleton Pond was completed and all water used in Augusta since that time has come from this pond with the exception of two periods of a few weeks each when it was necessary to use Cobbosseecontee as an auxiliary supply.

The plant of the Augusta Water District has grown more or less gradually since it was acquired from the Augusta Water Company.

Its main pipes reach out in all directions as far as business warrants, or territorial limitations permit.

Vassalboro and Chelsea were amputated from the District many years ago after it was found that good water could be obtained elsewhere and the demand for water service probably never would be great enough to warrant extensions into those towns.

The present outside limits of service are as follows:

- Riverside Drive to the Vassalboro town line
- North Belfast Avenue east of Hicks Road
- South Belfast Avenue nearly to Cony Road
- Cony Street to Bruce Park
- Eastern Avenue to Togus
- Hospital Street to nearly the Chelsea town line
- State Street to the Hallowell line
- Western Avenue to Morangs Crossing
- Mount Vernon Avenue as far as there are dwelling houses
- Northern Avenue to the corner of Townsend Road
- Coombs Mill Road to Twin Bridges

The Village of Manchester is also supplied with ample water and five fire hydrants. East Winthrop Village also is supplied with potable water and four hydrants.

There are 75 miles of mains, ranging in size from 2" to 24" in diameter, 3,576 services, 198 hydrants and several major additions to the distribution system to improve service.

In 1925-26 a ten million gallon reservoir was constructed adjacent to the old one and connected so that one may be out of service without affecting the use of the other. About 1935 a three hundred thousand gallon steel standpipe was erected on "Main Top" so called, together with a booster station near the cotton mill, designed to improve fire protection and domestic service in the Cushnoc Heights area.

After the new hospital was erected at Togus it became necessary to build a new standpipe with a capacity of three hundred thousand gallons in order to serve the upper floors of the new building. Since this standpipe was about 50 feet higher than the old one, a booster station was required to fill it. This was built on Hospital Street and serves to increase the pressure to all residents of the Togus Road section.

A group of new modern dwelling houses were erected on Blaine Avenue making necessary another booster station to serve them. This was built on Western Avenue at the corner of Airport Road and pumps into a small 15,000 gallon tank buried in the ground near the airport.

Still another standpipe was erected at Morangs Crossing intended to equalize the pressure on the long Western Avenue extension.

Other booster systems and storage tanks are planned for various high elevation areas of Augusta. Some will be very small and others will be of greater capacity, depending on the prospects for future development in their respective areas.

One of the major changes made in recent years was the construction of a submarine water main across the river in 1936. Plans for this type of crossing were made as long ago as 1913, but at that time a new railroad bridge was built and the old single track bridge was bought by the District and a 16" main placed upon it and connected to similar size mains in Water and Willow Streets. A second 10" main was placed under the northerly sidewalk of the highway bridge, matching the same size pipe under the south sidewalk. The three lines together across the river have a greater carrying capacity than the main line from Carleton Pond.

All was well with this scheme of things until 1936, when the river rose to unprecedented heights and threatened to remove all bridges in Augusta. It was realized that if this should occur, the three hospitals East of the river would be without water and preparations were made to run emergency lines on cables from one side to the other. Cables were actually placed and work was started on the emergency water lines, but when the crest of the flood passed down

river without plant damage, emergency lines were not required.

Since it was uncertain when a similar or greater flood might appear, it was decided to complete the previous plans for a submarine line. This work was started in mid-summer, and pressed to completion the following March at a cost of about \$85,000.

Financially the district has been prosperous. Whereas the entire plant is owned by its customers, there are no shareholders and consequently no dividends to pay, all earnings in excess of requirements for operation and maintenance of the plant have gone into increased physical property.

As previously stated, the plant and franchises were purchased from the Augusta Water Company at a cost of \$427,000. The new water supply and other improvements cost about \$273,000, making a total of \$700,000, the amount of the first bond issue of 1906. Further improvements and extensions about 1925-1926 cost \$300,000 which was financed by a second bond issue. The river crossing and various extensions were financed in 1939 with a \$100,000 issue, making a total of \$1,100,000 of bonds issued, of which, on December 31, 1946 only \$531,000 remained unpaid. This amount is now all represented by serial bonds which are being paid at the rate of \$25,000 per year.

While retiring bonds, much of the plant has also been paid for from current earnings. The actual plant is now valued at \$1,836,000 which represents the expense of construction over a period of more than forty years. If built now at present costs the value would be far greater.

In recent years it has been the policy of the District to purchase and use as much mechanical equipment for operations as is consistent with good practice. Early in the century there was little such equipment available. All excavation was done by hand with pick and shovel, rock was drilled for blasting by a team of three strikers with a heavy hammer pounding on a long hand sharpened steel drill. When installing a new water main to be connected to an existing one it was necessary to shut off water for a period of several hours, cut the pipe and place a tee and sleeve in the line, with a branch valve connected before the water could be turned on again.

Equipment now in use includes a machine which will do this work in half an hour without stopping water service to anyone and with the wastage of only a few gallons of water. Trenches are dug for water mains by a machine which digs a trench 30 inches wide and up to twelve feet deep at a rate of six inches to five feet per minute, depending on conditions. Rock is drilled by pneumatic drills at a

rapid rate. A diamond core drill will make a horizontal hole as much as 50 feet long in a few hours for installation of house services through solid rock, eliminating the need for much cutting of pavement and blasting rock in lawns and streets. A small crawler type tractor with a scoop on the front will fill trenches, roll down the surface and remove large rocks from the trench. It will also act as a derrick to handle pipe and other heavy objects.

The workshop is equipped with the latest in blacksmithing tools, drills, welders, grinders, hoists and so on.

Transportation of men, tools, equipment and materials is done with trucks suited for the need instead of a single horse drawn wagon as in the past.

One of the most important moves made by the District was made in 1925 and 1926 when a single small office in City Hall and a wooden workshop on the river bank were abandoned in favor of a modern brick one story office building on Williams Street and a three storey concrete and brick workshop and garage on Arsenal Street.

This garage has truck entrances on two levels and a spacious yard

to which was added in 1944 the adjacent Ripley property of nearly an acre in area. The old barn was removed and the yard graded, racks built for the storage of pipe and other material, and storehouses erected for the larger equipment which is used only in the summer and does not require heated quarters.

The District's affairs are governed by a Board of three Trustees, one of whom is elected annually by the Municipal Officers of Augusta, to hold his office three years. These three in turn appoint a superintendent and engineer, a clerk and a treasurer. The superintendent engages the office employees and other personnel to operate and maintain the system.

The payroll amounts to \$38,000 to \$50,000 per year, depending on the number of part time employees engaged during the construction season. The normal force includes a foreman, two office clerks, two pumping station operators who also operate the treatment equipment for sterilization and conditioning of the water supplied, a patrolman at Carleton Pond and ten other men who are capable of carrying on most of the installation and repair work required during the year. Among these ten are many skills or trades, most of them having more than one. There are meter readers and repairmen, welders, blacksmiths, truck drivers, equipment operators, pipe

layers, painters, carpenters, brick layers and machinists. All these men are also efficient with a pick and shovel and do all the installation and repair work during late fall, winter and early spring.

When the construction season opens, usually about May first, extra men are engaged in sufficient numbers to carry on the construction program for the season.