

# THE CITY RECORD.

OFFICIAL JOURNAL.

VOL. XXVII.

NEW YORK, FRIDAY, APRIL 7, 1899.

NUMBER 7,880.



## DEPARTMENT OF WATER SUPPLY.

### First Annual Report of the Department of Water Supply, City of New York, 1898.

DEPARTMENT OF WATER SUPPLY—COMMISSIONER'S OFFICE,  
No. 150 NASSAU STREET,  
NEW YORK, February 16, 1899.

Hon. ROBERT A. VAN WYCK, Mayor :

DEAR SIR—In compliance with section 457 of the Greater New York Charter, I have the honor to present herewith my report of the public business devolving on the Department of Water Supply for the year 1898.

Under the Charter there were consolidated into this Department :

First—From the former City of New York, the Bureau of Chief Engineer of the Croton Aqueduct, with all the works, lands and property pertaining to the supply of water from the Croton, Bronx and Byram rivers, and the Bureau of Water Register, having charge of the assessment and collection of water rents in the boroughs of Manhattan and The Bronx.

Second—From the former City of Brooklyn, those bureaus, officers, employees, works, lands and property of the former Department of City Works which appertained to, and were concerned in the supply of water to the population of the Borough of Brooklyn, and the collection of the water revenue.

Third—From the former county, city, town and village authorities in that part of Queens County which has been consolidated into Greater New York, and from the county, town and village authorities of the County of Richmond, all public property and all public functions and duties connected with the supply of water to the population, and the assessment and collection of charges for the public water supply.

As the water systems of the boroughs of Manhattan and The Bronx have been under one management since the annexation to the city of the towns of Morrisania, Fordham and West Farms, in 1873, they will continue to be so treated and considered under this Department, and in this and future reports. The systems in other boroughs will be treated and considered separately.

#### BOROUGH OF MANHATTAN AND THE BRONX.

##### THE CROTON WATERSHED.

The drainage area of the Croton river and its affluents above the Croton dam is 338 square miles. Since 1866 the city has kept accurate records of the rainfall, first at only two stations, the Boyd's Corner Reservoir in the northwesterly part of the watershed, and at the Croton Dam, to which was added in 1878 the station at the East Branch Reservoir. The record of thirty-three years shows an average annual rainfall of 48 inches, with a minimum of 38.33 inches in 1895, and a maximum of 63.51 inches in 1888. For the year 1898, the rainfall was 56.28, or 8.28 inches above the average. In the driest of the thirty-three years, the average daily flow of the Croton river at the Croton Dam was 250,000,000 gallons, but even in a year of abundant rainfall, the flow may fluctuate between less than 30,000,000 gallons per day after a considerable period of dry weather, and upwards of 700,000,000 gallons per day after a heavy rainfall. Therefore, whenever the natural flow falls below the daily supply needed in the city, which under recent and present conditions may occur on from 100 to 200 days or more in the course of the year, recourse must be had to the water held in reserve in the storage reservoirs and lakes.

Prior to 1870 there was no reserve supply held in storage, except in the lake formed by the Croton Dam, which cannot be classed as a storage reservoir. In that year, the Commissioner of Public Works acquired the right to dam up the outlets of lakes Mahopac, Kirk, Gleneida, and Gilead and Barrett's Pond, and to draw down the water in case of need. The development and capacity of the system of storage reservoirs in the Croton watershed is shown in the following table :

YEAR.	RESERVOIRS.	GALLONS CAPACITY.
1870	Lakes Mahopac, Kirk, Gleneida, Gilead and Barrett's Pond.....	1,600,000,000
1873	Boyd's Corners Reservoir.....	2,700,000,000
1878	Middle Branch Reservoir.....	4,000,000,000
1891	East Branch Reservoir.....	8,000,000,000
1893	Titicus Reservoir.....	7,000,000,000
1895	West Branch Reservoir.....	10,000,000,000
1897	Muscot Reservoir.....	7,000,000,000
1898	White Pond Reservoir.....	200,000,000
	Total present capacity (gallons).....	40,500,000,000

The East Branch, West Branch and Titicus reservoirs were built under the direction of the Aqueduct Commissioners. The others were built under the direction of the former Department of Public Works, with the exception of the White Pond Reservoir. The contract for this was made by the Commissioner of Public Works, December 8, 1897, and the entire work has been done in 1898, under the direction of this Department. It is now completed so far that the outlet was closed on November 1, 1898, since which time the reservoir is gradually filling. All the other storage reservoirs are now full to the lips of the dams, and the Department is prepared, in case of necessity, to deliver a daily water supply of 200,000,000 gallons for 200 consecutive days, irrespective of the natural flow of the Croton river.

The Cornell Reservoir, which is in course of construction under the direction of the Aqueduct Commissioners, and is to be completed in 1902, will add 25,000,000,000 gallons to the storage.

During 1898 there were 112 days on which the flow of the river had to be supplemented by drafts upon the storage reservoirs, as follows :

	GALLONS.
From East Branch Reservoir.....	3,430,000,000
From West Branch Reservoir.....	3,400,000,000
From Middle Branch Reservoir.....	400,000,000
From Titicus Reservoir.....	500,000,000
From Muscot Reservoir.....	900,000,000
Total.....	8,630,000,000

#### SANITARY PROTECTION OF WATER SUPPLY.

By chapter 189 of the Laws of 1893, the former Department of Public Works was authorized to expend \$500,000 annually for the sanitary protection of the water supply at its sources and in its courses through the watersheds to the aqueducts and conduits, and for that purpose to acquire the title to lands, buildings and water rights along the streams and on the shores of reservoirs and lakes, where necessary for the removal or prevention of nuisances and establishments which tended to the pollution of the water. The power to institute legal proceedings for the taking of lands was, however, limited to four years from the passage of the act and expired March 23, 1897. Several legal proceedings for the acquisition of lands, etc., through Commissioners of Appraisal, which were instituted under the act, are still pending. The City has up to date acquired for sanitary protection in the Croton watershed, 2,166 acres of land along the East, West, Middle and Muscot branches of the Croton river, around Lake Gleneida and White Pond, and in and around the villages of Mount Kisco, Townier's, Patterson, Brewsters and Carmel. More than half the area was in small parcels, occupied by houses, barns and outhouses, which had to be removed to prevent pollution of the adjacent streams. Under the regulations of the State Board of Health and with the co-operation of the City Board of Health many other nuisances were suppressed. This Department is steadily pursuing the measures authorized by the Act of 1893 and the general State law for the protection of potable waters used by cities, towns and villages. These measures include, besides the removal of nuisances from lands acquired by the city, the operation of an electrozone plant in the Village of Brewsters for the disinfection of the sewage, the dry-pan process for disposing of sewage and excrement in the Village of Mount Kisco, the patrolling of the water-courses and reservoirs to prevent and suppress pollution of the water, and the legal prosecution of offenders against the law and the regulations of the State Board of Health.

The total amount which has been expended under the Act of 1893 to December 1, 1898, is \$2,445,015.56. Of this amount there has been paid in 1898, \$514,368.92 for lands acquired by legal proceedings and for costs of the proceedings.

#### BRONX AND BYRAM WATERSHEDS.

The drainage area of the Bronx river is 137½ square miles and that of the Byram river is 8½ square miles. Water was first obtained through the pipe-conduit from the Bronx river in September, 1884, at the rate of 10,000,000 gallons per day, which in subsequent years was increased to 14,000,000 gallons per day. In January, 1896, the supply from the Byram river was added, after which a daily supply of 17,000,000 gallons was received through the conduit. During the past year this has been increased to 19,000,000 gallons. The contract for the construction of the collecting reservoir on the Byram river was made by the Commissioner of Public Works on December 31, 1896; it was completed under the direction of this Department in May last, the final estimate for payment being made on June 1, 1898. The following is the present storage capacity in the Bronx and Byram watersheds :

	GALLONS.
Kensico Reservoir.....	1,600,000,000
Rye Ponds Reservoir.....	1,300,000,000
Byram Pond Reservoir.....	800,000,000
Total.....	3,700,000,000

The demands on the water supply in the Borough of The Bronx, the Twenty-third and Twenty-fourth Wards of the old City of New York, has outgrown the capacity of the Bronx and Byram river system, which for some time past has been supplemented by a supply from the Croton Aqueducts. An engineering party is now engaged on surveys for additional sources of supply to the east and south of the Croton and Byram watersheds.

The measures for the sanitary protection of the water supply, which have been described in the preceding paragraph of this report, except the treatment of sewage in villages, are also applied to the Bronx and Byram watersheds, and are included in the expenditures therein stated. The city has acquired for this purpose 97 acres of land around the Kensico Reservoir, and 376 acres at Byram Pond and along Bear Gutter creek, an affluent of the Byram river.

#### AQUEDUCTS AND CONTENTS.

For several years past the New Aqueduct has conveyed the entire water supply from the Croton river, which at the beginning of 1898 amounted to 214,000,000 gallons per day, was increased to 235,000,000 by the end of September, and thereafter diminished to 225,000,000 gallons per day in December. The Old Aqueduct had to be shut off since November, 1896, to make necessary changes in the structure in connection with the building of the Cornell Dam and the Jerome Park Reservoir by the Aqueduct Commissioners, and for the construction of an arched passageway where Burnside avenue, in the Borough of The Bronx, crosses the aqueduct. This archway was contracted for by the Commissioner of Public Works on November 20, 1896, under a special act of the Legislature and completed by this Department in June last at a total cost of \$53,377.25, a portion of which is to be assessed on adjacent and benefited property. In October last the interior of the Old Aqueduct had been thoroughly cleaned out, and water was again let into it, first to a depth of two feet, which was afterwards increased to five feet. A leak was soon developed in the structure at the south abutment of the arch by which it crosses the Sing Sing Kill, in the Village of Sing Sing. The stability of the arch has not been endangered, but as soon as spring opens the south abutment will be reinforced and newly faced, and in the meantime the Old Aqueduct will again be closed.

The care of the two aqueducts and the Bronx river and Byram river conduits, the grounds and structures, storage and distributing reservoirs, dams, sluices, culverts, fences and roads embraced in the water system, has received constant and diligent attention.

The total conduit capacity for conveying water to the boroughs of Manhattan and The Bronx is : Old Aqueduct, 80,000,000 gallons per day ; New Aqueduct, 300,000,000 gallons per day ; Bronx and Byram river conduit, 20,000,000 gallons per day ; total, 400,000,000 gallons per day.

#### DISTRIBUTING MAINS, STOP-COCKS AND HYDRANTS.

Since 1875 there has been an annual appropriation in each year's tax levy, limited by law to \$250,000, for the laying of water-mains to extend the water service into new streets, the appropriation to include cost of engineering, inspection and supervision as well as the contracts for furnishing and laying the mains. For the year 1898 the final estimate allowed \$229,830 for the contract work of manufacturing and laying the mains. Against this appropriation four contracts have been made, viz. : One for the manufacture of pipes and special castings, amounting to \$42,213, and one for the manufacture of stop-cocks and hydrants, \$4,253.50, both of which were authorized by the Board of Public Improvements ; and two contracts for laying water-mains in Fordham road, the Southern Boulevard and other streets, amounting to \$92,681.50, which had been authorized in 1897. These contracts left a balance of \$90,682 for work to be authorized by the Board of Public Improvements and the Municipal Assembly.

To meet the pressing demands for extension of the water service which were presented by property-owners and Local Improvement Boards, the Department forwarded to the Board of Public Improvements recommendations and drafts of resolutions and ordinances for authority to lay about 68,000 lineal feet, or nearly 13 miles of additional water-mains in more than 50 different streets, the aggregate estimated cost of which was approximately the amount of the available balance of \$90,682 in the appropriation. The Board promptly approved these recommendations by resolutions which were forwarded to the Municipal Assembly. The Assembly, however, deferred action thereon until late in November and in December, when ordinances covering about 40 per cent. of the work recommended by the Department and approved by the Board of Public Improvements were passed, and promptly approved by your Honor. The measures for putting these works under contract are now under way, but about \$50,000 of the appropriation for 1898 will remain unavailable for the much needed work of extending the water service into new streets and will lapse into the general fund of the city.

Under the three contracts above mentioned, and several unfinished contracts which came over to this Department from the former Department of Public Works, there were laid during the year, 2,034 lineal feet of 36-inch mains, 62 lineal feet of 20-inch mains, 9,521 lineal feet of 12-inch mains, and 20,410 lineal feet of 6-inch main ; total, 32,027 lineal feet, or 6.06 miles of mains, with 62 stop-cocks and 94 fire-hydrants.

The laying of additional water-mains has not been confined to the foregoing work of extending the water service into new streets and territory. Coeval with the steady building up of vacant territory, there has, in recent years, been an immense and rapid expansion skyward of the older and densely built up part of Manhattan Island, by the erection of buildings of from ten to twenty and more stories in height, in place of buildings of five stories or less, which is assuming larger proportions from year to year. The new demands on the water service which this has created,



outgrew the capacity of the distributing mains several years ago, resulting in great reduction of the pressure of water in the distributing mains and in the elevation at which the water could be delivered in the houses. The necessity for enlarging the distributing system in the central and lower sections of Manhattan Island on a scale hitherto unknown, and far beyond the means of annual appropriations, became imperative. The State Legislature brought relief by the enactment of chapter 669 of the Laws of 1896, which authorized a bond issue of \$1,000,000 for this purpose. During 1896 and 1897 the Commissioner of Public Works made contracts, amounting in the aggregate to that sum, for the laying of several lines of large mains from the Central Park Reservoirs southward to different sections of the old distributing system, where the loss of pressure and elevation in the delivery of the water was most severely felt. One of these contracts, amounting to \$104,315, was made on April 23, 1897, and was only about two-thirds finished when this Department took charge on January 1, 1898. It was completed in June last. The last of the contracts was made on December 6, 1897, amounting to \$275,397. It was entirely performed during the past year under the direction of this Department, and is now completed with the exception of some minor finishing work. Under these contracts, there were laid during the year 1898: 41,019 lineal feet of 36-inch mains, 7,682 lineal feet of 20-inch mains, 5,511 lineal feet of 12-inch mains, and 2,631 lineal feet of 6-inch mains; total, 56,843 lineal feet, or 10.76 miles of mains, with 156 stop-cocks and 62 fire-hydrants.

The total length of new water-mains laid in 1898, under the annual appropriation, and under the bond issue authorized by the Act of 1896, is 16.94 miles, with 283 stop-cocks and 244 fire-hydrants, including new work done in the maintenance and repairs of the distributing system.

At the close of the year, the distributing system for the boroughs of Manhattan and The Bronx included 833.41 miles of water-mains and 8,804 stop-cocks, ranging in diameter from 4 inches to 48 inches, and 11,226 fire-hydrants.

For the purposes of maintenance and repairs, the distributing system is divided into six districts, four in the Borough of Manhattan and two in the Borough of The Bronx. As near as practicable to the centre of each district there is a repair shop and office, with telephone connection with the central office of the Department, the police stations, the fire-stations, and the general telephone systems. A repair company of mechanics and laborers, under the charge of a competent and experienced foreman, has charge of the repairs in each district, and men are stationed at the repair shops at all hours of the day and night to receive and attend to messages and reports of leaks or other accidents. One or two additional repair companies are also employed in making special repairs in the territory at large, as the occasion may require. The average repair force for 1898 included 51 mechanics, 133 laborers, 5 two-horse teams and 30 horses and carts.

The following are the prominent items of work done by this force during the year:

- 801 old fire-hydrants replaced by new ones.
- 5,783 fire-hydrants repaired.
- 29 new stop-cocks placed.
- 1,599 stop-cocks repaired.
- 1,172 leaks in water-mains repaired.
- 1,163 leaking service-pipes cut off at the taps.
- 3,711 new taps placed in mains for house connections.
- 970 lineal feet of new mains laid.

The unskillful or careless use of fire-hydrants by street cleaners and sprinklers causes much extra work and many complaints of leakage from hydrants which are not properly closed after using them.

#### USE AND WASTE OF WATER.

During the year, the quantity of water daily distributed and consumed in the two boroughs was increased from 231,000,000 gallons, up to April, to 238,000,000 gallons in June, 251,000,000 gallons in August, and 256,000,000 gallons in September, after which it gradually diminished to 244,000,000 gallons in December. The average for the whole year was 243,000,000 gallons per day, which is 121 gallons per capita for a population of 2,000,000. It shows the enormous increase of 17,000,000 gallons in the total, and 9 gallons per capita over the daily consumption of water in 1897, and 98,000,000 gallons, 31 gallons per capita, over the consumption in 1890, when the New Aqueduct was first brought into use. Making the most liberal allowances for increase in population and buildings, and new demands on the water service by new contrivances, and methods for domestic, industrial and sanitary uses of the water, the conclusion is yet irresistible that enormous quantities are carelessly or wantonly wasted without any possible benefit in any direction. I believe it is safe to say that no other large municipality on the face of the globe uses and wastes its public and artificial water supply in such profusion, and that few, if any, of them have such quantities of supply at their disposal for use or waste. If such rate of increase should continue, all previous calculations and estimates as to the future necessities of the city, and the means of meeting them, would be set at naught; the magnificent resources of the combined watersheds of the Croton, Bronx and Byram rivers will be exhausted or exceeded in a few years, and many more millions of dollars of public funds will, in a few years hence, have to be invested in obtaining water from new, more distant, more expensive and practically inexhaustible sources. The lesson to be drawn from this experience is the absolute necessity of effective measures to restrain waste, even at times when there is a superabundance of supply, because prolonged and unchecked indulgence in waste creates a fixed habit which cannot be overcome so long as the material for waste is at hand.

The water meter, and the enforced payment for water at meter rates have, so far, been the only practicable and effective means of detecting and checking waste. There are now 35,442 meters in use in Manhattan and The Bronx, covering, as I believe or am informed, every place where water is used to any considerable extent for other than domestic purposes. The presentation of meter bills for water consumed or wasted is such a forcible monitor that it is not reasonable to assume that any considerable portion of the people who receive and pay these bills will persist in wanton or careless waste of water. The bulk of the waste must, therefore, be in the dwellings, which are exempt from the use of meters and meter charges. The consideration forces itself seriously on the municipal government and the public mind, whether the meter rates should not be enforced on dwellings as well as on business establishments.

The results of waste are most seriously felt in the high service districts and in the Borough of The Bronx, where the present means of supply are now used to their maximum capacity, and waste diminishes the pressures in the mains and the elevation at which the water can be delivered in the houses to the extent of depriving the higher grounds of an adequate supply. Waste reduces the pressures and elevation of delivery in any other part of the city as well, though to a lesser degree. As soon as a house-owner or tenant finds the force of water in his house diminished in the least, he lays the blame on the Department which has charge of the water supply, without giving a thought to the true causes.

In the Borough of The Bronx the supply is limited to the capacity of the Bronx and Byram watersheds, the resources of which are now strained to their full limit. The Department is preparing measures of relief by plans for the construction of a high service pumping station at Jerome Park, which will be fed from the Croton aqueducts, and for a large water-main from that station to the distributing mains in the easterly and southerly sections of the borough. The Department is prepared to proceed with the execution of these works, which have been approved by the Board of Public Improvements, as soon as they, and the issue of bonds to pay for them, are duly authorized by action of the Municipal Assembly and the Board of Estimate and Apportionment.

#### HIGH SERVICE SUPPLY.

The following is the daily capacity of the present high service pumping plants:

	Gallons per day.
High Bridge Station, built in 1871, and enlarged in 1888.....	6,000,000
West Ninety-eighth Street Station, built in 1880 and enlarged in 1892.....	25,000,000
West One Hundred and Seventy-ninth Street (Washington Bridge) Station, completed in 1896.....	28,000,000
Total.....	59,000,000

The high service districts include all the territory on Manhattan Island which is on a higher level than 65 feet above mean tide. It embraces the choicest residential parts of the city, such as Murray Hill, the surroundings of the Central Park, Morningside Heights and Washington Heights. The great development of this territory in buildings and population in the last twenty-eight years is in part shown by the following figures of the quantities of water pumped for the high service and supplied to the people, taken from the reports of the former Department of Public Works:

In	Gallons per day.
1871 to 1880.....	2,500,000
" 1881.....	11,500,000
" 1888.....	15,000,000
" 1891.....	21,400,000
" 1894.....	25,360,000
" 1898.....	55,000,000

The present pumping plants are operated to their full capacity, with a reserve supply of 4,000,000 gallons in the High Bridge tower for emergencies. The area of vacant ground is still quite large, notwithstanding the vast progress in building in recent years. The rate of progress is not diminishing, but is increasing, and the demands on the high service are growing in proportion. To meet them, the Department has obtained the approval of the Board of Public Improvements to make a contract for two additional pumping engines for the Washington Bridge Station of 15,000,000 gallons daily capacity each, and the contract will be advertised for public letting as soon as the Municipal Assembly passes the requisite ordinance to authorize the work and expen-

diture. Application will also be made for authority and funds to lay a 36-inch main in the Boulevard, from Ninety-second street to Eighty-sixth street, and through that street and the Transverse road across Central Park, to increase the quantity and elevation of supply in the high service district east of the park, where the increase is very much needed.

#### SUPPLY FROM PRIVATE WATER COMPANIES.

The large territory of the Borough of The Bronx which lies east of the Bronx river, and includes the former villages of Williamsbridge, Westchester and Wakefield, and part of the town of Pelham, receives its water from the New York and Westchester Water Company, under contracts made by the late town and village authorities which will not expire until 1905 unless they are terminated earlier by legal process or otherwise. The plant and service of this company are entirely inadequate, and the Department is constantly receiving complaints from people in that district of insufficient supply and pressure of water. In July, 1897, the late Commissioner of Public Works, at the solicitation of the company and delegations of property-owners and residents, verbally agreed to furnish 500,000 gallons of water per day from the Bronx conduit for distribution through the company's mains, at the charge of 1 cent per 100 gallons, and in December, 1897, the verbal agreement was confirmed and renewed by a written agreement. This supply by the city still continues, and without it the population of the district would suffer from a scarcity of supply which would practically be a water famine. It is highly desirable that the city extend its own water service to this territory as soon as possible, but at present there are obstacles to this, besides the existence of the franchises and contracts of the New York and Westchester Water Company. The city's system of distributing mains in the Borough of The Bronx has not yet reached the Bronx river, because the territory immediately west of the river is as yet undeveloped in respect to the establishment of regular and permanent street lines and grades. When these shall be established and some of the approaches to the river graded and extended across and beyond the river, and when the Jerome Park Reservoir shall be completed and a 48-inch main laid from it through Moshulu parkway, Bronx Park and the Southern Boulevard, all of which can be accomplished in two years, this Department will be prepared to extend its water service to the east of the Bronx river. The question will then present itself whether the city shall purchase the company's water-mains or lay its own mains.

The New York and Westchester Water Company's plant consists of a pumping station at Glen Hill, Yonkers, with one old pumping-engine, much in need of repairs; a pumping station at Pelham, with two pumping-engines in fair condition, but poorly housed; a standpipe at Glen Hill, 100 feet high and 21 feet diameter; a small reservoir at Glen Hill; 1.05 miles of 20-inch main from the Glen Hill station across the Bronx river to the upper portion of the district; 45.86 miles of distributing mains, ranging in diameter from 4 inches to 16 inches; 453 fire-hydrants, and 12 wells at Pelham 90 feet deep. The combined capacity of the two pumping stations is 2,500,000 gallons per day, but one of them is operated to less than half its capacity in consequence of its defective condition.

#### TOTAL COST OF THE CROTON, BRONX AND BYRAM SYSTEMS

—beginning with the construction of the old Croton Aqueduct, 1837 to 1842 and continuing with all construction work under the Croton Aqueduct Department to April, 1870; the Department of Public Works to December 31, 1897; the Department of Water Supply during 1898, and the Aqueduct Commissioners from 1883 to December 31, 1898:

Old Croton Aqueduct, Bronx and Byram conduits, receiving and distributing reservoirs in the city.....	\$16,731,845 88
Removing masonry aqueduct, between Eighty-sixth and One Hundred and Thirty-fourth streets, and substituting iron pipes (1868 to 1873).....	4,905,402 12
Storage reservoirs and dams.....	5,160,224 40
Distributing system, which now includes 833.41 miles of water-mains, 8,804 stop-cocks and 11,226 fire-hydrants.....	18,957,643 14
Sanitary protection, by acquisition of lands, extinguishment of mill rights, removal of nuisances, etc.....	2,445,015 86
New Aqueduct, reservoirs, lands, etc. (under the Aqueduct Commissioners).....	38,036,519 29
Total.....	\$86,236,630 75

#### BOROUGH OF BROOKLYN.

A brief description of the Brooklyn water system, as it came under the charge of this Department on January 1, 1898, seems appropriate in this first annual report of the Department. The data and material for this are almost entirely taken from the "History and Description of the Water Supply of the City of Brooklyn," compiled and written by Mr. I. M. De Varona, Engineer of Water Supply, under the direction of the Commissioner of City Works, and printed in 1897 in a large volume, with ample illustrations, statistical tables and plates or maps.

#### SOURCES OF WATER SUPPLY.

With the exception of the pumping plants and wells at Gravesend and New Utrecht, which the City of Brooklyn acquired in 1895, and the plants of several private water companies, an account of which will be given below, the Borough of Brooklyn derives its entire water supply from a watershed within the boundaries of the County and the present Borough of Queens. This watershed embraces the southerly slope of the central ridge of Long Island, and the plains south of it to the salt meadows on the shores of Jamaica and Hempstead Bays. The area is 154 square miles. In addition to the public supply of Brooklyn, the water plants owned and operated by twelve private water companies and associations of property-owners in the Boroughs of Brooklyn and Queens derive their supply from this watershed.

The radical difference between the old New York and the Brooklyn water systems is in the topography of the watersheds and the intervening territory through which the water supply has to be conveyed to the distributing systems. The entire New York supply flows by gravity or decline of grade from the elevations of the sources to and through the distributing mains. The only pumping required is for the high service supply within the city.

The gravity supply in the Brooklyn system is confined to the flow from streams and supply ponds in the easterly section of the watershed, east of Millburn Station, which is 15 miles east of the Ridgewood Reservoir, and from some streams, reservoirs and ponds west of Millburn. A very large percentage of the supply is pumped into the conduits from wells and from bodies of water below the level of the conduits. At Ridgewood pumping station, which is the westerly terminus of the conduit lines, the entire supply has to be pumped a height of 170 feet into the Ridgewood Reservoir. The supply distributed from the Mount Prospect Reservoir for the higher ground of the borough is again raised 50 feet or more, by pumping, and the supply from the Mount Prospect tower is pumped for the third time a height of 80 feet or more, for delivery to the highest elevations in the borough.

The annual rainfall in the watershed since 1826 averaged 43.43 inches. For the year 1898 it was 51.22 inches, taken by a rain-gauge at the Hempstead Reservoir.

#### RESERVOIR AND PONDS.

The Brooklyn water system includes the following ponds and reservoirs for the storage of water, given in the chronological order of their acquisition and construction, and nearly in the order of their distance from the city line to the easterly boundary of the watershed, with the area and available storage capacity of each:

Smith's Pond—Acquired in 1853; area of water surface, 27.25 acres; capacity, 41,580,000 gallons.
Baisley's Pond—Acquired and dam built in 1858; area of water surface, 40 acres; capacity, 41,940,000 gallons.
Pine's Pond—Acquired and dam built in 1859; area of water surface, 8 acres; capacity, 9,046,000 gallons.
Simonson's Pond—Acquired and dam built in 1862; area of water surface, 8.75 acres; capacity, 9,870,000 gallons.
Clear Stream Pond—Acquired and dam built in 1862; area of water surface, 1.07 acres; capacity, 977,500 gallons.
Valley Stream Pond—Acquired and dam built in 1862; area of water surface, 17.78 acres; capacity, 20,850,000 gallons.
Hempstead Pond—Acquired and dam built in 1862; improved in 1879 and 1894; area of water surface, 23.52 acres; capacity, 26,900,000 gallons.
Hempstead Reservoir—Construction begun in 1872, completed in 1877, and first filled in 1879; area of water surface, 237.6 acres; capacity, 1,000,000,000 gallons. Work is still in progress, under a contract made by the late Commissioner of City Works, on March 20, 1897, for diverting the water of Hempstead stream, at an estimated cost of \$100,000, on which certificates for payments to the amount of \$61,639.78 were made in 1898.
Watt's Pond—Acquired and dam built in 1880; improved in 1882 and 1893; area of water surface, 3.83 acres; capacity, 3,750,000 gallons.
Springfield Pond—Acquired and dam built in 1881; area of water surface, 7.34 acres; capacity, 7,199,000 gallons.
Millburn Pond—Acquired and dam built in 1892; area of water surface 13.63 acres; capacity, 11,100,000 gallons.
East Meadow Pond—Acquired and dam built in 1892; area of water surface 16.15 acres; capacity, 18,830,000 gallons.
Newbridge Pond—Acquired and dam built in 1892; area of water surface 8.9 acres; capacity, 11,428,000 gallons.
Wantagh Ponds—Acquired and dam built in 1892; area of water surface 24.92 acres; capacity, 44,020,000 gallons.



Massapequa Lake—Acquired and dam built in 1891-2; area of water surface 14.55 acres; capacity, 16,990,000 gallons.

Massapequa Pond—Acquired and dam built in 1892; area of water surface 38.56 acres; capacity, 19,000,000 gallons.

Millburn Reservoir—Construction begun in 1890, and reported as practically completed in 1894, but never accepted from the contractor, owing to subsequent leakage through the bottom and sides at the rate of six per cent. of the contents in every 24 hours. When filled, the area of the water surface will be 48 acres, and the capacity, 373,000,000 gallons.

Exclusive of the unaccepted Millburn Reservoir, the aggregate area of all the storage ponds and reservoirs is 491.45 acres, and the available storage capacity 1,283,480,500 gallons.

#### DRIVEN WELL STATIONS.

From time to time, beginning in 1882, it became necessary to add to the water supply by the construction and operation of driven wells, of which the following is a brief account and description:

Spring Creek Station—There are practically two stations, completed in 1883, distinguished as the old and the new, each having 100 wells, converging into one central reservoir which is connected by the suction-pipe with the pumps. The maximum yield of the two stations is 8,460,000 gallons for 24 hours. There is also what is called a temporary station, built in 1894 in the emergency of a severe drought, and consisting of 13 6-inch wells, which give an average yield of 4,569,000 gallons in 24 hours.

Baisley's Station—With 100 2-inch wells, giving an average daily yield of 2,000,000 gallons. Jameco Station—Built in 1888, with 183 shallow and 7 deep wells, to which were added in 1895, 10 8-inch and 1 10-inch deep wells; average daily yield, 3,000,000 gallons.

Forest Stream Station—Completed in 1885; 110 2-inch wells; average daily yield, 3,500,000 gallons.

Clear Stream Station—Completed in 1885, 150 wells of an average depth of 53 feet; average daily yield, 3,500,000 gallons.

Watt's Pond Station—Twelve 6-inch wells, completed in 1894; average depth, 50 feet; daily yield, 2,500,000 gallons.

Agawan Station—Thirty-two 6-inch wells, completed in 1896; average daily yield, 3,600,000 gallons; average depth of wells, 91 feet.

Merrick Station—Sixty-two 4½-inch wells, completed in 1896; average depth, 60 feet; average daily yield, 4,100,000 gallons.

Matowa Station—Forty-six 4½-inch wells, completed in 1896; average depth, 36 feet and 97 feet; average daily yield, 4,000,000.

Wantagh Station—Forty-three 4½-inch and 6 6-inch wells, completed in 1896; average depth of 6-inch wells, 92 feet, and of 4½-inch wells, 89 feet and 24 feet; average daily yield, 3,700,000 gallons.

Massapequa Station—Fifty-three 4½-inch wells, completed in 1896; ten of the wells 106 feet depth, the others 37½ feet depth; average daily yield 5,000,000 gallons.

New Spring Creek Station—One 6-inch and seven 8-inch wells, completed in 1896; depth from 149 to 157 feet; average daily yield 2,000,000 gallons.

Shetucket Station—Twelve 8-inch wells, completed in 1897; average depth 180 feet; average daily yield 3,500,000 gallons.

Oconee Station—Twelve 8-inch wells, completed in 1897; average depth 195 feet; average daily yield 2,500,000 gallons.

New Jameco Station—Twelve 8-inch wells, completed in 1897; depth from 152 to 180 feet; average daily yield 4,000,000 gallons.

Springfield Station—Twenty 8-inch wells, completed in 1897; depth from 55 to 207 feet; average daily yield 2,500,000 gallons.

#### CONDUIT LINES.

A brick conduit, 7½ miles long, collects and conveys the water from the easterly section of the water-shed, beginning at Massapequa pond and emptying into the pump well at Millburn pumping station. The bottom is inverted and the top is arched. The interior dimensions are: Commencing at Massapequa Pond, width at spring line 7 feet 4 inches, height 5 feet 11 inches; this is gradually enlarged to 9 feet 4 inches in width and 6 feet 11 inches in height at Millburn, the point of discharge.

A brick conduit 12 miles long, from Hempstead Pond to the pump well at Ridgewood station, collects and conveys the water from the westerly section of the water-shed, and also receives part of the supply from the easterly section through the pump well, pumping plant and force-mains at Millburn. The shape of the conduit is the same as that east of Millburn; at Hempstead Pond the interior width is 9 feet 4 inches; height 6 feet 11 inches, gradually enlarged to 10 feet in width and 8 feet 8 inches in height at the point of discharge, Ridgewood station.

The estimated safe capacity of flow of water for which these conduits were designed and built is as follows:

	Gallons.
At Massapequa Pond .....	40,617,000
At Wantagh Ponds .....	46,841,000
At Simonson's Pond .....	50,500,000
At Jamaica .....	62,000,000
From Baisley's to Ridgewood .....	75,000,000

A 48-inch iron pipe conduit, fifteen miles long, conveys water from the Millburn engine house to the Ridgewood engine house. It is laid parallel with and near to the brick conduit, and was completed in 1896.

As early as 1884 the consumption of water had reached the maximum safe capacity of the brick conduit, and since that time it has been subjected to a constantly increasing strain to meet the increased demands on the water service created by the increase in population, buildings, industries and commerce. The strain has now reached a dangerous point, and the safety of the brick conduit demands the construction of an additional conduit of large capacity in the shortest time possible.

Several years ago the engineers in charge of the Brooklyn water system prepared plans and reported in favor of a 66-inch steel conduit from Millburn to Spring Creek, near Ridgewood. The authority for this work was obtained, and on August 7, 1896, the contract to build this conduit was awarded to Mr. John McNamara at the sum of \$850,000. The Comptroller of the City of Brooklyn did not attach his certificate, required by the provisions of the Brooklyn Charter, that sufficient funds were available to cover the contract and no work has been performed under it. The present Corporation Counsel, Hon. John Whalen, rendered an opinion in other identical cases that, without the Comptroller's certificate, a contract is not valid and not binding on the city, but that the contractor might test his right under the contract in the courts.

By a communication dated December 29 I brought these conditions, and the growing urgency for the construction of the steel pipe conduit, to the attention of the Board of Public Improvements, and asked for the authorization of that Board and of the Municipal Assembly to advertise, award and execute a new contract, and for the requisite bond issue to pay for the work.

#### RECEIVING AND DISTRIBUTING RESERVOIRS.

The Ridgewood Reservoir has three storage basins of an aggregate capacity of 304,000,000 gallons. The first two basins, 150,000,000 gallons capacity, were built under a contract made in 1856, and water was first admitted in November, 1858. The third basin, 154,000,000 gallons capacity, was built under a contract made in 1889 and completed in August, 1891. The elevation of the water service at high water is 150 feet above tide.

The Mount Prospect Reservoir was also built under a contract made in 1856, on land originally laid out for the park designated as Mount Prospect Square. Its capacity is 19,185,000 gallons, and the elevation of water service is 198½ feet above tide—48½ feet higher than the Ridgewood Reservoir. It is fed from the latter reservoir by pumping engines in the Mount Prospect engine house. From this higher elevations about 4,500,000 gallons of water per day is distributed to the high grounds in the Borough of Brooklyn. In 1890 a stand-pipe or tower was added to this station to supply the extreme elevation in the borough. Its diameter is 16 feet, elevation at top of overflow 278.4 feet, and capacity 111,500 gallons. The average daily supply now distributed from it is 2,820,000 gallons.

#### PUMPING ENGINES.

At the close of 1895, the following engines were in use:

STATIONS.	NUMBER OF ENGINES.	DAILY CAPACITY OF EACH ENGINE.	TOTAL DAILY CAPACITY.
		Gallons.	Gallons.
Ridgewood .....	3	15,000,000	45,000,000
" .....	2	7,500,000	15,000,000
" .....	5	10,000,000	50,000,000
Mt. Prospect .....	1	5,000,000	5,000,000
" .....	1	4,000,000	4,000,000
" .....	2	1,250,000	2,500,000

STATIONS.	NUMBER OF ENGINES.	DAILY CAPACITY OF EACH ENGINE.	TOTAL DAILY CAPACITY.
		Gallons.	Gallons.
Spring Creek .....	2	3,000,000	6,000,000
Baisley's .....	2	3,000,000	6,000,000
Jan eco .....	1	5,000,000	5,000,000
" .....	2	6,000,000	12,000,000
Springfield .....	1	5,000,000	5,000,000
Forest Stream .....	2	5,000,000	10,000,000
Clear Stream .....	2	5,000,000	10,000,000
Watt's Pond .....	1	3,000,000	3,000,000
Smith's Pond .....	2	5,000,000	10,000,000
Millburn .....	1	4,000,000	4,000,000
" .....	5	10,000,000	50,000,000
Gravesend .....	1	5,000,000	5,000,000
" .....	1	2,000,000	2,000,000
New Utrecht .....	2	2,000,000	4,000,000
Added Since 1895.			
At driven well stations .....	6	.....	23,000,000
At Ridgewood .....	2	25,000,000	50,000,000
Totals .....	47	.....	336,500,000
Discontinued .....	3	.....	19,000,000

Now in use, 44 engines; aggregate daily capacity, 327,500,000 gallons.

#### DISTRIBUTING SYSTEM.

On January 1, 1898, the system embraced the following distributing-mains, water-gates or stopcocks, and fire-hydrants, including the Gravesend and New Utrecht systems:

48-inch mains .....	99,970 feet = 18.934 miles.
36 " .....	54,616 " = 10.344 "
30 " .....	49,869 " = 9.445 "
20 " .....	137,064 " = 25.959 "
16 " .....	35,710 " = 6.763 "
14 " .....	3,159 " = 0.508 "
12 " .....	286,115 " = 54.183 "
10 " .....	19,601 " = 3.712 "
8 " .....	599,895 " = 113.617 "
6 " .....	1,714,004 " = 324.622 "
4 " .....	53,305 " = 10.096 "

Total length of mains .....

48-inch stopcocks .....	17
36 " .....	17
30 " .....	29
20 " .....	180
16 " .....	9
14 " .....	1
12 " .....	441
10 " .....	7
8 " .....	974
6 " .....	3,027
4 " .....	78

Total stopcocks .....

Total fire-hydrants .....

#### GRAVESEND WATER PLANT.

This plant consists of an engine-house, the upper part of which is occupied as a dwelling for the engineer; a boiler-house, two pumping engines of 3,000,000 gallons daily capacity, 113 two-inch driven wells, from which the water supply is obtained, and 17 miles of distributing-mains, ranging in diameter from 4 inches to 16 inches. The plant supplies the territory of the former Town of Gravesend, now the Thirty-first Ward of the Borough of Brooklyn, and was bought by the City of Brooklyn from the Sewer Commissioners of Gravesend in 1895, for the sum of \$423,000, the actual value, according to testimony given before the Commissioners of Appraisal, being \$125,000. The payment of \$423,000 was compulsory under the Act of 1895, which authorized the purchase for an amount not less than half the amount of bonds issued by the Town of Gravesend for the construction of the plant. The average daily supply distributed from the plant is 2,064,600 gallons, but varies from 1,500,000 gallons in winter to over 3,000,000 gallons in the height of summer.

#### NEW UTRECHT WATER PLANT.

This supplies most of the territory of the former Town of New Utrecht, now the Thirtieth Ward of the Borough of Brooklyn. At the time of the annexation of New Utrecht to the City of Brooklyn, in 1894, the plant was owned by the Kings County Water Company, from which the City of Brooklyn purchased it in 1895 for the sum of \$205,855. It consists of a building containing the engine-room, boiler-room and offices; two pumping engines of 2,000,000 gallons daily capacity each; a system of open and driven wells from which the supply is pumped, and 24 miles of distributing mains. The average daily supply distributed from the station is 1,454,000 gallons, and varies between 925,000 gallons in winter and 2,500,000 gallons in the height of summer.

#### LABORATORY.

In 1896 a laboratory for chemical analyses and biological examinations of the water obtained from the different sources was established at the Mount Prospect Station, and properly equipped. Samples of water from all parts of the water system are scientifically analyzed and tested every day by a Biologist, a Chemist and an Assistant Chemist, and since January 1, 1898, these tests include water from the supplies in the boroughs of Queens, Manhattan and The Bronx. They have proved very useful in giving warnings of contaminations, thus aiding to preserve the purity of the water supply.

#### PRIVATE WATER COMPANIES AND PLANTS.

The Long Island Water Company was incorporated in 1873, for fifty years, and in September, 1881, received a franchise for 25 years to supply the Town of New Lots with water. This town was annexed to the City of Brooklyn in 1886, and now constitutes the Twenty-sixth Ward of the borough. The water plant was built in 1881, and now consists of three pumping-engines of an aggregate daily capacity of 6,560,000 gallons; four boilers, with a total of 325-horse power; 2 miles of 16-inch force-mains; a reservoir of 5,000,000 gallons capacity near the Highland Boulevard, two miles from the pumping plant; 22 2-inch and 5 6-inch driven wells as sources of supply, and 47 miles of 6-inch, 8-inch and 12-inch distributing mains, with 673 fire-hydrants. The average daily supply pumped and distributed to an estimated population of 50,000 is 4,500,000 gallons. Under a still-existing contract, made by the City of Brooklyn prior to 1898, the company is paid \$31,145 per year for the rentals of 669 hydrants, being an average of \$46.55 per hydrant.

The Flatbush Water Company was incorporated in 1881 for fifty years, and received permission from the Town of Flatbush, not in the form of a franchise, to lay water-pipes, etc. The Act of 1894, making the Town of Flatbush the Twenty-ninth Ward of the City of Brooklyn, prohibits the city from laying water-mains and supplying water in that territory until the expiration of the company's charter, and authorized the making of a contract for fire-hydrant service. The plant includes three pumping-engines of 11,000,000 gallons aggregate daily capacity; three boilers of 80-horse power; a stand-pipe, 20 feet diameter, 103 feet high, and 239,700 gallons capacity; 66½ miles of distributing mains, ranging in diameter from 4 inches to 20 inches, with 535 stop-cocks and 609 fire-hydrants; 12 open 8-inch wells and 10 deep 4-inch wells for sources of supply. The average daily supply pumped and distributed is 5,000,000 gallons. Under a contract made by the City of Brooklyn prior to 1898, the company receives \$30,000 per year for fire-hydrant service.

The West Brooklyn Water Company supplies a small territory in West Brooklyn, bounded by Forty-first street, New Utrecht and Fort Hamilton avenues, Fifty-seventh street and Fifteenth



avenue. The main pumping plant is on Forty-second street, near Fort Hamilton avenue. The plant includes one steam pumping-engine of 216,000 gallons daily capacity; one hot-air engine of 2,000 gallons daily capacity; one 15-horse-power boiler; 15.7 miles of 2½-inch, 4-inch, 6-inch and 8-inch distributing mains, with 47 stop-cocks and 35 fire-hydrants; 3 tanks of 42,000 gallons capacity; one 6-inch open brick well, and one 6-inch driven well as sources of supply. The average daily supply distributed through the mains is 210,000 gallons.

The Blythebourne Water Company, whose plant and territory are in the same section of the borough as that of the West Brooklyn Water Company, has two steam-pumps of 216,000 and 115,000 gallons daily capacity; two hot-air pumps, each of 2,500 gallons capacity per hour, but seldom used; two steam-boilers of 50 and 30 horse power; 12.4 miles of distributing pipes of 2 to 8 inches diameter, with 47 stop-cocks and 14 fire-hydrants; two tanks of 20,000 and 25,000 gallons capacity; one 5-inch open brick well, and two driven wells of 7 and 8 inches diameter, respectively. The average daily supply distributed is estimated at 250,000 gallons.

There are four associations and estates which own small private plants, located in thinly populated sections of the borough: The German-American Improvement Company, 8.4 miles of 6 inch mains; the Germania Real Estate Company, 13.3 miles of 4 and 6 inch mains; the W. P. Rae Real Estate Company, 1.6 miles of 2 and 4 inch mains; and the H. C. P. Rae Estate, 1.5 miles of 1½, 2 and 4 inch mains. Each of these includes a small pumping plant and wells, except that of the Germania Real Estate Company, which is supplied with water by the Flatbush Water Company, and three-eighths of the German-American Improvement Company's distributing system, which is supplied with water by the Long Island Water Company. The total daily supply distributed through the four plants does not exceed 450,000 gallons. The total daily supply distributed by private water companies and private water plants in the borough is estimated at 10,400,000 gallons.

#### OPERATIONS AND WORK IN THE BOROUGH OF BROOKLYN FOR 1898.

On January 1, 1898, there were no available funds from bond issues of the City of Brooklyn, applicable to new works for the extension and improvement of the watershed, reservoirs, ponds, wells, pumping plants and conduit lines, and for laying additional water-mains to extend the water service. Early in the year the Corporation Counsel advised that the moneys collected from water revenue, after providing for interest on the outstanding water debt and the sinking fund for the redemption of the debt, are applicable to the cost of labor, services and materials required for the maintenance and repairs of the entire water system, but not to the extension and improvement of the system for collecting the supply and conveying it to the city, or for the extension of the water service by distributing mains into new streets and territory; and that the administrative expenses for salaries and contingencies must be provided for in the annual estimates and appropriations raised by general taxation in each year's tax levy.

No bond issues were authorized or made during the year, consequently no new work for the further development and extension of the water system has been or could be undertaken. Progress has, however, been made on four contracts which were made and provided for prior to January 1, 1898, and not completed at that date.

#### WORK ON UNFINISHED CONTRACTS.

Contract of Henry R. Worthington, dated November 20, 1895, for three new pumping-engines of 20,000,000 gallons daily capacity each, in place of three old ones, one of 10,000,000 and two of 7,500,000 gallons capacity; estimated and certified cost, \$300,000; amount paid prior to January 1, 1898, \$212,000; amount paid in 1898, \$4,400. Two of the new engines were completed prior to 1898, and have since been in constant operation. Progress on the third engine has been slow, in consequence of the necessity of operating the old engine No. 2, which occupied the space for the new one during part of the year. The foundations were completed early last December, when the erection of the engine was begun, and has so far progressed satisfactorily.

Contract of M. T. Davidson, dated August 31, 1897, for a pumping-engine at Mount Prospect Station of 3,000,000 gallons daily capacity; estimated and certified cost, \$9,500; amount paid to January 1, 1898, \$6,090; amount paid in 1898, \$2,460; ten per cent. retained during period of probation. This engine was completed in the first quarter of 1898, and has since been in constant operation. It has shown an excess of capacity over the contract requirements for which the contract provided a premium.

Contract of Charles Hart, dated March 20, 1897, for diverting Hempstead stream; estimated and certified cost, \$100,000; nothing paid prior to January 1, 1898; amount paid in 1898, \$61,639.78. This work is for the purpose of diverting the polluted portion of Hempstead stream from the supply which passes into the conduit, and consists mainly of laying a 36-inch pipe line, 14,400 feet long, from the head of Hempstead reservoir to the lower end of Smith's pond. It was begun late in 1897, and was rapidly progressed during the first six months of 1898, when

9,907 feet of the pipe-line had been laid, and the ditch for the diversion of the polluted water, the dams and grading for the settling basin, and much of the masonry work were completed. Soon thereafter the work reached a stage when it had to be suspended until the depth of water in the reservoir could be lowered, as required by the terms of the contract. This was not accomplished until December 13, as the water had to be drawn off slowly in order to utilize it for supply in the city. The work was then resumed, and at the close of the year about 3,950 feet of the pipe-line remained to be laid.

Contract of M. J. Dady, dated July 19, 1897, for constructing a by-pass around Ridgewood reservoir; estimated and certified cost, \$65,000; amount paid to January 1, 1898, \$38,390.04; amount paid in 1898, \$14,473.96. This work was completed in June last. It consists of a 60-inch steel pipe-line around the reservoir, connections with the force-mains from the Ridgewood pumping station, construction of chambers for large water meters and meter registers of the Venture pattern, and some grading and concrete work on the reservoir embankment.

#### MAINTENANCE AND REPAIRS.

All expenditure on this account is paid from the water revenue. It includes:

First—The operation and repairs of the pumping plants at twenty-two stations with 44 pumping-engines of 327,500,000 aggregate daily capacity. The present force employed is: 92 Engine-men, 46 Firemen, 5 Machinists, 32 Oilers and 29 Stokers and Coal Passers. The greater part of the pumping plant is operated night and day, requiring three reliefs of crews.

Second—The care and repairs of conduit lines, reservoirs, ponds and all buildings, dams, culverts, other structures and grounds in the watershed, along the conduit lines, and the work done to protect the water supply from pollution by patrolling the borders of the streams, ponds and reservoirs, and maintaining systems of dry-pans closets in villages and hamlets near the sources of supply to neutralize and dispose of excrement and sewage. The following is the present force employed on this work: 1 Superintendent and Assistant, 6 Keepers, 1 Civil Engineer and 3 Assistants, 4 Inspectors, 20 Mechanics, 14 Well Drivers and 164 Laborers.

Third—The maintenance and repairs of 578 miles of distributing mains, 4,780 stop-cocks or water-gates, 6,144 fire-hydrants and a large number of drinking hydrants or fountains. The force now employed consists of 3 Foremen, 31 Mechanics and 105 Laborers.

The details of the maintenance and repair work for the year are too numerous to be embodied in this report, but will be found in the report of the Chief Engineer, which is hereto appended. It is proper, however, to make special mention of the only serious accident which happened to the distributing system during the year.

The accident was a break in a 48-inch water-main, which occurred at Central avenue and Covert street, between 4 and 5 o'clock on the morning of December 11. The volume of water discharged through the break was very large, flooding streets, cellars and basements for a radius of about 150 feet, and doing considerable damage to buildings, car-tracks and the Central avenue sewer. For a brief time it cut off the water supply to the Mount Prospect pumping station and affected the supply in some other sections of the borough; but a Department repair force arrived within an hour after the accident, and by closing certain water gates and opening others, promptly stopped further flow through the break, and restored the circulation and supply through the distributing system. The quantities of pavement, earth and other material carried away by the flood, the debris to be removed and the damage to the sewers to be repaired were too large to be handled with the necessary expedition by the Department repair force. In the emergency a firm of contractors with a large working force was at once employed to prosecute the repairs night and day, to prevent damage claims as far as possible. Several Department Inspectors were also detailed to make prompt examinations and estimates of damage done to private property, in order to forestall and obtain evidence against excessive damage claims and suits. The repairs to the water-mains were completed by the Department force on the afternoon of December 14, and the other repairs were finished by the contractors' men shortly after that, at a total cost of \$7,147.93.

#### ANALYSES OF WATER SUPPLY.

At the Department Laboratory 2,180 samples of water were received, of which a considerable number were from the supply in the Borough of Queens, and some from the Croton, Bronx and Byram systems. The work of the Laboratory staff in testing the samples included 1,874 physical examinations, 1,688 chemical analyses, 1,825 microscopical examinations, 2,204 bacteriological examinations and 283 chlorine determinations of water in driven wells.

Samples of coal and oils submitted by bidders for contracts were also tested and analyzed.

#### CONSUMPTION OF WATER.

The following shows the average daily supply and consumption of water for each month of the past year:

MONTH.	RIDGEWOOD RESERVOIR LOW SERVICE.	MT. PROSPECT RESER- VOIR, MEDIUM HIGH SERVICE.	MT. PROSPECT TOWER, EXTREME HIGH SERVICE.	TOTAL RIDGEWOOD SYSTEM.	GRAVESEND SYSTEM.	NEW UTRECHT SYSTEM.	TOTAL PUBLIC SUPPLY.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
January.....	83,162,901	4,640,555	2,311,425	90,114,881	1,644,339	988,742	92,747,972
February.....	83,950,258	4,614,592	2,255,071	90,819,921	1,649,750	942,979	93,412,650
March.....	81,531,489	4,336,329	2,354,484	88,222,102	1,504,726	993,539	90,720,367
April.....	80,064,813	4,355,521	2,385,226	86,806,160	1,618,130	1,241,680	89,665,970
May.....	80,777,523	4,343,512	2,600,255	87,721,290	1,736,174	1,263,935	90,721,399
June.....	81,458,026	4,605,103	2,734,433	91,798,162	3,071,113	1,757,933	96,627,208
July.....	83,363,462	4,531,770	2,777,236	90,672,468	2,644,906	2,073,097	95,390,471
August.....	83,935,027	4,586,766	2,789,963	91,311,761	2,890,271	2,348,668	96,550,700
September.....	86,245,146	4,781,090	2,893,916	93,921,152	2,765,403	2,277,477	98,964,032
October.....	83,269,982	4,131,452	2,862,054	90,556,498	2,083,490	1,620,858	94,260,846
November.....	80,728,294	4,232,301	2,820,800	87,781,395	1,563,457	924,937	90,269,789
December.....	83,628,758	4,331,020	2,817,710	90,777,488	1,587,774	942,961	93,308,223
Average for the year.....	82,937,213	4,481,402	2,635,888	90,054,503	2,064,615	1,454,382	93,573,500

The foregoing table shows that the people in the Borough of Brooklyn indulge in profuse use of water, or waste, in hot summer days to keep cool, and in midwinter to prevent freezing in their service pipes, as people do in other cities. The degree of profusion or waste is, however, much smaller than in the boroughs of Manhattan and The Bronx. This is undoubtedly due more to the fact that the present Brooklyn water system is not capable of supplying the percentage of profusion or waste which is supplied and used from the Croton, Bronx and Byram systems, than to a disposition to exercise greater care and restraint in the use of the public water supply. If Brooklyn had the same abundance of supply which Manhattan has enjoyed in the last eight years, the people would, probably, fall into the same habits of waste. In the Ridgewood water system the difference between the minimum daily consumption in mild weather, and the maximum in the hottest month was over 7,000,000 gallons, or 7½ per cent. of the average for the year. In Manhattan it was 28,000,000 gallons, or 11½ per cent. of the average for the year.

To the average daily Brooklyn supply of 93,573,500 gallons for the year 1898, from the public water plants, is to be added 10,500,000 gallons from private plants, making a total of 104,073,500 gallons, for a population of 1,179,100, given by the census of the Health Department of last July.

This is at the rate of 88½ gallons per capita, which is very liberal and ample for all purposes of comfort, health and safety, though the per capita rate in Manhattan and The Bronx for 1898, was 121 gallons. Until the Brooklyn supply can be increased by the construction of an additional conduit and other improvements, which, under the most favorable conditions, will consume at least two years' time, the per capita rate of consumption must of necessity be diminished, because the population and the number of consumers will grow, even if no extensions of the distributing system are made. Measures to restrain waste are, therefore, indispensable to an equitable distribution of the supply to all consumers. The water meter, which is the only effective check on waste so far known by practical application, has hitherto been used in Brooklyn only to a very limited extent. There are now only 2,705 meters in use, while the number in the boroughs of Manhattan and The Bronx, is 35,442. The necessity for further extension of the meter system seems unavoidable, in whatever light the situation may be considered.

#### PRESENT AND FUTURE NECESSITIES FOR DEVELOPMENT AND EXTENSION OF THE BROOKLYN WATER SYSTEM.

The urgency of measures to increase the water supply by the further development and utilization of the resources of the present watershed, and ultimate acquisition of additional watershed, and sources of supply, and for large extensions of the distributing mains into the large territory

which has been annexed to the city and present borough in the past ten years, became forcibly apparent to me soon after my accession to the office of Commissioner of Water Supply.

In preceding paragraphs of this report I have already presented the reasons for the immediate need of enlarging the conduit capacity, from the watershed to the distributing system, by the construction of a large steel pipe conduit, for the double purpose of relieving the dangerous strain on the present brick conduit and increasing the conduit capacity, and I have also shown the necessity of increasing the quantity of water supplied and distributed through the mains.

On the subject of extending the water service by additional mains, I received many petitions from the very beginning of this administration, principally from property-owners and residents in newly annexed territory. The necessity of making the stereotyped reply that my hands were tied by the total absence of available funds, and by the barriers to new bond issues, was not comforting either to the petitioners or myself. However, I responded to the petitions, and to reports made by the Chief Engineer of this Department, by submitting to the Board of Public Improvements for approval and for presentation to the Municipal Assembly six separate communication or reports, between the dates of March 29 and December 5, calling for the laying of 104,755 feet, or nearly 20 miles, of additional water-mains in the Borough of Brooklyn, at an estimated expense of \$128,850. The Board acted favorably on all these reports, but the Municipal Assembly deferred its action until the close of the year, when ordinances were passed, and were approved by your Honor, covering 101,500 feet of the additional mains. A contract for these mains will be advertised and let at an early day.

Delay in meeting the demands for increase of supply of water and for extension of the service prevents the development of new and vacant territory by private enterprise and investment, and prevents additions to the taxable values of property. On the other hand judicious progress in quantity of supply and extension of the service will meet and encourage private enterprise, will add to the taxable values, will speedily and largely increase the revenue from the water service and will thereby create funds for the support of the bond issue for further improvements without resort to additional taxation, and will, on the contrary, become an important factor in lessening taxation by lowering the tax rate.

As to quantity of supply, the present watershed is capable of further development and considerable increase of obtainable supply by sinking additional wells at each or most of the pumping-stations and by corresponding increase in the capacity of the pumping machinery. A proper enlargement of pumping plant at Millburn Station to the capacity of the brick conduit which brings to that station the yield of the easterly section of the watershed, would alone add over 20,000,000 gallons per day to the present supply, if the conduit capacity west of Millburn is



enlarged at the same time. By these and other means the necessity for acquiring additional watershed and sources can be put off for a few years.

In a communication to the Board of Estimate and Apportionment in October last, I summarized the immediate necessities for improvements and extensions, and for corresponding bond issues, as follows:

For 66-inch steel conduit from Spring Creek to Millburn.....	\$950,000 00
For improvement and increase of Millburn Pumping-station and Plant.....	100,000 00
For laying additional distributing mains.....	150,000 00
For lands to increase well pumping plants and for protection of water from pollution at the sources.....	150,000 00
For additional wells, machinery, engine-houses, etc., at well pumping plants.....	150,000 00
Total.....	\$1,500,000 00

I herewith renew the recommendation for the speedy authorization of these improvements and the necessary bond issues.

The following is the total amount expended for the construction of the Brooklyn water system from its inception to December 31, 1898:

For lands, water rights, reservoirs, ponds, wells, conduit lines and pumping plants.....	\$15,011,249 76
For distributing mains, stop-cocks and hydrants.....	9,400,000 00
Total.....	\$24,411,249 76

#### BOROUGH OF QUEENS.

Of the territory of this borough, the former Long Island City and the former Villages of Flushing, College Point and Whitestone had public water plants, which became the property of the city on January 1, 1898. All the other territory which is artificially supplied with water obtains the supply from private water companies.

#### LONG ISLAND CITY WATER SYSTEM.

There are three pumping stations supplied from wells. The wells for Station No. 2 are so near the shore of Flushing Bay that the water obtained from them is too brackish to be used for drinking or cooking, and no water has been taken from them during the past year. The obtainable daily supply of proper quality from the three plants at no time exceeds 2,000,000 gallons, and is frequently several hundred thousand gallons less. It is distributed through 23.19 miles of water-mains, ranging in diameter from 4 inches to 14 inches, with 91 stop-cocks and 67 fire hydrants.

When the system came under the charge of this Department, it was thoroughly examined by our Chief Engineer. The entire plant, including wells, machinery, buildings, distributing mains, stop-cocks and hydrants, was found to be in poor and neglected condition, and the capacity of the supply was found to be utterly inadequate. The circulation of the water was stopped by numerous dead ends in the distributing mains. A considerable part of the population had to cart its water supply from other and distant sources. Two of the pumping plants were old and worn, and the third had but one engine and boiler, housed in temporary wooden buildings.

In a communication dated February 14, I presented these facts to the Board of Public Improvements, with the following estimate of the character, quantities and cost of the works of immediate necessity to put the water system in fairly efficient condition:

Furnishing and laying 8,000 feet of 20-inch, 18,000 feet of 12-inch, and 8,000 feet of 6-inch mains, with stop-cocks and hydrants.....	\$62,000 00
Driving two 2-inch test wells and twenty permanent and deep 6-inch wells, with connections to the pumping plant.....	15,200 00
Total.....	\$77,200 00

The Board approved and authorized these works, but the necessary authorization by the Municipal Assembly, including bond issue to cover the cost, was not obtained last year.

The lack of authority and means to improve the city's own water system, and its capacity in quantity and quality of supply, compelled resort to other sources, to relieve the discomfort, insecurity of property from fires and other disadvantages and evils caused by the inadequacy of the water supply.

#### CONTRACT WITH THE CITIZENS' WATER SUPPLY COMPANY.

In a communication to the Board of Public Improvements, dated February 16, I submitted a proposition made by the Citizens' Water Supply Company of Newtown to furnish a maximum daily supply of 3,000,000 gallons, at \$65 per 1,000,000 gallons, for distribution in Long Island City. Other propositions were subsequently submitted—from the Jamaica Water Supply Company for a daily supply of 5,000,000 gallons, and from the Woodside Company for 1,500,000 gallons. The latter company had then actually no plant at its disposal to carry out its proposition, and the system of the Jamaica Company had the disadvantage of being at too great a distance from the Long Island City distributing system to convey the supply without considerable expenditure for a conduit line, for which the Department had no funds. After long deliberation the Board of Public Improvements authorized the making of a contract with the Citizens' Water Supply Company at the price of \$65 per 1,000,000 gallons, the company to make, at its own expense, the necessary connections by mains, with meters, with the city's distributing system. The contract was executed on May 16, and on June 4 the delivery of water began at the rate of 968,000 gallons per day, which was gradually increased afterwards, until, at the close of the year, it amounted to 1,479,000 gallons. The water is of excellent quality, and the pressure in the Long Island City mains has been increased so that water is delivered to an elevation of 45 feet or more above the street grades. At the beginning this supply was all received through one connection with the distributing mains, but a second connection was made later, which has greatly improved the circulation and distribution of the water. The total cost of the supply, from June 4 to December 31, 1898, is \$15,569.23.

#### FLUSHING WATER PLANT.

This includes a pumping station and machinery, a new standpipe erected in 1897, supply wells and 15.04 miles of distributing mains, ranging in diameter from four inches to twelve inches, with 248 stop-cocks and 185 fire-hydrants. The average daily supply pumped and distributed in 1898 is 751,392 gallons. The plant was turned over to the city in better condition than the Long Island City plant, but improvements are desirable for which no funds are yet available.

#### COLLEGE POINT PLANT.

Early in 1898 a new pumping-engine, contracted for by the former village authorities, was delivered, but no provision had been made for the foundations and other necessary work to place the engine in position and make it ready for use. There was a balance in the fund which had been provided for the water-works prior to 1898, but when bids for the contract for the foundations and other work were advertised for and received last November, the available balance was found to be about \$3,000 less than the lowest bid for the contract. This was subsequently rectified by the Board of Estimate and Apportionment in making a transfer to the fund, and the contract was awarded and executed last December. A new standpipe has also been completed under a contract made prior to 1898. The College Point supply is also obtained from wells, and is distributed through 15.42 miles of water-mains of 6 inches, 8 inches, 10 inches and 12 inches diameter, with 94 stop-cocks and 94 fire-hydrants. The average daily supply distributed in 1898 is 567,561 gallons.

#### WHITESTONE WATER PLANT.

This consists of a pumping station and machinery, and 10.42 miles of distributing mains of 4 inches, 6 inches, 8 inches, 10 inches and 12 inches diameter, with 46 stop-cocks and 91 fire-hydrants. The average daily supply obtained from the supply wells and distributed through the mains in 1898 is 141,355 gallons. It is entirely inadequate, and should be speedily supplemented by connecting with and drawing upon the College Point system, or by sinking or driving additional wells.

#### WORK FOR 1898.

In the absence of authority and funds for new work and improvements, except the completion of work begun and provided for prior to 1898, as mentioned in foregoing paragraphs, the operations have necessarily been confined to maintenance and repairs.

The operation of the six pumping stations requires the services of 13 Enginemen, 9 Firemen and 4 Stokers.

The force which has been employed in the maintenance and repairs of the 64 miles of public water-mains, 479 stop-cocks and 437 fire-hydrants, includes 3 Mechanics and 13 Laborers, under a general Foreman and a Mechanical Engineer. The repair work has resulted in placing the distributing system in much better condition than it came under the charge of the Department, and included the placing of 21 new stop-cocks, 7 new hydrants, 17 new hydrant-boxes and 214 new taps for house services.

The following is a summary of the average daily supply and consumption of water for the year for which the Department collects water rents:

	Gallons.
Long Island City, Station 1.....	609,443
" " 2.....	520,000
" " 3.....	757,190
Flushing Station.....	1,886,633
College Point Station.....	751,392
Whitestone Station.....	567,561
Total from city plants.....	3,346,941
From Citizens' Water Supply Company.....	1,479,087
Total.....	4,826,028

#### PRIVATE WATER COMPANIES.

The Citizens' Water Company of Newtown has three pumping stations, with 6 pumping-engines of 11,750,000 gallons aggregate daily capacity; a standpipe, 25 feet diameter, 50 feet high and 183,580 gallons capacity; a reservoir of 3,500,000 gallons capacity; 126 supply wells, from 20 to 78 feet deep; 44.3 miles of water-mains, of which 10 miles are from 10 to 16 inches diameter, 29 miles of 6 and 8 inches diameter and 4.3 miles of 2, 3 and 4 inches diameter; 200 stop-cocks and 339 fire-hydrants. The company supplies the territory of the Second Ward of the Borough of Queens, former Town of Newtown, besides the 1,500,000 gallons now supplied to the First Ward, former Long Island City, under the contract already mentioned in this report. The quality of the water is excellent.

The Jamaica Water Supply Company has pumping-engines of 6,000,000 gallons aggregate daily capacity; a standpipe, 50 feet diameter and 47 feet high; 26 supply wells, 47 feet deep, and 60 miles of distributing mains, averaging 8 inches in diameter, with 300 stop-cocks and 631 fire-hydrants. The company supplies the territory of the former Village and Town of Jamaica and surroundings, now the Fourth Ward of the Borough of Queens. The quality of the water is good.

The Woodhaven Water Company has pumping-engines of 3,000,000 gallons daily capacity, for which the steam-power is supplied by the Lalanc and Grosjean Manufacturing Company; 2 reservoirs of 4,000,000 gallons capacity; 16 supply wells, from 98 to 143 feet deep, and 32 miles of water-mains, averaging 8 inches in diameter, with 480 fire-hydrants. The service of this company interlaces with that of the Jamaica Water Supply Company, and covers the southerly part of the Fourth Ward of the Borough of Queens. The quality of the water is good.

The Wyckoff Heights Water Company also supplies part of the Fourth Ward. The plant includes pumping-engines of 3,000,000 gallons daily capacity and 1 3/4 miles of 4 and 6 inch distributing mains, with 42 stop-cocks and 8 fire-hydrants.

The Queens County Water Company supplies the greater part of the Fifth Ward, formerly in the Town of Hempstead; its plant consists of pumping-engines of 10,000,000 gallons daily capacity; two standpipes, one of 20 inches diameter and 100 feet high, and the other 16 inches diameter and 125 feet high; 45 supply wells, from 32 to 50 feet deep; 37.43 miles of distributing mains, ranging in diameter from 2 to 16 inches; 357 stop-cocks and 278 fire-hydrants. The water is of excellent quality.

The anticipated growth of population and buildings in the Borough of Queens will demand large additions to the present capacities of water supply, proportionate and incident to the necessities for increasing the Brooklyn supply. Any large additional supply for the Borough of Brooklyn, and the additional conduit to convey it to the distributing system, will have to pass through the Borough of Queens. It will, therefore, be perfectly feasible, economical and advantageous to both boroughs and to the city to treat the two systems as one so far as acquisition of additional supply is concerned, and to build new conduits and their accessories on plans and of capacity to supply both boroughs.

#### BOROUGH OF RICHMOND.

The city owns only one small water plant in this borough, located at Tottenville. It was recently improved under a contract made in 1897 by the trustees of the late Village of Tottenville, and completed last year under the direction of this Department, including with other work a new 10-inch well 84 feet deep and a force-pump connected with a small reservoir. The plant now includes two pumping-engines of 3,000,000 gallons daily capacity, a high-service pump of 1,000,000 gallons daily capacity, 3 boilers of 200-horse power, a low service reservoir of 4,000,000 gallons capacity, a standpipe for high service, 418 feet above tide level; 52 supply wells, 6 inches diameter and 60 to 120 feet deep; 32,176 lineal feet, or 6 1-10 miles, of distributing mains, of which 700 feet were laid last year; 51 stop-cocks, and 60 fire-hydrants. The reliable daily yield of the wells is little more than 150,000 gallons per day, and funds should be provided for driving additional wells or for other sources of supply, to utilize the capacity of the pumping and distributing plant.

#### PRIVATE WATER COMPANIES.

The Crystal Water Company supplies the population of the former Village or Town of Edgewater. It has two pumping stations, with three pumping-engines of 5,000,000 gallons daily capacity; a high service pumping-engine of 1,000,000 gallons daily capacity; 5 boilers of 320-horse power; a low-service reservoir of 4,000,000 gallons capacity; a standpipe for high service, 418 feet above tide level; 96 6-inch supply wells, 50 to 120 feet deep; 48 miles of distributing mains, ranging in diameter from 4 to 16 inches; 82 stop-cocks, 340 fire-hydrants and 65 hydrants for the use of the public.

The Staten Island Water Supply Company supplies the villages on the north shore of the island. The plant consists of 3 pumping-engines of 8,000,000 gallons daily capacity, 3 boilers of 340-horse power, a reservoir or standpipe 22 feet diameter and 80 feet high, 194 6-inch supply wells from 40 to 194 feet deep, 70 miles of distributing mains ranging in diameter from 4 to 16 inches and 590 fire-hydrants.

The plants of both companies are in good condition, and the combined daily supply pumped and distributed averages 6,500,000 gallons. The pressure in the delivery of water to houses on the hills of St. George, New Brighton and West Brighton is deficient.

Inspectors, under the direction of the Deputy Commissioner and Engineer for this borough, are constantly engaged in looking after the service of the two companies, as well as the service from the city's plant at Tottenville.

#### FIRE-HYDRANT SERVICE BY PRIVATE WATER COMPANIES.

On taking charge of the water supply for Greater New York, this Department was not in possession of the contracts, or authenticated copies of contracts, which had been made prior to January 1, 1898, by the several municipalities which became consolidated with the city, for fire-hydrant service by private water companies, and such copies of contracts were not obtained, and their legality passed upon by the Law Department, until several months later. Consequently, no estimate could be given to the Board of Estimate and Apportionment at the beginning of the year, of the amounts required for such hydrant service for 1898, and no moneys were appropriated for it in the estimate and appropriations made by the Board in January. By April 26, sufficiently reliable data had been collected to form a proper basis for an estimate, and in a communication of that date to the Board of Public Improvements, I presented for its consideration and action, under subdivision 7, section 415 of the City Charter, the following estimate for 1898, which, in July, was approved and allowed by the Board of Estimate and Apportionment:

Borough of Queens.....	1,263 hydrants.....	\$25,564 00
" Richmond.....	960 ".....	26,052 50
" Bronx.....	465 ".....	18,600 00
" Brooklyn.....	1,218 ".....	61,145 00
	3,906 hydrants.....	\$131,361 50
Service of 8 Inspectors, at \$1,000 each per annum, for 5 months.....		3,333 33
Total.....		\$134,694 83

There are twenty-six of these hydrant contracts in existence, for terms of from four to twenty years, and at prices ranging from \$18 to \$35 per annum for each hydrant. One contract, made September 15, 1881, by the Town of New Lots, now in the Borough of Brooklyn, for twenty-five years, even makes a price of \$100 each for 100 hydrants, and \$75 each for 50 hydrants. Five of the contracts were made in 1897, subsequent to the passage of the Greater New York Charter.

In two communications to the Board of Public Improvements, April 26, and August 17, I called attention to the great divergence in the prices stipulated in the contracts, and recommended that \$20 per year for each hydrant be adopted as the maximum price for this service. On September 26, the Board adopted a form of supplementary agreement whereby private water companies are restricted to the charge of \$20 per year per hydrant including water supply for fire purposes, flushing sewers, and 500 gallons of water per day from each hydrant, for sprinkling streets and roads, for 200 days in the year. These conditions have since been applied on all permits to the companies for laying additional water-mains and placing additional hydrants, and without these permits and conditions the companies are prohibited from extending their mains and water service.



## NEW SCALE OF WATER RENTS.

The provisions of the Greater New York Charter in reference to a uniform scale of rents and charges for water supply are embodied in section 473, as follows:

Sec. 473. "The municipal assembly shall hereafter have all power, on recommendation of the board of public improvements, to fix and to establish a uniform scale of rents and charges for supplying water by the city of New York which shall be apportioned to different classes of buildings in said city in reference to their dimensions, values, exposure to fires, ordinary uses for dwellings, stores, shops, private stables and other common purposes, number of families or occupants, or consumption of water, as near as may be practicable, and modify, alter, amend and increase such scale from time to time, and to extend it to other descriptions of buildings and establishments. All extra charges for water shall be deemed to be included in the regular rents, which shall become a charge and lien upon the buildings upon which they are respectively imposed, and if not paid, shall be returned as arrears to the collector of assessments and arrears. Such regular rents, including the extra charges above mentioned, shall be collected from the owners or occupants of all such buildings, respectively, which shall be situated upon lots adjoining any street or avenue in said city in which the distributing water-pipes are or may be laid, and from which they can be supplied with water. Said rents, including the extra charges aforesaid, shall become a charge and lien upon such houses and lots, respectively, as herein provided, but no charge whatever shall be made against any building in which a water-meter may have been or shall be placed as provided in this act. In all such cases the charge for water shall be determined only by the quantity of water actually used as shown by said meters."

It will be noticed that no direct duty or responsibility in respect to the establishment of a new scale of water-rents devolves upon the Commissioner of Water Supply, except as one of the fourteen members of the Board of Public Improvements. It was reasonable to assume, however, that the Commissioner might be expected to take the initial action of bringing the subject before the Board, and that he would be called upon to present the statistics and conditions which the Board and the Municipal Assembly would require in their deliberations and action on this important branch of municipal legislation and government.

The fiscal year for the assessment, apportionment and collection of water-rents begins on May 1 of each year, and the water-rent books and charges for each ensuing year must be written up correctly and completely on or before that date. These books, for the Greater New York, contain more than 200,000 individual accounts, and a multiplied number of itemized charges. It occupies the time of the clerical force in the several boroughs for at least three months in each year to write up the books for the ensuing year, and to attend to current business at the same time; consequently, a new scale of rents would have to be established not later than January 31 in any year to become applicable for the ensuing fiscal year. This precluded the possibility of establishing a new scale for the fiscal year beginning May 1, 1898, and compelled the retention for that year, at least, of the then existing scales in the several boroughs. It also left at the disposition of the authorities the ample time which should be devoted to the deliberations on so important a subject.

There is considerable divergence between certain classes of charges in the old New York scale, the Brooklyn scale and the charges in the boroughs of Queens and Richmond, which are still in force.

In a communication, dated September 23, I submitted to the Board of Public Improvements a new scale, prepared by the Chief Engineer of this Department, from the standpoint of the Engineer, who desires ample means for works to improve and extend the water systems.

In further communications of December 7 and December 21, considerable modifications of the scale presented in September were recommended. In the several communications the following considerations were presented:

First—That the laws relating to the Brooklyn water supply, which, under the opinion of the Corporation Counsel, continue in force under the present City Charter, are mandatory in requiring that all expenses for the maintenance of the water system and for interest and redemption of the water debt be paid from the collections of revenue from the water service.

Second—That section 216 of the City Charter prohibits the alteration or reduction of any existing rates or charges which would diminish any of the sources of revenue of the Sinking Funds or the General Fund of the city, which prohibition must be recognized in establishing a new scale of water rents.

Third—That section 10, article 8, of the amended State Constitution separates bond issues for public water supply from other municipal indebtedness, and excludes the water debt from the limitation to ten per centum of the assessed valuation of real property subject to taxation; that this separation of water debt and bond issues for purposes of water supply from other municipal indebtedness is further provided for and required by section 208 of the City Charter, which requires the creation of a "Water Sinking Fund," into which are to be consolidated all the existing water sinking funds of the several municipalities merged into Greater New York, and to which are pledged all the moneys, funds, revenues and assets heretofore pledged and appropriated to each of said funds, for the liquidation of all indebtedness incurred on account of water supply.

Fourth—That from the foregoing provisions of the State Constitution and the present City Charter, construed together, the deduction may be drawn that the new scale of water-rents should be made with the view and for the purpose of producing sufficient revenue to pay for the maintenance of the water systems, and the support and liquidation of the existing water-debt and future bond issues for the improvement and enlargement of the systems, not only in the Borough of Brooklyn, where the law on that subject is direct and mandatory, but in the other boroughs as well—the greater city as a whole.

As further material for consideration, I presented in my communication of December 21, the following figures:

## BOROUGH OF MANHATTAN AND BRONX.

Revenue from water service for 1898 (then partly estimated).....	\$4,545,262 00
Cost of maintenance, now paid from annual appropriations.....	\$959,337 00
Interest on outstanding bonds.....	2,200,000 00
One per cent. for sinking fund.....	550,000 00
	<u>3,709,337 00</u>

Surplus applicable to the support of further bond issues..... \$835,925 00

## BOROUGH OF BROOKLYN.

Revenue for 1898 (then partly estimated).....	\$2,124,277 00
Less reduction by abolishment of charges on vacant lots.....	\$80,000 00
And frontage rate on houses which have water-meters.....	25,000 00
	<u>105,000 00</u>

Net revenue for 1898.....	\$2,019,277 00
Cost of maintenance of water system.....	\$822,910 00
Interest on debt of \$17,000,000.....	752,921 00
One per cent. for sinking fund.....	170,000 00
	<u>1,745,831 00</u>

Surplus applicable to the support of further bond issues..... \$273,446 00

## BOROUGH OF QUEENS.

Cost of maintenance and repairs for 1898, including contract with the Citizens' Water Supply Company.....	\$118,620 00
Revenue for 1898, partly estimated.....	73,800 00
	<u>\$44,820 00</u>

In the Borough of Richmond the extent of the public water service and the revenue derived from it are so small that they need not enter into the present consideration of a new scale of water rents for the greater city.

The foregoing, partly estimated, figures will be somewhat modified by the actual revenues and expenditures for 1898, as now ascertained, but they were at the time, and even now, sufficiently close to demonstrate that the aggregate water revenue of Greater New York on the now and heretofore existing scales of rents and charges yields a surplus over and above the amounts required for maintenance of the water systems, interest and sinking funds, to support further bond issues for such improvements and enlargements of the systems as are immediately necessary or desirable to maintain the efficiency of the water service and meet the additional demands upon the water supply which the growth of the city in the next two or three years will create. In the mean time, if the authority and means to extend the water-mains and water service into new streets and territory are granted in proportion to the prospective advances in population and buildings, the water revenue will increase at a greater ratio than the cost of maintenance and of support of the water debt, and the yearly surplus for support of new bond issues will increase at a still greater ratio. Consequently, there is no financial necessity for increasing the rents and charges in a new scale of water rents, either in the average or the aggregate, and adjustment and equalization of the present diverging scales are all that the financial conditions require, bearing always in mind the prohibition against reducing the present sources of revenues of the sinking funds and the general fund of the city.

The entire subject is still in the hands of the Board of Public Improvements.

## REVENUE FROM THE WATER SERVICE FOR 1898.

## BOROUGH OF MANHATTAN AND THE BRONX.

## Moneys collected and paid into the City Treasury—

Regular and extra water rents.....	\$1,735,241 80
Penalties on water rents.....	14,413 95
Water supplied through meters.....	2,075,185 32
Water supplied to shipping.....	128,006 74
Water supplied for street sprinkling.....	28,000 00
Water supplied for building purposes.....	40,575 74
Water supplied for miscellaneous purposes.....	4,084 52
Permits to tap water-mains.....	15,547 50

Total collections.....	\$4,041,055 57
Amounts returned in arrears as liens on property.....	418,348 60

Total revenue for 1898..... \$4,459,404 17

## Comparisons with 1897.

Total collections in 1898.....	\$4,041,055 57
Total collections in 1897.....	3,822,420 22

Increase, 1898 over 1897..... \$218,635 35

Total revenue, including arrears, 1898.....	\$4,459,404 17
Total revenue, including arrears, 1897.....	4,322,226 33

Increase, 1898 over 1897..... \$137,177 84

In the report of the Water Registrar, hereto appended, will be found a list of 151 charitable institutions in the boroughs of Manhattan and The Bronx which were declared exempt from charges for water supply in the years 1888 to 1897, under successive acts of the State Legislature, whose aggregate water rents amounted to \$51,286 per year, and 10 institutions which have been added to the exempt list in 1898, under said acts and the advice of the Corporation Counsel, with an aggregate water rent of \$4,557, making the present annual donation by the city in water supply to these institutions \$55,833.

## BOROUGH OF BROOKLYN.

## Moneys Collected and Paid into the City Treasury.

Regular and extra water rents.....	\$1,744,672 94
Penalties on water rents.....	18,228 23
Water for building purposes.....	8,778 95
Permits for water supply (taps).....	9,720 50
Arrears of water rents.....	147,181 23

Total.....	\$1,928,581 85
Revenue collected in 1897.....	2,062,799 61

Decrease in 1898 from 1897..... \$134,217 76

The decrease is accounted for by the abolishment, under the Greater New York Charter and the advice of the Corporation Counsel, of the charge assessed and collected from vacant lots and the frontage charge on houses which also pay meter charges which obtained in Brooklyn prior to 1898.

## BOROUGH OF QUEENS.

## Moneys Collected and Paid into the City Treasury.

Water rents and permits to tap water-mains:	
First Ward (Long Island City).....	\$53,151 93
Third Ward (Flushing, College Point and Whitestone).....	32,539 03
Total.....	<u>\$85,690 96</u>

The Department is not in possession of the necessary and reliable data for a comparison with the receipts of 1897 in the former Long Island City and the Villages of Flushing, College Point and Whitestone.

## BOROUGH OF RICHMOND.

## Moneys Collected and Paid into the City Treasury.

Water rents at meter rates.....	\$132 48
New taps in water-mains.....	243 08
Additional faucets, garden hose, etc.....	37 76
Total.....	<u>\$413 32</u>

The revenue from the small water plant at Tottenville will be increased after authority and means are obtained to sink additional supply wells, and to lay additional distributing mains. The grand total of revenue from the public water service in Greater New York for 1898 is..... \$6,474,090 30

## SUMMARY OF EXPENDITURES FOR 1898.

Including all vouchers drawn on the Comptroller against appropriations and funds for 1898, and all outstanding liabilities incurred in 1898, by contracts, orders and otherwise, and excluding vouchers in payment of liabilities incurred prior to 1898.

On account of annual appropriations in the tax levy (section 226, City Charter):

## Boroughs of Manhattan and The Bronx—

Vouchers drawn.....	\$649,673 63
Liabilities.....	200,984 60
	<u>\$850,658 23</u>

## Borough of Brooklyn—

Vouchers drawn.....	\$135,303 35
Liabilities.....	2,305 60
	<u>137,608 95</u>

## Borough of Queens—

Vouchers drawn.....	\$83,360 92
Liabilities.....	18,537 35
	<u>101,898 27</u>

## Borough of Richmond—

Vouchers drawn.....	\$13,400 77
Liabilities.....	1,373 19
	<u>14,773 96</u>

Total on account of annual appropriations..... \$1,104,939 41

On account of fund from collection of water revenue, Borough of Brooklyn (Brooklyn Consolidation Act of 1888, title 15, sections 5 and 6):

## Water supply—Maintenance and Repairs—

Vouchers drawn.....	\$419,714 99
Liabilities.....	199,543 66
	<u>\$619,258 65</u>

## Distribution—Maintenance and Repairs—

Vouchers drawn.....	\$145,364 87
Liabilities.....	10,370 41
	<u>155,735 28</u>

Total on account of Brooklyn water revenue..... \$774,993 93

On account of bond issues, authorized prior to 1898:

## Boroughs of Manhattan and The Bronx—

Additional Water Fund, for sanitary protection of water supply (chapter 189, Laws of 1893):	
Vouchers drawn.....	\$514,368 92
Liabilities.....	
	<u>\$514,368 92</u>



On account of bond issues, authorized prior to 1898:

Boroughs of Manhattan and The Bronx—

Croton Water Fund, for constructions and surveys in water-sheds (New York City Consolidation Act of 1882, section 189):

Vouchers drawn.....\$95,013 48

Liabilities.....2,137 99

97,151 47

Water-main Fund (chapter 669, Laws of 1896):

Vouchers drawn.....\$30,915 90

Liabilities.....295 00

31,210 90

Fire-hydrant Fund (chapter 510, Laws of 1894):

Vouchers drawn.....\$4,429 42

Liabilities.....272 37

4,701 79

Borough of Queens—

Fund for Standpipe and Pumping Plant at College Point, contract of 1898:

Vouchers drawn.....

Liabilities.....\$8,172 50

8,172 50

Total expenditures on bond issues.....\$655,605 58

## RECAPITULATION.

Being the total expenditures and liabilities incurred in 1898, and excluding vouchers for liabilities incurred prior to 1898:

Boroughs of Manhattan and The Bronx.....\$1,498,091 31

Borough of Brooklyn.....912,602 88

Borough of Queens.....110,070 77

Borough of Richmond.....14,773 96

Grand total.....\$2,535,538 92

Vouchers drawn in 1898, in payment of liabilities incurred prior to 1898:

Boroughs of Manhattan and Bronx—

Appropriation Accounts.....\$110,985 12

Bond Issue Accounts.....529,960 16

\$640,945 28

Vouchers drawn in 1898, in payment of liabilities incurred prior to 1898:

Borough of Brooklyn—

Appropriation Accounts.....

Water Revenue Accounts.....\$126,045 92

Bond Issue Accounts.....106,561 51

232,607 43

Borough of Queens—

Bond Issue Accounts.....

10,210 21

Total.....

\$883,762 92

## COMPARISONS—1897 AND 1898.

Including all expenditures and liabilities incurred in each year, and vouchers drawn in 1898, in payment of liabilities of 1897.

Boroughs of Manhattan and Bronx—

Department of Public Works, 1897.....\$2,515,812 93

Department of Water Supply, 1898.....1,498,091 31

Reduction.....\$1,017,721 62

Borough of Brooklyn—

Department of City Works, 1897.....\$1,447,588 39

Department of Water Supply, 1898.....912,602 88

Reduction.....\$534,985 51

A comparison with the expenditures in the boroughs of Queens and Richmond in 1897 cannot be made, because they were distributed among the former municipalities, towns and villages, and this Department is not in possession of the necessary data and figures for a comparison.

I append hereto the tabular statement of the General Bookkeeper, Document A, giving the expenditures and liabilities on each appropriation and fund, and the cash receipts from all sources; the report of the Chief Engineer, Document B, containing, among other details which are valuable but too numerous to be embodied in my report, tabular statistics in reference to private water companies and other subjects; and the report of the Water Registrar for the boroughs of Manhattan and The Bronx, with a list of all charitable institutions exempt from charges for water supply since 1886, and the revenue from the Croton water service since 1842.

Very respectfully,

WILLIAM DALTON, Commissioner of Water Supply.

## DOCUMENT "A."

Statement Showing Titles of Appropriations, Appropriations with Transfers of 1898, Total Requisitions, 1898, Liabilities and Balances of Appropriations, December 31, 1898; also Titles of Trusts and Special Accounts, Total Requisitions, 1898, and Liabilities.

TITLES OF APPROPRIATIONS.	BOROUGH.	APPROPRIATIONS WITH TRANSFERS, 1898.	TOTAL REQUISITIONS, 1898.	LIABILITIES.	BALANCES OF APPROPRIATIONS, DECEMBER 31, 1898.
Aqueduct—Repairs and Maintenance.....	Manhattan and Bronx.....	\$265,552 00	\$203,502 72	\$41,256 16	\$14,793 12
Aqueduct—Repairs and Maintenance—Salaries.....	".....	33,100 00	31,486 47	.....	1,613 53
Bronx River Works—Maintenance and Repairs.....	".....	31,025 00	23,337 84	1,451 37	6,235 79
Bronx River Works—Maintenance and Repairs—Salaries.....	".....	3,900 00	3,100 00	.....	800 00
Laying Croton Pipes.....	".....	229,830 00	31,339 69	134,670 69	63,819 62
Laying Croton Pipes—Salaries.....	".....	19,780 00	17,516 33	123 00	2,140 67
Public Drinking Hydrants.....	".....	2,000 00	1,478 58	300 00	221 42
Rentals of Hydrants.....	".....	18,600 00	.....	18,600 00	.....
Repairing and Renewal of Pipes, Stop-Cocks, etc.....	".....	223,991 00	158,627 90	20,195 02	5,168 08
Salaries—General Administration.....	".....	20,333 33	15,991 69	.....	4,341 44
Salaries—Deputy Commissioner, Chief Clerk and Employees.....	".....	35,240 00	34,523 12	8 57	708 31
Salaries—Engineers, Clerks, Inspectors and Measurers.....	".....	72,610 00	69,564 49	237 50	2,808 01
Salaries—Supplying Water to Shipping and for Building Purposes.....	".....	7,000 00	6,015 96	54 00	930 04
Water for Twenty-fourth Ward.....	".....	10,400 00	7,188 64	3,111 36	100 00
Salaries—Office of Deputy Commissioner.....	Brooklyn.....	19,590 00	17,040 37	.....	2,549 63
Salaries—Office of Chief Engineer.....	".....	12,060 00	7,270 84	.....	4,789 16
Salaries—Office of Water Registrar.....	".....	59,540 00	58,671 81	.....	868 19
Salaries—Laboratory.....	".....	5,760 00	5,040 01	.....	719 99
Contingencies—Office of Deputy Commissioner.....	".....	1,000 00	219 35	.....	783 65
Contingencies—Office of Chief Engineer.....	".....	2,000 00	398 08	495 78	1,106 14
Contingencies—Office of Laboratory.....	".....	2,675 00	804 24	1,809 82	60 94
Rentals of Hydrants.....	".....	61,145 00	45,858 75	15,286 25	.....
Salaries—Office of Deputy Commissioner.....	Queens.....	14,600 00	12,698 69	.....	1,901 31
Salaries—Pumping Stations.....	".....	22,200 00	21,182 63	12 00	1,005 37
Pumping Stations—Fuel and Supplies.....	".....	34,750 00	12,072 85	16,996 01	5,681 14
Maintenance and Repairs of Water Pipes.....	".....	19,520 00	15,645 79	1,541 34	2,332 87
Telephonic Service.....	".....	1,350 00	582 75	600 00	167 25
Supplying Water to Long Island City.....	".....	23,200 00	12,764 21	3,900 00	6,535 79
Rentals of Hydrants.....	".....	25,564 00	8,414 00	17,150 00	.....
Pumping Plant Extension, College Point.....	".....	3,000 00	.....	3,000 00	.....
Salaries—Office of Deputy Commissioner.....	Richmond.....	4,466 67	4,283 57	.....	183 10
Pumping Stations—Salaries and Supplies.....	".....	4,000 00	3,016 44	933 89	29 67
Contingencies.....	".....	250 00	40 76	191 30	17 94
Rentals of Hydrants.....	".....	26,052 50	6,060 00	19,992 50	.....
Totals.....		\$1,316,084 50	\$851,738 77	\$301,936 56	\$132,409 17

NOTE.—Requisitions were drawn during the year on liabilities against appropriations of previous years amounting to \$110,985.12.

TITLES OF TRUSTS AND SPECIAL ACCOUNTS.	BOROUGH.	TOTAL REQUISITIONS, 1898.	LIABILITIES.	TITLES OF TRUSTS AND SPECIAL ACCOUNTS.	BOROUGH.	TOTAL REQUISITIONS, 1898.	LIABILITIES.
Additional Water Fund.....	Manhattan and Bronx..	\$514,368 92	.....	Water Supply—Distribution and Repairs—Materials and Supplies.....	".....	6,853 05	10,370 41
Croton Water Fund.....	".....	236,431 91	\$19,995 26	Water Maintenance, 1897.....	".....	16,728 10	.....
Burnside Avenue Archway.....	".....	10,831 55	.....	Water Construction.....	".....	106,561 51	.....
Fire Hydrant Fund.....	".....	4,429 42	.....	Stand-Pipe, College Point.....	Queens.....	7,407 13	.....
Revenue Bond Fund—Readjustment of Pipes, Forty-second Street Reservoir.....	".....	1,623 18	.....	Stand-Pipe Fund, Flushing.....	".....	132 12	.....
Water-Main Fund, No. 2.....	".....	406,727 49	67,604 93	College Point Water Works Fund.....	".....	2,770 96	5,172 50
Water-Meter Fund, No. 2.....	".....	275 41	.....	Totals.....		\$1,982,685 38	\$302,686 76
Water Supply—Maintenance and Repairs—Salaries and Wages.....	Brooklyn.....	342,038 93	.....				
Water Supply—Maintenance and Repairs—Materials and Supplies.....	".....	186,993 88	199,543 66				
Water Supply—Distribution and Repairs—Salaries and Wages.....	".....	138,511 82	.....				

The above figures of liabilities on Trust and Special Accounts are approximate only, being largely dependent on pending proceedings of Commissioners of Appraisal, and because of incomplete information as to accounts of former municipalities outside of Manhattan and The Bronx.



Statement of General Bookkeeper, Department of Water Supply, showing all Revenues of the City received through the Department during the Year 1898.

SOURCE OF REVENUE.	BOROUGH.		
Water rents.....	Manhattan and Bronx ..	\$1,735,741 80	
Penalties on water rents .....	" ..	14,413 95	
Water through meters .....	" ..	2,075,185 32	
Water for shipping.....	" ..	128,006 74	
Water for building purposes.....	" ..	40,375 74	
Water for street sprinkling.....	" ..	28,000 00	
Water for miscellaneous purposes.....	" ..	4,084 52	
Permits to tap water-mains.....	" ..	15,347 50	
		\$4,041,055 57	
Add amount returned as in arrears.....	" ..	418,348 60	\$4,459,404 17
Water rents .....	Brooklyn .....	\$1,744,672 94	
Penalties on water rents .....	" .....	18,728 23	
Water for building purposes .....	" .....	8,178 95	
Permits to tap water-mains.....	" .....	9,720 50	
Arrears .....	" .....	147,181 23	1,928,581 85
Water rents and permits to tap water-mains :			
First Ward—Long Island City.....	Queens .....	\$53,151 93	
Third Ward—Flushing, College Point and Whitestone ..	" .....	32,539 03	85,690 96
Water rents at meter rates.....	Richmond .....	\$132 48	
Extra water .....	" .....	37 76	
Permits to tap water-mains .....	" .....	243 08	413 32
Total revenue from water .....			\$6,474,050 30
Miscellaneous receipts, labor and material, proceeds of public sales, etc. :			
Manhattan and The Bronx .....		\$830 37	
Brooklyn .....		1,719 59	\$2,549 96

E. BEARDSLEY, General Bookkeeper.

BUREAU OF THE CHIEF ENGINEER.

WILLIAM DALTON, Esq., Commissioner of Water Supply :

DEAR SIR—Under your instructions with this please find a statement of the operations of this Bureau during the quarter ending December 31, 1898, and a summary, etc., of the year 1898.

BOROUGH OF MANHATTAN AND BRONX.

SUMMARY OF EXPENDITURES FOR THE QUARTER ENDING DECEMBER 31, 1898.

Additional Water Fund.....	\$20,448 02
Aqueduct Repairs and Maintenance.....	63,450 68
Aqueduct Repairs and Salaries.....	8,635 56
Bronx River Works Maintenance and Repairs.....	7,832 72
Bronx River Works Salaries.....	975 00
Croton Water Fund .....	77,136 73
Laying Croton pipes.....	26,817 41
Laying Croton pipes, Salaries .....	5,172 50
Public Drinking Hydrants .....	938 47
Repairing and renewal of pipes, etc.....	58,435 14
Revenue Bond Fund (Forty-second Street Reservoir)....	318 23
Salaries, Engineer, etc.....	649 98
Water Main Fund, No. 2 .....	23,831 00
Water Supply, Twenty-fourth Ward.....	2,223 74
Rentals of Hydrants, Brooklyn .....	23,072 50
Rentals of Hydrants, Queens.....	8,414 00
	\$328,351 68

SUMMARY OF EXPENDITURES FOR THE YEAR 1898.

Additional Water Fund .....	\$514,922 42
Aqueduct Repairs and Maintenance.....	247,942 28
Aqueduct Repairs Salaries.....	31,486 47
Bridge over Harlem river, Third avenue.....	1,083 33
Bronx River Works, Maintenance and Repairs.....	25,631 37
Bronx River Works, Salaries.....	3,100 00
Burnside Avenue Archways.....	10,831 55
Croton Water Fund.....	236,431 91
Fire Hydrant Fund.....	4,922 88
Laying Croton Pipes.....	83,719 11
Laying Croton Pipes, Salaries.....	17,363 58
Public Drinking Hydrants.....	1,478 58
Repairing and renewal of pipes, etc.....	209,048 14
Revenue Bond Fund (Forty-second Street Reservoir)....	1,623 18
Salaries, Engineer, etc.....	2,432 18
Water Main Fund .....	381,591 39
Water Supply, Twenty-fourth Ward.....	7,763 62
Rentals of Hydrants, Brooklyn.....	53,645 00
Rentals of Hydrants, Queens.....	8,414 00
Rentals of Hydrants, Richmond.....	6,060 00
	\$1,849,490 99

CONTRACTS MADE, COMPLETED AND UNFINISHED DURING THE YEAR 1898.

LOCATION AND WORK.	CONTRACTOR.	DATE CONTRACT.	ESTIMATED COST.	DATE FINAL ESTIMATE.	AMOUNT OF FINAL ESTIMATE.	AMOUNT PAID IN 1898.
Furnishing and laying water-mains in Fifth avenue.....	William P. Baird.....	Aug. 24, 1896	\$452,470 00	Jan. 22, 1898	\$434,070 36	\$41,809 84
Burnside avenue archways.....	A. C. Gildersleeve.....	Nov. 20, "	51,865 00	June 30, "	53,377 25	10,156 55
Byram Pond Reservoir.....	P. F. Curran.....	Dec. 31, "	57,555 00	" 1, "	66,757 45	11,804 36
Keepers' houses at Muscote Reservoir, Middle Branch Reservoir.....	John McQuade .....	Jan. 6, 1897	11,500 00	Jan. 20, "	11,500 00	2,500 00
Furnishing cast-iron pipe, etc.....	Warren Fg. Machine Company.....	Feb. 9, "	37,689 50	" 14, "	44,703 16	4,908 19
Furnishing coal.....	William C. Moquin.....	" 9, "	28,800 00	Mar. 11, "	28,817 68	13,683 06
Laying mains in Amsterdam avenue, etc.....	J. S. Rodgers.....	Mar. 12, "	27,521 00	Jan. 28, "	27,466 82	4,064 63
Laying mains in Pleasant avenue, etc.....	John Cornwell, Jr. ....	Apr. 23, "	21,704 55	Oct. 4, "	20,541 09	1,027 05
Furnishing and laying mains in Third street, etc.....	" .....	" 23, "	104,315 55	June 21, "	105,980 51	41,848 86
Furnishing double nozzle hydrants.....	Kennedy Valve Manufacturing Company .....	June 21, "	7,550 00	May 9, "	7,550 00	7,550 00
Laying mains in Burnside avenue, etc.....	Martin Lipps.....	July 2, "	16,636 00	Aug. 21, "	15,150 06	5,536 92
Laying mains in Amsterdam avenue, etc.....	" .....	Sept. 14, "	6,304 03	July 13, "	6,842 04	2,714 54
Facing tank, Highbridge.....	Patrick F. Burns.....	" 16, "	16,050 00			13,491 00
Furnishing and laying mains in Eleventh avenue, etc.....	T. A. Gillespie Company.....	Dec. 6, "	275,397 50			263,367 44
Furnishing and laying mains in Webster avenue.....	" .....	" 6, "	61,584 70	Oct. 26, 1898	55,030 46	52,278 94
Improvement of White Pond, etc.....	(John Twinn, Jr.....) (B. S. Palmer.....)	" 8, "	48,837 50			29,782 24
Furnishing and laying mains in Fort George avenue.....	Martin Lipps.....	Feb. 2, 1898	22,745 20			6,216 12
Furnishing stop-cocks, etc.....	Fox & Engel.....	May 12, "	4,253 50			3,144 15
Furnishing whitewood plugs, etc.....	" .....	" 12, "	2,998 40	Sept. 9, 1898	2,998 82	2,998 82
Furnishing cast-iron water pipes.....	" .....	" 25, "	9,598 60	Dec. 15, "	9,931 42	9,931 42
Furnishing cast-iron water pipes.....	Warren Fg. Machine Company.....	" 20, "	35,178 00			24,433 27
Furnishing coal.....	Theo. F. Tone.....	June 1, "	30,730 00			17,954 55
Furnishing tapping cocks, etc.....	Kennedy Valve Manufacturing Company.....	" 7, "	2,130 00	Dec. 25, 1898	2,133 51	2,133 51
Furnishing stop-cocks, etc.....	" .....	" 7, "	9,537 50	" 31, "	9,537 50	9,537 50
Furnishing and laying mains across Harlem river, etc.....	Peter Fruh.....	Sept. 2, "	53,000 00			
Furnishing and laying mains in Southern Boulevard.....	Martin Lipps.....	Oct. 31, "	39,681 50			

STORAGE RESERVOIRS.

The Croton river has furnished a full supply to the Aqueduct since October 20, 1898.

Storage Drawn during the Quarter.

	Gallons.
East Branch Reservoir.....	1,400,000,000
West Branch Reservoir.....	1,000,000,000
Quarter.....	2,400,000,000

Storage Drawn during the Year.

	Gallons.
East Branch Reservoir.....	3,430,000,000
West Branch Reservoir.....	3,400,000,000
Middle Branch Reservoir .....	400,000,000
Titicus Reservoir.....	500,000,000
Muscote Reservoir.....	900,000,000
Total gallons drawn.....	8,630,000,000

All of the reservoirs are now full.

The work at White pond and outlet has been carried on steadily. The dam is completed, and the pond is gradually filling. Surveys and plans for a reservoir on the Cross river branch of the Croton river are now being completed, and the necessary maps of lands required for same are being prepared.

BRONX AND BYRAM RIVER SUPPLY.

No storage has been drawn during the quarter.

Storage Drawn during the Year.

	Gallons.
Kensico Reservoir.....	490,000,000
Rye Ponds Reservoir.....	620,000,000
Total drawn during the year .....	1,110,000,000

Kensico Reservoir has filled during the quarter, and Rye Ponds and Byram Reservoirs are gradually filling. The contract for relaying 48-inch conduit on Webster avenue at Woodlawn has been completed. The full capacity of this conduit is now in use during the summer, and it



becomes necessary to increase this supply of 20,000,000 gallons per day in order to supply the Twenty-third and Twenty-fourth Wards.

By building a pumping plant at Jerome Park Reservoir to supply the higher portions of same and by laying a 48-inch main from the Croton Aqueduct at Jerome Park Reservoir to the lower portions of the Twenty-third Ward.

Surveys are being made to the east and south of the Byram and Croton sheds, in the State of New York, for a further supply.

## RAINFALL, INCHES.

	OCTOBER.	NOVEMBER.	DECEMBER.	QUARTER.	YEAR 1898.
Boyd's Corner Reservoir.....	4.84	6.81	2.20	13.85	56.48
Middle Branch Reservoir .....	4.63	6.34	2.44	13.41	54.59
Kensico Reservoir .....	7.78	6.57	2.89	17.24	56.34
Croton Dam .....	4.76	5.74	2.50	13.00	56.00
Central Park Reservoir .....	5.89	4.56	2.65	13.10	44.17

This rainfall during the year has been above the average at all of the stations, except Central Park, and as the heavy rainfalls have occurred in August and October, but little storage has been drawn.

The electrozone plant at Brewsters, and dry pan method at Mount Kisco, have been carried on, treating sewerage of these villages during the year.

## STORAGE.

YEAR.	RESERVOIRS.	GALLONS.
1870	Lakes Kirk, Mahopac, Gleneida and Gilead and Barrett's Pond, capacity .....	1,600,000,000
1873	Boyd's Corners Reservoir, capacity .....	2,700,000,000
1878	Middle Branch Reservoir, capacity .....	4,000,000,000
1891	East Branch Reservoirs, capacity .....	8,000,000,000
1893	Titicus Reservoir, capacity .....	7,000,000,000
1895	West Branch Reservoir, capacity .....	10,000,000,000
1897	Muscot Reservoir, capacity .....	7,000,000,000
1898	White Pond Reservoir, capacity .....	200,000,000
	Total storage .....	40,500,000,000
	Total storage in Croton Watershed .....	40,500,000,000
	<i>In Bronx and Byram Watersheds.</i>	
1854	Kensico Reservoir .....	1,600,000,000
1886	Rye Ponds Reservoir .....	1,300,000,000
1898	Byram Pond Reservoir .....	800,000,000
	Total storage capacity, gallons .....	44,200,000,000
1871	High Service Plant at High Bridge, capacity per day .....	6,000,000
1880	High Service Plant at Ninety-eighth street and Ninth avenue, capacity, per day .....	15,000,000
1892	Increase at Ninety-eighth street, capacity per day .....	10,000,000
1896	High Service Plant at One Hundred and Seventy-ninth street and Tenth avenue, capacity per day .....	28,000,000

## ADDITIONAL WATER FUND.

Under chapter 189, Laws of 1893, the following lands have been taken :

	Acres.
East Branch Croton river .....	349
West Branch Croton river .....	389
Middle Branch Croton river .....	369
Around Lake Gleneida .....	235
Muscot river .....	398
Around Kensico Reservoir .....	97
Along Bear Gutter creek and around Byram pond .....	376
Around White pond and outlet .....	278
In Mount Kisco and vicinity .....	101
In Towner's and Patterson .....	67
Total acres .....	2,639

Amount expended on this account to December 1, 1888, has been .....

More than half of this area consisted of small plots with houses, barns, etc., in the several villages of Brewsters, Carmel, Kensico, Mount Kisco, Farmer's Mills, Towner's, Patterson, Amawalk and Somer's Centre.

## RAINFALL.

At Storage Reservoir, Boyd's Concerns, Putnam County, including Melted Snow.

MONTH.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.
January .....	3.33	2.11	2.90	3.79	4.51	3.80	1.44	5.66	6.36	2.74	1.42
February .....	3.60	3.00	1.38	3.64	6.40	3.81	1.22	3.09	2.78	3.47	4.91
March .....	3.33	1.49	2.55	5.48	3.80	4.27	2.59	3.08	1.57	4.99	6.33
April .....	3.79	3.74	3.87	2.11	5.45	3.01	3.04	3.77	6.31	3.04	4.43
May .....	5.62	6.86	8.79	4.52	2.30	3.45	3.69	2.91	1.99	1.08	3.99
June .....	4.45	5.28	4.53	3.59	2.06	5.73	4.00	0.71	3.57	3.02	2.52
July .....	4.01	5.25	2.13	2.26	3.43	5.07	4.34	2.21	5.98	3.10	3.42
August .....	6.56	10.04	6.98	1.92	5.10	5.24	5.99	5.73	2.75	10.33	1.20
September .....	4.92	3.62	9.33	3.20	2.85	1.14	3.69	3.73	3.56	2.11	5.21
October .....	5.09	3.66	0.87	9.46	4.73	6.18	2.15	5.13	2.40	3.61	1.50
November .....	3.80	3.10	4.65	2.43	2.51	4.35	4.91	3.72	2.72	4.61	3.40
December .....	3.27	2.62	2.35	5.96	1.49	2.59	3.68	4.13	1.78	1.56	2.35
Total .....	51.77	50.77	50.33	48.36	44.63	48.94	40.74	43.87	42.37	43.66	40.68

MONTH.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
January .....	2.68	4.49	2.52	4.00	4.19	4.41	2.80	5.07	5.59	5.25	5.68
February .....	0.80	3.65	2.85	2.92	5.28	5.96	5.21	6.31	4.65	5.20	6.01
March .....	7.66	3.10	4.96	4.51	6.14	4.58	1.67	4.82	1.29	3.86	3.60
April .....	2.35	2.85	5.10	3.99	1.67	1.36	3.94	2.96	2.09	3.61	3.47
May .....	0.85	4.97	2.45	1.17	3.74	6.30	2.86	4.33	2.44	4.54	0.32
June .....	4.95	4.65	5.29	1.28	5.72	3.04	5.64	2.04	1.19	3.09	7.70
July .....	4.65	4.28	5.95	5.65	2.45	3.64	4.26	6.54	5.27	4.40	13.32
August .....	2.54	2.66	5.83	3.60	1.71	3.92	2.09	4.50	7.35	3.21	7.06
September .....	1.49	6.61	3.43	2.69	0.75	14.33	2.45	1.69	1.09	2.30	2.00
October .....	8.38	3.78	0.95	3.25	3.65	3.33	6.99	3.74	5.19	2.28	3.12
November .....	8.16	4.36	2.49	2.97	4.50	1.66	1.79	4.37	5.99	5.57	2.69
December .....	1.52	8.74	4.26	2.49	6.53	2.68	3.45	7.34	3.84	4.29	6.71
Total .....	46.03	54.14	46.08	33.52	46.33	55.20	43.15	53.71	45.99	47.59	61.68

MONTH.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
January .....	5.56	5.14	2.03	9.76	5.95	4.03	3.40	4.85	1.09	4.07	5.82
February .....	5.07	2.33	4.94	8.02	1.22	8.05	5.01	1.85	6.65	3.14	5.55
March .....	6.44	1.86	5.66	3.36	3.90	4.52	1.62	1.88	6.86	3.68	2.64
April .....	2.68	4.43	3.03	3.77	1.08	3.55	3.07	5.63	1.48	2.78	3.84
May .....	6.27	3.22	5.74	1.36	5.74	8.18	6.90	2.41	3.09	5.56	7.07
June .....	2.00	4.51	3.56	1.81	3.64	2.33	1.59	2.16	3.79	2.89	1.50
July .....	2.43	7.74	5.46	2.97	5.05	2.38	1.75	3.95	3.18	13.03	4.78
August .....	6.87	2.90	4.70	5.61	6.22	7.06	1.42	3.10	4.56	5.63	9.26
September .....	10.77	6.13	6.85	1.89	2.65	2.65	7.69	1.16	6.50	1.74	1.97
October .....	4.80	4.85	7.63	2.15	0.92	6.42	5.94	3.55	2.17	1.94	4.84
November .....	4.49	8.45	1.12	3.86	7.85	3.32	4.17	2.91	3.96	6.44	6.81
December .....	6.13	2.94	3.71	5.65	1.15	5.34	4.43	4.88	2.72	6.56	2.20
Total .....	63.51	51.50	54.44	48.19	45.37	57.83	46.99	38.33	46.05	57.46	56.88

## AQUEDUCT—REPAIRS AND MAINTENANCE.

Work Done during the Quarter.

Division	Earth Excavation, Cubic Yards.	Stone Quarried, Cubic Yards.	Dry Stone Masonry, Cubic Yards.	Stone Masonry, Cubic Yards.	Fence Built, Lineal Feet.	Fence Repaired, Lineal Feet.	Fence Painted, Lineal Feet.	Iron Railing Painted, Lineal Feet.	Iron Railing Set, Lineal Feet.	Fence Gates Built.	Telephone Poles Set.	Filling and Grading, Cubic Yards.	Pointing Coping, Lineal Feet.	Pointing Masonry, Square Feet.	Brick Masonry, Cubic Yards.	Brick Hauled.	Sand Hauled, Cubic Yards.
1.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.....	.....	.....	.....	.....	2,274	.....	.....	.....	8	70	.....	.....	.....	.....	.....	.....	.....
3.....	266	50	20	14	625	.....	1,651	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4.....	.....	25	.....	27	.....	740	.....	.....	.....	.....	.....	200	.....	.....	.....	30,000	30
5.....	.....	.....	41	.....	262	300	1,458	.....	.....	.....	.....	43	.....	.....	.....	4,000	.....
6.....	.....	.....	.....	.....	380	800	1,950	.....	.....	.....	.....	125	.....	.....	.....	8,000	.....
7.....	.....	.....	.....	4	.....	.....	.....	3,100	104	.....	.....	.....	2,656	4,188	44	.....	.....
8.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	266	75	61	45	3,541	1,840	5,059	3,100	104	8	70	368	2,656	4,188	44	42,000	30



## Work Done during the Year 1898.

Division	1	2	3	4	5	6	7	8	Totals																			
	Earth Excavation, Cubic Yards.	Stone Quarried, Cubic Yards.	Dry Stone Masonry, Cubic Yards.	Stone Masonry, Cubic Yards.	Filling and Grading, Cubic Yards.	Brick Masonry, Cubic Yards.	Drain Laid, Lineal Feet.	Paving Gutter, Lineal Feet.	Spreading Gravel, Cubic Yards.	Curb Set, Lineal Feet.	Flagging Laid, Square Feet.	Coping Set, Lineal Feet.	Pointing Masonry, Square Feet.	Pointing Coping, Lineal Feet.	Hauling Sand, Cubic Yards.	Hauling Bricks.	Iron Railing Set.	Iron Railing Painted.	Fence Built, Lineal Feet.	Fence Repaired, Lineal Feet.	Fence Painted, Lineal Feet.	Fence Gates Built.	Fence Posts Set.	Telephone Poles Set.	Screens put in Old Gate-house.	Built Wooden Bridges Over Brooks.	Sodding, Square Yards.	Spreading Manure Loads.
1	88																		160		8			10				
2	121		154		60								1,100						3,711	400	57			70		5		
3	596	50	92	14	153		65						40						1,985		5,818						40	
4	808	25		27	658	187	38								30	30,000			300	1,330								
5	49	17	61		599			60	53							4,000			1,672	1,050	1,458							
6	639	50			849				50	328	243	110				8,000			2,630	3,350	1,950		500				50	
7			4	4	275	67							4,188	2,656			104	3,100					8				330	
8	50				25	27					200								500	150								
Totals	2,263	142	399	45	2,619	281	103	60	103	328	443	110	5,328	2,656	30	42,000	104	3,100	10,798	6,440	9,283	8	508	70	10	5	380	40

The usual work of keeping the aqueducts and grounds, the reservoirs and surrounding lands, the lands along the rivers taken for sanitary purposes, the fences, gate houses and telephone line in good order and repair, the operation of two pumping stations at Ninety-eighth street and One Hundred and Seventy-ninth street and the general supervision of the water shed have been continued during the year.

The contract for facing the bank at the west end of Highbridge has been completed.

In October the old aqueduct was cleaned out and water again passed through same to the city, it having been shut off for changes at Burnside avenue and Jerome Park Reservoir since November, 1896, starting with 2 feet in depth, it was gradually increased in depth to 5 feet; on December 12, a leak developed at the arch over the Sing Sing kill, which was built to carry the masonry of the aqueduct over this stream; on shutting off the water and draining the aqueduct it was found that the aqueduct had given away on the west side over and south of the south abutment of this arch, for a distance of 100 feet; the force of the water, with the help of the severe cold weather and frost, had cracked the south abutment and west facing above the arch stone, but not destroying the stability of the arch over the stream. Work is now being carried on inside the aqueduct, tearing out the weak and cracked portions of masonry and obtaining the necessary materials to repair same. Plans are being made for the outside facing of the abutment and arch and reinforcement of same, which will be ready for letting contract for same in the spring.

All of the water now supplied to the city is obtained through the new aqueduct which is in good order and has shown no defects during the year.

A gang of men have been employed during the quarter and year keeping in order, cleaning and making necessary repairs to the numerous large stop-cocks on the mains throughout the city.

## LAYING CROTON PIPES.

There was no work done during the quarter ending December 31, 1898. The ordinances in the Municipal Assembly not having passed in time to do any work. Contracts, etc., are now being prepared for the carrying out of the several ordinances passed by the Municipal Assembly and approved by the Mayor, in November and December, 1898.

## STREETS AND AVENUES IN WHICH WATER-MAINS HAVE BEEN LAID IN 1898.

## (R) Mains Reset and Replacing Others.

## 48-inch pipe—

Webster avenue, north and south of Two Hundred and Thirty-third street (R).

## 36-inch pipe—

One Hundred and Twenty-fifth street, Third to Madison avenues.  
High Bridge, from Shaft No. 25, new aqueduct to pumping station.  
Eleventh avenue and Western Boulevard, Fifty-ninth street to One Hundred and Seventy-ninth street.  
One Hundred and Seventy-ninth street, Western Boulevard to Amsterdam avenue.  
West Broadway, West Fourth to West Third street.  
Fourth street, West Broadway to Lafayette place.  
Lafayette place, Fourth to Bond street.  
Elm street, Bond to Chambers street.

## 20-inch pipe—

At intersection of One Hundred and Twenty-fifth street and Park avenue.  
Third street, West Broadway to Greene street.  
Greene street, Third to Canal street.  
Thompson street, Third to Canal street.  
West Broadway, Third to Fulton street.

## 12-inch pipe—

Amsterdam avenue, Fifty-eighth to Seventy-first street.  
Boulevard, Manhattan to One Hundred and Twenty-second streets.  
One Hundred and Twenty-second street, Boulevard to Riverside Drive.  
Fort George avenue, One Hundred and Ninetieth street to Amsterdam avenue.  
Burnside avenue, Jerome to Sedgwick avenue.  
Webster avenue, Suburban street to Tower place (R).  
Tremont avenue, Ryer to Morris avenue (R).  
Southern Boulevard, Perry to Briggs avenue (R).  
Tremont avenue, Webster to Ryer avenue (R).  
Lispensard street, between Broadway and West Broadway.  
Walker street, between Broadway and West Broadway.  
White street, between Broadway and West Broadway.  
Franklin street, between Broadway and West Broadway.  
Leonard street, between Broadway and West Broadway.  
Worth street, between Broadway and West Broadway.  
Thomas street, between Broadway and West Broadway.  
Duane street, between Broadway and West Broadway.  
Reade street, between Broadway and West Broadway.  
Warren street, between Broadway and West Broadway.  
Murray street, between Broadway and West Broadway.  
Barclay street, between Broadway and West Broadway.  
Park place, between Broadway and West Broadway.  
Vesey street, between Broadway and West Broadway.  
Elm street, between Great Jones and Bond street.

## 6-inch pipe—

One Hundred and Sixty-third street, from Tinton to Union avenue.  
Union avenue, from Home to One Hundred and Sixty-eighth street (R).  
Union avenue, from One Hundred and Sixty-eighth street to Boston road (R).  
Jansen avenue, from Terrace View avenue to a point 500 feet south (R).  
Simpson street, from Freeman to One Hundred and Sixty-seventh street.  
One Hundred and Forty-first street, from Brook to St. Ann's avenue.  
Travers street, from Jerome to Bainbridge avenue (R).  
One Hundred and Sixty-third street, from Amsterdam avenue to Edgecombe road.  
One Hundred and Sixty-third street, from Courtlandt to Railroad avenue (R).  
Dawson street, from Prospect to Westchester avenue.  
One Hundred and Seventieth street, from Bristow street to Prospect avenue.  
One Hundred and Eightieth street, from Third to Webster avenue.  
One Hundred and Forty-second street, from Amsterdam to Convent avenue.  
One Hundred and Seventy-eighth street, from Eleventh avenue to Kingsbridge road.  
Home street, from Intervale avenue to Southern Boulevard (R).  
Stebbins avenue, from One Hundred and Sixty-fifth to One Hundred and Sixty-seventh street.  
One Hundred and Eightieth street, from Prospect to Mapes avenue.  
Mapes avenue, from One Hundred and Eightieth street to a point 500 feet north.  
Bryant street, from Jennings street to East One Hundred and Seventy-second street.  
Franklin avenue, from One Hundred and Sixty-ninth street to a point 250 feet north (R).  
Washington avenue, at intersection of One Hundred and Eighty-third street (R).  
Bathgate avenue, at intersection of One Hundred and Eightieth street (R).  
Wicker place, from Van Corlears place to Kingsbridge avenue (R).  
Cauldwell avenue, from Westchester avenue to Boston road.  
One Hundred and Thirty-sixth street, from St. Ann's avenue to Southern Boulevard.

## 6-inch pipe—

Ninetieth street, from First avenue to Avenue A.  
Convent avenue, from One Hundred and Thirty-fifth to One Hundred and Forty-first street.  
One Hundred and Twenty-seventh street, from Boulevard to Claremont avenue.  
Boulevard, from Manhattan to One Hundred and Twenty-second street.  
Home street, at intersection of Longfellow street (R).  
Andrews avenue, from Hampden street to a point 300 feet north (R).  
Marcher avenue, from Bosobel avenue to a point 200 feet north (R).  
Loring place, from One Hundred and Eighty-first street to One Hundred and Eighty-third street.  
Vireo avenue, from Two Hundred and Thirty-third to Two Hundred and Thirty-fourth street (R).  
Vireo avenue, from Two Hundred and Thirty-sixth to Two Hundred and Thirty-ninth street (R).  
Keppler avenue, from Two Hundred and Thirty-third street to Two Hundred and Thirty-fifth street (R).  
Travers street, from Decatur avenue to Pond place (R).  
One Hundred and Twenty-fourth street, from Amsterdam avenue to Boulevard.  
Franklin avenue, from Tremont avenue to Crotona Park, North (R).  
Morris avenue, from One Hundred and Sixty-first to One Hundred and Sixty-fifth street (R).  
Anthony avenue, from Tremont to Burnside avenue (R).  
One Hundred and Thirty-seventh street, from St. Ann's avenue to Southern Boulevard (R).  
Bathgate avenue, from One Hundred and Eightieth street to One Hundred and Eighty-third street (R).  
Woodruff street, from Boston road to Main street (R).  
Willis avenue (east side), from Southern Boulevard to One Hundred and Thirty-fourth street.

## "A"—HYDRANTS PLACED DURING THE YEAR 1898.

North side One Hundred and Sixty-third street, between Tinton and Union avenues..... 1  
Northwest corner Union avenue and Home street..... 1  
Southwest corner Union avenue and One Hundred and Sixty-eighth street..... 1  
Northwest corner Union avenue and One Hundred and Sixty-eighth street..... 1  
Southwest corner Union avenue and One Hundred and Sixty-ninth street..... 1  
West side Webster avenue, north of Moshulu Parkway..... 1  
Northwest corner Simpson and One Hundred and Sixty-sixth streets..... 1  
Southwest corner Simpson and Home streets..... 1  
Northwest corner Simpson and Home streets..... 1  
Southwest corner Simpson and Freeman streets..... 1  
Northwest corner One Hundred and Forty-first street and Brook avenue..... 1  
Northwest corner One Hundred and Forty-first street and St. Ann's avenue..... 1  
North side Southern Boulevard, between Perry and Bainbridge avenues..... 1  
Northeast corner One Hundred and Sixty-third street and Amsterdam avenue..... 1  
Northwest corner One Hundred and Sixty-third street and Edgecombe road..... 1  
North side Dawson street, between Westchester and Tinton avenues..... 1  
North side Dawson street, between Tinton and Union avenues..... 1  
North side Dawson street, between Union and Prospect avenues..... 1  
Northeast corner One Hundred and Seventieth street and Prospect avenue..... 1  
Northwest corner One Hundred and Seventieth and Bristow streets..... 1  
Northeast corner One Hundred and Forty-second street and Amsterdam avenue..... 1  
Northwest corner One Hundred and Forty-second street and Convent avenue..... 1  
Northeast corner One Hundred and Eightieth street and Webster avenue..... 1  
Northwest corner One Hundred and Eightieth street and Park avenue..... 1  
Northeast corner One Hundred and Eightieth street and Bathgate avenue..... 1  
Northeast corner One Hundred and Seventy-eighth street and Kingsbridge road..... 1  
Northwest corner One Hundred and Seventy-eighth street and Wadsworth avenue..... 1  
Northwest corner One Hundred and Seventy-eighth street and Eleventh avenue..... 1  
North side Home street, between Barretto and Simpson streets..... 1  
West side Stebbins avenue, between One Hundred and Sixty-fifth and One Hundred and Sixty-sixth streets..... 2  
North side One Hundred and Eightieth street, between Prospect and Mapes avenues..... 1  
West side Mapes avenue, north of One Hundred and Eightieth street..... 2  
West side Bryant street, north of Jennings street..... 2  
Northwest corner Cauldwell and Westchester avenues..... 1  
West side Cauldwell avenue, between Westchester avenue and One Hundred and Fifty-sixth street..... 2  
Northwest corner Cauldwell avenue and One Hundred and Fifty-sixth street..... 1  
West side Cauldwell avenue, between One Hundred and Fifty-sixth street and Cedar place..... 1  
West side Cauldwell avenue, between Cedar place and One Hundred and Sixty-first street..... 1  
Southwest corner Cauldwell avenue and One Hundred and Sixty-first street..... 1  
West side Cauldwell avenue, between One Hundred and Sixty-third street and Teasdale place..... 1  
Southwest corner Cauldwell avenue and One Hundred and Sixty-fourth street..... 1  
West side Cauldwell avenue, between One Hundred and Sixty-fourth and One Hundred and Sixty-fifth streets..... 1  
Southwest corner Cauldwell avenue and Boston road..... 1  
North side One Hundred and Thirty-sixth street, between St. Ann's and Cypress avenues..... 2  
North side One Hundred and Thirty-sixth street, between Cypress avenue and Southern Boulevard..... 1  
Northeast corner Ninetieth street and First avenue..... 1  
Northwest corner Ninetieth street and Avenue A..... 1  
Northwest corner One Hundred and Thirty-sixth street and Convent avenue..... 1  
Northwest corner One Hundred and Thirty-seventh street and Convent avenue..... 1  
Northwest corner One Hundred and Thirty-eighth street and Convent avenue..... 1  
Northwest corner One Hundred and Thirty-ninth street and Convent avenue..... 1  
Northwest corner One Hundred and Fortieth street and Convent avenue..... 1  
Northwest corner Andrews avenue and Hampden street..... 1  
Northwest corner Eleventh avenue and One Hundred and Ninetieth street..... 1  
Southwest corner Eleventh and Wadsworth avenues..... 1  
West side Eleventh avenue, north of Wadsworth avenue..... 2  
Northwest corner Boulevard and One Hundred and Twenty-second street..... 1  
Northwest corner Boulevard and One Hundred and Twenty-fourth street..... 1  
Northwest corner Boulevard and One Hundred and Twenty-fifth street..... 1  
Southwest corner Boulevard and Manhattan street..... 1  
Northeast corner One Hundred and Twenty-seventh street and Claremont avenue..... 1  
Southwest corner Loring place and One Hundred and Eighty-third street..... 1  
Northwest corner Loring place and One Hundred and Eighty-first street..... 1  
Northeast corner Burnside and Sedgwick avenues..... 1

NOTE—(R) indicates streets and avenues in which mains have been relaid during the year to replace old mains abandoned on account of changes of grades of streets and construction of sewers



North side Burnside avenue, between Osborne and Loring places.....	I
Northwest corner Burnside and Andrews avenues.....	I
North side Burnside avenue, between Andrews and Aqueduct avenues.....	I
West side Aqueduct avenue, north of Burnside avenue.....	I
North side Burnside avenue, between Harrison and Grand avenues.....	I
Northeast corner Burnside and Davidson avenues.....	I
Northwest corner One Hundred and Twenty-fourth street and Amsterdam avenue.....	I
North side One Hundred and Twenty-fourth street, between Amsterdam avenue and the Boulevard.....	I
Northeast corner One Hundred and Twenty-fourth street and Boulevard.....	I

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## DOUBLE-NOZZLE "A" HYDRANTS PLACED DURING THE YEAR 1898.

Northeast corner Amsterdam avenue and Fifty-eighth street.....	I
Northeast corner Amsterdam avenue and Fifty-ninth street.....	I
East side Amsterdam avenue, between Sixtieth and Sixty-first streets.....	I
East side Amsterdam avenue, between Sixty-first and Sixty-second streets.....	I
East side Amsterdam avenue, between Sixty-second and Sixty-third streets.....	I
East side Amsterdam avenue, between Sixty-third and Sixty-fourth streets.....	I
East side Amsterdam avenue, between Sixty-fourth and Sixty-fifth streets.....	I
East side Amsterdam avenue, between Sixty-fifth and Sixty-sixth streets.....	I
East side Amsterdam avenue, between Sixty-sixth and Sixty-seventh streets.....	I
East side Amsterdam avenue, between Sixty-seventh and Sixty-eighth streets.....	I
East side Amsterdam avenue, between Sixty-eighth and Sixty-ninth streets.....	I
Southeast corner Amsterdam avenue and Seventieth street.....	I
Southeast corner One Hundred and Twenty-fifth street and Lexington avenue.....	I
Southeast corner Park avenue and One Hundred and Twenty-fifth street.....	I
Northeast corner Tremont and Anthony avenues.....	I

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## LAYING LARGE MAINS.

## Report for Quarter and Year ending December 31, 1898.

Contracts for laying water-mains in the following streets and avenues have been completed during the quarter:

- One Hundred and Seventy-ninth street, from Amsterdam avenue to Western Boulevard.
- Eleventh avenue and Western Boulevard, from One Hundred and Seventy-ninth to Fifty-ninth street.
- Elm street, from Bond to Chambers street.

## "NEW YORK" HYDRANTS PLACED DURING THE YEAR 1898.

Northwest corner Great Jones and Bond streets.....	I
Southwest corner Vesey street and Broadway.....	I
Southwest corner Barclay street and Broadway.....	I
Southwest corner Park place and Broadway.....	I
Southwest corner Murray street and Broadway.....	I
Northwest corner Warren street and Broadway.....	I
Southwest corner Reade street and Broadway.....	I
South side Duane street, west of Broadway.....	I
Northwest corner Worth street and Broadway.....	I
South side Leonard street, west of Broadway.....	I
North side Franklin street, west of Broadway.....	I
North side White street, west of Broadway.....	I
Southwest corner Walker street and Broadway.....	I
East side Greene street, between West Third and Bleecker streets.....	I
East side Greene street, between Bleecker and West Houston streets.....	I
East side Greene street, between West Houston and Prince streets.....	I
West side Greene street, between Prince and Spring streets.....	I
East side Greene street, between Spring and Broome streets.....	I
East side Greene street, between Broome and Grand streets.....	I
West side Greene street, between Grand and Canal streets.....	I
Southwest corner Broadway and West Fourth street.....	I
East side West Broadway, between Franklin and Leonard streets.....	I
East side West Broadway, between Thomas and Duane streets.....	I
Intersection of West Broadway and Chambers street.....	I
West side West Broadway, between Chambers and Warren streets.....	I
East side West Broadway, between Warren and Murray streets.....	I
East side West Broadway, between Murray street and Park place.....	I
West side West Broadway, between Park place and Barclay street.....	I
West side West Broadway, between Barclay and Vesey streets.....	I
East side West Broadway, between Vesey and Fulton streets.....	I
Southeast corner of One Hundred and Seventy-ninth street and Eleventh avenue.....	I
West side Eleventh avenue, between One Hundred and Seventy-sixth and One Hundred and Seventy-seventh streets.....	I
West side Eleventh avenue, between One Hundred and Seventy-second and One Hundred and Seventy-third streets.....	I
Southwest corner Eleventh avenue and One Hundred and Fifty-third street.....	I
Northwest corner Eleventh avenue and One Hundred and Fifty-third street.....	I
West side Western Boulevard, between One Hundred and Forty-seventh and One Hundred and Forty-eighth streets.....	I
Southwest corner Western Boulevard and One Hundred and Thirty-third street.....	I
West side Western Boulevard, between One Hundred and Seventeenth and One Hundred and Eighteenth streets.....	I
Southwest corner Western Boulevard and One Hundred and Thirteenth street.....	I
West side Western Boulevard, between One Hundred and Sixth and One Hundred and Seventh streets.....	I
Northwest corner Western Boulevard and Ninety-second street.....	I
Southwest corner Western Boulevard and Ninety-second street.....	I
Southwest corner Western Boulevard and Seventy-seventh street.....	I
Northwest corner Western Boulevard and Seventy-sixth street.....	I
Southwest corner Western Boulevard and Sixty-ninth street.....	I
Southwest corner Western Boulevard and Sixty-second street.....	I
Northeast corner Elm street and Jones Alley.....	I
Northeast corner Elm and Houston streets.....	I
Southeast corner Elm and Jersey streets.....	I
East side Elm street, between Prince and Spring streets.....	I
East side Elm street, near Marion street.....	I
East side Elm street, between Broome and Grand streets.....	I
Northeast corner Elm and Howard streets.....	I
West side Elm street, between Howard and Canal streets.....	I
Northeast corner Elm and Walker streets.....	I
Southeast corner Elm and Walker streets.....	I
West side Elm street, between Leonard and Franklin streets.....	I
Southeast corner Elm and White streets.....	I
Northeast corner Elm and Worth streets.....	I
Southeast corner Elm and Worth streets.....	I
East side Elm street, between Pearl and Duane streets.....	I
Northeast corner City Hall place and Chambers street.....	I

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This completes the work of laying large mains under chapter 669, Laws of 1896, and will for some years give an ample supply of water to the lower portions of the city.

There is required to be laid a 36-inch main in the Boulevard, from Ninety-second to Eighty-sixth street, through the Eighty-sixth street Transverse road, and Eighty-fifth street, between Boulevard and Third avenue, with the necessary branches, in order to fully supply the high service district east of Central Park, and a 48-inch main from the Aqueducts at Jerome Park Reservoir, through Moshulu parkway, Bronx Park and Southern Boulevard to One Hundred and Seventy-third street, in order to supply the lower portions of the Twenty-third and Twenty-fourth Wards, from the Croton Aqueduct, and when finished from Jerome Park Reservoir. Ordinances, etc., are now before the Municipal Assembly, having passed the Board of Public Improvements (under chapter 646, Laws of 1897), for erecting two 15-million-gallon pumping-engines in the engine-house, One Hundred and Seventy-ninth street, between Amsterdam avenue and Harlem river, and for constructing and equipping a new high service station at Jerome Park Reservoir.

## LAYING LARGE MAINS—AMOUNT OF PIPE LAID, STOP-COCKS SET AND HYDRANTS PLACED.

## Pipes.

DIAMETER OF PIPE.	LINEAL FEET LAID DURING QUARTER ENDING DECEMBER 31, 1898.	LINEAL FEET LAID DURING YEAR 1898.
36-inch.....	7,592	41,019
20-inch.....	2,628	7,682
12-inch.....	491	5,511
6-inch.....	1,065	2,631
Totals.....	11,776	56,843

## Stop-cocks.

DIAMETER OF STOP-COCK.	SET DURING QUARTER ENDING DECEMBER 31, 1898.	SET DURING YEAR 1898.
36-inch.....	1	8
20-inch.....	2	14
12-inch.....	7	58
6-inch.....	29	76
Totals.....	39	156

## Hydrants.

PATTERN.	PLACED DURING QUARTER DECEMBER 31, 1898.	PLACED DURING YEAR 1898.
New York.....	16	62

## SUMMARY—1898.

## Pipes.

DIAMETER OF PIPE.	LINEAL FEET LAID TO DECEMBER 31, 1897.	LINEAL FEET LAID FROM DECEMBER 31, 1897, TO DECEMBER 31, 1898.	TOTAL LINEAL FEET LAID TO DECEMBER 31, 1898.
48-inch.....	138,781	.....	138,781
36-inch.....	181,382	43,154	224,536
30-inch.....	43,510	18	43,528
24-inch.....	11,542	.....	11,542
20-inch.....	232,774	7,774	240,548
16-inch.....	17,130	.....	17,130
12-inch.....	1,012,202	17,294	1,029,496
10-inch.....	6,629	.....	6,629
6-inch.....	2,608,693	* 21,171	2,629,864
4-inch.....	58,299	53	58,352
Total.....	4,310,942	89,464	4,400,406
Miles.....	816.47	16.94	833.41

\* A deduction of 4,000 lineal feet 6-inch pipe was made from amount laid in 1898 on account of old pipe abandoned.

## Stop-cocks.

DIAMETER OF STOP-COCK.	SET TO DECEMBER 31, 1897.	SET FROM DECEMBER 31, 1897, TO DECEMBER 31, 1898.	TOTAL SET TO DECEMBER 31, 1898.
48-inch.....	29	.....	29
36-inch.....	58	9	67
30-inch.....	31	1	32
24-inch.....	13	.....	13
20-inch.....	218	17	235
16-inch.....	21	2	23
12-inch.....	1,901	96	1,997
10-inch.....	16	1	17
6-inch.....	6,098	155	* 6,243
4-inch.....	146	2	148
Totals.....	8,531	283	8,804

\* Less to six-inch stop-cocks abandoned.

## Hydrants.

PATTERNS.	PLACED TO DECEMBER 31, 1897.	PLACED FROM DECEMBER 31, 1897, TO DECEMBER 31, 1898.	TOTAL PLACED TO DECEMBER 31, 1898.
Nos. 1, 2 and 3.....	3,682	13	* 3,675
Victor.....	137	.....	137
A.....	4,204	79	4,283
B.....	1,780	.....	1,780
Double Nozzle A.....	449	29	478
Double Nozzle New York.....	726	123	849
Miscellaneous.....	24	.....	24
Totals.....	11,002	244	11,226

\* Less 20 No. 1, 2 and 3 hydrants abandoned.



## LAYING CROTON PIPES—AMOUNT OF PIPE LAID, STOP-COCKS SET AND HYDRANTS PLACED IN 1898.

## Pipes.

DIAMETER OF PIPE.	LINEAL FEET LAID DURING QUARTER ENDING DECEMBER 31, 1898.	LINEAL FEET LAID DURING YEAR 1898.
36-inch .....	600	2,034
20-inch .....	....	62
12-inch .....	....	9,521
6-inch .....	....	20,410
4-inch .....	....	.....
Totals.....	600	32,027

## Stop-cocks.

DIAMETER OF STOP-COCK.	SET DURING QUARTER ENDING DECEMBER 31, 1898.	SET DURING YEAR 1898.
36-inch .....	....	1
20-inch .....	....	1
12-inch .....	....	13
6-inch .....	....	47
4-inch .....	....	....
Totals.....	....	62

## Hydrants.

PATTERN.	PLACED DURING QUARTER ENDING DECEMBER 31, 1898.	PLACED DURING YEAR 1898.
New York "A" .....	....	79
Double Nozzle "A" .....	....	15
Totals.....	....	94

NOTE.—In addition to the above, the following amount of pipes, stop-cocks and hydrants have been relaid and reset to replace an equal amount abandoned on account of changes of grades of streets and construction of sewers during year 1898:

20-inch pipe, lineal feet.....	76
12-inch pipe, lineal feet.....	1,991
6-inch pipe, lineal feet.....	9,320
12-inch stop-cocks.....	2
6-inch stop-cocks.....	15
"A" hydrants.....	22
"A" nozzle "A" hydrants.....	3
	25

## Water-mains Laid.

	MILES.	TOTAL MILES.		MILES.	TOTAL MILES.
Previous to 1870.....	....	333.64	1885.....	17.02	595.02
1870.....	72.45	346.09	1886.....	24.53	619.55
1871.....	12.52	358.61	1887.....	15.43	634.98
1872.....	20.34	378.95	1888.....	18.38	653.36
1873.....	28.28	407.93	1889.....	18.93	672.29
1874.....	13.15	421.08	1890.....	10.31	682.80
1875 and 1876.....	19.38	440.46	1891.....	17.77	700.57
1877.....	15.00	455.46	1892.....	13.35	713.92
1878.....	23.31	478.77	1893.....	11.10	725.02
1879.....	16.03	494.80	1894.....	15.21	740.23
1880.....	23.37	518.17	1895.....	24.08	764.31
1881.....	8.96	527.13	1896.....	12.77	777.08
1882.....	19.60	546.73	1897.....	39.39	816.47
1883.....	16.88	563.61	1898.....	16.94	833.41
1884.....	14.39	578.00		833.41	

## REPAIRING AND RENEWAL OF PIPES, STOP-COCKS, ETC.

Seven gangs of men have been employed relaying mains, resetting small stop-cocks and hydrants, and making necessary repairs to mains, hydrants, stop-cocks, etc., etc., on small mains throughout the boroughs, and a force maintained at Pipe Yard, Twenty-fourth street, East river, and Receiving Piers Twenty-eighth and Twentieth streets, East river, to receive and deliver materials required for repair gangs and for contractors laying small mains, and a force of tappers to place the taps for which permits are given by the Water Register.

## Work Done during Quarter.

205 new hydrants set.	322 repairs to mains.
1,330 old hydrants repaired.	301 service-taps shut off.
4 new stop-cocks set.	222 hydrants found improperly closed.
342 old stop-cocks repaired.	890 taps placed.

## Work Done during the Year 1898.

801 new hydrants placed.
5,783 old hydrants repaired.
29 new stop-cocks set.
1,599 stop-cocks repaired.
1,172 repairs to mains.
1,163 taps shut off, service-pipes being found leaking.
835 hydrants found improperly closed.
3,711 taps placed.
32 lineal feet of 36-inch pipe laid, new.
30 lineal feet of 20-inch pipe laid, new.
72 lineal feet of 12-inch pipe laid, new.
836 lineal feet of 6-inch pipe laid, new.

The use of fire-hydrants by the employees of the Street Cleaning Department, by sprinklers, contractors, and by the railroad companies has become so excessive (these parties not knowing how to properly open or shut the hydrants), and the leaving of the hydrants open so that children can place stone, etc., in same, that to properly protect the hydrants and keep them in order has become almost impracticable at any reasonable expense. In order to allow this to be done all permits to use hydrants, except by this Department and the Fire Department, was stopped on December 3, 1898, to continue to March 20, 1899, and I recommend that no more general permits be given for the use of hydrants, and only permits for use of specified hydrants be given, the parties obtaining same to pay for any repairs necessary to said hydrant during and after use, and the Street Cleaning Department should only allow the use of the hydrants by employees who thoroughly understand the use of fire-hydrants and who shall close same each time after being used.

The increase of pressures below Thirty-eighth street by the use of new mains on Fifth avenue has developed a large number of weak places in the old mains and in the service-pipes to houses and old disused taps and services, thus largely increasing the work of the repair gangs.

## Mains Laid and Relaid in 1898.

Franklin avenue, Tremont avenue to Crotona Park, North (R).  
 Morris avenue, One Hundred and Sixty-first to One Hundred and Sixty-fifth street (R).  
 Bathgate avenue, One Hundred and Eightieth to One Hundred and Eighty-third street (R).  
 Anthony avenue, Tremont to Burnside avenue (R).  
 Tremont avenue, Webster to Ryer avenue (R).  
 One Hundred and Thirty-seventh street, St. Ann's avenue to Southern Boulevard (R).  
 Woodruff street, Boston road to Main street (R).  
 Willis avenue (east side), Southern Boulevard to One Hundred and Thirty-fourth street.  
 Elm street, Great Jones to Spring street.

## Double-nozzle "New York" Hydrants Placed during the Year 1898.

Northeast corner Seventy-fourth street and Fifth avenue.....	1
Northeast corner Thirty-fourth street and Second avenue.....	1
Northeast corner Second avenue and Twenty-seventh street.....	1
Southwest corner First avenue and Nineteenth street.....	1
Southwest corner First avenue and Eighteenth street.....	1
Northwest corner Avenue C and Tenth street.....	1
Northwest corner Avenue C and Eleventh street.....	1
Southwest corner Tenth street and Avenue D.....	1
Southeast corner Avenue B and Eleventh street.....	1
Northwest corner Avenue B and Eleventh street.....	1
Southeast corner Avenue B and Thirteenth street.....	1
Southeast corner Avenue B and Sixth street.....	1
Southeast corner Avenue B and Fourth street.....	1
Northwest corner Avenue B and Second street.....	1
West side Avenue A, between First and Second streets.....	1
Southwest corner Avenue A and Tenth street.....	1
Northeast corner Forty-ninth street and Second avenue.....	1
Northeast corner Forty-eighth street and Second avenue.....	1
Northwest corner Fiftieth street and Second avenue.....	1
Northeast corner Fiftieth street and Third avenue.....	1
Northeast corner Fifty-second street and Second avenue.....	1
Northwest corner Fifty-first street and Second avenue.....	1
South side Fifty-third street, between First and Second avenues.....	1
North side Fifty-fourth street, between First and Second avenues.....	1
Northeast corner Fifty-sixth street and Second avenue.....	1
Northeast corner Fifty-fifth street and Second avenue.....	1
Northeast corner Fifty-seventh street and Second avenue.....	1
North side Fifty-fourth street, between Second and Third avenues.....	1
Northwest corner Fiftieth street and Third avenue.....	1
Northwest corner Jefferson street and East Broadway.....	1
Northwest corner Division and Suffolk streets.....	1
Northwest corner Division and Norfolk streets.....	1
Northeast corner Essex and Division streets.....	1
North side East Broadway, between Jefferson and Rutgers streets.....	1
North side Thirty-first street, between Madison and Fifth avenues.....	1
East side Wooster street, between Bleeker and West Third streets.....	1
Northwest corner Forty-fifth street and Vanderbilt avenue.....	1
Southeast corner John and Nassau streets.....	1
Northeast corner John and Dutch streets.....	1
Southwest corner William and John streets.....	1
Northwest corner Platt and Gold streets.....	1
Northeast corner Pearl and Beekman streets.....	1
Northeast corner Maiden lane and Pearl street.....	1
East side Water street, between Fletcher and John streets.....	1
Northeast corner Front and Depuyster streets.....	1
Northwest corner Front and Wall streets.....	1
North side Forty-third street, between Fifth and Sixth avenues.....	1
Southwest corner Front and Wall streets.....	1
Southeast corner Wall and Front streets.....	1
Northeast corner Wall and Water streets.....	1
West side Water street, between Maiden lane and Pine street.....	1
East side Water street, between Coenties and Old slips.....	1
East side Water street, between Gouverneur's lane and Wall street.....	1
East side Water street, between Coenties slip and Broad street.....	1
West side Pearl street, opposite Coenties slip.....	1
South side Forty-second street, between Seventh and Eighth avenues.....	1
West side Pearl street, between Pine and Wall streets.....	1
North side Thirty-sixth street, between Madison and Fifth avenues.....	1
Southwest corner Forty-second street and Eighth avenue.....	1
South side One Hundred and Seventieth street, between Amsterdam and Audubon avenues.....	1
East side Forest avenue, between One Hundred and Sixty-first and One Hundred and Sixty-third streets.....	1

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## Double-nozzle "A" Hydrants Placed during the Year 1898.

Northeast corner One Hundred and Forty-first street and Walnut avenue.....	1
Northwest corner Webster avenue and Two Hundred and Thirty-third street.....	1
West side Morris avenue, between One Hundred and Sixty-first and One Hundred and Sixty-second streets.....	1
West side Morris avenue, between One Hundred and Sixty-second and One Hundred and Sixty-third streets.....	1
East side Anthony avenue, between Berry and Bush streets.....	1
West side Tremont avenue, between Carter and Ryer avenues.....	1
Northwest corner Bathgate avenue and One Hundred and Eighty-first street.....	1
Southwest corner Bathgate avenue and One Hundred and Eighty-third street.....	1
Northwest corner Elm and Bond streets.....	1
Southwest corner Elm and Houston streets.....	1
West side Elm street, between Prince and Spring streets.....	1

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## Nos. 1, 2 and 3 Hydrants Placed during the Year 1898.

South side Fifty-sixth street, between Eleventh and Twelfth avenues.....	1
Northwest corner Broadway and Forty-second street.....	1
Intersection of Boulevard and Sixty-second street.....	1
Southeast corner Maiden lane and Front street.....	1
Northeast corner Amsterdam avenue and One Hundred and Seventy-fourth street.....	1
Northwest corner Coenties slip and Water street.....	1
Northeast corner Coenties slip and Water street.....	1
Northeast corner Front street and Old slip.....	1
Northwest corner Front street and Coenties slip.....	1
West side Water street, between Broad and Moore streets.....	1
Intersection of Forty-third street and Prospect place.....	1
East side Ogden avenue, between Devoe and Union streets.....	1
East side Webster avenue south of Kingsbridge road.....	1

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NOTE.—(R) indicates streets and avenues in which mains have been relaid during the quarter to replace old mains abandoned on account of changes of grade of streets and construction of sewers.



## PRIVATE WATER COMPANIES, BOROUGH OF THE BRONX.

The Borough of The Bronx, east of the Bronx river, is supplied with water by the New York and Westchester Water Company, who have about 500 hydrants on their mains. They have an old cross-compound pumping engine in Yonkers, supplying the upper portion of this district by a 20-inch main across Bronx river, capacity 1,500,000 gallons per day, when in order, supplied by water from the Bronx river conduit. Also, a pumping station in South Mount Vernon, Pelham, capacity one million gallons a day, supplied by driven wells and Hutchinson's creek. One of the pumping plants is in very bad order, and not able and does not supply over one-half its actual capacity. They do not keep their hydrants in order, and very seldom have a pressure sufficient to fully supply the houses in the district.

*The New York and Westchester Water Company.*

Number of Pumping Stations—Two; one located at Glen Hill, Yonkers, and one at Pelham. Number of Pumping Engines—Three; one at Glen Hill and two at Pelham (but only one in use).

Water Pressure at Engine-house—At Glen Hill, 60 pounds; at Pelham, 100 pounds. The engine at Glen Hill station is badly in need of repairs. The engine at Pelham is in a fair condition, but the building very poorly constructed, roof very leaky.

Number of Boilers—Two; one at Pelham and one at Glen Hill—(horizontal tubular). Pressure—75 pounds at Glen Hill; 90 pounds at Pelham. Steam Carried—At Pelham, 70—75 pounds; at Glen Hill, 50—60 pounds. Number of Stand Pipes—One at Glen Hill; height about 100 feet, diameter about 21 feet. Number of Reservoirs—One at Glen Hill.

Number of Miles of Pipes, viz.:

4-inch pipe.....	14.98 miles.
6-inch ".....	9.24 "
8-inch ".....	9.78 "
10-inch ".....	4.64 "
12-inch ".....	5.45 "
14-inch ".....	0.29 "
16-inch ".....	1.48 "
20-inch ".....	1.05 "

Total..... 46.91 miles.

Number of Hydrants in Order—439, and 14 additional on Hart's Island. Number of Stop-cocks, etc.—This could not be ascertained. Number of Wells—Twelve; 90 feet deep, at Pelham.

The City has not at present any mains near this district that will supply the higher portions of same and the mains near the lower portions are now used to their full capacity in supplying the other portion of the Borough of The Bronx.

The High Service Station at Jerome Park and the 48-inch main from Aqueduct at Moshulu avenue I recommend in a former portion of this report as being necessary will, when completed allow the laying of mains and supplying water to this district east of The Bronx.

The contracts of the New York and Westchester Water Company for the supply of water to the several districts expire in 1905.

As soon as the Pumping Station at Jerome Park and the 48-inch main is completed in 1900 it will have to be decided whether the City shall lay its water mains in this district or buy those belonging to the private water company.

## WASTE AND USE OF WATER.

The use of water has gradually decreased from the excessive use during the summer so that the use was normal during October and November. The cold weather in December started the waste of water to keep service pipes from freezing, this reduced pressures, especially in High Service District and in the Twenty-fourth Ward where the supply is limited.

October, Croton watershed.....	Gallons. 235,000,000
October, Bronx and Byram watersheds.....	19,000,000

Total..... 254,000,000

November, Croton watershed.....	227,000,000
November, Bronx and Byram watersheds.....	18,000,000

Total..... 245,000,000

December, Croton watershed.....	225,000,000
December, Bronx and Byram watersheds.....	19,000,000

Total..... 244,000,000

Average daily use in 1898, gallons..... 243,000,000

Amount run over Croton Dam to waste during the year 1898, 109,476,000.000 gallons.

*Average Daily Supply and Consumption of Water and Amount of Stored Water Drawn Each Year and Rainfall Each Year.*

	GALLONS PER CAPITA USED.	MILLIONS GALLONS USED.	MILLIONS GAL- LONS STORAGE USED.	RAINFALL.
1870.....	72	17	1.668	44.63
1871.....	72	79	.....	48.94
1872.....	74	81	.....	40.74
1873.....	74	88	2.724	43.87
1874.....	76	92	1.968	42.37
1875.....	77	95	.580	43.66
1876.....	74	90	6.173	40.68
1877.....	74	89	4.344	46.03
1878.....	77	93	1.251	54.14
1879.....	77	93	1.257	46.08
1880.....	77	93	9.024	38.52
1881.....	77	94	6.710	46.33
1882.....	78	94	4.120	55.20
1883.....	76	94	4.970	43.15
1884.....	79	97	2.740	53.71
1885.....	84	105	6.470	45.99
1886.....	85	109	5.990	47.59
1887.....	86	109	.310	61.63
1888.....	86	113	1.775	63.51
1889.....	84	114	.....	54.50
1890.....	90	145	2.720	54.44
1891.....	91	165	17.120	48.21
1892.....	90	162	11.630	45.37
1893.....	93	174	12.455	57.83
1894.....	95	183	12.710	46.96
1895.....	96	189	23.490	38.33
1896.....	110	220	22.145	48.10
1897.....	112	226	10.140	57.48
1898.....	121	243	8.630	56.48

## AMOUNT EXPENDED

*By the Water Commission of 1837, the Croton Aqueduct Department, the Department of Public Works, the Department of Water Supply and the Aqueduct Commission for the Boroughs of Manhattan and The Bronx to December 31, 1898.*

Aqueduct Commission for New Aqueduct reservoirs, lands, etc.....	\$38,036,519 29
Aqueduct and conduits.....	16,731,845 88
For water-mains, etc.....	18,957,643 14
For storage reservoirs, etc.....	5,160,204 46
For changing aqueduct between Eighty-sixth and One Hundred and Thirty-fourth streets, and laying pipes in place of same.....	4,905,402 12
For sanitary protection.....	2,445,015 86

Total amount expended..... \$86,236,630 75

The Old Aqueduct, between Eighty sixth and Ninety-third streets, was removed and pipes substituted in 1868. The Old Aqueduct, between Ninety-third and One Hundred and Thirteenth streets, in 1873.

## BOROUGH OF BROOKLYN.

"Water Supply, Maintenance and Repairs—Salaries and Wages".....	\$107,921 65
"Water Supply, Maintenance and Repairs—Materials and Supplies".....	53,676 79
"Water Supply, Distribution and Repairs—Salaries and Wages".....	46,119 81
"Water Supply, Distribution—Materials and Supplies".....	6,755 96

\$214,474 21

"Salaries—Chief Engineer's Office".....	\$2,071 49
"Contingencies—Chief Engineer's Office".....	583 14
"Salaries—Laboratory".....	1,260 09
"Contingencies—Laboratory".....	211 40

4,126 12

"Water Maintenance," 1897.....	2,849 68
"Water Construction".....	562 90

\$222,012 91

## EXPENDITURES DURING THE YEAR 1898.

"Water Supply, Maintenance and Repairs—Salaries and Wages".....	\$411,124 22
"Water Supply, Maintenance and Repairs—Materials and Supplies".....	215,010 25
"Water Supply, Distribution and Repairs—Salaries and Wages".....	168,589 57
"Water Supply, Distribution—Materials and Supplies".....	12,529 08

\$807,253 12

"Salaries—Chief Engineer's Office".....	7,270 84
"Contingencies—Chief Engineer's Office".....	869 75
"Salaries—Laboratory".....	4,620 01
"Contingencies—Laboratory".....	870 95

13,631 55

"Water Maintenance," 1897.....	17,063 20
"Water Construction".....	100,561 34

\$938,509 21

## LIST OF PENDING CONTRACTS.

NAME OF CONTRACTOR AND DESCRIPTION OF WORK.	DATE OF CONTRACT.	CERTIFIED FOR	AMOUNT FOR WHICH ESTIMATES WERE RENDERED BY ENGINEER DURING 1898.	TOTAL AMOUNT FOR WHICH ESTIMATES WERE RENDERED BY ENGINEER UP TO DEC. 31, 1898.
W. T. Rainey & Co.—Furnishing semi-bituminous coal to various pumping stations.....	Sept. 5, 1898.	\$97,057 00	\$17,133 62	\$17,133 62
A. M. Wittenberg—For furnishing anthracite pea coal to various pumping stations.....	Nov. 11, 1898.	74,686 00	5,809 44	5,809 44
Henry R. Worthington—Remodeling Ridgewood engines and buildings, Section I and Section II.....	Nov. 20, 1895.	390,000 00	4,400 00	216,400 00
Charles Hart—Diversion of Hempstead stream.....	Mar. 20, 1897.	100,000 00	61,639 76	61,639 78
M. J. Dady—By-pass around Ridgewood reservoir.....	July 19, 1897.	65,000 00	14,472 96	* 52,883 00
M. T. Davidson—Constructing a pumping engine at Mt. Prospect pumping station.....	Aug. 31, 1897.	9,500 00	2,460 00	† 8,550 00

## AVERAGE DAILY CONSUMPTION, UNITED STATES, GALLONS.

SYSTEM.	OCTOBER.	NOVEMBER.	DECEMBER.	THREE MONTHS.
Ridgewood Supply—				
Ridgewood Low Service.....	83,262,982	80,728,294	83,628,758	82,559,704
Mount Prospect Low Service.....	4,431,452	4,232,301	4,331,020	4,332,670
Mount Prospect High Service.....	2,862,054	2,820,800	2,817,710	2,833,663
Total, Ridgewood.....	90,556,498	87,781,395	90,777,488	89,726,037
Gravesend.....	2,083,490	1,563,457	1,587,774	1,746,879
New Utrecht.....	1,629,858	924,937	942,961	1,168,338
Total.....	94,269,846	90,269,789	93,308,223	92,641,454

## DEPTH OF RESERVOIRS, IN FEET.

RESERVOIR.	OCT. 1, 1898.	JAN. 1, 1899.	GAIN.	LOSS.
Ridgewood Basin No. 1.....	18.03	19.62	1.59	.....
Ridgewood Basin No. 2.....	17.62	.....	.....	17.62
Ridgewood Basin No. 3.....	16.43	18.28	1.85	.....
Mount Prospect.....	21.51	20.60	.....	0.91
Hempstead.....	16.50	4.58	.....	11.92

## AVERAGE DAILY CONSUMPTION IN 1898.

Ridgewood Supply—	
Ridgewood Low Service.....	82,937,213
Mount Prospect Low Service.....	4,481,402
Mount Prospect High Service.....	2,635,888
Total, Ridgewood.....	90,054,503
Gravesend.....	2,064,615
New Utrecht.....	1,454,382
Total.....	93,573,500

## RAINFALL, 1898.

Municipal Building.....	47.88
Hempstead Storage Reservoir.....	51.22

The total storage at Ridgewood and Mount Prospect on October 1, 1898, was 274,006,269 United States gallons, while on December 31, 1898, it had decreased to 222,574,070 United States gallons, the loss being due to the fact that Ridgewood Basin No. 2 was emptied in October, preparatory to cleaning.

\* Five per cent. retained \$2,783.32; final estimate tendered of \$55,656.32.

† Ten per cent. retained \$950; final estimate rendered of \$9,500; \$1,108.90 is due on this contract in excess of certification for premium on excess duty.



The water in the Hempstead Storage Reservoir remained at a fairly constant elevation from October 1 to November 15, when the gates were opened and the water rapidly drawn off to permit the resumption of pipe-laying on the contract for the diversion of Hempstead stream. On December 12, the date of resuming work, the water stood at a depth of seven feet, only six inches higher than the depth required by the contract, but in order to facilitate the work of pipe-laying it was further reduced to four feet seven inches.

#### RAINFALL.

The rainfall in inches as observed at this office in the Municipal Building and at the Storage Reservoir at Hempstead during the quarter was as follows:

LOCATION.	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL.
Municipal Building.....	5.75	6.52	2.93	15.20
Hempstead Reservoir.....	5.81	6.00	2.36	14.17

This indicates 4.95 inches more at the Municipal Building and 1.47 inches more at the Hempstead Reservoir than in the preceding quarter.

#### ANALYSES.

The work done at the Mount Prospect Laboratory during the quarter was as follows:

##### Water Samples.

493 samples received, 457 physical examinations, 301 chemical analyses, 23 partial chemical analyses, 453 microscopical examinations, 459 bacteriological examinations and 61 special bacterial examinations.

##### Miscellaneous.

Analyses of coal, castor oil, boiler compounds and sediment from Ridgewood Basin No. 2, and examination of deposit in distribution pipes. Also inspections of water works at Far Rockaway, Jamaica, Woodhaven, Flushing, College Point and Whitestone.

#### DISTRIBUTION SYSTEM.

During the quarter 826 feet of 6-inch pipe were laid, and three 6-inch, one 8-inch and two 20-inch water-gates were set, also two fire-hydrants; two 6-inch gates were replaced by new ones; 67 new meters were set and 30 accounts were closed, the total number of meters in use January 1, 1899, being 2,705. The length of pipe of each size and the number of gates and fire-hydrants in use on October 1, 1898, and all additions to the same during this quarter, as well as the number of repairs and leaks, are shown in the annexed tables:

Distribution Mains Laid to January 1, 1899.

	4-INCH.	6-INCH.	8-INCH.	10-INCH.	12-INCH.	14-INCH.	16-INCH.	20 INCH.	30-INCH.	36-INCH.	48-INCH.	TOTAL MILES.
Ridgewood system, to October 1, 1898.....	Feet. 3,871	Feet. 1,648,824	Feet. 561,855	Feet. .....	Feet. 259,660	Feet. .....	Feet. 30,345	Feet. 137,064	Feet. 49,869	Feet. 54,616	Feet. 99,970	539,039
Gravesend system, to October 1, 1898.....	5,550	35,430	18,235	.....	25,685	.....	5,100	.....	.....	.....	.....	17,045
New Utrecht system, to October 1, 1898.....	43,884	34,494	22,538	19,601	2,342	3,159	265	.....	.....	.....	.....	23,917
Total feet laid to October 1.....	53,305	1,718,750	602,628	19,601	287,687	3,159	35,710	137,064	49,869	54,616	99,970	579,992
Deduct pipe taken up.....	.....	4,746	2,733	.....	1,572	.....	.....	.....	.....	.....	.....	1,714
Total feet.....	53,305	1,714,004	599,895	19,601	286,115	3,159	35,710	137,064	49,869	54,616	99,970	578,278
Ridgewood system, laid between October 1, 1898, and January 1, 1899.....	.....	816	.....	.....	.....	.....	.....	.....	.....	.....	.....	156
Gravesend system, laid between October 1, 1898, and January 1, 1899.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Utrecht system, laid between October 1, 1898, and January 1, 1899.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total feet laid to January 1, 1899.....	53,305	1,714,820	599,895	19,610	286,115	3,159	35,710	137,064	49,869	54,616	99,970	.....
Total miles.....	10,096	324,778	113,617	3,712	54,188	598	6,763	25,939	9,445	10,344	18,934	578,434

Water Gates and Hydrants Set to January 1, 1899.

	4-INCH.	6-INCH.	8-INCH.	10-INCH.	12-INCH.	14-INCH.	16-INCH.	20 INCH.	30-INCH.	36-INCH.	48-INCH.	HYDRANTS.
Ridgewood System, to October 1, 1898.....	18	2,952	945	....	429	....	7	180	29	17	17	5,984
Gravesend System, to October 1, 1898.....	12	52	15	....	11	....	2	....	....	....	....	144
New Utrecht System, to October 1, 1898.....	48	23	14	7	1	1	....	....	....	....	....	16
Ridgewood System, between October 1, 1898, and January 1, 1899.....	....	3	1	....	....	....	....	2	....	....	....	2
Gravesend System, between October 1, 1898, and January 1, 1899.....	....	....	....	....	....	....	....	....	....	....	....	....
New Utrecht System, between October 1, 1898, and January 1, 1899.....	....	....	....	....	....	....	....	....	....	....	....	....
Total.....	78	3,030	975	7	441	1	9	182	29	17	17	6,146

#### Break at Central Avenue and Covert Street.

Between 4 and 5 o'clock in the morning of December 11, 1898, a break occurred at Central Avenue and Covert street on the 48-inch main leading from Basin No. 3 of the Ridgewood Reservoir, causing considerable damage to the buildings in the immediate vicinity, as well as to the car tracks and the sewer in Central Avenue, and for a short time somewhat affecting the general supply of portions of the city. The repair gang arrived at the scene of the break about 6.30 A. M., and at once closed the 48-inch and 30-inch gates at the corner of Broadway and Willoughby Avenue, to prevent any water backing through the break. A 48-inch gate between Covert street and the reservoir was closed as soon as possible, as well as the gates on the 8-inch main in Central Avenue and the connecting 6-inch main in Covert street. The blow-off on 48-inch main was then opened at Central and Myrtle Avenues, and the gate on the 48-inch main at Van Voorhis street, immediately above the break, was closed. One of the most serious features of the break was the cutting off of the supply from the Mount Prospect engines; this was re-established when the 48-inch and 30-inch gates at Willoughby Avenue and Broadway were closed. Repairs were completed at 4 P. M. on December 14, and the 48-inch main slowly filled.

The quantity of earth and the material carried away by this break and the amount of work to be done in refilling, repairing sewers, etc., and replacing pavements, sidewalks, etc., was so great that in the emergency to prevent, as far as possible, suits for damages, Harris & McGuire, contractors, were employed to do the necessary work (working night and day), to be paid their actual expenses for labor, teams and material and 10 per cent. added for the superintendence, etc. The amount so expended was \$7,147.93.

#### Conduits and Force-mains.

No change has been made during this quarter in the force-mains and conduits required to deliver the supply to the reservoirs and distribution system.

#### RIDGEWOOD PUMPING STATION.

During the quarter the foundation of New Engine No. 3 was completed, the underpinning of the old foundation by the new was very carefully performed, the last stones being wedged up with steel wedges and grouted with liquid cement.

#### Leaks in Distribution.

	1898.			
	Oct.	Nov.	Dec.	Total.
4-inch.....	..	..	..	..
6-inch.....	1	3	3	7
8-inch.....	1	..	..	1
10-inch.....	..	..	..	..
12-inch.....	..	..	..	..
20-inch.....	4	2	3	9
48-inch.....	..	..	1	1
	6	5	7	18
Drinking hydrants repaired.....	22	26	26	74
Fire-hydrants repaired.....	270	185	203	658
Leaks reported by Inspectors.....	17	14	19	50
Premises cut off.....	9	10	4	23
Taps inspected.....	272	227	103	602
Complaints of violations.....	16	15	31	62
Permits for extension.....	78	71	77	226
Permits for old and new buildings.....	231	126	60	417
Permits to cement sidewalks, etc.....	102	82	8	192
Stop-cocks repaired.....	10	16	5	31
Street opening permits.....	491	296	161	948
Special and temporary taps.....	1	1	3	5
Accommodation permits.....	36	21	1	70
Draw, tap and plug permits.....	9	1	1	11
Special water permits.....	14	6	6	26
Citizens' complaints attended to.....	30	68	50	148

The work of erection of the new engine began early in December, and now the water ends, main columns and low-pressure cylinders have been erected and the engine has been lined up. The grouting under the feet of the main columns has also been completed. The retubing of condensers Nos. 1 and 2 has been done by the contractors, and also the facing of the foot-valves with brass. The boilers have been in regular operation during the entire quarter.

#### RIDGEWOOD RESERVOIR.

The registers for the four Venturi meters have been set in place in the Register House and connected by 1/2-inch pipes with the meters. Also the wires to connect said registers with secondary registers at the Ridgewood Engine-house have been put up, but connections are not yet made. Rabbets for a double set of screens have been cut in the efflux chamber of Basin No. 2, none having been provided in the original construction.

#### Cleaning Basin No. 2 at Ridgewood Reservoir.

On October 6 the inlet of Basin No. 2 was closed and the water let into the distribution system. On October 24 as much had been let into the distribution system as was practicable, and the remainder was pumped out. The mud left on the bottom was quite soft and fluid, and averaged about six inches in depth. An inclined roadway was built and the mud removed in carts and deposited beyond the south of the reservoir, the work being done by city laborers. The cleaning has been completed, about 10,000 yards having been removed at a cost of \$6,018.28.

#### HEMPSTEAD BY-PASS.

Work on this contract was resumed by the contractor on December 12, the water in the storage reservoir being at the depth required by contract on December 13. The first pipe was laid on December 19, commencing at Station 59 + 88, and on December 31 the line reached Station 65 + 63. About 3,950 feet of the pipe are yet to be laid.

#### ELECTRIC WORK AT MOUNT PROSPECT AND MILLBURN.

Plans have been made and requisitions drawn for remodeling the electric-lighting installation at the Mount Prospect Engine-house. The present engine and dynamo will be removed to Mill-



burn and a new and larger unit erected at Mount Prospect. The arc-lights now around the Mount Prospect Reservoir, for which the city pays a rental of \$625 per annum, will be removed and new ones, to be operated from the engine-house, erected. The new installation also necessitates a new switch-board and some changes in steam-fitting and wiring.

Plans and specifications have also been prepared for erecting the above dynamo and engine at the Millburn Pumping Station and doing the necessary wiring.

#### DRIVEN-WELL STATIONS.

At Jameco work on cleaning and repairing the 8-inch wells has continued, six wells having been pulled, cleaned, redriven and reconnected.

At Oconee six 8-inch wells have been pulled, cleaned, redriven and reconnected. At Shetucket the 8-inch wells have been disconnected and sounded; were found clean on inside, but obstructed on the outside. Work has begun on removing the outside obstruction.

At Springfield 8-inch well No. 20 was connected and the ground at Nos. 19 and 20 cleaned and graded.

At Watts Pond Pumping Station the 8-inch test well was carried from a depth of 302 to 331 feet, when the pipe broke and further progress was prevented. Water was found at this depth, but not enough to pump.

At New Utrecht, 11 of the 13 six-inch wells have been repaired and connected; two are unconnected on account of non-delivery of material required for repairs.

#### RIDGEWOOD AND LINE PUMPING STATIONS.

All the pumping stations on the old watershed have been in practically constant operation during the entire quarter, a few shut-downs being made on account of repairs or to enable the storage reservoir to be drawn down more rapidly. On the new watershed two of the Edwards Stations were run in October and part of November.

The pumping machinery has been overhauled and repaired as required, the work being done, as usual, either by the Engineer in charge, or by machinists from Ridgewood.

The cost of repairs for the quarter, as made by the city employees, exclusive of Mount Prospect, Gravesend, and New Utrecht Stations, was as follows:

Labor.....	\$4,750 07
Materials.....	1,999 65

Repairs to buildings, including engine-houses and dwellings along the water works line, have been made by city employees.

#### MISCELLANEOUS.

Changes have been made in plans and specifications for 66-inch steel pipe line; plans and specifications are being made for a coal-shed, tool-house, and steel standpipe at Millburn, and for a third force-main from the Mount Prospect Engine-house to the reservoir, and for a steel stack at Mount Prospect; plans are being made for an Engineer's house at Millburn, filter beds at Jameco, and new engines and boilers at Mount Prospect and Gravesend.

#### CONDUITS AND RESERVOIRS.

Three hundred and fifty panned closets along the conduit line and supply streams have been cleaned regularly each week, except week ending December 7, when the roads were impassable on account of the heavy snow. A general overhauling of the closets in the Village of Hempstead has been begun, and the general work of maintenance and repairs connected with this Bureau has been continued. New fences have been built, old ones reset, monuments set, and on conduit line east of Millburn work is progressing on cutting and burning brush, weeds, etc.

The following recommendations were presented to the Board of Estimate and Apportionment for the issue of bonds to the amount of \$1,500,000 to provide for the absolutely necessary work to increase the water supply of the Borough of Brooklyn from its present sources of supply:

In the Borough of Brooklyn this Department is now forced by the necessities of the city to endanger the old masonry conduit from Hempstead to Ridgewood by carrying through same 30 per cent. more water than it was designed and built to carry. If this gave out the amount available for the supply of the city would be decreased 60 per cent. and would endanger the supply through the 48-inch conduit laid along-side of the old conduit. The demand for a new conduit of a capacity equal to the old masonry conduit is imperative, so as to relieve the two present conduits of an excessive and dangerous strain.

The pumping facilities at Millburn Pumping Station are now overtaxed and do not pump the capacity of the new conduit from Millburn east, by an amount equal to 30,000,000 gallons per day, so that cost of operation and maintenance is largely increased by the forced use of excessive pressures on the conduits west of Millburn and by the loss of millions of gallons running to waste east of Millburn.

All of the pumping stations from wells require large additions of wells and improved machinery, coal-houses, etc., to be operated economically and to increase the amount obtained from same.

It is also necessary to purchase more land to increase the capacity of the well-pumping plants and to protect the present ponds, reservoirs and streams from pollution. The growing needs of the borough demand the laying of a large number of mains where houses are now built or building, and where buildings would be erected if the mains were laid, and of large mains to supplement the present small mains and increase the pressures as the demand increases.

The laying of mains is the best means of increasing the revenue. The placing of meters to regulate use and stop the waste of water will be actively carried on under the laws which allow the Commissioner of Water Supply in his discretion to do same.

Thus by increasing the safety and amount of supply by distributing same where needed and by stopping the waste, the full supply can be kept up for a few years without any large expenditures for new watersheds, and equalize the receipts and expenditures so as to conform to the requirements of the Constitution and place the same on a business and paying basis.

I therefore present for immediate necessities an estimate of amounts required.

For 66-inch steel conduit from Spring creek east to Millburn.....	\$950,000 00
For improvement and increase of Millburn Pumping Station and plant.....	100,000 00
For laying additional mains in city.....	150,000 00
For lands to increase well-pumping plants and to protect present source of supply from contamination.....	150,000 00
For additional machinery, wells, engine-houses, etc., at well-pumping plants.....	150,000 00
	<u>\$1,500,000 00</u>

It will take two seasons, that is, two years, to prepare for and complete this work, and the bonds for same would only have to be issued as required.

The safety and necessary increase of supply demand the immediate commencement of this work and the growth and prosperity of the old City of Brooklyn will be greatly retarded if not carried out.

The year 1898 was an extraordinary year as to rainfall, being 10 inches above the average, with heavy rains in May, August and October, giving an equitable supply to the streams during the year, the storage capacity in the watersheds available being very small.

Area of watersheds.....

Storage capacity.....

And allowed this Department to carry on the work and give a full supply to the borough, at a decreased cost, especially in operating the numerous well plants.

During cycles of eleven years, two years of consecutive small rainfalls and heavy droughts are liable to occur, and to provide for the dry years immediate attention should be given to the necessities of this borough and the Borough of Queens, for an increased watershed to draw from, especially as the sinking of wells and obtaining water from same is very expensive and unsatisfactory means of obtaining water in large quantities.

#### STATISTICS REGARDING PRIVATE WATER COMPANIES IN THE BOROUGH OF BROOKLYN.

##### The Flatbush Water Works Company.

Pumping-engines—  
3—2 Worthington duplex condensing engines; 1 Knowles duplex condensing engine. Capacities, 5,000,000, 3,000,000 and 3,000,000 gallons per 24 hours; all in good condition, only one working (the 5,000,000 Worthington). Water pressure at engine-house, 75 pounds.

Boilers—  
3 horizontal tubular bricked in boilers (1 battery bricked in together), contain respectively, 90, 90 and 86 tubes; horse-power, 80; average steam pressure 85 pounds.

Stand-pipe—1 stand-pipe, 103 feet high; capacity, 239,700 gallons; diameter, 20 feet.

Pipe—	
Size.....	Feet.
4-inch.....	68,258
6-inch (rendered by company).....	227,438
8-inch.....	23,726
12-inch.....	16,170
16-inch.....	15,188
20-inch.....	350
Total.....	<u>351,130</u>

66.5 miles.  
Fire-hydrants—609 (December 19), Mathews type with one or two exceptions.

Gates—		Feet.
Size.....		
4-inch.....		146
6-inch.....		338
8-inch (approximate estimate of different sizes).....		24
12-inch.....		12
16-inch.....		15
Total.....		<u>535</u>

Wells—  
12 open wells and 10 deep wells. Open wells, 8 feet diameter; 26 feet deep, with 4-inch tubes extending to depth of 18 feet. Deep wells, 4-inch suction, 40 feet deep.

##### The Blythebourne Water Company.

Pumping-engines—  
2 Worthington piston pumps situated near bottom of well; sizes, 7½ by 5 by 6, and 5¼ by 3½ by 5; capacities, 216,000 and 115,000 gallons per 24 hours.  
2 Rider hot air engines employed in old pumping-station; capacities, 2,500 gallons per hour. (These engines are seldom in use). Water pressure at engine-houses, 30 pounds.  
Boilers—2 upright tubular boilers. Larger contains 149 tubes, H. P., 50; 90 pounds steam pressure. Smaller contains 80 tubes; horse-power, 30; 80 pounds steam pressure.

Pipe—		Feet.
Size.....		
8-inch.....		850
6-inch (scaled from map, no record owned by company).....		12,015
4-inch.....		26,400
3-inch.....		1,450
2½-inch.....		7,445
2-inch.....		17,280
Total.....		<u>65,440</u>

12.4 miles.  
Hydrants—14 various types.

Gates—		Feet.
Size.....		
8-inch.....		5
6-inch.....		25
4-inch (taken from map).....		1
3-inch.....		8
2½-inch.....		8
2-inch.....		8
Total.....		<u>47</u>

Tanks—  
At main station, 2 tanks, 16 feet by 16 feet; capacity, 25,000 gallons each.  
At old station, 1 tank, 16 feet by 15 feet; capacity 20,000 gallons each.

Wells—  
Main station, one 5-foot open circular brick well, 90 feet deep.  
Old station, one 7-inch driven well, 52 feet deep.  
Old station, one 8-inch driven well, 52 feet deep.

##### The West Brooklyn Water Company.

Pumping Engines—  
1 7½ by 5 by 6 Worthington piston pump; capacity 216,000 gallons per 24 hours (main station).  
1 8-inch Rider hot air engine; capacity 2,000 gallons per hour (old station).  
Water pressure at main engine-house, 27 pounds.

Boiler—  
1 upright tubular boiler, 73 tubes; horse-power, 15; allowed steam pressure, 80 pounds.

Pipe—		Feet.
Size.....		
8-inch.....		1,920
6-inch (scaled from map, no record kept by Company).....		19,140
4-inch.....		50,405
2½-inch.....		11,395
Total.....		<u>82,860</u>

15.7 miles.  
Hydrants—35.

Tanks—  
At main station 1 tank, 15½ feet high, 15 feet diameter; capacity 20,000 gallons.  
At old station, 2 tanks, 15 feet high, 15½ feet diameter; capacity 22,000 gallons.

Gates—		Feet.
Size.....		
8-inch.....		3
6-inch (taken from map).....		24
4-inch.....		19
2½-inch.....		1
Total.....		<u>47</u>

Wells—  
1 6-foot open circular brick well, 68 feet deep at main station.  
1 6-inch driven well, 60 feet deep at old station.

##### Hans. C. Pfalgg Raf's Private Water Plant.

Pumping Engines—  
1 4½ by 2¾ by 4 Worthington piston pump, capacity 60,000 gallons per 24 hours. Engine situated near bottom of well.  
A windmill with capacity of about 1,800 gallons per hour.  
The pump operates only when the windmill is incapacitated.

Boiler—  
1 upright tubular boiler, 29 tubes; horse-power, 6, and 80 pounds allowed steam pressure.

Pipe—		Feet.
Size.....		
4-inch (scaled from map).....		950
2-inch.....		6,725
1¼-inch.....		475
Total.....		<u>8,150</u>

1.5 miles.  
Hydrants—1.

Gates—		Feet.
Size.....		
4-inch.....		3
2-inch.....		14
Total.....		<u>17</u>

Well—1 open circular brick well, 2 feet 8 inches in diameter and 45 feet deep.  
Tank—1 tank, 12 feet by 12 feet in height; capacity 10,000 gallons.

##### Water Supply of Germania Real Estate Company.

Water is supplied by the Flatbush Water Works Company, to whom all water bills are paid.  
Pipe—About 43,000 feet of 6-inch and 12,000 feet of 4-inch. Total, 65,000 feet—12.3 miles. (Scaled from map; no record of pipe in possession of company.)

Hydrants—49, mostly of Mathews' single-nozzle type.  
Gates—3 4-inch gates and 15 6-inch gates. Total, 18.

##### Water Supply of the W. P. Rea Real Estate Company.

Water is supplied to this system by the Flatbush Water Works Company.  
Pipes—7,614 feet of 4-inch and 1,000 feet of 2-inch. Total, 8,614 feet—1.6 miles. (Length of different size pipe rendered by Company.)

Hydrants—3.  
Gates—8 4-inch gates.



*Water Supply of the Ardmore Real Estate Company.*

Water is supplied to this system by the Flatbush Water Works Company.  
Pipe—About 7,500 feet of 2-inch pipe.  
Hydrants—3.  
Gates—No record can be found showing the gates.

*Long Island Water Supply Company's Pumping Plant and Pipe System, Located in the Twenty-sixth Ward, Borough of Brooklyn, N. Y.*

Engines—The pumping machinery of the above plant consists of two Davidson compound condensing engines, one Davidson compound duplex condensing engine, four Davidson air pumps, one boiler feed pump, one Korting's injector.

The two Davidson compound condensing engines were installed in the year 1881, and appear from a superficial examination to be in good condition. One of these engines is held in reserve. Their displacement is forty gallons per stroke each, with a capacity of twenty-five strokes per minute, equivalent to a theoretical pumpage of 1,440,000 gallons in twenty-four hours, or 2,880,000 gallons with both engines running. The working pressures, etc., of the above engines are fifty pounds steam and eighty pounds water pressure; the number of strokes per minute is twenty and 75 horse-power is developed. The diameters of the steam cylinders are 18 inches by 32 inches, and of water cylinders, 24 inches. Two Davidson air pumps are connected with these engines.

The Davidson compound duplex condensing engine has a displacement of eighty gallons per stroke, and a capacity of thirty-two strokes per minute, equivalent to a theoretical pumpage of 3,680,000 gallons in twenty-four hours. The working pressures, etc., are seventy pounds steam and eighty pounds water pressure; number of strokes per minute is twenty-nine; 150 horse-power is developed. Diameters of steam cylinders is 16 inches by 30 inches, and of water cylinders, 24 inches. One air pump is connected with this pump. These pumps were installed in the year 1897, and appear from a superficial examination to be in very good condition.

There is also one air-pump connected with the air chamber on the suction main, and one independent boiler feed-pump, held in reserve.

At the present rate of pumping the consumption per 24 hours approximates 4,500,000 gallons.

The injector is of the pattern known as Korting's Universal No. 10, and develops 350 H. P.

Boilers—There are four boilers, of which two Davidson boilers have 50 4-inch tubes, an allowed pressure of 105 pounds, and a working pressure of 70 pounds; each boiler develops 75 H. P. A 4-inch steam-pipe leads from these boilers to the old Davidson pumps. The above two boilers were installed in the year 1881, and exhibit vertical cracks in their iron front. They are 16 feet long and 5 feet in diameter.

One Bigelow boiler has 100 3-inch tubes, allowed pressure of 105, and a working pressure of 70 pounds, 100 H. P. being developed; this boiler is 16 feet long and 5.5 feet in diameter.

One Hampson boiler has 84 3-inch tubes, an allowed pressure of 105, and a working pressure of 70 pounds; 75 H. P. being developed. This boiler is 15 feet long and 5 feet in diameter.

The Bigelow boiler was installed in the year 1894, and the Hampson boiler in 1897; they appear, from a superficial examination, to be in good condition.

Reservoir—The pumps discharge into a single 16-inch force-main, 10,460 feet long, which leads to a "reservoir which is located north of Highland Boulevard, between Van Siclen and Schenck avenues. The high-water line is about 150 feet above mean tide. The reservoir plot comprises about 6.8 acres. The capacity of the reservoir is 5,000,000 gallons." This reservoir receives only the surplus water pumped, as all distribution mains branch from the above 16-inch force-main.

Pipe—The distribution-pipe system comprises about 47 miles of 6-inch, 8-inch and 12-inch mains, as follows: 37.4 miles of 6-inch pipe; 8.6 miles of 8-inch pipe; 1.2 miles of 12-inch pipe. There are, also, 2 miles of 16-inch force-main pipe not included in the above estimate.

Hydrants—There are 673 hydrants actually in use, of which 14 are double-nozzle. For the use of these hydrants the city pays to the above company the sum of \$31,145 annual rental for 647 hydrants; 22 hydrants being furnished free of charge in place of 25 drinking hydrants, stipulated to be furnished in the original contract, free of charge; two hydrants are on private property, and two hydrants have not been charged to the city, in order to prevent any possible overcharge by the company.

Gates—The gates on the distribution system are in number and size as follows: 257 6-inch gates, 49 8-inch and 6 12-inch; there are 7 16-inch gates on the force main leading to the reservoir.

Wells—The entire water supply is derived from a system of driven wells, consisting of 22 2-inch suction wells, 14 6-inch suction wells and 5 6-inch flowing wells.

The 22 2-inch wells are driven to depths of from 35 to 45 feet, and are connected up by a 6-inch pipe from which a 10-inch pipe increased to a 12-inch leads to a 20-inch main suction pipe; there is also 1 6-inch well connected with the above 12-inch pipe, and 2 6-inch wells with the 20-inch main suction. Eleven of the 6-inch wells are connected up by a 10-inch pipe, from which a 16-inch main leads to the pumping engines.

All of the above 6-inch wells are driven to depths of from 78 to 85 feet.

The 5 6-inch flowing wells (one of which is disabled) are driven to a depth of 45 feet below the bottom of a large open well; this open well is 25 feet deep and 24 feet in diameter, and has a cement bottom, bricked sides and covered top. A 12-inch suction pipe leads from the bottom of this well to the 20-inch main suction pipe.

There are no test wells by which fluctuations in elevation of ground water can be ascertained.

*Description of the Water-Works of the German-American Improvement Company, Twenty-sixth Ward, Borough of Brooklyn.*

Engines—The pumping machinery of the above plant consists of one Worthington compound duplex engine, with 8-inch high and 12-inch low-pressure steam cylinder, 7-inch water cylinders and a 10-inch stroke. This pump is operated for about five hours daily, pumping about 70,000 gallons. It was installed in August, 1892, and appears from a superficial examination to be in good condition.

The boilers are fed by a small Worthington duplex pump; size of steam cylinders are 3 inches by 2 inches, and it has a 3-inch stroke.

A "Universal No. 2" injector is held in reserve.

Boilers—Power is obtained from an upright Erie boiler containing 114 2-inch tubes. Allowed pressure is 70 pounds; average working pressure is 65 pounds and develops 30 H. P.

A horizontal Logan boiler, built in November, 1897, is held in reserve; it is 11 feet long and 4.8 feet in diameter, has 60 3-inch tubes, an allowed pressure of 80 pounds and develops 50 H. P. The Erie boiler was installed in August, 1892, and is in fair condition. The Logan boiler has had very little usage.

Standpipe—A standpipe adjoins the building in which the pumping plant is located, and is built of riveted steel plates. It is fifteen feet in diameter inside, and 128.5 feet high, with a capacity of 169,850 gallons.

Pipe—The above company owns two tracts of land, known as Nos. 1 and 2. The pipe system of Tract No. 1 comprises 5.4 miles of 6-inch cast iron pipe; that of tract No. 2 comprises 3 miles of 6-inch iron pipe, the water supply of which is furnished by the Long Island Water Supply Company at a fixed rate; this supply averages 90,000 gallons daily.

Hydrants—There are 39 hydrants in place, of the "McLean No. 3" single-nozzle pattern, all located on Tract No. 1. On Tract No. 2 there are 22 single-nozzle hydrants of the above pattern, and connections are laid for 25 more.

Gates—There are 32 6-inch gates in place on Tract No. 1, and 37 6-inch gates on Tract No. 2.

Wells—The water supply for Tract No. 1 is obtained from 3 6-inch driven wells, at a depth of 65 feet, and are connected by a 6-inch main.

## BOROUGH OF QUEENS.

The six pumping stations have been kept in order during the quarter and the hydrants and mains in repair. Having abandoned the building and yards at the City Hall, Long Island City, the material, horses and wagons have had to be removed to other places. It is absolutely necessary that proper yards for storage of materials be established in each of the first and third wards as soon as possible.

The water at station No. 2 is still brackish although the worst wells have been shut off and the station only run for sixteen hours per day. A supply is still furnished by the Citizens' Water Company, which enables the Department to keep up with the increased demand and improve the quality of the water. The necessity for the laying of a large number of mains to supply the new buildings erected and to be erected and to connect the several pumping stations and increase supply is very apparent; more or less of these have been approved by the Board of Public Improvements and are now before the Municipal Assembly for their action. The sinking of new wells and improvement in the several pumping stations will be also brought to the attention of the Board of Public Improvements as soon as the necessary test wells are sunk as provided for in the ordinances now before the Municipal Assembly.

## WORK DONE DURING THE QUARTER.

57 taps put in.	91 hydrants repaired.
14 leaks in pipes repaired.	9 new stop-cocks set.
21 stop-cocks repaired.	7 new hydrants placed.

## WORK DONE DURING THE YEAR 1898.

214 taps put in.	21 new stop-cocks set.
57 leaks in pipes repaired.	7 new hydrants set.
49 stop-cocks repaired.	17 new boxes set.
187 hydrants repaired.	5 drinking hydrants repaired.

## AVERAGE DAILY AMOUNT OF WATER PUMPED DURING THE QUARTER.

	Gallons.
First Ward, city stations .....	1,886,633
First Ward, by Citizens' Water Company .....	1,479,087
Third Ward, city stations .....	1,460,309
Total average daily uses, gallons .....	4,826,029

Contracts for coal and for improvements to the College Point pumping station have been entered into.

## EXPENDITURES FOR THE QUARTER ENDING DECEMBER 31, 1898.

Maintenance and repairs of water-pipes .....	\$4,493 61
Pumping stations, fuel and supplies .....	2,408 24
Salaries, office of Deputy Commissioner .....	3,616 62
Salaries, pumping stations .....	5,328 58
Supplying water to Long Island City .....	11,252 50
Standpipe College Point .....	132 13
Standpipe, Flushing .....	3,105 12
College Point Water Works (fund for steam-pump) .....	16 30
	\$30,353 10

## SUMMARY OF EXPENDITURES FOR THE YEAR 1898.

Maintenance and repairs of water pipes .....	\$15,819 77
Pumping stations, fuel and supplies .....	16,030 07
Salaries, office of Deputy Commissioner .....	12,715 64
Salaries, pumping stations .....	21,098 63
Supplying water to Long Island City .....	15,569 23
Standpipe, College Point .....	3,917 13
Standpipe, Flushing .....	3,105 12
College Point Water Works (fund for steam-pipe) .....	2,770 96
Telephone service .....	582 75
	\$91,609 30

## RECORD OF COAL USED AND WATER PUMPED.

	POUNDS OF COAL (AVERAGE PER DAY).	GALLONS PUMPED (AVERAGE PER DAY).
First Ward, Station 1 .....	4,900	609,443
First Ward, Station 2 .....	6,000	520,000
First Ward, Station 3 .....	3,500	757,190
		1,886,633
Third Ward, Flushing Station .....	3,147	751,392
Third Ward, College Point Station .....	1,989	567,561
Third Ward, Whitestone Station .....	1,436	141,355
		1,460,308
Flushing avenue meter .....		1,010,432
Citizens' Water Supply Company, Laurel Hill meter .....		468,555
		1,479,087
Total .....		4,826,028

To provide for a large future supply to the Borough of Queens brings to the front the fact that for any large increase of water supply to the Borough of Brooklyn the conduits for same would have to pass through the Borough of Queens, and, being both in the city, the increased supply can be used in both boroughs, and all conduits and appurtenances built to provide for both boroughs.

## LONG ISLAND CITY, FLUSHING, WHITESTONE AND COLLEGE POINT.

	MILES OF WATER-MAINS.									STOP-COCKS.									HYDRANTS. Number.
	2-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	14-inch.	16-inch.	Total.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	14-inch.	16-inch.	20-inch.	Total.	
Long Island City .....	....	0.12	9.55	8.48	3.98	0.33	0.73	....	23.19	....	63	14	12	2	....	....	....	91	67
Flushing .....	....	1.09	4.67	4.47	2.49	2.32	....	....	15.04	27	142	59	3	9	7	1	1	248	185
Whitestone .....	0.60	3.51	3.69	2.14	0.71	0.31	....	....	10.42	20	12	9	5	....	....	....	....	46	91
College Point .....	....	....	8.47	0.71	1.07	4.61	....	0.56	15.42	....	82	3	3	4	....	2	....	94	94
	0.60	4.72	26.38	16.07	8.25	7.57	0.73	0.56	64.07	47	299	85	23	15	7	3	1	479	437



PRIVATE WATER COMPANIES.

NAME OF COMPANY.	PUMPING ENGINES.			BOILERS.		STANDPIPES.		RESERVOIRS.		WELLS.		
	Capacity of Engines.	Water Pressure at Station.	Present Condition.	Capacity of Boilers.	Pressure.	Diameter.	Height.	Capacity, Gallons.	Number of Reservoirs.	Capacity, Gallons.	Number of Wells.	Depth.
Citizens' Water Supply Company.....	Station 1—2,000,000 gallons. 1,000,000 " 750,000 "	75 pounds.	Excellent....	80 horse-power.	100 pounds.						28	65 feet.
	Station 2—2,000,000 gallons. 2,000,000 "	78 pounds.	Excellent....	50 "	80 pounds.	25 feet.	50 feet.	183,580	1	3,500,000	78	70 feet.
	Station 3—4,000,000 gallons.		Excellent....	50 "	80 pounds.						20	45 feet.
Queens County Water Company.....	2,000,000 gallons. 2,000,000 " 4,000,000 "	55-76 pounds.	Excellent..	100 "	85 pounds.	20 feet.	100 feet.		None.		45	32 feet. 50 feet.
				100 "	85 pounds.	16 feet.	125 feet.					
Jamaica Water Supply Company.....	6,000,000 gallons, total of engines.....	67 pounds.	Good.....	100 "	90 pounds.	50 feet.	40 feet.		None.		1	47 feet.
Woodhaven Water Supply Company.....	3,000,000 gallons, total of engines.....	45 pounds.	Good.....	Supplied with steam by Lalanc & Grosjean		None.			2	4,000,000	16	98 feet to 143 feet.
Wyckoff Heights Water Company.....	3,000,000 gallons, total of engines.....	45 pounds.	Good.....	None.		None.			None.			

NAME OF COMPANY.	MILES OF MAINS.										STOP-COCKS.										HYDRANTS.			
	16-inch.	14-inch.	12-inch.	10-inch.	8-inch.	6-inch.	4-inch.	3-inch.	2-inch.	Total.	16-inch.	14-inch.	12-inch.	10-inch.	8-inch.	6-inch.	4-inch.	3-inch.	2-inch.	1½-inch.	Total.	Single.	Double.	Triple.
Citizens' Water Supply Company .....	1	1	2	6	10	19	5	0.10	0.2	44.3	2	3	4	18	45	97	26	3	2	..	200	20	...	339
Queens County Water Company.....	1	3	4	10	6	16	7	1	2	37.43	3	3	19	3	34	152	124	17	..	2	357	...	260	18
Jamaica Water Supply Company .....	..	..	..	...	60	..	...	...	...	60	..	..	..	..	..	...	...	..	..	..	300	359	272	...
Woodhaven Water Supply Company.....	..	..	..	...	32	..	...	...	...	32	..	..	..	..	..	...	...	..	..	...	...	...	480	...
Wyckoff Heights Water Company.....	..	..	..	...	..	1	0.75	...	...	1.75	..	..	..	..	..	...	...	..	..	..	42	...	8	...

BOROUGH OF RICHMOND.

EXPENDITURES FOR THE QUARTER ENDING DECEMBER 31, 1898.	
Contingencies.....	\$9 85
Pumping stations—Salaries and supplies.....	1,939 80
Salaries—Office of Deputy Commissioner.....	1,266 64
Total.....	\$3,216 29
EXPENDITURES FOR THE YEAR 1898.	
Contingencies.....	\$40 76
Pumping stations—Salaries and supplies.....	3,023 44
Salaries—Office of Deputy Commissioner.....	4,283 58
Total.....	\$7,347 78

Having no moneys available for laying mains, only 700 feet have been laid during the year. The pumping plant has been kept in good order and the wells have so far furnished a full supply. An ordinance is now before the Municipal Assembly for sinking three new wells which will fully develop the property now owned by the city.

Average daily use of water, 50,000 gallons.  
15 taps placed during quarter ending December 31, 1898.  
63 taps placed during the year 1898.

The supply of water for this borough is principally by private water companies. The available supply in Richmond County it being surrounded by salt water and with very limited drainage areas where surface water could be obtained from streams and stored during wet weather and being all within the limits of the city, some other means will have to be adopted to increase the supply. All of the water supplied by the private water companies is supplied from wells; the water is good, but very hard and has over 20 parts per 100,000 of solids by evaporation, New York and Brooklyn 8 only; this again limits the capabilities of a further supply from wells, of a quality which can be used in boilers and for manufacturing purposes to the best advantage.

The contracts with the private water companies end in 1902, so that it becomes necessary during the next year to decide what shall be done as to a further supply.

This new supply should be of a soft, wholesome water, suitable for all purposes.

STATEMENT OF CAPACITY AND CONDITION OF PRIVATE WATER COMPANIES.

Crystal Water Company.

Clove Pumping Station—	
Number of pumping-engines.....	2
Daily capacity in gallons.....	3,500,000
Water pressure at station.....pounds,	55
High Service Pump—	
Daily capacity in gallons.....	1,000,000
Number of pumping-engines.....	1
Water pressure at station.....pounds,	155
Boilers—	
Number of boilers in service.....	3
Capacity, horse-power.....	200
Cold water pressure, test.....pounds,	120
Steam carried.....pounds,	80
Reservoirs—	
Low service reservoir, circular; size, 250 by 18 feet deep, capacity.....gallons,	4,000,000
Elevation of reservoir above sea level.....feet	251
Standpipes.....	1
Height above sea level.....feet,	418
Size 20 by 30 on 60-foot trestle.....	..
Water lands at elevation 130.....acres,	40
Suction main, 20-18-14-12.....feet,	3,000
Number of wells.....	52
Size of wells.....inches,	6
Depth of wells.....feet,	60 to 120
Bulls Head Pumping Station—	
Number of pumping-engines.....	1
Daily capacity in gallons.....	1,500,000
Water pressure at station.....pounds,	120
Boilers—	
Number of boilers in service.....	2
Capacity, horse-power.....	120
Cold water pressure, tested.....pounds,	120
Steam carried.....pounds,	80
Water is pumped to same reservoir as Clove Station at elevation.....	251
Water lands at elevation 10.....acres,	115
Suction main 14-12-8-6.....feet,	4,000
Number of wells.....	46
Size of wells.....inches,	6
Depth of wells.....feet,	50 to 75
Mains—	
Total mileage, 4 inches to 16 inches.....miles,	48
Number of fire-hydrants.....	340
Number of draw-hydrants.....	65
Number of water-gates, 4 inches to 16 inches.....	82
Number of taps, 1/2-inch to 3/4-inch.....	2,556

The pumping stations, machinery, boilers and general physical condition of the system are good.

Staten Island Water Supply Company.

Pumping-engines—	
Number of pumping-engines.....	3
Daily capacity in gallons.....	8,000,000
Water pressure at engine-house.....pounds,	150
Present condition.....	Good.
Boilers—	
Number of boilers.....	3
Total horse-power.....	340
Cold-water pressure.....pounds,	120
Steam pressure (carried).....pounds,	80
Reservoirs—	
Number of reservoirs.....	1
Size: diameter, 80 feet; height, 22 feet.	
Mains—	
Total mileage.....	70
Sizes: 4 inches to 16 inches.	
Hydrants—	
Number of hydrants.....	590
Gate-valves—	
No record.	
Wells—	
Number of wells.....	194

Size: 6 inches.  
Depth: from 40 feet to 128 feet.

Owing to the want of funds no new work has been commenced during the year and on account of the holding of many ordinances for laying mains, etc., in the Municipal Assembly, but little has been done. Are now preparing contracts, etc., for the work authorized in November and December.

TOTAL AVERAGE DAILY USE OF WATER.

	Gallons.
Boroughs of Manhattan and The Bronx, city.....	243,000,000
Boroughs of Manhattan and The Bronx, private companies.....	1,900,000
Borough of Brooklyn, city.....	93,500,000
Borough of Brooklyn, private companies.....	9,000,000
Borough of Queens, city.....	4,800,000
Borough of Queens, private companies.....	9,000,000
Borough of Richmond, city.....	50,000
Borough of Richmond, private companies.....	6,500,000
Total gallons.....	367,750,000

Respectfully yours,

GEO. W. BIRDSALL, Chief Engineer.

JANUARY 27, 1899.

THE STATEN ISLAND WATER SUPPLY COMPANY.

ANALYSIS OF THE WATER, ALSO RULES AND REGULATIONS AND CONDITIONS GOVERNING ITS INTRODUCTION AND SUPPLY, WITH ANNUAL WATER RATES AND RULES FOR PLUMBERS.

(Office, West New Brighton, 1898).

ANALYSIS.

PRINCETON, N. J., November 9, 1880.

Mr. J. R. CROES:

DEAR SIR—The two samples of water left with me on Saturday last yielded the following results:

Sample Parts—Per 1,000 Gallons.

	FREE AMMONIA.	ALBUMINOIDAL CHLORINE AMMONIA.	GRAINS, PER U. S. GALS.	TOTAL SOLID.	HARDNESS, DEG. PER U. S. GALS.
1—E. Flowing well.....	0.002	0.010	0.33	5.2	2.7
2—W. Flowing well.....	0.004	0.007	0.49	6.7	2.00

Remarks.—Both samples clear and odorless, even when kept for some time.

The free and albumoidal ammonia is exceedingly small as regards organic impurity; there is practically no choice between them, and they are the best samples of water I have ever seen in that respect.

(Signed) H. B. CORNWALL.

It will be observed by the analysis that the hardness of the water is only 2 7-10, while 6 per cent. is considered soft water.

CERTIFICATE OF ANALYSIS.

No. 1982.	NEW YORK, July 10, 1883.
SIR—The sample of water submitted to me for examination contains in one U. S. gallon of 231 cubic inches:	
Chlorine in chlorides.....	0.5124 grains.
(Equal to sodium chloride 0.8440 grains).	
Nitrogen in nitrate.....	0.0479 grains.
Albuminoid ammonia.....	0.00082 grains.



Free ammonia .....	Faint trace.
Mineral matter .....	7.5810 trace.
Organic and volatile matter .....	Trace.
Phosphalis .....	Faint trace.
Hardness, equivalent to carbonate of lime, before boiling .....	2.923 grains.
Hardness, equivalent to carbonate of lime, after using .....	3.313 grains.

Respectfully,  
C. F. CHANDLER, Ph. D.

NEW YORK, July 10, 1883.

MY DEAR SIR—I inclose herewith a report of the analysis of the sample of water submitted by you, and would say that it exhibits no indications whatever of contamination either by refuse of any kind or by sea water—on the contrary, it is a remarkably pure specimen of sweet water.

Very truly yours,  
C. F. CHANDLER.

To Mr. H. BRIGHTMAN, President, Staten Island Water Supply Company.

CHAS. M. STILLWELL, A. M.

THOMAS S. GLADDING, A. M.

OFFICE AND LABORATORY OF STILLWELL & GLADDING,  
ANALYTICAL AND CONSULTING CHEMISTS,  
No. 55 FULTON STREET, CORNER CLIFF STREET, P. O. BOX 1261,  
NEW YORK, July 17, 1897.

Analysis No. 74939.

#### CERTIFICATE OF ANALYSIS

Of a Sample of Water Marked Pump No. 2, Received from the Staten Island Water Supply Company, July 15, 1897:

	PARTS PER 100,000.	GRAINS PER U. S. GALLON OF 231 CUBIC INCHES.
Chlorine.....	2.93	1.70
Free Ammonia.....	0.003	0.00175
Albuminoid Ammonia.....	0.008	0.00465
Organic and Volatile (loss on ignition).....	3.40	1.97
Mineral matter (non-volatile).....	15.80	9.16
Total solids (by evaporation).....	19.20	11.13
Oxide of Iron.....	0.043	0.026

An excellent water.

Very respectfully,  
STILLWELL & GLADDING, Chemists to the New York Produce Exchange.

#### ANNUAL RATES.

Until further notice the following rates will be charged annually for water:

##### Dwelling-houses.

Occupied by one family, for the first faucet.....	\$8 00
For each additional faucet, to be used by the same family.....	1 00
Where a house is occupied by more than one family, and less than four, one faucet only being used by all, for each family.....	6 00
Where a house is occupied by four or more families, and but one faucet is used by all, for each family.....	5 00
Where a house is occupied by more than one family, the highest rates will be charged for each family having the water carried into their part of the house.....	8 00
For the first bath-tub.....	5 00
When used by more than one family, for each family.....	4 00
For each additional bath-tub.....	2 50
The first pan or hopper water-closet, with self-regulating faucet.....	5 00
When used by more than one family, for each family.....	4 00
Each additional pan or hopper water-closet, with self-regulating faucet.....	2 50
For hopper water-closets, special rates will be made.	
Urinal.....	2 50
One set wash-tubs, not exceeding three tubs.....	3 00
Each additional set wash-tub.....	1 00

Where two faucets are used, one for hot and one for cold water, both emptying into one vessel, but one charge will be made for both.

##### Boarding Houses.

For the first faucet.....	\$10 00
Each additional faucet.....	1 00
For pan or hopper water-closet, with self regulating faucet.....	8 00
Each additional pan or hopper water-closet, with self-regulating faucet.....	2 50
Hopper water-closets, without self-regulating faucet, each.....	20 00
Urinal.....	4 00
Bath-tub, when used by boarders.....	10 00
For each tub in a public bath-house or hotel.....	12 00
For each water-closet in a public bath-house.....	8 00

##### Stores, Offices, Etc.

For each tenement occupied as a store, warehouse or office.....	\$6 00
Where two or more such tenements are supplied from the same faucet, each.....	5 00
For markets, saloons, workshops, or for purposes not included in any other classification, and not requiring more than an ordinary supply of water, taken from one faucet, from.....	6 00 to 25 00
For pan or hopper water-closet, with self-regulating faucet, used by the occupants of one tenement only.....	5 00
When used by occupants of more than one tenement, for each.....	4 00

##### Private Stables.

For first horse.....	\$5 00
Each additional horse.....	3 00
Each cow.....	2 00

##### Livery, Club and Boarding Stables.

For not exceeding three horses, the same as private stables.....	
For each additional horse.....	2 00

##### Truck and Cart Stables.

For not exceeding three horses, the same as private stables.....	
For each horse, if more than three.....	2 00
Rates for stables include water for washing carriages, omnibuses and cars, without hose.....	
No stable less than.....	8 00

Where hose is used in any stable, an addition to the above charges will be made of six dollars for the first horse and two dollars for each additional horse.

##### Hose.

For the right to attach hose of not more than three-eighths inch orifice for washing windows or watering gardens.....	\$10 00
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All persons using hose must do so before 8 A. M. and after 4 P. M. Hose must not be used to wash the filth of gutters down upon neighbors, nor must it be converted into jets, or the water suffered to run to waste or leak. A permit to use hose gives authority to wash the sidewalks or water the gardens of the owner paying for the same, and if used upon another person's property an extra rate of \$10 for each and every adjoining lot upon which the hose is used, will be charged against the property having the right to use hose.

Fixed jets and revolving lawn sprinklers (so called) will be rated as fountains and charged accordingly.

##### Steam-engines.

Stationary steam-engines, working not over ten hours per day, will be charged by the horse-power, as follows: For each horse-power up to and not exceeding ten.....	\$7 00
For each horse power exceeding ten, and not over fifteen.....	6 00
For each horse power over fifteen.....	5 00

##### Eating Houses.

Refectories, confectioneries, eating houses, market and fish stalls, provision shops, refreshment and oyster saloons, according to the quantity of water used, will be charged from.....	\$10 to 50.00
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##### Building Purposes.

For each cask of lime or cement used.....	\$0 06
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##### Bakeries.

Bakeries will be charged according to the average daily use of flour, namely, for each barrel per day, per annum.....	\$5 00
Provided, that in no case shall any bakery be charged less than.....	10 00

##### Hotel and Bar Rooms.

For one faucet behind the bar, per annum.....	\$10 00
For one faucet in bar room, per annum.....	8 00
Additional faucets per annum.....	4 00
Water-closet, self-acting.....	\$5 to 12 00
Water-closet, hopper.....	\$12 to 20 00
Urinal, self-acting.....	4 00
Urinal, flowing.....	\$5 to 8 00
Bath.....	\$5 to 12 00

##### Fountains.

Fountains supplied with water will be charged upon the estimated quantity used, namely, for each one hundred gallons, used daily, per annum.....	\$10 00
Counter or conservatory, one-sixteenth of inch jet, six hours per day.....	8 00
One-eighth inch jet, six hours per day.....	10 00
Three-sixteenths inch jet, six hours per day.....	20 00
One-quarter inch jet, six hours per day.....	35 00
Five-sixteenths inch jet, six hours per day.....	60 00
Special rates for an excess over above time and size.	

##### Horse Troughs.

Each trough, per annum.....	\$10 00
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Each trough is to be fitted with a proper ball-cock to prevent waste, and this must be kept in order.

##### Boarding Schools.

From.....	\$25 to 150 00
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##### Market Stalls and Stands.

From.....	\$8 to 30 00
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##### Barber Shops.

1 faucet or basin.....	\$8 00
Each additional.....	3 00
Bath.....	6 00
Each additional.....	4 00
Water-closet.....	6 00
Each additional.....	4 00

##### Confectioneries.

1 faucet or basin.....	\$8 00
1 faucet for soda water fountain.....	10 00

##### Drug Stores.

1 faucet or basin.....	\$8 00
1 faucet for soda water fountain.....	10 00

##### Slaughter-houses.

From.....	\$50 to 400 00
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##### Street Sprinkling.

Scarcity of water at times may reduce the street sprinkling service; hence water will be furnished by special contract only.

##### Manufacturing and Other Purposes.

In all cases where large quantities of water are required, the charge for the same shall be as follows, the quantity to be ascertained by meters:

For 2,000 gallons used daily, at the rate of 5 cents per 100 gallons.  
Where the average daily use is less than 5,000 gallons and more than 2,000 gallons, at the rate of 3 cents per 100 gallons.

For the quantity in excess of 5,000 gallons up to 10,000, at the rate of 2 cents per 100 gallons.  
For other cases, special rates will be made.

It being frequently necessary to shut off the water from the street mains to make extensions and repairs, without giving notice, all persons having boilers within their premises, not supplied by tanks, but depending upon the pressure from the street mains to keep them supplied, are cautioned against danger of collapse.

All matters not hereinbefore mentioned are reserved for special contract by and with the Company.

#### RULES AND REGULATIONS.

(Subject to Additions and Amendments.)

1. All applications for the use of water must be made at the office of the company, in the form prescribed, stating fully and truly the various uses to which the water is to be applied.  
2. All plumbing in houses must be completed and service run from the house to the stop box at the curb, before applying for a permit to tap the main.

3. Where service pipes have been laid to or inside the curb line, or continued to the cellar foundation of building, for building purposes, a permit will be necessary for any additions thereto.

4. All applications for a permit for a tap must be made before opening the street. The company may refuse to grant a permit for a tap in the main to any plumber who fails to obtain such permit before opening the street for that purpose.

5. Under no circumstances will one tap and one service pipe be allowed to connect with and supply more than one house on streets or avenues where mains are laid.

6. Whenever two or more parties are supplied from one pipe connecting with the main, the failure on the part of either of said parties to pay the water rent when due the company reserves the right to shut off the whole line without liabilities for damages or rebates to those who may have paid promptly or in advance.

7. No street washer or garden hydrant shall be used for the purpose of washing wagons, without extra payment for the same.

8. In all cases where from necessity a trench is left open during the night, a lighted lantern shall be placed by the plumber over such trench from twilight until daylight, and the trench properly railed in.

The company will tap the main; all work from the tap may be done only by a plumber who is licensed by this company.

The company reserve the right to decline to connect with plumbing which has not been examined and approved by the Superintendent.

The strength of the pipes used, their protection against freezing, the kinds of faucets and other fixtures and the general arrangement of the work in reference to its security and safety, are to be subject to approval by the Superintendent.

Persons taking water must keep their water pipes and all fixtures connected therewith in good repair and protected from frost at their own expense. They must provide a stop and waste-cock, to be properly located inside the building, and have the pipes so arranged that the water can be drawn from them wherever and whenever there is danger of its freezing.

No alterations in pipes or fixtures shall be made, and no additional fixtures put in, without notice to the company, and a permit having been obtained therefor. The only exception to the above will be in cases where pipes have burst and damage to the premises is likely to result from any delay in making the application.



No person shall be entitled to damages, nor to have any portion of a payment refunded, for any stoppage of supply occasioned by accident to any portion of the works; nor for stoppage for purposes of additions or repairs; nor for non-use occasioned by absence; and the company shall have the right to shut off water to make repairs or additions of new work.

No hydrant, horse-bib or hose attachment shall be placed in any yard or area of any premises so situated as to be accessible to persons living in or occupying neighboring premises, unless the owner of the premises first named becomes responsible for and pays the water rent for all persons using water therefrom, and under no circumstances will any private hydrant or goose neck be allowed to be placed in the public streets.

In all premises every private fountain, water-closet, set-basin, sink or other fixture, whether used or not, will be deemed and held as used, and will be charged for so long as such fountain, water-closet, set-basin, sink or other fixture shall remain connected with the water pipes.

No water taker will be allowed to supply water to parties not entitled to its use, except by special permit from the company, and if found doing so without a permit, the supply will be stopped, and the water rent already paid forfeited.

There shall be no concealment of the purpose for which water is used.

There shall be no unnecessary waste of water. Any person violating this rule shall be liable to have his supply of water shut off, and the amount paid therefor forfeited.

The company, their agents and assistants reserve the right to enter the premises of any water taker that is supplied with water, at all reasonable hours of the day, to wit: between eight o'clock A.M. and six o'clock P.M. to examine the pipes and fixtures, the quantity of water used and the manner of its use.

#### METERS.

Meters are prohibited in private or tenement houses.

Water will be served to ferries, railroads, factories, etc., by meter or special contract at rates to be agreed upon.

If a meter gets out of order and fails to register, the consumer will be charged at the average daily consumption as shown by the meter when in order. Repairs of meters will be made by the company at the expense of the owners, whenever the company deems repairs necessary.

All water that passes through a meter will be charged for, whether used or wasted.

All meters will be set by an employee of the company, and shall not be moved or disturbed without permission from the proper officer.

#### STREET SPRINKLERS AND STREET SPRINKLING.

No person or persons shall be permitted to take water from the fire-hydrants or street sprinkler's hydrants to sprinkle any of the streets, or portions of the streets, or for any other purpose, without having obtained a permit from the company, which permit shall be good only for the time named therein.

In taking water for street sprinkling purposes no leakage or waste of water, either from street sprinkler, hose, or sprinkling cart will be tolerated; and all persons using the sprinklers shall leave them properly protected.

#### PAYMENT OF BILLS.

1. All water rates are payable in advance, at the office of the company, during the month of May in each year, and prompt payments are required from consumers as a condition of continued supply.

2. Fractional parts of a year will be calculated from the date on which the tap is made to the first day of May next ensuing, and will be payable as soon as the water is let on.

3. Section 2 applies only to premises which are about to connect with the water-mains of the company, and does not in any way apply to premises which are connected.

4. Bills for measured and estimated water are payable monthly.

5. If bills are unpaid twenty days after due, the water may be shut off without further notice.

6. The owners of dwelling houses, hotels, manufactories, and all other places which are connected with the mains of the Staten Island Water Supply Company, shall be deemed and held personally responsible for the payment of the water rent for each and every year, commencing from May 1, and in default of payment the water may be shut off at the option of the company and not turned on again until the expense thereof, \$3, and on county roads, \$6, and the annual rate be paid in full.

7. All connections made with the water-mains will be for not less than one year.

8. The annual water rate to be charged is regulated by the fixtures for the use of water which may be on the premises.

9. All fixtures that are connected with the mains of the water company will be charged for, whether used or not.

10. The water rate or tax commences and dates from the day on which the tap is made (excepting only for building purposes) and does not cease as an annual rate or tax from that date, whether the premises are occupied or not.

11. Water will be shut off by our agents or employees only for non-payment of water rate or violation of rules, and any consumer who may desire the water shut off temporarily from his premises should send for a plumber to do the same.

12. No water taker will be allowed to supply water to parties not entitled to its use, and if found doing so the supply will be stopped, and the water rent already paid forfeited.

13. The company will make such revisions in their rates and regulations as time and experience shall show to be advantageous for themselves and their customers.

#### NOTICE TO PLUMBERS.

1st. An application in regular form must be made by all plumbers, when a tap is wanted, and a return in regular form, giving the full name of the owner, filled out for the work to be done.

2d. All applications for taps and the returns for the same must be made out and placed on file at the office of the Water Supply Company before a tap will be made.

3d. All taps must be paid for when application is made.

4th. When application is made for a tap for building purposes the full name of the owner, the full name of the builder and the estimated number of barrels of lime or cement to be used to complete the building or buildings, must be given on the returns, and the number of barrels must be paid for, at the rate of six cents per barrel, by either the plumber or builder before any tap will be made.

5th. All plumbing work required in a building must be completed and service run to the stop-box at the curb before making application for a tap.

6th. No tapping will be done before 1 o'clock P.M. All applications for taps must be made before 12 M. All applications made after that hour will positively receive no attention until the following afternoon, and no tapping will be done on a Saturday.

7th. All connections to corporation taps must be of lead and not less than 4 feet in length, exclusive of coupling, size and weight as follows:

For  $\frac{1}{2}$  tap  $\frac{3}{4}$ -inch lead pipe, weighing not less than  $3\frac{1}{2}$  pounds per foot.

For  $\frac{3}{4}$  tap  $\frac{3}{4}$ -inch lead pipe, weighing not less than  $3\frac{3}{4}$  pounds per foot.

8th. All service beyond the sidewalk must be connected by stop-box at the curb, and stop and waste inside the foundation walls.

The tapper will see that the above rules are complied with before tapping the main.

Stop-cocks must conform in size and weight to those adopted by the company. Galvanized pipe shall be used for services.

All connections to galvanized-iron pipe must be made with brass soldering nipples; no cup joints allowed under any circumstances.

Any plumber wishing to do business in connection with the Staten Island Water Supply Company will be required to procure a license from the Superintendent of the company by executing a bond, with one or more sureties to be approved by said Superintendent, in the sum of five hundred dollars, conditioned that he will indemnify and save harmless the company from all suits and actions brought against it or any officer of the company, for, or on account of, any injuries or damages received or sustained by any person by said plumber, his servants or agents, doing any work, or by, or in consequence of, any negligence in guarding the same, or any improper materials used therein, or by, or on account of any act, or omission, of said plumber or his agents. Said plumber shall faithfully perform the work in all respects, and shall also replace and restore the street and gutter pavement over every opening to as good condition as he found it; and keep and maintain the same in good order, to the satisfaction of the company, for the space of six months thereafter; and shall also comply in all respects with the rules and regulations established by the company. All licenses shall expire the 31st day of May next ensuing the date thereof.

No licenses will be granted to persons other than practical plumbers, or those who employ practical plumbers to do their work. Plumbers shall state their place of business, together with the name under which their business is done, for record, at the time of taking out licenses, and shall immediately notify the company of any change in either.

Plumbers shall make full written returns of the ordinary and special uses for which the water is to be used under the permit granted, whether of new work, alterations or additions, with a full description of all apparatus and arrangements for using the same, the return to be made within forty-eight hours after attachment with the several pipes, or completion of alterations or additions. In case of the suspension of any part of the contemplated work for any cause it shall be the duty of the plumber to make a return of the work so far as completed on blanks furnished by the company. No plumber or other unauthorized person will be allowed to turn on water.

No person, unless specially authorized by the company, will be permitted to tap or make any connection with the main or distribution pipes.

All work in the street must be done in the best manner, so as to protect the public against injury. The company may repair work which is not satisfactory, after three days' notice, and collect the cost from the plumber doing the work.

The company and their agents are to have at all times facilities for inspecting the plumbing, fixtures or other work under the charge of the plumber.

No plumber having a license from the company will be allowed to take out a permit for work to be done by a person not in his employ.

The company shall have the right to impose a fine, not exceeding the sum of ten dollars, for each violation of rules and regulations.

Violations of rules and regulations, or the conditions under which a license is taken, will subject the plumber to forfeiture of his license, or to a fine, or both, as well as to the penalties of his bond.

The foregoing is subject to change without notice.

MARCH, 1898.

By order of the Board of Directors.

J. S. WARDE, Superintendent.

H. BRIGHTMAN, President.

RATES AND RULES OF THE WOODHAVEN WATER SUPPLY COMPANY, WOODHAVEN, N. Y., NOVEMBER 1, 1894.

(New York office, No. 19 Cliff street).

SCALE OF WATER RATES.

(Per annum).

FRONT WIDTH.	STORIES IN HEIGHT.				
	One.	Two.	Three.	Four.	Five.
16 feet and under.....	\$4 00	\$5 00	\$6 00	\$8 00	\$9 00
18 and over 16 feet.....	5 00	6 00	8 00	9 00	11 00
20 and over 18 feet.....	6 00	8 00	9 00	11 00	12 00
22½ and over 20 feet.....	8 00	9 00	11 00	12 00	13 00
25 and over 22½ feet.....	9 00	11 00	12 00	13 00	14 00
30 and over 25 feet.....	11 00	13 00	14 00	15 00	16 00
37½ and over 30 feet.....	13 00	15 00	17 00	19 00	20 00
50 and over 37½ feet.....	17 00	18 00	19 00	20 00	21 00

All rear tenements or any lot or lots, with front buildings thereon, shall pay an annual regular rate of one-half the regular rate fixed by the foregoing subdivisions for front buildings of similar height and width; but this provision shall not apply to tenements erected on corner lots, each of which tenements shall pay the regular rates as stated in the above subdivisions.

Rates are payable annually in advance, on the first day of November. If not paid within thirty days after said date, interest will be added at the rate of 6 per cent. per annum until paid, and to the disconnection of the service, at the option of the company, without notice.

#### SPECIAL OR EXTRA WATER RATES

as follows are due and payable in advance; default in payment within the prescribed time subjects the entire premises wherein the water is furnished to be disconnected without notice.

##### Sidewalk Washers.

For each washer, for washing windows and sidewalks, the sum of \$2 per annum. A permit for a sidewalk washer gives authority to wash sidewalks of the premises for twenty-five feet only; if used beyond that distance an extra rate will be required to be paid upon the property upon which the water is used. The use of a hose bib for the purpose of a sidewalk washer is prohibited, unless a special permit therefor is obtained.

##### Hose.

When hose is used for garden purposes an additional charge of \$2.50 per twenty-five foot lot will be made.

##### Water-closets.

Each private house is entitled to one water closet and one bath without charge; for each additional water-closet \$2 per year, and for each additional bath \$3 per year.

##### Baths.

Baths in public houses, boarding houses, barber shops and boarding schools from \$5 to \$25 each, at the discretion of the company.

##### Large Buildings.

Churches, public schools, institutions, greenhouses, factories, railroads, storage, etc., shall be subjects of special contract with the company; and all large buildings with stores or offices on the ground floor, and halls or offices above, shall rate the same as though each store or subdivision on the ground floor front was, with the building above, a separate building.

##### Manufacturing Purposes.

All water used for manufacturing purposes shall be subject to special contract.

##### Bakeries.

For every barrel of flour or meal used, the sum of 1 cent per barrel.

##### Barber Shops.

Each wash-basin, \$3.

##### Bars and Drug Stores.

\$5 to \$25 each, according to use.

##### Boarding-schools.

Boarding-schools shall be charged at the rate of from \$15 to \$50 each, and private school-houses at the rate of from \$10 to \$20 each per annum.

##### Fountains.

Fountains ordinarily used three hours per day, for a period of not more than four months in the year, shall be charged as follows: A one-sixteenth of an inch jet, the sum of \$7 per annum; for a one-eighth of an inch jet, the sum of \$15 per annum; for a one-quarter of an inch jet, the sum of \$40 per annum; for a one-half inch jet, the sum of \$90 per annum; for an inch jet, the sum of \$200 per annum. No fountain shall be permitted on any premises where the water is not taken for other purposes and to an extent sufficient for those purposes; and if the water from the jet or fountain be permitted to flow into premises adjacent to, or in the neighborhood, where it may be used for other purposes, the supply shall be stopped and the amount of payment forfeited.

##### Cow and Cattle Stables.

For each and every cow or head of cattle, the sum of 75 cents, and for hogs, 25 cents each per annum.

##### Private Horses.

For each horse, \$2.50 per annum, with privilege to wash carriages used in such stable.

##### Livery Horses.

For each horse \$2 per annum. Railroad and omnibus horses the same rate.

##### Cart and Other Work Horses.

\$1 each per annum.

##### Horse Troughs.

For each trough on sidewalk (which must be made to conform to Company's order), the sum of \$5 per annum.

##### Hotels and Boarding-houses.

Hotels and boarding-houses shall, in addition to the regular rate for private families, be charged for each lodging room at the discretion of the company, and not less than \$1 for each additional bed over those used by the family.

##### Taverns, Saloons, etc.

Taverns, saloons, etc., shall be charged an extra rate of from \$5 to \$30, at the discretion of the Company.



*Slaughter-houses.*

Slaughter-houses shall be charged at the rate of from two to three hundred dollars each per annum.

*Building Purposes.*

Rates \$6 to \$25, at the discretion of the Company.

All matters not herein mentioned are reserved for special contract by the company.

THE WOODHAVEN WATER SUPPLY CO.

## RULES.

1. All applications for water must be made in writing by the owner or agent of the premises to be supplied, stating fully and truly all the purposes for which it is to be used; and should additional use at any time be required, the company must be notified thereof before such additional use will be allowed, and when paying annual charges parties must frankly and without concealment answer all questions relating to its consumption.

2. Persons taking water must keep their own water-pipes and all fixtures connected therewith in good repair and protected from frost at their own risk and expense. They must provide a stop and waste-cock, to be properly located inside the building, and have the pipe so arranged that the water can be drawn from them whenever there is danger of its freezing.

3. The water at wash-basins, water-closets, urinals, baths, or any other places must not be left running to prevent the water in the pipes from freezing or for any other purpose, and all unnecessary waste of water must be prevented. Water-closets and urinals must in all cases be self-closing.

4. All house boilers shall be constructed with one or more air holes near the top of the inlet pipe, and be of sufficient strength to bear the pressure of the atmosphere under vacuum. The service-pipes, stop-cocks and other appurtenances must be sufficiently strong to bear the pressure and ram of the water; and it is expressly stipulated by the company that no claim shall be made against it by reason of the breaking of any service-pipe or service-cock, or from damage arising from shutting off water to repair mains, or for any cause when circumstances require it. In case of failure upon the part of any consumer of water to repair any leak occurring upon the service-pipe within twenty-four hours after verbal or written notice has been served upon the premises, the water shall be shut off from the same, and will not be turned on until the sum of five dollars has been paid, together with such additional fine or charge as the company may impose. When the waste of water is great, or when damage is likely to result from the leak, the water will be turned off if the repair is not proceeded with immediately upon service of the notice.

5. Street sprinklers and garden hydrants must not be allowed to run to waste, nor be converted into jets, nor used for washing the gutters of the streets; neither shall they be used for sprinkling or washing the premises of adjoining or opposite proprietors or occupants, or in any other way or for any purpose not authorized by the terms agreed upon with the company.

6. No permits will be granted for street or garden washers or post-hydrants unaccompanied with inside use.

7. The use of sidewalk washers and garden hose will not be permitted between the hours of 8 A. M. and 6 P. M.

8. When two or more parties or families are supplied with water from the same service-pipe, and if either of said parties fail to pay the water rent when due, or to comply with the rules, said company shall have the right to withhold all supply until such rent be paid or the rules complied with.

9. No owner or tenant will be allowed to supply water to other persons or families without the consent of the company, except in some unexpected emergency.

10. No person or persons not authorized by the company shall connect or disconnect, or take apart, or in any way change or cause to be changed, or interfere with the action or regulation of a water meter or tap the mains. The company does this work at reasonable rates.

11. No person will be allowed under any circumstances to make any addition or alteration whatever in connection with any water pipe without the permission, in writing, of this company. This rule will be strictly enforced, and if violated, the supply will be instantly shut off.

12. The penalty for violation of any of the rules and requirements of the company will be the prompt stoppage of the supply of water.

13. In all cases where the water has been turned off for non-payment of water rent or for violation of any rule, it shall not be turned on again until the charge of five dollars be paid for expenses and default, together with such fine as may have been imposed by the company, or rent that may be due, and a satisfactory understanding with the party that no future cause of complaint shall arise. If it is found that the water has been turned on again without having complied with the above requirements, it shall be lawful for the company to cause the ferrule to be drawn; and it shall not be inserted again until all back rents are paid up, and five dollars additional for drawing and replacing ferrule.

14. The representatives of the company must have free access, at all proper times, to all parts of the premises where the water is delivered and consumed.

## TO PLUMBERS.

No permit will be granted for tap or alterations in plumbing work, unless application therefor be made in writing, signed by the plumber; the application to designate the size of the tap, the size and kind of service pipe to be used, the street and number (if any); which side of the street; if on the corner, on which street to be tapped, with a diagram of the property to be supplied from the service pipe, showing the streets on all sides of the block on which it is situated, with the distance from the nearest corner, the full name of the owner, the purpose for which the water is to be used, and all other particulars necessary to a full understanding of the subject. Also state what plumbing work is in the house at the time this application is made; and a detailed statement of the proposed alteration.

Plumbers not complying with any of the rules, will thereafter be refused permits.

## APPLICATION FOR WATER.

Application is hereby made to The Woodhaven Water Supply Company to supply

..... } Give  
..... } Exact  
..... } Location.  
with water for the term of..... and from year to year until further  
notice in writing for the following purposes, subject to their Rates and Rules, as per copy here-  
with, dated, Nov. 1, 1894; receipt of which is hereby acknowledged.

Dated..... 189..... } Applicant  
No..... } Sign here.  
Distance from House to Main.....  
" " Tap to Sides of House.....

# RULES, REGULATIONS AND TARIFF OF RATES OF THE QUEENS COUNTY WATER COMPANY, FOR THE USE OF WATER IN QUEENS COUNTY, N. Y., INCLUDING RULES REGULATING THE PLUMBING OF HOUSES—JANUARY 18, 1892.

FAR ROCKAWAY, N. Y., January 18, 1892.

The Queens County Water Company, recognizing the necessity for uniform rating, has adopted the following rules, regulations and tariff of rates, for the guidance and governance of all persons using the water served by this company. The company desires, as far as may be possible, not to interfere with the rates and agreements for water that have been previously established, and in consequence will permit all rates to remain as they have been heretofore, until further notice, unless the consumers, individually, desire to be rated under the new schedule; any consumer who may so desire, will, upon application to the company, be rated as per the schedule of rates herein given. Meters will be furnished on the request of the consumers or at the option of the company.

All new consumers will be charged the new rates, as shown in the schedule, subject to such modifications or additions as may be made by the company, from time to time.

## MEMORANDA.

One cubic foot is equal to nearly seven and one-half gallons. The amount of water which can be obtained through different sizes of pipe depends upon the head or pressure, which will vary in different parts of the district, and the delivery per hour, when metered, with service-pipes of the usual length, will be approximately as follows:

Size of Pipe.	Average Delivery, Gallons per Hour.
1/2 inch	250
3/8 "	450
3/4 "	900
1 "	1,800
1 1/2 "	2,700
2 "	3,600
3 "	5,100
4 "	27,000

## Annual Water Rates for Buildings not Metered—Approved January 18, 1892, by the Queens County Water Company.

FRONT BUILDINGS.	ONE-STORY.	ONE AND ONE-HALF-STORY.	TWO-STORY.	TWO AND ONE-HALF-STORY.	THREE-STORY.	THREE AND ONE-HALF-STORY.	FOUR-STORY.	FOUR AND ONE-HALF-STORY.	FIVE-STORY.
Fifteen and under 20 feet in width	\$7 00	\$8 00	\$9 00	\$10 00	\$11 00	\$12 00	\$13 00	\$14 00	\$15 00
Twenty and not exceeding 25 feet in width	9 00	10 00	11 00	12 00	13 00	14 00	15 00	16 00	17 00
Exceeding 25 and not exceeding 30 feet	11 00	12 00	13 00	14 00	15 00	16 00	17 00	18 00	19 00
Exceeding 30 and not exceeding 40 feet	13 00	14 00	15 00	16 00	17 00	18 00	19 00	20 00	21 00
Exceeding 40 and not exceeding 50 feet	15 00	16 00	17 00	18 00	19 00	20 00	21 00	22 00	23 00
Exceeding 50 and not exceeding 60 feet	19 00	20 00	21 00	22 00	23 00	24 00	25 00	26 00	27 00
Exceeding 60 and not exceeding 70 feet	22 00	23 00	24 00	25 00	26 00	27 00	28 00	29 00	30 00
Exceeding 70 and not exceeding 80 feet	26 00	27 00	28 00	29 00	30 00	31 00	32 00	33 00	34 00
Exceeding 80 and not exceeding 90 feet	30 00	31 00	32 00	33 00	34 00	35 00	36 00	37 00	38 00
Exceeding 90 and not exceeding 100 feet	34 00	35 00	36 00	37 00	38 00	39 00	40 00	41 00	42 00
Exceeding 100 and not exceeding 110 feet	38 00	39 00	40 00	41 00	42 00	43 00	44 00	45 00	46 00
Exceeding 110 and not exceeding 120 feet	42 00	43 00	44 00	45 00	46 00	47 00	48 00	49 00	50 00

Basements where water is used will be rated as stories.

Water rents on all buildings must be paid as rated in the foregoing lists where the water is introduced or used.

## NOTICE TO CONSUMERS.

Water rates for buildings not metered are due and payable annually on the 1st day of June for the year beginning on that day.

Measured water bills are due and payable quarterly on the 5th days of December, March, June and September, except when by consent of the company they are made payable monthly on the 5th day of each month. Office hours from 4 to 6 P. M. daily, excepting Sundays. Bankable money only will be received. Minimum rates payable in advance.

Water takers must prevent all waste of water, protecting their pipes, etc., from frost; allow full inspection at all times; notify the company before making any addition to their plumbing, or alteration thereof, and get a permit for the same through a licensed plumber.

Those failing to pay for the water consumed within the periods specified, or otherwise not complying with the regulations of this company, will, after five days' notice, have their supply cut off.

## EXTRA RATES.

(In addition to building rates for buildings not metered).

Section 1. Baths—Three dollars and fifty cents each per annum. One extra allowed without additional charge in houses occupied by only one family.

Sec. 2. Bars and Saloons—Ten dollars to twenty-five dollars each per annum.

Sec. 3. Building Purposes—Twenty-five cents per thousand brick laid. Twenty-five cents per hundred cubic feet of stone masonry. Twenty-five cents per hundred square yards of plastering. All expenses of tapping main and making connections for the service of water for building purposes must be paid in advance by the consumer.

Sec. 4. Fire Hydrants—For other uses than for the extinguishment of fires will be charged at the rate of five cents per minute, and shall be used only by special permit; no charge to be less than one dollar.

Sec. 5. Fountains—One-sixteenth-inch jet, \$15 per annum; one-eighth-inch, \$30 for season of four months.

Sec. 6. Greenhouses and Conservatories—Five dollars per thousand square feet of surface covered per annum.

Sec. 7. Horse Troughs and Hydrants (on sidewalks)—Twenty-five dollars per annum. Each trough to be fitted with a proper ball cock to prevent waste. This must be kept in order.

Sec. 8. Hose—When held in the hand for sprinkling purposes \$5 per annum per each lot not exceeding 5,000 square feet. Automatic or revolving sprinklers \$20 each per annum. Hose and sprinklers may be used between the hours of 5 and 8 o'clock in the morning and 5 and 7 o'clock in the evening unless the service is metered in which case they may be used at any time. Hose use is not included in the charge for houses or for domestic service. Hose will be charged in all cases where there are hose bibs or hydrant spouts with hose screws thereon or other means of attaching to the hose. Consumers not desiring to use hose must have the screws removed.

Sec. 9. Steam Engines and Boilers—Five dollars per horse power for each nominal horse power or by meter.

Sec. 10. Stables—In addition to regular building rates \$1 per annum for each horse or cow in excess of two.

Sec. 11. Water-closets and Urinals—Two dollars and fifty cents each per annum. One extra will be allowed without charge in all houses occupied by one family only. Only self-closing water-closets and urinals will be allowed. All others, \$15 each per annum.

Sec. 12. No deduction will be made from the rates on account of fixtures not being used; if not wanted they should be disconnected from the pipes, and upon the same being reported in proper form to the company further charge for their use will be discontinued.

Sec. 13. No alteration or extension shall be made in any water pipe or fixtures without first giving notice of such proposed alteration or extension, and receiving a permit from the company authorizing the same, and the work must be done by a licensed plumber.

Sec. 14. Meters will be loaned by the company, but must be attached by the consumer, for any business requiring a large amount of water.

## METERS.

Sec. 15. At the option of the company, meters will be used, and the water charged for, either at the foregoing rates or at the following meter rates, such rates varying with the amount used, from a maximum of 50 cents per 1,000 gallons to a minimum of 25 cents per 1,000 gallons, the rates decreasing as the amount used is increased; such meter rate to be in full payment of building rates for the premises where such water is used.

Sec. 16. Until further notice, this company will lend a meter, free of charge, and keep the same in repair, except in case of misuse or damage by frost, in which case the expense of repairs must be borne by the consumer.

The company will replace meters damaged by frost only on receipt of \$10 to cover the cost or expense of making necessary repairs. When the amount of such expense is ascertained, the balance, if any, will be returned to the consumer.

## Meter Rates.

Sec. 17. When the consumption of water is—

First, 50,000 gallons, at 40 cents per 1,000 United States gallons.

Next, 200,000 gallons, at 30 cents per 1,000 United States gallons.

Next, 200,000 gallons, at 25 cents per 1,000 United States gallons.

All over 450,000 gallons, at 20 cents per 1,000 United States gallons.

Final adjustments will be made on the first day of June.

The regular quarters shall commence on the first days of December, March, June and September.

No bill will be rendered or payment accepted for less than the following minimum rates:

Through 1/2-inch meter	\$10 00 per annum.
" 3/4 "	15 00 "
" 1 "	20 00 "
" 1 1/2 "	30 00 "
" 2 "	40 00 "

These minimum rates are payable in advance (see below Paragraphs 6 and 7, "Agreement and Conditions.")

Sec. 18. The company reserves the right—

To set meters at any time.

To shut off water without further notice whenever bills remain unpaid for ten days after they are due, or where there is a misuse or waste of water.

To decrease or temporarily discontinue water for business purposes or hose use whenever, in times of drought, the whole supply is needed for domestic purposes, and to meet the conditions of its contracts with the municipal authorities.

To decline to connect with plumbing which has not been examined and approved by the Superintendent.

To decline to continue to supply any consumer unless his service-pipe has a separate stop-cock in the street which is accessible, and which is protected with a proper box and cover.

To add to or modify its rules at any time.



## RULES AND REGULATIONS AS TO PLUMBING.

1. No person except the tapper employed by the company will be allowed, under any circumstances, to tap the mains or distributing pipes, or insert stop-cocks therein; and no plumbing connected with the mains of this company shall be done without a permit from this company.

2. Every plumber, at the time of receiving his license, shall execute and deposit in the office of the company a bond, with two or more sureties, to be approved by the President of the company, in the sum of \$1,000, conditioned that he will pay all moneys due to the company for fines and otherwise; that he will indemnify and save harmless the company from all accidents and damages consequent thereupon, for or by reason of any openings in any street, road, lane, avenue, boulevard, alley or court, made by him or by those in his employ for the purpose of putting down or inserting any service pipe or pipes, hydrant or other apparatus for the introduction and use of water furnished by the Queens County Water Company, or for any other object or purpose whatever; that he will replace and restore the street and pavement or loam or macadam surface over every such opening to as good a state and condition as he found it, and keep and maintain the same in good order, to the satisfaction of the company, for the space of six months thereafter; that he will make true and faithful reports to the company of the situation, number, size and character of all pipes, hydrants, washers, water-closets, baths, and all other work or apparatus for conveying, containing or consuming the water furnished by the Queens County Water Company, made, fixed or inserted by him, or under his direction, within five days after the same shall have been completed.

3. Plumbers applying for permits, whether it be for the introduction of water furnished by the Queens County Water Company, or for the alteration and extension of the arrangements for supplying the same, shall state fully and truly the purpose for which said water is required.

All permits must be paid for at the time of application therefor.

The permit will be authority only for such work as is specified in the application.

4. Special permits must be obtained in writing signed by the company, for the following plumbing work, viz.: Taps in street mains exceeding  $\frac{3}{4}$  inch diameter; service pipe other than extra strong "AA" lead pipe of full weight; fountains, horse troughs, drinking fountains, or hydrants on sidewalks or in yards, either in front or rear of premises.

5. Notice must be given at the company's office by the plumber who is to lay down service pipes, during the time when he will have the trench open and ready for the tapper. This notice must be given at least twenty-four hours previous to the time fixed.

6. No licensed plumber will be permitted to transfer his permit to another party, or to sign for an unlicensed plumber.

7. The surface of the street over trenches must be put in good order within forty-eight hours after the tapper has finished his work, and must be kept in good order for the space of six months thereafter by the plumber. In case of his failure so to do, it will be done by the company at his expense.

8. In opening streets, the materials excavated must be so deposited as to cause the least possible obstruction to public travel, and the trench or excavation must not be left open at night, except in case of necessity, when a suitable barricade and lighted lanterns shall be placed around the said trench or excavation from twilight until the following morning, as a guard against accidents.

9. Plumbers fitting up apparatus for the use of the water of the Queens County Water Company, under authority of any permit issued by the company, shall within forty-eight hours after the work shall have been completed fill up and return to the office of the company a blank form of report furnished for that purpose, showing all the arrangements, both new and old, for using the water of the company upon the premises, giving the block, lot and street number of the premises, the name of the street on which the said premises are located, and such other particulars as the case may require. In case lot or street numbers cannot be ascertained, the distance from the nearest street corner must be given. Each report must state the number and kind of permit authorizing the work.

10. Service pipe must be of extra strong "AA" lead pipe, of full weight, from the street main to the stop-cock at the curb line, and laid at least  $\frac{3}{4}$  feet below the established grade line of the street, with a bend in the form of a trap at or near the main, requiring at least 1 foot of extra length, in such a manner as to prevent rupture by settling.

No pipe shall be used in plumbing houses except "AA" lead pipe, unless a special permit is obtained therefor.

11. All services shall be provided with a side-wasting stop-cock of the same bore as the pipe, which shall be covered with an iron box marked with the number of the permit, leading from the cock to the surface of the sidewalk, and covered with a cover or lid of iron with the word "Water" thereon, and located 1 foot back of the curb line and of a pattern satisfactory to the Water Company.

12. House boilers must be provided with vacuum valves in all new work, and when old boilers are removed and replaced by new ones, and also with a stop-cock to shut off the supply from the boiler.

13. All apparatus for the use of the water of the Queens County Water Company's water shall be subject to the inspection and approval of the company as to pattern, material and workmanship.

14. Plumbers making repairs when the water has been shut off by authority, on account of leak, defect or disuse, shall report in writing to the office of the company that all plumbing work, both new and old, is in complete working order, and pay all attendant expenses, otherwise the water will not be turned on; and no person, whether plumber or otherwise, shall turn on the water until he shall receive permission from the company.

15. Any plumber who shall be guilty of violating any of the rules of the company, shall be immediately suspended and deprived of his license, or subjected to a fine, not exceeding the sum of \$25.

16. In all cases where a fine is imposed, the party so fined will be suspended from acting under his license until the fine is paid.

17. The charges for furnishing corporation cocks and tapping mains will be as follows:

Size of Taps.	Price.
$\frac{1}{2}$ -inch .....	\$2 50
$\frac{3}{8}$ " .....	3 00
$\frac{1}{4}$ " .....	3 50
1 " .....	4 50

18. The meter must be set in line with the service box, in a convenient place, protected with a suitable box, and packed to prevent the meter from freezing.

Couplings must be made up or secured in the meter (especially in case of the inlet opening), without using either red or white lead. Boiled oil will answer the same purpose.

In opening the stop-cock to admit water to the meter, open gradually, leaving some convenient faucet on the outlet side open to permit the air and water to escape.

Meters must not be placed in improper positions, rendering same difficult of access. The proposed location of each meter put in, must be inspected and approved by the proper officer of this company before the said meter is set. Notice may be sent to the office of the company in Far Rockway concerning same.

Plumbers making connections with the street mains of the Queens County Water Company, must insert a draw-off cock between the meter and the house, and a check valve between this cock and the meter, in such manner that the cock and meter may be readily disconnected. A second cock on the main side of the meter will also be required.

Plumbers must have excavated for the tapper a hole 4 feet in length, 2 feet wider on each side than the pipe, and 1 foot in depth below the pipe.

Before any application will be granted, the consumer will sign a blank form containing the following agreement and conditions:

## AGREEMENT AND CONDITIONS.

1. Each consumer will honestly comply with the rules and regulations of the Queens County Water Company, among which are the following:

2. The Superintendent or other proper officer or agent of the company shall have access at all reasonable hours to all parts of the premises to which water is supplied by the company.

3. The said company shall have the right, at any time, to shut off the water, without notice, in any one or more of their mains, in cases of conflagration, for making repairs or extensions, or for other reasonable and proper purposes; and all consumers having boilers within their premises, not supplied with tanks or cisterns, but depending upon the pressure in the pipes to keep them supplied, are hereby cautioned against the danger of collapse. Risk of damage in all such cases must be exclusively on the consumer. In case of danger, the hot-water faucet should be opened.

4. The said company undertakes, however, to use all reasonable care and diligence to provide a constant supply of water through its pipes to consumers, but in the event of break, failure or accident the said company shall not be liable to any consumer for any damages resulting from the public enemy, the elements, or any accident, misfortune, failure or break in the machinery, reservoirs or pipes of the company.

5. In case of a supply by meter, one meter for each tap will be loaned and kept in repair by said company, without charge to the consumer. If any meter be found defective, it will immediately be replaced by another meter; and in case of its ceasing to register the quantity of water consumed, the account will be made by an average of another meter, or by the amount charged during a previous corresponding period, at the discretion of the company. The accuracy of a meter can be tested at any time by the consumer, by simply observing whether the meter registers 1 cubic foot when  $7\frac{1}{2}$  gallons or 62 $\frac{1}{2}$  pounds of water are drawn through the pipes.

Consumers will be held responsible if their meters are permitted to freeze, or are damaged otherwise than by ordinary wear and tear. Meters will be furnished at the request of consumers or at the option of the company.

6. After meters are attached, no bill will be rendered or payment accepted for less than the following minimum rates, which must be paid in advance:

Through $\frac{1}{2}$ -inch meter .....	\$10 00 per annum.
Through $\frac{3}{4}$ -inch meter .....	15 00 "
Through 1-inch meter .....	20 00 "
Through $1\frac{1}{2}$ -inch meter .....	30 00 "
Through 2-inch meter .....	40 00 "

7. The regular quarters will commence on the first days of December, March, June and September, and statements of the amount of water used will be rendered at that time. Final adjustments will be made on June 1, at which time the excess, if any, over minimum rates will become due and payable.

Tapping will be done by the company, at the following prices, which include the corporation cock:

$\frac{1}{2}$ -inch cock and tapping .....	\$2 50
$\frac{3}{8}$ -inch cock and tapping .....	3 00
$\frac{1}{4}$ -inch cock and tapping .....	3 50
1-inch cock and tapping .....	4 00

8. And the said application shall also contain the following agreement:

As a further consideration and inducement to said Water Company to supply me with water, I hereby agree for myself, my heirs, representatives and assigns, to sell to the said Water Company, at any time, my right, title and interest in the pipe I may lay from the mains of said company to the point where the said pipe enters my own property, at a fair market value of the pipe, at the time the company decides to take the pipe off my hands, and the actual cost for excavation and refilling, which would be necessary if the company had to lay the pipe itself.

I will also sell and convey to them without additional compensation any right-of-way I may now or hereafter possess enabling me to lay and maintain said pipe, and will keep the said pipe and fixtures in repair until the company shall purchase it.

W. M. MARTIN, President.

GURDON S. BUCK, Secretary and Treasurer.

CHAS. B. BRUSH, Chief Engineer.

F. S. PECKE, Engineer in charge.

THOS. D. SMITH, Superintendent.

All communications should be addressed to the Queens County Water Company, and sent to its office at Far Rockaway, Long Island, New York.

## THE JAMAICA TOWNSHIP WATER COMPANY.

RULES, REGULATIONS AND CONDITIONS GOVERNING ITS INTRODUCTION AND SUPPLY WITH ANNUAL WATER RATES AND RULES FOR PLUMBERS.

## RICHMOND HILL.

## SCHEDULE OF PRICES OF WATER FOR DOMESTIC AND OTHER PURPOSES.

Houses of 9 rooms or over (with all improvements) .....	\$15 00 per annum.
Houses of 6, 7 or 8 rooms (with all improvements) .....	12 00 "
Houses of 8 rooms or over (kitchen sink only, hot and cold water) .....	8 00 "
Houses of 6 or 7 rooms (kitchen sink only, hot and cold water) .....	6 00 "
Houses of 5 rooms or under (kitchen sink only, hot and cold water) .....	4 00 "

The expression "all improvements," means one bath tub, closet and basin, kitchen sink and set of wash-tubs and butler's pantry sink. For all additional fixtures the following prices are charged: Bath tub, \$3; water-closet, \$3; tubs, \$2; faucet, \$1, but no more than \$20 shall be charged for domestic purposes in any one house, and in houses not having "all improvements" the rate for kitchen sink only is charged plus the price of each additional fixture, but not exceeding the price for all improvements.

Lawn sprinkling, not exceeding \$0.10 per front of plot sprinkled, nor \$0.10 in the aggregate, for four hours' sprinkling per diem.

Water for sprinkling streets not to exceed \$0.10 per 1,000 gallons.

All other or special rates not above specified shall not exceed those now charged in the village of Jamaica, nor shall the said Water Company at any time during the period of this contract make or charge any water rates other than those specified in the foregoing schedule, which shall be in excess of the rates then charged for the same accommodations in buildings of the same description in the village of Jamaica.

## Sidewalk Washers.

For each washer, for washing windows and sidewalks, the sum of \$2 per annum. Sidewalk washers shall be used only between the hours of 4 A.M. and 8 A.M., from March 1 to November 1, and from 4 A.M. to 9 A.M. from November to March; nor must they be converted into jets, or the water suffered to run to waste or leak, or used to wash the filth of gutters down upon neighbors or into receiving basins of sewers. A permit for a sidewalk washer gives authority to wash sidewalks of the premises for twenty-five feet only; if used beyond that distance an extra rate will be required to be paid upon the property upon which the water is used. The use of a hose bib for the purpose of a sidewalk washer is prohibited, unless a special permit therefor is obtained. The sprinkling of roadways of streets from sidewalk washers or lawn sprinklers is strictly prohibited. When hose is used for garden purposes an additional charge of \$2.50 per twenty-five foot lot will be made. Hose for lawn purposes will only be allowed to be used for two hours before 9 A.M., and between 4 and 6 P.M. Any infringement of this rule will necessitate shutting off the whole supply.

Each private house is entitled to one water-closet and one bath without charge; for each additional water-closet \$2 per year, and for each additional bath \$3 per year.

Baths in public houses, boarding houses, bathing establishments, barber shops and boarding schools, from \$5 to \$25 each, at the discretion of the company.

## Large Buildings.

Churches, factories, storage, etc., shall be subjects of special contracts with the company; and all large buildings, with stores or offices on the ground floor, and halls or offices above, shall rate the same as though each store or subdivision on the ground floor front was with the building above a separate building.

All water used for manufacturing purposes shall be charged and paid for at the rate of \$0.01 per 100 gallons, or \$0.07 $\frac{1}{2}$  per 100 cubic feet, meter measurement. All water furnished and used for other purposes shall be charged and paid at the rate of \$0.01 $\frac{1}{2}$  per 100 gallons, or \$0.11 $\frac{1}{4}$  per 100 cubic feet, meter measurement, provided however, that in cases where an annual supply of water for a given purpose exceeds in cost the sum of one thousand (\$1,000) dollars, meter measurement, such supply of water shall be furnished and paid for at the rate charged for manufacturing purposes, to wit: \$0.01 per 100 gallons.

## SPECIAL OR EXTRA WATER RATES

as follows: are due and payable in advance; default in payment within the prescribed time subjects the entire premises wherein the water is furnished to be disconnected without notice.

## Bakeries.

Special rates will be made.

## Barber Shops.

Special rates will be made.

## Bars and Drug Stores.

Bars and Drug Stores—\$5 to \$25 each, according to use.

## Building Purposes.

For each building \$10.

## Boarding Schools.

Boarding schools shall be charged at the rate of from \$15 to \$50 each, and school-houses at the rate of from \$10 to \$20 each, per annum.

## Fountains.

Fountains, ordinarily used three hours per day, for a period of not more than four months in the year, shall be charged as follows: A one-sixteenth of an inch jet, the sum of \$7 per annum; for a one-eighth of an inch jet, the sum of \$15 per annum; for a one-quarter of an inch jet, the sum of \$40 per annum; for a one-half inch jet, the sum of \$90 per annum; for an inch jet the sum of \$200 per annum. No fountain shall be permitted on any premises where the water is not taken for other purposes, and to an extent sufficient for those purposes; and if the water from the jet or fountain be permitted to flow into premises adjacent to, or in the neighborhood, where it may be used for other purposes, the supply shall be stopped, and the amount of payment forfeited.

## Cow and Cattle Stables.

For each and every cow or head of cattle, the sum of 75 cents, and for hogs 25 cents each per annum.

## Private Horses.

For each horse, \$2.50 per annum, with privilege to wash carriages used in such stable.



*Livery Horses.*

For each horse, \$2 per annum. Railroad and omnibus horses the same rate.

*Cart and Other Work Horses.*

Cart and other work horses, \$1 per annum.

*Horse Troughs.*

For each trough on sidewalks (which must be made to conform to Company's order), the sum of \$5 per annum.

Hotels and boarding houses shall, in addition to the regular rate for private families, be charged for each lodging room at the discretion of the company, and not less than \$1 for each additional bed over those used by the family.

*Market Stalls and Stands.*

Special rates will be made.

*Porter Houses, Taverns, Etc.*

Porter houses, taverns, etc., that retail liquors, shall be charged an extra rate of from \$5 to \$30, at the discretion of the company.

*Refectories and Printing Offices.*

Refectories and printing offices shall be charged at such rates as may be determined in the discretion of the company.

*Slaughter Houses.*

Slaughter houses shall be charged at the rate of from two to three hundred dollars each, per annum.

All matters not hereinbefore mentioned, are reserved for special contract by and with the company.

## RULES AND REGULATIONS.

(Subject to Additions and Amendments.)

1. All applications for the use of water must be made at the office of the company, in the form prescribed, stating fully and truly the various uses to which the water is to be applied.

2. All plumbing in houses must be completed, and service run from the house to the stop-box at the curb, before applying for a permit to tap the main.

3. Where service pipes have been laid to or inside the curb-line, or continued to the cellar foundation of building, for building purposes, a permit will be necessary for any additions thereto.

4. All applications for a permit for a tap must be made before opening the street. The Superintendent may refuse to grant a permit for a tap in the main to any plumber who fails to obtain such permit before opening the street for that purpose.

5. Under no circumstances will one tap and one service pipe be allowed to connect with and supply more than one house on streets or avenues where our mains are laid.

6. Whenever two or more parties are supplied from one pipe connecting with the main, the failure on the part of either of said parties to pay the water rent when due, or to comply with the rules and regulations of the company, shall authorize the Superintendent to stop the supply of water from all on said premises, without any liability whatever; owners shall be so far responsible for tenants, that new tenants shall not be entitled to a supply until all arrearages on the premises are paid.

7. No street washer or garden hydrant shall be allowed to be used for the purpose of washing wagons without payment for the same.

8. In all cases where from necessity a trench is left open during the night, a lighted lantern shall be placed by the plumber over such trench from twilight until daylight, and the trench properly railed in.

9. The company will tap the main; all work from the tap to the curb shall be controlled by this company.

10. The company reserve the right to decline to connect with plumbing which has not been examined and approved by the Superintendent.

11. The strength of the pipes used, the protection against freezing, the kind of faucets and other fixtures and the general arrangement of the work in reference to its security and safety, are to be subject to approval by this company.

12. Persons taking water must keep their own water pipes and all fixtures connected therewith in good repair and protected from frost at their own expense. They must provide a stop and waste cock, to be properly located inside the building, and have the pipes so arranged that the water can be drawn from them wherever and whenever there is danger of its freezing. Each consumer must protect their house boilers, either with check or vacuum valve. The company will not be responsible for any damage caused by reason of the water being shut off.

13. No alterations in pipes or fixtures shall be made and no additional fixtures put in without notice to the company and a permit having been obtained therefor. The only exception to the above will be in cases where pipes have burst and damage to the premises is likely to result from any delay in making the application.

14. No person shall be entitled to damages, nor to have any portion of a payment refunded, for any stoppage of supply occasioned by accident to any portion of the works; nor for stoppage for purposes of additions or repairs; nor for non-use occasioned by absence; and the company shall have the right to shut off water to make repairs or additions of new work.

15. No hydrant, hose bib or hose attachment shall be placed in any yard or area of any premises so situated as to be accessible to persons living in or occupying neighboring premises, unless the owner of the premises first named becomes responsible for and pays the water rent for all persons using water therefrom, and under no circumstances will any private hydrant or goose neck be allowed to be placed in the public streets.

16. In all premises, every private fountain, water-closet, set-basin, sink or other fixtures, whether used or not, will be deemed and held used, and will be charged for as long as such fountain, water-closet, set-basin, sink or other fixtures shall remain connected with the water pipes.

17. No water taker will be allowed to supply water to parties not entitled to its use, except by special permit from the company, and if found doing so without a permit, the supply will be stopped, and the water rent already paid forfeited.

18. There shall be no concealment of the purpose for which water is used.

19. There shall be no unnecessary waste of water. Any person violating this rule shall be liable to have his supply of water shut off, and the amount paid therefor forfeited.

20. The company, their agents and assistants, may enter the premises of any water taker that is supplied with water at all reasonable hours of the day, to wit: Between 8 o'clock A.M. and six o'clock P.M., to examine the pipes and fixtures, the quantity of water used, and the manner of its use.

## METERS.

Meters will not be allowed to be set for private dwellings or tenement houses.

All water that passes through a meter will be charged for, whether used or wasted.

All meters will be set by an employee of the company, and shall not be moved or disturbed without permission from the proper officer.

## STREET SPRINKLERS AND STREET SPRINKLING.

No person or persons shall be permitted to take water from fire-hydrants and street sprinklers to sprinkle any of the streets or portions of the streets, or for any other purpose, without having obtained a permit from the company, or their Superintendent, which permit shall be only good for the time named therein.

In taking water for street sprinkling purposes no leakage or waste of water, either from street sprinkler, hose or sprinkling cart will be tolerated; and all persons using the sprinklers shall leave them properly covered.

Violation of rules relating to sprinkling streets shall be deemed sufficient reason for refusing further permits.

## PAYMENT OF BILLS.

1. All water rates are payable in advance, at the office of the company, during the months of May and November in each year, and prompt payments are required from consumers as a condition of continued supply.

2. Fractional part of a year will be calculated from the date on which the tap is made to the first day of May or November, next ensuing, and will be payable as soon as the water is let on.

3. Section 2 applies only to premises which are about to connect with the water main of the Company, and does not in any way apply to premises which are connected.

4. Bills for measured and estimated water will be payable on demand, according to use.

5. If bills remain unpaid for ten days after due, the water may be shut off without further notice.

6. The owners of dwelling-houses, hotels, manufactories and all other places which are connected with the mains of the Jamaica Township Water Company shall be deemed and held personally responsible for the payment of the water rent for each and every year, commencing from May and November. In default of payment by any tenant or lessee, the same must be paid by the owner thereof, or the water will be cut off from the entire premises, and not turned on again for any occupant until the expense thereof (\$3) and the annual rate be paid in full.

7. All connections made with the water-mains will be for not less than one year.

8. The water rate or tax commences and dates from the day on which the tap is made (excepting only for building purposes), and does not cease as an annual rate or tax from that date, whether the premises are occupied or not, until the water is cut off from the entire premises.

9. Water will be cut off by our own agents or employees only for non-payment of water rate or violation of rules, and any consumer who may desire the water shut off temporarily from their premises shall send for a plumber to do the same, the Water Company only shutting off for the causes above mentioned.

10. When cut off for non-payment or violation of rules the expense thereof will be \$3, which will be added to the amount due, and will not be turned on again until the same shall be paid in full.

11. No water-taker will be allowed to supply water to parties not entitled to its use, and if found doing so the supply will be stopped and the water rent already paid forfeited.

12. The company will make such revisions in their rates and regulations as time and experience shall show to be advantageous for themselves and their consumers.

## NOTICE TO PLUMBERS.

1st. An application in regular form must be made by all plumbers when a tap is wanted, and a return in regular form, giving the full name of the owner and tenant or tenants, made and filled out for the work done.

2d. All applications for taps and the returns for the same must be made out and on file at the office of the Water Company before any tap will be made.

3d. All taps must be paid for when application is made.

4th. When application is made for a tap for building purposes the full name of the owner, the full name of the builder, and the estimated number of bricks and yards of plaster to be used to complete the building or buildings must be given on the returns, and the amount paid for, by either the plumber or builder, before any tap will be made.

5th. All plumbing work required in a building must be completed and service run to stop-box at curb before making application for a tap.

6th. No tapping will be done before 1 o'clock P.M. All applications for taps must be made before 12 M. All applications made after that hour will positively receive no attention until the following afternoon, and no tapping will be done on a Saturday.

7th. All service beyond sidewalk must be connected by stop-cock at curb, and stop waste-cock inside foundation walls.

8th. The tapper will see that the above rules are complied with before tapping the main.

9th. Such stop-cocks to conform in size and weight adopted by the company. Galvanized pipe must be used for services.

10th. All connections to galvanized iron pipe must be made with brass soldering nipples; no cup joint allowed under any circumstances.

11th. Boxes for the use of street washers and stop-cocks of pattern approved by the company may be used. A single stop-cock shall not be used as a street washer, and in all cases a street washer, whether used for building or other purposes, must be controlled by a separate stop-cock. Street washers and stop-cock box must be made to conform to samples to be seen in the office of the company. The appurtenances used in the construction of stop-cock boxes and street washers must be subjected to the inspection of the Superintendent before being set.

12th. Any plumber wishing to do business in connection with the Jamaica Township Water Company shall be required to procure a license from the Superintendent of this company by executing a bond with one or more securities, to be approved by said Superintendent, in the sum of five hundred dollars, conditions that he shall indemnify and save harmless this company from all suits and actions brought against it or any officer of said company, for or on account of any injuries or damages received or sustained by any person, by or from said plumber, his servants or agents, in doing any work, or by or in consequence of any negligence in guarding the same, or any improper materials used therein, or by or on account of any act or omission of said plumber or his agents. Said plumber shall faithfully perform the work in all respects, and shall also replace and restore the street and gutter pavement over every opening to as good a state and condition as he found it, and keep and maintain the same in good order, to the satisfaction of said company, for the space of six months thereafter, and shall also comply in all respects with the rules and regulations established by this company. All licenses shall expire the 31st day of May next ensuing the date thereof.

13th. No license will be granted to persons other than practical plumbers, or those who employ practical plumbers to do their work. Each plumber shall state his actual place of business, together with the name under which the business is done, for record at the time of taking his license, and shall immediately notify the Superintendent of any change in either thereafter.

14th. Plumbers shall make full written returns of the ordinary and special uses which the water is designed to be applied under any permit granted, whether of new work, alterations or additions, with a full description of all apparatus and arrangements for using the water in every case; the return to be made by the plumber who obtained the permit within forty-eight hours after attachment with the several pipes, or completion of alteration or additions. In case of the suspension of any part of the contemplated work for any cause, it shall be the duty of the plumber to make a return of the work as far as completed on blanks furnished by the company. No plumber or other unauthorized person will be allowed to turn on water.

15th. No person, unless specially authorized by the company, will be permitted to tap or make any connection with the main or distributing pipes, under penalty of prosecution.

16th. All work in the street must be done in the best manner to protect the public against injury, and to secure good and satisfactory work. The company may repair work which is not satisfactory after three days' notice and collect the cost from the plumber doing the work.

17th. The company and their agents are to have, at all times, facilities for inspecting the plumbing or other work and fixtures while under the charge of the plumber.

18th. No plumber having a license from this company will be allowed to take out a permit for work to be done by a person not in the employ of such plumber.

19th. Permits will be required to be obtained by licensed plumbers for all work done.

20th. The company shall have the right to impose a fine not exceeding in any one case the sum of ten dollars for violation of rules and regulations.

21st. Violations of rules and regulations, or the condition under which a license is taken, will subject the plumber to forfeiture of his license, or to a fine, or both, as well as to the pains and penalties of his bond.

By order of the Board of Directors,

JOHN C. LOCKWOOD, President.

## WATER RATES AS PER CONTRACT BETWEEN THE VILLAGE OF EDGEWATER AND THE CRYSTAL WATER COMPANY OF EDGEWATER, JUNE 1, 1897.

Office, No. 168 Bay street, Stapleton, N.Y.

## SCHEDULE FOR ANNUAL WATER RATES.

*Dwelling Houses.*

Occupied by one family, for the first faucet	\$7 00
For each additional faucet to be used by the same family	3 00
Where house is occupied by more than one family, and less than four, one faucet only being used by all, for each family	6 00
Where a house is occupied by four or more families, and but one faucet is used by all, for each family	5 00
Where a house is occupied by more than one family the highest rates will be charged for each family having the water carried into their part of the house	8 00
For the first bath tub	5 00
When used by more than one family, for each family	4 00
For each additional bath tub	2 50
The first water-closet with self-regulating faucet	5 00
When used by more than one family, for each family	4 00
Each additional water-closet with self-regulating faucet	2 50
Urinal with self-regulating faucet	2 50
One set set-wash tubs, not exceeding three tubs	3 00
Each additional set-wash tub	1 00
Where two faucets are used, one for hot and one for cold water, both emptying into one vessel, but one charge will be made for both.	
Provided that in no case shall the charge for the use of water by private family, under the foregoing provision of this schedule, exclusive of hose and stable, be more than	50 00

*Boarding Houses.*

For the first faucet	10 00
Each additional faucet	1 00
For water-closet, with self-regulating faucet	8 00
For each additional water-closet with self-regulating faucet	2 50
Urinal with self-regulating faucet	4 00
Bath tub when used by boarders	10 00
For each tub in a public bath house or hotel	12 00
For each water-closet in a public bath house, with self-regulating faucet	8 00



Stores, Offices, Etc.

For each tenement occupied as a store, warehouse or office	\$8 00
Where two or more such tenements are supplied from the same faucet, each	5 00
For markets, saloons, workshops, or for purposes not included in any other classification, and not requiring more than an ordinary supply of water, taken from one faucet, from	8 00 to 25 00
For water-closet or urinal with self-regulating faucet, used by the occupants of one tenement only	5 00
When used by occupants of more than one tenement, for each tenement	4 00
For each additional faucet one-half the above charges shall be added. All urinals and water-closets, wherever situated, shall be equipped with self-regulating faucets.	

Private Stables.

For first horse	5 00
Each additional horse	3 00
Each cow	2 00

Livery, Club and Boarding Stables.

For not exceeding three horses, the same as private stables.	
For each additional horse	2 00

Truck and Cart Stables.

For not exceeding three horses, the same as private stables.	
Rates for stables include water for washing carriages, omnibuses and cars, without hose.	
Where hose is used in any stable, an addition to the above charges will be made of six dollars for the first horse and two dollars for each additional horse. Where any stable contains faucets with hose bib, same rates shall be paid as where hose is used.	

Hose.

For the right to attach hose of not more than three-eighths inch orifice for washing windows, sprinkling streets or watering gardens (and the use of the same shall be limited to one hour per day), not less than	10 00
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Steam-engines.

Stationary steam-engines, working not over twelve hours per day, will be charged by the horse-power, as follows: For each horse-power up to and not exceeding ten, the sum of	7 00
For each horse-power exceeding ten, and not over fifteen, the sum of	6 00
For each horse-power over fifteen, the sum of	5 00

Eating Houses.

Refectories, confectioneries, eating houses, market and fish stalls, provision shops, refreshment and oyster saloons, according to the quantity of water used, will be charged from	50 00
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Building Purposes.

For each cask of lime or cement used	06
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Bakeries.

Bakeries will be charged according to the average daily use of flour, namely, for each barrel per day, the sum per annum	5 00
Provided, that in no case shall any bakery be charged less than	10 00

Hotels and Bar-rooms.

For one faucet behind the bar, per annum	10 00
For one faucet in bar-room, per annum	8 00
Additional faucets, per annum	4 00

Laundries.

Laundries, per tub	5 00
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The company may at any time attach a meter to the service pipe of any consumer, provided that in their judgment an excess of water is consumed or wasted to the detriment of the fire or water service, and in that case the rate for water used by such consumer shall be the meter rates herein prescribed, provided that no consumer shall pay a less sum than ten dollars per annum, and provided further that in case the meter is caused to be set at the instance of the company, the said company shall furnish, place and maintain such meter at its own cost and expense, and without charge to such consumer.

In case any consumer of the Water Company desires to take water by meter, he shall have the privilege of so doing at the meter rates herein prescribed, provided that no such consumer shall pay a less sum than ten dollars per annum, and provided further that the said consumer shall pay a meter rental of three dollars per annum, unless said consumer shall provide and install a standard meter adopted by the company at his own expense, in which event said consumer shall not be compelled to pay a meter rental as herein provided. Said company shall not be required to install a meter unless at least one year's rental shall first be paid.

MAXIMUM METER RATES FOR WATER.

For 8,000 cubic feet per quarter, or less	\$3 38	per 1,000 cubic feet.
For 20,000 cubic feet per quarter, or less	3 00	"
For 33,400 cubic feet per quarter, or less	2 63	"
For 66,800 cubic feet per quarter, or less	2 25	"
For 100,000 cubic feet per quarter, or more	1 88	"

NEW YORK AND WESTCHESTER WATER SUPPLY COMPANY.

The annexed schedule shows the terms at which the New York and Westchester Water Supply Company supplies water to the residents of the territory east of the Bronx river. There are physical difficulties confronting the project of extending the public water supply owned by the city into the territory east of the Bronx river, which consist of the fact that the final plan of streets and avenues has not yet been established, and that the greater part of the streets now on the map have not been permanently regulated and graded.

Very respectfully,

(Signed) WM. DALTON, Commissioner of Water Supply.

Water rates of New York and Westchester Water Company to consumers:

	Per Annum.
Bakery	\$10 to \$50 00
Barber shop, first chair	10 00
Barber shop, each additional chair	3 00
Bath-tubs, private, each tub	5 00
Bath-tubs, public	15 00
Bath-tubs, hotel or boarding-house, each tub	10 00
Brickyard, each gang	20 00
Brickwork, per thousand	10
Billiard saloons, each table	3 00
Boarding-house, each room	1 50
Banks	\$10 and up.
Churches	\$10 00
Concrete, per cubic yard	15
Fountains, six months, 1-16 inch jet, five hours daily	10 00
Hotels, each room	1 50
Halls	Not less than 10 00
Hose, per front foot	10
Hose, corner lots	15
Ice-cream saloons	10 00

Livery stables, first horse	\$5 00
Livery stables, additional horse	2 00
Liquor saloon	\$10 to \$50 00
Laundry	\$10 and up.
Machine shop	Special rates.
Motor power	"
Oyster saloons	\$10 00
Offices	\$10 and up.
Photograph gallery	"
Printing office	Special rates.
Plastering, per square yard	\$0 01
Residence, six or less persons	10 00
Residence, each additional person	1 00
Restaurants	\$10 and up.
Schools in public buildings, average number of pupils, each	\$0 05
Schools, private, 50 pupils or less	5 00
Schools, each additional 50	05
Stables, private, for 2 horses or cows	5 00
Stables, each additional	1 00
Hose for washing carriages	5 00
Sprinkling carts, each, per month	20 00
Shops	\$10 and up.
Stores	\$10 to \$30 00
Steam boilers, per horse-power	3 00
Stonework, per cubic yard	05
Urinals, private residences	3 00
Urinals, hotels and boarding-houses	5 00
Urinals, public offices	5 00
Urinals, stores	3 00
Water-closets, private residences	5 00
Water-closets, each additional seat	3 00
Water-closets, hotels, first seat	10 00
Water-closets, hotels, each additional seat	5 00
Washing bottles	\$5 to \$25 00
Wash-tubs, stationary	1 00
Wash-hand basins, stationary	3 00
No license less than	10 00
Meter rates, per 100 cubic feet	15
Meter rates for larger quantities	By special contract.

CITIZENS' WATER SUPPLY COMPANY.

ELMHURST, BOROUGH OF QUEENS, NEW YORK CITY, 189

The undersigned hereby requests the Citizens' Water Supply Company to supply with water the premises owned by.....at.....on the.....side of.....between.....and.....and to supply the necessary meter and to extend the service-pipe to the curb-line in front of those premises.

In consideration of the above request being granted.....hereby agrees to comply with the following rules and regulations which are hereby admitted to form a part of this agreement.

RULES AND REGULATIONS.

Upon payment of the tapping and meter in advance, the company will insert tap and furnish the necessary connections, when notified that excavation is ready.

The applicant shall connect to the curb stop by means of a lead goose-neck not less than 18 inches long with a wave of at least six inches.

No black iron pipe shall be used between the curb-stop and the meter.

Wherever lead pipe is used on the street side of the meter it shall be not less than the following weights:

1/2-inch, 2 pounds to the foot.

3/4-inch, 3 1/2 pounds to the foot.

1-inch, 2 3/4 pounds to the foot.

1 1/2-inch, 6 pounds to the foot.

A stop of suitable pattern shall be set by the consumer on the service-pipe within the building between the meter and the street.

The company will supply the soldering unions for the meter. In case iron pipe is used in the building, one of those unions shall be connected to a lead goose-neck as for the curb-stop and connected to the service-pipe. This being done and the company notified, the meter will be connected in by the company.

Whenever a meter must be set out doors, it shall be set in a pit not less than two and one-half (2 1/2) feet wide by four (4) feet long, suitably lined to prevent the earth from caving in. Provision for the meter must be made at the end of the pit nearest the house and the consumer's stop set within the pit at the street end. Such pits must be kept dry and clean by the consumer.

Bye passes around meters shall in no case be made.

Provision for setting the meter must be so made that it will be readily accessible for inspection and repairs.

A meter once set shall not be disconnected except by an employee of the company.

The company will keep the meter in repair in so far as ordinary wear and tear is concerned, for the term of five years from the time of its purchase. All damages to the meter through frost, heat, accident or design will be repaired by the company at the cost of the consumer.

In case of dispute as to the accuracy of a meter, it will be tested upon application of the consumer and if not found to register against said consumer the latter will pay a testing fee of \$1.50.

The company reserves the right to take out and test meters, without cost to the consumer, whenever doubt exists on the part of said company as to the accuracy of the meter.

Should the meter fail to register properly the charge for water will be based on the average consumption either prior or subsequent to the failure of the meter.

All water passing through the meter, whether consumed, or wasted through leaks or defective fixtures, will be paid for at the following rates:

For the first 1,000 cubic feet consumed in each six months, 30 cents per 100 cubic feet or 750 gallons.

For the second 1,000 cubic feet consumed in the same period, 20 cents per 100 cubic feet or 750 gallons.

For quantities in excess of 2,000 cubic feet up to 98,000 cubic feet in the same period, 10 cents per 100 cubic feet or 750 gallons.

All water rents are payable at the office of the company within fifteen (15) days from the date of the bill. If not paid within thirty (30) days from the date of the bill, the company may discontinue the service upon twenty-four (24) hours' notice and the service will not be resumed except upon payment of all arrearages plus five dollars cost for turning the water off and on.

Charges for water supplied will be made against the owners of the premises who will be held responsible for all amounts due for water so supplied.

No consumer will be supplied with water for less than six dollars per annum, irrespective of the amount used. Taps will be inserted only with that understanding.

No part of the water supplied to the premises for which the application is made shall be sold or supplied to other premises for which the application is made shall be sold or supplied to other premises or parties except under a written permit from the company.

The authorized agents of the company shall have access to the premises supplied during any reasonable hour of the day for the purpose of examining the meter, fixtures and appliances connected with the water service.

For the violation of any of these rules, the company may discontinue the service upon three (3) days' notice.

Either party of this agreement may terminate it upon thirty (30) days' notice in writing. But no such termination shall take effect in behalf of the consumer unless all charges against said consumer have been paid.

The company reserves the right to discontinue the service temporarily in case of emergency or accident.

Signed the day and year above written.

.....Applicant.

.....Post-office Address.....For the Company.

In the presence of.....

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TITLE OF WATER COMPANY.	AUTHORITY MAKING CONTRACT.	DATE OF CONTRACT.	EXPIRATION OF CONTRACT.	TERRITORY COVERED.	SOURCE OF SUPPLY.	DAILY CAPACITY OF SUPPLY.	RATES TO CONSUMERS.	HYDRANT RATES PER ANNUM.
<i>Borough of Brooklyn.</i>								
Long Island Water Supply Company	Town of New Lots	Sept. 15, 1881	Sept. 15, 1906	Town of New Lots	Wells	Gallons.	Same as Brooklyn	100 hydrants, at \$100..... 50 hydrants, at \$75..... 50 hydrants, at \$35..... 22 hydrants, no charge..... Other hydrants, at \$35..... \$30,000 per annum
Long Island Water Supply Company	"	July 2, 1885	" 15, "	"	"	5,000,000	Same as Brooklyn	
Flatbush Water Works Company	City of Brooklyn	June 2, 1896	Dec. 31, 1900	Twenty-ninth Ward, Brooklyn	"	7,000,000	Same as Brooklyn	
<i>Borough of Queens.</i>								
Queens County Water Company	Village of Far Rockaway	Jan. 28, 1896	Aug. 1, 1901	Village of Far Rockaway	Wells			\$20 per hydrant..
"	Arverne-by-the-Sea	Nov. 27, 1897	July 1, 1902	Arverne-by-the-Sea	"	5,000,000	Rates attached..	20 " ..
"	Village of Rockaway Beach	Dec. 28, "	" 1, "	Village of Rockaway Beach	"			20 " ..
Citizens' Water Supply Company	Town of Newtown	Jan. 6, 1894	Jan. 6, 1904	Town of Newtown	"			100 hydrants, at \$25..... 100 hydrants, at \$20..... Other hydrants, at \$18..... \$65 per 1,000,000 gallons..... \$20 per hydrant..
"	The City of New York	May 19, 1898	May 19, 1901	Long Island City	"	7,000,000	Rates attached..	Extended for 10 years from January 6, 1904.
Jamaica Township Water Company	Village of Jamaica	June 8, 1894	May 1, 1899	Richmond Hill District	"			Superseding contract of March 1, 1890.
Jamaica Township Water Company, successors to Jamaica Water Supply Company	"	Apr. 6, 1897	Apr. 23, 1902	Jamaica Village	"	5,000,000	Same as Brooklyn	Contract to be renewed every 5 years until Village of Jamaica buys plant.
Jamaica Water Supply Company	Town of Jamaica	Dec. 30, "	Dec. 30, "	Richmond Hill District	"			22 hydrants, at \$16..... 100 hydrants, at \$20..... Other hydrants, at \$18..... \$20 per hydrant..
"	"	" 30, "	" 30, "	Queens Water Supply District	"		Rates attached..	20 " ..
"	"	" 30, "	" 30, "	Hollis Water Supply District	"			20 " ..
Woodhaven Water Supply Company	"	" 17, "	" 17, 1917	Woodhaven District	"	2,000,000	Same as Brooklyn	Contract cancels contract of June 15, 1894.
<i>Borough of Richmond.</i>								
Staten Island Water Supply Company	Village of New Brighton	Mar. 10, 1897	Mar. 10, 1902	Village of New Brighton	Wells			\$25 per hydrant
Staten Island Water Supply Company	Town of Northfield	Apr. 2, "	Five years from time of setting hydrant..	Town of Northfield	"	8,000,000	Rates attached..	25 " .. Renewal of contract of May 20, 1890. Privileges granted by contract are perpetual except for hydrants, which shall not be less than 5 years.
Staten Island Water Supply Company	Village of Port Richmond	June 8, "	June 8, 1902	Village of Port Richmond	"			25 " .. Renewal of contract of June 1, 1890.
Crystal Water Company	Village of Edgewater	May 28, "	May 28, "	Village of Edgewater	"			27 50 " .. Village has option of four 5-year renewals.
"	Town of Southfield	Dec. 18, "	Dec. 18, "	Southfield, outside of any incorporated village therein	"			30 " .. Village has option of four 5-year renewals.
"	Town of Northfield	" 22, "	" 22, "	Northfield, outside of any incorporated village therein	"	5,000,000	Rates attached..	25 " .. Village has option of four 5-year renewals.
"	Town of Middletown	" 24, "	" 24, "	Middletown, outside of any incorporated village therein	"			40 " .. Village has option of four 5-year renewals.
West End Water Company	Town of Westfield	Nov. 3, "	Nov. 3, "	Westfield, outside of any incorporated village therein	"			40 " .. Village has option of four 5-year renewals.
<i>Borough of The Bronx.</i>								
New York and Westchester Water Company	Town of Pelham	July 20, 1891	July 20, 1896	Town of Pelham	Wells. Hutchinson Creek			\$40 per hydrant..
New York and Westchester Water Company	Town of Westchester	Sept. 7, 1893	Sept. 7, 1903	Town of Westchester	Bronx River Supply and wells.	1,500,000	Rates attached..	40 " .. Continuation of contract of November 3, 1890.
New York and Westchester Water Company	Village of Wakefield	1895	1905	Village of Wakefield	Bronx River Supply and wells.			40 " .. Continuation and extension of contract of January 5, 1891.
New York and Westchester Water Company	Village of Williamsbridge	June 5, 1895	June 5, 1905	Village of Williamsbridge	Bronx River Supply and wells.			40 " .. Renewal of contract of November 6, 1890.
Upper New York City Water Company	Village of Eastchester	May 17, "	May 17, "	Village of Eastchester	Bronx River and Hutchinson Creek	1,500,000		40 " ..

## REPORT OF THE WATER REGISTER.

## BOROUGH OF MANHATTAN AND THE BRONX.

DEPARTMENT OF WATER SUPPLY,  
OFFICE OF WATER REGISTER, MANHATTAN AND BRONX,  
NEW YORK, January, 1899.

WILLIAM DALTON, Esq., Commissioner of Water Supply:

DEAR SIR—I herewith transmit a schedule of the charitable institutions exempt from taxation, which is copied from a previous annual report, together with those that have been exempted during the year 1898. Also a statement of the amount of revenue derived from Croton water from the year 1842 up to and including December 31, 1897, copied from a former annual report, together with the revenues derived from Croton water for the year 1898, and also a statement of the entire amount of money received in this office during the year 1898, as more particularly set forth in that part of my report.

Charitable Institutions which have Applied for Exemption from Charges for Croton Water under the Provisions of Chapter 696 of the Laws of 1887, as Amended by Chapter 492, Laws of 1890, which the Counsel to the Corporation has Advised are Entitled to Exemption under the Act.

Year.	INSTITUTION.	RATED.	LOCATION.	AMOUNT.
1888	Association for the relief of Aged and Indigent Females	Regular rents	Tenth avenue and One Hundred and Fourth street	\$45 00
1889	Asylum of St. Vincent de Paul	Meter	No. 221 West Thirty-ninth street	309 70
1891	Association for Befriending Children and Young Girls	"	No. 132 Second avenue	12 50
1894	American Female Guardian Society	Regular rents	Nos. 225 and 227 East Eightieth street	51 00
1888	Baptist Home for Aged and Infirm Persons	Meter	Fourth avenue and East Sixty-eighth street	128 30
1888	Colored Orphan Asylum	"	One Hundred and Forty-third street and Northern Boulevard	639 20
1894	Children's Aid Society	"	No. 27 St. Mark's place	14 00
1894	"	"	Nos. 242 and 244 William street	30 00
1894	"	"	No. 287 East Broadway	35 00
1894	"	"	Nos. 127 and 129 Avenue B	17 00
1894	"	"	No. 307 East Twelfth street	17 00
1894	"	"	Nos. 825 and 827 Second avenue	18 00
1894	"	"	Nos. 400 and 402 Seventh avenue	17 00
1892	Die Deutsche Poliklinik	Regular rents	No. 78 Seventh street	16 00
1890	Day Nursery and Babies' Shelter	"	No. 118 West Twenty-first street	20 00
1888	French Benevolent Society	"	No. 131 West Fourteenth street	27 00
1888	German Hospital Dispensary	Meter	Nos. 135 and 137 Second avenue	55 60
1888	German Hospital and Dispensary	"	Park avenue and Seventy-seventh street	724 70
1894	Good Samaritan Dispensary	"	Northwest corner Broome and Essex streets	17 00
1888	Hebrew Sheltering and Guardian Society	Meter	Northeast corner Eighty-seventh street and Avenue A	\$190 90
1888	Hebrew Sheltering and Guardian Society	"	West side Boulevard, One Hundred and Fiftieth and One Hundred and Fifty-first street	8 1 80
1888	Home for Aged and Indigent Women	"	Southeast corner Tenth avenue and One Hundred and Fourth street	183 10
1888	Home for Aged and Infirm Hebrews	"	Nos. 119 and 127 West One Hundred and Twenty-fifth street	282 30
1888	Hebrew Benevolent and Asylum Society	"	West side of Tenth avenue, between One Hundred and Thirty-sixth and One Hundred and Thirty-eighth streets	2,441 30
1889	Home of Good Shepherd and St. Ann's Home	Regular rents	Southeast corner of Eighty-ninth street and Avenue A	38 80
1888	Hahnemann Hospital	Meter	East side of Fourth avenue, between Sixty-seventh and Sixty-eighth streets	447 60
1890	Home for Old Men and Aged Couples	Regular rents	Nos. 487 to 491 Hudson street	32 00
1889	Home for the Aged of the Little Sisters of the Poor	Meter	Nos. 201 to 215 East Seventieth street	175 50
1889	Home for the Aged of the Little Sisters of the Poor	"	North side of West One Hundred and Sixth street, between Ninth and Tenth avenues	175 10
1888	Home of the Good Shepherd	"	Foot of East Ninetieth street	640 00
1888	Home of the Good Shepherd	"	Southeast corner Avenue A and Ninetieth street	327 80
1888	Lake and Watts Orphan Home	"	West One Hundred and Tenth street and Ninth avenue	96 30
1887	Manhattan Dispensary and Hospital	Regular rents	One Hundred and Thirty-first street and Tenth avenue	32 00
1888	Manhattan Eye and Ear Hospital	Meter	No. 103 Park avenue	247 90
1888	Methodist Episcopal Church Home	"	Nos. 1584 to 1602 Tenth avenue	219 00
1889	Montefiore Home for Chronic Invalids	"	Boulevard and West One Hundred and Thirty-fifth street	497 60
1888	Mount Sinai Hospital	"	East side of Lexington avenue, between Sixty-sixth and Sixty-seventh streets	1,031 60
1894	Margaret Strachen Home	"	Nos. 103 and 105 West Twenty-seventh street	23 00
1892	New York Institution for the Blind	"	East side of Ninth avenue, between Thirty-third and Thirty-fourth streets	1,018 00
1888	New York Foundling Asylum	"	Third and Lexington avenues, between Sixty-eighth and Sixty-ninth streets	1,220 80
1888	New York Foundling Asylum	"	Spuyten Duyvil	128 40
1883	New York Asylum for Lying-in Women	Regular rents	No. 139 Second avenue	12 00
1888	New York Cancer Hospital	Meter	Southwest corner One Hundred and Sixth street and Eighth avenue	269 10
1888	New York Hospital and Bloomingdale Asylum	Meter	Nos. 7 to 21 West Fifteenth street, No. 8 West Sixteenth street; also Boulevard, between One Hundred and Seventeenth and One Hundred and Eighteenth streets	1,402 20
1894	New York Hospital and Bloomingdale Asylum	"	Hudson street, between Jay and Staple streets	18 00
1888	New York Homoeopathic Hospital	Regular rents	West side Avenue A, between Sixty-third and Sixty-fourth streets	50 00



Year.	INSTITUTION.	RATED.	LOCATION.	AMOUNT.
1888	New York Ophthalmic Hospital....	Meter.....	No. 201 East Twenty-third street.....	\$122 50
1894	New York Post-Graduate Medical School, etc.....	".....	{ Nos. 544, 346 and 348 Second avenue... Nos. 350 and 352 Second avenue and No. 303 East Twentieth street..... }	153 00 8 00
1888	New York Society for the Relief of Ruptured and Crippled.....	".....	No. 135 East Forty-second street.....	454 50
1889	New York Infirmary for Women and Children.....	Regular rents	Nos. 4 and 5 Livingston place.....	39 00
1889	New York Mothers' Home for the Sisters of Misericorde.....	".....	No. 531 East Eighty-sixth street.....	21 00
1888	Nursery and Child's Hospital.....	Meter.....	No. 571 Lexington avenue.....	577 70
1891	New York Juvenile Asylum.....	".....	{ East side Eleventh avenue, between One Hundred and Seventy-sixth and One Hundred and Seventy- eighth streets..... }	1,662 20
1890	New York Eye and Ear Infirmary....	".....	No. 218 Second avenue.....	70 00
1894	New York Orthopaedic Dispensary and Hospital.....	Regular rents	Nos. 126 and 128 East Fifty-ninth street.....	48 00
1888	Protestant-Episcopal Orphan Home and Asylum.....	Meter.....	{ East Forty-ninth street, between Lex- ington and Fourth avenues..... }	241 90
1888	Presbyterian Hospital.....	".....	Park avenue and East Seventieth street.....	756 70
1890	Peabody Home for Aged and Indigent Women.....	Regular rents	Boston road and Clover street.....	.....
1888	Roman Catholic Orphan Asylum....	".....	{ East side Fifth avenue, between Fifty- first and Fifty-second streets..... South side East Fifty-second street, between Fifth and Madison and Madison and Fourth avenues..... South side West Fifty-ninth street, be- tween Ninth and Tenth avenues..... }	1,709 00 ..... 1,040 90
1888	Roosevelt Hospital.....	Meter.....	Nos. 137 to 143 Second street.....	40 00
1887	Sisters of the Order of St. Dominick.	Regular rents	{ No. 243 East Thirty-fourth street, Fordham Heights..... }	120 00
1888	Skin and Cancer Hospital.....	Meter.....	Fifty-ninth street and Tenth avenue....	144 90
1888	Sloane Maternity Hospital.....	".....	No. 225 West Thirty-first street.....	32 60
1888	St. Elizabeth Hospital.....	".....	No. 609 Fifth street.....	450 30
1888	St. Francis Hospital.....	".....	{ East One Hundred and Forty-third and East One Hundred and Forty- fourth streets, between St. Ann's and Brook avenues..... }	15 00
1888	St. Joseph's Hospital.....	Regular rents	No. 27 West Fifty-fourth street.....	760 10
1888	St. Luke's Hospital.....	Meter.....	{ Nos. 152 to 162 West Eleventh street and Nos. 160 to 174 West Twelfth street..... Also Nos. 17 and 19 Seventh avenue.... }	308 20 110 00
1888	St. Vincent's Hospital.....	".....	No. 26 James and No. 22 Oliver streets..	34 00
1888	St. Philip's Parish House.....	".....	No. 127 West Thirtieth street.....	10 00
1888	St. Joseph's Home for the Aged.....	".....	No. 211 West Fifteenth street.....	200 90
1888	St. Joseph's Orphan Asylum.....	".....	{ North side Eighty-ninth street, be- tween First avenue and Avenue A. Nos. 405 and 407 West Thirty-fourth street..... Manhattan avenue, between One Hun- dred and Fourth and One Hundred and Fifth streets..... }	9 00 138 10 227 50
1888	Society for the Relief of Half Or- phans and Destitute Children.....	Regular rents	No. 143 West Fourteenth street.....	33 00
1890	St. Mary's Lodging House.....	".....	No. 65 East Eighty-first street.....	240 00
1891	St. Joseph's Industrial Home.....	".....	{ South side One Hundred and Twenty- ninth street, between Amsterdam avenue and Broadway..... West side Amsterdam avenue, be- tween Lawrence Street and Broad- way..... North side Lawrence street, between Amsterdam avenue and Broadway Lorillard place, between One Hun- dred and Eighty-eighth and One Hundred and Eighty-ninth streets.. }	34 40 116 00 21 85 24 00
1890	Sheltering Arms.....	".....	Nos. 145 and 147 East Twenty-eighth street.....	300 40
1892	St. Elizabeth Industrial School.....	Regular rents	No. 235 East Fourteenth street.....	20 00
1888	Trinity Corporation.....	Meter.....	No. 50 Varick street.....	86 40
1888	{ The Orphan Asylum of the City of New York..... }	".....	{ West Seventy-third street, between Eleventh avenue and Riverside drive..... Nos. 15 and 17 East One Hundred and Eleventh street..... }	435 60 115 60
1888	The Laura Franklin Free Hospital..	".....	No. 330 First avenue.....	11 00
1890	The Home for the Aged of the Church of the Holy Communion.....	Regular rents	No. 117 Second avenue.....	34 00
1890	The St. Mark's Hospital.....	".....	Nos. 147 and 155 Worth street.....	10 30
1890	The Five Points House of Industry..	Meter.....	{ First avenue, between Sixty-fourth and Sixty-fifth streets..... Nos. 100 and 102 East Twenty-third street..... }	1,309 50 36 00
1890	The Colored Home and Hospital....	".....	No. 657 Lexington avenue.....	29 00
1890	The New York Society for the Pre- vention of Cruelty to Children.....	Regular rents	{ Fourteenth avenue, between Two Hundred and Thirtieth and Two Hundred and Fiftieth streets..... }	189 00
1890	The Babies' Hospital.....	".....	No. 328 Sixth avenue.....	27 00
1891	The House of Mercy.....	Meter.....	No. 414 West Twenty-second street....	28 00
1890	The Guardian of the Sisterhood of the Holy Communion.....	Regular rents	{ West side Lexington avenue, from Sixty-seventh to Sixty-eighth street No. 433 East One Hundred and Eighteenth street..... }	1,018 40 10 00
1892	The Samaritan Home for the Aged..	".....	No. 23 East Eleventh street.....	16 95
1892	The Institution for Improved In- struction of Deaf Mutes.....	Meter.....	{ No. 32 East Thirtieth street, through to No. 29 East Twenty-ninth street No. 144 East One Hundred and Twenty-seventh street..... }	62 00 9 00
1892	The New York Home for Con- valescents.....	Reg. rents	No. 267 Henry street.....	20 00
1892	The Free Home for Destitute Young Girls.....	".....	No. 149 Second avenue.....	38 00
1892	The American Female Guardian Society.....	".....	{ Block bounded by Third avenue, Kingsbridge and Quarry roads..... }	1,129 30
1893	The Harlem Eye, Ear and Throat Infirmary.....	Regular rents	Nos. 417 and 419 West Nineteenth street	22 00
1893	The Louis Downtown Sabbath and Daily School.....	Meter.....	{ No. 7 East Fifteenth street, and Nos. 14 and 16 East Sixteenth street.... }	328 10
1892	The House of the Holy Comforter...	".....	Fiftieth street and Park avenue.....	595 10
1892	The Home for Incurables.....	Regular rents	No. 266 West Fortieth street.....	8 00
1892	The Sisters of the Good Shepherd....	Meter.....	No. 110 Second avenue.....	82 50
1893	The Young Women's Christian As- sociation.....	Regular rents	No. 1147 First avenue.....	20 00
1888	Woman's Hospital.....	".....	East Broadway and Market street.....	687 10
1891	West Side Day Nursery.....	".....	{ No. 206 East Broadway and No. 195 Division street..... }	131 70
1891	Women's Home.....	".....	No. 226 East Twentieth street.....	63 90
1894	Young People's American House....	".....	Nos. 12 to 16 Eldridge street.....	654 66
1895	Baron de Hirsch Fund Institution, by advice of Commissioner of Public Works, May 14, 1895.....	".....	No. 245 East Twenty-third street.....	598 40
1895	Beth Israel Hospital Association, by advice of Commissioner of Public Works, September 10, 1895.....	".....	{ One Hundred and Ninetieth street and Amsterdam avenue..... }	1,136 25
1895	Columbus Hospital, by advice of Commissioner of Public Works, November 19, 1895.....	".....		
1895	Congregation Kol Adahas Jesu- runi, by advice of Commissioner of Public Works, December 19, 1895.....	".....		
1895	Demilt Dispensary, by advice of Commissioner of Public Works, March 18, 1895.....	".....		
1895	Isabella Heimath, by advice of Commissioner of Public Works, January 29, 1895.....	".....		

Year.	INSTITUTION.	RATED.	LOCATION.	AMOUNT.
1895	New York Polyclinic and Hospital, by advice of Commissioner of Public Works, January 25, 1895.....	".....	Nos. 214 to 216 East Thirty-fourth street.	\$350 50
1895	New York Infant Asylum, by ad- vice of Commissioner of Public Works, January 3, 1895.....	".....	Amsterdam avenue and Sixty-first street	12 00
1895	New York Ophthalmic and Aural Institution, by advice of Commis- sioner of Public Works, March 27, 1895.....	".....	Nos. 44 and 46 East Twelfth street.....	11 00
1895	New York Protestant Episcopal City Society, by advice of Com- missioner of Public Works, July 22, 1895.....	".....	Nos. 330 and 332 Broome street.....	11 10
1895	St. Mark's Hospital, by advice of Commissioner of Public Works, May 1, 1895.....	".....	No. 177 Second avenue.....	34 00
1895	Society of the Lying-in Hospital of The City of New York, by advice of the Commissioner of Public Works, March 22, 1895.....	".....	No. 251 East Seventeenth street.....	2 30
1895	Silver Cross Day Nursery, by ad- vice of Commissioner of Public Works, October 18, 1895.....	".....	{ No. 242 East One Hundred and Twentieth street..... }	10 00
1895	Exemption transferred to Decem- ber 29, 1897.....	".....	{ Nos. 249 to 251 East One Hundred and Seventeenth street..... }	18 00
1895	St. Joseph's Day Nursery, by ad- vice of Commissioner of Public Works, December 26, 1895.....	".....	No. 473 West Fifty-seventh street.....	32 70
1895	Hebrew Technical Institute, by advice of Commissioner of Pub- lic Works, March 25, 1895.....	".....	Nos. 34 and 36 Stuyvesant street.....	366 30
1895	Webb's Academy and Home for Shipbuilders, by advice of Com- missioner of Public Works, June 20, 1895.....	".....	{ Southeast corner Sedgwick avenue and Academy street..... }	357 90

Charitable Institutions which have Applied for Exemption from Charges for Croton Water, under the Provisions of the Law above referred to and Laws of 1896, Chapter 852, for the Year 1896, and Exempted.

INSTITUTION.	LOCATION.
Die Deutsche Poliklinik of the State of New York, by advice of Commissioner of Public Works, December 11, 1895.....	No. 80 Seventh street.....
Hebrew Institute, Aguilar Free Library and the Hebrew Free School Association, by advice of Commissioner of Public Works, August 31, 1896.....	Nos. 191-197 East Broadway.....
Missionary Sisters of the Third Order of St. Francis, by advice of Commissioner of Public Works, November 12, 1896.....	No. 12 West One Hundred and Twenty-ninth street.....
New York Magdalen Benevolent Society, by advice of Commissioner of Public Works, June 8, 1896.....	One Hundred and Thirty-ninth street and North river.....
New York Ladies' Home Missionary Society of the Methodist Episcopal Church, known as the Five Points Mission, by advice of Commissioner of Public Works, August 31, 1896.....	Nos. 61 and 63 Park street.....
New York Skin and Cancer Hospital, by advice of Commissioner of Public Works, December 14, 1896.....	Nos. 301 and 303 East Nineteenth street, and Nos. 330 to 332 Second avenue.....
St. Zita's Home for Friendless Women of the City, by advice of Commissioner of Public Works, May 21, 1896.....	Nos. 123 and 125 East Fifty-second street.....
St. Agnes' Nursery, by advice of Commissioner of Public Works, October 27, 1896.....	No. 7 Charles street.....
The Seton Hospital, by advice of Commissioner of Public Works, July 31, 1896.....	West Side Spuyten Duyvil Parkway.....
Wilson Industrial School, by advice of Commissioner of Public Works, September 26, 1896.....	No. 125 St. Mark's place.....
Wetmore Home, by advice of Commissioner of Public Works, November 25, 1896.....	No. 141 West Fourth street.....
West Side German Dispensary, by advice of Commissioner of Public Works, December 11, 1896.....	No. 328 West Forty-second street.....
St. Elizabeth's Industrial School, by advice of Commissioner of Public Works, November 28, 1896.....	No. 237 East Fourteenth street.....

Charitable Institutions which have Applied for Exemption from Charges for Croton Water under the Provisions of the Law above Referred to and Laws of 1896, Chapter 852, for the Year 1897, and Exempted.

INSTITUTION.	RATED.	LOCATION.
Children's Aid Society, by advice of Commissioner of Public Works, December 9, 1897.....	Meter.....	{ 156 Leonard street..... 256 Mott street..... 630 Sixth street..... 219 Sullivan street..... 28 Pike street..... }
	Regular rates	{ 173-175 Rivington street..... 217 East Twenty-first street..... 407 East Seventy-third street..... 338 East Eighty-eighth street..... 533 East Sixteenth street..... 537-539 East Sixteenth street..... 224 West Sixty-third street..... }
Chapin Home for the Aged and Infirm, by advice of Commissioner of Public Works, December 17, 1897.....	Meter.....	151 East Sixty-sixth street.....
Home for Old Men and Aged Couples, by advice of Commissioner of Public Works, July 2, 1897.....	Regular rates	{ Amsterdam avenue and One Hun- dred and Twelfth street..... }
Metropolitan Throat Hospital, by advice of Commissioner of Public Works, May 10, 1897.....	".....	351 West Thirty-fourth street.....
Manhattan Eye and Ear Hospital, by advice of Commissioner of Public Works, July 2, 1897.....	".....	102 East Forty-first street.....
Missionary Society of the Most Holy Redeemer, by advice of Commissioner of Public Works, September 20, 1897.....	".....	{ 4-6 Thompson street..... 328 West Broadway..... }
New York Infirmary for Women and Children, by advice of Commissioner of Public Works, November 9, 1897.....	".....	2 Livingston street.....
People's baths, by advice of Commissioner of Public Works, October 5, 1897.....	".....	9 Centre Market place.....
St. Mary's Lodging House, by advice of Commissioner of Public Works, January 27, 1897.....	".....	144 West Fifteenth street.....
St. Philip's Parish House, by advice of Commissioner of Public Works, February 5, 1897.....	".....	1119 Boston avenue.....
St. Lawrence Free School, by advice of Commissioner of Public Works, January 28, 1897.....	".....	{ South side East Eighty-fourth street, between Park and Madison ave- nues..... }
St. Ann's Free School, by advice of Commissioner of Public Works, October 28, 1897.....	".....	113-117 East Eleventh street.....
St. Joseph's Asylum, by advice of Commissioner of Public Works, December 29, 1897.....	Regular rates	{ North side East Eighty-ninth street, between First avenue and Avenue A..... }



Charitable Institutions which have applied for Exemption from Charges for Croton Water, under the provisions of the Law above referred to and Laws of 1896, chapter 852, for the Year 1898, and Exempted.

INSTITUTION.	RATED.	LOCATION.	
Brightside Bay Nursery and Kindergarten, by advice of Corporation Counsel, June 15, 1898.....	Regular rates	No. 141 Suffolk street.....	\$11 00
Halsey Day Nursery of St. Thomas P. E. Church, by advice of Corporation Counsel, February 26, 1898.....	"	No. 227 East Fifty-ninth street.....	30 00
Lebanon Hospital Association, by advice of Commissioner of Water Supply, December 27, 1898.....	"	{ North side Westchester avenue, between Trinity and Cauldwell avenues..... }	151 20
Manhattan State Hospital, Ward's Island, and Ferry-house, One Hundred and Sixteenth street, East river, by advice of Corporation Counsel, September 19, 1898.....	Meter.....		2,443 66
New York Association for Improving the Condition of the Poor, by advice of Corporation Counsel, January 24, 1898.....	Regular rates	No. 411-413 West Forty-sixth street..	31 00
New York Juvenile Asylum, by advice of Commissioner of Water Supply, December 5, 1898.....	"	{ Eleventh avenue, One Hundred and Seventy-sixth to One Hundred and Seventy-seventh street..... }	
New York Skin and Cancer Hospital, by advice of Commissioner of Water Supply, December 5, 1898.....	Regular rates	No. 305 East Nineteenth street.....	9 20
Riverside Association, by advice of Corporation Counsel, June 9, 1898.....	Meter.....	No. 259 West Sixty-ninth street.....	1,260 50
St. Patrick's Cathedral School.....		Nos. 113 to 119 East Fiftieth street....	
St. Patrick's School.....		{ Nos. 272-274 Mott street; Nos. 32- 38 Prince street..... }	
Cathedral Library, by advice of Corporation Counsel, February 11, 1898.....	Regular rates	No. 123 East Fiftieth street.....	332 00
St. Catherine Literary Society, by advice of Commissioner of Water Supply, November 25, 1898.....	"	South side East Sixty-ninth street....	80 00
St. Joseph's Institute for the Improved Instruction of Deaf Mutes, by advice of Corporation Counsel, October 7, 1898.....	Regular rates	{ No. 772 East One Hundred and Eighty-eighth street..... }	198 60
			\$55,833 32

Applications Received for which Exemption has been Refused during the Year 1895.

INSTITUTION.	LOCATION.
Armitage House, by advice of Commissioner of Public Works, February 4 or 21, 1895.....	No. 343 West Forty-seventh street.
New York Protestant Episcopal City Society, by advice of Commissioner of Public Works, June 29, 1895.....	No. 38 Bleecker street and Nos. 113 and 115 Broome street.
New York Parochial School, by advice of Commissioner of Public Works, January 3, 1895.....	No. 151 Thompson street.
St. John's Guild, by advice of Commissioner of Public Works, November 23, 1895.....	No. 157 West Sixty-first street.

Applications Received for which Exemption has been Refused during the Year 1896.

INSTITUTION.	LOCATION.
Church of St. Ignatius Loyola, by advice of Commissioner of Public Works, July 18, 1896.....	Southwest corner Park avenue and Eighty-fourth street.
Congregation Mount Zion, by advice of Commissioner of Public Works, November 13, 1896.....	No. 65 East One Hundred and Thirteenth street.
Congregation Atonement, by advice of Commissioner of Public Works, November 23, 1896.....	Nos. 347-349 East One Hundred and Twenty-first street.
Dominican Convent of Our Lady of the Rosary, by advice of Commissioner of Public Works, September 24, 1896.....	Nos. 329-335 East Sixty-third street.
Five Point House of Industry, by advice of Commissioner of Public Works, February 21, 1896.....	No. 155 Worth street.
German-American School Association, by advice of Commissioner of Public Works, December 14, 1896.....	Nos. 244-246 East Fifty-second street.
House of the Holy Family, by advice of Commissioner of Public Works, October 27, 1896.....	No. 132 Second avenue.
Jewish Theological Seminary, by advice of Commissioner of Public Works, September 24, 1896.....	No. 736 Lexington avenue.
Manhattan East Side Mission, by advice of Commissioner of Public Works, June 8, 1896.....	Nos. 416-422 East Twenty-sixth street.
New York Catholic Protector, by advice of Commissioner of Public Works, July 18, 1896.....	Nos. 415-417 Broome street.
New York Protestant Episcopal City Mission Society, by advice of Commissioner of Public Works, December 2, 1896.....	Nos. 113 and 115 Thompson street.
New York Protestant Episcopal City Mission Society, by advice of Commissioner of Public Works, December 7, 1896.....	No. 307 Mulberry street.
Presbyterian Church of the Sea and Land, by advice of Commissioner of Public Works, November 9, 1896.....	No. 61 Henry street.
St. Joseph's Institute for the Improved Instruction of Deaf Mutes, by advice of Commissioner of Public Works, July 24, 1896.....	Bayard and Hoffman streets.
School Sisters of St. Agnes, by advice of Commissioner of Public Works, August 27, 1896.....	No. 232 East One Hundred and Thirteenth street.
The Tabernacle Baptist Church, by advice of Commissioner of Public Works, May 22, 1896.....	No. 162 Second avenue.
The Tabernacle Baptist Church, by advice of Commissioner of Public Works, October 27, 1896.....	Nos. 164, 166 and 168 Second avenue.
The New York Christian Home for Intemperate Men, by advice of Commissioner of Public Works, June 8, 1896.....	No. 1175 Madison avenue.
United Hebrew Charities, by advice of Commissioner of Public Works, November 5, 1896.....	No. 58 St. Mark's place.
Vanderbilt Clinic, by advice of Commissioner of Public Works, July 6, 1896.....	Sixtieth street and Amsterdam avenue.

Applications Received for which Exemption has been Refused during the Year 1897.

INSTITUTION.	LOCATION.
Beth Israel Hospital Association, by advice of Commissioner of Public Works, March 31, 1897.....	No. 206 East Broadway and No. 195 Division street.
Congregation Kol Israel Poland, by advice of Commissioner of Public Works, February 26, 1897.....	No. 20 Forsyth street.
Congregation Ahawath Achim Auschie Ungarn, by advice of Commissioner of Public Works, October 30, 1897.....	No. 70 Columbia street.
East Side House, by advice of Commissioner of Public Works, March 10, 1897.....	Nos. 540 and 542 East Seventy-sixth street.
Female Academy of the Sacred Heart, by advice of Commissioner of Public Works, November 3, 1897.....	Nos. 44 to 48 West Eighteenth street.
Fifth Avenue Swimming School, Bath and Gymnasium, by advice of Commissioner of Public Works, February 26, 1897.....	Nos. 2 and 4 East Forty-fifth street.
Loretto Free School, by advice of Commissioner of Public Works, April 9, 1897.....	No. 209 and 301 Elizabeth street.
New York Hospital, by advice of Commissioner of Public Works, October 1, 1897.....	No. 10 West Sixteenth street.
New York Sanitarium Hospital, by advice of Commissioner of Public Works, November 3, 1897.....	No. 247 West Forty-ninth street.
St. Joseph's Institute for the Improved Instruction of Deaf Mutes, by advice of Commissioner of Public Works, October 10, 1897.....	No. 772 East One Hundred and Eighty-eighth street.
St. Mark's Hospital, by advice of Commissioner of Public Works, March 4, 1897.....	No. 220 East Thirteenth street.
St. James Free School Society, by advice of Commissioner of Public Works, September 9, 1897.....	Nos. 25 to 29 James street.
St. Michael's Free School, by advice of Commissioner of Public Works, August 25, 1897.....	Nos. 401 and 403 West Thirty-first street, No. 406 West Thirty-second street, Nos. 373 to 383 Ninth avenue.

INSTITUTION.	LOCATION.
St. Mary Magdalen School, by advice of Commissioner of Public Works, September 23, 1897.....	No. 525 East Seventeenth street.
St. Francis Xavier's College, by advice of Commissioner of Public Works, September 24, 1897.....	Nos. 151 and 153 West Nineteenth street.
St. Jerome's School, by advice of Commissioner of Public Works, November 24, 1897.....	Northeast corner Alexander avenue and One Hundred and Thirty-seventh street.
Talmud Torah School, by advice of Commissioner of Public Works, May 27, 1897.....	Nos. 225 and 227 East Broadway.
Woman's Hospital, by advice of Commissioner of Public Works, May 12, 1897.....	No. 558 Lexington avenue.

Applications Received for which Exemption has been Refused During the Year 1898.

INSTITUTION.	LOCATION.
Dominican Convent of Our Lady of the Rosary, by advice of Corporation Counsel, April 19, 1898.....	329 to 335 East Sixty-third street, 120 East Sixty-fifth street.
General Theological Seminary, by advice of Corporation Counsel, February 25, 1898.....	Ninth avenue, Twentieth and Twenty-first streets.
Henry Keep Flower Memorial Building and Chapel, by advice of Corporation Counsel, February 26, 1898.....	229 and 231 East Fifty-ninth street, 230 East Sixtieth street.
Roman Catholic Parochial Schools—Assumption, Epiphany, Holy Cross, Holy Innocents, Immaculate Conception, Our Lady of Angels, Our Lady of Mount Carmel, St. Anthony, St. Bridget, St. Columbia, St. Francis of Assisi, St. Gabriel's, St. Jerome, St. James, St. Jean Baptiste, St. John Baptist, St. Mary's, St. Monica's, St. Michael's, St. Paul, St. Paul the Apostle, St. Stephen, St. Teresa, Sacred Heart of Jesus, St. Vincent de Paul, St. Vincent Ferrer, St. Francis College, St. Mary Magdalene, Transfiguration, by advice of Corporation Counsel, October 10, 1898.....	
Sisters of Bon Secours, by advice of Corporation Counsel, June 3, 1898.....	1195 Second avenue.
Young Men's Christian Association, by advice of Corporation Counsel, December 15, 1898.....	318 West Fifty-seventh street.

I have the honor to also submit a statement of moneys received for the year ending December 31, 1898, and placed to the credit of their respective accounts with the City Chamberlain, together with the amounts returned to the Bureau of Arrears:

## TOTAL RECEIPTS.

	PRINCIPAL.	PENALTIES.	TOTAL.
<i>Regular Rates.</i>			
Quarter ending March 31.....	\$36,015 34	\$1,743 00	\$37,758 34
" June 30.....	585,420 95	1,382 40	586,803 35
" September 30.....	880,543 45	3,264 75	883,808 20
" December 31.....	233,262 06	8,023 80	241,285 86
	\$1,735,241 80	\$14,413 95	\$1,749,655 75
<i>Street Sprinkling.</i>			
Quarter ending March 31.....			
" June 30.....	\$14,000 00		28,000 00
" September 30.....	14,000 00		
" December 31.....			
<i>Meter Measurement.</i>			
Meters outside of Riverdale and exclusive of Steamboat Meters—			
Quarter ending March 31.....	516,870 05		
" June 30.....	517,740 15		2,070,513 72
" September 30.....	500,368 55		
" December 31.....	535,534 97		
Riverdale Meters—			
Quarter ending March 31.....	978 60		
" June 30.....	1,377 60		4,671 60
" September 30.....	432 80		
" December 31.....	1,882 60		
Steamboat Meters—			
Quarter ending March 31.....	27,805 10		
" June 30.....	13,062 60		109,458 74
" September 30.....	44,238 44		
" December 31.....	24,352 60		
<i>Miscellaneous.</i>			
Building Purposes—			
Quarter ending March 31.....	9,111 80		
" June 30.....	8,777 45		40,575 74
" September 30.....	10,567 00		
" December 31.....	12,119 49		
Permits issued, 1383.			
Extras, Boilers, etc.—			
Quarter ending March 31.....	1,068 80		
" June 30.....	735 00		4,084 52
" September 30.....	1,243 50		
" December 31.....	1,037 22		
Permits issued, 241.			
Tugs—			
Quarter ending March 31.....	3,160 00		
" June 30.....	6,262 50		18,548 00
" September 30.....	3,105 50		
" December 31.....	6,020 00		
Permits issued, 640.			
Taps—			
Quarter ending March 31.....	2,917 00		
" June 30.....	3,262 50		15,547 50
" September 30.....	5,733 00		
" December 31.....	3,635 00		
Permits issued, 3711.			
Amount set down as revenue.....			\$4,041,055 57



	PRINCIPAL.	PENALTIES.	TOTAL.
<i>Repairing Streets.</i>			
January 1 to March 12.....	\$2,982 00	.....	\$ 2,982 00
Permits issued, 310.			
This account transferred to the Department of Highways, March 12, 1898.			
<i>Meter Setting Fund No. 2.</i>			
Quarter ending March 31.....	410 06	.....	816 17
" June 30.....	172 57	.....	
" September 30.....	233 54	.....	
" December 31.....	.....	.....	
Total receipts.....	.....	.....	\$4,044,853 74
<i>Returned to Bureau of Arrears.</i>			
Regular rates.....	.....	\$172,356 26	418,348 60
Meter measurements.....	.....	245,992 34	
Meter Setting Fund No. 2.....	.....	6,584 74	
Total revenue received.....	.....	.....	\$4,041,055 57
Total revenue from Croton Water returned to Bureau of Arrears.....	.....	.....	418,348 60
Grand total.....	.....	.....	\$4,459,404 17

Number of meters placed from January 1, 1898, to December 31, 1898..... 852

Total number of meters in use December 31, 1898..... 35,442

In the boroughs of Manhattan and The Bronx, there are 4,817 houses which are only partly metered, distributed as follows:

Section 1.....	574	Section 7.....	253
" 2.....	997	" 8.....	10
" 3.....	857	" 9.....	102
" 4.....	633	Ward 24.....	2
" 5.....	854		
" 6.....	535	Total.....	4,817

Total receipts for 1898..... \$4,025,508 07  
Total receipts for 1897..... 3,917,597 70

Increase 1898 over 1897..... \$107,910 37

All of which is most respectfully submitted.

Very respectfully,

WM. G. BYRNE, Water Registrar.

#### REVENUE.

The following table exhibits the yearly revenue derived from Croton water from its introduction into the city in the year 1842 to January 1, 1898, copied from former Water Register's report, together with the revenue from January 1, 1898, to January 1, 1899:

		Statement of Arrears of Water Rents Returned to the Comptroller, Clerk of Arrears, accord- ing to Law, and Collected by Clerk of Arrears.	TOTAL REVENUE.
From October 5, 1842, to May 1, 1843.....	\$32,053 74	.....	\$32,053 74
From May 1, 1843, to May 1, 1844.....	84,444 68	.....	84,444 68
" 1, 1844, " 1, 1845.....	117,227 86	.....	117,227 86
" 1, 1845, " 1, 1846.....	163,900 52	.....	163,900 52
" 1, 1846, " 1, 1847.....	193,346 24	.....	193,346 24
" 1, 1847, " 1, 1848.....	219,416 72	.....	219,416 72
" 1, 1848, " 1, 1849.....	250,081 51	.....	250,081 51
" 1, 1849, to December 31, 1849.....	259,532 97	.....	259,532 97
From January 1, 1850, to December 31, 1850.....	458,551 87	.....	458,551 87
" 1, 1851, " 31, 1851.....	458,789 78	\$30,379 20	489,168 98
" 1, 1852, " 31, 1852.....	573,426 43	22,329 55	600,756 03
" 1, 1853, " 31, 1853.....	650,021 20	22,230 66	672,251 86
" 1, 1854, " 31, 1854.....	703,730 83	35,032 45	738,763 28
" 1, 1855, " 31, 1855.....	790,077 70	47,382 34	837,460 04
" 1, 1856, " 31, 1856.....	778,292 77	57,670 46	835,963 23
" 1, 1857, " 31, 1857.....	823,156 35	57,671 60	880,827 95
" 1, 1858, " 31, 1858.....	840,928 08	62,892 92	903,821 00
" 1, 1859, " 31, 1859.....	855,266 47	55,410 05	910,676 52
" 1, 1860, " 31, 1860.....	868,843 58	48,005 51	916,849 09
" 1, 1861, " 31, 1861.....	891,430 81	50,836 98	942,267 79
" 1, 1862, " 31, 1862.....	893,896 82	62,738 23	956,635 05
" 1, 1863, " 31, 1863.....	982,031 26	55,331 11	1,037,362 37
" 1, 1864, " 31, 1864.....	1,006,191 77	50,536 18	1,056,727 95
" 1, 1865, " 31, 1865.....	1,056,772 49	49,478 75	1,106,251 24
" 1, 1866, " 31, 1866.....	1,125,605 96	41,219 45	1,166,825 41
" 1, 1867, " 31, 1867.....	1,261,600 30	45,023 63	1,306,623 93
" 1, 1868, " 31, 1868.....	1,312,093 05	42,436 15	1,354,529 20
" 1, 1869, " 31, 1869.....	1,315,676 13	39,844 05	1,355,520 18
" 1, 1870, to April 9, 1870.....	77,641 95	49,155 60	126,797 55
From April 11, 1870, to April 10, 1871.....	1,296,383 79	51,223 30	1,347,607 09
" 11, 1871, " 10, 1872.....	1,353,591 59	49,428 15	1,403,019 74
" 10, 1872, " 30, 1873.....	1,439,349 39	50,660 25	1,490,009 64
" 30, 1873, to December 31, 1873.....	1,386,132 41	48,039 53	1,434,171 94

		Statement of Arrears of Water Rents Returned to the Comptroller, Clerk of Arrears, accord- ing to Law, and Collected by Clerk of Arrears.	TOTAL REVENUE.
From January 1, 1874, to January 1, 1875.....	\$1,477,277 06	\$57,721 38	\$1,534,998 44
" 1, 1875, " 1, 1876.....	1,444,256 71	66,652 10	1,510,908 81
" 1, 1876, " 1, 1877.....	1,478,381 00	67,677 50	1,545,958 50
" 1, 1877, " 1, 1878.....	1,470,329 60	70,641 21	1,540,970 81
" 1, 1878, " 1, 1879.....	1,606,509 29	60,219 35	1,675,728 64
" 1, 1879, " 1, 1880.....	1,618,722 50	76,043 09	1,694,765 59
" 1, 1880, " 1, 1881.....	1,560,598 57	69,533 70	1,630,232 27
" 1, 1881, " 1, 1882.....	1,510,791 77	93,552 56	1,604,344 33
" 1, 1882, " 1, 1883.....	1,647,183 25	100,743 81	1,747,927 06
" 1, 1883, " 1, 1884.....	1,869,518 96	169,558 61	2,039,077 57
" 1, 1884, " 1, 1885.....	1,985,329 32	164,689 55	2,150,018 87
" 1, 1885, " 1, 1886.....	2,122,411 83	117,041 07	2,239,452 90
" 1, 1886, " 1, 1887.....	2,343,792 61	165,425 18	2,509,217 79
" 1, 1887, " 1, 1888.....	2,514,343 92	154,043 30	2,668,387 22
" 1, 1888, " 1, 1889.....	2,437,962 66	149,100 25	2,587,062 91
" 1, 1889, " 1, 1890.....	2,544,650 07	237,401 27	2,782,051 34
" 1, 1890, " 1, 1891.....	2,675,135 86	304,869 38	2,980,005 24
" 1, 1891, " 1, 1892.....	3,056,168 66	441,679 69	3,497,848 35
" 1, 1892, " 1, 1893.....	3,002,647 35	272,764 01	3,275,411 36
" 1, 1893, " 1, 1894.....	3,590,357 88	338,162 25	3,928,520 13
" 1, 1894, " 1, 1895.....	3,363,796 16	435,882 87	3,799,679 03
" 1, 1895, " 1, 1896.....	3,522,840 24	409,462 62	3,932,302 86
" 1, 1896, " 1, 1897.....	3,723,375 22	499,806 11	4,223,181 33
" 1, 1897, to December 31, 1898.....	3,917,597 70	416,885 66	4,334,483 36
" 1, 1898, to January 1, 1899.....	4,025,508 07	.....	4,025,508 07

## CHANGE OF GRADE DAMAGE COMMISSION.

OFFICE OF THE COMMISSION, ROOM 58, No. 96 BROADWAY,  
NEW YORK, WEDNESDAY, January 18, 1899, 2 o'clock P. M.

The Commission met pursuant to adjournment.

Present—Daniel Lord (Chairman) and James M. Varnum, Commissioners.

Of Counsel—Robert C. Beatty, Esq., representing the Corporation Counsel; Carroll Berry, Esq., representing numerous claimants.

The reading of the minutes of the proceedings of the previous meeting was dispensed with. Mr. Berry asked for an adjournment of his cases for a week, which application was granted. The Commission then adjourned to Monday, January 23, 1899, at 2 o'clock P. M.

LAMONT McLOUGHLIN, Clerk.

OFFICE OF THE COMMISSION, ROOM 58, No. 96 BROADWAY,  
NEW YORK, MONDAY, January 23, 1899, 2 o'clock P. M.

The Commission met pursuant to adjournment.

Present—Daniel Lord (Chairman), James M. Varnum and William E. Stillings, Commissioners.

The reading of the minutes of the proceedings of the previous meeting was dispensed with. The Commissioners then, in executive session, examined, discussed and considered the depositions, testimony, photographs and other evidence in certain claims heretofore submitted.

The Commissioners fixed Friday, January 27, 1899, at 2.30 o'clock P. M., at the office of the Commission, as the time and place for an oral argument by Messrs. McCarty & Baldwin and the Corporation Counsel in seven claims heretofore submitted.

The Commissioners also fixed Monday, January 30, 1899, at 2 o'clock P. M., at the office of the Commission, as the time and place for an oral argument by Thomas S. Bassford, Esq., and the Corporation Counsel in two claims heretofore submitted.

The Commission then adjourned to Wednesday, January 25, 1899, at 2 o'clock P. M.

LAMONT McLOUGHLIN, Clerk.

OFFICE OF THE COMMISSION, ROOM 58, No. 96 BROADWAY,  
NEW YORK, WEDNESDAY, January 25, 1899, 2 o'clock P. M.

The Commission met pursuant to adjournment.

Present—Daniel Lord (Chairman) and William E. Stillings, Commissioners.

Of counsel—Robert C. Beatty, Esq., representing the Corporation Counsel; Carroll Berry, Esq., representing numerous claimants.

The witness Berrian, desiring a further opportunity to examine certain property before cross-examination, Mr. Berry's claims were adjourned for one week.

The Commissioners handed down the following decisions:

Claim No. 701 (Alexander W. Robbins); amount claimed, \$3,000; Twenty-fourth Ward, Block 1120, Ward No. 52, No. 1943 Vanderbilt avenue, West; award, \$750; counsel fee, \$40.

Claim No. 278 (William H. Gaines and another), amount claimed, \$2,500; Twenty-fourth Ward, Block 1120, Ward No. 51, No. 1951 Vanderbilt avenue, West; award, \$550; counsel fee, \$40.

Claim No. 455 (Henry C. Peters and another), amount claimed, \$11,000; motion to increase to \$21,650 granted; Twenty-fourth Ward, Block 1110, Ward No. 35, west side Vanderbilt avenue, south side Samuel street; award, \$14,500; counsel fee, \$100.

Claim No. 456 (Henry C. Peters and another), amount claimed, \$10,000; Twenty-fourth Ward, Block 1085, Ward No. 1, west side Vanderbilt avenue, north side Samuel street; award, \$10,000; counsel fee, \$100.

Claim No. 446 (Patrick J. Keary), amount claimed, \$8,000; Twenty-fourth Ward, Block 1057, Ward No. 1, west side Vanderbilt avenue, north side One Hundred and Eighty-fourth street and east side Webster avenue; award, \$5,750; counsel fee, \$100.

Claim No. 515 (Annie Vanecek), amount claimed, \$2,500; Twenty-third Ward, Block 1560, Ward No. 27, No. 831 Washington avenue; award, \$650; counsel fee, \$40.

Claim No. 383 (Margaret L. McMahon), amount claimed, \$5,000; Twenty-third Ward, Block 1556, Ward Nos. 28, 30 and 31, Nos. 863, 865 and 867 Washington avenue; award, \$1,800; counsel fee, \$60.

Claim No. 356 (Michael Rice), amount claimed, \$4,000; Twenty-third Ward, Block 1300, Ward No. 57, No. 939 Washington avenue; award, \$1,725; counsel fee, \$60.

Claim No. 423 (Albert Stein), amount claimed, \$2,500; Twenty-third Ward, Block 1654, Ward No. 16, south side One Hundred and Fifty-first street, between Vanderbilt and Morris avenues; award, \$900; counsel fee, \$40.

Claim No. 187 (Catharine Loehr), amount claimed, \$5,000; Twenty-third Ward, Block 1654, Ward Nos. 18 and 19, No. 458 East One Hundred and Fifty-first street; award, \$1,400; counsel fee, \$60.

Claim No. 407 (Charles H. Woehling and Helena Woehling), amount claimed, \$3,000; Twenty-third Ward, Block 1552, Ward No. 4, No. 853 Railroad avenue, West; award, \$200; counsel fee, \$25.

Claim No. 384 (Patrick Clark), amount claimed, \$1,500; Twenty-third Ward, block 1560, Ward No. 26, No. 833 Washington avenue; award, \$650; counsel fee, \$40.

The Commission then adjourned to Friday, January 27, 1899, at 2.30 o'clock P. M.

LAMONT McLOUGHLIN, Clerk.



## DEPARTMENT OF HEALTH.

WEEK ENDING SATURDAY, 12 M., MARCH 25, 1899.

BOROUGH.	ESTIMATED POPULATION, JULY 1, 1899.	DEATHS.	BIRTHS.	MARRIAGES.	STILL-BIRTHS.	DEATH-RATE.
Manhattan.....	1,953,569	714	914	389	75	19.07
*The Bronx.....	163,537	70	72	8	2	22.33
Brooklyn.....	1,231,548	438	400	134	31	18.56
Queens.....	134,139	47	43	7	8	18.28
Richmond.....	67,260	20	34	8	1	15.52
City of New York.	3,550,053	1,289	1,463	546	117	18.95

\* Many large institutions raise the death-rate.

## Cases of Infectious and Contagious Diseases Reported.

WEEK ENDING—														
	Dec. 24.	Dec. 31.	Jan. 7.	Jan. 14.	Jan. 21.	Jan. 28.	Feb. 4.	Feb. 11.	Feb. 18.	Feb. 25.	Mar. 4.	Mar. 11.	Mar. 18.	Mar. 25.
Phthisis.....	202	126	180	203	189	200	198	252	255	281	244	178	131	178
Diphtheria.....	154	155	160	192	180	197	182	186	161	184	167	192	171	177
Croup.....	23	16	13	21	12	15	14	16	15	12	9	11	8	4
Measles.....	123	142	127	170	159	174	153	170	210	217	210	280	229	283
Scarlet Fever.....	141	141	152	161	162	202	229	181	155	170	181	182	162	155
Small-pox.....	1	3	1	..	..	..	1	1	..	..	7	..	2	..
Typhoid Fever.....	20	18	15	17	14	10	12	11	15	18	14	17	14	8
Yellow Fever.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.....	664	601	648	764	716	798	789	817	811	882	832	860	717	805

## Deaths According to Cause, Age and Sex.

	Total.	Males.	Females.	Under 1 Year.	1 Year and under 5.	5 and under 15.	15-25.	25-45.	45-65.	65 and over.
Total, all causes.....	1,289	685	604	239	87	94	420	36	81	299
Diphtheria.....	25	14	11	3	11	10	24	1	..	..
Croup.....	4	2	2	1	2	..	3	1	..	..
Malarial Fevers.....	..	..	..	..	..	..	..	..	..	1
Measles.....	11	5	6	1	5	5	11	..	..	..
Scarlet Fever.....	21	12	9	..	3	12	15	4	2	..
Small-pox.....	..	..	..	..	..	..	..	..	..	..
Typhoid Fever.....	3	..	3	..	..	..	1	..	2	..
Typhus Fever.....	..	..	..	..	..	..	..	..	..	..
Whooping-cough.....	9	5	4	5	2	2	9	..	..	..
Diarrhoeal Diseases.....	14	8	6	10	..	3	13	..	..	1
Phthisis.....	178	116	62	3	2	2	7	2	29	102
Other Tuberculous Diseases.....	36	17	19	11	7	9	27	1	3	4
Diseases of the Nervous System.....	115	61	54	27	7	10	44	8	2	15
Heart Diseases.....	97	48	49	..	..	1	4	3	22	29
Bronchitis.....	39	17	22	18	8	6	32	..	..	1
Pneumonia.....	173	89	84	42	23	14	79	2	9	34
Other Diseases of Respiratory Organs.....	32	15	17	3	2	1	6	..	2	8
Diseases of Digestive System.....	85	42	43	22	8	2	32	3	7	20
Diseases of Urinary System.....	13	72	59	..	1	7	8	4	7	30
Congenital Debility.....	80	51	29	75	5	..	80	..	..	..
Old Age.....	31	11	20	..	..	..	..	..	..	31
Suicides.....	11	9	2	..	..	..	..	..	6	3
Other violent deaths.....	42	27	15	2	..	3	5	1	2	21
All other causes.....	152	64	88	16	1	7	24	4	15	52

\* Including premature births atrophy, inanition, marasmus, atelectasis, cyanosis and preterm births.

## Causes of Death not Specified in the Foregoing Table.

Zymotic.	Circulatory.	Genito-urinary.
Erysipelas, 8; Septicæmia, 2; Cerebro-Spinal Fever, 13; Influenza, 14; Puerperal Fever, 5.	Aneurism, 3; Embolism, 5; Sclerotic Gangrene, 1; Epistaxis, 1.	Bright's Disease and Nephritis, 125; Ovarian Diseases, 4; Uræmia, 3; Diseases of Uterus and Vagina, 3; Pelvic Abscess, 1; Disease of Bladder, 3.
Dietetic.	Respiratory.	Locomotor.
Alcoholism, 4; Starvation, 1.	Pulmonary Congestion, 4; Emphysema, 5; Pleurisy, 3; Chronic Bronchitis, 13; Empyema, 4; Pulmonary Hemorrhage, 1; Laryngitis, 2.	Spinal Disease, 1; Arthritis, 1; Hip Joint Disease, 1.
Constitutional.	Digestive.	Integumentary.
Cancer, 50; Tubercular Meningitis, 25; Tuberculosis, 10; Anæmia, 2; Rheumatism, 8; Diabetes, 5; Tabes Mesenterica, 1; Rachitis, 2.	Gastro-enteritis, 17; Gastritis, 8; Enteritis, 3; Cirrhosis, 11; Hepatitis, 2; Peritonitis, 4; Intestinal Obstruction, 2; Appendicitis, 1; Hernia, 5; Jaundice, 4; Intestinal Ulcer, 1; Stricture of Intestines, 1; Gastric Ulcer, 2; Gall-stones, 1; Indigestion, 3; Other Liver Diseases, 3; Stomatitis, 1; Abdominal Tumor, 1; Pharyngeal Abscess, 1; Melæna Neonatorum, 1; Constipation, 1; Dilatation of Stomach, 1; Stricture of Oesophagus, 1.	Abscesses, 3.
Nervous.	Accident.	Other Causes.
Convulsions, 11; Meningitis, 39; Apoplexy, 39; Paralysis, 2; Insanity, 10; Cerebral Congestion, 3; Tetanus, 1; Epilepsy, 2; Myelitis, 3; Cerebral Softening, 1; Cerebral Tumor, 2; Bulbar Paralysis, 2.	Poison, 6; Fractures, 16; Burns and Scalds, 4; Suffocation, 2; Railroad, 4; Drowning, 3; Wounds, 1; Surgical Operations, 1; Electric Current, 1; Criminal Abortion, 2.	Miscarriage, 2; Debility, 2; Foramen Ovale Open, 2; Post-partum Hemorrhage, 2; Child-birth, 1; Otitis, 3; Heart Malformation, 1; Imperforate Rectum, 1; Homicide, 2.

## Deaths According to Cause, Annual Rate per 1,000 and Age, with Meteorology and Number of Deaths in Public Institutions for 13 Weeks.

WEEK ENDING—														
	Dec. 31.	Jan. 7.	Jan. 14.	Jan. 21.	Jan. 28.	Feb. 4.	Feb. 11.	Feb. 18.	Feb. 25.	Mar. 4.	Mar. 11.	Mar. 18.	Mar. 25.	
Total deaths.....	1,560	1,521	1,275	1,257	1,245	1,229	1,259	1,387	1,406	1,291	1,291	1,222	1,289	
Annual death-rate.....	23.67	22.36	18.74	18.47	18.30	18.06	18.50	20.39	20.66	18.97	18.97	17.96	18.95	
Diphtheria.....	25	31	30	26	30	40	34	41	24	27	26	30	25	
Croup.....	11	7	7	9	3	9	5	6	9	5	5	4	4	
Malarial Fevers.....	3	2	1	2	1	1	4	1	3	3	..	..	..	
Measles.....	9	8	7	10	13	12	12	9	3	11	15	14	11	
Scarlet Fever.....	11	4	12	17	11	13	17	18	13	14	14	18	21	
Small-pox.....	..	..	1	..	..	..	..	..	..	..	..	..	..	
Typhoid Fever.....	9	12	3	4	6	5	5	1	7	3	6	4	3	
Typhus Fever.....	..	..	..	..	..	..	..	..	..	..	..	..	..	
Whooping-cough.....	5	8	7	11	8	10	9	5	10	11	12	6	9	
Diarrhoeal Diseases.....	9	7	14	9	7	6	15	8	14	11	11	10	14	
Diarrhoeal Diseases under 5 years.....	7	4	7	6	4	4	15	4	11	9	7	8	13	
Phthisis.....	173	177	147	176	191	189	160	187	194	172	202	169	178	
Bronchitis.....	77	68	55	40	48	42	45	71	65	53	43	44	39	
Pneumonia.....	325	328	256	204	209	190	240	235	257	236	215	216	173	
Other Diseases of Respiratory Organs.....	40	28	24	30	28	21	17	24	29	21	32	11	32	
Violent Deaths.....	54	60	46	46	52	47	48	62	63	69	43	48	53	
Under one year.....	235	257	189	213	230	221	251	249	236	245	242	247	239	
Under five years.....	370	395	332	354	356	374	401	407	385	397	394	422	420	
Fifty to sixty-five.....	856	846	733	681	682	672	649	733	772	697	701	596	675	
Sixty-five years and over.....	334	280	210	222	207	183	209	247	249	197	196	204	194	
In Public and Private Institutions.....	315	321	327	321	293	304	314	327	333	303	317	290	321	
Inquest Cases.....	174	201	172	149	169	156	169	188	188	167	175	144	162	
Mean barometer.....	29.902	30.205	30.230	29.967	29.756	29.943	29.935	29.928	29.769	29.922	29.873	29.960	29.754	
Mean humidity.....	61.	73.	74.	77.	89.	91.	98.	89.	81.	85.	86.	83.	85.	
Inches of rain and snow.....	.36	1.57	.25	.45	1.59	.40	.74	1.84	.01	1.13	.51	1.86	2.35	
Mean temperature (Fahrenheit).....	35.0°	30.4°	28.3°	37.3°	34.4°	25.6°	15.9°	24.9°	39.2°	38.7°	37.6°	39.9°	35.0°	
Maximum temperature (Fahrenheit).....	57.0°	53.0°	46.0°	48.0°	49.0°	40.0°	35.0°	47.0°	53.0°	50.0°	53.0°	63.0°	55.0°	
Minimum temperature (Fahrenheit).....	18.0°	8.0°	7.0°	18.0°	14.0°	12.0°	6.0°	4.0°	22.0°	27.0°	26.0°	25.0°	19.0°	

## Infectious and Contagious Diseases in Hospitals.

	WILLARD PARKER HOSPITAL.			RIVERSIDE HOSPITAL.									
	Scarlet Fever.	Diphtheria.	Total.	Measles with Diphtheria.	Small-pox.	Scarlet Fever with Diphtheria.	Scarlet Fever with Measles.	Diphtheria with Pertussis.	Measles.	Diphtheria, Scarlet Fever and Measles.	Scarlet Fever.	Diphtheria.	Pertussis.
Remaining Mar. 18.....	49	23	72	2	3	9	..	..	19	..	..	29	..
Admitted.....	9	6	15	3	..	4	..	..	11	..	..	18	..
Discharged.....	12	10	22	..	2	..	..	..	13	..	..	6	..
Died.....	..	3	3	1	..	..	..	..	..	..	..	6	..
Remaining Mar. 25.....	46	16	62	4	1	13	..	..	17	..	..	35	..
Total treated.....	58	29	87	5	3	13	..	..	30	..	..	47	..

	KINGSTON AVENUE HOSPITAL.											
	Diphtheria.	Erysipelas.	Measles with Varicella.	Scarlet Fever with Diphtheria.	Scarlet Fever.	Scarlet Fever with Measles.	Measles.	Measles with Diphtheria.	Parotitis.	Tonsillitis.	Under Observation.	Total.
Remaining Mar. 18.....	4	2	3	..	12	1	47	1	..	1	..	71
Admitted.....	4	..	..	..	3	..	18	1	..	..	1	27
Discharged.....	..	2	..	..	..	..	1	..	..	1	..	4
Died.....	1	..	..	..	..	..	3	..	..	..	..	4
Remaining Mar. 25.....	7	..	3	..	15	1	61	2	..	..	1	90
Total treated.....	8	2	3	..	15	1	65	2	..	1	1	98



## Cases of Infectious and Contagious Diseases Reported, and Deaths from the Same, by Wards.

BOROUGH.	WARDS.	SICKNESS.						DEATHS REPORTED.									
		Diphtheria.	Croup.	Measles.	Scarlet Fever.	Typhoid Fever.	Small-pox.	Phthisis.	Diphtheria.	Croup.	Measles.	Scarlet Fever.	Small-pox.	Typhoid Fever.	Typhus Fever.	Phthisis.	All Causes.
The Bronx.	Manhattan.	First .....	2	..	1	..	..	3	..	..	..	..	..	..	..	..	5
	Second .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Third .....	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2
	Fourth .....	..	..	..	..	..	..	8	..	..	..	..	..	..	..	3	10
	Fifth .....	2	..	..	1	..	..	2	..	..	..	..	..	..	..	..	6
	Sixth .....	3	..	..	1	..	..	2	..	..	..	..	..	..	..	4	15
	Seventh .....	9	..	1	2	..	..	9	..	..	..	..	..	..	..	5	29
	Eighth .....	..	..	..	3	1	..	7	..	..	..	..	..	..	..	3	12
	Ninth.....	3	..	1	3	1	..	6	..	..	..	3	..	..	..	3	26
	Tenth.....	8	..	..	2	..	..	8	1	..	..	2	..	..	..	3	20
	Eleventh.....	4	..	1	6	..	..	4	..	..	..	..	..	..	..	4	29
	Twelfth .....	35	1	48	23	2	..	19	3	..	3	3	..	1	..	16	152
	Thirteenth.....	6	..	..	1	..	..	3	1	..	..	..	..	..	..	5	18
	Fourteenth .....	2	..	3	1	..	..	5	2	..	..	..	..	..	..	1	18
	Fifteenth.....	1	..	..	1	..	..	5	2	..	..	..	..	..	..	2	15
	Sixteenth.....	1	..	..	4	..	..	4	1	..	..	..	..	..	..	2	22
	Seventeenth.....	5	..	8	2	..	..	12	..	..	..	..	..	..	..	5	32
	Eighteenth .....	5	..	11	7	..	..	9	..	..	2	..	..	..	..	5	40
	Nineteenth .....	19	..	11	7	1	..	22	3	..	..	1	..	..	..	22	137
	Twentieth .....	5	..	3	8	2	..	9	..	..	..	1	..	..	..	1	29
	Twenty-first.....	5	..	..	6	..	..	12	..	..	..	1	..	..	..	5	26
	Twenty-second .....	13	..	20	11	..	..	12	1	..	1	1	..	..	..	12	71
	Twenty-third .....	7	1	8	4	..	..	2	6	1	..	1	..	1	..	11	52
	Twenty-fourth.....	1	..	..	2	..	..	3	..	..	..	..	..	..	..	3	18
Total .....		138	2	116	95	7	..	168	20	1	6	13	..	2	..	115	784
Brooklyn.	First .....	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	7
	Second .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2
	Third.....	1	..	4	3	..	..	..	..	..	..	..	..	..	..	..	6
	Fourth .....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	5
	Fifth .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
	Sixth .....	1	..	..	1	..	..	..	1	..	..	..	..	..	..	5	25
	Seventh .....	4	..	..	2	..	..	..	..	..	2	..	..	..	..	2	17
	Eighth .....	4	..	1	3	..	..	..	..	..	..	..	..	1	..	3	18
	Ninth.....	2	..	..	3	..	..	..	..	..	..	..	..	..	..	1	14
	Tenth .....	3	..	..	2	..	..	..	..	..	1	..	..	..	..	3	14
	Eleventh .....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	11
	Twelfth .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	15
	Thirteenth.....	..	..	4	3	..	..	..	..	..	1	..	..	..	..	1	10
	Fourteenth .....	1	..	1	1	..	..	..	..	..	..	..	..	..	..	1	9
	Fifteenth .....	1	..	2	1	..	..	..	..	..	..	1	..	..	..	2	9
	Sixteenth .....	..	..	2	1	..	..	..	..	1	..	..	..	..	..	1	10
	Seventeenth.....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	3	21
	Eighteenth.....	2	..	4	1	..	..	..	..	..	..	..	..	..	..	3	19
	Nineteenth.....	..	..	7	3	..	..	..	..	..	..	..	..	..	..	2	12
	Twentieth .....	1	..	2	2	..	..	..	..	..	..	..	..	..	..	1	12
	Twenty-first .....	2	..	10	2	..	..	..	..	..	..	..	..	..	..	1	19
	Twenty-second .....	1	2	2	4	..	..	..	..	1	..	..	..	..	..	4	27
	Twenty-third .....	2	..	38	2	..	..	..	2	..	..	..	..	..	..	3	23
	Twenty-fourth.....	..	..	34	..	..	..	..	..	..	1	..	..	..	..	6	27
	Twenty-fifth .....	1	..	23	2	..	..	..	..	..	..	..	..	..	..	..	15
	Twenty-sixth .....	3	..	1	2	..	..	..	1	..	..	..	..	..	..	..	13
	Twenty-seventh.....	1	..	8	1	..	..	..	..	1	1	1	..	..	..	..	12
	Twenty-eighth.....	1	..	5	5	..	..	..	..	..	..	..	..	..	..	1	15
	Twenty-ninth .....	..	..	1	1	..	..	..	1	..	3	1	..	..	..	8	37
	Thirtieth.....	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	5
	Thirty-first .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
	Thirty-second.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total.....		33	2	154	48	..	..	..	5	3	5	7	..	1	..	55
Queens.	First.....	1	..	..	1	..	..	..	..	..	1	..	..	..	2	18	
	Second.....	..	..	7	..	..	..	..	..	..	..	..	..	..	1	16	
	Third.....	..	..	5	3	..	..	..	..	..	..	..	..	..	1	4	
	Fourth.....	..	..	..	3	..	..	1	..	..	..	..	..	..	1	8	
	Fifth.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	
	Total.....	1	..	12	7	..	..	1	..	..	..	1	..	..	..	5	47
Richmond.	First.....	..	..	1	5	..	..	5	..	..	..	..	..	..	1	6	
	Second .....	1	..	..	..	..	..	2	..	..	..	..	..	..	1	5	
	Third.....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	
	Fourth.....	4	..	..	..	..	..	1	..	..	..	..	..	..	..	2	
	Fifth.....	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	
	Total.....	5	..	1	5	1	..	9	..	..	..	..	..	..	3	20	

## Inspections of Premises.

Total number of inspections made .....	15,726
Classified as follows:	
Inspections of tenement-houses .....	5,767
“ tenement apartments (at night), to prevent overcrowding .....	1,298
“ mercantile establishments .....	277
“ private dwellings .....	115
“ lodging-houses .....	235
“ stables .....	251
“ slaughter-houses .....	3,351
“ other premises .....	4,432

Total number of citizens' complaints attended to .....	880
“ verified .....	544
“ found baseless, or nuisance already abated .....	336
“ original complaints by Inspectors .....	1,003

## Inspection of Foods, Milch Cows, etc.

Total number of inspections of milk .....	602
“ specimens examined .....	532
“ inspections of fruit, vegetables and canned goods .....	6,392
“ pounds of same condemned and destroyed .....	107,405
“ inspections of meat .....	816
“ pounds of same condemned and destroyed .....	17,460
“ inspections of fish .....	5,703
“ pounds of same condemned and destroyed .....	19,840
“ milch cows examined (tuberculin test) .....	40
“ milch cows examined (physical test) .....	30

## Chemical Laboratory.

Milk—Adulterated .....	3
“ Unadulterated .....	1
Croton Water—Complete sanitary analysis .....	1
Water (Kensico supply)—Complete sanitary analysis .....	1
“ (Ridgewood supply)—Complete sanitary analysis .....	1
“ (Borough supplies)—Complete sanitary analysis .....	1
Candy, injurious ingredients, negative .....	1
Earth, composition .....	1
Sausage, injurious ingredients, negative .....	1
Soda water, injurious ingredients, negative .....	1
Sausage, poisonous metals, negative .....	10
Vinegar, injurious ingredients, negative .....	1

## Experimental Analyses.

Estimation of suspended matter in Croton matter .....	25
Microscopical .....	25

## Analysis of Croton Water, March 24, 1899.

	RESULTS, EXPRESSED IN GRAINS PER U. S. GALLON OF 231 CUBIC INCHES.	RESULTS, EXPRESSED IN PARTS BY WEIGHT IN ONE HUNDRED THOUSAND.
Appearance .....	Very slightly turbid.	Very slightly turbid.
Color .....	Light yellowish brown.	Light yellowish brown.
Odor (Heated to 100° Fahr.) .....	Marshy.	Marshy.
Chlorine in Chlorides .....	0.127	0.218
Equivalent to Sodium Chloride .....	0.209	0.358
Phosphates (P <sub>2</sub> O <sub>5</sub> ) .....	None.	None.
Nitrogen in Nitrites .....	None.	None.
Nitrogen in Nitrates .....	0.0230	0.0395
Free Ammonia .....	0.0012	0.0020
Albuminoid Ammonia .....	0.0078	0.0135
Total Nitrogen .....	0.0305	0.0523
Hardness equivalent to Carbonate of Lime { Before boiling .....	1.95	3.35
After boiling .....	1.95	3.35
Organic and volatile (loss on ignition) .....	1.108	1.90
Mineral matter (non-volatile) .....	2.274	3.90
Total solids (by evaporation) .....	3.382	5.80

## Temperature at hydrant, 36° Fahr.

## Analysis of Ridgewood Water, March 23, 1899.

	RESULTS, EXPRESSED IN GRAINS PER U. S. GALLON OF 231 CUBIC INCHES.	RESULTS, EXPRESSED IN PARTS BY WEIGHT IN ONE HUNDRED THOUSAND.
Appearance .....	Very slightly turbid.	Very slightly turbid.
Color .....	Light yellowish brown.	Light yellowish brown.
Odor (Heated to 100° Fahr.) .....	Marshy.	Marshy.
Chlorine in Chlorides .....	1.135	1.980
Equivalent to Sodium Chloride .....	1.907	3.270
Phosphates (P <sub>2</sub> O <sub>5</sub> ) .....	None.	None.
Nitrogen in Nitrites .....	None.	None.
Nitrogen in Nitrates .....	0.0670	0.1149
Free Ammonia .....	0.0003	0.0005
Albuminoid Ammonia .....	0.0029	0.0050
Total Nitrogen .....	0.0696	0.1194
Hardness equivalent to Carbonate of Lime { Before boiling .....	2.13	3.66
After boiling .....	2.13	3.66
Organic and volatile (loss on ignition) .....	1.438	2.50
Mineral matter (non-volatile) .....	3.907	6.70
Total solids (by evaporation) .....	5.365	9.20

## Temperature at hydrant, 49° Fahr.



## Medical Inspection of Schools.

	Number of School Days.	Average Daily Attendance.	Number of Schools Visited.	Number of Visits to Schools.	Number Examined.	Number Excluded.	CAUSE OF EXCLUSION.											
							Measles.	Diphtheria.	Scarlet Fever.	Croup.	Whooping-cough.	Mumps.	Contagious Eye Diseases.	PARASITIC DISEASES OF HEAD.	Body.	Chicken-pox.	Skin Diseases.	Miscellaneous.
Grammar Schools—																		
Grammar Department.	5	148,360	187	839	323	24	2	1	..	..	1	3	2	11	..	..	4	..
Primary Department..	5	93,909	*127	*599	1,858	136	3	1	..	..	6	10	19	84	..	6	5	2
Primary.....	5	58,626	87	419	512	35	1	..	..	..	1	2	8	13	..	..	9	1
Parochial.....	5	49,354	96	471	116	8	..	..	..	..	..	..	4	3	..	1	..	..
Industrial Schools—																		
American Female Guardian Society...	5	2,877	11	55	40	4	..	..	..	..	1	1	1	1	..	..	..	..
Children's Aid Society.	5	6,587	20	94	94	2	..	..	..	..	..	1	..	1	..	..	..	..
Training Schools.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kindergarten Schools...	5	1,031	16	73	57	3	..	..	..	..	..	1	1	1	..	..	..	..
Intermediate Schools....	5	29,835	34	170	60	7	..	..	..	..	..	1	2	..	..	3	1	..
Total .....	5	390,579	451	2,121	3,060	219	6	2	..	..	9	17	36	116	1	7	21	4

\* Included in the Grammar Schools, Grammar Department.

## Inspections under Law Regulating Employment of Women and Children in Mercantile and Manufacturing Establishments.

## CHILDREN'S EMPLOYMENT CERTIFICATES GRANTED.

	COLOR.		BIRTHPLACE.																				
	White.	Black.	FOREIGN.										AMERICAN.										
			Russia.	Austria.	Germany.	England.	Ireland.	Italy.	Hungary.	Bohemia.	Poland.	France.	Roumania.	Other.	N. Y. City.	N. Y. State.	New Jersey.	Pennsylvania.	Massachusetts.	Connecticut.	Michigan.	Illinois.	Others.
Mercantile, Male . . . . .	90	..	7	..	2	3	..	2	1	..	..	..	3	64	2	4	1	..	..	..	..	1	90
"    Female . . . . .	56	..	3	..	2	1	1	1	..	..	..	..	6	40	1	1	..	..	..	..	..	..	56
Manufacturing, Male . . . . .	67	..	1	1	..	..	..	3	1	1	..	..	9	44	6	..	1	..	..	..	..	..	67
"    Female . . . . .	83	..	2	1	..	1	..	2	..	..	..	..	11	59	3	3	1	..	..	..	..	..	83
Total . . . . .	296	..	13	2	4	5	1	8	2	1	..	..	29	207	12	8	3	..	..	..	..	1	296

## CHILDREN'S EMPLOYMENT CERTIFICATES REFUSED.

	COLOR.		BIRTHPLACE.										CAUSE.									
			FOREIGN.							AMERICAN.												
	White.	Black.	Russia.	Austria.	Germany.	Italy.	England.	Ireland.	Hungary.	Bohemia.	Others.	N. Y. City.	N. Y. State.	New Jersey.	Massachusetts.	Total.	Under Age.	Over Age.	Insufficient Tuition.	Insufficient Education.	Physical Incapacity.	Total.
Mercantile, Male.....	5	..	..	..	..	..	..	..	..	3	2	..	..	..	..	5	2	3	..	..	..	5
"    Female....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..
Manufacturing, Male..	4	..	1	..	1	..	..	..	..	..	2	..	..	..	..	4	2	..	2	..	..	4
"    Female	6	..	1	..	1	..	..	..	..	2	2	..	..	..	..	6	3	..	2	1	..	6
Total. ....	16	..	2	..	2	..	..	..	..	5	7	..	..	..	..	16	7	3	5	1	..	16

## Pathology and Bacteriology.

Total number of premises visited by Inspectors.....	27
" autopsies (human 0, animal 11).....	11
" new cases treated with diphtheria anti-toxin by Medical Inspectors.....	18
" curative injections of diphtheria anti-toxin given by Medical Inspectors.....	20
" persons immunized with diphtheria anti-toxin by Medical Inspectors.....	21
" intubations performed.....	6
" inoculations of animals with toxins.....	1
" animals bled for anti-toxic serum.....	1
" samples of toxins tested.....	1
" samples of anti-toxic serums tested.....	1
" bacteriological examinations of suspected diphtheria, viz.: True 106, not diphtheria 78, indecisive 63, viz.: Culture made too late in disease 26, insufficient growth on culture medium 2, culture medium contaminated 4, culture medium dried up 0, suspicious bacilli only found 30, no diphtheria bacilli found 1, laryngeal cases 0, antiseptic applied within two hours 0.....	247
" bacteriological examinations of convalescent cases of diphtheria, preceding disinfection.....	188
" bacteriological examinations of healthy throats in infected families.....	1
" cultures in cases of suspected diphtheria taken by Medical School Inspectors in schools, viz.: Diphtheria bacilli found 1, diphtheria bacilli not found 0, indecisive 0.....	1
" examinations of blood from cases of suspected typhoid fever (positive reaction 2, negative reaction 17), Widal test.....	19
" samples of feces or urine examined for typhoid bacilli (typhoid bacilli found 0, not found 2), Hiss method.....	2
" bacteriological examinations of suspected tuberculosis (tubercle bacilli found 49, not found 45).....	94
" microscopical preparations made and examined (tuberculosis).....	147
" cases of pulmonary tuberculosis examined and removed to hospitals.....	2
" cases of pulmonary tuberculosis examined, removal not recommended.....	3
" animals vaccinated.....	4
" animals collected from.....	6
" grammes of vaccine virus collected.....	38.57
" cub. cent. of liquid vaccine virus prepared.....	97
" clinical tests of vaccine virus made.....	41
" samples of vaccine virus tested bacteriologically.....	2
" capillary tubes prepared.....	1,760
" small vials prepared.....	56
" large vials prepared.....	55
Amount of diphtheria anti-toxic serum produced in c.c.....	232
Number of visits to Department Stations (collection of cultures, etc.).....	232

## Infectious and Contagious Diseases.

Total number of cases visited by Inspectors.....	2,211
" premises visited by Disinfectors.....	334
" rooms disinfected.....	676
" pieces of infected goods destroyed.....	79
" pieces of infected goods disinfected and returned.....	847
" persons removed to hospital.....	70
" primary vaccinations.....	452
" revaccinations.....	1,208
" certificates of vaccination issued.....	640
" cattle examined by Veterinarian.....	384
" glandered horses destroyed.....	1
" institutions inspected.....	78

Total number of dead animals removed from streets..... 1,099

## Executive Action.

Total number of orders issued for abatement of nuisances.....	1,158
" Attorney's notices issued for non-compliance with orders.....	477
" civil actions begun.....	32
" criminal actions begun.....	..
" arrests made.....	..
" judgments obtained in civil courts.....	..
" " criminal courts.....	4
" permits issued.....	178
" persons removed from overcrowded apartments.....	4

By order of the Board.

EMMONS CLARK, Secretary.

## POLICE DEPARTMENT.

At a meeting of the Police Board of the Police Department of The City of New York, held on the 23d day of March, 1899.

Present—Commissioners York (President), Hess and Abell.

The minutes of March 21 were read and approved.

## The following Mask Ball Permits were Granted:

Walter T. Smith, at Walsh's Academy, March 23, fee \$5.

Edward Felix, at Sangerbund Hall, March 27, fee \$10.

## THE FOLLOWING REPORTS, ETC., WERE ORDERED ON FILE:

Chief of Police—Leave of absence granted under the rule.

Comptroller—Approving sureties of James C. Wynn, on contract for coal.

Comptroller—Relative to contracts and appropriations therefor.

Contagious disease in families of Patrolman Andrew Currie, Ninth Precinct; Patrolman John Schermerhorn, Thirty-first Precinct; Patrolman Edward D. Fuller, Fifty-sixth Precinct.

Deaths of Doorman Frank McNulty, Eighteenth Precinct, at 4.30 P. M., February 17, 1899; Patrolman Patrick Gray, Twentieth Precinct, at 7.15 A. M., March 23, 1899; Patrolman Morris White, House of Detention, at 4.30 A. M., March 23, 1899.

Thirteenth Precinct—On complaint of William B. Clark, of gambling at No. 420 Grand street, Sixty-fourth Precinct—On complaint of boxing matches and prize fights, at National Club, Brooklyn.

Seventy-fourth Precinct—On application of J. H. W. Killien, for payment of bill for use of store in Astoria. Denied for reasons stated.

## Send Copy:

Forty-ninth Precinct—On complaint of Augustus Kalt &amp; Co., of breaking of windows and theft.

## The following Communications were Referred to the Treasurer:

Bonds of Chief William S. Devery and Captain James Kenney. Approved.

Daniel D. Kash, Special Patrolman—Relative to loss of shield. To furnish new one on payment of \$3.

The following applications were referred to the Committee on Pensions:

Bertha Baker and Julia A. Armstrong, for increase of pension.

Application of Patrolman Thomas J. Sullivan, Thirty-fifth Precinct, for retirement, was referred to the Board of Surgeons for report.

## The following Communications were Referred to the Chief Clerk to Answer:

Civil Service Board—Asking record of Harry Lee, ex-Patrolman.

Charles W. Brown—Asking information as to appointment of Patrolmen.

Charles Dushkur—Asking copy of Rules.

Mary Kennedy—Asking appointment as Bed-maker.

Charles Mildenberger—Asking permit to carry concealed weapon.

L. Redelsheimer—Recommending Dennis McLaughlin for Special Patrolman.

## THE FOLLOWING COMMUNICATIONS WERE REFERRED TO THE CHIEF OF POLICE:

Anonymous—Relative to citizens viewing Windsor Hotel ruins.

## For Report.

M. Fox &amp; Co—Relative to robbery at Factory No. 38 East Ninth street, etc.

Sidney H. Saloman—Commending Patrolman Samuel T. Harrigan for bravery at Windsor Hotel fire.

Philip Dietrich—Asking appointment of Fred Neubauer, as Special Patrolman.

B. Goldstein—Asking appointment of William Wound, as Special Patrolman.

Fred Goetz—Asking appointment of Ed. J. Schroeder, as Special Patrolman.

Resolved, That the resolution of the Police Board adopted March 21, assigning the room heretofore occupied as the Clothing and Equipment Room to the Stationery Bureau, be and is hereby rescinded.

## The Chief of Police Reported the following Transfers, etc.:

Captain James A. Corwin, from Fifty-ninth Precinct to Sixty-third Precinct.

Patrolman Artemus Bossard, from Fifteenth Precinct to Nineteenth Precinct.

" Walter R. Boston, from Nineteenth Precinct to Fifteenth Precinct.

" Rosell Young, from Sixth Precinct to Thirty-third Precinct.

" Frederick L. Cummings, from Thirty-third Precinct to Sixth Precinct.

Precinct Detective Byron C. Lewis, Sixteenth Precinct, remanded to patrol and transferred to Fifteenth Precinct.

Patrolman George Lamb, from Fifteenth Precinct to Sixteenth Precinct.

Detective Sergeant Henry Miller, from Sixty-fourth Precinct to Sixty-seventh Precinct.

Sergeant Francis Stacom, in command of Sixty-third Precinct, to Fifty-ninth Precinct.

" James P. Tucker, from Eighth Precinct to Seventy-sixth Precinct, and assigned to duty as Sergeant in command.

" Bernard Gallagher, from Seventy-sixth Precinct to Sixty-eighth Precinct, and assigned to duty as Sergeant in command.

" John W. Wormell, from Sixty-eighth Precinct to Sixty-second Precinct.

" Bernard J. Hayes, Fifty-ninth Precinct, assigned to duty as Sergeant in command.

Patrolman Charles L. Whiting, Sixty-fourth Precinct, detailed to duty as Precinct Detective. Deputy Chief Patrick H. McLaughlin, Borough of Brooklyn, assigned to duty as Deputy Chief in charge of Borough of Queens.

Sergeant John Russell, from Twenty-sixth Precinct to Twenty-first Precinct.

" Edward G. O'Brien, from Twenty-first Precinct to Twenty-sixth Precinct.

Patrolman Frank Newman, from Twentieth Precinct to Twenty-eighth Precinct.

" George Issing, from Twenty-eighth Precinct to Twentieth Precinct.

" Robert Jackson, from Twenty-fourth Precinct to Ninth Precinct.

" Joseph Colligan, from Ninth Precinct to Twenty-fourth Precinct.

" Martin F. Conway, from Nineteenth Precinct to Seventeenth Precinct.

" Thomas Kenny, from Seventeenth Precinct to Nineteenth Precinct.

" Frederick Faulhaber, from Nineteenth Precinct to Thirty-fifth Precinct.

" William F. Aiken, from Thirty-fifth Precinct to Nineteenth Precinct.

" Miles Cunningham, from Eleventh Precinct to Twelfth Precinct.

" Edward Reilly, from Twelfth Precinct to Eleventh Precinct.

" Joseph Stillwagon, from Seventy-fifth Precinct to Seventy-sixth Precinct.

" David V. W. Wright, from Seventy-sixth Precinct to Seventy-fifth Precinct.

" Frank Brewer, from Seventy-fifth Precinct to Seventy-sixth Precinct.

" Charles H. Bradley, from Fifty-fifth Precinct to Fifty-first Precinct.



Patrolman Michael Feeney, from Fifty-first Precinct to Fifty-fifth Precinct.  
 " George Garcia, from Twenty-sixth Precinct to Thirty-sixth Precinct.  
 " George S. Booth, from Thirty-sixth Precinct to Twenty-sixth Precinct.  
 " Edward Burns, from Eighth Precinct to Thirty-third Precinct.  
 " James Gambell, from Thirty-third Precinct to Eighth Precinct.  
 " William T. Frost, from Nineteenth Precinct to Twenty-sixth Precinct.  
 " John F. Baxter, from Twenty-sixth Precinct to Nineteenth Precinct.  
 " Thomas Baker, from Forty-ninth Precinct to Sixty-fourth Precinct.  
 " James R. Johnson, from Sixty-fourth Precinct to Forty-ninth Precinct.  
 " James Young, from Twentieth Precinct to Thirty-second Precinct.  
 " Theodore Thompson, from Thirty-second Precinct to Twentieth Precinct.  
 " Thomas F. Kelly, from Thirty-sixth Precinct to Thirty-third Precinct.  
 " Benjamin Krog, from Thirty-seventh Precinct to Thirty-sixth Precinct.  
 " Charles J. Saich, from Second Precinct to Thirty-first Precinct.  
 " Earle C. Gordon, from Thirty-first Precinct to Second Precinct.  
 " Marcus D. Hutchinson, from Twelfth Precinct to Nineteenth Precinct.  
 " George H. Zimmerman, from Nineteenth Precinct to Twelfth Precinct.  
 " William F. Miller, from Thirteenth Precinct to Thirty-first Precinct.  
 " Thomas Finnigan, from Thirty-first Precinct to Thirteenth Precinct.  
 " John Flaherty, from Fifth Precinct to Twenty-seventh Precinct.  
 " Bernard Bray, from Twenty-seventh Precinct to Fifth Precinct.  
 " Charles E. Moore, from Nineteenth Precinct to Twenty-seventh Precinct.  
 " James J. Coogan, from Twenty-seventh Precinct to Nineteenth Precinct.  
 Doorman Jerome H. Johnson, from Twenty-sixth Precinct to Twenty-first Precinct.  
 " Peter Eichle, from Twenty-first Precinct to Twenty-sixth Precinct.  
 " Francis M. Cunningham, from Seventh Precinct to Eighteenth Precinct.  
 Patrolman Owen J. Cavanagh, reinstated by Courts and assigned to Seventy-fifth Precinct.  
 " James E. McCabe, Seventh Precinct, assigned to duty as Acting Doorman.  
 Sergeant Nathaniel Shire, from Seventieth Precinct to Twenty-first Precinct.  
 " John H. Russell, from Twenty-first Precinct to Twenty-sixth Precinct.  
 " Edward G. O'Brien, from Twenty-sixth Precinct to Seventieth Precinct.  
 Patrolman Willard, from Central Office to Ninth Precinct.  
 " James P. Fannon, from Ninth Precinct to Sixth Precinct.  
 " John F. Knaeagh, from Twenty-second Precinct to Twenty-first Precinct.  
 " George Subbe, from Twenty-first Precinct to Twenty-second Precinct.  
 " John E. Butler, from Seventh Precinct to Thirty-second Precinct.  
 " Elber L. Kimme, from Thirty-second Precinct to Seventh Precinct.  
 Sundry temporary details, etc.

The following law cases were referred to the Corporation Counsel:  
 Supreme Court, Queens County—The People ex rel. John Kelly, for writ of mandamus.  
 Third District Court—Charles Luhrs, against the Property Clerk, to recover four slot machines.

Resolved, That full pay while sick be granted to the following officers:  
 Captain Thomas Collins, Fifty-second Precinct, from November 19, 1898, to December 12, 1898.

Patrolman John W. O'Keefe, Fifty-sixth Precinct, from January 29, 1899, to February 25, 1899.  
 " Robert H. Hart, Thirty-first Precinct, from December 21, 1898, to February 14, 1899.  
 " Charles Spitz, Sixth Precinct, from February 5, 1899, to February 19, 1899.  
 " Richard C. Schum, Seventeenth Precinct, from November 8, 1898, to January 1, 1899.  
 " Philip K. Sweet, Eighteenth Precinct, from September 15, 1898, to October 31, 1898.  
 " Milburn Bruce, Seventy-seventh Precinct, from October 26, 1898, to December 4, 1898.  
 " Hugh McDonough, Forty-third Precinct, from December 13, 1898, to December 29, 1898.  
 " Patrick Hurley, Thirtieth Precinct, from November 5, 1898, to December 28, 1898.  
 " Thomas Walsh, Tenth Precinct, from May 9, 1898, to January 18, 1899.  
 " Martin D. Corbett, Twenty-seventh Precinct, from October 10, 1898, to October 20, 1898.

Resolved, That the pay-rolls of the Police Department and force of the Central Department and Bureau of Elections for the month of March, 1899, when properly audited and approved, be and are hereby ordered to be paid by the Treasurer, as per schedule.

Resolved, That the resolution of the Police Board, adopted February 24, 1899, requesting the Commissioners of the Sinking Fund to execute renewal of certain leases, be amended so that the renewal of the lease for Sixty-seventh Precinct, from Frederick E. Schultze, of stable rear of Nos. 37-39 Vernon avenue, two hundred and forty dollars per annum and water tax, shall be from March 1, 1899, instead of from May 1, 1899.

Resolved, That the following Patrolmen be and are hereby advanced in grades, their efficiency and conduct having been satisfactory:

#### To First Grade, January 1, 1899.

Patrolman Thomas Guider, Health Squad.  
 " Thomas F. Murray, Third Precinct.  
 " John F. McKenna, Twenty-seventh Precinct.  
 " Augustus H. Murphy, Thirty-third Precinct.  
 " James H. Boyle, Fifty-fifth Precinct.  
 " Nicholas J. Dunne, Fifty-fifth Precinct.  
 " James Buckley, Fifty-ninth Precinct.  
 " Obed Trill, Seventy-eighth Precinct.

#### To First Grade.

Patrolman John B. Sampson, Sixteenth Precinct, January 1, 1898.  
 " Frank T. Murphy, Forty-first Precinct, March 11, 1899.  
 " Frederick Muhs, Forty-ninth Precinct, March 20, 1899.  
 " Henry J. Donohue, Fifty-ninth Precinct, February 19, 1899.  
 " Peter E. Donnelly, Fifty-ninth Precinct, February 19, 1899.  
 " Denis F. Lyons, Seventy-fifth Precinct, March 20, 1899.

#### To Second Grade (\$1,350).

Patrolman John F. McKenna, Twenty-seventh Precinct, July 1, 1898.  
 " Augustus H. Murphy, Thirty-third Precinct, July 1, 1898.  
 " James J. Gannon, Forty-eighth Precinct, January 19, 1899.  
 " Patrick J. Hart, Forty-ninth Precinct, March 7, 1899.  
 " William A. Pohlers, Fifty-eighth Precinct, January 29, 1899.  
 " John J. Drum, Seventy-second Precinct, February 9, 1899.  
 " Peter Flanagan, Seventy-fourth Precinct, February 20, 1899.

#### To Second Grade (\$1,300), from March 19, 1899.

Patrolman James H. Murphy, Central Office.  
 " George E. Jones, Second Precinct.  
 " Thomas W. Pierce, Eighth Precinct.  
 " Thomas Brennan, Ninth Precinct.  
 " Andrew Sesselmann, Tenth Precinct.  
 " Thomas F. Ryan, Twelfth Precinct.  
 " Thomas F. Keenan, Fifteenth Precinct.  
 " Patrick J. Brennan, Sixteenth Precinct.  
 " Frank L. Baxter, Nineteenth Precinct.  
 " Maurice J. Convey, Twenty-second Precinct.  
 " William H. O'Shaughnessy, Twenty-second Precinct.  
 " James R. Burns, Twenty-eighth Precinct.  
 " John Scully, Thirty-second Precinct.  
 " Charles Sheridan, Fifty-fifth Precinct.

#### To Second Grade (\$1,300).

Patrolman Theodore A. H. Dulfer, Eleventh Precinct, March 1, 1899.  
 " John F. Hussey, Seventeenth Precinct, February 13, 1899.  
 " George W. Kokell, Eighteenth Precinct, January 30, 1899.  
 " Herman Kahn, Eighteenth Precinct, February 16, 1899.  
 " Charles G. Mead, Thirty-fifth Precinct, February 16, 1899.  
 " Richard Kerwick, Thirty-sixth Precinct, January 30, 1899.  
 " Floyd H. Palmer, Thirty-eighth Precinct, March 11, 1899.

#### To Third Grade.

Patrolman John L. Gordon, First Precinct, March 11, 1899.  
 " Earl C. Gordon, Second Precinct, February 11, 1899.  
 " Joseph Wensler, Fifth Precinct, December 3, 1898.  
 " Peter P. Byrnes, Sixth Precinct, January 1, 1899.  
 " William C. Hay, Eighth Precinct, March 12, 1899.  
 " John L. Sullivan, Eighth Precinct, March 21, 1899.  
 " William P. Dunn, Ninth Precinct, March 11, 1899.  
 " Oliver P. Raymond, Fourteenth Precinct, March 11, 1899.

Patrolman William Schneider, Twentieth Precinct, January 1, 1899.  
 " Joseph C. Kelly, Twenty-first Precinct, March 9, 1899.  
 " Herbert P. Ritter, Twenty-first Precinct, November 2, 1898.  
 " Walter L. Tyler, Twenty-fifth Precinct, January 14, 1899.  
 " Charles A. Lieber, Thirty-first Precinct, March 9, 1899.  
 " Thomas J. Ryan, Thirty-first Precinct, March 1, 1899.  
 " Walter Grant, Thirty-third Precinct, March 11, 1899.  
 " John F. O'Meara, Thirty-third Precinct, December 31, 1898.  
 " James Farley, Thirty-fifth Precinct, January 1, 1899.  
 " John J. Cox, Thirty-fifth Precinct, February 17, 1899.  
 " Hugh E. Boyle, Seventy-fifth Precinct, March 21, 1899.

#### To Fourth Grade.

Patrolman Albert D. Schults, Fifty-fifth Precinct, October 21, 1898.  
 " Peter C. Farrell, Seventy-fourth Precinct, August 1, 1898.

#### To Fifth Grade.

Patrolman Patrick F. Walsh, Bicycle Squad, January 28, 1899.  
 " William F. McDonough, Fourteenth Precinct, January 1, 1899.  
 " William F. Doubleday, Sixteenth Precinct, January 1, 1899.  
 " Henry N. Boerner, Nineteenth Precinct, January 1, 1899.  
 " Patrick J. Downey, Seventy-fourth Precinct, April 1, 1898.

#### To Sixth Grade.

Patrolman Milburn Bruce, Seventy-seventh Precinct, December 5, 1898.  
 " Harry Keeton, Seventy-ninth Precinct, December 1, 1898.

On reading and filing communication from Captain Reynolds, Detective Bureau, Borough of Brooklyn:

Resolved, That patrolmen detailed to perform detective duty in Detective Bureau, Brooklyn, be authorized and required to wear the shield of "Detective Officer" while so detailed; and that the Chief Clerk be directed to issue such shields to such detailed officers, on proper notification of the detail, and to keep such of a record of shields issued as will enable him to reissue the old shields of the officer when the detail shall, in each case, have ceased.

Resolved, That concert license be granted to Otto Huber Brewery, Alabama avenue and Fulton street, Brooklyn, to May 1, 1899; fee, one hundred and fifty dollars.

Resolved, That the attention of the Chief of Police be and is called to the provisions of the Penal Code having reference to obscene exhibitions, books and prints, being chapter 7 of said code; and he is directed to require a stringent enforcement of such law, and to cause the attention of the commanding officers of precincts to said provisions, and to require of them an immediate and rigid enforcement of the same.

Resolved, That the Police Board hereby consents to the substitution of Lowell M. and Henry U. Palmer, as sureties, in the proposal of Bacon & Co., to furnish the Police Department with coal for station-houses, in the boroughs of Brooklyn and Queens, in the place of Charles Cooper and F. W. Carruthers.

Resolved, That the Police Board hereby consents to the substitution of the United States Fidelity and Guaranty Company, No. 140 Broadway, and the American Surety Company, New York, No. 100 Broadway, as sureties in the place of J. C. Wickes and Joseph W. Hatch, in the proposal of Theodore P. Huffman & Company, for supplying the Police Department with horse feed, in the boroughs of Manhattan and The Bronx.

#### The following Proposals for Repairs to Patrol Wagons were Opened and Read:

Patrol wagon, Fifty-first Precinct—	
Peters & Heins.....	\$148 75
M. Marlborough's Sons.....	138 55
Patrol wagon, Sixty-third Precinct—	
Peters & Heins.....	228 50
M. Marlborough's Sons.....	208 70
Patrol wagon, Seventeenth Precinct—	
Peters & Heins.....	242 65
M. Marlborough's Sons.....	251 75
Patrol Wagon, Twelfth Precinct—	
Peters & Heins.....	169 40
M. Marlborough's Sons.....	173 50
Patrol Wagon, Fourteenth Precinct—	
Peters & Heins.....	217 40
M. Marlborough's Sons.....	229 30

Whereupon, said bids were ordered referred to Sergeant Thomas E. O'Brien to make report in writing whether, in his judgment, the amounts stated in the bids referred to are fair and reasonable amounts for the doing of the work called for by the specifications.

The following proposals for furnishing plumbing materials for the Twenty-second Precinct Station-house were opened and read:

Ronalds & Johnston Company.....	\$101 79
J. L. Mott Iron Works.....	104 98
John A. Murray.....	130 00

#### Whereupon it was

Resolved, That the proposal of Ronalds and Johnston Company for furnishing the following materials:

14 short iron enameled hoppers and connections; 14 enameled traps and clamps; 10 lengths, 6-inch D. H. heavy; 10 lengths, 4-inch D. H. heavy; 1 6 by 6 double Y; 14 6 by 4 Y's; 1 6 by 4 reducer; 24 4-inch  $\frac{1}{8}$  bends; 4 lengths 2-inch galvanized pipe, 80 feet; 4 lengths  $\frac{3}{4}$ -inch galvanized pipe, 80 feet; 14 2-inch galvanized tees; 14 2-inch galvanized elbows; 14  $\frac{3}{4}$ -inch galvanized tees; 4  $\frac{3}{4}$ -inch galvanized caps; 6  $\frac{3}{4}$ -inch galvanized elbows; 2  $\frac{3}{4}$ -inch soldering nipples; 2  $\frac{3}{4}$ -inch gate-valves; 14  $\frac{3}{8}$ -inch complete plain bibbs, I. P.; 10 pounds solder, and 30 pounds oakum.

— all to be delivered to the Twenty-second Precinct Police Station, No. 347 West Forty-seventh street, Borough of Manhattan, for the sum of \$101.79, be and is hereby accepted.

In the matter of demands received from Hattie E. Curtis, Sarah E. Driscoll, Catherine Fitzpatrick, Henrietta A. Millwood, Catherine Flaherty, E. L. Paynton, Amelia L. Boyle, Annie Chyden, Elizabeth Barling and Martha J. Winne, Police Matrons, in which they state that they had been receiving, under due appointment as Police Matrons in the Police Department of the late City of Brooklyn, prior to its consolidation with the Police Department of The City of New York, salaries of \$800 per annum each, and further stating that during the year 1898 they had received as such salaries only \$720 each, and demanding that they be paid the balance, to wit, the sum of \$80 each:

The Police Board declines to direct the payment of any amount to said Matrons on account of their salaries for the year 1898, for the reason that they have been paid in full the amount of salaries legally allowed and awarded to them, and each of them, as Matrons in the Police Department of The City of New York. The Police Board, under the authority vested in it by law, did, on the 5th day of February, 1898, fix the salaries of Police Matrons at the sum of \$720 each per annum, the said sum of \$720 being the amount of salary that had been paid to each of the Police Matrons in the said Police Department of the late City of New York, and the said sum of \$720 per annum each was paid to the Matrons in the Police Department of The City of New York. The salary of said Matrons was continued at and after the rate of \$720 each during the whole of the year 1898, but in the month of January, 1899, the salaries of Matrons in the Police Department of The City of New York were increased and fixed at the rate of \$800 per annum each, to date from and after the 1st day of January, 1899.

On reading and filing report of the Treasurer's Bookkeeper, submitted by the Treasurer:

Resolved, That the Chief Clerk be directed to forward the checks referred to in said report, together with copy of report of said Bookkeeper, to the Comptroller, taking his receipt therefor.

Patrolman Thomas F. Kealey, of the Seventh Precinct, having had a judgment recovered against him by default in a civil action, which action was, or appears to have been, according to the papers therein, an action against him for an arrest made by him as a police officer, and he having been arrested under a body execution, and a judgment rendered by default in said action, and he having been confined in Ludlow Street Jail down to and including the forenoon of March 22, upon which date the said default was opened and the defendant permitted to answer, and the defense of said defendant having been by the Board referred to the Corporation Counsel; and now it appearing that, under the rules, the Sergeant in command of the Seventh Precinct has filed with the Board charges against the said Patrolman Kealey, to wit: 1st. Being absent without leave, from 11.10 P.M., March 18, until 12.40 P.M., March 22; and, 2d. Being absent without leave, from 11.10 P.M., March 13, until 11.10 P.M., March 18, 1899, being five days and over; and, it appearing to the Board that the cause of the absence of the said Patrolman Kealey was due to the fact that he was, during the time mentioned, imprisoned, under the above-mentioned body execution, it is ordered that the said complaints against the said Patrolman be and the same are not approved, and they are dismissed.

Resolved, That Patrolman Thomas F. Kealey, Seventh Precinct, be relieved from suspension and restored to duty by the Chief.

#### Retired Officer on Application.

Patrolman Michael Murray, Twenty-second Precinct, \$700 per year.  
 Resolved, That Elizabeth Fonda, widow of George Fonda, late Patrolman, be and is hereby awarded and granted a pension of \$200 per annum, from and after March 23, 1899.



Resolved, That Mary Ann Stewart, widow of John Stewart, late Patrolman, be and is hereby awarded and granted a pension of two hundred dollars per year, from March 23, 1899.

Resolved, That Ellen Roche, guardian of Nellie Boyle, child of Charles H. Boyle, late Patrolman, be and is hereby awarded and granted a pension of three hundred dollars per year, until said child reaches the age of eighteen years, from March 23, 1899.

Resolved, That the pension heretofore granted to Mary A. Thompson, widow of William Thompson, late Patrolman, be and is hereby increased one hundred and eighty dollars per year, from March 23, 1899, making a total pension of three hundred dollars per year.

Resolved, That Daniel McMahon be and is hereby appointed Special Patrolman in the service of the Chemical National Bank.

Resolved, That the fine of three days' pay imposed upon Patrolman Charles Connolly, Nineteenth Precinct, be and is hereby reduced to two days' pay.

Resolved, That the judgment of reprimand in the case of Patrolman Martin J. Regan, Twenty-second Precinct, rendered December 1, 1898, be and is hereby changed to complaint dismissed.

Trial was had of charges against members of the Force before Commissioner York, and Commissioner York reports the disposition of said trials as follows:

#### Fines Imposed.

Patrolman Daniel J. Curtin, Second Precinct, neglect of duty, two days' pay.  
 " Charles E. Cooke, Second Precinct, neglect of duty, ten days' pay.  
 " Charles E. Cooke, Second Precinct, neglect of duty, fifteen days' pay.  
 " William J. Vanderleith, Fifth Precinct, neglect of duty, two days' pay.  
 " Dennis J. Dineen, Fifth Precinct, neglect of duty, two days' pay.  
 " Patrick J. Donaldson, Sixth Precinct, neglect of duty, one day's pay.  
 " Charles Grey, Seventh Precinct, neglect of duty, one day's pay.  
 " Frederick H. Bergman, Seventh Precinct, neglect of duty, ten days' pay.  
 " Charles W. Cox, Eighth Precinct, neglect of duty, two days' pay.  
 " Edward J. Manchester, Eighth Precinct, neglect of duty, one day's pay.  
 " Harry Haverkamp, Eighth Precinct, neglect of duty, three days' pay.  
 " Joseph Morrissey, Tenth Precinct, neglect of duty, one day's pay.  
 " Joseph Morrissey, Tenth Precinct, neglect of duty, five days' pay.  
 " Joseph Morrissey, Tenth Precinct, neglect of duty, five days' pay.  
 " William R. Gibb, Tenth Precinct, neglect of duty, two days' pay.  
 " Patrick Linehan, Tenth Precinct, neglect of duty, one day's pay.  
 " Germaine M. Soule, Tenth Precinct, neglect of duty, two days' pay.  
 " John Clare, Eleventh Precinct, neglect of duty, one day's pay.  
 " James Whalen, Fifteenth Precinct, neglect of duty, two days' pay.  
 " Julius E. Scheffler, Sixteenth Precinct, neglect of duty, two days' pay.  
 " Floyd R. Houston, Sixteenth Precinct, neglect of duty, one day's pay.  
 " Walter R. Boston, Nineteenth Precinct, neglect of duty, two days' pay.  
 " Harry D. Ward, Nineteenth Precinct, neglect of duty, one day's pay.  
 " Joseph D. Mury, Nineteenth Precinct, neglect of duty, two days' pay.  
 " Aaron H. Griswold, Nineteenth Precinct, neglect of duty, two days' pay.  
 " Matthew Courtney, Nineteenth Precinct, neglect of duty, three days' pay.  
 " Patrick Mullen, Nineteenth Precinct, neglect of duty, three days' pay.  
 " Otto C. Schasberger, Nineteenth Precinct, neglect of duty, three days' pay.  
 " John Donnelly, Nineteenth Precinct, neglect of duty, three days' pay.  
 " Addison G. Remy, Nineteenth Precinct, neglect of duty, five days' pay.  
 " William J. Monroe, Twentieth Precinct, neglect of duty, two days' pay.  
 " James J. Haber, Twenty-first Precinct, neglect of duty, one day's pay.  
 " Charles Smith, Twenty-first Precinct, neglect of duty, one day's pay.  
 " Emil Johnson, Twenty-first Precinct, neglect of duty, five days' pay.  
 " Martin Collins, Twenty-first Precinct, neglect of duty, one day's pay.  
 " John J. Healy, Twenty-second Precinct, neglect of duty, three days' pay.  
 " Elmer W. Hearty, Twenty-second Precinct, neglect of duty, three days' pay.  
 " Francis Mallon, Twenty-second Precinct, neglect of duty, one day's pay.  
 " Ellsworth E. Doty, Twenty-second Precinct, neglect of duty, two days' pay.  
 " William J. Farnan, Twenty-second Precinct, neglect of duty, two days' pay.  
 " Eugene A. Masterson, Twenty-fourth Precinct, neglect of duty, four days' pay.  
 " Julius Weinberg, Twenty-fourth Precinct, neglect of duty, five days' pay.  
 " William Crosett, Twenty-fourth Precinct, neglect of duty, two days' pay.  
 " Joseph Ocker, Twenty-fourth Precinct, neglect of duty, two days' pay.  
 " Frank A. Flagler, Twenty-fourth Precinct, neglect of duty, two days' pay.  
 " James Carew, Twenty-fourth Precinct, neglect of duty, two days' pay.  
 " Luke A. Parslow, Twenty-fifth Precinct, neglect of duty, five days' pay.  
 " William J. Eggers, Thirtieth Precinct, neglect of duty, two days' pay.  
 " Francis M. Campbell, Thirtieth Precinct, neglect of duty, two days' pay.  
 " James A. Kieley, Thirtieth Precinct, neglect of duty, five days' pay.  
 " Arthur M. Werner, Thirty-third Precinct, neglect of duty, two days' pay.  
 " Charles F. Coghlan, Thirty-third Precinct, neglect of duty, one day's pay.  
 " Thomas F. Callen, Forty-seventh Precinct, neglect of duty, two days' pay.  
 " Thomas F. Ryan, Forty-ninth Precinct, violation of rules, two days' pay.  
 " Henry R. Pfister, Fifty-fourth Precinct, violation of rules, one day's pay.  
 " Daniel Delehanty, Fifty-fifth Precinct, violation of rules, two days' pay.  
 " Frank J. Link, Fifty-eighth Precinct, violation of rules, two days' pay.  
 " William F. Gredel, Sixty-third Precinct, neglect of duty, two days' pay.  
 " William F. Gredel, Sixty-third Precinct, violation of rules, two days' pay.  
 " Charles D. Behense, Sixty-fifth Precinct, violation of rules, two days' pay.  
 " Patrick Deloughy, Sixty-ninth Precinct, violation of rules, five days' pay.  
 " James Dougherty, Seventy-second Precinct, neglect of orders, etc., three days' pay.  
 " Everett A. Nostrand, Seventy-third Precinct, violation of rules, fifteen days' pay.  
 " Hugh Gallagher, Seventy-fifth Precinct, neglect of duty, one day's pay.  
 " Thomas Keegan, Seventy-eighth Precinct, neglect of duty, one day's pay.

#### Reprimands.

Patrolman Edward Schultz, Fifth Precinct, neglect of duty.  
 " Julius F. Schultz, Sixth Precinct, neglect of duty.  
 " James Whalen, Fifteenth Precinct, neglect of duty.  
 " Michael Dolan, Sixteenth Precinct, neglect of duty.  
 " Glenn C. Armin, Twenty-fourth Precinct, neglect of duty.  
 " Patrick Kent, Twenty-eighth Precinct, neglect of duty.  
 " Edward J. Cashman, Twenty-ninth Precinct, neglect of duty.  
 " John H. Meyers, Twenty-ninth Precinct, neglect of duty.  
 " Claude A. Stephens, Twenty-ninth Precinct, neglect of duty.  
 " Edward J. Shoemaker, Thirty-first Precinct, neglect of duty.  
 " John E. Kelleher, Thirty-first Precinct, neglect of duty.  
 " James R. Stillings, Thirty-third Precinct, neglect of duty.  
 " Josiah Elting, Thirty-third Precinct, neglect of duty.  
 " Manuel H. Heatley, Thirty-third Precinct, neglect of duty.  
 " Patrick Dowd, Thirty-third Precinct, neglect of duty.  
 " John Dugan, Fifty-first Precinct, neglect of duty.  
 " William J. McLaughlin, Sixtieth Precinct, violation of rules.  
 " William J. McLaughlin, Sixtieth Precinct, violation of rules.  
 " John McGovern, Sixty-seventh Precinct, violation of rules.  
 " Francis McTaggart, Sixth Court, neglect of duty.

#### Complaints Dismissed.

Patrolman Dennis Dineen, Fifth Precinct, conduct unbecoming an officer.  
 " Charles W. Brown, Nineteenth Precinct, conduct unbecoming an officer.  
 Adjourned.

WM. H. KIPP, Chief Clerk.

#### POLICE DEPARTMENT.

At a meeting of the Police Board of the Police Department of The City of New York, held on the 24th day of March, 1899.

Present—Commissioners York (President), Sexton, Hess and Abell.

The minutes of March 23 were read and approved.

Application of S. Porter, for permit to hold masked ball at Tammany Hall, March 25, between 8 and 12 o'clock, be granted, and the Chief required to direct the commanding officer of the precinct in which such ball is to be held to see that such ball ceases at 12 o'clock midnight. Fee, \$25.

#### THE FOLLOWING REPORTS, ETC., WERE ORDERED ON FILE:

Comptroller—Approval of sureties of Bacon & Co., on coal contract.  
 Comptroller—Returning sureties of T. P. Huffman & Co., without approval.  
 Supreme Court—Relation of Alexander Kerr in matter of return of fine imposed.  
 Chief of Police—Notice of assignment of Patrolman Frank J. Stoddard, Fourth Precinct, as Roundsman.  
 Inspector Rhodes—On complaint of Louise Kubal against Sergeant Zwingman.

#### Send Copies:

Inspector J. H. Grant—On complaint of Ed. Strassler of treatment by Captain Dean, Thirty-eighth Precinct.

Nineteenth Precinct—On complaint of H. L. Edmunds of "Army & Navy," monthly periodical.

Nineteenth and Twentieth Precincts—Letter of R. V. H. Schram, relative to detail of officers to arrest young thieves.

Twentieth Precinct—Complaint of R. V. H. Schram of disorderly persons at No. 519 West Twenty-seventh street.

Report of Acting Inspector Kane relative to Hostler James Feeley, absent from duty, was referred to the President.

#### The following Communications were Referred to the Chief of Police for Report:

Mayor—Inquiry of Henry Batterman as to A. Henry Batterman.

Holmes Electric and Protective Company—Asking appointment of William M. Anderson, Alex. Lazarus, Arthur J. O'Leary and Michael McDonough as Special Patrolmen.

Supreme Court, Queens County—The People ex rel. John Kelly, for writ of mandamus. Referred to the Corporation Counsel.

Communication from the District Attorney, inclosing bill of William J. Kinsley, handwriting expert in Kate Adams murder case, \$1,275, was referred to Captain McCloskey to report to the Board.

Communication from the Metropolitan Brass Foundry Company, inclosing bids for furnishing certain brass railings, was referred to Sergeant O'Brien to return to the Board with specifications.

Application of Joseph H. Gallon, No. 253 Bowery, for concert license, was denied.

Application of the Coney Island Sporting Club for license to give entertainments and exhibitions was laid over.

Resolved, That the appointments of Barney Rowohl, Charles B. Froen and James Boys, as Special Patrolmen for Holmes Electric and Protective Company, be and are hereby revoked.

Resolved, That Jacob A. Lehman be and is hereby appointed Special Patrolman in the service of Ludwig Brothers.

Resolved, That full pay, while sick, be granted to Patrolman Hugh Cassidy, Thirty-second Precinct, from February 22 to March 11, 1899.

On recommendation of the Auditor, it was

Resolved, That the following bill be approved and referred to the Comptroller for payment:

General Election Expenses, Borough of Manhattan—

Hoffman Brothers, cartage, Fifteenth Precinct, March, 1899..... \$7 50

Resolved, That the following bill be approved and referred to William McKinney, Auditor, Borough of Brooklyn, for payment:

General Election Expenses, Borough of Brooklyn—

M. V. McNulty, rent, No. 19 Smith street, January, February and March, 1899.... \$900 00

Resolved, That the resolution of the 23d instant, relative to obscene pictures, etc., be amended as follows: Alter title 10, just before chapter 10, as it appears in that resolution, so that it will read title 10, chapter 7.

Resolved, That no head of a bureau or other commanding officer in the Police Department shall certify to the correctness of any bill or claim that may be presented to him for certification, and which claim or bill is to be certified to another Board, officer or body other than the Police Board, without first communicating in writing with the Police Board, stating the fact, together with the nature of the claim for which his certification is asked, and the Chief of Police is directed to promulgate this resolution at once to the Police.

It is further

Resolved, That commanding officers of precincts shall in no case employ physicians for any purpose except in cases of extreme necessity, in which case they shall immediately transmit to the Police Board, through the Chief of Police, a statement of the facts in the particular case in which they have summoned medical assistance.

On motion of Commissioner Sexton,

Resolved, That Mary E. O'Connor, No. 152 West Eighty-fourth street, be and is hereby appointed a Female Cleaner in the Police Department, with compensation at the rate of thirty dollars per month.

On motion of Commissioner York,

Resolved, That the contract for supplying the Police Department with printing, books, blanks and lithography, in accordance with the specifications, be and is hereby awarded to Martin B. Brown Company, Nos. 49 and 51 Park place, for the sum or price as per list attached, making a total sum of nine thousand four hundred and fifty-six dollars, they being the lowest bidders; and that the President be and is hereby authorized to execute such contract for and in behalf of the Police Board, on the approval of sureties by the Comptroller.

Commissioner Hess not voting.

The following proposals for furnishing summer helmets were received and placed on file:

	Each.		Each.
Hawes Hat Company.....	\$1 87	A. W. Fitzgibbon.....	\$1 75 and \$1 80
E. V. Simis.....	1 80	".....	1 80
Frank Erreger.....	1 80	Henry H. Roelofs & Co.....	1 50
John H. Spellman.....	1 82		
A. W. Fitzgibbon.....	\$1 75 and 1 80		

Whereupon, it was

Resolved, That the contract for furnishing summer helmets for the use of the Police Department be and is hereby awarded to John H. Spellman, for the sum and price of one dollar and eighty cents each, the same to be made conformable with sample now on deposit with the Chief of Police, and to be furnished as per an agreement executed on his part, provided that he executes a contract with bond and two sureties in the sum of ten thousand dollars, on or before 11 o'clock A. M. on Monday, March 27, 1899, and that said John H. Spellman is not authorized to proceed with the work of furnishing such summer helmets until the agreement required to be executed by this resolution is signed, executed and delivered; the said helmets to be sold to members of the Police Force requiring them by the Clerk assigned to such duty by the Police Board. The Clerk so assigned to collect moneys for the sale of the said summer helmets shall make returns thereof to the said John H. Spellman, it being distinctly understood that neither the Police Board nor The City of New York are responsible in any form or manner for such sale of summer helmets or any part thereof.

On reading report of the Chief of Police:

Resolved that Patrolman John J. Hannigan, Twenty-ninth Precinct, be and is hereby suspended without pay, and that the Chief be directed to require Captain Brown to report why the attention of the Board was not called previously to the case of Hannigan.

On reading and filing certificate of F. A. Spencer, Labor Clerk, and, on motion of Commissioner Sexton:

Resolved, That George H. Nicholson, No. 7 Vandam street, be and hereby is appointed a Plumber in the Police Department, with compensation at the rate of three dollars and seventy-five cents per day, and that he be directed to report to the Bureau of Repairs and Supplies for duty at once.

Resolved, That the Chief be directed to remand to patrol duty John Kiefer, now assigned to the Bureau of Repairs and Supplies as a plumber.

On reading and filing report of M. R. Brennan, Superintendent of Telegraph:

Resolved, That the request of the New York Telephone Company to attach to the north and west walls of the Ninth Precinct Station-house, a lead-encased cable about one and one-half inches in diameter, with terminal box, size of which will be five by ten inches, be granted; the work to be performed under the direction of the Superintendent of Police Telegraph, and without expense to this Department, and the permit to maintain the said cable and terminal box on the said walls, to continue during the pleasure of the Police Board.

On reading and filing communication from M. R. Brennan, Superintendent of Telegraph, recommending the purchase of telegraph wire:

Resolved, That the purchase of wire, as follows: from Phillips Insulated Wire Company, five miles of wire at thirty-six dollars and ninety-three and two-fifths cents per mile, total, one hundred and eighty-four dollars and sixty-seven cents; and from India Rubber and Gutta Percha Insulating Company, five miles of wire at one hundred and fifty-six dollars per mile, total, seven hundred and eighty dollars, be and the same is hereby approved.

Resolved, That the Superintendent of Elections be and he is directed to remove from the office of the Department of Finance, Jamaica, Long Island, certain election records there stored, and transfer them to place where polling-place fittings pertaining to the Borough of Queens are now stored.

Resolved, That the nine boxes of voted ballots, detached stubs and election codes, pertaining to the years 1880-1897, recently transferred from the office of the Finance Department, Jamaica, Long Island, and reported by the Chief of the Branch Bureau of Elections, Borough of Queens, March 23, be and they are hereby condemned and ordered to be sold at public sale at the place of storage, by the Property Clerk.



Trial was had of charges against members of the Police Force before Commissioner Sexton, and Commissioner Sexton reports the disposition of said trials as follows:

*Fines Imposed.*

Patrolman John O'Rourke, Sixth Precinct, neglect of duty, one-half day's pay.  
 " Eugene Fox, Twenty-first Precinct, neglect of duty, one-half day's pay.  
 " John J. McGreevy, Twenty-first Precinct, neglect of duty, one-half day's pay.  
 " John H. Conran, Twenty-second Precinct, neglect of duty, one day's pay.  
 " Daniel W. O'Grady, Twenty-second Precinct, neglect of duty, one-half day's pay.  
 " Wm. M. Mahony, Twenty-second Precinct, neglect of duty, one-half day's pay.  
 " George Wetzel, Twenty-fourth Precinct, neglect of duty, one day's pay.  
 " James McGovern, Twenty-fourth Precinct, neglect of duty, one day's pay.  
 " Edwin F. Wardel, Twenty-fourth Precinct, neglect of duty, two days' pay.  
 " James P. Dempsey, Twenty-fifth Precinct, neglect of duty, two days' pay.  
 " John J. M. Phelan, Thirtieth Precinct, neglect of duty, one day's pay.  
 " George H. Peterson, Thirtieth Precinct, neglect of duty, one day's pay.  
 " Sherman Bentley, Thirty-second Precinct, neglect of duty, one day's pay.  
 " John G. Deger, Thirty-fifth Precinct, neglect of duty, one day's pay.  
 " Michael Kenney, Thirty-fifth Precinct, neglect of duty, one day's pay.  
 " Edward L. Tierney, Thirty-sixth Precinct, neglect of duty, one day's pay.  
 " Charles H. Stromberg, Thirty-seventh Precinct, neglect of duty, two days' pay.  
 " James R. Gelling, Thirty-seventh Precinct, neglect of duty, two days' pay.

*Reprimands.*

Patrolman Frederick Degenhardt, Twenty-second Precinct, neglect of duty.  
 " Edward Kiernan, Twenty-third Precinct, neglect of duty.  
 " James D. Cunningham, Twenty-sixth Precinct, neglect of duty.  
 " Jeremiah J. Murphy, Twenty-sixth Precinct, neglect of duty.  
 " William M. Dobbins, Twenty-sixth Precinct, neglect of duty.  
 " James A. Torpey, Twenty-sixth Precinct, neglect of duty.  
 " Richard H. Walsh, Twenty-eighth Precinct, neglect of duty.  
 " Albert Lurker, Twenty-eighth Precinct, neglect of duty.  
 " John Slattery, Thirty-third Precinct, neglect of duty.  
 " Reuben C. Harvey, Fortieth Precinct, neglect of duty.

Adjourned.

WM. H. KIPP, Chief Clerk.

METEOROLOGICAL OBSERVATORY OF THE DEPARTMENT OF PARKS.

Central Park, New York—Latitude 40° 45' 58" N. Longitude 73° 57' 58" W. Height of Instruments above the Ground, 53 feet; above the Sea, 97 feet.

Abstract of Registers from Self-recording Instruments for the Week ending April 1, 1899.

*Barometer.*

DATE.	MARCH AND APRIL.	7 A. M.	2 P. M.	9 P. M.	MEAN FOR THE DAY.	MAXIMUM.		MINIMUM.	
		Reduced to Freezing.	Reduced to Freezing.	Reduced to Freezing.		Reduced to Freezing.	Time.	Reduced to Freezing.	Time.
Sunday,	26	29.400	29.652	29.900	29.651	29.950	12 P. M.	29.340	5 A. M.
Monday,	27	30.042	30.030	30.082	30.051	30.082	9 P. M.	29.950	0 A. M.
Tuesday,	28	29.960	29.780	29.400	29.713	30.060	0 A. M.	29.196	12 P. M.
Wednesday,	29	29.192	29.390	29.590	29.391	29.614	12 P. M.	29.006	2 A. M.
Thursday,	30	29.778	29.760	29.742	29.760	29.786	9 A. M.	29.614	0 A. M.
Friday,	31	29.574	29.530	29.630	29.578	29.660	12 P. M.	29.516	3 P. M.
Saturday,	1	29.806	29.740	29.814	29.787	29.844	12 P. M.	29.660	0 A. M.

Mean for the week ..... 29.704 inches.  
 Maximum " at 9 P. M., March 27th ..... 30.082  
 Minimum " at 2 A. M., March 29th ..... 29.006  
 Range " ..... 1.076

*Thermometers.*

DATE.	MARCH AND APRIL.	7 A. M.		2 P. M.		9 P. M.		MEAN.	MAXIMUM.		MINIMUM.		MAXIMUM.
		Dry Bulb.	Wet Bulb.	Dry Bulb.	Wet Bulb.	Dry Bulb.	Wet Bulb.		Dry Bulb.	Wet Bulb.	Dry Bulb.	Wet Bulb.	
Sunday,	26	35	35	34	32	32	30	33.6	32.3	41	4 P. M.	38	1 A. M.
Monday,	27	26	26	39	35	43	42	36.0	34.3	45	8 P. M.	42	8 P. M.
Tuesday,	28	42	41	40	40	38	38	40.0	39.6	44	0 A. M.	41	0 A. M.
Wednesday,	29	36	33	34	32	34	32	34.6	32.3	44	2 A. M.	43	2 A. M.
Thursday,	30	34	32	41	38	45	44	40.0	38.0	46	5 P. M.	44	8 P. M.
Friday,	31	39	38	50	47	45	43	44.6	42.6	52	4 P. M.	49	4 P. M.
Saturday,	1	34	31	38	34	35	34	35.6	33.0	42	0 A. M.	40	0 A. M.

Mean for the week ..... 37.8 degrees.  
 Maximum " at 4 P. M., 31st ..... 54 " at 4 P. M., 31st ..... 49  
 Minimum " at 6 A. M., 27th ..... 26 " at 6 A. M., 27th ..... 23  
 Range " ..... 28

*Wind.*

DATE.	MARCH AND APRIL.	DIRECTION.			VELOCITY IN MILES.				FORCE IN POUNDS PER SQUARE FOOT.				Time.
		7 A. M.	2 P. M.	9 P. M.	9 P. M. to 7 A. M.	7 A. M. to 2 P. M.	2 P. M. to 9 P. M.	Distance for the day.	7 A. M.	2 P. M.	9 P. M.	Max.	
Sunday,	26...	NW	NNW	WNW	49	64	78	191	0	1 3/4	1	3 3/4	5.20 P. M.
Monday,	27...	NNW	NNW	ESE	83	45	19	147	0	0	0	1	1.20 P. M.
Tuesday,	28...	E	E	NE	37	58	73	168	0	1	1/2	3 3/4	11.30 A. M.
Wednesday,	29...	WNW	W	WSW	113	177	118	408	10	11 1/2	1 1/2	23 3/4	1 P. M.
Thursday,	30...	W	WNW	ESE	114	106	49	269	4	2 1/4	0	7 1/4	6 A. M.
Friday,	31...	N	N	N	35	38	38	111	0	0	0	1/4	0.40 P. M.
Saturday,	1...	WNW	NW	NW	80	95	93	268	1	5	1	6 3/4	3.40 P. M.

Distance traveled during the week ..... 1,562 miles.  
 Maximum force " ..... 23 3/4 pounds.

DATE.	Hygrometer.								Clouds.			Rain and Snow. Ozone.					
	FORCE OF VAPOR.				RELATIVE HUMIDITY.				CLEAR, o. OVERCAST, 10.			DEPTH OF RAIN AND SNOW IN INCHES					
	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	Time of Beginning.	Time of Ending.	Duration.	Amount of Water.	Depth of Snow.	10
MARCH AND APRIL.																	
Sunday, 26	.204	.155	.144	.167	100	79	79	86	10	6 Cir. Cu	0	0 A. M.	3.30 A. M.	3.30	.10	1/2	6
Monday, 27	.141	.152	.254	.182	100	63	91	84	5 Cir. Cu	0	0	.....	.....	.....	.....	.....	2
Tuesday, 28	.244	.248	.229	.240	91	100	100	97	10	10	10	6.30 A. M.	12 P. M.	17.30	.75	...	8
Wed'sday, 29	.149	.155	.155	.153	70	79	79	76	7 Cir. Cu	8 Cu.	3 Cu	0 A. M.	5.30 A. M.	5.30	.10	...	1
Thursday, 30	.155	.190	.275	.206	79	74	92	81	4 Cu.	0	0	.....	.....	.....	.....	.....	2
Friday, 31	.216	.283	.251	.250	90	78	84	84	6 Cir.	7 Cir. Cu	3 Cu	.....	.....	.....	.....	.....	5
Saturday, 1	.139	.144	.183	.155	71	63	90	74	0	6 Cu.	4 Cu	.....	.....	.....	.....	.....	4

Total amount of water for the week ..... .95 inch.  
 Duration for the week ..... 1 day 2 hours 30 minutes.

DATE.	7 A. M.	2 P. M.
Sunday, March 26	Mild, overcast.	Mild, pleasant.
Monday, " 27	Cool, pleasant.	Mild, pleasant.
Tuesday, " 28	Cool, raining.	Mild, overcast.
Wednesday, " 29	Cool, windy.	Cool, windy.
Thursday, " 30	Cool, windy.	Cool, pleasant.
Friday, " 31	Calm, cloudy.	Cloudy, pleasant.
Saturday, April 1	Cool, pleasant.	Cool, pleasant.

DANIEL DRAPER, Ph. D., Director.

EXECUTIVE DEPARTMENT.

CITY OF NEW YORK—OFFICE OF THE MAYOR.  
 APPOINTMENT MADE BY THE MAYOR.

APRIL 5, 1899.

Antonio Rasines, a Municipal Statistical Commissioner, in place of Thornton N. Motley, resigned, and for the unexpired term of said Thornton N. Motley.

DEPARTMENT OF BUILDINGS.

DEPARTMENT OF BUILDINGS, No. 220 FOURTH AVENUE,  
 BOROUGH OF MANHATTAN,  
 NEW YORK CITY, April 4, 1899.

OPERATIONS OF THE DEPARTMENT OF BUILDINGS, FOR THE WEEK ENDING APRIL 1, 1899.

BOROUGH OF MANHATTAN AND THE BRONX.

Plans filed for new buildings, main office (estimated cost, \$2,834,000).....	66
Plans filed for new buildings, branch office (estimated cost, \$694,400).....	40
Plans filed for alterations, main office (estimated cost, \$84,571).....	60
Plans filed for alterations, branch office (estimated cost, \$5,505).....	13
Buildings reported as unsafe.....	131
Buildings reported for additional means of escape.....	79
Other violations of law reported.....	196
Unsafe building notices issued.....	247
Fire-escape notices issued.....	116
Violation notices issued.....	489
Unsafe building cases forwarded for prosecution.....	2
Fire-escape cases forwarded for prosecution.....	17
Violation cases forwarded for prosecution.....	155
Iron and steel inspections made.....	5,417
Complaints lodged with the Department.....	141

BOROUGH OF BROOKLYN.

Number of new buildings for which permits were issued (estimated cost, \$416,355).....	89
Brick (estimated cost, \$260,500).....	31
Frame (estimated cost, \$155,855).....	58
Number of alterations for which permits were issued (estimated cost, \$30,635).....	50
Buildings reported as unsafe.....	7
Buildings reported for additional means of escape.....	18
Other violations of law reported.....	64
Unsafe building notices issued.....	7
Fire-escape notices issued.....	18
Violation notices issued.....	64
Unsafe building cases forwarded for prosecution.....	6
Fire-escape cases forwarded for prosecution.....	8
Violation cases forwarded for prosecution.....	18
Passenger elevators examined.....	19
Iron and steel inspections made.....	267
Complaints lodged with the Department.....	20

BOROUGH OF QUEENS AND RICHMOND.

Plans filed for new buildings (estimated cost, \$151,875).....	24
Plans filed for alterations (estimated cost, \$10,462).....	65
Plans filed for plumbing (estimated cost, \$8,455).....	27

T. J. BRADY, President, Board of Buildings.

A. J. JOHNSON, Secretary.

APPROVED PAPERS.

No. 232.

Whereas, The Board of Estimate and Apportionment, by a resolution adopted January 24, 1899, subject to concurrence therewith by the Municipal Assembly, authorized the Comptroller to issue Corporate Stock of The City of New York to the amount of twelve thousand dollars (\$12,000), for the purpose of providing means for the payment of the wages of Inspectors and Draughtsmen employed in connection with the construction of new school buildings, etc., in the boroughs of Manhattan and The Bronx, under the authority of chapter 740 of the Laws of 1897;

Resolved, That the Municipal Assembly hereby concurs in said resolution, and that the Comptroller be and hereby is authorized to issue Corporate Stock of The City of New York, in the manner provided by section 169 of the Greater New York Charter, to the amount of twelve thousand dollars (\$12,000), for the purpose of providing means for the purposes aforesaid.

Adopted by the Board of Aldermen, February 28, 1899.

Adopted by the Council, March 21, 1899.

Approved by the Mayor, March 28, 1899.



No. 233.

Whereas, the Board of Estimate and Apportionment, by a resolution adopted January 24, 1899, subject to concurrence therewith by the Municipal Assembly, authorized the Comptroller to issue Corporate Stock of The City of New York to the amount of nine thousand four hundred and nineteen dollars and eighty-five cents (\$9,419.85), for the purpose of providing means for the payment of expenses to be incurred by the Committee on Buildings, for and on behalf of the Board of Education, with the State Prison authorities, for supplying desks, seats and chairs for the following schools, viz.:

Public School No. 167, Mott and Walton avenues, One Hundred and Forty-fourth and One Hundred and Forty-sixth streets.....	\$4,159 00
Public School No. 166, Eighty-ninth street, between Columbus and Amsterdam avenues.....	5,260 85
	<hr/> \$9,419 85

—under the authority of chapter 740, Laws of 1897.

Resolved, That the Municipal Assembly hereby concurs in said resolution, and that the Comptroller be and hereby is authorized to issue Corporate Stock of The City of New York, in the manner provided by section 169 of The Greater New York Charter, to the amount of nine thousand four hundred and nineteen dollars and eighty-five cents (\$9,419.85), for the purpose of providing means for the purposes aforesaid.

Adopted by the Board of Aldermen, February 28, 1899.

Adopted by the Council, March 21, 1899.

Approved by the Mayor, March 28, 1899.

#### EXECUTIVE DEPARTMENT.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT for the relief of the Young Women's Settlement in The City of New York, a membership corporation organized for religious, benevolent and educational purposes.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Tuesday, April 11, 1899, at 11 o'clock A. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to amend sections two hundred and eighty-four and seven hundred and thirty-four of the Greater New York Charter, in relation to the age qualifications of patrolmen and firemen.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Tuesday, April 11, 1899, at 2 o'clock P. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to enable the commissioners of the police department of The City of New York to rehear and determine the charges against Michael McGrath, a policeman of the first grade, for reinstatement in said department.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Tuesday, April 11, 1899, at 12 o'clock M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to enable the fire commissioner of The City of New York to rehear and determine the charges against Henry A. Rehwinkel, a fireman of the first grade, for reinstatement in said department.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Tuesday, April 11, 1899, at 11 o'clock A. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to authorize the board of estimate and apportionment of The City of New York to apply the proceeds of certain bonds heretofore issued for school purposes in the former school district number one in the towns of Castleton and Middletown, county of Richmond, and now contained within the borough of Richmond in The City of New York, to similar purposes in another location within said borough.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Monday, April 10, 1899, at 2 o'clock P. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to authorize the board of estimate and apportionment of The City of New York to

examine, audit and allow the claim of William F. S. Hart, as assignee of George S. Chapman, for expenses and disbursements incurred by George S. Chapman as a police captain in The City of New York during the months of December, eighteen hundred and ninety-six, and January, eighteen hundred and ninety-seven.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Monday, April 10, 1899, at 2:30 o'clock P. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to amend the Greater New York Charter, relating to offensive trades in the borough of Brooklyn.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Monday, April 10, 1899, at 3 o'clock P. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT in relation to the opening of the highway or avenue known as Prospect avenue, in the former town of Flatbush, Kings County, now a part of The City of New York.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Monday, April 10, 1899, at 11:30 o'clock P. M.

DATED CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to amend the Greater New York Charter, in relation to a division of notification in the department of finance, by adding a new section thereto, to be designated section ten hundred and twenty-three-a.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Monday, April 10, 1899, at 3:30 o'clock P. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT to amend "the Greater New York Charter," relative to the legislative department.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Tuesday, April 11, 1899, at 2:30 o'clock P. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT relating to the discontinuance of proceedings for the improvements of certain streets in the Twenty-sixth Ward of the late City of Brooklyn.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Monday, April 10, 1899, at 11 o'clock A. M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

Pursuant to statutory requirement, notice is hereby given that an act has been passed by both branches of the Legislature, entitled AN ACT in relation to the Wallabout market lands in the borough of Brooklyn, in The City of New York.

Further notice is hereby given that a public hearing upon such bill will be held at the office of the Mayor, in the City Hall, in The City of New York, on Monday, April 10, 1899, at 12 o'clock M.

Dated CITY HALL, NEW YORK, April 6, 1899.

ROBERT A. VAN WYCK,  
Mayor.

#### DEPARTMENT OF BUILDINGS.

DEPARTMENT OF BUILDINGS,  
No. 220 FOURTH AVENUE,  
BOROUGH OF MANHATTAN,  
NEW YORK CITY, April 5, 1899.

Supervisor of the City Record:

DEAR SIR—I hereby notify you of the appointment of Andrew J. Kelly, Messenger in this Department, for the boroughs of Manhattan and The Bronx.

Respectfully,  
A. J. JOHNSON,  
Secretary, Board of Buildings.

#### DEPARTMENT OF PARKS.

THE CITY OF NEW YORK,  
DEPARTMENT OF PARKS,  
BOROUGH OF MANHATTAN AND RICHMOND,  
THE ARSENAL, CENTRAL PARK,  
April 5, 1899.

Supervisor of the City Record:

SIR—I beg to report the following action, taken in connection with employees of this Department, boroughs of Manhattan and Richmond:

Appointed.

John J. McCarthy, No. 79 Carroll street, Brooklyn, Engineman (Steam Engineer), at \$75 per month.

Thomas Connolly, No. 330 Rivington street, Machinist's Helper, at \$1 per day.

Patrick J. McDonald, No. 153 West Ninety-seventh street, Gardener.

Samuel Leuba, No. 229 East Fifty-eighth street, Gardener.

Respectfully,  
CLINTON H. SMITH,  
Assistant Secretary, Park Board.

THE CITY OF NEW YORK,  
DEPARTMENT OF PARKS,  
OFFICE OF COMMISSIONER FOR THE  
BOROUGH OF THE BRONX,  
ZBROWSKI MANSION, CLAREMONT PARK,  
April 5, 1899.

Supervisor of the City Record:

DEAR SIR—Pursuant to section 1546, chapter 378, Laws of 1897, I hereby notify you, for publication in the CITY RECORD, that, by order of the Commissioner, the following changes have been made in the working force of this Department:

Reinstated.

Thomas Morrissey, No. 2711 Vanderbilt avenue, Teamster with team, at \$4.50.

Appointed.

Edward Heffernan, One Hundred and Eighty-first street and Mapes avenue, Teamster with team, at \$4.50.

Leonard Geigerich, City Island, Teamster with team, at \$4.50.

Patrick Murphy, No. 618 East One Hundred and Sixty-second street, Laborer, at \$1.76 per day.

Louis Greismeyer, No. 664 East One Hundred and Forty-third street, Laborer, at \$1.76 per day.

Henry C. Bridges, No. 664 East One Hundred and Thirty-fourth street, Gardener, at \$75 per month.

Respectfully yours,  
MAX K. KAHN,  
Private Secretary.

#### MUNICIPAL ASSEMBLY.

CITY OF NEW YORK,  
OFFICE OF THE BOARD OF ALDERMEN,  
CITY HALL, April 3, 1899.

Supervisor of the City Record:

DEAR SIR—You are respectfully notified to attend a public hearing of the Committee on Legislation of the Board of Aldermen, which is to be held in the Aldermanic Chamber, City Hall, Manhattan, on Friday, April 7, 1899, at 2 P. M., on the question of Rapid Transit and New East River Bridges in Greater New York.

Yours respectfully,  
MICHAEL F. BLAKE,  
Clerk of the Board of Aldermen.

#### OFFICIAL DIRECTORY.

STATEMENT OF THE HOURS DURING which the Public Offices in the City are open for business, and at which the Courts regularly open and adjourn, as well as of the places where such offices are kept and such Courts are held; together with the heads of Departments and Courts:

##### EXECUTIVE DEPARTMENT.

Mayor's Office.

No. 6 City Hall 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

ROBERT A. VAN WYCK, Mayor.

ALFRED M. DOWNES, Private Secretary.

Bureau of Licenses.

9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

DAVID J. ROCHE, Chief of Bureau.

Principal Office, Room 1, City Hall. GEORGE W. BROWN, Jr., Deputy Chief in Boroughs of Manhattan and The Bronx.

Branch Office, Room 2, Borough Hall, Brooklyn; WILLIAM H. JORDAN, Deputy Chief in Borough of Brooklyn.

Branch Office, "Richmond Building," New Brighton, S. I.; WILLIAM H. McCABE, Deputy Chief in Borough of Richmond.

Branch Office, "Hackett Building," Long Island City; PETER FLANAGAN, Deputy Chief in Borough of Queens.

#### THE CITY RECORD OFFICE.

And Bureau of Printing, Stationery and Blank Books. No. 2 City Hall, 9 A. M. to 5 P. M., except Saturdays, on which days 9 A. M. to 12 M.

WILLIAM A. BUTLER, Supervisor; SOLON BERRICK, Deputy Supervisor; THOMAS C. COWELL, Deputy Supervisor and Accountant.

#### COMMISSIONERS OF ACCOUNTS.

Rooms 114 and 115 Stewart Building, 9 A. M. to 4 P. M. JOHN C. HERTLE and EDWARD OWEN.

#### BOARD OF ARMORY COMMISSIONERS.

THE MAYOR, Chairman; PRESIDENT OF DEPARTMENT OF TAXES AND ASSESSMENTS, Secretary; HENRY S. KEARNY, McCOSKRY BUTT and JAMES McLEER, Commissioners.

Address THOMAS L. FEITNER, Stewart Building. Office hours, 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

#### MUNICIPAL ASSEMBLY.

THE COUNCIL.

RANDOLPH GUGGENHEIMER, President of the Council. P. J. SCULLY, City Clerk. Clerk's office open from 10 A. M. to 4 P. M.; Saturdays, 10 A. M. to 12 M.

#### BOARD OF ALDERMEN.

THOMAS F. WOODS, President. MICHAEL F. BLAKE, Clerk.

#### BOROUGH PRESIDENTS.

Borough of Manhattan.

Office of the President of the Borough of Manhattan, Nos. 10, 11 and 12 City Hall. 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

JAMES J. COOGAN, President.

IRA EDGAR RIDER, Secretary.

Borough of The Bronx.

Office of the President of the Borough of The Bronx, corner Third avenue and One Hundred and Seventy-seventh street. 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

LOUIS F. HOFFEN, President.

Borough of Brooklyn.

President's Office, No. 1 Borough Hall. 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

EDWARD M. GROUT, President.

Borough of Queens.

FREDERICK BOWLEY, President. Office, Long Island City. 9 A. M. until 4 P. M.; Saturdays, from 9 A. M. until 12 M.

Borough of Richmond.

GEORGE CROMWELL, President. Office of the President, First National Bank Building, New Brighton; 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

#### PUBLIC ADMINISTRATOR.

No. 110 Nassau street, 9 A. M. to 4 P. M. WILLIAM M. HOES, Public Administrator.

#### AQUEDUCT COMMISSIONERS.

Room 200 Stewart Building, 5th floor, 9 A. M. to 4 P. M. JOHN J. RYAN, MAURICE J. POWER, WILLIAM H. TEN EYCK, JOHN P. WINDOLPH and THE MAYOR, and COMPTROLLER, Commissioners; HARRY W. WALKER, Secretary, A. FTELEY, Chief Engineer.

#### DEPARTMENT OF FINANCE.

Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.

BIRD S. COLER, Comptroller.

MICHAEL T. DALY, EDGAR J. LEVEY, Deputy Comptrollers.

#### Auditing Bureau.

JOHN F. GOULDSBURY, First Auditor of Accounts Borough of Manhattan.

EDWARD J. CONNELL, Auditor of Accounts, Borough of The Bronx.

WILLIAM McKINNY, First Auditor of Accounts, Borough of Brooklyn.

FRANCIS R. CLAIRE, Auditor of Accounts, Borough of Queens.

WALTER H. HOLT, Auditor of Accounts, Borough of Richmond.

Bureau for the Collection of Assessments and Arrears.

EDWARD GILON, Collector of Assessments and Arrears, Borough of Manhattan.

JAMES E. STANFORD, Deputy Collector of Assessments and Arrears, Borough of The Bronx.

MICHAEL O'KEEFE, Deputy Collector of Assessments and Arrears, Borough of Brooklyn.

JOHN F. ROGERS, Deputy Collector of Assessments and Arrears, Borough of Queens.

GEORGE BRAND, Deputy Collector of Assessments and Arrears, Borough of Richmond.

Bureau for the Collection of Taxes.

DAVID E. AUSTEN, Receiver of Taxes, Borough of Manhattan.

JOHN B. UNDERHILL, Deputy Receiver of Taxes, Borough of The Bronx.

JAMES B. BOUCK, Deputy Receiver of Taxes, Borough of Brooklyn.

FREDERICK W. BLECKWENN, Deputy Receiver of Taxes, Borough of Queens.

MATTHEW S. TULLY, Deputy Receiver of Taxes, Borough of Richmond.

Bureau for the Collection of City Revenue and of Markets.

DAVID O'BRIEN, Collector of City Revenue and Superintendent of Markets.

ALEXANDER MEAKIM, Clerk of Markets.

Bureau of the City Chamberlain.

PATRICK KERNAN, City Chamberlain.

JOHN H. CAMPBELL, Deputy Chamberlain.

Office of the City Paymaster.

No. 83 Chambers street and No. 65 Reade street.

JOHN H. TIMMERMAN, City Paymaster.

#### BOARD OF PUBLIC IMPROVEMENTS.

No. 346 Broadway, 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.

MAURICE F. HOLAHAN, President.

JOHN H. MOONEY, Secretary.

#### Department of Highways.

No. 150 Nassau street, 9 A. M. to 4 P. M.

JAMES P. KEATING, Commissioner of Highways.

WILLIAM N. SHANNON, Deputy for Manhattan.

THOMAS R. FARRELL, Deputy for Brooklyn.

JAMES H. MALONEY, Deputy for Bronx.

JOHN P. MADDEN, Deputy for Queens.

HENRY P. MORRISON, Deputy and Chief Engineer for Richmond. Office, "Richmond Building," corner Richmond Terrace and York avenue, New Brighton, S. I.



**Department of Sewers.**

Nos. 265 and 267 Broadway, 9 A. M. to 4 P. M.  
 JAMES KANE, Commissioner of Sewers.  
 MATTHEW F. DONOHUE, Deputy for Manhattan.  
 THOMAS J. BYRNES, Deputy for Bronx.  
 WILLIAM BRENNAN, Deputy for Brooklyn.  
 MATTHEW J. GOLDNER, Deputy Commissioner of Sewers, Borough of Queens.  
 HENRY P. MORRISON, Deputy Commissioner and Chief Engineer of Sewers, Borough of Richmond. Office, "Richmond Building," corner Richmond Terrace and York avenue, New Brighton, S. I.

**Department of Bridges.**

Room 177 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.; Saturdays, 9 A. M. to 12 M.  
 JOHN L. SHKA, Commissioner.  
 THOMAS H. YORK, Deputy.  
 SAMUEL R. PROBASCO, Chief Engineer.  
 MATTHEW H. MOORE, Deputy for Bronx.  
 HARRY BEAM, Deputy for Brooklyn.  
 JOHN E. BACKUS, Deputy for Queens.

**Department of Water Supply.**

No. 150 Nassau street, 9 A. M. to 4 P. M.  
 WILLIAM DALTON, Commissioner of Water Supply.  
 JAMES H. HASLIN, Deputy Commissioner.  
 GEORGE W. BIRDSALL, Chief Engineer.  
 W. G. BYRNE, Water Register.  
 JAMES MOFFETT, Deputy Commissioner, Borough of Brooklyn, Municipal Building.  
 WILLIAM RASQUIN, Jr., Deputy Commissioner Borough of Queens, Old Town Hall, Flushing.  
 THOMAS J. MULIGAN, Deputy Commissioner, Borough of The Bronx, Crotona Park Building.  
 HENRY P. MORRISON, Deputy Commissioner, Borough of Richmond. Office, "Richmond Building," corner, Richmond Terrace and York avenue, New Brighton, S. I.

**Department of Street Cleaning.**

9 A. M. to 4 P. M.  
 JAMES MCCARTNEY, Commissioner, No. 346 Broadway, Manhattan.  
 F. M. GIBSON, Deputy Commissioner for Borough of Manhattan, No. 346 Broadway.  
 PATRICK H. QUINN, Deputy Commissioner for Borough of Brooklyn, Room 37 Municipal Building.  
 JOSEPH LIEBERTZ, Deputy Commissioner for Borough of The Bronx, No. 615 East One Hundred and Fifty-second street.  
 JOHN P. MADDEN, Deputy Commissioner for Borough of Queens, Municipal Building, Long Island City.  
**Department of Buildings, Lighting and Supplies.**  
 No. 346 Broadway, Room 1142, 9 A. M. to 4 P. M.  
 HENRY S. KEARNEY, Commissioner of Public Buildings, Lighting and Supplies.  
 PETER J. DOOLING, Deputy Commissioner for Manhattan.  
 WILLIAM WALTON, Deputy Commissioner for Brooklyn.  
 HENRY SUTPHIN, Deputy Commissioner for Queens.  
 EDWARD I. MILLER, Deputy Commissioner for Richmond.

**LAW DEPARTMENT.**

**Office of Corporation Counsel.**  
 Staats-Zeitung Building, 3d and 4th floors 9 A. M. to 5 P. M.; Saturdays, 9 A. M. to 12 M.  
 JOHN WHALEN, Corporation Counsel.  
 THEODORE CONNOLLY, W. W. LADD, Jr., CHARLES BLANDY, Assistants.  
 WILLIAM J. CARR, Assistant Corporation Counsel for Brooklyn.

**Bureau for Collection of Arrears of Personal Taxes.**  
 Stewart Building, Broadway and Chambers street, 9 A. M. to 4 P. M.

**Bureau for the Recovery of Penalties.**

Nos. 119 and 121 Nassau street.  
 ADRIAN T. KIERNAN, Assistant Corporation Counsel.  
**Bureau of Street Openings.**  
 Nos. 90 and 92 West Broadway.  
 JOHN P. DUNN, Assistant to Corporation Counsel.

**POLICE DEPARTMENT.**

**Central Office.**  
 No. 300 Mulberry street, 9 A. M. to 4 P. M.  
 BERNARD J. YORK, President of the Board; JOHN B. SEXTON, JACOB HESS, HENRY E. ABELL, Commissioners.

**DEPARTMENT OF PUBLIC CHARITIES.**

**Central Office.**  
 Foot of East Twenty-sixth street, 9 A. M. to 4 P. M.  
 JOHN W. KELLER, President of the Board; Commissioner for Manhattan and Bronx.  
 THOMAS S. BRENNAN, Deputy Commissioner.  
 ADOLPH SIMS, Jr., Commissioner for Brooklyn and Queens.  
 ARTHUR A. QUINN, Deputy Commissioner.  
 JAMES FEENEY, Commissioner for Richmond.  
 Plans and Specifications, Contracts, Proposals and Estimates for Work and Materials for Building, Repairs and Supplies, Bills and Accounts, 9 A. M. to 4 P. M., Saturdays, 12 M.  
 Out-door Poor Department. Office hours, 8.30 A. M. to 4.30 P. M.

**DEPARTMENT OF CORRECTION.**

**Central Office.**  
 No. 148 East Twentieth street, 9 A. M. to 4 P. M.  
 FRANCIS J. LANTRY, Commissioner.  
 N. O. FANNING, Deputy Commissioner.  
 JAMES J. KIRWIN, Deputy Commissioner for Boroughs of Brooklyn and Queens.

**FIRE DEPARTMENT**

Office hours for all, except where otherwise noted from 9 A. M. to 4 P. M.; Saturdays, 12 M.  
**Headquarters.**  
 Nos. 157 and 159 East Sixty-seventh street.  
 JOHN J. SCANNELL, Fire Commissioner.  
 JAMES H. TULLY, Deputy Commissioner, Boroughs of Brooklyn and Queens.  
 AUGUSTUS T. DOCHARTY, Secretary.  
 HUGH BONNER, Chief of Department, and in Charge of Fire-alarm Telegraph.  
 JAMES DALE, Deputy Chief, in Charge of Boroughs of Brooklyn and Queens.  
 GEORGE E. MURRAY, Inspector of Combustibles.  
 PETER SEERY, Fire Marshal, Boroughs of Manhattan The Bronx and Richmond.  
 ALONZO BRYMER, Fire Marshal, Boroughs of Brooklyn and Queens.  
 Central Office open at all hours.

**DEPARTMENT OF HEALTH.**

New Criminal Court Building, Centre street, 9 A. M. to 4 P. M.  
 MICHAEL C. MURPHY, President, and WILLIAM T. JENKINS, M. D., JOHN B. COSBY, M. D., THE PRESIDENT OF THE POLICE BOARD, *ex-officio*, and the HEALTH OFFICER OF THE PORT, *ex-officio*, Commissioners; EMMONS CLARK, Secretary.  
 CHARLES F. ROBERTS, M. D., Superintendent, Borough of Manhattan.  
 EUGENE MONAHAN, M. D., Assistant Sanitary Superintendent, Borough of The Bronx.  
 ROBERT A. BLACK, M. D., Assistant Sanitary Superintendent, Borough of Brooklyn.  
 OBED L. LUSK, M. D., Assistant Sanitary Superintendent, Borough of Queens.  
 JOHN L. FEENEY, M. D., Assistant Sanitary Superintendent, Borough of Richmond.

**DEPARTMENT OF EDUCATION.**

**BOARD OF EDUCATION.**  
 No. 146 Grand street, Borough of Manhattan, 9 A. M. to 5 P. M.; Saturdays, 9 A. M. to 12 M.  
 JOSEPH J. LITTLE, President; A. EMERSON PALMER, Secretary.

**School Board for the Boroughs of Manhattan and The Bronx.**

No. 146 Grand street, Borough of Manhattan.  
 JOSEPH J. LITTLE, President; ARTHUR McMULLIN, Secretary.

**School Board for the Borough of Brooklyn.**

No. 131 Livingston street, Brooklyn.  
 CHARLES E. ROBERTSON, President; GEORGE G. BROWN, Secretary.

**School Board for the Borough of Queens.**

Flushing, L. I.  
 F. DE HAAS SIMONSON, President; JOSEPH H. FITZPATRICK, Secretary.

**School Board for the Borough of Richmond**

Stapleton, Staten Island.  
 JOHN T. BURKE, President; FRANKLIN C. VITT, Secretary.

**DEPARTMENT OF PARKS.**

Arsenal Building, Central Park, 9 A. M. to 4 P. M.; Saturdays, 12 M.  
 GEORGE C. CLAUSEN, President, Commissioner in Manhattan and Richmond.  
 GEORGE V. BROWER, Commissioner in Brooklyn and Queens.  
 AUGUST MOEBUS, Commissioner in Borough of The Bronx, Zbrowski Mansion, Claremont Park.

**DEPARTMENT OF DOCKS AND FERRIES.**

Pier "A," N. R., Battery place.  
 J. SERGEANT CRAM, President; CHARLES F. MURPHY, Treasurer; PETER F. MEYER, Commissioners.  
 WILLIAM H. BURKE, Secretary.  
 Office hours, 9 A. M. to 4 P. M.; Saturdays, 12 M.

**DEPARTMENT OF BUILDINGS.**

Main Office, No. 220 Fourth avenue, Borough of Manhattan. Office hours, 9 A. M. to 4 P. M.; Saturday, 9 A. M. to 12 M.  
 THOMAS J. BRADY, President of the Board of Buildings and Commissioner for the Boroughs of Manhattan and The Bronx.  
 JOHN GUILFOYLE, Commissioner for the Borough of Brooklyn.  
 DANIEL CAMPBELL, Commissioner for the Boroughs of Queens and Richmond.  
 A. J. JOHNSON, Secretary.  
 Office of the Department for the Boroughs of Manhattan and The Bronx, No. 220 Fourth avenue, Borough of Manhattan.  
 Office of the Department for the Borough of Brooklyn, Borough Hall, Borough of Brooklyn.  
 Office of the Department for the Boroughs of Queens and Richmond, Richmond Hall, New Brighton, Staten Island, Borough of Richmond. Branch office: Room 1, second floor, Town Hall, Jamaica, Long Island, Borough of Queens.

**DEPARTMENT OF TAXES AND ASSESSMENTS.**

Stewart Building, 9 A. M. to 4 P. M.; Saturdays, 12 M.  
 THOMAS L. FEITNER, President of the Board; EDWARD C. SHEEHY, ARTHUR C. SALMON, THOMAS J. PATTERSON and WILLIAM GRELL, Commissioners.  
**BUREAU OF MUNICIPAL STATISTICS.**  
 No. 346 Broadway (N. Y. Life Insurance Building), Rooms 1033 and 1034. Office hours from 9 A. M. to 4 P. M.; Saturdays, from 9 A. M. to 12 M.  
 JOHN T. NAGLE, M. D., Chief of Bureau.  
 Municipal Statistical Commission: FREDERICK W. GRUBE, LL. D., HARRY PAYNE WHITNEY, ANTONIO RASINES, JULIUS G. KUGELMAN, RICHARD T. WILSON, Jr., ERNEST HARVIER.

**MUNICIPAL CIVIL SERVICE COMMISSION.**

Criminal Court Building, Centre street, between Franklin and White streets, 9 A. M. to 4 P. M.  
 CHARLES H. KNOX, President, ROBERT E. DEVO and WILLIAM N. DYKMAN, Commissioners.  
 LEE PHILLIPS, Secretary.

**BOARD OF ASSESSORS.**

Office, No. 320 Broadway, 9 A. M. to 4 P. M.  
 EDWARD CAHILL, THOMAS A. WILSON, EDWARD McCUE, PATRICK M. HAVERTY and JOHN B. MEYENBORG, Board of Assessors. WILLIAM H. JASPER, Secretary.

**BOARD OF ESTIMATE AND APPORTIONMENT.**

The Mayor, Chairman; THOMAS L. FEITNER (President, Department of Taxes and Assessments, Secretary, the COMPTROLLER, PRESIDENT OF THE COUNCIL, and the CORPORATION COUNSEL, Members; CHARLES V. ADEE, Clerk.  
 Office of Clerk, Department of Taxes and Assessments, Stewart Building.

**SHERIFF'S OFFICE.**

Stewart Building, 9 A. M. to 4 P. M.  
 THOMAS J. DUNN, Sheriff; HENRY P. MULVANY, Under Sheriff.

**SHERIFF'S OFFICE, KINGS COUNTY**

County Court-house, Brooklyn.  
 FRANK D. CREAMER, Sheriff; HUGH McLAUGHLIN, Under Sheriff.

**COMMISSIONERS OF THE SINKING FUND.**

The Mayor, Chairman; BIRD S. COLER, Comptroller; PATRICK KEENAN, Chamberlain; RANDOLPH GUGGENHEIMER, President of the Council, and ROBERT MUIR, Chairman, Finance Committee, Board of Aldermen, Members. EDGAR J. LEVEY, Secretary.  
 Office of Secretary, Room No. 11, Stewart Building.

**REGISTER'S OFFICE.**

East side City Hall Park, 9 A. M. to 4 P. M.  
 ISAAC FROMME, Register; JOHN VON GLAHN, Deputy Register.

**COMMISSIONER OF JURORS**

Room 127 Stewart Building, Chambers street and Broadway, 9 A. M. to 4 P. M.  
 CHARLES WELDE, Commissioner; JAMES E. CONNER, Deputy Commissioner.

**SPECIAL COMMISSIONER OF JURORS.**

No. 111 Fifth avenue.  
 H. W. GRAY, Commissioner.

**COMMISSIONER OF JURORS, KINGS COUNTY.**

3 Court-house.  
 WILLIAM A. FUREY, Commissioner.

**SPECIAL COMMISSIONER OF JURORS, KINGS COUNTY.**

No. 325 Fulton street.  
 EDWARD J. DOOLEY, Commissioner.

**NEW YORK COUNTY JAIL.**

No. 70 Ludlow street, 9 A. M. to 4 P. M.  
 PATRICK H. PICKETT, Warden.

**COUNTY CLERK'S OFFICE.**

Nos. 7 and 8 New County Court-house, 9 A. M. to 4 P. M.  
 WILLIAM SOMMER, County Clerk.  
 GEORGE H. FAHRBACH, Deputy.

**NEW EAST RIVER BRIDGE COMMISSION.**

Commissioners' Office, Nos. 49 and 51 Chambers street, New York, 9 A. M. to 4 P. M.  
 LEWIS NIXON, President; JAMES W. BOYLE, Vice-President; SMITH E. LANE, Secretary; JULIAN D. FAIRCHILD, Treasurer; JOHN W. WEBER, THOMAS S. MOORE and The Mayor, Commissioners.  
 Chief Engineer's Office, No. 84 Broadway, Brooklyn, E. D., 9 A. M. to 5 P. M.

**DISTRICT ATTORNEY**

New Criminal Court Building, Centre street, 9 A. M. to 4 P. M.  
 ASA BIRD GARDINER, District Attorney; WILLIAM J. McKENNA, Chief Clerk.

**CHANGE OF GRADE DAMAGE COMMISSION TWENTY-THIRD AND TWENTY-FOURTH WARDS.**

Room 58, Schermerhorn Building, No. 96 Broadway. Meetings, Mondays, Wednesdays and Fridays, at 3 P. M.  
 DANIEL LORD, Chairman; WARREN W. FOSTER, WILLIAM E. STILLINGS, Commissioners.  
 LAMONT McLOUGHLIN, Clerk.

**CORONERS.**

**Borough of Manhattan.**  
 Office, New Criminal Court Building. Open at all times of day and night.  
 EDWARD T. FITZPATRICK, JACOB E. BAUSCH, EDWARD W. HART, ANTONIO ZUCCA.

**Borough of The Bronx.**

ANTHONY MCOWEN, THOMAS M. LYNCH.

**Borough of Brooklyn**

ANTHONY J. BURGER, GEORGE W. DELAP.

**Borough of Queens.**

PHILIP T. CRONIN, Dr. SAMUEL S. GUY, Jr., LEONARD ROUFF, Jr., Jamaica, L. I.

**Borough of Richmond.**

JOHN SEAYER, GEORGE C. TRANTER.

**SURROGATES' COURT.**

New County Court-house. Court opens at 10.30 A. M.; adjourns 4 P. M.  
 FRANK T. FITZGERALD, JAMES M. VARNUM, Surrogates; WILLIAM V. LEARY, Chief Clerk.

**CITY MAGISTRATES' COURTS.**

Courts open from 9 A. M. until 4 P. M.  
**City Magistrates.**—HENRY A. BRANN, ROBERT C. CORNELL, LEROY B. CRANE, JOSEPH M. DEUEL, CHARLES A. FLAMMER, HERMAN C. KUDLICH, CLARENCE W. MEADE, JOHN O. MOTT, JOSEPH POOL, CHARLES E. SIMMS, Jr., THOMAS F. WENTWORTH, W. H. OLMSTEAD, LUDWIG F. THOMA, Secretary.  
 First District—Criminal Court Building.  
 Second District—Jefferson Market.  
 Third District—No. 69 Essex street.  
 Fourth District—Fifty-seventh street, near Lexington avenue.  
 Fifth District—One Hundred and Twenty-first street southeastern corner of Sylvan place.  
 Sixth District—One Hundred and Fifty-eighth street and Third avenue.  
 Seventh District—Fifty-fourth street, west of Eighth avenue.

**SECOND DIVISION.**

**Borough of Brooklyn.**  
 First District—No. 318 Adams street. JACOB BRENNER, Magistrate.  
 Second District—Court and Butler streets. HENRY BRISTOW, Magistrate.  
 Third District—Myrtle and Vanderbilt avenues. CHARLES E. TRALE, Magistrate.  
 Fourth District—Nos. 6 and 8 Lee avenue. WILLIAM KRAMER, Magistrate.  
 Fifth District—Ewen and Powers streets. ANDREW LEMON, Magistrate.  
 Sixth District—Gates and Reid avenues. LEWIS R. WORTH, Magistrate.  
 Seventh District—No. 31 Grant street, Flatbush. ALFRED E. STEERS, Magistrate.  
 Eighth District—Coney Island. J. LOTT NOSTRAND, Magistrate.

**Borough of Queens**

First District—Nos. 21 and 23 Jackson avenue, Long Island City. MATTHEW J. SMITH, Magistrate.  
 Second District—Flushing, Long Island. LUKE J. CONNORTON, Magistrate.  
 Third District—Far Rockaway, Long Island. EDMUND J. HEALY, Magistrate.

**Borough of Richmond.**

First District—New Brighton, Staten Island. JOHN CROAK, Magistrate.  
 Second District—Stapleton, Staten Island. NATHANIEL MARSH, Magistrate.  
 Secretary to the Board, GEORGE E. ENGLAND, Myrtle and Vanderbilt avenues, Borough of Brooklyn.

**KINGS COUNTY SURROGATE'S COURT;**

County Court-house, Brooklyn.  
 GEORGE B. ABBOTT, Surrogate; MICHAEL F. MCGOLDRICK, Chief Clerk.

**KINGS COUNTY TREASURER.**

Court-house, Room 14.  
 JOHN W. KIMBALL, Treasurer; THOMAS F. FARRELL, Deputy Treasurer.

**THE COMMISSIONERS OF RECORDS.**

Kings County.—Room 7, Hall of Records.  
 JOHN M. RIDER, HENRY N. MEERER, HENRY S. RASQUIN, Commissioners.

**EXAMINING BOARD OF PLUMBERS.**

Rooms 14, 15 and 16 Nos. 149 to 151 Church street.  
 President, JOHN RENEHAN; Secretary, JAMES H. MCGOVERN; Treasurer, EDWARD HALEY, HORACE LOOMIS, P. J. ANDREWS, *ex-officio*.  
 Meet every Monday, Wednesday and Friday at 2 P. M.

**SUPREME COURT.**

County Court-house, 10.30 A. M. to 4 P. M.  
 Special Term, Part I., Room No. 2.  
 Special Term, Part II., Room No. 15.  
 Special Term, Part III., Room No. 19.  
 Special Term, Part IV., Room No. 11.  
 Special Term, Part V., Room No. 23.  
 Special Term, Part VI., Room No. 21.  
 Special Term, Part VII., Room No. 25.  
 Special Term, Part VIII., Room No. 34.  
 Trial Term, Part II., Room No. 16.  
 Trial Term, Part III., Room No. 17.  
 Trial Term, Part IV., Room No. 18.  
 Trial Term, Part V., Room No. 32.  
 Trial Term, Part VI., Room No. 31.  
 Trial Term, Part VII., Room No. 30.  
 Trial Term, Part VIII., Room No. 24.  
 Trial Term, Part IX., Room No. 22.  
 Naturalization Bureau, Room No. 26.  
**Justices.**—ABRAHAM R. LAWRENCE, CHARLES H. RUAX, CHARLES F. MACLEAN, FREDERICK SMYTH, JAMES FITZGERALD, MILES BEACH, DAVID LEVENTRIT, LEONARD A. GEIGERICH, HENRY W. BOOKSTAVEN, HENRY BISCHOFF, Jr., JOHN J. FRIEDMAN, GEORGE P. ANDREWS, P. HENRY DUGRO, DAVID McADAM, HENRY R. BEEKMAN, HENRY A. GILDERSLEEVE, FRANCIS M. SCOTT, WILLIAM SOMMER, Clerk.

**CITY COURT.**

Brown-stone Building, City Hall Park.  
 General Term.  
 Trial Term, Part I.  
 Part II.  
 Part III.  
 Part IV.  
 Special Term Chambers will be held 10 A. M. to 4 P. M.  
 Clerk's Office, Brown-stone Building, No. 32 Chambers street, 9 A. M. to 4 P. M.  
 JAMES M. FITZSIMONS, Chief Justice; JOHN H. MCCARTHY, LEWIS J. CONLAN, EDWARD F. O'DWYER, JOHN P. SCHUCHMAN and THEODORE F. HASCALL, Justices. THOMAS F. SMITH, Clerk.

**COURT OF SPECIAL SESSIONS.**

Building for Criminal Courts, Centre street, between Franklin and White streets, Borough of Manhattan. Court opens at 10 A. M.  
**Justices.**—First Division—ELIZUR B. HINSDALE, WILLIAM TRAVERS JEROME, EPHRAIM A. JACOB, JOHN HAYES, WILLIAM C. HOLBROOK, WILLIAM M. FULLER, Clerk; JOSEPH H. JONES, Deputy Clerk.  
 Clerk's office open from 9 A. M. to 4 P. M.  
 Second Division—Trial days—Borough Hall, Brooklyn, Mondays, Wednesdays and Fridays, at 10 o'clock; Town Hall, Jamaica, Borough of Queens, Tuesdays, at 10 o'clock; Town Hall, New Brighton, Borough of Richmond, Thursdays, at 10 o'clock.  
**Justices.**—JOHN COURTNEY, HOWARD J. FORKER, PATRICK KEADY, JOHN FLEMING, THOMAS W. FITZGERALD, JOSEPH L. KERRIGAN, Clerk; CHARLES F. WOLZ, Deputy Clerk.  
 Clerk's office, Borough Hall, Borough of Brooklyn, open from 9 A. M. to 4 P. M.

**COURT OF GENERAL SESSIONS.**

Held in the building for Criminal Courts, Centre Elm, White and Franklin streets. Court opens at 11 o'clock.  
 RUFUS B. COWING, City Judge; JOHN W. GOFF, Recorder; JOSEPH E. NEWBURGER, MARTIN T. McMAHON and JAMES A. BLANCHARD, Judges of the Court of General Sessions. EDWARD R. CARROLL, Clerk.  
 Clerk's office open from 10 A. M. to 4 P. M.

**Supreme Court, Part I., Criminal Trial Term.**  
 Held in the building for Criminal Courts. Court opens at 10.30 A. M.  
 EDWARD R. CARROLL, Clerk. Hours from 10 A. M. to 4 P. M.

**CRIMINAL DIVISION, SUPREME COURT.**

New Criminal Court Building, Centre street. Court opens at 10.30 o'clock A. M.  
 EDWARD R. CARROLL, Clerk. Hours from 10 A. M. to 4 P. M.

**APPELLATE DIVISION, SUPREME COURT.**

Court-house, No. 111 Fifth avenue, corner Eighteenth street. Court opens at 1 P. M.  
 CHARLES H. VAN BRUNT, Presiding Justice; GEORGE C. BARRETT, CHESTER B. McLAUGHLIN, EDWARD PATTERSON, MORGAN J. O'BRIEN, GEORGE L. INGRAM, WILLIAM RUMSEY, Justices. ALFRED WAGSTAFF, Clerk. WILLIAM LAMB, Jr., Deputy Clerk.

**COUNTY COURT, KINGS COUNTY.**

County Court-house, Brooklyn.  
 JOSEPH ASPINALL and WM. B. HURD, Jr., County Judges.  
 CHARLES Y. VAN DOREN, Chief Clerk.

**QUEENS COUNTY COURT.**

County Court-house, Long Island City.  
 HARRISON S. MOORE, County Judge.

**MUNICIPAL COURTS.**

**Borough of Manhattan.**  
 First District—Third, Fifth and Eighth Wards, and all that part of the First Ward lying west of Broadway and Whitehall street, including Governor's Island, Bedloe's Island, Ellis Island and the Oyster Islands, New Court-house, No. 128 Prince street, corner of Wooster street.  
 WAUHOPE LYNN, Justice. FRANK L. BACON, Clerk.  
 Clerk's office open from 9 A. M. to 4 P. M.  
 Second District—Second, Fourth, Sixth and Fourteenth Wards, and all that portion of the First Ward lying south and east of Broadway and Whitehall street. Court-room, corner of Grand and Centre streets.  
 HERMANN BOLTE, Justice. FRANCIS MANGIN, Clerk.  
 Clerk's office open from 9 A. M. to 4 P. M.  
 Third District—Ninth and Fifteenth Wards. Court room, southwest corner Sixth avenue and West Tenth street. Court open daily (Sundays and legal holidays excepted) from 9 A. M. to 4 P. M.  
 WM. F. MOORE, Justice. DANIEL WILLIAMS, Clerk.  
 Fourth District—Tenth and Seventeenth Wards. Court-room, No. 30 First street, corner Second avenue. Court opens 9 A. M. daily, and remains open to close of business.  
 GEORGE F. ROESCH, Justice. JOHN E. LYNCH, Clerk.  
 Fifth District—Seventh, Eleventh and Thirteenth Wards. Court-room, No. 154 Clinton street.  
 HENRY M. GOLDFOGLE, Justice. JEREMIAH HAYES, Clerk.  
 Sixth District—Eighteenth and Twenty-first Wards. Court-room, northwest corner Twenty-third street and Second avenue. Court opens 9 A. M. daily, and continues open to close of business.  
 DANIEL F. MARTIN, Justice. ABRAHAM BERNARD, Clerk.  
 Seventh District—Nineteenth Ward. Court-room, No. 151 East Fifty-seventh street. Court opens every morning at 9 o'clock (except Sundays and legal holidays), and continues open to close of business.  
 JOHN B. MCKEAN, Justice. PATRICK McDAVITT, Clerk.  
 Eighth District—Sixteenth and Twentieth Wards. Court-room, northwest corner of Twenty-third street and Eighth avenue. Court opens at 9 A. M. and continues open to close of business.  
 Clerk's office open from 9 A. M. to 4 P. M. each Court day.  
 Trial days, Wednesdays, Fridays and Saturdays. Return days Tuesdays, Thursdays and Sundays.  
 JOSEPH H. STINER, Justice. THOMAS COSTIGAN, Clerk.  
 Ninth District—Twelfth Ward, except that portion thereof which lies west of the centre line of Lenox or Sixth avenue, and of the Harlem river north of the terminus of Lenox avenue. Court-room, No. 170 East One Hundred and Twenty-first street, southeast corner of Sylvan place. Court opens every morning at 9 o'clock (except Sundays and legal holidays), and continues open to close of business.  
 JOSEPH P. FALLON, Justice. WILLIAM J. KENNEDY, Clerk.  
 Clerk's office open daily from 9 A. M. to 4 P. M.  
 Tenth District—Twenty-second Ward and all that portion of the Twelfth Ward which is bounded on the north by the centre line of One Hundred and Tenth street, on the south by the centre line of Eighty-sixth street, on the east by the centre line of Sixth avenue, and on the west by the North river. Court-room, No. 378 West Fifty-fourth street. Court opens daily (Sundays and legal holidays excepted) from 9 A. M. to 4 P. M.  
 JAMES A. O'GORMAN, Justice. JAMES J. GALLIGAN, Clerk.



**Eleventh District**—That portion of the Twelfth Ward which lies north of the centre line of West One Hundred and Tenth street and west of the centre line of Lenox or Sixth avenue, and of the Harlem river north of the terminus of Lenox or Sixth avenue. Court-room, corner of One Hundred and Twenty-sixth street and Columbus avenue. Court opens daily (Sundays and legal holidays excepted) from 10 A. M. to 4 P. M.

FRANCIS J. WORCESTER, Justice. ADOLPH N. DUMAHAUT, Clerk.

#### Borough of The Bronx.

**First District**—All that part of the Twenty-fourth Ward which was lately annexed to the City and County of New York by chapter 1034 of the Laws of 1895, comprising all of the late Town of Westchester and part of the Towns of Eastchester and Pelham, including the Villages of Wakefield and Williamsbridge. Court-room, Town Hall, Main street, Westchester Village. Court opens daily (Sundays and legal holidays excepted) from 9 A. M. to 4 P. M.

WILLIAM W. PENFIELD, Justice. JOHN N. STEWART, Clerk.

**Second District**—Twenty-third and Twenty-fourth Wards. Court-room, corner of Third avenue and One Hundred and Fifty-eighth street. Office hours from 9 A. M. to 4 P. M. Court opens at 9 A. M.

JOHN M. TIERNEY, Justice. HOWARD SPEAR, Clerk.

#### Borough of Brooklyn.

**First District**—Comprising First, Second, Third, Fourth, Fifth, Sixth, Tenth and Twelfth Wards of the Borough of Brooklyn. Court-house, northwest corner State and Court streets.

JACOB NEU, Justice. EDWARD MORAN, Clerk.

**Second District**—Seventh, Eighth, Ninth, Eleventh, Twentieth, Twenty-first, Twenty-second and Twenty-third Wards. Court-room located at No. 794 Broadway, Brooklyn.

GERARD B. VAN WART, Justice. WILLIAM H. ALLEN, Chief Clerk.

Clerk's office open from 9 A. M. to 4 P. M.

**Third District**—Includes the Thirteenth, Fourteenth, Fifteenth, Sixteenth, Seventeenth, Eighteenth and Nineteenth Wards. Court-house, Nos. 6 and 8 Lee avenue, Brooklyn.

WILLIAM SCHNITZPAHN, Justice. CHARLES A. CONRADY, Clerk.

Clerk's office open from 9 A. M. until 4 P. M. Court opens at 10 o'clock.

**Fourth District**—Twenty-fourth, Twenty-fifth, Twenty-sixth, Twenty-seventh and Twenty-eighth Wards. Court-room, No. 14 Howard avenue.

ADOLPH H. GOETTING, Justice. HERMAN GOHLINGHORN, Chief Clerk. JAMES P. SINNOTT, Assistant Clerk.

Clerk's office open from 9 A. M. to 4 P. M.

**Fifth District**—Twenty-ninth, Thirtieth, Thirty-first and Thirty-second Wards. Court-room on Bath avenue and Bay Twenty-second street, Bath Beach.

CORNELIUS FURGUSON, Justice. JEREMIAH J. O'LEARY, Clerk.

Clerk's office open from 9 A. M. to 4 P. M.

#### Borough of Queens.

**First District**—First Ward of Long Island City, formerly composing five Wards. Court-room, Queens County Court-house (located temporarily).

THOMAS C. KADEN, Justice. THOMAS F. KENNEDY, Clerk.

Clerk's office open from 9 A. M. to 4 P. M. each week day. Court held each day, except Saturday.

**Second District**—Second and Third Wards, which includes the territory of the late Towns of Newtown and Flushing. Court-room in Court-house at late Town of Newtown, corner of Broadway and Court street, Elmhurst, New York. P. O. address, Elmhurst, New York.

WILLIAM T. MONTEVERDE, Justice. HENRY WALTER, Jr., Clerk.

Clerk's office open from 9 A. M. to 4 P. M.

**Third District**—JAMES F. McLOUGHLIN, Justice; GEO. W. DANON, Clerk.

Court-house, Town Hall, Jamaica.

#### Borough of Richmond.

**First District**—First and Third Wards (Towns of Castleton and Northfield). Court-room, former Village Hall, Lafayette avenue and Second street, New Brighton.

JOHN J. KENNEY, Justice. FRANCIS F. LEMAN, Clerk.

Court office open from 9 A. M. to 4 P. M. Court held each day, except Saturday, from 10 A. M.

**Second District**—Second, Fourth and Fifth Wards (Towns of Middletown, Southfield and Westfield). Court-room, former Edgewater Village Hall, Stapleton.

ALBERT REYNOLD, Justice. PETER TIERNAN, Clerk.

Court office open from 9 A. M. to 4 P. M. Court held each day from 10 A. M., and continues until close of business.

#### RICHMOND COUNTY.

##### COUNTY CLERK'S OFFICE.

County Office Building, Richmond, S. I., 9 A. M. to 4 P. M.

JOHN H. ELSWORTH, County Clerk.

#### SHERIFF.

County Court-house, Richmond, S. I., 9 A. M. to 4 P. M.

AUGUST ACKER, Sheriff.

#### DISTRICT ATTORNEY.

Port Richmond, S. I.

EDWARD S. RAWSON, District Attorney.

#### DISTRICT ATTORNEY, QUEENS COUNTY.

GEORGE W. DAVISON, District Attorney.

#### COUNTY JUDGE AND SURROGATE.

County Office Building, Richmond, S. I.

STEPHEN D. STEVENS, County Judge.

#### OFFICIAL PAPERS.

**MORNING**—"Morning Journal," "Telegraph."  
**Evening**—"Daily News," "Evening Sun."  
**Weekly**—"Weekly Union."  
**Semi-weekly**—"Harlem Local Reporter."  
**German**—"Morgen Journal."

WILLIAM A. BUTLER,

Supervisor, City Record.

NOVEMBER 28, 1898.

#### DEPARTMENT OF FINANCE.

**NOTICE TO TAXPAYERS OF SECOND WARD (LATE TOWN OF NEWTOWN), BOROUGH OF QUEENS.**

DEPARTMENT OF FINANCE,  
BUREAU FOR THE COLLECTION OF ASSESSMENTS  
AND ARREARS,  
CITY OF NEW YORK, April 3, 1899.

**UNDER THE PROVISIONS OF CHAPTER 20, Laws of 1899, public notice is hereby given, that "Any tax heretofore levied for town, state and**

county purposes in arrears at the time of the passage of this act in that part of The City of New York which heretofore and before the first day of January, 1898, formed and constituted the town of Newtown, in the County of Queens, may be paid and discharged of record at any time before the fifteenth (15th) day of September, 1899, with interest at the rate of two (2) per centum per annum."

Also, that "any lot, piece or parcel of land within the boundaries of that part of The City of New York, constituting the Town of Newtown prior to January 1, 1898, which has been heretofore sold for unpaid taxes, where the same was bid in, in the name of said Town of Newtown, and where the certificates of sale have not been assigned at the date of the passage of this act, may be redeemed from such sale and sales by the payment of the face of the tax or taxes for which the same was sold, with interest at the rate of two per centum per annum, and such taxes shall be thereby satisfied and discharged of record; provided such payment be made prior to the thirty-first (31st) day of December, 1899."

On and after Monday, April 3, 1899, payments may be made, under the provisions of this act, to the undersigned, at his office, in the Borough of Queens, Hackett Building, corner of Jackson avenue and Fifth street, First Ward (formerly Long Island City), between the hours of 9 A. M. and 2 P. M.; Saturdays, 9 to 12 M.

EDWARD GILON,  
Collector of Assessments and Arrears.

#### NOTICE TO PROPERTY OWNERS.

**IN PURSUANCE OF SECTION 1018 OF THE Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessments for LOCAL IMPROVEMENTS, in the BOROUGH OF THE BRONX:**

##### TWENTY-THIRD WARD.

**FRANKLIN AVENUE—SEWER**, between One Hundred and Sixty-eighth and One Hundred and Sixty-ninth streets. Area of assessment: Both sides of Franklin avenue, between One Hundred and Sixty-eighth and One Hundred and Sixty-ninth streets, also north side of One Hundred and Sixty-eighth street, between Franklin avenue and Boston road.

**ST. MARY'S STREET—REGULATING, GRADING, CURBING, FLAGGING AND LAYING CROSSWALKS** between St. Ann's and Robbins avenues. Area of assessment: Both sides of St. Mary's street, between St. Ann's and Robbins avenues, and to the extent of half the blocks on the intervening and terminating avenues.

**TINTON AVENUE—SEWER**, between One Hundred and Sixty-ninth and Home streets, with BRANCH SEWER in One Hundred and Sixty-eighth street, between Tinton avenue and Boston road. Area of assessment: Both sides of Tinton avenue, between One Hundred and Sixty-ninth and Home streets; also, both sides of One Hundred and Sixty-eighth street, between Tinton avenue and Boston road.

—that the same were confirmed by the Board of Assessors on March 28, 1899, and entered on same date in the Record of Titles of Assessments Confirmed, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of entry of the assessment, interest will be collected thereon, as provided in section 1019 of said Greater New York Charter. Said section provides that, "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per cent, per annum, to be calculated from the date of such entry to the date of payment."

The above assessments are payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, at Crotona Park Building, corner of One Hundred and Seventy-seventh street and Third avenue, Borough of The Bronx, between the hours of 9 A. M. and 2 P. M., and on Saturdays from 9 A. M. to 12 M., and all payments made thereon on or before May 27, 1899, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per cent, per annum from the date of entry in the Record of Titles of Assessments in said Bureau to the date of payment.

BIRD S. COLER,  
Comptroller.  
CITY OF NEW YORK—DEPARTMENT OF FINANCE,  
COMPTROLLER'S OFFICE, April 1, 1899.

PETER F. MEYER, AUCTIONEER.

#### CORPORATION SALE OF REAL ESTATE.

##### FIFTH WARD.

**PUBLIC NOTICE IS HEREBY GIVEN THAT** the Commissioners of the Sinking Fund of The City of New York, by virtue of the powers vested in them by law, will offer for sale at public auction, on

**THURSDAY, MAY 4, 1899,**

at 12 o'clock M., at the New York Real Estate Salesroom, No. 111 Broadway, the following described real estate belonging to the Corporation of The City of New York, viz:

All that certain block of land with the buildings thereon erected, situate, lying and being in the Fifth Ward of The City of New York, Borough of Manhattan, bounded by West street, Duane street, Washington street and Reade street, said premises being laid down on the Tax Maps of The City of New York, as a part of Block 139, Lot Nos. 53 and 54, and are described as follows: Beginning at the northwest corner of Washington and Reade streets; thence northerly along the westerly line of Washington street 70 feet 7 inches to the southerly line of Duane street; thence westerly along the southerly line of Duane street 270 feet to the easterly line of West street; thence southerly along the easterly line of West street 70 feet 2 inches to the northerly line of Reade street; thence easterly along the northerly line of Reade street 266 feet 4 inches to the point or place of beginning, be the said several dimensions, more or less, the said property being shown on a map thereof prepared by Eugene E. McLean, Engineer of the Department of Finance, dated March 27, 1899, upon the following:

##### TERMS AND CONDITIONS OF SALE.

The highest bidder will be required to pay ten (10) per cent. of the amount of his bid, together with the auctioneer's fees at the time of the sale; thirty (30) per cent. upon the delivery of the deed, which shall be thirty days from the date of sale, and the remaining sixty (60) per cent. of the purchase money either to be paid at the date of the delivery of the deed, or, at the option of the purchaser, to remain on bond and mortgage for five years, with interest at the rate of six per cent. per annum, payable semi-annually, the mortgage to contain the customary thirty days' interest and ninety days' tax clauses.

The bond and mortgage may be paid off at any time within the term thereof on giving thirty days' notice to the Comptroller or it may be paid in installments of not less than five thousand dollars, on any day when the interest is due, or on thirty days' notice. The bond and mortgage will be prepared by the Counsel to the Corporation, and the sum of twelve dollars and fifty cents will be charged for drawing, acknowledging and recording the same.

The Comptroller may, at his option, resell the property if the successful bidder shall fail to comply with the terms of sale, and the person failing to comply therewith will be held liable for any deficiency that may result from any such resale.

The right to reject any bid is reserved.  
Lithographic Maps of said real estate may be had at the Comptroller's Office, Stewart Building, No. 280 Broadway, Borough of Manhattan, after April 1, 1899.

By order of the Commissioners of the Sinking Fund, under a resolution adopted at a meeting of the Board held March 16, 1899.

BIRD S. COLER,  
Comptroller.  
CITY OF NEW YORK—DEPARTMENT OF FINANCE,  
COMPTROLLER'S OFFICE, March 23, 1899.

#### NOTICE TO PROPERTY OWNERS.

**IN PURSUANCE OF SECTION 1018 OF THE Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessments for LOCAL IMPROVEMENTS in the BOROUGH OF THE BRONX:**

##### TWENTY-THIRD WARD.

**ONE HUNDRED AND FIFTY-SIXTH STREET—REGULATING, GRADING, CURBING, FLAGGING, LAYING CROSSWALKS AND FENCING**, between St. Ann's and Westchester avenues. Area of assessment: Both sides of One Hundred and Fifty-sixth street, between St. Ann's and Westchester avenues, and to the extent of half the blocks on Trinity avenue.

##### TWENTY-FOURTH WARD.

**ONE HUNDRED AND NINETY-FIFTH STREET (FORMERLY TAPPAN STREET)—REGULATING, GRADING, CURBING, FLAGGING, LAYING CROSSWALKS AND FENCING**, between Webster and Marion avenues. Area of assessment: Both sides of One Hundred and Ninety-fifth street, between Webster and Marion avenues, and to the extent of half the blocks on the intersecting and terminating avenues.

—that the same were confirmed by the Board of Assessors on March 21, 1899, and entered on same date in the Record of Titles of Assessments Confirmed, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessment, interest will be collected thereon, as provided in section 1019 of said Greater New York Charter. Said section provides that, "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per cent, per annum, to be calculated from the date of such entry to the date of payment."

The above assessments are payable to the Collector of Assessments and Arrears, at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, at Crotona Park Building, corner of One Hundred and Seventy-seventh street and Third avenue, Borough of The Bronx, between the hours of 9 A. M. and 2 P. M., and on Saturdays from 9 A. M. to 12 M., and all payments made thereon on or before May 20, 1899, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per cent, per annum from the date of entry in the Record of Titles of Assessments in said Bureau to the date of payment.

BIRD S. COLER,  
Comptroller.  
CITY OF NEW YORK—DEPARTMENT OF FINANCE,  
COMPTROLLER'S OFFICE, March 27, 1899.

#### INTEREST ON CITY BONDS AND STOCK.

**THE INTEREST DUE MAY 1, 1899, ON THE Registered Bonds and Stock of The City of New York will be paid on that day by the Comptroller, at his office in the Stewart Building, corner of Broadway and Chambers street (Room 27).**

The Transfer Books thereof will be closed from March 31 to May 1, 1899.

The interest due May 1, 1899, on the Coupon Bonds and Stock of the former City of New York will be paid on that day by the Knickerbocker Trust Company, No. 66 Broadway.

BIRD S. COLER,  
Comptroller.  
THE CITY OF NEW YORK—DEPARTMENT OF FINANCE,  
COMPTROLLER'S OFFICE, March 6, 1899.

DEPARTMENT OF FINANCE—CITY OF NEW YORK,  
BUREAU FOR THE COLLECTION OF ASSESSMENTS  
AND ARREARS,  
ROOMS 1 AND 3 MUNICIPAL BUILDING,  
BOROUGH OF BROOKLYN, December 15, 1898.

**NOTICE IS HEREBY GIVEN THAT THE Assessment Rolls in the following-entitled matters have been completed and are now due and payable and the authority for the collection of the various installments of assessments mentioned therein, have this day been delivered to the Collector of Assessments and Arrears, and all persons liable to pay such assessments are required to pay the same without delay at his office, in the Borough of Brooklyn, under the penalty of the law.**

**Sewer Map N, District 29**—Assessment for sewers in the Eighth Ward, under chapter 365, Laws of 1889, chapter 452, Laws of 1890, and chapter 520, Laws of 1895; fourth installment.

**Assessment for benefit from Prospect Park (for lands taken), under chapter 244, Laws of 1878; twenty-first installment.**

**Main sewers in Map S, Drainage District No. 39, under chapter 516, Laws of 1896, assessed upon the District in the Twenty-sixth Ward and parts of Wards Twenty-four, Twenty-five, Twenty-eight and Twenty-nine; second installment.**

**Assessments for grading and paving the following-named streets, under chapter 310, Laws of 1892:**

**Market street, from Jamaica avenue to Atlantic avenue; fourth installment.**

**Richmond street, from Jamaica avenue to Fulton street; fourth installment.**

**Belmont avenue, from Rockaway avenue to Powell street; fourth installment.**

**Sutter avenue, from Rockaway avenue to Alabama avenue; fourth installment.**

**Miller avenue, from Jamaica avenue to Eastern parkway; fourth installment.**

**Berriman street, from Atlantic avenue to New Lots road; fourth installment.**

**Essex street, from Atlantic avenue to Eastern Parkway; fourth installment.**

**Snediker avenue, from Liberty avenue to Dumont avenue; fourth installment.**

**Logan street, from Atlantic avenue to New Lots road; fourth installment.**

**Sackman street, from Eastern parkway to Livonia avenue; fourth installment.**

**Vermont street, from Jamaica avenue to Eastern parkway; fourth installment.**

**Hinsdale street, from Atlantic avenue to Sutter avenue; third installment.**

**Ashford street, from Jamaica avenue to Arlington avenue; third installment.**

##### EXTRACTS FROM THE LAW.

Chapter 583, Laws of 1888, title 7, section 10, and title 19, section 9, as amended by chapter 599, Laws of 1892, and chapter 888, Laws of 1895, as amended by section 937, chapter 378, Laws of 1897.

On all taxes and on all assessments except assessments for grading and paving, which shall hereafter be paid to the Collector, before the expiration of thirty days from the time the same shall become due and payable, an allowance shall be made to the person or persons making such payments at the rate of seven and three-tenths per centum per annum, for the unexpired portion thereof. On all taxes, assessments and water rates paid after the expiration of thirty days from the time the same shall have become due and payable, there shall be added to and collected as part of every such tax, assessment or water rate, interest at the rate of nine per cent. per annum, to be computed from the time the same became due and payable, to the date of said payment.

BIRD S. COLER,  
Comptroller.  
EDWARD GILON,  
Collector of Assessments and Arrears.  
M. O'KEEFFE,  
Deputy Collector of Assessments and Arrears.  
Borough of Brooklyn.

#### MUNICIPAL CIVIL SERVICE COMMISSION.

MUNICIPAL CIVIL SERVICE COMMISSION OF THE CITY OF NEW YORK,  
CENTRE, ELM, FRANKLIN AND WHITE STREETS,  
NEW YORK, April 7, 1899.

**PUBLIC NOTICE IS HEREBY GIVEN THAT** open competitive examinations will be held at the offices of this Commission for the following positions, upon the dates specified:

Friday, April 7, 10 A. M. **DEPUTY SUPERINTENDENT OF SCHOOL SUPPLIES.** Subjects: Technical, experience, arithmetic and writing.

Monday, April 10, 10 A. M. **FOREMAN, REPAIRS TO BUILDINGS.** Subjects: Technical, experience, arithmetic and writing.

Tuesday, April 11, 10 A. M. **MATE.** Subjects: Experience and technical.

Tuesday, April 11, 10 A. M. **PILOT AND MASTER.** Subjects: Technical and experience.

Friday, April 14, 10 A. M. **OFFICE GIRL.** Applicants must be under 18 years of age. Subjects: Arithmetic, spelling, dictation, writing and letter-writing.

LEE PHILLIPS,  
Secretary.

#### NORMAL COLLEGE OF THE CITY OF NEW YORK.

**A SPECIAL MEETING OF THE BOARD OF Trustees of the Normal College of The City of New York will be held at the Hall of the Board of Education, No. 146 Grand street, Borough of Manhattan, on Wednesday, April 12, 1899, at 5.30 o'clock P. M., to consider the question of salaries of the Professors, and for the transaction of other business.**

Dated **BOROUGH OF MANHATTAN**, April 6, 1899.

JOSEPH J. LITTLE,  
Chairman.

A. EMERSON PALMER,  
Secretary.

#### DEPARTMENT OF EDUCATION.

**SEALED PROPOSALS WILL BE RECEIVED BY** the Committee on Buildings of the Board of Education of The City of New York, at the Annex to the Hall of the Board, No. 585 Broadway, eleventh floor, Borough of Manhattan, until 4 o'clock P. M., on

**THURSDAY, APRIL 20, 1899,**

for erecting a new school building on north side of Butler street, between Fourth and Fifth avenues, Borough of Brooklyn.

Plans and specifications may be seen and blank proposals obtained at the Annex of the Hall of the Board of Education, Estimating Room, Nos. 419 and 421 Broome street, Manhattan.

The attention of bidders is expressly called to the time stated in the contract within which the work must be completed. They are expressly notified that the successful bidder will be held strictly to completion within said time.

The Committee reserves the right to reject any or all of the proposals submitted.

The party submitting a proposal, and the parties proposing to become sureties, must each write his name and place of residence on said proposal.

Two responsible and approved sureties, residents of this city, are required in all cases. One of the sureties must be a surety company doing business in this city when the amount of the bid exceeds two thousand dollars.

No proposal will be considered from persons whose character and antecedent dealings with the Board of Education render their responsibility doubtful.

It is required, as a condition precedent to the reception or consideration of any proposals, that a certified check upon, or a certificate of deposit of one of the State or National banks or Trust Companies of The City of New York, drawn to the order of the President of the Board of Education, shall accompany the proposal to an amount of not less than three per cent. of such proposal when said proposal is for or exceeds ten thousand dollars, and to an amount of not less than five per cent. of such proposal when said proposal is for an amount under ten thousand dollars; that, on demand, within one day after the awarding of the contract by the Committee, the President of the said Board will return all the deposits of checks and certificates of deposit made to the persons making the same, except that made by the person or persons whose bid has been accepted; and that if the person or persons whose bid has been so accepted shall refuse or neglect, within five days after due notice has been given that the contract is ready for execution, to execute the same, the amount of the deposit or of the check or certificate of deposit made by him or them shall be forfeited to and retained by this Board, not as a penalty, but as liquidated damages for such neglect or refusal, and shall be paid into the City Treasury to the credit of the Sinking Fund of The City of New York; but if the said person or persons whose bid has been so accepted shall execute the contract within the time aforesaid, the amount of his or their deposit of check or certificate of deposit shall be returned to him or them.

Dated **BOROUGH OF MANHATTAN**, April 7, 1899.

RICHARD H. ADAMS,  
CHARLES E. ROBERTSON,  
GEORGE LIVINGSTON,  
JOHN T. BURKE,  
MILES M. O'BRIEN,  
JOHN R. THOMPSON,  
F. DE HASS SIMONSON,  
Committee on Buildings.

**SEALED PROPOSALS WILL BE RECEIVED BY** the Committee on Buildings of the Board of Education of The City of New York, at the Annex to the Hall of the Board, No. 585 Broadway, eleventh floor, Borough of Manhattan, until 4 o'clock P. M. on

**THURSDAY, APRIL 13, 1899,**



the successful bidder will be held strictly to completion within said time.

The Committee reserves the right to reject any or all of the proposals submitted.

The party submitting a proposal, and the parties proposing to become sureties, must each write his name and place of residence on said proposal.

Two responsible and approved sureties, residents of this city, are required in all cases. One of the sureties must be a surety company doing business in this city, when the amount of the bid exceeds two thousand dollars.

No proposal will be considered from persons whose character and antecedent dealings with the Board of Education render their responsibility doubtful.

It is required, as a condition precedent to the reception or consideration of any proposals, that a certified check upon, or a certificate of deposit of one of the State or National banks, or trust companies of the City of New York, drawn to the order of the President of the Board of Education, shall accompany the proposal to an amount of not less than three per cent. of such proposal when said proposal is for or exceeds ten thousand dollars, and to an amount of not less than five per cent. of such proposal when said proposal is for an amount under ten thousand dollars; that, on demand, within one day after the awarding of the contract by the Committee, the President of the said Board will return all the deposits of checks and certificates of deposit made, to the persons making the same, except that made by the person or persons whose bid has been accepted; and that if the person or persons whose bid has been so accepted shall refuse or neglect, within five days after due notice has been given that the contract is ready for execution, to execute the same, the amount of the deposit or of the check or certificate of deposit made by him or them shall be forfeited to and retained by this Board, not as a penalty, but as liquidated damages for such neglect or refusal, and shall be paid into the City Treasury to the credit of the Sinking Fund of the City of New York; but if the said person or persons whose bid has been so accepted shall execute the contract within the time aforesaid, the amount of his or their deposit of check or certificate of deposit shall be returned to him or them.

Dated Borough of Manhattan, April 3, 1899,  
 RICHARD H. ADAMS,  
 CHARLES E. ROBERTSON,  
 GEORGE LIVINGSTON,  
 JOHN T. BURKE,  
 MILES M. O'BRIEN,  
 JOHN R. THOMPSON,  
 F. DE HASS SIMONSON,  
 Committee on Buildings.

**SEALED PROPOSALS WILL BE RECEIVED**  
 by the Committee on Buildings of the Board of Education of the City of New York, at the Annex to the Hall of the Board, No. 585 Broadway, eleventh floor, Borough of Manhattan, until 4 o'clock P. M., on

**MONDAY, APRIL 10, 1899,**

for Alterations in and erecting an addition to Public School No. 7, Borough of Brooklyn.

Plans and specifications may be seen and blank proposals obtained at the Annex of the Hall of the Board of Education, Estimating Room, Nos. 419 and 421 Broome street, Manhattan.

The attention of bidders is expressly called to the time stated in the contract within which the work must be completed. They are expressly notified that the successful bidder will be held strictly to completion within said time.

The Committee reserves the right to reject any or all of the proposals submitted.

The party submitting a proposal, and the parties proposing to become sureties, must each write his name and place of residence on said proposal.

Two responsible and approved sureties, residents of this city, are required in all cases.

No proposal will be considered from persons whose character and antecedent dealings with the Board of Education render their responsibility doubtful.

It is required, as a condition precedent to the reception or consideration of any proposals, that a certified check upon, or a certificate of deposit of one of the State or National banks or trust companies of the City of New York, drawn to the order of the President of the Board of Education, shall accompany the proposal, to an amount of not less than three per cent. of such proposal when said proposal is for or exceeds ten thousand dollars, and to an amount of not less than five per cent. of such proposal when said proposal is for an amount under ten thousand dollars; that, on demand, within one day after the awarding of the contract by the Committee, the President of the said Board will return all the deposits of checks and certificates of deposit made to the persons making the same, except that made by the person or persons whose bid has been accepted; and that if the person or persons whose bid has been so accepted shall refuse or neglect, within five days after due notice has been given that the contract is ready for execution, to execute the same, the amount of the deposit or of the check or certificate of deposit made by him or them shall be forfeited to and retained by this Board, not as a penalty, but as liquidated damages for such neglect or refusal, and shall be paid into the City Treasury to the credit of the Sinking Fund of the City of New York; but if the said person or persons whose bid has been so accepted shall execute the contract within the time aforesaid, the amount of his or their deposit of check or certificate of deposit shall be returned to him or them.

Dated Borough of Manhattan, March 27, 1899.

RICHARD H. ADAMS,  
 CHARLES E. ROBERTSON,  
 GEORGE LIVINGSTON,  
 JOHN T. BURKE,  
 MILES M. O'BRIEN,  
 JOHN R. THOMPSON,  
 F. DE HASS SIMONSON,  
 Committee on Buildings.

## DEPARTMENT OF WATER SUPPLY.

DEPARTMENT OF WATER SUPPLY,  
 COMMISSIONER'S OFFICE,  
 No. 150 NASSAU STREET,  
 NEW YORK, April 5, 1899.

### TO CONTRACTORS.

**BIDS OR ESTIMATES, INCLOSED IN A**  
 sealed envelope, with the title of the work and the name of the bidder indorsed thereon, also the number of the work as in the advertisement, will be received at No. 150 Nassau street, corner of Spruce street, in Room No. 1704, until 2 o'clock P. M., on

**THURSDAY, APRIL 20, 1899.**

The bids will be publicly opened by the head of the Department, in Room 1722, No. 150 Nassau street, at the hour above-mentioned.

**Boroughs of Manhattan and The Bronx.**

No. 1. FOR REPAIRS TO AQUEDUCT VIA DUCT AT SING SING AND TO AQUEDUCT GATE-HOUSES AT HIGH BRIDGE.

No. 2. FOR FURNISHING THE DEPARTMENT OF WATER SUPPLY WITH 9000 GROSS TONS (2240 pounds to a ton) OF EGG-SIZE WHITE ASH ANTHRACITE COAL.

No. 3. FOR FURNISHING CAST IRON WATER PIPES, BRANCH PIPES AND SPECIAL CASTINGS.

No. 4. FOR FURNISHING STOP COCKS, HYDRANTS, WOODEN HYDRANT BOXES AND CAST IRON STOP COCK BOXES AND COVERS.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Municipal Assembly, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the corporation, is directly or indirectly interested therein, or in the supplies or in the work to which it relates, or in any portion of the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance, and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion, and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting, the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied by the oath or affirmation, in writing, of each of the persons signing the same that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as surety in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be included in a sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of the deposit will be returned to him.

**THE COMMISSIONER OF WATER SUPPLY RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.**

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained in Room No. 1715.

WILLIAM DALTON,  
 Commissioner of Water Supply.

## BOROUGH OF QUEENS.

THE CITY OF NEW YORK,  
 OFFICE OF PRESIDENT OF THE BOROUGH OF QUEENS,  
 LONG ISLAND CITY, April 4, 1899.

**PUBLIC NOTICE IS HEREBY GIVEN THAT I,**  
 the undersigned, am in receipt of petitions from the property-owners along the line of Camella street, First Ward, Borough of Queens, to have said street legally opened, graded, paved, curbed, and flagged (where not so improved), from Crescent to the Boulevard, ward and borough before mentioned; that said petitions are on file in my office for public inspection, and that I have appointed Friday, April 21, 1899, at 10.30 A. M., in this my office, Hackett Building, corner of Jackson avenue and Fifth street, Long Island City, as the time and place for public hearing thereon, at which all whom it may concern will be afforded an opportunity of being heard.

FRED'K BOWLEY,  
 President.

THE CITY OF NEW YORK,  
 OFFICE OF PRESIDENT OF THE BOROUGH OF QUEENS,  
 LONG ISLAND CITY, April 4, 1899.

**PUBLIC NOTICE IS HEREBY GIVEN THAT I,**  
 the undersigned, have received a petition from the property-owners along the line of St. Nicholas avenue, Second Ward, Borough of Queens, to have said avenue paved with asphalt, from Myrtle avenue to Ralph street, ward and borough as aforesaid; that said petition is now on file in my office for public inspection, and that I have appointed Friday, April 21, 1899, at 10.30 A. M., at my office, Hackett Building, corner of Jackson avenue and Fifth street, Long Island City, as the time and place for public hearing thereon, at which all whom it may concern will be afforded an opportunity of being heard.

FRED'K BOWLEY,  
 President.

THE CITY OF NEW YORK,  
 OFFICE OF PRESIDENT OF THE BOROUGH OF QUEENS,  
 LONG ISLAND CITY, April 4, 1899.

**PUBLIC NOTICE IS HEREBY GIVEN THAT I,**  
 the undersigned, have received a petition from the property-owners along the line of Camella street, First Ward, Borough of Queens, for the construction of public sewer in said street, from Van Alst avenue to Crescent; that said petition is now on file in my office for public inspection, and that I have appointed Friday, April 21, 1899, at 10.30 A. M., at my office, Hackett Building, corner of Jackson avenue and Fifth street, Long Island City, as the time and place for public hearing thereon, at which all whom it may concern will be afforded an opportunity of being heard.

FRED'K BOWLEY,  
 President.

## CORPORATION NOTICE.

**PUBLIC NOTICE IS HEREBY GIVEN TO THE**  
 owner or owners of all houses and lots, improved or unimproved lands affected thereby, that the following proposed assessments have been completed and are lodged in the office of the Board of Assessors for examination by all persons interested, viz.:

### BOROUGH OF BROOKLYN.

List 5724, No. 1. Sewer in Forty-eighth street, between Fifth and Sixth avenues, and in Sixth avenue, between Forty-seventh and Forty-eighth streets.

List 5742, No. 2. Sewer in Irving street, between Columbia street and Van Brunt street.

List 5743, No. 3. Sewer in North Tenth street, between Roebing street and Driggs avenue.

The limits within which it is proposed to lay the said assessments include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Both sides of Forty-eighth street, from Fifth to Sixth avenues, and extending to one-half the block, and both sides of Sixth avenue, from Forty-seventh to Forty-eighth street.

No. 2. Both sides of Irving street, from Columbia street to Van Brunt street.

No. 3. Both sides of North Tenth street, from Roebing street to Driggs avenue.

All persons whose interests are affected by the above-named proposed assessments, and who are opposed to the same, or either of them, are requested to present their objections, in writing, to the Secretary of the Board of Assessors, No. 320 Broadway, New York, on or before May 9, 1899, at 11 A. M., at which time and place the said objections will be heard and testimony received in reference thereto.

EDWARD McCUE,  
 EDWARD CAHILL,  
 THOS. A. WILSON,  
 PATRICK M. HAVERTY,  
 JOHN B. MEYENBORG,  
 Board of Assessors.

WILLIAM H. JASPER,  
 Secretary,  
 No. 320 Broadway,  
 CITY OF NEW YORK, BOROUGH OF MANHATTAN,  
 April 6, 1899.

**PUBLIC NOTICE IS HEREBY GIVEN TO THE**  
 owner or owners of all houses and lots, improved or unimproved lands affected thereby, that the following proposed assessments have been completed and are lodged in the office of the Board of Assessors for examination by all persons interested, viz.:

### BOROUGH OF BROOKLYN.

List 5797, No. 1. Sewer in Forty-sixth street, between First and Third avenues.

List 5668, No. 2. Sewer in Pacific street, between Ralph and Buffalo avenues.

List 5699, No. 3. Sewer in Folsom place, between Linwood and Essex streets.

List 5700, No. 4. Sewer in Suydam street, between Irving and Wyckoff avenues.

List 5786, No. 5. Repaving Lafayette avenue, from Ryerson street to the easterly crosswalk of Grand avenue, with asphalt pavement.

List 5903, No. 6. Repaving Twelfth street, from Third to seventh avenues, with asphalt pavement.

The limits within which it is proposed to lay the said assessments include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Both sides of Forty-sixth street, from First to Third avenue.

No. 2. Both sides of Pacific street, from Buffalo to Ralph avenue and extending north and south of Pacific street 100 feet.

No. 3. Both sides of Folsom place, from Linwood to Essex streets; also block bounded by Fulton street, Folsom place, Linwood and Essex streets.

No. 4. Both sides of Suydam street, from Irving to Wyckoff avenue, and east side of Irving avenue and west side of Wyckoff avenue, from Hart to Suydam street.

No. 5. Both sides of Lafayette avenue, from the easterly crosswalk of Ryerson street to the easterly crosswalk of Grand avenue.

No. 6. Both sides of Twelfth street, from Third to Seventh avenue.

All persons whose interests are affected by the above-named proposed assessments, and who are opposed to the same, or either of them, are requested to present their objections, in writing, to the Secretary of the Board of Assessors, No. 320 Broadway, New York, on or before May 2, 1899, at 11 A. M., at which time and place the said objections will be heard and testimony received in reference thereto.

EDWARD McCUE,  
 EDWARD CAHILL,  
 THOS. A. WILSON,  
 PATRICK M. HAVERTY,  
 JOHN B. MEYENBORG,  
 Board of Assessors.

WILLIAM H. JASPER,  
 Secretary,  
 No. 320 Broadway,  
 CITY OF NEW YORK, BOROUGH OF MANHATTAN,  
 March 31, 1899.

**PUBLIC NOTICE IS HEREBY GIVEN TO THE**  
 owner or owners of all houses and lots, improved or unimproved lands affected thereby, that the following proposed assessments have been completed and are lodged in the office of the Board of Assessors for examination by all persons interested, viz.:

### BOROUGH OF MANHATTAN.

List 5858, No. 1. Regulating, grading, curbing and flagging Jansen avenue on Marble Hill, from Terrace View avenue north to Terrace View avenue south.

List 5873, No. 2. Regulating, grading, curbing and flagging Audubon avenue, from One Hundred and Sixty-fifth to One Hundred and Seventy-fifth street.

List 5908, No. 3. Flagging and reflagging both sides of Fifth avenue, from One Hundred and Tenth to One Hundred and Twentieth street.

### BOROUGH OF THE BRONX.

List 5607, No. 4. Sewer and appurtenances in Bristow street, from Freeman street to Boston road; in Jennings street, between Bristow street and Union avenue, and in East One Hundred and Seventy-fifth street, between Bristow street and Prospect avenue.

List 5797, No. 5. Paving Webster avenue, from One Hundred and Eighty-fourth street to Pelham avenue, with granite-block pavement.

The limits within which it is proposed to lay the said assessments include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Both sides of Jansen avenue (or Place), from Terrace View avenue, South, to Terrace View avenue, North, and to the extent of half the block at the intersecting streets.

No. 2. Both sides of Audubon avenue, from One Hundred and Sixty-fifth to One Hundred and Seventy-fifth street and to the extent of half the block at the intersecting streets.

No. 3. Both sides of Fifth avenue, between One Hundred and Tenth and One Hundred and Twentieth streets, on Block 1594, Lot Nos. 37 to 40, inclusive; Block 1616, Lot Nos. 69 and 70; Block 1618, Lot Nos. 71 and 72; Block 1620, Lot Nos. 2 and 72; Block 1599, Lot Nos. 24, 35 and 36; Block 1621, Lot No. 70; Block 1612, Lot Nos. 4, 70, 71 and 72; Block 1717, Lot Nos. 37 to 40 inclusive; Block 1718, Lot Nos. 56 to 60 inclusive; Block 1745, Lot Nos. 3, 4, 70, 71 and 72; Block 1746, Lot Nos. 1, 2, 3, 4, 70, 71 and 72.

### BOROUGH OF THE BRONX.

No. 4. Both sides of Jennings street, from Union avenue to Bristow street; west side of Prospect avenue, from Boston road to Jennings street; south side of Boston road, extending about 122 feet west of Prospect avenue; both sides of One Hundred and Seventy-fifth street, from Prospect avenue to Bristow street, and both sides of Bristow street, from Boston road to Freeman street.

No. 5. Both sides of Webster avenue, from One Hundred and Eighty-fourth street to Pelham avenue, and to the extent of half the block at the intersecting streets.

All persons whose interests are affected by the above-named proposed assessments, and who are opposed to the same, or either of them, are requested to present their objections, in writing, to the Secretary of the Board of Assessors, No. 320 Broadway, New York, on or before May 2, 1899, at 11 A. M., at which time and place the said objections will be heard and testimony received in reference thereto.

EDWARD McCUE,  
 EDWARD CAHILL,  
 THOS. A. WILSON,  
 PATRICK M. HAVERTY,  
 JOHN B. MEYENBORG,  
 Board of Assessors.

WILLIAM H. JASPER,  
 Secretary,  
 No. 320 Broadway,  
 CITY OF NEW YORK, BOROUGH OF MANHATTAN,  
 March 30, 1899.

## DEPARTMENT OF STREET CLEANING.

DEPARTMENT OF STREET CLEANING,  
 MAIN OFFICE, NEW YORK LIFE BUILDING,  
 No. 346 BROADWAY.

BOROUGH OF MANHATTAN AND THE BRONX.

## CONTRACT FOR FURNISHING FORAGE FOR THE USE OF THE DEPARTMENT OF STREET CLEANING.

### PUBLIC NOTICE.

**ESTIMATES INCLOSED IN SEALED ENVELOPES** and indorsed with the name and address of the person or persons making the same, and the date of presentation, and a statement of the work and supplies to which they relate, will be received at the office of the Department of Street Cleaning, in The City of New York, until 12 o'clock M. of

**FRIDAY, THE 7TH DAY OF APRIL, 1899,**

at which time and place the estimates will be publicly opened and read for the Furnishing and Delivery of Forage, as follows:

1,000,500 pounds Hay, of the quality and standard known as Prime Hay.

206,700 pounds good, clean, long Rye Straw.

1,660,400 pounds clean No. 2 White Clipped Oats, to be bright, sound, well cleaned, and reasonably free from other grain, weighing not less than 36 pounds to the measured bushel.

63,300 pounds first quality Bran.

2,000 pounds first quality Coarse Salt.

12,000 pounds first quality Rock Salt.

3,000 pounds first quality Oil Meal.

The person or persons to whom the contract may be awarded will be required to execute such contract within five days from receipt of a notice to that effect, and in case of failure or neglect so to do, he or they will be considered as having abandoned such contract and as in default to the Corporation, whereupon the Commissioner of Street Cleaning will readvertise and relet the work, and so on till the contract be accepted and executed.

Bidders are required to state in their estimate, under oath, their names and places of residence, the names of all persons interested with them therein, and if no other person be so interested they shall distinctly state that fact; also, that it is made without any connection with any other person making any bid or estimate for the above work or supplies, and that it is in all respects fair and without collusion or fraud; and also that no member of the Municipal Assembly, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. Where more than one person is interested, it is requisite that the verification be made and subscribed by all the parties interested. Each estimate shall also be accompanied by the consent, in writing, of two householders or freeholders of the City of New York, with their respective places of business or residence, or of two (2) guarantee or surety companies, duly authorized by law to act as surety, incorporated under the Laws of the State of New York, as shall be satisfactory to the Comptroller, to the effect that if the contract be awarded to the person or persons making the estimate, they will on its being so awarded become bound as his or their sureties for its faithful performance in the amount of Ten Thousand (\$10,000) Dollars, and that if he or they shall omit or refuse to execute the same they will pay to the City of New York any difference between the sum to which he or they would be entitled on its completion and that which the City of New York may be obliged to pay to the person or persons to whom the contract may be subsequently awarded. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature and over and above his liabilities as bail, surety and otherwise; that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law. The adequacy and sufficiency of the sureties offered shall be approved by the Comptroller.

The price in the bid or estimate must be written, and also stated in figures. Permission will not be given for the withdrawal of any bid or estimate, and the right is expressly reserved by the Commissioner of Street Cleaning to reject all the bids, if, in his judgment, it be deemed best for the interest of the City. No bid will be accepted from or contract awarded to any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Each bid or proposal must be accompanied by a certified check on one of the State or National banks of the City of New York, payable to the order of the Comptroller of said city, for Five Hundred Dollars (\$500), or by money to that amount. On the acceptance of any bid, the checks or money of the unaccepted bidders will be returned to them, and upon the execution of the contract the check or money of the accepted bidder will be returned to him.

All bids must be made with reference to the form of contract and the requirements thereof on file at the Department of Street Cleaning, or they will be rejected.

The form of the agreement (with specifications), showing the manner of payment for the articles, may be seen, and forms of proposals may be obtained at the main office of the Department.

Dated New York, March 23, 1899.  
 F. M. GIBSON,  
 Deputy Commissioner of Street Cleaning, Borough of Manhattan, designated with full powers of Commissioner.

**PERSONS HAVING BULKHEADS TO FILL, IN**  
 the vicinity of New York Bay, can procure material for that purpose—ashes, street sweepings, etc., such as is collected by the Department of Street Cleaning—free of charge, by applying to the Commissioner of Street Cleaning, 346 Broadway, Borough of Manhattan.

JAMES McCARTNEY,  
 Commissioner of Street Cleaning.

**CHANGE OF GRADE DAMAGE COMMISSION, TWENTY-THIRD AND TWENTY-FOURTH WARDS.**

**PURSUANT TO THE PROVISIONS OF CHAPTER 537 of the Laws of 1893, entitled "An Act providing for ascertaining and paying the amount of damages to lands and buildings suffered by reason of changes of grade of streets or avenues, made pursuant to chapter 721 of the Laws of 1887, providing for the depression of railroad tracks in the Twenty-third and Twenty-fourth Wards, in The City of New York, or otherwise," and the acts amendatory thereof and supplemental thereto, notice is hereby given that public meetings of the Commissioners appointed pursuant to said acts, will be held at Room 58, Schermerhorn Building, No. 96 Broadway, in The City of New York, on Monday, Wednesday and Friday of each week, at 2 o'clock P. M., until further notice.**

Dated New York, March 4, 1899.  
 DANIEL LORD,  
 WARREN W. FOSTER,  
 WILLIAM E. STILLINGS,  
 Commissioners.

LAMONT McLOUGHLIN,  
 Clerk.



## DEPARTMENT OF HIGHWAYS.

DEPARTMENT OF HIGHWAYS,  
COMMISSIONER'S OFFICE, No. 150 NASSAU STREET,  
NEW YORK, March 27, 1899.

## NOTICE OF SALE AT PUBLIC AUCTION.

ON TUESDAY, APRIL 11, 1899, AT 11 o'clock A. M., the Department of Highways will sell at public auction, by Messrs. Peter F. Meyer & Co., Auctioneers, a one and one-half story frame building within the lines of Eighty-second street, east of Tenth avenue, Borough of Brooklyn.

The sale will take place on the ground.  
A plan and description of the building may be examined at the office of the Deputy Commissioner of Highways, Municipal Building, Borough of Brooklyn.

## TERMS OF SALE.

Cash payment to bankable funds at the time and place of sale, and the entire removal of the building from the street by the purchaser or purchasers within twenty days after the sale. If the purchaser or purchasers fail to effect the removal within that time, he or they shall forfeit his or their purchase money and the ownership of the building.

WM. N. SHANNON,  
Deputy and Acting Commissioner of Highways.

DEPARTMENT OF HIGHWAYS,  
COMMISSIONER'S OFFICE, No. 150 NASSAU STREET,  
NEW YORK, March 27, 1899.

## NOTICE OF SALE AT PUBLIC AUCTION.

ON MONDAY, APRIL 10, 1899, AT 11 o'clock A. M., the Department of Highways will sell at public auction, by Messrs. Peter F. Meyer & Co., Auctioneers, a frame building situated within the lines of Utica avenue, between Farnald and Earl streets, Borough of Brooklyn.

The sale will take place on the ground. A plan and description of the building may be examined at the office of the Deputy Commissioner of Highways, Municipal Building, Borough of Brooklyn.

## TERMS OF SALE:

Cash payment in bankable funds at the time and place of sale, and the entire removal of the building from the street by the purchaser or purchasers within 20 days after the sale. If the purchaser or purchasers fail to effect the removal within that time, he or they shall forfeit his or their purchase money and the ownership of the building.

WM. N. SHANNON,  
Deputy and Acting Commissioner of Highways.

## DEPARTMENT OF CORRECTION.

DEPARTMENT OF CORRECTION,  
CITY OF NEW YORK,  
BOROUGH OF MANHATTAN AND BRONX.

## PROPOSALS FOR MISCELLANEOUS ARTICLES TO BE DELIVERED AT ONCE.

SEALED BIDS OR ESTIMATES FOR FURNISHING MISCELLANEOUS ARTICLES, in conformity with specifications, will be received at the office of the Department of Correction, No. 148 East Twentieth street, in the City of New York, until 10 A. M.

TUESDAY, APRIL 18, 1899.

All goods to be delivered on dock (foot of East Twenty-sixth street) for Blackwell's Island Storehouse, and quantities allowed as received there.

## PENITENTIARY REQUISITION 4.

- |          |   |
|----------|---|
| Line No. | 3 packages Carriage Bolts, 1 package 2 1/2 by 5-16, 1 package 2 3/4 by 5-16, 1 package 3 by 5-16.                 |
| 15.      |   |
| 16.      | 1 package Tire Bolts, 2 1/2 by 5-16.  |
| 17.      | 2 bundles 5/8-inch Round Iron.  |
| 18.      | 2 bundles 5/8-inch square Norway Iron.  |
| 19.      | 1 dozen 8-inch half round Files.  |
| 20.      | 1 dozen 8-inch Rattail Files.   |
| 21.      | 1/2 dozen 6-inch Tapered Files for keys to taper from 1/2-inch to 1-16-inch.                                      |
| 22.      | 1 Ratchet Brace, 10 inch sweep, for wagon work.   |
| 23.      | 4 kegs 40d common Spikes.   |
| 24.      | 4 kegs 20d common Nails.  |
| 25.      | 1 keg 8d Wrought Nails.   |
| 26.      | 2 dozen pairs 10-inch heavy T Hinges.   |
| 27.      | 2 bundles Buckle Iron, 1-inch gauge, No. 16.  |
| 28.      | 4 packages black Rivets, 2 packages 4-lb., 2 packages 6-lb.   |
| 29.      | 8 pairs Ice Box Hinges, 5 inches long, galvanized.  |
| 30.      | 3 Auger Bits, 2-3/4-inch, 1-3/4-inch.   |
| 31.      | 8 Spring Ice Box Catches, 4 inches long.  |
| 32.      | 2 dozen Pipe Cutter Wheels, 1-1/2 inch, 1-3/4-inch.   |
| 33.      | 25 pounds Wire Roofing Nails.   |
| 34.      | 25 pounds Tinned Roofing Nails.   |
| 35.      | 1 dozen 1-1/2 inch Flat Files.  |
| 36.      | 3 packages Stove Bolts, 1 package 1-inch by 3/4-inch, 1 package 1-inch by 1/2-inch, 1 package 1-inch by 1/4-inch. |
| 37.      | 1 dozen Tinners' Mallets, 2-inch.   |
| 38.      | 10 pounds Lump Sal Ammonia.   |
| 39.      | 1 set Twist Drills, 1-16-inch to 1/4-inch.  |
| 40.      | 1 set Taps or Dies, 1-16 inch to 1/4-inch.  |
| 41.      | 1 Emery Wheel, 1 inch by 6 inches.  |
| 42.      | 5 gallons Demar Varnish.  |
| 43.      | 2 dozen papers each Upholsterer's Tacks, 3, 4, 6, 8, 10 and 12-ounce.   |
| 44.      | 1/2 dozen each Spear Point Mattress Needles, 14-inch and 18-inch.   |
| 45.      | 1/2 dozen each Circle Needles, 5-inch and 6-inch.   |
| 46.      | 1/2 dozen Upholsterer's Scissors, assorted sizes.   |
| 47.      | 1 dozen pounds Spring Twine.  |
| 48.      | 1/2 dozen Upholsterer's Hammers, 1/4-inch to 3/4-inch face.   |
| 49.      | 1 roll Webbing.   |
| 50.      | 10 gallons Benzine.   |
| 51.      | 24 boxes White Tailors' Chalk.  |
| 52.      | 12 boxes Red Tailors' Chalk.  |
| 53.      | 24 boxes Platinum Paper, 2 1/4 by 4 1/4 (3 papers in each box).   |
| 54.      |   |
| 55.      | 2 dozen Lantern Burners, as per sample.   |
| 56.      | 10 Oilskin Suits with Hats, assorted sizes.   |
| 57.      | 1 Gas Stove for Female Hospital.  |
| 58.      | 1 No. 20 Plough.  |
| 59.      | 500 feet Garden Line.   |
| 60.      | 1 Hydraulic Ground Lifting Jack, to lift 7 tons; run out 24 inches.   |
| 61.      | 1 Log Camwood, rough, about 3 feet long.  |
| 62.      | 1 Front Slide and Grate for J. L. Mott Improved Laundry Stove, 1895, marked No. 2 Grate, 45 and 60.               |
| 63.      | 1/2 dozen Padlocks, with 2 keys (Tiger), steel, 4-ounce, No. 76.  |
| 64.      | 1-6 dozen Prison Bolt Locks.  |
| 65.      | 1 Work House, Requisition 4.  |
| 66.      | 1 dozen Lamp Chimneys, Miller No. 2.  |
| 67.      | 1 dozen Lamp Chimneys, as per sample.   |
| 68.      | 1 dozen Forged Steel Nickle-plated Key Blanks, No. 375 B.   |
| 69.      | 1/2 dozen Carpenters' Marking Gauges, No. 475.  |
| 70.      | 1/2 dozen 3-inch Brass Spring Bolts, No. 515.   |
| 71.      | 1-5 dozen 50-foot Tape Lines, No. 33.   |
| 72.      | 3 1-pound spools, No. 21, Copper Wire.  |
| 73.      | 1 box assorted French Chalk for tailors' use.   |
| 74.      | 8 dozen Bright Wire Screw Eyes—2 dozen No. 9, 2 dozen No. 12, 2 dozen No. 12 1/2, 2 dozen No. 14.                 |
| 75.      | 1/2 dozen porcelain Gas Bells.  |

87. 1/2 dozen 6-inch Hinge Hasps.  
88. 1,000 Paper Bags, 5 to 20 pounds, assorted.  
89. 1 80 gallon Steam Caldron for Kitchen.  
90. 25 pieces 1-inch Clear White Pine, 12 inches by 16 feet, D. B. S.  
91. 1 14-inch Monkey Wrench.

- CITY PRISON, REQUISITION 4.  
92. 1 dozen Round Alarm Whistles.  
93. 1 dozen Brass Drawer Locks, Nos. 5007, 6002.  
94. 1 dozen Medium Size Desk Locks.  
95. 1 dozen Fritchard Tools No. 5.

- STEAMBOATS, REQUISITION 4.  
96. 20 feet 1-inch Round Tucks Packing, "Minna-hanock."  
97. 1 4-inch Round Whalebone Tube Brush, "Minna-hanock."  
98. 1 dozen Earthenware Spittoons, "Minna-hanock."

- 100 feet 1-inch Rubber Hose, "Gilroy."  
101. 1 piece 2 1/2-inch Galvanized Pipe, 21 inches long, "Gilroy."  
102. 1 piece 2 1/2-inch Galvanized Pipe, 9 1/2 inches long, "Gilroy."

103. 2 1 1/2-inch Gate Valves, solid disc, "Gilroy."  
104. 2 3/4-inch Angle Valves, "Gilroy."  
105. 1 Brass Engineer's Oil Set, 14 inch diameter, "Gilroy."

- 6-12 dozen Pinafore Lamp Globes, "Gilroy."  
6-12 dozen Pinafore Lamp Burners, "Gilroy."  
2-12 dozen Cabinet Locks, "Gilroy."

- B. I. STABLE, REQUISITION 4.  
106. 7 dozen Horseshoe Buckles—1 dozen 1/2-inch, 1 dozen 3/4-inch, 2 dozen 1-inch, 2 dozen 1 1/4-inch.  
107. 1 dozen Roller Buckles, 1 inch.

108. 2 dozen Black Rings—1 dozen 3/8-inch, 1 dozen 1/2-inch.  
109. 3 dozen Assorted Saddlers' Awls, Nos. 51, 53 and 55.  
110. 3 papers Harness Needles—1 paper No. 3, 1 paper No. 4, 1 paper No. 5.

- B. I. BAKERY—REQUISITION 4.  
111. 8 pieces 1 foot 4 inch clear white Pine, 14 inches by 16 feet, D. B. S.  
112. 12 pieces 1 inch clear white Pine, 12 inches by 16 feet, D. B. S.

- 50 feet 1-inch 3-ply Wallabout Hose, with couplings.  
DISTRICT PRISONS, REQUISITION 4.  
113. 5 pounds Putty.  
114. 1/2 dozen 6 degree Flat Paint Brushes.

- PENITENTIARY, SPECIAL REQUISITION 104.  
115. 10,000 square feet Yellow Pine Flooring, 4 inches wide, 1 1/2 inches thick, dressed both sides with a 1/4-inch bead on one side at the tongue, same as drawing exhibited.  
116. 15 gross 1-inch No. 12 Screws.  
117. 5 gross 3/4-inch No. 12 Screws.

- PENITENTIARY, SPECIAL REQUISITION 111.  
118. 50 gallons Black Japan.  
FIFTH DISTRICT PRISON, SPECIAL REQUISITION No. 112.  
119. 51 feet 1-inch by 1/2-inch Band Iron.

- PENITENTIARY, SPECIAL REQUISITION 115.  
120. 65 Boxes Lead Plate Roofing Tin, 14 by 20.  
121. 300 pounds Wire Roofing Nails.  
122. 50 pounds Tinned Roofing Nails.  
123. 100 pounds Resin.  
124. 2 set Roofing Double Seamers, 1 inch by 3/4 inch.

- HART'S ISLAND, SPECIAL REQUISITION 117.  
125. 10 pieces Clear White Pine, 16 inches by 16 feet by 7 1/2-inch dress, both sides.

No bonds or deposit required on bids under One Thousand Dollars. Awards will be made on the lowest item.

THE COMMISSIONER OF CORRECTION RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 419, CHAPTER 378, LAWS OF 1897.

No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Delivery will be required to be made from time to time, and in such quantities as may be directed by the said Commissioner.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract, by his or their bond, with two sufficient sureties, each in the penal amount of fifty (50) per cent. of the bid for each article.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Municipal Assembly, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders, in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same they shall pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered to be approved by the Comptroller of the City of New York.

No bid or estimate will be considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him,

to execute, the same, the amount of the deposit made by him shall be forfeited to and retained by The City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet, as provided by law.

The quality of the articles, supplies, goods, wares and merchandise must conform in every respect to the samples of the same on exhibition at the office of the said Department, No. 148 East Twentieth street, New York City, or, in the absence of samples, to the printed specifications. Bidders are cautioned to examine the specifications for particulars of the articles, etc., required before making their estimates.

Bidders will state the price for each article, by which the bids will be tested.

Bidders will write out the amount of their estimates in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract, or from time to time, as the Commissioner may determine.

The form of the contract, including specifications, and showing the manner of payment and other details, will be furnished at the office of the Department, No. 148 East Twentieth street, New York City, and bidders are cautioned to examine each and all of its provisions carefully, as the Commissioner will insist upon its absolute enforcement in every particular.

FRANCIS J. LANTRY,  
Commissioner of Correction.

## BOARD OF PUBLIC IMPROVEMENTS.

BOARD OF PUBLIC IMPROVEMENTS,  
No. 346 BROADWAY, BOROUGH OF MANHATTAN.

NOTICE IS HEREBY GIVEN, THAT A MAP or Plan, showing a general design for a system of avenues, streets, public squares, places, parks, bridges, etc., in City Island, Borough of The Bronx, City of New York, having been submitted to the Board of Public Improvements, for its approval, the said Board of Public Improvements will give a public hearing to all persons affected by such said proposed general design, on Wednesday, April 26, 1899, at 2 o'clock P. M., at the office of the said Board, No. 346 Broadway, Borough of Manhattan.

Dated New York, April 4, 1899.  
JOHN H. MOONEY,  
Secretary.

BOARD OF PUBLIC IMPROVEMENTS,  
No. 346 BROADWAY, BOROUGH OF MANHATTAN.

NOTICE IS HEREBY GIVEN THAT THE Board of Public Improvements of The City of New York, deeming it for the public interest so to do, proposes to alter the map or plan of The City of New York, by changing the grades of East Two Hundred and Thirty-fifth street, between Katonah avenue and Martha avenue, and changing the grades of East Two Hundred and Thirty-eighth street, between Katonah avenue and Katonah avenue, in the Borough of The Bronx, City of New York, more particularly described as follows:

(a) East Two Hundred and Thirty-fifth street—1st. Beginning at the intersection of Katonah avenue, the elevation to be 140 feet above mean high-water datum, as heretofore.

2d. Thence to a point 350 feet easterly from the eastern curb of Katonah avenue, the elevation to be 143.0 feet above mean high-water datum.

3d. Thence easterly to the intersection with Martha avenue, the elevation to be 135.0 feet above mean high-water datum, as heretofore.

(b) East Two Hundred and Thirty-eighth street—1st. Beginning at the intersection of Katonah avenue, the elevation to be 182 feet above mean high-water datum, as heretofore.

2d. Thence to a point 400 feet easterly from the eastern curb-line of Katonah avenue, the elevation to be 186.0 feet above mean high-water datum as heretofore.

3d. Thence to a point 160 feet easterly, the elevation to be 176 feet above mean high-water datum.

4th. Thence easterly to the intersection with Katonah avenue, the elevation to be 140 feet above mean high-water datum as heretofore.

Resolved, That this Board consider the proposed change of grades of the above-named streets at a meeting of this Board, to be held in the office of this Board, on the 19th day of April, 1899, at 2 o'clock P. M.

Resolved, That the Secretary of this Board cause these resolutions, and a notice to all persons affected thereby, that the proposed change of grades of the above-named streets will be considered at a meeting of this Board to be held at the aforesaid time and place, to be published in the CITY RECORD for ten days continuously, Sundays and legal holidays excepted, prior to the 19th day of April, 1899.

Dated New York, April 4, 1899.  
JOHN H. MOONEY,  
Secretary.

## DEPARTMENT OF DOCKS AND FERRIES.

DEPARTMENT OF DOCKS AND FERRIES,  
PIER "A," NORTH RIVER.

## TO CONTRACTORS.

(No. 651.)

PROPOSALS FOR ESTIMATES FOR BUILDING A NEW STEEL PROPELLER, WITH ALL APPURTENANCES.

ESTIMATES FOR BUILDING A NEW STEEL Propeller, with all appurtenances, will be received by the Board of Commissioners at the head of the Department of Docks and Ferries, at the office of said Department, on Pier "A," foot of Battery place, North river, in the City of New York, until 2 o'clock P. M., on

FRIDAY, APRIL 7, 1899,

at which time and place the estimates will be published by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same,

the date of its presentation and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract in the manner prescribed and required by ordinance, in the sum of Eighteen Thousand Dollars.

Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become a part of every estimate received:

(1) Bidders must satisfy themselves in regard to the work, by personal examination of the plans and specifications of the proposed work, and by such other means as they may prefer, and shall not, at any time after the submission of an estimate, dispute or complain of the statement of work in specifications, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

(2) Bidders will be required to complete the entire work to the satisfaction of the Department of Docks and Ferries, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation, beyond the amount payable for the work before mentioned, which shall be actually performed, at the price therefor, to be specified by the lowest bidder, shall be due or payable for the entire work.

The work to be done under this contract is to be commenced within five days after receiving a notification from the Engineer-in-Chief of the Department of Docks and Ferries to begin work, and all the work under this contract is to be fully completed on or before the expiration of one hundred and fifty days after the date of service of said notification.

The damages to be paid by the contractor for each day that the contract, or any part thereof that may be ordered or directed by the Engineer, may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at Fifty Dollars per day.

Bidders will state in their estimates a price for the whole of the work to be done in conformity with the approved form of agreement and the specifications therein set forth, by which prices the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing this work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect, and in case of failure or neglect so to do, he or they will be considered as having abandoned it and as in default to The City of New York, and the contract will be readvertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence, the names of all persons interested with them therein, and if no other person be so interested, the estimate shall distinctly state the fact; also that the estimate is made without any consultation, connection or agreement with, and the amount thereof has not been disclosed to, any other person or persons making an estimate for the same purpose and is not higher than the lowest regular market price for the same kind of labor or material, and is in all respects fair and without collusion or fraud; that no combination or pool exists of which the bidder is a member, or in which the bidder is directly or indirectly interested, or of which the bidder has knowledge, either personal or otherwise, to bid a certain price or not less than a certain price for said labor or material, or to keep others from bidding thereon; and also that no member of the Municipal Assembly, head of a department, chief of a bureau, deputy thereof, or clerk therein, or any other officer or employee of The City of New York, or any of its departments, is directly or indirectly interested in the estimate or in the supplies or work to which it relates or in any portion of the profits thereof, and has not been given, offered or promised, either directly or indirectly, any pecuniary or other consideration by the bidder or anyone in his behalf with a view to influencing the action or judgment of such officer or employee in this or any other transaction heretofore had with this Department, which estimate must be verified by the oath, in writing, of the party making the estimate that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed to by all the parties interested.

In case a bid shall be submitted by or in behalf of any corporation, it must be signed in the name of such corporation by some duly authorized officer or agent thereof, who shall also subscribe his own name and office. If practicable the seal of the corporation should also be affixed.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance, and that if said person or persons shall omit or refuse to execute the contract, they will pay to The City of New York any difference between the sum to which said person or persons would be entitled upon its completion and that which said city may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of The City of New York after the awards made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of The City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by The City of New York as liquidated damages for such neglect or refusal, but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instructions of the Engineer-in-Chief.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to The City of New York upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the said city.

In case there are two or more bids at the same price, which price is the lowest price bid, the contract, if awarded, will be awarded by lot to one of the lowest bidders.

THE RIGHT TO DECLINE ALL THE ESTIMATES IS RESERVED IF DEEMED FOR THE INTEREST OF THE CITY OF NEW YORK.

Bidders are requested, in making their bids or esti-



mates, to use the blank prepared for that purpose by the Department, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be obtained upon application therefor at the office of the Department.

Dated New York, February 17, 1899.  
J. SERGEANT CRAM,  
CHARLES F. MURPHY,  
PETER F. MEYER,  
Commissioners of Docks.

DEPARTMENT OF DOCKS AND FERRIES,  
PIER "A," NORTH RIVER.

## TO CONTRACTORS.

(No. 652.)

## PROPOSALS FOR ESTIMATES FOR DREDGING AT THE RUTGERS SECTION, ON THE EAST RIVER, BOROUGH OF MANHATTAN.

ESTIMATES FOR DREDGING ON THE EAST river will be received by the Board of Commissioners at the head of the Department of Docks and Ferries, at the office of said Department, on Pier "A," foot of Battery place, North river, in The City of New York, until 2 o'clock P. M. on

FRIDAY, APRIL 7, 1899.

at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract, in the manner prescribed and required by ordinance, in the sum of Nine Thousand Five Hundred Dollars.

The Engineer's estimate of the quantities of materials necessary to be dredged is as follows:

CLASS I.—Mud Dredging, about 45,000 cubic yards.  
CLASS II.—Crib Dredging, about 16,400 cubic yards.  
N. B.—Bidders are required to submit their estimates upon the following express conditions, which shall apply to and become a part of every estimate received:

(1) Bidders must satisfy themselves by personal examination of the location of the proposed dredging, and by such other means as they may prefer, as to the accuracy of the foregoing Engineer's estimate, and shall not, at any time after the submission of an estimate, dispute or complain of the above statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

(2) Bidders will be required to complete the entire work to the satisfaction of the Department of Docks and Ferries, and in substantial accordance with the specifications of the contract. No extra compensation beyond the amount payable for each class of the work before mentioned, which shall be actually performed, at the prices therefor, per cubic yard, to be specified by the lowest bidder, shall be due or payable for the entire work.

The work to be done under this contract is to be commenced within five days after receiving a notification from the Engineer-in-Chief of the Department of Docks and Ferries that any part or portion of the dredging herein mentioned is required. The dredging to be done under this contract will be at the Rutgers Section, on the East river, and is to be done from time to time, and in such quantities and at such times as may be directed by the Engineer, and all the work under this contract is to be fully completed on or before the expiration of sixty days from the date of service of the above-mentioned notification, or as otherwise defined in Article 21 of this contract.

The damages to be paid by the contractor for each day that the contract, or any part thereof, that may be ordered or directed by the Engineer, may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at Fifty Dollars per day.

Bidders will state in their estimates the price, per cubic yard, for the whole of the dredging to be done in each class, in conformity with the approved form of agreement and the specifications therein set forth, by which prices the bids will be tested. These prices are to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder.

Bidders will distinctly write out, both in words and in figures, the amounts of their estimates for doing this work in each class.

The person or persons to whom the contract may be awarded will be required to attend at this office, with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it and as in default to The City of New York, and the contract will be re-advertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence, the names of all persons interested with them therein, and if no other person be so interested, the estimate shall distinctly state the fact; also that the estimate is made without any consultation, connection or agreement with, and the amount thereof has not been disclosed to, any other person or persons making an estimate for the same purpose, and is not higher than the lowest regular market price for the same kind of labor or material, and is in all respects fair and without collusion or fraud; that no combination or pool exists of which the bidder is a member, or in which the bidder is directly or indirectly interested, or of which the bidder has knowledge, either personal or otherwise, to bid a certain price, or not less than a certain price, for said labor or material, or to keep others from bidding thereon, and also that no member of the Municipal Assembly, head of a department, chief of a bureau, deputy thereof or clerk therein, or any other officer or employee of The City of New York or any of its departments is directly or indirectly interested in the estimate, or in the supplies or work to which it relates, or in any portion of the profits thereof, and has not been given, offered or promised, either directly or indirectly, any pecuniary or other consideration by the bidder or any one in his behalf with a view to influencing the action or judgment of such officer or employee in this or any other transaction heretofore had with this Department, which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is requisite that the verification be made and subscribed to by all the parties interested.

In case a bid shall be submitted by or in behalf of any corporation, it must be signed in the name of such corporation by some duly authorized officer or agent thereof, who shall also subscribe his own name and office. If practicable, the seal of the corporation should also be affixed.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in The City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to The

City of New York any difference between the sum to which said person or persons would be entitled upon its completion and that which said City may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in The City of New York, and is worth the amount of the security required for the completion of the contract over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise, and that he has offered himself as surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of The City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of The City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by The City of New York as liquidated damages for such neglect or refusal, but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instructions of the Engineer-in-Chief.

No estimate will be accepted from or contract awarded to any person who is in arrears to The City of New York, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the said City.

In case there are two or more bids at the same price, which price is the lowest price bid, the contract, if awarded, will be awarded by lot to one of the lowest bidders.

THE RIGHT TO DECLINE ALL THE ESTIMATES IS RESERVED IF DEEMED FOR THE INTEREST OF THE CITY OF NEW YORK.

Bidders are requested, in making their bids or estimates, to use the blank prepared for that purpose by the Department, a copy of which, together with the form of agreement, including specifications, and showing the manner of payment for the work, can be obtained upon application therefor at the office of the Department.

Dated New York, March 3, 1899.

J. SERGEANT CRAM,  
CHARLES F. MURPHY,  
PETER F. MEYER,  
Commissioners of Docks.

## POLICE DEPARTMENT.

PROPERTY CLERK'S OFFICE,  
POLICE DEPARTMENT OF THE CITY OF NEW YORK,  
ROOM 9, NO. 300 MULBERRY STREET,  
NEW YORK, March 23, 1899.

PUBLIC NOTICE IS HEREBY GIVEN THAT the following Horses will be sold at public auction, at the salesrooms of Messrs. Van Tassel & Kearney No. 130 East Thirtieth street, on

FRIDAY, APRIL 7, 1899.

at 10 A. M.:

Sixty-eighth Precinct:

"Dan," No. 325.

Thirty-fourth Precinct:

"Speedway," No. 68.

Twentieth Precinct:

"Paddy," No. 26.

Thirty-fourth Precinct:

"Prince," No. 117.

"Jennie," No. 110.

"Fordham," No. 116.

Thirty-sixth Precinct:

"Charlie," No. 142.

Thirty-eighth Precinct:

"Walter," No. 179.

"Tom," No. 179.

Thirty-ninth Precinct:

"Colonel," No. 194.

Fortieth Precinct:

"Fletcher," No. 229.

"Topsy," No. 211.

By order of the Board of Police.

JOHN F. HARRIOT,

Property Clerk.

POLICE DEPARTMENT—CITY OF NEW YORK, 1898.

OWNERS WANTED BY THE PROPERTY Clerk of the Police Department of The City of New York, No. 300 Mulberry street, Room No. 9, for the following property, now in his custody, without claimants: Boats, rope, iron, lead, male and female clothing, boots, shoes, wine, blankets, diamonds, canned goods, liquors, etc.; also small amount money taken from prisoners and found by Patrolmen of this Department.

JOHN F. HARRIOT,

Property Clerk.

POLICE DEPARTMENT—CITY OF NEW YORK,  
BOROUGH OF BROOKLYN.

OWNERS WANTED BY THE DEPUTY PROPERTY Clerk of the Police Department of The City of New York—Office, Municipal Building, Borough of Brooklyn—for the following property now in his custody without claimants: Boats, rope, iron, lead, male and female clothing, boots, shoes, wine, blankets, diamonds, canned goods, liquors, etc.; also small amount money taken from prisoners and found by Patrolmen of this Department.

CHARLES D. BLATCHFORD,  
Deputy Property Clerk.

## BOROUGH OF RICHMOND.

OFFICE OF PRESIDENT OF BOROUGH OF RICHMOND,  
NEW BRIGHTON, N. Y., April 5, 1899.

NOTICE IS HEREBY GIVEN, IN ACCORDANCE with section 400 of the Charter of The City of New York, that a petition signed by residents of the First District for Local Improvements, concerning the acquisition of property for a public park at St. George, First Ward, has been presented to me, and is on file in this office for inspection, and that a meeting of the Local Board will be held in the Borough Office, in the First National Bank Building, at St. George, Borough of Richmond, on the 18th day of April, 1899, at 10 o'clock in the forenoon, at which meeting said petition will be submitted to said Board.

GEORGE CROMWELL,

President.

ALBERT E. HADLOCK,

Secretary.

## DEPARTMENT OF TAXES AND ASSESSMENTS.

THE CITY OF NEW YORK,  
DEPARTMENT OF TAXES AND ASSESSMENTS,  
MAIN OFFICE, BOROUGH OF MANHATTAN,  
No. 280 BROADWAY, STEWART BUILDING,  
January 3, 1899.

NOTICE IS HEREBY GIVEN AS REQUIRED by "The Greater New York Charter," that the books called "The Annual Record of the Assessed Valuation of Real and Personal Estate of the Boroughs of Manhattan, The Bronx, Brooklyn, Queens and Richmond, comprising The City of New York," will be open for examination and correction on the second Monday of January, and will remain open until the 1st day of May, 1899.

During the time that the books are open to public inspection application may be made by any person or corporation claiming to be aggrieved by the assessed valuation of real or personal estate, to have the same corrected.

In the Borough of Manhattan, at the main office of the Department of Taxes and Assessments, No. 280 Broadway.

In the Borough of The Bronx, at the office of the Department, Municipal Building, One Hundred and Seventy-seventh street and Third avenue.

In the Borough of Brooklyn, at the office of the Department, Municipal Building.

In the Borough of Queens, at the office of the Department, Hackett Building, Jackson avenue and Fifth street, Long Island City.

In the Borough of Richmond, at the office of the Department, Richmond Building, New Brighton.

Corporations in all the boroughs must make applications only at the main office in the Borough of Manhattan. Applications in relation to the assessed valuation of personal estate must be made by the person assessed at the office of the Department in the borough where such person resides, and in the case of a non-resident carrying on business in The City of New York, at the office of the Department of the borough where such place of business is located, between the hours of 10 A. M. and 2 P. M., except on Saturdays, when all applications must be made between 10 A. M. and 12 noon.

THOMAS L. FEITNER,

President.

EDWARD C. SHEEHY,

THOMAS J. PATTERSON,

WILLIAM F. GRELL,

ARTHUR C. SALMON,

Commissioners of Taxes and Assessments.

## SUPREME COURT.

FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening PARK STREET (although not yet named by proper authority), from East One Hundred and Forty-ninth street to Westchester avenue, as the same has been heretofore laid out and designated as a first class street or road in the Twenty-third Ward of The City of New York.

NOTICE IS HEREBY GIVEN THAT THE BILL of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I, to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 17th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon, and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated BOROUGH OF MANHATTAN, NEW YORK, March 30, 1899.

ARTHUR BERRY,

GEORGE E. HYATT,

MARTIN S. COHEN,

Commissioners.

JOHN P. DUNN,

Clerk.

FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening BOSTON ROAD (although not yet named by proper authority), from Tremont avenue to the Bronx Park, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-fourth Ward of The City of New York.

NOTICE IS HEREBY GIVEN THAT THE bill of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, up to and including the 31st day of March, 1899, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I, to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 17th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon; and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated BOROUGH OF MANHATTAN, NEW YORK, April 3, 1899.

JAMES R. ELY,

WM. G. ROSS,

SAMUEL B. PAUL,

Commissioners.

JOHN P. DUNN,

Clerk.

SECOND JUDICIAL DISTRICT.

In the matter of the application and petition of Charles H. T. Collis, as Commissioner of Public Works of The City of New York, for and on behalf of The Mayor, Aldermen and Commonalty of The City of New York, under chapter 189 of the Laws of 1893, to acquire certain real estate as the term "real estate" is defined in said act for the purpose of providing for the sanitary protection of the sources of the water supply of The City of New York.

NOTICE OF FILING FIRST SEPARATE REPORT OF FARMERS' MILLS AND WHITE POND PROCEEDING.

PUBLIC NOTICE IS HEREBY GIVEN THAT the First Separate Report of David Thomson, Emerson W. Addis and Frederick Barnard, Commissioners of Appraisal in the above-entitled matter, was filed in the office of the Clerk of the County of Westchester,

at White Plains in said county, on the 20th day of January, 1899, and a certified copy thereof was filed in the County Clerk's office of the County of Putnam, at Carmel, in said county, on the 13th day of March, 1899.

Notice is further given that said report includes and affects the parcels of land designated as Parcels Nos. 1, 2, 3, 4, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29, 31, 34, 36, 37, 39, 40, 42, 43, 44, 45, 46, 47, 48 and 49.

Notice is further given that an application will be made at a Special Term of the Supreme Court of the State of New York, to be held in and for the Second Judicial District at the Court-house in White Plains on the 6th day of May, 1899, at 10.30 o'clock in the forenoon, or as soon thereafter as counsel can be heard, for an order confirming said report and for such other and further relief as may be just.

Dated New York, March 23, 1899.

JOHN WHALEN,

Corporation Counsel,

No. 2 Tryon Row,

Borough of Manhattan,

City of New York.

## FIRST DEPARTMENT.

In the matter of the application of the Commissioner of Public Works of The City of New York for and on behalf of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title in fee to certain pieces or parcels of land between East One Hundred and Twenty-fifth street and First avenue and the Harbor Commissioner's line of the Harlem river, and between the southerly line of One Hundred and Thirty-second street and Willis avenue, and the southerly line of One Hundred and Thirty-fourth street and Willis avenue, and to a right of way or easement between the United States pierhead line of the Harlem river and One Hundred and Thirty-second street at Willis avenue, for the construction of a bridge over the Harlem river, and approaches thereto, between One Hundred and Twenty-fifth street and First avenue and One Hundred and Thirty-fourth street and Willis avenue, pursuant to the provisions of chapter 147 of the Laws of 1894.

NOTICE IS HEREBY GIVEN THAT THE BILL of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter up to and including the 31st day of March, 1899, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I, to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 18th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon, and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated BOROUGH OF MANHATTAN, NEW YORK, April 3, 1899.

ARTHUR BERRY,

E. W. BLOOMINGDALE,

EDWARD B. WHITNEY,

Commissioners.

JOHN P. DUNN,

Clerk.

## SECOND JUDICIAL DISTRICT.

In the matter of the petition of Thomas F. Gilroy, Commissioner of Public Works of The City of New York, under and in pursuance of chapter 490 of the Laws of 1893, and the Laws amendatory thereof, on behalf of The Mayor, Aldermen and Commonalty of The City of New York, for the appointment of Commissioners of Appraisal under said acts.

NOTICE OF FILING FIRST SEPARATE REPORT OF CORNELL DAM SEVENTH SUPPLEMENTAL PROCEEDING.

PUBLIC NOTICE IS HEREBY GIVEN THAT the First Separate Report of Henry C. Henderson, James H. Briggs and Quinon Corwin, Commissioners of Appraisal in the above-entitled matter was filed in the office of the Clerk of the County of Westchester, at White Plains in said County, on the 9th day of January, 1899.

Notice is further given that said report includes and affects the parcels of land designated as Parcels Nos. 102, 104, 106, 107, 108, 115, 116, 117, 118, 121, 122, 125, 126, 128, 131, 136, 141, 142, 146, 150, 159, 160 and a parcel belonging to Mary A. Merritt, Lennie W. Todd, Carrie M. Todd and Rhoda M. Reynolds, which is therein reported on under a stipulation.

Notice is further given that an application will be made at a Special Term of the Supreme Court of the State of New York, to be held in and for the Second Judicial District at the Court-house in White Plains, on the 6th day of May, 1899, at 10.30 o'clock in the forenoon or as soon thereafter as counsel can be heard, for an order confirming said report and for such other and further relief as may be just.

Dated New York, March 23, 1899.

JOHN WHALEN,

Corporation Counsel,

No. 2 Tryon Row,

Borough of Manhattan,

City of New York.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND FIFTY-THIRD STREET (formerly Sedgwick avenue) (although not yet named by proper authority), from Mott avenue to East One Hundred and Fifty-seventh street, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-third Ward of The City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments thereto, do present their said objections, in writing, duly verified, to us, at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in The City of New York, on or before the 14th day of April, 1899, and that we, the said Commissioners, will hear parties, so objecting, and for that purpose will be in attendance at our said office on the 17th day of April, 1899, at 2 o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also the affidavits, estimates, proofs and other documents used by us in making our report, have been deposited in the Bureau of Street Openings, in the Law Department of The City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said city, there to remain until the 24th day of April, 1899.

Third—That the limits of our assessment for benefit include all those lands, tenements, and hereditaments and premises situate, lying and being in the Borough of



The Bronx, in The City of New York, which, taken together, are bounded and described as follows, viz.: Beginning at a point formed by the intersection of the southerly side of the approach to the Central Bridge with the United States bulkhead-line of the Harlem river; thence easterly along said southerly side of the approach to the Central Bridge to the corner formed by the intersection of the easterly side of Exterior street with the southerly side of the approach to the Central Bridge; thence southeasterly on a straight line to a point in the southeasterly side of Cromwell avenue midway between East One Hundred and Fifty-seventh street and East One Hundred and Sixty-first street; thence southeasterly by the middle line of the block between East One Hundred and Fifty-seventh street and East One Hundred and Sixty-first street to the northwesterly side of River avenue; thence southeasterly to the corner formed by the intersection of the southwesterly side of East One Hundred and Fifty-eighth street with the southeasterly side of River avenue; thence southeasterly along the southwesterly side of East One Hundred and Fifty-eighth street to its intersection with the middle line of the block between River avenue and Gerard avenue; thence southwesterly along said middle line of the block to its intersection with the middle line of the blocks between East One Hundred and Fifty-seventh street and East One Hundred and Fifty-eighth street; thence southeasterly along said middle line of the blocks to its intersection with the middle line of the blocks between Gerard avenue and Walton avenue; thence southwesterly along said middle line of the blocks to its intersection with the prolongation northwesterly of the northwesterly side of East One Hundred and Fifty-sixth street; thence southeasterly along said prolongation and northwesterly side of East One Hundred and Fifty-sixth street to its intersection with a line drawn parallel to the southerly side of the approach to the Central Bridge, and distant 100 feet southeasterly therefrom; thence southwesterly along said parallel line to its intersection with a line drawn parallel to the northwesterly side of East One Hundred and Fifty-third street and distant 100 feet northwesterly therefrom; thence southeasterly along said parallel line to its intersection with the northwesterly side of Railroad avenue, East, or Park avenue; thence southwesterly along said northwesterly side of Railroad avenue, East, or Park avenue, to the northwesterly side of East One Hundred and Forty-ninth street; thence northwesterly along the northwesterly side of East One Hundred and Forty-ninth street to its intersection with the prolongation southwesterly of that part of the middle line of the block between Walton avenue and an unnamed street between East One Hundred and Fifty-first street and East One Hundred and Fiftieth street; thence northwesterly along said prolongation and middle line of the block between Walton avenue and said unnamed street and its prolongation northwesterly to the northwesterly side of East One Hundred and Fifty-first street; thence northwesterly along said northwesterly side of East One Hundred and Fifty-first street to its intersection with the easterly side of Exterior street; thence westerly at a right angle to Exterior street to the United States bulkhead-line of the Harlem river; thence northwesterly along said United States bulkhead-line of the Harlem river to the point or place of beginning, as such streets are shown upon the final maps and profiles of the Twenty-third and Twenty-fourth Wards of The City of New York, excepting from said area all streets, avenues and roads or portions thereof heretofore legally opened, as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court-house, in the Borough of Manhattan, in The City of New York, on the 15th day of May, 1899, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated Borough of Manhattan, New York, February 6, 1899.

J. DE COURCEY IRELAND,  
JOHN J. QUINLAN,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND SEVENTIETH STREET (although not yet named by proper authority), from Boston road to Prospect avenue, and from Bristow street to Charlotte street, as the same has been heretofore laid out and designated as a first-class street or road in the Twenty-third and Twenty-fourth Wards of The City of New York.

NOTICE IS HEREBY GIVEN THAT THE bill of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I., to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 10th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon; and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated Borough of Manhattan, New York, March 8, 1899.

JAMES R. ELY,  
GEORGE G. BANZER,  
J. DE COURCY IRELAND,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening CROTONA PARK, NORTH (although not yet named by proper authority), from Arthur avenue to East One Hundred and Seventy-fifth street, near the Southern Boulevard, as the same has been heretofore laid out and designated as a first-class street or road in the Twenty-fourth Ward of The City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in The City of New York, on or before the 13th day of April, 1899, and that we, the said Commissioners, will hear parties so objecting, and for that purpose will be in attendance at our said office on the 14th day of April, 1899, at 4 o'clock p. m.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by us in making our report, have been deposited in the Bureau of Street Openings, in the Law Department of The City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said city, there to remain until the 18th day of April, 1899.

Third—That the limits of our assessment for benefit include all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, which, taken together, are bounded and described as follows, viz.: Beginning at a point formed by the intersection of the middle line of the block between East One Hundred and Fifty-ninth street and East One Hundred and Sixty-first street with the easterly side of Mott avenue, running thence northwesterly along said easterly side of Mott avenue and the easterly side of the Grand Boulevard and Concourse to its intersection with the middle line of the block between East One Hundred and Sixty-first street and East One Hundred and Sixty-second street; thence easterly along said middle line to the southeasterly side of the New York and Harlem Railroad; thence northwesterly along said southeasterly side of the said New York and Harlem Railroad to its intersection with the middle line of the blocks between East One Hundred and Sixty-fifth street and East One Hundred and Sixty-sixth street; thence easterly along said middle line of the blocks to the westerly side of Third avenue; thence southerly along said westerly side of Third avenue to its intersection with the westerly prolongation of the middle line of the blocks between that part of East One Hundred and Sixty-fifth street and East One Hundred and Sixty-sixth street lying easterly from Boston road; thence easterly along said westerly prolongation and said middle line of the blocks between East One Hundred and Sixty-fifth street and East One Hundred and Sixty-sixth street and its prolongation easterly to its intersection with a line drawn parallel to the easterly side of Stebbins avenue, and distant 100 feet easterly therefrom; thence southerly along said parallel line to its intersection with a line drawn parallel to the northwesterly side of East One Hundred and Sixty-fifth street, and distant 100 feet northwesterly therefrom; thence easterly along said parallel line to its intersection with a line drawn parallel to the northwesterly side of Westchester avenue and distant 100 feet northwesterly therefrom; thence northwesterly along said parallel line and its prolongation northwesterly to its intersection with a line drawn parallel to the easterly side of the Southern Boulevard and distant 100 feet easterly therefrom; thence southerly along said parallel line and continuing southeasterly along a line drawn parallel to the northwesterly side of Hunt's Point road and distant 100 feet northwesterly therefrom to its intersection with a line drawn parallel to the southerly side of Lafayette avenue and

documents used by us in making our report, have been deposited in the Bureau of Street Openings in the Law Department of The City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said city, there to remain until the 23d day of April, 1899.

Third—That the limits of our assessment for benefit include all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, which, taken together, are bounded and described as follows, viz.: Beginning at a point formed by the intersection of the southerly side of Tremont avenue with a line drawn parallel to the westerly side of Arthur avenue and distant 100 feet westerly therefrom; thence easterly along said parallel line to its intersection with the middle line of the blocks between East One Hundred and Seventy-fifth street and Woodruff street (East One Hundred and Seventy-sixth street); thence easterly along said middle line of the blocks to the westerly side of the Southern Boulevard; thence southerly along said westerly side of the Southern Boulevard to its intersection with a line drawn parallel to the southerly side of East One Hundred and Seventy-fifth street and distant 100 feet southerly therefrom; thence westerly along said parallel line to its intersection with a line drawn parallel to that part of the easterly side of Crotona Park, North, between Mohegan avenue and the Southern Boulevard and distant 100 feet easterly therefrom; thence southerly along said parallel line to its intersection with the prolongation easterly of a line drawn parallel to the southerly side of Crotona Park, North, and distant 100 feet southerly therefrom; thence westerly along said prolongation and line drawn parallel to the southerly side of Crotona Park, North, and distant 100 feet southerly therefrom to its intersection with the prolongation, southerly, of a line drawn parallel to that part of the westerly side of Crotona Park, North, between Crotona avenue and Fulton avenue and distant 100 feet westerly therefrom; thence northwesterly along said prolongation and line drawn parallel to that part of the westerly side of Crotona Park, North, between Crotona avenue and Fulton avenue and distant 100 feet westerly therefrom to the northwesterly side of East One Hundred and Seventy-fifth street, thence northwesterly along a line drawn parallel to the westerly side of Arthur avenue and distant 100 feet westerly therefrom to the point or place of beginning; as such streets are shown upon the Final Maps and Profiles of the Twenty-third and Twenty-fourth Wards of The City of New York, excepting from said area all streets, avenues and roads or portions thereof heretofore legally opened, as such area is shown upon our benefit maps deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court-house, in the Borough of Manhattan, in The City of New York, on the 8th day of May, 1899, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated Borough of Manhattan, New York, February 9, 1899.

JOHN G. H. MEYERS,  
Chairman,  
PETER F. RAFFERTY,  
JAMES J. MARTIN,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND SIXTY-THIRD STREET (although not yet named by proper authority), from Third avenue to Westchester avenue, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-third Ward of The City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in The City of New York, on or before the 8th day of April, 1899, and that we, the said Commissioners, will hear parties so objecting, and for that purpose will be in attendance at our said office on the 10th day of April, 1899, at 1 o'clock p. m.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by us in making our report, have been deposited in the Bureau of Street Openings, in the Law Department of The City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said city, there to remain until the 21st day of April, 1899.

Third—That the limits of our assessment for benefit include all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, which, taken together, are bounded and described as follows, viz.: Beginning at a point formed by the intersection of the prolongation westerly of the middle line of the blocks between East One Hundred and Sixty-fourth street and East One Hundred and Sixty-fifth street with the middle line of the block between Lind avenue and Summit avenue; thence easterly along said prolongation and middle line of the blocks between East One Hundred and Sixty-fourth street and East One Hundred and Sixty-fifth street and said middle line produced easterly to its intersection with the middle line of the block between Jerome avenue and Anderson avenue; thence southerly along said middle line of the block between Jerome avenue and Anderson avenue to its intersection with the prolongation easterly of the middle line of the blocks between East One Hundred and Sixty-second street and East One Hundred and Sixty-fourth street; thence westerly along said prolongation and middle line of the block between East One Hundred and Sixty-second street and East One Hundred and Sixty-fourth street to the easterly side of Woodycrest avenue (Bremer avenue); thence across Woodycrest avenue (Bremer avenue) and along the northwesterly side of East One Hundred and Sixty-third street to the easterly side of Ogden avenue; thence across Ogden avenue to its intersection with the middle line of the block between East One Hundred and Sixty-second street and East One Hundred and Sixty-fourth street; thence westerly along said middle line of the block and said middle line produced westerly to its intersection with the middle line of the block between Lind avenue and Summit avenue; thence northwesterly along said middle line of the block between Lind avenue and Summit avenue to the point or place of beginning as such streets are shown upon the Final Maps and Profiles of the Twenty-third and Twenty-fourth Wards of The City of New York, excepting from said area all streets, avenues and roads or portions thereof, heretofore legally opened as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court-house, in the Borough of Manhattan, in The City of New York, on the 15th day of May, 1899, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated Borough of Manhattan, New York, March 16, 1899.

CHARLES L. GUY,  
Chairman,  
EDWARD D. FARRELL,  
EDWARD B. WHITNEY,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND SIXTY-FOURTH STREET (although not yet named by proper authority), from Summit avenue to Anderson avenue, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-third Ward of The City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in The City of New York, on or before the 12th day of April, 1899, and that we, the said Commissioners, will hear parties so objecting, and for that purpose will be in attendance at our said office on the 13th day of April, 1899, at 4 o'clock p. m.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by us in making our report, have been deposited in the Bureau of Street Openings, in the Law Department of The City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said city, there to remain until the 21st day of April, 1899.

Third—That the limits of our assessment for benefit include all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, which, taken together, are bounded and described as follows, viz.: Beginning at a point formed by the intersection of the prolongation westerly of the middle line of the blocks between East One Hundred and Sixty-fourth street and East One Hundred and Sixty-fifth street with the middle line of the block between Lind avenue and Summit avenue; thence easterly along said prolongation and middle line of the blocks between East One Hundred and Sixty-fourth street and East One Hundred and Sixty-fifth street and said middle line produced easterly to its intersection with the middle line of the block between Jerome avenue and Anderson avenue; thence southerly along said middle line of the block between Jerome avenue and Anderson avenue to its intersection with the prolongation easterly of the middle line of the blocks between East One Hundred and Sixty-second street and East One Hundred and Sixty-fourth street; thence westerly along said prolongation and middle line of the block between East One Hundred and Sixty-second street and East One Hundred and Sixty-fourth street to the easterly side of Woodycrest avenue (Bremer avenue); thence across Woodycrest avenue (Bremer avenue) and along the northwesterly side of East One Hundred and Sixty-third street to the easterly side of Ogden avenue; thence across Ogden avenue to its intersection with the middle line of the block between East One Hundred and Sixty-second street and East One Hundred and Sixty-fourth street; thence westerly along said middle line of the block and said middle line produced westerly to its intersection with the middle line of the block between Lind avenue and Summit avenue; thence northwesterly along said middle line of the block between Lind avenue and Summit avenue to the point or place of beginning as such streets are shown upon the Final Maps and Profiles of the Twenty-third and Twenty-fourth Wards of The City of New York, excepting from said area all streets, avenues and roads or portions thereof, heretofore legally opened as such area is shown upon our benefit map deposited as aforesaid.

Fourth—That our report herein will be presented to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court-house, in the Borough of Manhattan, in The City of New York, on the 8th day of May, 1899, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated Borough of Manhattan, New York, March 3, 1899.

JOHN G. H. MEYERS,  
Chairman,  
MICHAEL L. BOULLON,  
EDWARD L. PATTERSON,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening ROSE STREET (although not yet named by proper authority), from Bergen avenue to Brook avenue, as the same has been heretofore laid out and designated as a first-class street or road in the Twenty-third Ward of The City of New York.

NOTICE IS HEREBY GIVEN THAT THE bill of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, up to and including the 27th day of March, 1899, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I., to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 14th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon, and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated Borough of Manhattan, New York, March 27, 1899.

THEODORE E. SMITH,  
EDGAR KETCHUM,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND EIGHTY-SEVENTH STREET (although not yet named by proper authority), from Third avenue to Southern Boulevard, as the same has been heretofore laid out and designated as a first-class street or road in the Twenty-fourth Ward of The City of New York.

NOTICE IS HEREBY GIVEN THAT THE bill of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I., to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 14th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon; and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated Borough of Manhattan, New York, March 30, 1899.

ASA A. ALLING,  
FLOYD M. LORD,  
EDWARD F. HOLLISTER,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening FULTON AVENUE (although not yet named by proper authority), from the Twenty-third and Twenty-fourth Ward line to East One Hundred and Seventy-fifth street, as the same has been heretofore laid out and designated as a first-class street or road in the Twenty-fourth Ward of The City of New York.

NOTICE IS HEREBY GIVEN THAT THE supplemental and additional bill of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I., to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 14th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon; and that the said supplemental and additional bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated Borough of Manhattan, New York, February 27, 1899.

FREDERIC A. TANNER,  
JOHN T. SIMON,  
FLOYD M. LORD,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## FIRST DEPARTMENT.

In the matter of the application of The Mayor, Aldermen and Commonalty of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening TOWNSEND AVENUE (although not yet named by proper authority), from East One Hundred and Seventieth street to East One Hundred and Seventy-sixth street, as the same has been heretofore laid out and designated as a first-class street or road in the Twenty-fourth Ward of The City of New York.

NOTICE IS HEREBY GIVEN THAT THE bill of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I., to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 13th day of April, 1899, at 10.30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon, and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of title 4 of chapter 17, of chapter 378 of the Laws of 1897.

Dated Borough of Manhattan, New York, March 17, 1899.

FRANK E. HIPPLE,  
JNO. W. D. DOBLER,  
JAMES HIGGINS,  
Commissioners.

JOHN P. DUNN,  
Clerk.

## THE CITY RECORD.

THE CITY RECORD IS PUBLISHED DAILY, Sundays and legal holidays excepted, at No. 2 City Hall, New York City. Annual subscription, \$9.30, postage prepaid.

WILLIAM A. BUTLER,  
Supervisor.