



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.

Page	Subject heading	Illustration Caption	Type of illustration
1	One hundred and tenth annual report of the Bureau of Water for the year ending December 31, 1911 also annual report of Morris L. Cooke, Director of the Department of Public Works, issued by the City of Philadelphia, 1912	Volume held in Philadelphia Water Department Archives Catalogue No. 2004.057.0190	
1	Annual Report of the Department of Public Works for the year ending December 31, 1911		
3-12	Twenty-fifth annual report of the Department of Public Works. [M. L. Cooke, Director]. February 20, 1912		
3	Bureau of Gas		
5	Bureau of Highways		
6	Bureau of Lighting		
7	Bureau of Surveys		
7		Mileage of sewers - Division	
9	Bureau of Water [Summary report of Director of Department of Public Works]		
10		Daily average quantity filtered at Torresdale, Belmont, Upper Roxborough and Lower Roxborough	Table
12	Director's Office		
13	Annual report of the Bureau of Water for the year ending December 31, 1911 [of Frederick C. Dunlap]		
15	Officers of the Bureau of Water	[Partial list] Chief: Frederick C. Dunlap, General Superintendent: Allen J. Fuller, Assistants to Chief: William Whitby, H. J. Johnson, Seth M. van Loan [vanLoan], Registrar: James F. McCrudden, Chief Clerk: J. T. Hickman, Assistants to Chief Clerk: Thomas Spence, William J. Logan, Chief Draughtsmen: John E. Codman, Assistant Engineer: John S. Ely, Chemists: George E. Thomas, Francis D. West, Superintendents of Filters: Jos. S. V. Siddons, Albert Tolson, Alfred Stead	
19-60	Annual Report of the Bureau of Water for the year 1911, Twenty-fifth annual report of the Bureau of Water, one hundred and tenth annual report of the operations connected with the city water supply [of Fred. C. Dunlap], January 1, 1912		
24		[Costs and quantity of filtered water at Torresdale, Belmont, Upper Roxborough and Lower Roxborough]	Table
25	Typhoid fever		

25		Number of typhoid fever cases and deaths in Philadelphia 1901-1911	Table
26	Consumption		
26		Average daily pumpage [Pumpage into distribution, High service pumpage, Low service pumpage - filters]	Table
26		Average daily pumpage from the main pumping stations [Lardner's Point, Belmont, Queen Lane, Roxborough]	Table
27		Total quantity filtered during 1911 [Torresdale, Belmont, Queen Lane, Upper Roxborough, Lower Roxborough]	Table
27	Revenue collected		
27		Total collections during 1911 and the amounts for the several items compared with 1910	Table
28		Receipts of the Bureau for the years 1907 and 1911	Table
28		Statement of appropriations and expenditures for the year 1911	Table
29		Expenditures, 1911	Table
30		Bonds for the improvement, extension and filtration of the Philadelphia Water Supply, January, 1912	Table
30		Amounts, which have been expended or charged off on account of pending contracts	Table
31	Land appropriated		
31		[Section, Acres appropriated, Land damages and costs]	Table
31	Coal		
32		Coal consumed for pumpage [Stations, High Service Stations, Low Service Stations, Increase and Decrease of Coal and of Pumpage]	Table
33	Pumping station		
33		Total quantity pumped during the year	Table
33		The principal items of operating cost for 1910 and 1911	Table
34	Lardner's Point		
34		Cost of operation at Lardner's Point [Engine House 1, 2, 3]	Table
35	Torresdale		
35		Machinery of the Torresdale Pumping Station	Table
36	Fairmount and Spring Garden		
36	Belmont		
37	Queen Lane		
38	Shawmont		
38	High Service Stations		
39		Pumpage at the several High Service Stations [Stations, Pumpage, Increase, Decrease]	Table
40	Roxborough Low Service Station		
40		Pumpage and itemized cost for 1911 [Stations, Pumpage, Average Lift., Labor, Coal, Oil Grease and Waste, Packing rubber valves etc., Sundries, Total cost of Station, Cost per M. G. 100 ft. high, Averages 1910]	Table
41	Upper Roxborough Filters		
41		Reductions for 1911 comparing the filtered water and the water flowing from the Upper Roxborough sedimentation reservoir	Table
41		Reductions for 1911 comparing the effluent from the filters with the water pumped from the Schuylkill river	Table

42		[Methods of washing used and their runs 1911 [Brooklyn, Nichols]	Table
43	Lower Roxborough Filters		
44		Reductions for 1911 comparing the filtered water and the effluent from the preliminary filters	Table
44		Comparison showing the reduction of the bacteria and turbidity in the water received from the Schuylkill river	Table
44	Belmont Filters		
46		17 filters operated by the Brooklyn method: The items of cost, etc., in the process of cleaning	Table
46		Results of one filter, which was operated by the "Nichols Separators" method [Runs, Costs etc.]	Table
46		Reductions for 1911 comparing the effluent from the Belmont filters with the applied water	Table
47		Reductions for 1911 comparing the effluent from the plain sand filters and the water from the Schuylkill river	Table
47	Queen Lane filters		
48	Torresdale filters		
49		Datas to the standard method of cleaning adopted for 1911: Washing the sand in the filters by ejectors and Nichols Separators	Table
49		Reductions comparing the effluent from the Torresdale final filters with the water taken from the Delaware river	Table
51		Cost of operation of filters for 1911 [Upper Roxborough, Lower Roxborough, Belmont, Torresdale, Totals]	Table
51		Pre Filters [Upper Roxborough, Lower Roxborough, Belmont, Torresdale, Totals]	Table
52		Comparison of pumpage for 1910-1911	Table
53		Volume and cost of direct pumpage for the years 1901 to 1911 inclusive	Table
54		Volume and cost of High Service Pumpage for the years 1901 to 1911 inclusive	Table
55		Volume and cost of Low Service Pumpage for the years 1901 to 1911 inclusive	Table
56		Cost of raising 1,000,000 gallons 100 feet during 1910 and 1911	Table
57		Comparison of the capacity and average daily pumpage for 1910 and 1911 [Pumping Stations, Lardner's Point, High Service Stations]	Table
58		Comparison of the capacity and average daily pumpage for 1910 and 1911 [Low Service Stations]	Table
59	[Overview of appendices]		
59	Distribution		
61-71	Appendix A, Report of Chief Clerk, January 17, 1912 [of J. T. Hickman]		
62-70		Detailed expenditures of the Bureau for 1911	Table
71		Summary	Table
72-80	Appendix B, Report of the General Superintendent submitting tables of expenses, pumpage and consumption of water during 1911, January 1, 1912 [of Allen J. Fuller]		
73-75		Coal purchased and consumed 1911	Table
76-77		Cost of pumpage, gallons pumped and percentage of work done at stations, 1911	Table

78	George's Hill High Service Station, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure per square inch, less mean pressure on suction pipe, gallons raised 100 feet high per pound of coal]	Table
78	Fairmount Pumping Station, 1911 [numbers concerning the turbines - capacity, running time, gallons pumped, lubricants]	Table
78	Belmont Pumping Station, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure and mean suction lift in pounds per square inch, gallons raised 100 feet high per lb. of coal, based on meters]	Table
78	Queen Lane Pumping Station, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure and mean suction lift in lbs. per square inch, gallons raised 100 feet high per lb. coal. Based on meters]	Table
78	Shawmont Pumping Station, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure and mean suction lift in pounds per square inch, gallons raised 100 feet high per lb. of coal based on meters]	Table
78	Lardner's Point Pumping Station No. 1, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure and mean suction lift in pounds per square inch, gallons raised 100 feet high per pound of coal]	Table
78	Lardner's Point Pumping Station No. 2, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure and mean suction lift in pounds per square inch, gallons raised 100 feet high per lb of coal]	Table
78	Lardner's Point Pumping Station No. 3, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure and mean suction lift in pounds per square inch, gallons raised 100 feet high per pound of coal]	Table
79	Roxborough High Service Station, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure per square inch less mean pressure on suction pipe, gallons raised 100 feet high per pound of coal]	Table
80	Wentz Farm High Service Station, 1911 [numbers concerning the engines - capacity, running time, gallons pumped, coal, lubricants, mean water pressure per square inch less mean pressure on suction pipe, gallons raised 100 feet high per pound of coal]	Table
80	Current expenses of pumping stations for the year 1911 [Pumping stations, High service stations, Low Service Stations: Repairs [Engines, Boilers, Electric Lighting, Buildings, Grounds, Improvement, Total, Total], Wages [Engines, Boilers, Buildings, Grounds, Electric light, Injured on duty], Operation [Totals, Transportation, Operation, Coal consumed, Lubricants, Oils for lighting, Packing, Miscellaneous supplies, Total operation], Total cost, Total labor	Table

80		Total gallons pumped and consumed during the year 1911 [Months; Main pumping stations: Fairmount, Spring Garden, Belmont Meters, Queen Lane Meters, Shawmont Meters, Lardner's Point, Total, Average per day; Consumption: Stored in reservoirs at end of month, Total, Average per day; High Service Stations: George's Hill, Roxborough, Mt. Airy, Chestnut Hill, Wentz Farm, Total, Average per day; Low Service Station: Roxborough, Torresdale, Total, Average per day; Total pumpage and auxiliary pumpage; Average per day; Percentage of pumpage; Total steam pumpage; Total water pumpage]	Table
80		Description of steam boilers, Bureau of Water, Philadelphia, 1911 [Pumping station, Type of boilers, Steam boilers]	Table
80		Description of pumping machinery of the Bureau of Water, Philadelphia, 1911 [Pumping station, Designated number of engine or turbine, Types of engines, Designated capacity, Steam engines and pumps [High pressure cylinder, Int. pressure cylinder, Low pressure cylinder, Air pumps, Forcing pumps]]	Table
80		Pumpage diagram for the year 1911 [also: inches of rainfall, inches on dam, temperature degrees F.]	Diagram
81-110	Appendix C, Report of the Assistant in Charge of Distribution, January 1, 1912 [of W. Whitby]		
81	Mains		
81		New work	Table
81		Comparison of conditions relative to the distribution, 1910-1911	Table
82		[Comparison between water main repairs made in 1910 and in 1911]	Table
82		Repairs	Table
82		Abandoned	Table
83		Fire hydrants	Table
83		Drills for attachments	Table
85		Service and supply mains laid during 1911, First district	Table
86		Service and supply mains laid during 1911, Second district	Table
87		Service and supply mains laid during 1911, Third district	Table
88		Service and supply mains laid during 1911, Fourth district	Table
89		Service and supply mains laid during 1911, Fifth district	Table
90		Service and supply mains laid during 1911, Sixth district	Table
91		Service and supply mains laid during 1911, Seventh district	Table
92		Recapitulation of work on water pipes [Purposes for which used: New pipe or feet added, Pipe used but adding nothing to feet in ground, Total handled, Pipe cut off and abandoned; Size in inches, Total in feet and pounds]	Table
93		Recapitulation by districts [New pipe or feet added, Pipe used, but adding nothing to feet in ground, Total handled, Pipe cut off and abandoned: Districts, Size in inches, Feet, Pounds]	Table
94		Total feet of pipe in use December 31, 1911 [Size in inches, Total in use Dec. 31, 1910, Extensions and relays during 1911, Deductions during 1911, Total in use Dec. 31, 1911]	Table
95		Recapitulation of fire hydrants set, renewed and removed [Districts, Style, Total]	Table

96-97		Fire hydrants by wards	Table
98		Fire hydrants by purveyor's districts	Table
98		Statement of the number of fire hydrants by districts and wards during 1911, and total previous thereto [Number of attachments for fire purposes previously reported and made during 1911]	Table
99		Attachments, etc., made by the purveyors in accordance with permits issued by the Bureau of Water, Arranged by Districts [Districts: New attachments, Shut off by permit, Work done without permit]	Table
100		Repairs to mains, stops and fire hydrants, also stops and fire hydrants removed during 1911	Table
101-104		Total number [of] valves and check valves, arranged by districts [Pattern, Single Gate - Bureau of Water, Butterfly - Bureau of Water, Barton: Size, Outlets, Districts, Totals]	Table
105		Number of complaints and examinations during 1910 and 1911 [Months, Hydrants, Service pipes, Wash paves, Spigots, Water closets, Horse troughs, No. leaks, Totals]	Table
106-107		Schedule of pipes and castings inspected during 1911 [Manufacturer [Bureau of Water, Bureau of Surveys], Size in inches, Inspected, Rejected, Accepted]	Table
108		Schedule of pipe and castings inspected during 1911 [Manufacturer [Bureau of Correction, Contractors], Size in inches, Inspected, Rejected, Accepted]	Table
109-110		Distribution expenses during the year 1911. Including expenses of Main office, Purveyors' districts and meter shops [Material and Labor, Districts, Distibution, Meter Shops, Main Office, Totals]	Table
111-133	Appendix D, Report of the Registrar, January 16, 1912 [of James F. McCrudden, Registrar]		
111		Receipts from all sources for the year 1911	Table
114		Receipts of Bureau of Water 1911 [Water rents paid by schedule rates on existing connections, Rents current, Rents delinquent, Penalties current, Penalties delinquent, Paid by meter rates current and delinquent, Permits and fractional rates, Liens, Interest, Fees for searches, Miscellaneous, Water pipe frontage paid to the receiver of taxes, Water pipe frontage collected through the Department of Law, Totals]	Table
115-129		New meters set during the year 1911	Table
130		Receipts of the Bureau of Water, collected by the Water Rent Tax Office 1910-1911	Table
130		Types of permits issued 1910 and 1911 [Additional fixtures, building permits, additional water rents, ferrules, specials, new houses, ferrules drawn, total number of permits]	Table
131		Unpaid permits to December 31, 1911	Table
131		Department expenses	Table
131		Shut-off orders for delinquent water rents, 1911	Table
132	Attachments etc., made by the purveyors, in accordance with permits issued by the Bureau of Water		
132		New attachments	Table
132		Meters in use [1910, 1911]	Table
132		Permits issued during 1911	Table

134-139	Appendix E, Report of Superintendent of Bureau of Water Construction and repair shop for 1911, January 17, 1912 [of Arthur Molyneux, Superintendent of Shop]		
135		Merchandise [Drafts] [by types of materials and supplies] and wages	Table
135-136		[Labor and Merchandise [Credits] by districts, locations, project types]	Table
137-139		Inventory, January 1, 1912	Table
139		Furnished to districts during 1911 [Districts, No.1 Fire Hydrants, Wedge stops, Plugs, Iron Bands, Stop screws]	Table
139		Stops and fire hydrants built in 1911	Table
139		Fire hydrants repaired during 1911	Table
140-152	Appendix F, Report of the Chief Draughtsman on the hydrographic work for the year 1911, January 20, 1912 [of John E. Codman]		
142		Inches of rainfall flowing off - January to December, Comparison of the inches of rainfall flowing off in the Schuylkill river, with the runoff in inches on the Perkiomen and Neshaminy creeks [1898-1910]	Table
144		[Overview of the tables, which accompany the report]	Table
146		Table I. Monthly precipitation on sundry watersheds compared with United States Weather Bureau observations at Philadelphia. [U.S. Weather Bureau, Water Bureau Auto, Water Bureau ground gauge, Pennsylvania Hospital, Shawmont, Lebanon, Reading, Pottsville, Browers, Hamburg, Seisholtzville, Spring Mount, Moorestown, West Chester, Ottsville, Smith's Corner, Point Pleasant, Lansdale, Forks of Neshaminy, Doylestown]	Table
147		Table II. Rain storms exceeding in rate 0.25 inches per hour as recorded by the automatic rain gauge at Philadelphia, for the year 1911	Table
148		Table III. Rain storms exceeding in rate 0.25 inches per hour as recorded by the automatic rain gauge at Forks of Neshaminy, for the year 1911	Table
149		Table IV. Rain storms exceeding in rate 0.25 inches per hour as recorded by the automatic rain gauge at Spring Mount, for the year 1911	Table
150		Table V. Inches of rainfall flowing in the Perkiomen, Neshaminy and Tohickon Creeks. [Watersheds, Area in miles, Percentage of total area: Woodland, Cultivated, Flats and Roads, Average for 28 years 1883-1911]	Table
151		Table VI. Average annual yield of sundry watersheds to October 1st [Watersheds, Period covered in years, Area in miles, Average rainfall in inches, Average rainfall flowing off in inches, Per cent. flowing off, Average daily yield in gallons, Average yield in cubic feet per second per sq. mile of drainage area, Average yield in cubic feet per second per sq. mile of drainage area for each inch of rainfall]	Table
152		Table VII. Comparative daily stream flow [Watersheds, Area of watershed, Maximum gallons per day and per sq. mile, Date, Minimum gallons per day and per sq. mile, Date]	Table
152		Table IX. Precipitation and stream flow on Perkiomen, Neshaminy and Tohickon watersheds, [and Schuylkill River at Fairmount] [Oct. 1910 - Dec. 1911]	Table

152		Table of computed daily flow of the Schuylkill River at Fairmount dam. Showing flow over flashboards in cubic feet per second, height of water above or below top of flashboards in inches and computed pumpage, leakage and lockage from the pool [by month][note * means below top of flashboards]	Table
152		Stream flow - Perkiomen Creek at Frederick - 1911	Graph
152		Stream flow - Neshaminy Creek below Forks 1911	Graph
152		Stream flow - Tohickon Creek 1911	Graph