

BUREAU OF WATER

Philadelphia, January 24, 1935.

ANNUAL REPORT - 1934

The Bureau of Water has been engaged in operation and maintenance activities during this year.

During the winter season a period of abnormally low atmospheric temperatures inflicted a heavy burden on the water distribution system. Breaks in water mains were of frequent occurrence interrupting service in local areas and adding materially to the routine work of the Distribution organization.

The average daily consumption of water throughout the City was 313 million gallons with a per capita rate of 157 gallons per day.

The character of water furnished has measured within the standards adopted and required by the U. S. Treasury Department. As an index to the quality, the death rate for typhoid fever of 0.8 per 100,000 inhabitants marks the efficiency of purification steps applied by the Bureau.

A substantial number of men drawn from the unemployed were engaged upon work on the water works plant and these groups of men have rendered valuable assistance towards the demolition of useless structures and contributing labor towards the restoration of a normal condition of plant structures and office records.

The activities of the various branches of the Bureau are in sequential order.

RIVER PATROL

Routine observations were continued covering the effluents from industrial plants and communities which might have influenced the character of water in the river from which the City water is drawn.

INTAKES

The excessive cold created a needle ice condition at the various intakes and over-night attention during February at the screens was necessary to maintain a sufficient volume of water for pump suction.

River deposit at Shawmont demanded removal which was accomplished by Bureau force employing a jet from a high pressure hose.

PUMPING STATIONS

Belmont: The exterior appearance of the station has been improved by demolition of various masonry walls, chimney and a partial removal of a useless boiler house.

Shawmont: Improvement in appearance due to erection of masonry walls, removal of chimney and ash handling tower and clearing of general debris, resulting from demolition activities.

Torresdale: Removal of useless coal and ash handling tower was accomplished.

A considerable area of slope wall was laid on the interior of Sedimentation Basin and landscape work around station has added attractively to the appearance.

In general, the pumping units have functioned satisfactorily at all main and High Service Stations.

The High Pressure Fire Service has been well served by the two Pumping Stations, the latter being started promptly in response to 636 alarms of fire.

FILTERS

Continued service has been rendered by the active plants.

Belmont: Considerable work of a renovating character has been accomplished. Additional groups of men joined with the regular crews for cleaning both rapid and slow beds - and a substantial amount of work was applied to underground conduit structures.

Roxboro and Torresdale: The regular force of labor was increased in order to clean filter beds which required efforts beyond the ability of the routine force..

At the latter plant an abnormal load was imposed upon the beds due to a Federal dredging Disturbance in the Delaware River. For channel widening and deepening large dredges have been employed. At the Torresdale intake water containing a suspended colloidal content required continuous application of a coagulant and the applied water to filter beds was proportionately higher in turbidities than normal, all of which increased the burden of removal to create a clear water for the consumer. The extra expense to the water works was in substantial figures made up by the abnormal amount of alum applied and the added labor which was assigned for chemical handling.

The value of Sedimentation Basins at Belmont, Queen Lane, Roxboro and Torresdale is being reduced annually. Reduction in cross-section creates a short-circuiting of flow and cutting materially the sedimentation period thereby forcing an unwarranted load and burden upon filter beds.

Distribution

Activities on building operations and construction continued the low register.

Statistics

Water mains - in service (all sizes) - miles	2471.5
valves	49593
fire hydrants	20331

High Service Fire System

Mains - (all sizes) - miles	63.34
valves	1872
fire hydrants	1070

Breaks throughout the piping system were unusually high during the year due to the penetrating effect of frost.

The service system sustained 517 breaks, of which number 202 occurred during the months of February and March.

The High Service Fire System was visited by 27 breaks, the per cent being respectively 0.21 and 0.43 breaks per mile of pipe.

Meters

Total number in service	202,494	
Maintenance and activities -		
Repaired in shop	13,857	
Repaired on premises	3,403	17,260

Due to the heavy damage from cold weather and the inability to restore meters for service for the lack of parts, the meter division has been affected with an increasing burden of complaints.

Revenue

There has been returned \$6,311,160.97, contributed during the year from the following sources:

WATER RENTS - Flat Rates:

Current	\$2,223,351.83	
Delinquent ✓	<u>482,379.59</u>	\$2,705,731.42

Brought Forward

\$2,705,731.42

Meter Rates:

Current \$3,138,035.37

Delinquent 372,075.15

3,510,110.52

\$6,215,841.94

Water Searches \$2,361.75

Frontage -Water Pipe 16,055.72

Specials 6,042.65

New Services 7,381.00

Meter Repairs 46,908.79

Miscellaneous 16,569.12

95,319.03

\$6,311,160.97

Disbursements

Salary and Wages \$1,058,533.00

Materials and equipment* 1,263,325.72

Total \$2,341,858.81

*Includes an amount of 407,532.07

which represents a power and light account to cover which there appears an item in the Budget of the Electrical Bureau.

Construction Work

Distribution:-

The planning of and the start of installation of an additional water service for the Byberry Institution.

The planning of a Booster Station at 33rd and Girard Avenue to serve for pumping additional water to the center-city area.

Improvement Work

Groups of men have been assigned from State and Federal sources and detailed at Belmont, Shawmont and Torresdale Pumping Stations on demolition of useless structures - building masonry walls and clearing up conditions upon which attention could not be given by Bureau force..

At the Belmont and Torresdale Filters a force from the unemployed lists have assisted in cleaning beds and upon work attendant thereto.

In the Distribution Division a valuable contribution in the order of up to date and improved records has resulted from the well directed efforts of a large group of technical assistants from the unemployed lists.

Also a valve inspection has been active, the force engaged thereon being furnished to the Bureau by the Federal agency.

C. T. HAYES
Chief of Bureau.