

and the works constructed under a Board of Water Commissioners in the years 1857-58-59-60. In March, 1861, the system was taken over by the City.

As originally constructed the water supply was obtained from a basin, excavated in the sand at the Lake shore, this basin being 1,200 feet long and 78 feet wide at the surface, and 16 feet deep.

Until 1871 a sufficient volume of water filtered through the sand to the basin to supply the City, there being no intake or connection between the lake and the basin.

From the basin the water was conveyed to the pumping station through a 33 inch circular wood stave pipe 1,920 feet in length.

The pumping machinery comprised two beam engines of 100 H. P. each, and four boilers, furnished by John Gartshore, of Dundas, at a cost of \$95,810. These engines had a combined capacity of 3,300,000 gallons per 24 hours, but were enlarged to 5,250,000 gals. capacity in 1880.

From the pumping station the water was forced through an 18 inch cast iron pipe to a reservoir on the mountain side, distant about 17,000 feet in a south-westerly direction. This reservoir contains about 11,000,000 gals. and the surface elevation being 187 feet above Lake Ontario.

A branch main also 18 inches in diameter was laid along Main street to James street, from which sub-mains were laid.

About \$300,000 had been expended upon the works when they were assumed by the City.

Extensions. In 1871 the consumption exceeded the infiltration from the lake, and an opening was made from the basin to lake.

In 1876-7 the filtering basin was lengthened by 400 feet, and a second basin 1,086 feet long constructed to southward of the original, the two being connected by a 36 inch pipe. A new conduit 36 inches in diameter and 1,870 feet in length was also laid from the new basin to the pumping station.

In 1878 the Ferguson avenue High Level re-pumping station was erected. The main floor of this station has an elevation of 99 feet above Lake Ontario. The pumps, of 3,000,000 gals. capacity, raised the water to a small reservoir 196 feet above them, the capacity of reservoir being 400,000 gallons.

In 1880 the pumping cylinders of the beam engines were enlarged from 24 inches diameter to 30 inches in diameter, increasing the capacity to 5,250,000 gallons per day, and the four old boilers were replaced by four tubular boilers.

In the following year the 18 inch force main was parallel to the Barton Reservoir by a 24 inch pipe, with a branch to the City along King street to James. This work cost over \$100,000.

The next important improvement was made in 1886, when a contract was awarded the Osborne-Killey Company for two steam pumping en-