



This material is part of the collection of the
Philadelphia Water Department
and was downloaded from the website
www.phillyh2o.org

Please contact the PhillyH2O webmaster
for more information about this material.

ANNUAL REPORT

OF THE

BUREAU OF SURVEYS,

For the Year Ending December 31st, 1889,

AND

THIRD ANNUAL MESSAGE

OF

EDWIN H. FITLER,

Mayor of the City of Philadelphia,

WITH

ANNUAL REPORT

OF

LOUIS WAGNER,

Director of the Department of Public Works.

ISSUED BY THE CITY OF PHILADELPHIA.

1890.

PHILADELPHIA:

DUNLAP & CLARKE, PRINTERS AND BINDERS, 817-19-21 FILBERT STREET.

1890.

APPENDIX.

CENSUS RETURNS, 1890.

ALTITUDE, TOPOGRAPHY, ETC.

1. What is the altitude of the city above mean sea level, in feet?

At Broad and Market streets, +48.732. Highest, +446; lowest +2; average, +110.

2. Is the city on navigable water?

Yes.

3. If so, give a brief description of the harbor facilities, wharves, etc.

Five miles of wharves and docks on the Delaware river front; channel, 35 to 40 feet in depth at low water; greater depth than 18 feet one-quarter mile wide. Four miles of wharves on Schuylkill river front; channel 18 feet deep at low water; rise and fall of tide, 6.25 feet. United States Navy Yard at League Island at the junction of the Schuylkill and Delaware rivers.

4. Give a brief description of the geological and topographical characteristics of the site of the city, showing (a) character of soil; (b) underlying rock; (c) variations of level; (d) streams and water courses, and (e) if the land for a radius of five miles is open or wooded.

The city contains 129.4 square miles, 108 square miles lying between and north of the junction of the Schuylkill and Delaware rivers, and 21.4 square miles on the west side of the former river.

The Delaware river is navigable for 18 miles.

The Schuylkill river, 16 miles in length, is navigable for 8 miles from its mouth to Fairmount dam, above which it is not navigable.

About 4 square miles of the southern portion of the city is below low tide, and is used for truck farms. From this the surface rises in elevation northwestward, the summit between the two rivers lying near the Schuylkill river (along Ridge avenue) to Laurel Hill Cemetery and along Germantown avenue in the village of Germantown. It is rolling and intersected by many abrupt channels of creeks and small streams. The Wissahickon creek is in a narrow rocky gorge, and the banks of the Schuylkill river above Fairmount are rocky bluffs.

One-fourth of the area, near the north and west boundaries, is farm land, open, very little timber, with many villages. This also applies to all territory within a radius of 5 miles of the City Hall. About 50 square miles is suburban land undergoing city improvements, and 40 square miles of urban territory, the greater portion being north of the City Hall.

In elevation the surface slopes to the northwest from 10 feet above sea level in the southern portion, with mounds rising to 25 and 30 feet, to 49 feet at City Hall, with a height of 12 feet east thereof at the Delaware river and 109 feet west thereof near the city boundary. At the northern boundary, west of the Schuylkill river and near the latter, 260 feet; at the river, 15 feet. The villages of Manayunk and Roxborough on Ridge avenue, 310 feet; Chestnut Hill, 446; Mt. Airy, 370; Germantown, 200 to 300; Nicetown, 130; Branchtown, 226; Pittville, 263; Olney, 135; Frankford, 35 to 60; Holmesburg, 80; Volunteertown, 159; Crescentville, 216; Bustleton, 126; Fox Chase, 240.

The city is upon gneiss rock, rising in elevation with the topography of the surface. In the bend of the Delaware river there is about 60 feet of river mud upon gravel. On the Schuylkill river, at Point Breeze, the surface is gravel and clay, 96 feet to rock; Mifflin street, at the Delaware river, sand and gravel, 40 feet to rock; Smith's Island, in the Del-

aware river, 70 feet of sand, clay and gravel, 161 feet to rock ; Broad and Walnut streets, clay, gravel and sand, 50 feet to rock. The rock appears on the surface at Woodland Cemetery and at the bottom of the Schuylkill river, say 30 feet below the river banks, to Fairmount, where it reaches the surface and rises 40 feet above the river. In the greater portion of the city, west and north of a line from Woodland Cemetery to Frankford, the rock frequently appears on the surface, being only covered by from 10 to 15 feet of clay ; southeast of this line, from Frankford avenue and Beach street, to United States Arsenal at Bridesburg, the formation is a deposit of gravel and sand, about 50 feet in depth near the Delaware river.

CEMETERIES.

1. What is the total number and area of all cemeteries pertaining to the city ?

Total number, 183. Total area (in acres), no record kept by the city.

2. What number of these are located inside the city limits, and what is their total area in acres ?

Number, 183. Area, no record kept by the city.

3. How many cemeteries are there inside the city limits in which interments are no longer made, and what is their total area in acres ?

Number, 2. Area, 6.

4. What is the total number of interments made in all cemeteries to date ?

No record kept by the city.

5. Of this number, how many have been made inside present limits of the city ?

No record.

6. What has been the average yearly number of interments in all cemeteries for the past ten years ?

Twenty-two thousand seven hundred and twenty-seven (22,727).

7. What number of these were made inside city limits ?

Remarks.

The present City of Philadelphia, embracing the County of Philadelphia, was consolidated with numerous townships in 1854; prior to that time, no return of interments was made to the Health Office, and since that time no attempt has been made to ascertain the area of burying grounds within the county limits. The earliest interments commencing prior to 1682.

Interments are regulated by Act of Assembly of January 29, 1818, and March 8, 1860, and rules and regulations of the Health Office, a copy of which accompanies this sheet.

DRAINAGE AND SEWERAGE.

1. What is the total length, in miles, of all sewers laid in the city?

To January 1, 1890, 367.9 miles.

2. Please give the number of miles laid in each of the following diameters:

Main sewers, generally more than 3 feet in diameter,	66.59 miles.
Branch sewers, 3 feet and less in diameter, say 18 miles of these are generally 12 inches in diameter, and two miles of 8 inches diameter; the remainder, 281 miles, are all brick sewers, mostly egg-shaped, and from 3 to 3½ feet in vertical diameter.	301.31 miles,

3. What are the diameters of the largest and of the smallest sewer in the city?

Largest, 240 inches; smallest 8 inches.

4. How many outlets are there connected with the system, and where do they discharge?

Eighty outlets. They generally discharge into the Delaware river and into the Schuylkill river, below Fairmount dam.

5. Are the outlets above high-water mark, and if not, to what system are they submerged?

The bottoms of the sewers are generally below high tide, the lowest being at low tide, and therefore submerged 6 feet by the tide.

6. Please enumerate the several parts of the system, as indicated below :

Approximate only. Manholes, 8,000; catch-basins, 7,200; handholes, none; lampholes, 5; flush-tanks, 1; house connections, 100,000. A few vaults connected with sewers; they are not allowed.

7. Please give the number of miles of sewers laid in each ward, and the number of privies and cesspools, not connected with sewers, in each ward.

The length of sewers in each ward may be obtained from the accompanying map. Have no record of number of privies and cesspools connected with sewers.

8. What has been the total cost of all sewers to date, aside from the cost of maintenance and repairs?

Eight million fifty-six thousand four hundred and thirty-five (8,056,435) dollars and thirty-seven (37) cents since consolidation in 1855.

9. What has been the average yearly cost of maintenance for the past ten years?

Twenty-five thousand (25,000) dollars.

10. How much of the above has been expended for cleaning?

Two thousand (2,000) dollars.

11. What is the total length, in miles, of all covered drains in the city (brick or stone) intended to receive rainfall and soil water only, and not for transmission of sewerage?

Storm-water conduits, $4\frac{1}{2}$ miles.

Accompanying is a map of the city showing all sewers and storm-water conduits in the city, except old culverts on private property, which the city does not build or keep in repair.

REMARKS.

The combined sewerage system is generally in use, emptying by gravity into the Delaware and Schuylkill rivers.

Above, and at Fairmount, the Schuylkill river is used for water supply, and the separate system is being constructed, the storm-water emptying directly into the river and the sewage conducted by a main sewer $7\frac{3}{4}$ miles in length to below the point of water supply.

FIRE DEPARTMENT.

1. What is the total force of the Department?

Five hundred and nine (509) men.

2. Into how many grades is the force divided, and what is the salary of each grade? (Give number in each grade.)

There are no grades. Hose and Ladder men are paid \$2.50 per day.

3. How many of the above are "regular," and how many are "on call?"

All permanently employed.

4. What is the title of the chief executive of the force, and what is his salary?

Chief Engineer, Bureau of Fire. \$3,000.

5. How many cases of serious injury occurred in the regular force during the year?

Twenty-six (26).

6. How many deaths occurred in the regular force during the year, and from what causes?

Four (4) deaths; 2 killed, 1 consumption, 1 tumor on bowels.

7. Give the apparatus used by the Department, as indicated below:

Steam engines, 40; hand engines, —; fire extinguishers, 20; also, 2 chemical engines; hose carriages, carts or sleds, 44; ladders, number of feet, 2,000; aerial ladders, 7; fire-

escapes, —; hose, number of feet, 73,000; horses, 180; hook and ladder trucks, 10.

8. How many miles of wire and how many alarm boxes are on the fire-alarm system?

Nine hundred (900) miles. 550 boxes.

9. How many fires occurred during the past year?

One thousand and eighty-one (1,081).

10. What was the largest loss at any one fire?

Three hundred and eighty thousand (380,000) dollars.

11. What was the total loss by fire during the year?

One million five hundred thousand (1,500,000) dollars.

12. What was the total amount of insurance involved by the fires during the year?

About \$15,000,000.

13. What has been the average annual cost of the Department for the past 10 years?

About \$625,000.

14. What are the "fire limits" of the city?

One hundred and twenty-nine (129) square miles, as embraced in the county of Philadelphia.

GOVERNMENT.

1. What are the designations of the several classes of city officials elected by the people, with the number in each grade, and the salaries attached thereto?

One Mayor, \$12,000 per annum; one City Controller, \$8,000 per annum; one Receiver of Taxes, \$10,000 per annum; one City Treasurer, \$10,000 per annum; one City Solicitor, \$10,000 per annum; one District Attorney, \$10,000 per annum; three City Commissioners, \$5,000 each per annum; one Recorder of Deeds, \$10,000 per annum; one Sheriff, \$15,000 per annum; one Register of Wills, \$5,000 per annum; one Coroner, \$5,000 per annum; one Clerk Court of Quarter Sessions, \$5,000 per annum; twelve Judges, Courts of Common Pleas and Quarter Sessions, \$7,000 each per annum; four Judges, Orphans' Court, \$7,000 each per

annum; twenty-eight Police Magistrates, \$3,000 each per annum; thirty-four Select Councilmen, no salary; one hundred and ten Common Councilmen, no salary.

2. What is the total number of all city officials not elected by the people, and the total amount paid them yearly as salaries?

Officials not elected by the people, including Prothonotary of the Court of Common Pleas, heads of departments, chiefs of bureaus, and members of boards and commissions, 131. Total amount of yearly salaries, \$90,300.

3. What is the title of the chief health organization?

Board of Health.

4. How many members compose it, and how many of the members must be physicians?

Six members, including the Director of Public Safety (physicians not specified).

5. What has been the average annual expense of the organization for the past ten years?

Ninety-seven thousand three hundred and thirty-two (97,332) dollars and forty-eight (48) cents per year.

6. What are its powers in presence of an epidemic?

(See Philadelphia City Digest.)

LICENSES.

1. Please enumerate the places of amusement in the city, their seating capacity, and license paid, as indicated below:

Class.	Number.	Total Seating Capacity.	Am't of license paid City.
Theatres,	22	36,196	\$25 per annum each
Halls,	4	6,992	" "

Beer gardens not allowed.

2. How many licensed drinking saloons are there in the city?

One thousand two hundred and three (1,203).

3. What is the yearly license paid by each class?

Five hundred (500) dollars.

4. Are dogs licensed? If so, what is the yearly cost of each license?

No; but registered. The cost of registration, which is required but once, is \$1.

5. What has been the average yearly number of dog licenses issued for the past 10 years?

Two hundred and three (203) is the average number of dogs registered.

6. What is the estimated percentage of licensed dogs to unlicensed dogs in the city?

No data from which any definite estimate can be made of percentage of registered to unregistered dogs.

7. How many licensed public passenger vehicles are there in the city (exclusive of herdies, omnibuses, stages, etc., running over advertised routes)?

One thousand and fifty-six (1,056) passenger cars.

8. What license do they pay the city in the several classes?

Two-horse cars, \$50; one-horse cars, \$25 per year; cars crossing certain bridges, \$50 extra per year.

9. What is the average annual receipt to the city for all the above licenses?

During the year 1889, \$531,691.49.

PARKS.

1. Please give in the table below the number, area, etc., of the parks of the city.

Total number of all parks,	. . . . .	11
Total area (in acres),	. . . . .	2,884 $\frac{52}{100}$
Inside city limits:		
Number,	. . . . .	11
Total area (in acres),	. . . . .	2,884 $\frac{52}{100}$
Improved:		
Number,	. . . . .	11
Total area (in acres),	. . . . .	2,884 $\frac{52}{100}$

Not open to public.

All open to public.

2. How much area in the parks is covered by water in the form of pond, streams, etc.?

Three hundred and seventy-three (373) acres.

3. How many acres comprised in the parks were donated to the city?

One hundred and seventy-seven and seven one-hundredths ($177\frac{7}{100}$) acres.

4. What was the original cost of the land in the parks where it was acquired by purchase?

Seventeen million five hundred and three thousand five hundred and twenty-two (17,503,522) dollars.

5. How much has been expended on all parks for improvements, exclusive of maintenance?

One million eight hundred and twenty-three thousand six hundred and seventy-one (1,823,671) dollars.

6. What is the total length of each class of roads, etc., in all parks?

Driveways, $32\frac{1}{2}$ miles; bridleways, $7\frac{82}{100}$ miles; Footways, $40\frac{77}{100}$ miles.

7. What has been the average annual cost of maintenance of all parks for the past 10 years?

Two hundred and sixty thousand one hundred (260,100) dollars.

Please furnish a copy of the park rules and ordinances, and a map of the city showing location of parks.

Digest of Laws governing parks.

Map of Fairmount Park.

POLICE.

1. Please give the number of men in the force, by totals of grade, and the salary of each grade.

One Superintendent of Police, \$3,000; one Fire Marshal, \$1,800; one Surgeon, \$1,800; four Captains, each, \$1,600; one Chief Clerk, \$1,800; two Assistant Clerks, each, \$1,100; one Clerk to Superintendent, \$1,200; one Assistant Clerk to Superintendent, \$1,050; one Property Clerk, \$1,200; one

Chief of Detectives, \$1,500; eleven Detectives, each, \$1,350; one Vagrant Detective, \$1,100; one Court Detective, \$1,000; one Night Detective, \$912.50; one Superintendent of Vans and Patrol, \$1,200; six Van Drivers, each, \$720; one Hostler, \$720; six Matrons, each, \$600; twenty-eight Lieutenants, each, \$1,275; sixty-seven Sergeants, each, \$1,138.28; seventy-seven House Sergeants, each, \$1,040; twenty-two Patrol Drivers, each, \$952.50; twenty-two Patrol Sergeants, each, \$1,040; twenty-two Patrol Officers, each, \$952.50; four Harbor Pilots, each, \$1,050; four Harbor Engineers, each, \$1,050; four Harbor Firemen, each, \$912.50; one thousand four hundred and twenty-five Patrolmen, each, \$952.50. Total of Force, 1,717.

2. What is the uniform of the force, and what weapons are carried by the patrolmen?

Regulation blue cloth, for winter wear, consisting of double-breasted overcoat, pants, vest, black helmet; and for summer, single-breasted blouse, pants, vest, light colored helmet; baton.

3. How many miles of streets are patrolled by the force?

One hundred and twenty-five square miles.

4. Into how many reliefs is the force divided, and what are the hours of duty?

Two; sixteen hours out of every twenty-four, and subject to all calls.

5. What has been the average annual number of arrests for the past ten years?

Fifty thousand.

6. What has been the average annual number of Station-house lodgers for the past year?

Twenty-five thousand.

7. What has been the average annual value of all lost and stolen property recovered by the force for the past ten years?

One million (1,000,000) dollars; total average about one hundred thousand (100,000) dollars.

8. What has been the average annual cost of the force for the past ten years?

About one million (1,000,000) dollars.

What has been the average annual number of the force for the past ten years?

About fourteen hundred.

10. What has been the total number of deaths in the force during the past ten years?

(a) From disease, one hundred and fifty; (b) from wounds or injuries received in the line of duty, fifteen.

1. Name and official title of the head of the police department or constabulary?

John Lamon, Superintendent of Police.

2. Number of officers and men on the force?

221 officers; 1,476 men; 98 mounted; 12 harbor police.

3. Number of patrol wagons?

11 patrol wagons.

4. What system of electrical communication, if any, is in use?

Gamewell system.

5. Have you a city prison, calaboose, or lockup: if so, how many?

One County Prison, 25 station houses, and 10 sub-stations, with cells or lockups.

6. Give the total number of cells in said prison or prisons, and how many they will accommodate without overcrowding.

County Prison, 538; accommodate 2; average cells in station houses, 6; total, 210.

7. How are the sexes separated from each other?

By a wall thirty feet high, termed north and south blocks, in County Prison, and in station houses the cells are divided off by stone partitions.

8. Is there any prison or police matron regularly employed; by whom paid, and what is her salary?

There are 5 matrons in County prison, and 6 police matrons

at police stations; they are paid by city and county, and receive \$50 per month, each.

9. How many arrests were made by the force during the year ending December 31, 1889?

The number of arrests made was 42,673.

10. What was the actual or estimated value of property recovered and restored to its lawful owners?

About \$109,834.88

11. Number of lost children restored to their homes?

There were 3,024.

12. Number of lodgers in station houses?

There were 12,507 lodgers.

13. Number of known suicides?

About 8.

14. Number of houses known to have been burglariously entered?

About 40.

15. Number of known houses of prostitution at close of year?

About 100.

16. Number of pawnshops, and known "fences" other than pawnshops?

Number of pawnshops, 83; none.

17. Number of licensed retail liquor saloons; also, wholesale, and the number of places where beer or spirits are known to be sold without license?

Retail saloons, 1,203; wholesale, 268; none that we know of.

18. What is the amount per annum for a license to sell beer or spirits at wholesale or retail?

Wholesale, \$500; retail, \$500.

19. What were the number of licenses granted during the year, and the total revenue from this source?

Licenses granted, 1,471; total revenue derived, \$735,500.

20. Does the revenue from liquor licenses go into the general fund, or into some special fund; if the latter, to what special purpose is it devoted?

Four-fifths of retail into city treasury, and revenue from wholesale into State treasury; general improvements of the city.

21. Same question as to revenue from fines?

Into city treasury.

22. Please state whether there are any Chinese in your city or town; if so, how many?

About 1,200.

23. Are commitments made by any magistrate, judge, or court of any persons of any age and of either sex to any institution or institutions under the control of any church, sect, or religious order, or to any other private institution of a charitable or correctional nature; if so, please name the institution or institutions?

House of Correction.

24. Is there any city or town almshouse, hospital, or other charitable institution; if so, please give its location and name?

Philadelphia Hospital and Blockley Almshouse.

25. You will confer a great favor upon this office if you will furnish below a list of all private or public institutions for the insane, the idiotic, the blind, the deaf, or for the homeless, the aged, the sick, or the destitute, in your city or town, with the names of the superintendents, in order that we may correspond with them?

Philadelphia Hospital for Insane, George Roney, Superintendent.

Pennsylvania Hospital for Insane, John B. Chapin, Chief and Superintendent.

Friends' Asylum for Insane, J. C. Hall, M. D., Superintendent.

Pennsylvania Institution for the Instruction of the Blind, Edward Townsend, President.

Pennsylvania Industrial Home for Blind Women, James Pollock, President.

Pennsylvania Institution for deaf and dumb, F. Mortimer Lewis, President.

Blockley Almshouse, George Roney, Superintendent.

Germantown Poor House, Christian Donat, President.

Northern Home for Friendless Children, Rev. William M. Baum, President.

Southern Home for Destitute Children, Mrs. J. Elverson, President.

Roxborough Poor House, Shawmont avenue and Wissahickon avenue.

Western Home for Poor Children, Mrs. M. J. Wilson, Directress.

Union Home for Old Ladies, Mrs. I. S. Hinkson, President.

Sheltering Arms for Infants, Ozi W. Whitaker, D. D., President.

St. Joseph's Female Orphan Asylum, 700 Spruce street.

St. John's Male Orphan Asylum, Forty-eighth and Lancaster avenue.

Presbyterian Home for Aged Couples, Sixty-fifth and Vine streets.

Presbyterian Orphanage, Mrs. D. Haddock, President.

Penn Widows' Asylum, Mrs. L. A. Murphy, President.

Old Man's Home, Mrs. B. P. Williams, Directress.

Old Ladies' Home, Mrs. John F. Bailey, President.

Methodist Home for Aged and Infirm Members, Mrs. Bishop Simpson, President.

Jewish Foster Home and Orphan Asylum, I. Benswanger, President.

Home for Aged and Infirm Colored Persons, William Still, President.

PUBLIC BUILDINGS.

1. Please give the number and class of all buildings owned wholly or in part by the city and occupied for municipal purposes, the materials of which built, and cost of construction—giving totals in each class.

Class.	Number.	Material used in construction.	Cost.
City Hall.....	1	Marble	\$14,000,000
Independence Hall.....	1	Brick.	
Court Houses.....	6	Brick.....	1,400,000
Jails.....	1	Stone	300,000
Police Stations.....	26	Stone and brick....	622,000
Engine Houses.....	24	Stone and brick....	300,500
Markets.....	5	Frame and iron....	187,500
Hospitals, Asylums.....	1	Stone.....	1,525,000
Houses of Correction.....	1	Stone	800,000
Poorhouses or farms.....	2	Brick	75,800
Public Baths.....	6	Brick and stone....	41,290
School Houses.....	211	Brick and stone....	7,594,288
Real estate for water purposes...	16	Brick and stone....	6,853,000
Real estate for gas purposes.....	71	Brick and stone....	2,978,000

2. What buildings are owned in common with the county?
(See No. 3.)

Buildings held in trust by the city, value \$9,598,907.

3. What was the total of the city's portion?

The City of Philadelphia embraces the entire county.

4. What is the annual rental, if any, paid by the city for buildings used for municipal purposes?

Ninety-eight thousand and eighty-three (98,083) dollars.

5. What is the average annual amount paid by the city for the care of its buildings?

For maintenance,	\$245,900
For employés,	190,500

Value of sundry real estate not included in the above schedule, including wharves and landings, unimproved real estate, etc., \$1,545,672.

Total value of real estate owned by the city, \$65,325,479.

STREETS AND ALLEYS.

1. What is the total length (in miles) of all streets and alleys, open and accepted, within the city limits?

One thousand one hundred and fifty-one and six-tenths (1,151.6) miles.

2. Please indicate, in the table below, the number of miles of streets and alleys paved with the following materials:

	Miles.		Miles.
Stone. Cobble.....	392.2	Asphalt. Sheets.....	15.8
Block.....	98.2	Blocks.....	18.3
Artificial stone.....	.5	Coal-tar concrete.....	None
Brick.....	11.2	Wood.....	None
Macadamized.....	96	Rubble.....	117.6

3. Of the unpaved streets and alleys, how many miles are graded and curbed?

About 50 miles.

4. Of the unpaved streets and alleys, how many miles are unimproved?

Two hundred (200) miles.

5. What is the average width (in feet) of streets between building lines?

Fifty (50) feet.

6. What are the widths (in feet) of the widest and the narrowest streets in the city?

Widest, 144 feet; narrowest, 10 feet.

7. Please give the number of miles of paved streets and alleys in each ward?

Six hundred and ninety-nine and twenty-five one hundredths (699.25) miles.

Wards.	Miles of paved streets and alleys.	Wards.	Miles of paved streets and alleys.
First	31.25	Eighteenth	18.80
Second.....	15.20	Nineteenth	42.66
Third.....	8.80	Twentieth	26.25
Fourth.....	9.63	Twenty-first	12.50
Fifth.....	11.50	Twenty-second	48.90
Sixth	10.00	Twenty-third.....	14.80
Seventh.....	13.00	Twenty-fourth.....	36.00
Eighth.....	15.00	Twenty-fifth	35.15
Ninth	12.00	Twenty-sixth	38.20
Tenth	11.50	Twenty-seventh	29.40
Eleventh	6.50	Twenty-eighth	39.79
Twelfth	6.92	Twenty-ninth.....	32.70
Thirteenth.....	11.07	Thirtieth	18.68
Fourteenth.....	13.37	Thirty-first	23.37
Fifteenth	27.36	Thirty-second.....	19.63
Sixteenth.....	8.82	Thirty-third.....	20.50
Seventeenth.....	9.90	Thirty-fourth.....	20.10

8. What is the average proportionate width of sidewalks to streets?

One-fourth.

9. Please give the number of miles of sidewalks paved with the following materials :

Brick, 1,250; brick and stone combined, 10; stone, 100; asphalt sheets or blocks, 1; wood, 5; all others, 50.

10. To what extent are shade-trees set out along the streets inside of curb line?

Have no system. Planted two feet inside of curb at irregular distances.

11. Are these trees set out by the city or property owners? Property holders.

12. How many miles of streets have grassed places between the building lines, and what is the average width of same?

A very small proportion, and that only in the suburbs. Not allowed by ordinance.

13. What has been the average yearly cost of all street work, exclusive of cleaning, for the past ten years?

Six hundred and thirty-seven thousand five hundred and fifty (637,550) dollars; cost of construction, \$364,632; cost of repairs, \$272,918.

14. How often are the streets cleaned?

Once per week. In business centre, two, three, and six times a week.

15. Is the work done by hand or by machine?

Machine and hand labor combined.

16. What has been the average yearly cost of street cleaning for the past ten years?

Two hundred and eighty-three thousand nine hundred and seventy-nine (283,979) dollars.

17. What is the final disposal of the street scrapings?

Used in filling low lands in the suburbs of the city.

18. Are ashes and garbage removed by the city or by the householders?

By city.

19. How often are such removals made?

Ashes, once each week; garbage, six times weekly, during six months; three times weekly, during six months.

20. Are the ashes and garbage required to be kept in separate vessels?

Yes.

21. What is the final disposal of ashes and garbage?

Ashes are used in filling, etc.; garbage fed to hogs; residuum used as a fertilizer.

STREET LIGHTING.

1. What is the total number of all street lamps in the city?

Twenty-six thousand and forty-three (26,043).

2. How many of these are private?

Fifty (50).

3. Please give the number of each class of public lamps, and the annual cost to the city of each class of lamps ?

Class of Light.	No. of Lamps.	Annual cost to the city of each lamp.	Remarks.
Gas.....	*18,470	\$22 50	For lamps maintained by the city.
Electric.....	†1,095	48 50	Contract with seven Electric Light Companies.
Vapor, (a)....	6,478	21 00	Contract with Penna. Globe Gas Light Co.

(a) Naphtha, Gasoline, etc.

* Three hundred and eighty (380) of these gas lamps are lighted and repaired by the Northern Liberties Gas Co., under contract of \$22.27 per lamp, per annum.

† Fifty (50) private Electric Arc lights are maintained by the Girard Estate. All lamps burn each and every night and all night.

NOTE.—“The annual cost to the city of each lamp” should include the care, lighting, etc., as the actual total cost of each lamp to the city is desired.

WATER WORKS.

1. By whom are the water-works owned?

The City of Philadelphia.

2. What has been their total cost to date, aside from cost of maintenance and interest on debt?

The cost of the works cannot be accurately ascertained. The Spring Garden, West Philadelphia, Kensington, Germantown and Chestnut Hill Stations, with their supply pipes, were constructed by districts, which, at the time, were not a part of the city, or by private companies, and no complete records of the cost can be obtained; in some cases, no records whatever.

3. Describe the sources of supply, with the area of its drainage basin and character of country lying within it?

Ninety per cent. of the supply is from the Schuylkill river, and the remainder from the Delaware river. The drainage

area of the Schuylkill river is about 1,800 square miles. The upper portion is mountainous and wooded and full of mines of coal and iron. The lower portion is rolling and cultivated, and contains some large towns and villages.

4. What is the total daily capacity of the supply (gallons)?

If this refers to the capacity of the river or source of supply, the answer is: The daily average flow of the river is about 2,000,000,000 gallons. The minimum flow, which ordinarily lasts about one month in each year, is about 250,000,000 gallons.

5. Please state briefly but completely the system of works in use, and what system of filtration, if any, is connected with the system (*i. e.*, gravity, pumping—either direct or to stand-pipe or to reservoir—artesian wells, etc.)?

The systems in use are: Pumping by water or steam-power into reservoirs; pumping by steam-power into stand-pipes, and directly into the distribution pipes.

6. How many reservoirs are connected with the system, and what is their total capacity (gallons)?

There are nine reservoirs, with a total capacity of 891,491,454 gallons.

7. What are the dimensions of, and of what material is the stand-pipe?

The stand-pipe at the Spring Garden Station is of wrought iron, 153 feet high and 5 feet in diameter. The stand-pipe at the Roxborough basin, for high service, is of cast-iron, 30 inches in diameter and 90 feet high.

8 and 9. What is the full daily pumping capacity of the works (gallons)?

One hundred and eighty-five million two hundred and ninety thousand (185,290,000) gallons.

10. What is the average daily consumption (gallons)?

One hundred and sixteen million five hundred thousand (116,500,000) gallons.

11. What is the highest and lowest point of supply in city (feet above mean sea-level)?

Highest, 437 feet; lowest, 5 feet.

12. What is the pressure in the mains (lbs. to sq. in.)?

Fire and domestic, 15 to 175 lbs.

13. Please enumerate the several parts of the distribution system, as indicated below:

Mains: miles of, 930; material of, cast-iron; number of taps, 170,911; number of hydrants, 7,433; number of fountains, 646; number of watering troughs, 343; number of valves, 12,246; number of water meters, 304.

14. Please give the number of miles of mains laid, and the number of wells, public and private, in each ward of the city?

Have no record of the wells in each ward, and no record showing the miles of mains in each ward.

15. What does the city pay annually for each hydrant?

The city owns her water works.

16. What does the city pay annually for water exclusive of hydrants?

See question 15.

17. What has been the average annual cost of maintenance of the works for the past 10 years?

Five hundred and forty-five thousand six hundred and sixty-six (545,666) dollars and fifty-six (56) cents.

18. What has been the average yearly income from water-rents for the past 10 years?

One million six hundred and eighty-eight thousand five hundred and seven (1,688,507) dollars and seventy-six (76) cents. A list of water rates is enclosed.

The assessments are made by inspectors, who periodically visit each house, and by personal examination obtain a list of all appliances for the use of water, which are charged according to the rates fixed by Councils.

There are one or more registers for each ward in the city, in which every house is entered, the appliances described and

the amount of the assessment stated. Two copies of these registers (called duplicates) are made, one of which is delivered to the Receiver of Taxes, who makes out the bills and collects the money. The other duplicate is delivered to the City Controller, for the purpose of auditing the account of the Receiver of Taxes, who is obliged to return, daily, a list of all assessments collected.