

Philadelphia, January 29, 1931.

ANNUAL REPORT - 1930.

During the past year the Bureau has continued its work of laying large transmission mains, the most conspicuous being the ninety-three (93) and seventy-two (72) inch steel conduit. This contract was completed but until new pumps are installed at the supply terminal, the conduit will not be put in service.

Throughout the area in West Philadelphia where Pennsylvania Railroad reconstruction has materially affected lines and grades of streets, there have been new mains laid of increased carrying capacity to meet the growing demand for service in this neighborhood.

The Grade Crossing modification in Manayunk required extensive re-lays in new locations on street sections.

Further correction of sub-surface leakage has been registered through the efforts of the waste water survey.

There has been supplied to the consumers a daily average of 328 million gallons making a per capita rate of 168 gallons per day by using the last tabulated census figure of population for the City.

The year marked a period in the early Fall of abnormal low flow in the Schuylkill River. Easy passage from the banks could be made below the Flat Rock Dam with no fear of wetting the feet of an observer.

Volume to the consumer has been sufficient and the character of water has held to the high standard which is requested by the U. S. Treasury Department. As an index to the quality of water furnished the death rate for typhoid fever of 0.9 per 100,000 marks the efficiency of operation of the Bureau.

The activities of the various Branches of the Bureau follow in sequential order.

RIVER PATROL

Continued inspection of the industrial plants located on the banks of the Schuylkill River and its tributaries has held in check the drainage of deleterious effluents into the flowing streams. The character of the raw Schuylkill water was responsible for fish mortality during a period in the month of December which created considerable comment. Many of these fish were caught and eaten with no serious consequences.

PUMPING STATIONS

At the Torresdale Station the work in preparation for the installation of high pressure pumps has included the removal of the lofty chimney and the enclosing of former boiler house with a side wall of proper design and appearance.

At the Lardner's Point Station the new metal floors of the subway grating type were completed and each of the twelve vertical-triple steam pumping units were equipped with fly wheel platforms of a similar grating type taking the place of original wooden construction.

The reconditioning of the pumping units has continued and for the Chief Engineer a relocated office is in the process of construction.

At the Belmont Station the original electrical plant has been removed and foundations are now placed to receive the motors intended to drive the two remaining pumps which formerly functioned under steam power. An oil heating plant was installed and new quarters with modern plumbing prepared for the operating force of the station.

At the Queen Lane and Shawmont Stations normal service has been rendered and both stations operated under a high degree of efficiency.

At the various high pressure or booster stations a regularity of operation has continued with minor activities necessary to insure regular service.

FILTERS

The filter plants have functioned in a satisfactory manner and have met the loads required. The sedimentation basins at Queen Lane and Belmont were cleaned showing the value of these intercepting units insomuch as many cubic yards of river silt are arrested before reaching the filter beds.

An additional Blaisdell filter cleaner of a more improved and efficient type was placed in operation at the Upper Roxborough Plant.

At the Belmont and Queen Lane Plants there were installed machines and equipment which would permit the use of ammonia to be applied as an agent for reducing tastes and odors from the water of the Schuylkill River.

DISTRIBUTION

Continued activities on the reconstruction and readjustment of the Pennsylvania Railroad Terminal has offered a field for new pipe lines of larger cross section and much new work has been placed.

Subway work within the congested section of the City has also called for a revision of pipe lines and a more flexible system has been designed and placed at the location of this construction.

The Grade Crossing Revision in the 21st Ward by the Reading Railroad on Cresson and Main streets, Manayunk, has required an extensive readjustment of mains and this work will extend well into the coming year.

A completion of the ninety-three (93) and sixty (60) inch steel conduit was affected and its service expected upon the purchase and installation of the pumps at Torresdale Station.

A main for supplying water to the Oak Lane Basin was completed during the year, the nature of which was a thirty (30) inch steel line connecting by a direct route to an existing line from the Lardner's Point Station.

From the Oak Lane High Service Station there has been laid an additional twenty-four (24) inch cast iron distribution main, delivering to an area of high elevation at a remote section of the City.

Although building operations have been less extensive, much work has been done on the placing of service mains generally in the northeastern section of the City.

An especial drive by the maintenance forces was made upon fire hydrants throughout the City. Many hydrants are damaged by unauthorized operators and a vast amount of malicious pilfering of parts is practiced. Close to six thousand (6,000) inspections were made and this work is made part of a campaign to keep such equipment in operating condition.

Added to the Distribution System during the year were thirty-two (32) miles of piping giving a grand total of all sizes from ninety-three (93) inch to four (4) inch of two thousand four hundred and forty (2440) miles. In the system there were added one hundred twenty seven (127) fire hydrants totaling twenty thousand seven (20,007) throughout the City and nine hundred ten (910) gate valves increase the total throughout the system to forty eight thousand one hundred three (48,103).

Further extension of seventeen thousand two hundred (17,200) lineal feet has been made to the High Pressure Fire System through a congested section of the City, embracing an area from Spruce to Walnut and from 6th to 22nd streets.

The mileage of this system is 62.61 supplying a total of one thousand and fifty nine (1059) hydrants and under the control of one thousand eight hundred fifty two (1852) valves of all sizes, of which number seventy (70) were added during the year.

The water used on fires amounted to approximately fifteen million seven hundred fifty thousand (15,750,000) gallons and the service rendered by this system was highly efficient and commendable.

METERS

The total number of metered services are one hundred and ninety four thousand and ninety four (194,094) an increase of six thousand seven hundred ninety six (6796) for the year.

Repairs were made to sixteen thousand eight hundred ninety three (16,893) meters there being of this number three thousand three hundred forty three (3,343) repaired on the premises of the consumer.

REVENUES

There has been returned \$6,812,290.68 contributed from the following sources:-

Water Rents:-

Flat rates -

Fixtures - Current	\$2,580,906.27	
Fixtures - Delinquent	<u>296,707.12</u>	
		\$2,877,613.39

Meter Rates -

Meters - Current	\$3,427,925.15	
Meters - Delinquent	<u>294,727.05</u>	
		\$3,722,652.20

Water Pipe Searches	\$2,163.50
Frontage - Water Pipe	77,148.29
Specials	11,290.57
New services	24,020.00
Meter Repairs	59,230.43
Miscellaneous	<u>38,172.30</u>

\$212,025.09

\$6,812,290.68

FINANCIAL

Salary and wages	1,735,875.94 \$1,744,879.93	
Material and Equipment (Consumed)	<u>1,505,500.62</u>	\$3,241,376.56
Additions and betterments		<u>1,712,432.92</u>
Grand Total		<u>\$4,953,809.48</u>

CONSTRUCTION WORK

-Stations-

- Torresdale - Restoration of Boiler House Wall
Removal of Flue and Chimney
- Lardner's Point - Completion of Subway Grating floor and fly wheel
platforms in Engine Houses.

Building of Retaining Wall on Levick front of
coal pile.

Relocation and laying of R. R. spur for coal delivery.
- Belmont - Preparing the former two steam driven turbines for
motorization.

Removing Generators and auxiliaries with their re-
spective foundations.

Furnishing and installing heating and plumbing system
for Engine Room.

Replacing floors and walls in room assigned for Chief
Engineer's office.

Distribution

- Pipe Lines - The completion of :-

The ninety-three (93) and seventy-two (72) inch steel
conduit for use between the Torresdale Filter Plant and
Distribution divergence at the lower section of Frank-
ford.

The thirty (30) inch steel main from an existing pumping
main to the Oak Lane Reservoir.

The twenty-four (24) inch rising main from Oak Lane for improvement of pressures and volumes throughout the extreme northern area of the City.

Extensive work on smaller mains centered on the Pennsylvania Railroad terminal in West Philadelphia and on the Philadelphia and Reading Railroad grade crossing adjustments along Cresson and Main streets in Manayunk.

New mains are being laid where subway contracts are under construction on 8th street and Ridge avenue.

The placing of the usual size of service mains throughout the City has measured with the reduced activity of building operations.

Fire Service Lines

Further extension of High Pressure Mains is in progress on Spruce st. and on the intersecting streets between 6th and 22nd streets.

Water Waste Survey

Considerable underground leakage has been corrected on defective services, offending pipe joints and a few broken mains throughout an area located generally in the northeast.

Reservoirs

East Park - Continued activities were directed towards the repairs to inside slopes of the East Park Reservoir.

Contemplated Work 1931

-Stations-

Belmont - Continued work on installation of motors on former steam driven pumps.

Removal of old generator foundations.

Placing floor throughout Engine House.

Renewing sash and windows in Engine House.

Removal of steaming equipment in Boiler House.

Oak Lane - Installation of additional pumping equipment with the necessary discharge piping.

Distribution

Continued Work -

On readjustment of water mains made necessary due to the construction of Pennsylvania Railroad Terminal and the Grade Crossings under the Philadelphia and Reading.

On extensions of eight (8) and twelve (12) inch pipe for operation development.

On further extensions to the High Pressure Fire Lines.

On Water Waste correction.

For the benefit of the unemployed, work has been assigned for painting the fire hydrants and the removal of sediment from the Belmont Reservoir.