

2004.057.0215h
BUREAU OF WATER

130

Philadelphia, January 25, 1929.

ANNUAL REPORT - 1928

The construction progress and operation activities of the Bureau of Water during the past year have registered to an impressive extent. The flexibility of the Distribution System has been improved and continued work on determining the waste of water in the gridiron system has shown a saving due to a survey which has embraced an area between the two rivers and Callowhill and South Streets.

An average of 342 million gallons per day has been supplied to the City from the filter stations which equals 162 on a per capita basis.

The quality supplied to the consumer has been of a safe character, assumption of which is confirmed by the typhoid statistics which register 0.85 deaths per hundred thousand inhabitants.

Reference to the activities of the various branches of the Bureau is herewith noted -

RIVER PATROL

Close inspection has been directed upon the water of the Schuylkill river and its tributary streams into which may be contributed the drainage of industrial plants. Supporting this inspection force there has been and still is in session a Committee appointed by the Mayor. This Committee, working with the State authorities, has effected, through legal control, the correction of polluting agencies and has exacted the promise of many of the plants situated on the Schuylkill that measures will be taken to reduce, if not eliminate, all industrial wastes which have a tendency to give an odor or taste to the water or deprive the natural flow of oxygen content.

Pumping Stations

The Torresdale Station has had the interior of the engine room cleared of old and useless equipment and the entire floor and balcony surface has been tiled presenting a most pleasing appearance. A new heating and plumbing installation is in use and the ground, contiguous to the station and those bordering on the river front, have been resurfaced and trees of attractive varieties have been planted.

The Lardner's Point Station has had new metal roofs on the engine house and throughout both engine and boiler houses new steel doors and sash have been constructed.

At Belmont Station the construction for an expansion of service has been and is still in progress. A new 78 inch pre-cast circular intake with river chamber has been completed and two (2) new 60 million gallon motor driven pumps are in the progress of erection. Electrical equipment has been placed and the housing of same built with attractive brick work, conforming with the finish of the interior of the station. Ultimately the

BUREAU OF WATER

main units of the entire station will be driven by electric power. Changes in the piping to receive the additional pumpage from this station were planned and the activities towards construction of same are well under way.

At Shawmont Station a new plumbing and heating plant has been installed and is giving satisfactory service.

At Queen Lane High Service Station an additional pump has been erected, this unit being one formerly used at Shawmont, the service of which is at the latter place was no longer required.

At Belmont High Service Station extensive piping changes and additional pumping units have been added and the service of the station increased to a material extent.

Filters

At the various filter plants the slow sand beds have functioned regularly and no abnormal characteristics in the water of the rivers have imposed a burden of operation throughout the year.

At Torresdale the rehabilitation of the Preliminary Plant has been completed and brick work has encased the tower in which are enclosed the wash water tanks.

At Queen Lane the cleaning and restoring of filtering material throughout the Preliminary and Mechanical Plant was accomplished and extensive repairs to the ventilators for the roofs of all units will be made in the near future.

At Belmont the mechanical units were placed in service and are regularly functioning. The stage of construction of the coagulating basin, forming an important unit of this mechanical plant, is rapidly approaching a stage of completion. At all of the Filter Plants a new equipment of chlorine machines of the latest type has been installed.

The sand washing has been accomplished in a satisfying manner with the support of the Blaisdell machine equipment and the operation of beds has delivered a water of gratifying quality and sufficient quantity.

Distribution

Activities on building operation have continued and the gridiron system has been enlarged for service to an impressive extent. The South Broad Street Subway construction, the changing of grade of streets at various locations through the City, have required both the addition of new pipe lines and the relocation of existing mains. The maintenance force has been actively engaged on the replacement of many broken down

BUREAU OF WATER

132

valves and much time and labor has been expended on the replacement of fire hydrants damaged or made useless by abuse in operation by agencies other than Water Bureau men and firemen, as well as those damaged by the motor car driver.

Added to the piping system during the year were 47 miles of new mains ranging from 48 to 6 inches in size, giving a grand total of 2,364 miles of piping in service.

This year's work has also included the placing of 1,121 gate valves and 345 fire hydrants.

Further extension to the High Pressure Fire System has been made in the Kensington District and an active contract is now working in the central section of the City, the service of which addition will safeguard property of high values.

Important and valuable links were inserted in the system to permit the pumpage of filtered water from the Queen Lane source on the east side of the Schuylkill River by way of Girard avenue to West Philadelphia.

Meters

The total metered services number 175,000 there being added 11,000 during the year.

Repairs were made to 13,000 meters at the City Shop and 4,000 on the premises of the consumer.

Revenue

There has been returned \$6,911,045.30 contributed from the following sources:-

Water Rents:-

Flat Rates -

Fixtures	\$2,761,881.82	
" Delinquent	196,653.64	
		\$2,958,535.46

Meter Rates -

Current	\$3,407,938.35	
Delinquent	233,073.78	
		3,641,012.13

04-

BUREAU OF WATER

Water Pipe Searches	3,273.50	
Frontage - water pipe	133,793.61	
Specials	9,634.20	
New services	46,181.00	
Meter Repairs	61,089.66	
Miscellaneous	<u>57,545.74</u>	
		<u>311,497.71</u>
		\$ 6,911,045.30

Financial

Salary and wages	1,721,485.43	
Material and Equipment	<u>1,376,481.77</u>	
Total	3,597,967.20	
Additions and betterments	<u>951,612.61</u>	
Grand Total		\$4,349,579.81

Construction Work

Stations:-

Torresdale - Removal of useless pumping equipment and old generator units. Completion of a new tile floor for the engine room and the erection of a railing for the enclosing of electrical equipment on gallery and stairway. Completion of the oil heating system and the installation of new wash rooms and attendant plumbing. Resurfacing of ground area surrounding the station and extending to the river front.

Lardner's Point

- Completion of new metal roofs to take the place of the old time construction on the two engine houses. Completion of the replacement of all the wooden sash and frames for doors and windows in engine and boiler houses. Extensive repairs and improved equipment on the main pumping units. The adoption of new stokers in several boilers, the trial of which has proven satisfactory.

Belmont

- The completion of a new intake to admit a volume of water to meet the expansion of capacity.

BUREAU OF WATER

134

The completion of the electrical equipment for power to operate all primary units.
 Progressive work on the construction of foundations to receive new motors and the pumps has been effected.
 Work on the readjustment of discharge piping to admit of increased station capacity.

Shawmont - The completion of an oil heating plant and new plumbing.

High Service:-

Belmont - Completion of the installation of units to effect an increased capacity.
 Completion of the necessary building modifications and the piping adjustments to permit the increased service.

Queen Lane - The installation of additional pump which was removed from the Shawmont Station.

Filters:-

Torresdale - Completion of the revamping of the Preliminary units.
 Installation of new plumbing on the final plant.
 Completion of a new brick wall surrounding the tower enclosing the wash water tanks.

Belmont - Completion of the Mechanical Units and a progressive stage of construction has been effected on the coagulating basin attendant in the operation of this plant.
 Completion of pip lines connected with the plan for increased capacity of this plant.

Queen Lane - Completion of the restoration of the underdrain system and sand and gravel in the Mechanical and Preliminary units.

All the Filter Plants have been equipped with new apparatus for chlorine application.

Distribution:-

Pipe Lines - Completion of the 48" steel main on Belmont Avenue.
 Completion of 30" steel and 36" cast iron pipe links to provide service from Queen Lane to Belmont.
 Completion of 8" High Pressure Fire Service in the Kensington District.
 Progressive work has been registered on the High Pressure Fire Service on 16th Street north of Filbert.
 Extensive work completed and in progress on 6 - 8 and 12" service mains throughout the City.

BUREAU OF WATER

135

Reservoirs:-

East Park - Repairs completed on slopes

Contemplated Work - 1929.

Stations:-

Lardner's
Point

- The replacement of floors in engine rooms.
Repair work on pumps throughout station.
Construction of retaining wall on Levick Street
to confine coal pile.
Coal storage structure.

Belmont

- New roofs, floors, window and door frames in engine
room.
Installation and erection of new motor driven pumps
with the accompanying electrical equipment.

Queen Lane

- Coal storage equipment.

High Service Stations:-

Oak Lane

- Additional Pump Installation.

Filters:-

Queen Lane

- Replacement of ventilator frames throughout the entire
plant.
Waterproofing floor of filters and construction of sup-
ports for roof.

Distribution:-

Construction of steel conduit supplying filtered water
from the Torressdale Plant to a distribution center.
Laying of a 36" steel main from Oak Lane Pumping Sta-
tion to connect with pumping mains from Lardner's Point.
Laying of a 24" main to safeguard the supply from Bel-
mont High Service.
The relaying of a 30" pipe on account of street grade
adjustment on Searnly Avenue.
The laying, throughout the City, of new 8 and 12 inch
service mains.
Continued activities on water waste survey.

Tables giving data on operation, involving labor,
material and costs, will follow as an appendix.

BUREAU OF WATER

136

January 16, 1929.

BUREAU OF WATER ACTIVITIES - 1928

Both construction progress and operation activities have registered impressively during the past twelve months. The service rendered has been equal to the demand with an exception of a period during the weather of high temperatures. The average daily volume of water supplied to the City has been 342 million gallons or a rate of 162 gallons furnished to each inhabitant and as compared to the previous year which recorded respectively 345 m.g. and 168 gallons, there is a registered reduction of per capita rate. A waste water survey has continued throughout the year, the efforts of which have located and corrected serious underground leakage which gave no evidence on street surface.

The quality of water served from the filter plants has continued satisfactory, there being but scattered complaints and the typhoid rate has been appreciably lower than through former years and the past year's rate of 9.8 deaths per 100,000 inhabitants is comparable to the lowest rates of the large American cities.

A Schuylkill Pollution Committee has directed its scrutiny towards offenders contributing industrial wastes to the river and the Water Bureau Patrol have functioned in an active capacity towards furnishing data with which the Committee could work.

The Torresdale Pumping Station has had the interior of the engine room cleared of old and useless equipment and the entire floor and balcony surface has been tiled presenting a most pleasing appearance. A new heating and plumbing installation is in use and the grounds contiguous to the station and those bordering the river front have been surfaced and trees of attractive varieties have been planted.

BUREAU OF WATER

-2-

At Lardner's Point new metal roofs on engine houses have taken the place of the former tile construction and steel doors and sash were placed in both engine and boiler houses - new subway grating floors are in the process of construction and much incidental work has been done on the boiler and pump equipment.

At Belmont Pumping Station, the construction for an expansion of service is in progress; a new 78 inch pre-cast circular intake with river chamber has been completed; new motor driven pumps are to be installed within a few weeks; the entire station will be motorized and the essential discharge connections for the increased capacity of the station are now being laid.

At Shawmont Pumping Station new plumbing and a heating plant has been installed and giving satisfactory service.

At Torresdale filters a completion of the revamping of the preliminary filters was effected, new plumbing was installed throughout the plant.

At Belmont Filter Plant the mechanical units were placed in service and are regularly functioning under a temporary method of water supply - the settling and coagulation basin which is the step ahead of filtration, is nearly ready for service and all additional pumping units and pipe to accommodate the increased capacity of this plant have been completed,

At Queen Lane Filters the work on revamping of preliminary and mechanical has been effected and new ventilator frames for the roofs of all units are under contract and will be placed within a short period.

At all the filter plants an equipment of chlorine machines of the latest type has been installed.

Extensive work has been applied to the distribution system - the

BUREAU OF WATER

South Broad St. subway construction; the changing of grade of streets at various locations through the City have involved pipe line changes and replacements; real estate development has called for 46 miles of service mains and a substantial footage was added to the High Pressure Fire Lines. Important links were laid of larger sizes to extend the flexibility of the system and a steel conduit for the pumpage from the Torresdale Plant is now under construction upon the completion of which there will be secured an avenue for water of a generous volume direct from the Delaware source to a distribution center. The maintenance force in this and the Meter Division have been most active on repair work, there being an active campaign directed by the former towards the replacement of worn out valves and hydrants and the latter has handled over 17,000 complaints.

The installation of meters has been to the number of 11,000 and the setting is almost entirely confined to the newly built properties.

The revenue returned and the disbursements made are comparable with previous years as to operation of the Bureau and will average respectively 7 and $3\frac{1}{2}$ million dollars.

The expenditure of Loan Funds will vary in proportion to the available amounts.