

## DAMS, BUILDINGS, &amp;C.

All structures are in fair condition except the Keeper's house at Long Lake. The barn was destroyed by fire, and an inspection of the house resulted in a decision to build a new one and convert the old structure into a barn. The exterior of the new building has been completed. The cost to date is:

Lumber, &c.....	\$103.59
Carpenter.....	119.85
Labor.....	23.32
Truckage.....	20.00
Lime.....	1.25
Sand.....	75
Cement.....	90
Bricks.....	6.37
	<hr/>
	\$276.03

## RAINFALL.

In the City rain or snow fell on 169 days during 1899. Water ran over the dam at Long Lake in January, March, April, May, June, November and December. The surface of the lake on October 3rd was 3 feet 9 inches below the waste weir.

At Spruce Hill Lakes water ran over the wasteway in January, February, March, April, May, June, July and August. The water level on September 29th was 2 feet  $\frac{1}{2}$  inch below the waste weir.

## HIGH SERVICE:

The supply in this district is most unsatisfactory and complaints are vigorous and frequent. During the winter the water would not rise above the street at the highest part of Willow Park and at the urgent request of residents the water supply was cut off from a lower portion of the High Service District for two hours each day in order to raise the pressure at Willow Park. This concentration started leaks in the pipes which made the condition of the service worse than before. When that part of the system from which the water is turned off is empty it takes about four

hours to fill it up making the danger in case of fire far greater. It was very unsatisfactory and it would not be advisable to follow the same course next year.

As stated in a former report, the condition of the service in brief is :

*First.*—The Spruce Hill Lakes gathering grounds cannot collect more water in a dry year than the present 15 inch main can deliver to the City, and the water very seldom reaches the level of the waste weir. It would therefore be useless to put in a second pipe or a larger pipe, as the supply would fail. The capacity of the pipe decreases somewhat when the interior surface is corroded and cleaning the pipe affords a temporary remedy, the beneficial effect of which, however, does not last long.

*Second.*—If the main were not so heavily taxed a reservoir might be constructed to equalize the pressure, but under present conditions it could not be filled, or if filled, it could not be kept full. It has been suggested that it could be filled by pumping, but pumping would not only rob the present meagre supply, but would empty pipes all over the City in cold weather, causing much damage and inconvenience by frost. It would also largely increase the drain on a service already taxed to its utmost limit.

There is plenty of water coming through the main at present if it is used legitimately, and in my opinion there are only two courses to follow—one to seek for additional supply, the other to place meters on every service pipe in the High Service District. I am satisfied that the adoption of meters would increase the pressure sufficiently to raise the water to Willow Park. Until some step is taken to improve the condition of the service it would be advisable to stop further extension in the district. It is folly to go on laying new mains and further reduce the pressure. The Inspectors in making their rounds during the cold weather report many cases of waste which would easily effect the pressure sufficiently to prevent the water reaching Willow Park. The ordinary notices do not seem to have any effect, and it is generally the persons who pay the smallest water tax who are using the most water. The Inspector should have instructions to place a meter on every pipe where waste is discovered. Any milder remedy is useless as soon as the Inspector leaves the premises.

In order to enable this Department to deal intelligently with the water supply problem immediate action should be taken by the Council to provide (by Venturi Meters or otherwise) means for ascertaining the exact daily consumption through each main. At present it is estimated—a method which is by no means satisfactory

#### SEWERS

The length of new sewers constructed by the Works Department in 1899 was 7092 feet. The cheapest construction was on Summer Street at a cost of \$1.78 per foot. The most expensive work was on Atlantic Street in solid rock, the cost being \$8.12 per foot. The total cost of sewers was \$30,157.42 of which \$15,008.75 was assessed on abutting properties.

Forty concrete catchpits were constructed, making a total of 700. Five of these were constructed by Foreman Wm. Burley at an average cost of \$66.52, eleven by Jas King at \$57.71 and twenty two by Jas. Downey \$39.41

At the beginning of the year the sewer on Young Avenue had been completed and the work on Atlantic Street and Plover Street was well advanced. At the meeting of Council held on May 31st, 1899, a petition was presented from owners of property in the neighbourhood of the proposed outlet at the foot of Owen Street protesting against it. All work on the sewer was at once suspended.

When the construction of the Young Avenue Sewer was asked for by the property owners in 1898 surveys, studies and estimates were made to determine the best location for the outlet. It was impossible to drain the Avenue through the Inglis Street Sewer as it was not low enough and was too small to carry the drainage of a larger area. The Esplanade outlet, already taxed to its full capacity, could not be utilized. It therefore became necessary to construct a new outlet. It was possible to empty the sewer at the foot of Atlantic Street. The objections to this location were—(1) That the right-of-way must be acquired by expropriation or on conditions named by the owner, which would make the cost greater than by the former method. (2) It would drain a limited area only. (3) The outlet would be within a short

distance of the Esplanade. (4) It would make an extra sewer discharging into the Harbor which could be avoided by carrying it farther south to an outlet which cannot be avoided. (5) It would aggravate the nuisance and annoyance to residents in the neighborhood and discharge into a cove in front of valuable residential property.

Owing to the slope of the land it will be absolutely necessary to locate an outlet at Ogilvie Street or farther south. All the district between Inglis Street and the Park can be drained to this outlet and an extra outlet avoided. The drainage system was laid out with this end in view and its adoption recommended. It was recommended that the sewage be discharged at Owen Street, the intention being to use the 400 feet below View Street on Owen Street as a storm water overflow only, when it became necessary to construct the remainder of the system.

Since the work was ordered serious opposition developed against any discharge at Owen Street and the petition to the Council was the result.

I have no wish to recommend any work that would be a nuisance to property owners if it can be avoided. I therefore recommended the construction of the outlet to Ogilvie Street. The whole work will be permanent construction and a part of the complete design for the sewer system.

After a personal inspection and study of the district the Council ordered the construction of the work at a meeting held on the 5th of June, 1899. No steps were taken by the Department during the year to carry out the instructions of the Council except on the Atlantic Street section, which was completed.

As the expenditure on this work has been severely criticized I beg to submit a financial statement showing the expenditure as it stands to-day.

Cost of sewer, amount estimated.....	\$30,000.00
Of this amount the owners of property on Young Avenue and other streets pay.....	12,000.00
The City pays for the sewer only.....	\$18,000.00

The actual cost to the taxpayer is the interest at 4% . . .	720.00
The houses on Young Avenue which were built after this sewer was laid are assessed over \$50,000, which at 1.71 is . . . . .	855.00
Instead of increasing the taxes the construction of the sewer has already reduced the taxes at least . . . per annum	135.00
The cost of water extension, including fire hydrants, was	3,014.97
Interest at 5% . . . . .	150.74
Water tax paid by 7 houses . . . . .	150.20

#### HOUSE DRAINS AND PLUMBING.

One hundred and seventy-seven permits were issued for laying drains. This work is decreasing—first, because the number of new sewers constructed is not so large as formerly, and second, because nearly all the houses in the vicinity of new sewers have been connected during the last few years.

The report of the Plumbing Inspector and the records in this office show that 347 permits were granted under the plumbing law the total number issued being 1889. Four hundred and nine certificates were issued for work properly performed. The work necessitated 759 inspections. There were some prosecutions during the year, but the licensed men generally comply with the law and are in sympathy with it. Some master plumbers neglect to notify the Inspector when work is finished, but in most cases property owners are taking precautions themselves to obtain a certificate before paying for work.

The general sanitary condition of buildings throughout the City has improved rapidly under the new regime and the health regulations, at first severely criticized, are now approved by all tenants and many landlords.

The Board of Plumbing Examiners held 16 meetings during the year and recommended the renewal of 18 Master Plumbers' licenses and the granting of 3 new licenses. They also examined 29 Applicants for registration as journeymen plumbers and issued 21 journeymen's certificates.

## INTERNAL HEALTH.

A three years' contract was made with Stanhope Brothers for the removal of Ashes and Garbage at \$52.00 per week. They began work May 22nd and suspended operations for the season December 1st—a period of twenty-eight weeks. The removal of dead animals during the whole year was included in their contract.

A contract was made with John Nolen for supplying the horses required for street cleaning work at 15½ cents an hour.

The extra street sprinkler was operated by George Harvey at \$2.50 per day.

We have in service ten two-horse sprinkling carts and two one-horse carts. Nearly all streets on which water pipes are laid are sprinkled twice a day. The following streets are watered four times a day, viz: Barrington, Granville and Hollis Streets between Spring Garden Road and Jacob Street; Gottingen Street between Cogswell Street and Gerrish Street; Spring Garden Road between Pleasant Street and South Park Street; and Sackville Street between Barrington and South Park Street.

We require a two-horse sprinkler for the pair of horses at Bedford Row Engine House and two one-horse sprinklers for the Queen Street and Isleville Engine House horses. We also need a two-horse sprinkler for use with the street cleaning broom and the steam roller to avoid the necessity of taking a cart off street sprinkling service. We should also have one spare one-horse and one two-horse sprinkler for use in case of breakdowns. To give a proper and improved service at least six two-horse carts should be purchased in addition to those already named. Our two-horse carts cost \$350, one-horse \$300 and horses \$140.00.

In my opinion a better service is obtained by the employment of City horses and drivers than by private teams. The service is more flexible, the teams more suitable, more ground is covered and much better work can be done. The difficulty in the employment of more City horses is the scarcity of work for teams when not sprinkling. We have plenty of work during the whole year for

three teams, but at present cannot keep more than three profitably employed.

Many complaints are made in reference to the street sprinkling service, but no one should expect efficient service when we are able to cover the district laid out for the teams only twice a day with the exception of six streets. When a street is watered at seven o'clock in the morning and at one in the afternoon on a hot day with the wind blowing it is absolutely impossible to keep the dust down. Even if it is watered, as in the case of the six streets mentioned, four times a day it is little better, as the water put on by the sprinkler dries in not more than half an hour on a warm windy day. Part of each district cannot be watered at all until between 11 and 12 a. m. and again between 4 and 5 p. m.

It has been suggested that salt water should be used in the lower portion of the city, but it is an absolute impossibility for the teams to go the extra distance to get the salt water and sprinkle their district within the time allotted for a day's work while the appropriation for street sprinkling is stretched to its utmost limit, and unless the city council is prepared to authorize a larger expenditure no more work can be done.

Those who criticize the slowness of street sprinkling must remember that the teams are hauling a heavy cart carrying two and one half tons of water when full, and no humane driver should urge his team beyond a natural gait or hurry them at such heavy work. They do all the work that a team of horses should be called upon to do, as the twelve teams put out twelve hundred tons of water in a day. The districts have been stretched out with the water extensions until the limit of the capacity of the sprinkling service has been reached and it is impossible to water streets where there is no water service in consequence of the distance to be travelled to the hydrants.

Night sprinkling has been suggested. The question has been threshed out by the department long ago. It would be far more satisfactory if it were practicable because it would not interfere so much with the house water supply. Observation shows that though the ground may be soaked with rain through the night a warm day with a good breeze dries the street surface so that carts are needed by ten o'clock. In such weather the light sprinkling

the carts give would have no effect at all and it would be a waste of time and money, to say nothing of the increase in the consumption of water, as the carts would have to start again not later than eight o'clock in the morning. Our rock streets heat up and dry very rapidly. When the ground is watered by a rain storm and a cool day follows, the ground remains damp perhaps all day, but during such weather we have no difficulty in keeping down dust, even with our present service, so that it would not be necessary to water at night. An extra staff of men and horses would be required to do night watering, and in my judgment the result accomplished would not justify the additional outlay in time, money and water. The latter expenditure is by no means the least important. The carts put out an average of 45 loads a day in dry weather. This amounts to the enormous quantity of two and one half million gallons a day, about half the total consumption, which is a very heavy drain on the water supply and accounts for poor pressure in many districts in the city. It is very doubtful if it is advisable to increase the sprinkling service in the high service district at all and I cannot recommend it. If any great increase is to be made in the sprinkling work in the low service district we should consider the advisability of laying salt water mains up the hills on the principal east and west streets to save our fresh water supply.

## STREETS.

On Lockman Street a lot at the corner of Gerrish Street was sold to George McKerron for \$300, and a strip of land at the opposite corner was purchased from Caleb Heisler for \$250 to straighten the street. The cost of widening to date is:

Loan .....	\$125000	00	
Sale of property .....		4912	00
Rents, &c. ....		464	82
			<hr/>
			\$130376 82
Expenditure to April 30th, 1899 .....	\$129892	83	
1899-1900 Insurance .....		13	75
Advertising .....		24	17
Repairs on house .....		8	22
Caleb Heisler .....	250	00	130188 97
			<hr/>
Balance on hand April 30th, 1900 ..			\$187 85



The new portion of Allen, Lawrence and Duncan Streets was connected with the old by the purchase of land from Jas. F. Corston and George S. MacKinlay for \$200 and \$65.00 respectively.

The land on the West side of R. T. Forristall's house at the corner of Jubilee Road was purchased for \$40.00 to straighten Prestoq Street, and \$100.00 was paid to Robie Uniacke for a piece of land opposite Cunard's North Wharf to straighten Water Street.

As the stone crusher was not operated during the Winter there were no screenings for binding and it was very difficult to get material at all suitable. A bank on Inglis Street enabled us to get through the season and to provide for the next year's work two lots on Wellington Street were purchased, one from John E. Chaddock for \$800, the other from the Building Society and A. Anderson for the same price. When the hill on these lots is excavated and the street cut down to grade the lots will be sold again.

The stone broken by the Poor Association during the Winter was delivered by the City teams which slightly reduced the cost. It is expected that the cost will be still further reduced next season.

The steam roller was overhauled during the Winter but requires a new shaft or axle and the boiler should be renewed.

The amount provided for street work is so small that the best management cannot give satisfaction, and complaints may always be expected while we have only one dollar to do five dollars' worth of work. The City across the Bay expended last year on street work \$800 00 per mile. Halifax appropriated for street work only \$200.00 per mile.

There is little satisfaction for the man who attempts to satisfy an exacting public when he has \$200 a mile to make and macadamize roadways, pave gutters, lay curbs, construct sidewalks, lay crossings, grade streets, straighten crooked lines, buy encroachments, purchase and maintain plant, tools and material and keep one hundred miles of roadway and sidewalks in repair. Each man insists on getting what his neighbour gets whether he needs it or not, and if it is not forthcoming there is trouble brewing for somebody.

Every effort is made to spend the street appropriation in the best interest of the whole City and not in the interest of any particular ward or section, but it has to be done against the strongest opposition from the narrow minded men who insist on just as much money being spent in their street as in the next one solely because it is the street they live on. If the taxes were spent where they are collected many sections would never see a street foreman and his men as one man would be able to spend their proportion of the fund.

As there is not enough to go around it is an utter impossibility to repair every street every year, or every second year, and only the most necessary repairs can be attended to.

There is still room for improvement, however. The work is not done at the right season. "A stitch in time saves nine." The time to repair roads is at the first sign of wear or rut—not after they are worn out. As soon as the frost comes out all roads should be rolled with the steam roller to counteract the heaving of the frost. Where necessary the road should be picked up, re-formed and rolled, ruts filled and gutters cleared. All this work should be commenced not later than April 1st, and such work as sidewalks, crossings, gutters, &c, left till the more urgent work is finished. We should have money available for this service when it is needed, but under the present system our hands are tied because no money can be obtained till May.

The general taxpayers of the City are paying thousands of dollars annually to keep in repair the street and sidewalks in front of the property of the individual from whose downspouts and gateways pour forth small torrents during every rain. Each storm means hundreds of dollars thrown into the sewers and catchpits from which the deposit is extracted by the expenditure of more hundreds. We never can have good sidewalks and streets especially on the hills until the rain is conveyed from the roofs and yards direct to the sewer. While care must be taken to guard against hardship, this problem must be solved in the interest of the City and the individual should not be permitted to stand in the way of any movement for the public good.

No progress was made on the City survey owing to the reduction in the Staff of the office, which now consists of one assistant.

It is to be regretted that this work was not carried to completion. We require an accurate plan to give street lines, and grades and lines for houses, roadways, catchpits, sidewalks, fences, etc., and prevent encroachments. We cannot control or prevent such objectionable divisions as may be seen at Laundry Lane. A correct plan would save much time in the office and avoid the necessity of many special surveys. It would furnish the foundation for laying out, widening, altering, extending and numbering streets, and for surveys surface drainage, water pipe and conduit, location and special assessments. It would also reduce the cost of special work and insure more intelligent conclusions.

While we had assistance we made plans of the water system, records of stopcocks, valves and all underground work, records of drains, plans and profiles of sewers, with size, grade, depth, length and all other information required. We also completed a great deal of work which had been neglected for years on account of lack of assistance in the office.

Much delay and inconvenience and at times considerable expense would be avoided in dealing with matters arising daily, if we could keep up a complete system of records and plans. The work cannot be overtaken by our present staff and much time which could and should be employed more profitably on work in progress outside, has to be given to routine work at desk or table or to keep the office open. The work neglected now must be made up in the future, when it will cost more in consequence of the difficulty and expense in getting the information.

#### BATHS.

No changes were made at the North Ferry and Greenbank Baths.

At the Arm twenty new dressing rooms were constructed, bicycle racks built, the diving float extended, and a diver was employed to remove sea weed.

The Works Department, as it has existed for six years, expired on the 30th of April. During that term many changes have been made and considerable progress and improvement may be recorded.

Overdrawn accounts have become very rare, while a few years ago they were the rule. Every appropriation is expended legally and the work of the Department is done in a business-like manner. A statement of the cost of work and state of each appropriation is given to the Mayor and Engineer on every pay day. A great reduction has been made in the cost of all kinds of work by selecting, whenever possible, the most efficient foreman and gradually weeding out the force of employees. The different branches of the Department have been centralized and systematized, permitting a decrease in the number of employees and utilizing the services of the staff to better advantage.

I regret to have to record the death during the year of Mr. W. F. Reilly, Clerk of Works. He was in all things an honest man and faithful in his service to the City and its interests.

The usual statements of expenditure, cost of work, reports of Foremen, Inspectors, etc., are appended.

I have the honor to be, sir,

Your obedient servant,

F. W. W. DOANE,

City Engineer.

**WATER WORKS, FOREMAN'S REPORT.**

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CITY HALL, May 1st, 1900.

F. W. W. DOANE, ESQ.,  
*City Engineer.*

SIR,—

I have prepared the Annual Schedule of Stock belonging to the Water Department, and length of Main and Service Pipes laid with length of pipes cleaned and re-cleaned; also location of houses supplied with water during summer of 1899, all of which is herewith

Respectfully submitted.

E. MORRISON,  
*Foreman Water Department.*

## NEW MAINS, 1899-1900.

STREET.			High or Low Service.	CAST IRON MAIN PIPE.				HYDRANTS.				COST PER FOOT IN CENTS.							Total Cost.		
IN	FROM	TO		3-in. Pipe—feet.	4-in. Pipe—feet.	6-in. Pipe—feet.	Joints.	Number of Valves.	Length of Pipe—ft.	Size of Pipe—ins.	Number.	Number of Valves.	Percentage of Rock.	Pipes and Specials.	Valves and Hyd'nts.	Labor and Cartage.	Lead, Gasket, &c.	Dynamite and Fuse.		Incidentals.	Total.
Agricola	Bilby	Macara	H		239	T.&B.	1					100	70.0		128.5	0.6	9.61		208.7	498.97	
Atlantic*	Young Ave.	East end of street	L		1026		2		18	6	1	1	5	62.4	12.1	36.2	1.0	2.4		114.0	1186.47
Beech	Quinpool Rd.	Oak	H		787		1		38	6	2	3	100	62.1	33.9	162.0	0.9	13.4		272.3	2246.07
Bland (south)	Atlantic	Curling Rink	L		370		1		18	6	1	1	90	62.1	27.5	96.4	0.6	4.0		190.6	739.60
Cabot	Gottingen	182 feet west	H		162		1						90	62.4	12.5	83.3	0.4	5.2		164.8	262.84
Clifton	Cuward	445 feet north	H		445		1						5	65.9		29.8	0.1	0.8		96.6	429.33
Creighton	North	135 "	H		138								100	60.0		124.4	0.4	11.5		196.2	264.95
Edward	N. end of pipe	End of pipe s. of Jub.rd.	H		671								63.1			16.4	1.0			80.5	540.20
Henry*	260 ft. n. towards Co.rd.		H		260								60.0			18.7	1.1	0.4		80.2	208.62
	Coburg Rd.	263 ft. north	H		263		1						100	62.0	7.6	170.8	0.9	9.2		250.5	659.70
Laundry	W. end of pipe	63 ft. west	L	63									80	43.4		81.1	0.7	2.6		145.5	525.40
		342 ft. "	L		342								80	61.1						75.7	54.59
Lemarchant	N. "	72 ft. n. towards Co. rd.	H		72								60.0			15.8				75.7	54.59
Macara	Agricola	Kempt Road	H		620		2	10	6	1	1		100	63.7	20.1	150.9	1.0	1.7		137.4	865.88
Owen	Pleasant	169 ft. west	L		169		1						100	60.0	11.8	22.2	0.5	8.2		202.7	342.63
Pepperel	Louisburg	490 ft. "	H		490		1						75	60.0	4.1	66.6	0.4	1.6		132.7	650.90
Preston	West Harvey	234 ft. north	H		234								100	60.0		112.1	0.2	9.5		181.8	425.51
Rector	Campbell Rd.	School	L		266		1						2	62.2	7.5	58.2		1.3		129.2	343.70
School	Rector	304 ft. north	L		304		1	14	6	1	1		61.5	33.5	31.6	2.1	0.1			128.8	409.57
Summit	W. end of pipe	128 ft. west	H		128								6	60.0		48.5	0.6	1.3		110.4	141.25
Williams	Robie	414 ft. "	H	414			1						41.0	4.3	28.0	1.2				74.5	308.54
Young Ave.*	Inglis	23 ft. south Park gate.	L		2936		6	72	6	3	3		61.9	12.6	24.2	0.9	0.7			100.2	3014.97
(Islesville)	N. end of pipe	Almon	H	154			1						41.6	11.7	36.2	0.9				90.4	784.32
Dockyard†	Old Hydrant	New Hydrant	L		580																
Bedford Row	Sackville	Water	L	945			2						44.3	3.4	45.3	1.9				94.9	877.16
Gerrish	Brunswick	Gottingen	L		506								61.8		38.8	1.7				102.3	517.64
Service Mains			L	99		H.&S.	1														171.21
Bland (south)†	Street Main	Curling Rink	L	79			1														99.47
Sackville†		Dillon Bros	H				1														
Totals				178	1576	11008	27	170	11	10											16708.52

\* Laid in sewer trench. † cost paid by property owner.

## Street Mains Replaced with Larger Pipe, 1899.

STREET.			SIZE IN INCHES.		LENGTH IN FEET.
IN	FROM	To	Old Pipe.	New Pipe	
Bedford Row.....	Sackville .....	Water.....	3	4	945

N. B.—85 ft. of old 3-in pipe was abandoned.

## Street Mains Renewed, 1899.

STREET.			SIZE IN INCHES.	LENGTH IN FEET.
IN	FROM	To		
Gerrish.....	Brunswick ....	Gottingen ....	6	506

Total Length in feet of Cast Iron Water Mains in the Water Supply System of the City of Halifax.

	SIZE OF PIPE IN INCHES.										Less than 3 in.	Total.
	27	24	20	15	12½	9	8	6	4	3		
Length Apr. 30. 1889-...	14560	20524	6712	44236	37201	42401	415	111896	+17839	47473	898	344155
Laid during 1899 00 ...								10672	1576			12248
Total April 30. 1900-...	14560	20524	6712	44236	37201	42401	415	122568	19415	*46443	898	*355373

Equal to 67 1613-5280 miles. † Error of 39 ft. in last report

\* 945 ft. of 3-in. pipe taken up in Bedford Row, and 85 ft. abandoned

N.B. - 45 feet of 10 in. pipe in waste way Chain Lakes, and pipe from mains to hydrants (except wharves) laid previous to 1897, not included in above summary.



## Pipes Cleaned by Mechanical Scrapers, 1899.

DATE.	LOCATION.	Diam. in inches.	Lenth cleaned in feet.	Cost.	TIME SCRAPER PASSED.											REMARKS.				
					Spruce Hill Lake	Blow-off.	Air Valve.	201 15 inch Hatch.	Chain Lakes Blow-off	Chain Lakes Hatch.	Arm blow-off.	Industrial School Road.	Beech St.	Oxford St.	Monastery.		St. Andrew's Cross.	Total time.		
Sept. 6, '99	High Service Main	20	6712	\$16.29	11.07	11.12	11.24	11.33	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.26	Recleaned "	
" 6, '99	" "	15	29628		.....	.....	.....	14.31	15.04	15.22	15.37	15.48	15.55	15.57	.....	.....	.....	16.11		1.40
Nov. 7, '99	Low "	24	13400	12.95	.....	.....	.....	.....	.....	11.10	11.21	11.28	.....	.....	.....	.....	.....	11.52		0.42
" 8, '99	High "	20	6712	16.56	11.08	11.11	11.25	11.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		0.27
" 8, '99	" "	15	29628		.....	.....	.....	13.55	14.27	14.45	15.00	15.12	15.19	15.21	15.27	15.33	.....	.....		1.28
	Dundonald St. fm. Mcrris St to N. end of pipe ....	3	370	16.55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....

## 177 NEW SERVICE PIPES, 1899.

$\frac{1}{2}$ inch feet.	$\frac{3}{4}$ inch feet.	1 inch inch	Total feet.
5408	164	.....	5572

## HOUSE SERVICES RENEWED 1899.

341	25	31	397
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## New Hydrants, 1899.

STREET.	LOCATION.	Kind.	Service.	Size of Pipe in inches	Length of Pipe in feet.	Number of Nozzles.	Distance of valve from hydrant.	Pressure in
								pounds.
Atlantic...	Brussels .....	City.	L	6	18	3	ft. in. 5 11	32
Beech.....	Quinpool Road .....	"	H	6	9	3	10 8	36
" .....	450 ft. north of Quinpool Road	"	H	6	14	3	6 7	30
" .....	Oak .....	"	H	6	15	3	5 5	26
Bland .....	Atlantic .....	"	L	6	21	3	4 8	32
Macara.....	Agricola.....	"	H	6	10	3	5 8	15
School .....	Rector .....	"	L	6	14	3	8 3	15
Young Ave.	Atlantic .....	"	L	6	24	3	4 4	26
" .....	Ogilvie .....	"	L	6	24	3	4 2	20
" .....	Owen .....	"	L	6	24	3	4 6	24
	*Dockyard at end of new pipe.	"	L	6	.....	.....	.....	40
	People's Ht. & Lt. Co. (private)	"	L	6	.....	3	.....	.....

## OLD HYDRANTS REPLACED WITH FROST-JACKETED HYDRANTS.

Cornwallis..	Gottingen .. .. .	City.	L	6	.....	3	.....	14
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\* Paid for by Admiralty.

## SUMMARY OF HYDRANTS.

Number of Hydrants on streets April 30th, 1899 .....	349
"    "    wharves " " .....	20
"    "    military and naval property .....	18
"    "    private property .....	12
Total number in use April 30th, 1899 .....	399
Number set on street during 1899 .....	10
"    "    naval property .....	1
"    "    private property .....	1
Total number in use April 30th, 1900 .....	411

## Location and Size of Valves set 1899.

STREET.	LOCATION.	Size.	Service.
Agricola.....	35' 0" from N. W. corner of Bilby street, north line of Bilby street .....	6	H
Atlantic .....	35' 6" from N. E. corner of Young Avenue, east line of Young Avenue .....	6	L
" .....	26' 0" from N. W. corner Bland street, west line of Bland street .....	6	L
Beech .....	43' 7" from N. W. corner of Quinpool Road, 35' 4" from N. E. corner .....	6	H
Bland .....	26' 0" from N. W. corner of Atlantic street, north line of Atlantic street .....	6	L
Cabot .....	27' 0" from N. W. corner of Gottingen street, west line of Gottingen street .....	6	H
Clifton.....	23' 3" from N. W. corner of Cunard street, north line of Cunard street .....	6	H
Dundonald .....	18' 4" from N. E. corner of Morris street, north of Morris street 1' 0" .....	3	L
Gottingen .....	13 ft. from N. W. corner of Cornwallis street, 4' 8" north of Cornwallis street .....	24	L
Henry .....	0' 5" from N. E. corner of Coburg Road, north line of Coburg Road .....	6	H
Macara.....	32' 3" from N. E. corner of Agricola street, east of Agricola street, 0' 4" .....	6	H
" .....	33' 2" from N. E. corner of Kempt Road, east line of Kempt Road .....	6	H
Owen .....	35' 4" from S. W. corner of Pleasant street, west line of Pleasant street .....	6	L
Pepperel .....	26' 0" from N. W. corner of Louisburg street, west line of Louisburg street .....	6	H
Rector .....	16' 8" from N. W. corner of Campbell Road, west line of Campbell Road .....	6	L
Robie .....	70' 7" from N. E. corner of College street, north line of College street .....	6	H
School .....	24' 3" from N. E. corner of Rector street, south of north line of Rector street 3' 7" .....	6	L
Summer .....	28' 8" from N. W. corner of Spring Garden Road, north line of Spring Garden Road .....	3	H
Williams .....	38' 2" from S. W. corner of Robie street, west line of Robie street .....	4	H
Young Avenue....	31' 4" from S. E. corner of Inglis street, south line of Inglis .....	6	L
" .....	41' 4" from N. E. corner of Atlantic street, north line of Atlantic street .....	6	L
" .....	38' 9" from west side of Young Avenue, south of centre of man-hole, 4' 11" .....	6	L
" .....	30' 0" south of centre of man-hole at Owen street..	6	L
" .....	29' 4" south of centre of man-hole at Clarence st..	6	L

## Location and Size of Valves—(Continued)

STREET.	LOCATION.	Size.	Service.
Young Avenue...	29' 4" south of centre of man-hole at Ogilvie street.....	6	L
Young (No 3) ..	38' 0" from S. W. corner of Almon street, south of Almon street, 2' 0" .....	4	H
PRIVATE.			
Dockyard.....	36' 0" from N. E. corner of house at south side of main gate, 6' 0" from old hydrant.....	6	L
Bland.....	23' 6" from west line of Bland street, 23' 6" south of north corner of Curling Rink.....	3	L
RENEWALS.			
Bedford Row.....	17' 5" from N. W. corner of Sackville street, north line of Sackville street.....	4	L
" .....	17' 0" from N. W. corner of George street, north line of George street.....	4	L
HYDRANT VALVES.			
Atlantic.....	Corner of Brussels street 5' 11" from hydrant....	6	L
Beech.....	" Quinpool Rd. 10' 8" ".....	6	H
" .....	450' north of " 6' 7" ".....	6	H
" .....	Corner of Oak street 5' 5" ".....	6	H
Bland.....	" Atlantic street 4' 8" ".....	6	L
Macara.....	" Agricola street 5' 8" ".....	6	H
School.....	" Rector street 8' 3" ".....	6	L
Young Avenue ..	" Atlantic street 4' 4" ".....	6	L
" .....	" Owen street 4' 2" ".....	6	L
" .....	" Ogilvie street 4' 6" ".....	6	L

## Old Valves Replaced with Larger Valves, 1899

STREET.	LOCATION.	Size in Inches.		Service
		Old.	New	
Bedford Row.....	17' 5" from north-west corner of Sackville St. north line of Sackville St .....	3	4	L
" .....	17' 0" from north-west corner of George St. north line of George St .....	3	4	L

## Total Number of Valves, Main and Distribution Service, April 30th, 1900.

	27"	24"	20"	15"	12"	9"	6"	4"	3"	1½"	1¼"	1"	¾"	Hydrants, 6"	Total.
In 'use April 30th, 1899.....	1	7	1	29	55	65	280	53	148	1	9	2	11	40	702
Set during 1899-1900	...	1	...	...	...	...	22	4	2	...	...	...	...	10	39
Total in use April 30, 1900.....	1	8	1	29	55	65	302	57	*148	1	9	2	11	50	*739

\* Two taken out during year.

N. B.—1 20-inch valve in waste way at Chain Lake not included in above summary.

## Pipe---Specials.

No. of Pieces.	Diameter in. inches.	DESCRIPTION.	Weight of one in lbs.	Total weight in lbs.	Value per lb. in cents.	Total Value.
2	27	Bell Mouth.....	831	1662	2 $\frac{1}{4}$	\$37 39
13	27	Bevel Collars.....	795	10335	3	310 05
1	27	Plain special, 2 feet long, Class A.....	404	404	1 $\frac{3}{4}$	7 07
1	27	" 2 " " B.....	460	460	"	8 05
1	27	" 3 " " B.....	700	700	"	12 25
1	27	" 4 " " B.....	920	920	"	16 10
1	27	" 5 " " B.....	1248	1248	"	21 84
2	27	" 5 " " B.....	1144	2888	"	40 04
1	27	" 3 " " C.....	820	820	"	14 35
1	27	" 3 " " C.....	930	930	"	16 27
1	27	" 4 " " C.....	1068	1068	"	18 69
1	27	" 5 " " C.....	1332	1332	"	23 31
1	24	Bevel Collar.....	688	688	3	20 64
12	24	Thimbles.....	396	4752	2 $\frac{1}{4}$	106 92
1	24	(ap.....	290	290	"	6 52
6	24	Split Thimbles.....	620	3720	2 $\frac{1}{2}$	93 00
1	24	Y Branch, 24"x24".....	2372	2372	2 $\frac{1}{4}$	53 37
4	20	Thimbles.....	230	920	"	20 70
1	20	Split Thimble.....	453	453	2 $\frac{1}{2}$	11 32
3	15	4 Way Branches.....	896	2688	"	60 48
3	15	" 15"x6".....	660	1980	"	44 55
1	15	3 ".....	812	812	"	18 27
2	15	Y's.....	1112	2024	"	45 55
5	15	Thimbles.....	234	1170	"	26 32
1	15	Reducing to 6".....	400	400	2 $\frac{1}{4}$	9 00
9	15	Split Thimbles.....	260	2340	2 $\frac{1}{2}$	58 50
1	12	Four Way Branches.....	615	615	2 $\frac{1}{4}$	13 84
4	12	" " 12"x9".....	500	2000	"	45 00
4	12	" " 12"x6".....	475	1900	"	42 75
2	12	Three Way Branches 12"x12".....	524	1048	"	23 58
3	12	" " 12"x9".....	494	1482	"	33 34
1	12	" " 12"x6".....	469	469	"	10 55
2	12	Reducing to 9".....	240	480	"	10 80
8	12	" 6".....	200	1600	"	36 00
2	12	" with faucets.....	200	400	"	9 00
18	12	Thimbles.....	160	2880	"	64 80
5	12	Caps.....	45	225	"	5 06
4	12	Saddles 12"x4".....	90	360	"	8 10
1	12	" 12"x3".....	86	86	"	1 93
13	12	Split Thimbles.....	222	2886	2 $\frac{1}{2}$	72 15
2	9	Six Way Branches 9x9x9x3.....	450	900	2 $\frac{1}{4}$	20 25
6	9	Three " 9"x9".....	355	2130	"	47 97
11	9	" " 9"x6".....	335	3685	"	82 91

## PIPE—SPECIALS—(Continued).

No. of Pieces	Diameter in inches.	DESCRIPTION.	Weight of one in lbs.	Total weight in lb.	Value per lb. in cents.	Total Value.
7	9	Reducing 9" to 6" . . . . .	157	1099	2 $\frac{1}{4}$	\$24 73
3	9	Offsets . . . . .	156	468	"	10 53
11	9	Thimbles . . . . .	112	1232	"	25 72
7	9	Caps. . . . .	34	238	"	5 35
1	9	Saddle 9" x 4" . . . . .	45	45	"	1 01
1	9	" 9" x 3" . . . . .	40	40	"	" 90
20	9	Split Thimbles . . . . .	139	2780	2 $\frac{1}{4}$	69 50
12	6	Four Way Branches . . . . .	255	3060	2 $\frac{1}{4}$	68 85
3	6	Three " 6" x 6" . . . . .	209	627	"	14 11
7	6	" " 6" x 3" . . . . .	131	917	"	20 63
1	6	Y " 6" x 6" . . . . .	250	250	"	5 62
6	6	Reducing to 3" with faucets . . . . .	114	684	"	15 39
9	6	" " to 4" . . . . .	114	1026	"	23 08
6	6	" " to 3" without faucet . . . . .	105	630	"	14 11
24	6	Thimbles . . . . .	75	1800	"	40 50
8	6	Offsets . . . . .	140	1120	"	25 20
7	6	Caps. . . . .	19	133	"	2 99
3	6	Bends . . . . .	140	420	"	9 40
8	6	Split Thimbles . . . . .	92	736	2 $\frac{1}{2}$	18 30
24	4	Four Way Branches . . . . .	123	2952	2 $\frac{1}{4}$	66 42
7	4	Three " . . . . .	114	798	"	17 95
1	4	Y branch . . . . .	96	96	"	2 16
2	4	Reducers without faucets . . . . .	84	168	"	3 78
1	4	Offset . . . . .	66	66	"	1 43
7	4	Bends . . . . .	88	616	"	13 86
12	4	Thimbles . . . . .	29	348	"	7 83
6	4	Split Thimbles . . . . .	64	384	2 $\frac{1}{2}$	12 10
6	3	Crosses . . . . .	90	540	2 $\frac{1}{4}$	12 15
2	3	Three Way Branches . . . . .	60	120	"	2 70
16	3	Split Thimbles . . . . .	48	768	2 $\frac{1}{2}$	19 20
17	3	Thimbles . . . . .	36	612	2 $\frac{1}{4}$	13 77
2	3	Bends . . . . .	40	80	"	1 80
1	3	Three Way Branch 3" x 2" . . . . .	55	55	"	1 24
6	2	Four " . . . . .	30	180	2 $\frac{1}{4}$	4 05
2	2	Angle Branches . . . . .	23	46	"	1 03
4	....	Fire Hydrants . . . . .	....	....	66.50	266 00
16	....	Casting for Fire Hydrants . . . . .	418	6588	3	197 64
16	....	Bases " " . . . . .	140	2240	"	67 20
12	....	Jackets " " . . . . .	340	4080	"	122 40
9	....	Extension pieces for Fire Hydrants . . . . .	124	1116	3 $\frac{1}{2}$	27 90
28	....	Cast iron Caps for hydrants . . . . .	5	140	3	4 20
7	....	" " suction hose . . . . .	9	53	"	1 89





## Pipe Stock on Hand December 31, 1899.

No. of Pieces.	Diameter in inches.	Weight of one in lbs.	Total weight in lbs.	Val. per lb. in cts.	Total Value.	Remarks.
1	27	3658	3658	1 $\frac{3}{4}$	\$64 01	T. & B. 12 feet.
2	24	2555	5110	"	89 42	T. & B. 12 feet.
4	24		9698	"	169 72	T. & B. 11 feet.
1	27	2651	2651	2 $\frac{1}{4}$	59 65	
1	20	1263	1263	2 $\frac{1}{4}$	28 42	
9	15	1200	10800	2 $\frac{1}{4}$	243 00	
4	12	680	2720	2 $\frac{1}{4}$	61 20	
13	10	550	7150	2 $\frac{1}{4}$	160 87	
173	9	500	86500	2 $\frac{1}{4}$	1946 25	
22	8	386	8490	2 $\frac{1}{4}$	191 02	
15	6	380	3700	2 $\frac{1}{4}$	83 25	
162	6	280	45360	2 $\frac{1}{4}$	1020 60	
18	5	222	3966	2 $\frac{1}{4}$	89 23	
4	4	156	624	2 $\frac{1}{4}$	14 68	
7	3	130	910	2 $\frac{1}{4}$	20 47	
50	1 $\frac{1}{2}$	26	1300	2 $\frac{1}{4}$	29 25	Stand Pipes.
20		12	240	2 $\frac{1}{4}$	5 40	Plates.
100		6	600	2 $\frac{1}{4}$	13 50	Caps.
225		18	4450	2 $\frac{1}{4}$	110 10	Sleeves for service.
240		4	960	2 $\frac{1}{4}$	21 60	Caps for service.
160		2	320	2 $\frac{1}{4}$	7 20	Thimbles for service.
1231			200470		\$4428 24	

## Miscellaneous.

Number.	DESCRIPTION.	Value of each.	Total Value
1	Pipe-tapping Machine .....		\$127 60
1	5 H.-P. Steam Engine and Pump .....		625 00
1	4 H.-P. Gas Engine .....		475 50
3	Derrick Winches .....	\$7 00	21 00
2	Hand Winches .....	8 00	16 00
2	Platform Scales .....	25 00	50 00
..	Tape Packing for Meters .....		80 00
..	Blacksmith Tools .....		100 00
3	Lathes .....		200 00
5	Pressure Gauges .....	10 00	50 00
			\$1745 10

## Recapitulation.

DESCRIPTION.	No. of Pieces.	No. of Pounds.	Value.
Pipes .....	1231	200470	\$4428 24
Specials .....			3182 42
Joint Staves .....	12800		145 00
Valves .....	175		1657 13
Meters .....	212		5766 26
Miscellaneous .....			1745 10
	14418	200470	\$16924 15

## Rented Domestic Supply Hydrants, 1899.

STREET.	LOCATION.
Cedar .....	North-east corner Louisburg Street.
Wellington .....	South-west corner Lundy Lane.
Duncan .....	North side.
Preston .....	South-west corner Jubilee Road.
" .....	" Quinpool Road.
Tower Road .....	At Fay's Lane
Hunter .....	South-east corner Charles Street.
Duffus St. ....	Corner Gottingen Street.

## Free Pumps Maintained by City, 1899.

No.	LOCATION.
1.....	Leahyville.
1.....	Lady Hammond Road.
1.....	Kempt Road.
1.....	Acadia Street.
1.....	Oak Street.
1.....	Duffus Street.

## Hydraulic Hoists in Operation, 1899.

NAME.	BUSINESS.	size of Service.	How Rated.
Kenny & Co .....	Dry Goods .....	4 inch .....	Meter
Murdoch's Newpnews .....	" .....	4 " .....	"
Post Office .....	Post Office .....	3 " .....	"
Appraisers' Office .....	Warehouse .....	3 " .....	"
G. M. Smith & Co .....	Dry Goods .....	4 " .....	"
Smith Bros. ....	" .....	3 " .....	"
Wm. Stairs, Son & Morrow .....	Hardware .....	4 " .....	"
Dillon Bros. ....	Groceries .....	3 " .....	"

## Motors.

St. Luke's Church .....	Organ .....	3 inch .....	Meter
Brunswick Street Church (Meth).....	" .....	2 " .....	Indicator.

## SERVICE PIPES LAID, 1899.

Number.	Name of Owner or Agent.	Location of Premises.	Number of Stopcock.	Size of Pipe.	Purpose for which water is used.
1	Rev. Dean Gilpin .....	W. side Maynard. ....	6407	1 1/2"	Dwelling
2	J. W. Grant .....	N. side Shirley .....	6408	"	"
3	W. F. Pyke .....	E. " Edward .....	6409	"	"
4	W. F. Pyke .....	E. " " .....	6410	"	"
5	Ewen McDonald .....	N. " Shirley .....	6411	"	"
6	Jas. Nolan .....	W. " Louisburg .....	6412	"	"
7	Jas. Nolan .....	W. " " .....	6413	"	"
8	T. J. Barry .....	E. " Dresden row ..	6414	"	Shop
9	H. D. Fader .....	" " Charles .....	6415	"	Dwelling
10	Thos. Flynn .....	N. " " .....	6416	"	"
11	Geo. F. Hills .....	E. " Windsor .....	6417	"	"
12	James Gray .....	N. " Willow .....	6418	"	"
13	Wm. Fry .....	W. " Walnut. ....	6419	"	"
14	J. A. ....	N. " Macara .....	6420	"	"
15	Clayton & Sons .....	E. " Gottingen. ....	6421	"	"
16	Clayton & Sons .....	E. " " .....	6422	"	"
17	Rev. P. M. Morrison (Agt). W. " Franklyn .....		6423	"	Library
18	Chas. Carmichael .....	W. " Agricola. ....	6424	"	Dwelling
19	H. M. Havill .....	S. " Quinpool Rd. ...	6425	"	"
20	H. M. Havill .....	S. " " .....	6426	"	"
21	H. H. Hubley .....	N. " Bloomfield ...	6427	"	"
22	Geo. Kinsman .....	W. " Moran .....	6428	"	"
23	Edwin Wagstaff .....	W. " Walnut. ....	6429	"	"
24	James Burns .....	S. " Almon .....	6430	"	Barn
25	F. W. W. Doane .....	E. " Young Avenue. ...	6431	3/4"	Dwelling
26	John McInnis .....	E. " " .....	6432	"	"
27	J. E. G. Bolton .....	E. " " .....	6433	"	"
28	Emeline Hefler .....	W. " Campbell Rd. ...	6434	"	"
29	James Warnell .....	E. " " .....	6435	"	"
30	P. Dwyer .....	W. " " .....	6436	"	"
31	Chas. Myra .....	W. " Gottingen .....	6437	"	"
32	Thos. Clarke .....	E. " Clifton .....	6438	"	"
33	Allan McCarthy .....	E. " " .....	6439	"	"
34	Alfred Paul .....	E. " " .....	6440	"	"
35	Richard Brushard .....	E. " " .....	6441	"	"
36	P. McGrath .....	W. " Agricola .....	6442	"	"
37	P. McGrath .....	W. " " .....	6443	"	"
38	P. McGrath .....	S. " Macara .....	6444	"	Shop & dwelling
39	E. Doherty .....	N. " " .....	6445	"	Dwelling
40	H. Harshman .....	S. " " .....	6446	"	"
41	Ellen Martin .....	E. " Agricola .....	6447	"	"
42	John Butler .....	E. " " .....	6448	"	"
43	John Ferrin .....	W. " " .....	6449	"	"
44	John O'Toole .....	S. " Bloomfield .....	6450	"	"

## SERVICE PIPES LAID—(Continued.)

Number.	Name of Owner or Agent.	Location of Premises.	No. of Stopcock.	Size of Pipe.	Purpose for which water is used.
45	Frederick Ward	S. side Miller	6451	½	Dwelling
46	Thos. Stokes	S. " Cabot	6452	"	"
47	Thos. Humphrey	S. " Laundry Lane	6453	"	"
48	Richard Giles	S. " " "	6454	"	"
49	A L Hiltz	S. " " "	6455	"	"
50	Robt. Pearson	S. " " "	6456	"	"
51	Chas. J. Burger	S. " " "	6457	"	"
52	W. A. Tucker	S. " " "	6458	"	"
53	A fred Paine	N. " " "	6459	"	"
54	G. W. Brush	S. " Black	6460	"	"
55	Harry Fraser	E. " Edward	6461	"	"
56	Harry Fraser	E. " "	6462	"	"
57	B. L. Stewart	S. " Quinpool Rd.	6463	"	"
58	A. J. Manley	E. " Hollis	6464	"	"
59	H. A. Moore	N. " Willow	6465	"	"
60	J. C. Archibald	N. " Coburg Rd.	6466	"	"
61	Constant Upham	W. " Campbell Rd.	6467	"	"
62	C. M. McGrath	N. " Bilby	6468	"	"
63	M. A. Carr	W. " Windsor	6469	"	"
64	G. S. McKinlay	E. " "	9470	"	"
65	Jas. Wyman	N. " Gerrish	6471	"	"
66	Frank Glazebrook	N. " Morris	6472	"	"
67	Thos. Ritchie	S. " Charles	6473	"	"
68	Nelson Smith	W. " James	6474	"	Barn
69	G. W. T. Irving	W. " Robie	6475	"	Dwelling
70	Alfred Whitman	W. " Young Avenue	6476	"	"
71	Mrs. Smith	W. " " "	6477	"	"
72	Daniel Stewart	S. " Laundry Lane	6478	"	"
73	Lawn Tennis Club	E. " Young Avenue	6479	"	Tennis Lawn
74	Annie L. Green	W. " Young Avenue	6480	"	Dwelling
75	J. C. Bevis	W. " Preston	6481	"	"
76	Pierre Poirier	W. " " "	6482	"	"
77	M. L. Foster	E. " LeMarchant	6483	"	"
78	R. W. Thomas	W. " Preston	6484	"	"
79	Clement Hand	E. " " "	6485	"	"
80	Clement Hand	E. " " "	6486	"	"
81	Clement Hand	E. " " "	6487	"	"
82	Clement Hand	E. " " "	6488	"	"
83	B. Broadhurst	N. " Duffus	6589	"	"
84	Margaret McLellan	E. " School	6490	"	"
85	David Murray	W. " " "	6591	"	"
86	David Murray	W. " " "	6492	"	"
87	Mary Hartland	W. " " "	6493	"	"
88	John Walsh	S. " Rector	6494	"	"
89	Richard Power	N. " " "	6495	"	"

## SERVICE PIPES LAID—(Continued.)

Number.	Name of Owner or Agent.	Location of Premises.	No. of Stopcock.	Size of Pipe.	Purpose for which water is used.
90	John Westav r .....	E. side N. Starr .....	6496	$\frac{1}{2}$	Dwelling
91	James O'Hearn .....	S. " Pepperell .....	6497	"	"
92	John Frame .....	S. " " .....	6498	"	"
93	John Oxley .....	S. " " .....	6499	"	"
94	Jas. Hallett .....	S. " " .....	6500	"	"
95	Francis Hamilton .....	N. " " .....	6501	"	"
96	James Soleman .....	W. " Brunswick .....	6502	"	"
97	Peter Kelly .....	S. " Williams .....	6503	"	"
98	J. W. Nicholson .....	S. " " .....	6504	"	"
99	Mrs. Jas. Brown .....	W. " Windsor .....	6505	"	"
100	Agnes M. Shand .....	N. " North .....	6506	"	"
101	James Sutherland .....	W. " Windsor .....	6507	"	"
102	M. J. McKay .....	E. " Albermarle .....	6508	$\frac{1}{2}$	Dwelling & Shop
103	C. H. Cornish .....	E. " Beech .....	6509	"	Dwelling
104	Anthony Mills .....	E. " " .....	6510	"	"
105	S. Smith .....	E. " " .....	6511	"	"
106	James McDonald .....	E. " " .....	6512	"	"
107	Geo. H. Thornton .....	E. " " .....	6513	"	"
108	Thos. Bell .....	E. " " .....	7514	"	"
109	B. B. Wallace .....	E. " " .....	6515	"	"
110	M. Barrett .....	W. " " .....	6516	"	"
111	Jas. Shanks .....	E. " " .....	6517	"	"
112	D. Storey .....	W. " Wellington .....	6518	"	"
113	S. M. Brookfield .....	S. " Owen .....	6519	"	"
114	Sarah J. Fader .....	N. " Willow .....	6520	$\frac{3}{4}$	"
115	Mary J. Foote .....	E. " N. Starr .....	6521	"	"
116	E. Ainsley .....	S. " Blower .....	6522	"	Shop & Dwelling
117	Chas. Love .....	W. " S. Park .....	6523	"	Dwelling
118	Edward Mahar .....	E. " LeMarchant .....	6524	"	"
119	Mrs. Tupper .....	S. " Harvey .....	6525	"	"
120	John Johnston .....	N. " Charles .....	6526	"	"
121	Stephen White .....	E. " Union .....	6527	"	"
122	Joseph Walker .....	E. " Munford Rd. ...	6528	"	"
123	P. R. Colpitt .....	S. " Coburg Rd. ....	6529	"	"
124	R. Forristall .....	N. " Jubilee Rd. ....	6530	"	"
125	R. Forristall .....	N. " " .....	6531	"	"
126	Matilda Ainsley .....	E. " Grafton .....	6532	"	"
127	Matilda Ainsley .....	E. " " .....	6533	"	"
128	Matilda Ainsley .....	E. " " .....	6534	"	"
129	A. E. Myers .....	E. " Gottingen .....	6535	"	"
130	Wm. Leviscont .....	E. " Tower Rd. ....	6536	"	"
131	Philip Myers .....	W. " Gottingen .....	6537	"	"
132	Infants' Home .....	W. " Tower Rd. ....	6538	$\frac{3}{4}$	"
133	Hugh Rogers .....	S. " Bilby .....	6539	$\frac{1}{2}$	"
134	J. L. Archibald .....	W. " Edward .....	6540	"	Barn

## SERVICE PIPES LAID—(Continued).

Number.	Name of Owner or Agent.	Location of Premises.	No. of Stopcock.	Size of Pipe.	Purpose for which water is used.
135	Charles Myra .....	W. side Gottingen .....	6541	½	Dwelling.
136	Florence Cunningham .....	N. " Macara .....	6542	"	"
137	Robie Uniacke .....	E. " Young .....	6543	"	"
138	John Wright .....	W. " Windsor .....	6544	"	"
139	George Tanner .....	S. " Allan .....	6545	"	"
140	Peter Martin .....	N. " Willow .....	6546	"	Barn.
141	Rose Cohan .....	N. " Sarah .....	6547	"	Dwelling.
142	James Saunders .....	N. " Atlantic .....	6548	"	"
143	William Nagle .....	N. " " .....	6549	"	"
144	Patrick Dee .....	N. " " .....	6550	"	"
145	Thomson & Thomson .....	E. " Beech .....	6551	"	"
146	Bridget Warren .....	W. " Campbell Road .....	6552	"	"
147	Charles Myatt .....	S. " Jubilee Road .....	6553	"	"
148	M. O. Crowell .....	E. " Lorne Terroce .....	6554	"	"
149	George Wright .....	N. " Kent .....	6555	"	"
150	George Wright .....	N. " " .....	6556	"	"
151	George Wright .....	N. " " .....	6557	"	"
152	Thomas Day .....	N. " Atlantic .....	6558	1½	Fountain.
153	Dr. J. G. Bennett .....	W. " Mumford Road .....	6259	½	Dwelling.
154	M. Wall .....	W. " Gottingen .....	6560	"	"
155	Edward Delaney .....	N. " Summit .....	6561	"	"
156	D. R. Reid .....	W. " Creighton .....	6562	"	"
157	— Ross .....	S. " Charles .....	6563	"	"
158	J. Burford .....	S. " Williams .....	6564	"	"
159	J. Burford .....	S. " " .....	6565	"	"
160	J. W. Smith .....	E. " Edward .....	6566	"	"
161	Thomas J. Cahill .....	W. " Seymour .....	6567	"	"
162	H. W. Wentzell .....	W. " Young .....	6568	"	Barn.
163	James Gammon .....	N. " South .....	6569	"	Dwelling.
164	H. M. Curtis .....	W. " Robie .....	6570	"	"
165	Bolmon & Slaney .....	S. " Young .....	6571	"	"
166	Joseph Burbridge .....	S. " Summit .....	6572	"	"
167	George Wright .....	W. " Church .....	6573	"	"
168	W. H. Cleverdon .....	W. " Henry .....	6574	"	"
169	Thomas Bottomley .....	S. " Atlantic .....	6575	"	"
170	Samuel McCawley .....	S. " " .....	6576	"	"
171	John Butler .....	S. " " .....	6577	"	"
172	Thomas Bottomley .....	S. " " .....	6578	"	Factory.
173	E. Slavin .....	W. " S. Bland .....	6579	"	Dwelling.
174	T. R. Hutchings .....	E. " Henry .....	6580	"	"
175	William Saunders .....	W. " " .....	6581	"	"
176	W. H. Cleverdon .....	W. " " .....	6582	"	"
177	F. Roberts .....	S. " Tobin .....	6583	"	"

## Valves.

Number.	Size in inches.	DESCRIPTION.	Weight of one in lbs.	Total weight in lbs	Value.	Total Value.
1	12	Regulating Valve .....				\$206 66
1	6	“ .....				103 33
4	15	Stop Valves .....			\$60 00	240 00
2	12	“ .....			40 00	80 00
10	9	“ .....			25 77	257 70
11	6	“ .....			17 49	192 39
15	4	“ .....			9 98	149 70
5	3	“ .....			8 75	43 75
8	1	Service Cocks .....			2 50	20 00
15	1/2	“ .....			1 50	22 50
9	1/4	“ .....			2 00	18 00
56	1/2	“ .....			1 60	89 00
4	15	Gun-metal Screws (spindles) .....	28	112	60	67 20
5	9	“ “ s' .....	14	70	60	42 00
12	6	“ “ “ .....	9	108	60	64 80
15	4	“ “ “ .....	6	90	60	54 00
2	3	“ “ “ .....	5	10	60	6 00
175	.....	.....				\$57 13

## Meters.

Number.	Size in inches.	DESCRIPTION.	Value of each.	Total Value
8	6	Siemens .....	\$143 42	\$1147 36
8	4	“ .....	86 75	694 00
8	3	“ .....	65 67	525 36
9	2	“ .....	44 65	401 85
3	1 1/2	“ .....	34 42	103 26
10	1 1/4	“ .....	29 16	291 60
17	1	“ .....	21 50	365 50
32	1/2	“ .....	15 50	496 00
110	1/4	“ .....	14 50	1595 00
1	.....	Nash .....	14 49	14 49
1	.....	Niagara .....	13 19	13 19
1	.....	Trident .....	11 97	11 97
1	.....	Empire .....	14 49	14 49
1	1	Crown .....	49 25	49 25
2	1/2	Frost .....	21 47	42 94
212	.....	.....		\$5766 26



## Curb Stop-Cocks Put Down in 1899.

OWNER.	STREET.	LOCATION.
F. W. W. Doane .....	Young Avenue.....	42' 10" to first step.
John McInnes .....	" .....	39' 4" to first step.
J. E. G. Boulton.....	" .....	50' 6" to granite pillar.
Alfred Whitman .....	" .....	30' 8" to verandah.
Louisa Smith .....	" .....	53' 0" to centre bay window
Lawn Tennis Club.....	" .....	12' 2" west from fence.
Annie S. Green .....	" .....	40' 0" west from centre of manhole.

## Detailed Precipitation for the Year 1899.

## SPRUCE HILL LAKE

Day.	Jan.	Feb.	Mar.	Apr.	May	Jun	July	Aug.	Sep.	Oct.	Nov	Dec.
1	.41	.03	....	....	....	....	....	....	.01	....	.98	....
2	....	....	....	.04	....	....	....	....	....	.22	....	1.13
3	.12	.15	.06	....	....	....	....	....	.42	1.38	....	....
4	.07	.35	....	....	....	....	....	.02	....	....	.69	.58
5	....	....	1.03	....	....	.47	.02	.05	.11	....	....	....
6	.78	....	....	....	....	.20	0.2	....	....	....	.04	.45
7	.05	....	.91	....	....	.05	.20	....	....	3.25	....	....
8	....	.25	....	1.97	.05	.27	1.84	....	....	....	....	.14
9	....	.03	....	....	.29	....	.45	....	....	.16	.08	....
10	....	....	....	....	....	....	....	....	....	....	....	....
11	....	....	.19	....	....	....	....	....	....	....	.36	....
12	....	.21	.85	.46	....	....	....	.09	.14	....	.77	.34
13	....	2.05	.17	....	....	....	.06	....	....	....	....	....
14	.89	.1	....	....	.05	....	....	....	....	....	....	....
15	....	....	.15	....	....	.98	....	....	....	....	.74	.51
16	....	....	.79	.51	....	1.65	....	....	....	....	....	....
17	.87	....	....	.66	....	....	.81	....	....	....	....	....
18	....	....	.37	....	....	....	.14	....	....	1.98	.03	.14
19	....	.52	1.34	....	....	....	....	.05	....	....	.52	.13
20	....	.22	.04	....	2.27	....	....	....	1.31	....	.67	....
21	.47	....	....	....	.50	....	.52	....	....	.06	....	....
22	....	....	.16	....	....	....	....	....	....	....	.15	....
23	....	.20	....	....	....	....	....	.25	....	....	....	....
24	.75	.10	1.04	....	....	.22	....	1.02	....	....	....	.08
25	.43	....	.14	....	....	.09	....	....	.05	....	....	.25
26	.12	....	....	....	....	....	1.83	....	.26	....	....	....
27	....	.78	....	....	....	....	....	.27	.08	....	....	....
28	....	....	....	....	.85	.61	....	....	....	.07	.10	1.44
29	.05	....	1.14	....	....	....	....	....	.73	.12	....	.22
30	.05	....	....	....	....	.04	.32	....	.21	....	....	....
31	....	....	....	....	....	....	....	....	....	.31	....	.21
Totals	5.06	5.01	8.38	3.64	4.01	4.58	6.19	1.75	3.32	7.55	5.13	5.62

Total precipitation for the year 1899—60 24 inches.

## DETAILED PRECIPITATION FOR YEAR 1899—(Continued.)

## CITY OF HALIFAX.

Day.	Jan.		Feb.		March.		April.		May.		June.	
	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.
1	23.	.640	.6	T	.....	.....	.7	.020	.1	T	.....	.....
2	.8	.010	.....	.....	.....	.....	.....	.....	.1	T	.....	.....
3	1.5	.050	.....	.....	.2	T	.....	.....	8.0	.297	.....	.....
4	2.4	.067	11.8	4.20	.....	.....	.....	.....	.8	T	.....	.....
5	1.0	.920	.....	.....	8.0	.388	.10	T	.....	.....	1.8	.025
6	3.6	.100	.....	.....	8.4	.548	.....	.....	.....	.....	7.0	.933
7	11.7	.570	.....	.....	10.9	.690	.....	.....	.....	.....	.8	.010
8	.8	.010	6.5	.200	5.5	.062	5.75	.842	.....	.....	8.2	.190
9	.3	T	4.0	.080	.....	.....	7.5	1.148	7.5	.396	2.0	.010
10	.....	.....	.....	T	.....	.....	.....	.....	.....	.....	.....	.....
11	.....	.....	.....	.....	1.2	.020	.....	.....	.....	.....	.....	.....
12	.....	.....	4.	.230	6.8	.174	9.0	.484	.....	.....	.....	.....
13	.....	.....	8.	.290	8.2	.820	2.0	.010	.....	.....	.....	.....
14	8.1	.264	14.2	.680	.....	.....	.....	.....	1.	.047	.....	.....
15	9.	.578	.....	.....	.....	.....	.....	.....	.5	T	2.5	.032
16	.....	.....	.....	.....	8.9	.632	.....	.....	.....	.....	14.	1.313
17	7.6	.904	.....	.....	.....	.....	7.	.810	.....	.....	.....	.....
18	1.5	T	.....	.....	.....	.....	2.	.028	.....	.....	.....	.....
19	.....	.....	14.5	.723	11.2	1.394	.....	.....	.3	T	.....	.....
20	.....	.....	.....	.....	12.5	.228	.....	.....	12.5	.764	.....	.....
21	.....	.....	.....	.....	.....	.....	.....	.....	21.0	1.215	1.2	.044
22	5.	.490	3.9	.230	.....	.....	.....	.....	1.	.010	.....	.....
23	.....	.....	9	.040	.5	.020	.....	.....	.....	.....	.....	.....
24	.5	.016	.....	.....	1.7	.030	.....	.....	.....	.....	.4	T
25	9.8	1.134	.....	.....	18.5	.777	.....	.....	.....	.....	3.0	.251
26	.....	.....	.....	.....	1.	T	1.6	.036	.....	.....	1.0	.014
27	3.4	.150	3.7	.522	.4	T	.....	.....	.....	.....	.....	.....
28	.....	.....	3.5	.248	.....	.....	.....	.....	5.4	.921	4.6	.150
29	1.6	.060	.....	.....	8.1	1.405	.....	.....	.....	.....	7.0	.410
30	1.7	.020	.....	.....	.....	T	.....	.....	3.0	.027	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	.....	5.083	.....	3.613	.....	7.178	.....	3.278	.....	3.677	.....	3.875

Total precipitation for the year 1899 - 53.013 inches.

## DETAILED PRECIPITATION FOR YEAR 1899—(continued.)

## CITY OF HALIFAX.

Day.	July.		August.		September.		October.		November.		December.	
	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.	Hours.	Inches.
1	.....	.....	.....	.....	.7	.010	.....	.....	15.7	1.054	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	3.0	.055	8.0	.902
3	.....	.....	.....	.....	4.	.186	13.0	1.164	.....	.....	.....	.....
4	.....	.....	.5	T	4.1	.288	.....	.....	4.5	.480	6.0	.666
5	.....	.....	1.	.010	.....	.....	.....	.....	.....	.....	.....	.....
6	.5	.017	3.2	.046	.5	.094	5.0	.564	.....	.....	7.8	.230
7	3.5	.168	.....	.....	.....	.....	5.0	2.862	.....	.....	1.5	.010
8	.5	T	.....	.....	.....	.....	.....	.....	.....	.....	4.1	.144
9	8.9	2.302	.....	.....	.....	.....	.....	.....	.5	.006	.....	.....
10	1.0	.070	.....	.....	.....	.....	.4	.020	.7	.040	.....	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	.....	.....	1.7	.012	4.5	.092	.....	.....	8.3	.826	1.	.020
13	.6	.081	1.0	.045	2.1	.034	.....	.....	2.4	.250	5.	.228
14	.....	.....	.....	.....	2.0	.024	.....	.....	.....	.....	.3	T
15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.	.604
16	.....	.....	.....	.....	.....	.....	.....	.....	6.9	.662	.1	T
17	5.1	.781	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18	5.0	.846	.....	.....	.....	.....	1.5	.128	.....	.....	2.	.073
19	.....	.....	.....	.....	.....	.....	8.8	1.265	1.5	.020	3.	.012
20	.....	.....	1.1	.128	3.0	.500	.4	.002	12.	.853	2.	.102
21	3.5	.402	1.0	.010	2.5	.820	3.4	.093	2.8	.025	.....	.....
22	2.6	.048	.....	.....	.....	.....	.....	.....	1.0	T	.....	.....
23	.....	.....	1.4	.048	.....	.....	.....	.....	3.3	.217	.....	.....
24	.....	.....	3.1	.200	.....	.....	.....	.....	.....	.....	1.5	.016
25	.....	.....	8.0	.999	.....	.....	.....	.....	.....	.....	4.5	.360
26	11.5	.871	.....	.....	4.0	.030	.....	.....	.7	T	1.0	.046
27	6.5	.514	.5	.060	3.5	.160	.....	.....	.....	.....	.....	.....
28	.....	.....	1.0	.030	.....	.....	.3	T	.5	.004	3.5	.100
29	.....	.....	.....	.....	.....	.....	.9	.039	4.1	.098	20.5	1.409
30	4.5	.138	.....	.....	7.6	.968	3.0	.054	.....	.....	.....	.....
31	3.0	.110	.....	.....	.....	.....	.....	.....	.....	.....	3.7	.122
Totals ..	.....	5.747	.....	1.542	.....	3.201	.....	6.191	.....	4.590	.....	5.038

## Detailed Precipitation for the Year 1899.

## LOWER CHAIN LAKE.

Day.	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug	Sep.	Oct.	Nov	Dec.
1.....	.91											.60
2.....	.10										21.	1.11
3.....	.12				.68				.55	1.41		
4.....	.05	.46									.50	.45
5.....	.05		.32			.04		.03	.01	.55	.09	.19
6.....			.46			.92	.03	.05				
7.....	.84		.75			.06	.28			3.15		.38
8.....			.10	.40		.18						.05
9.....		.49		1.35	.41	.02	2.05					
10.....							.23			.03	.06	
11.....									.02	.11	.70	.03
12.....			.17	.88				.04	.05	.04	.18	.16
13.....		1.05	.77	.05			.02	.03	.02			
14.....	.22	.92			.02							
15.....					.02	.48						
16.....	.78		.88			1.46					.63	.55
17.....	.86			1.77			.72					
18.....				.12			.28					.13
19.....		.95	1.63		.01					2.21	.03	
20.....			.38		.79			.09	.04		1.04	.06
21.....					1.35	.13	.31	.04	1.21	.03	.02	
22.....	.49	.02			.04		.22					
23.....		.22	.07								.26	
24.....						.03		.28				
25.....	.85		1.30			.22		1.03				.28
26.....				.05		.01	.66		.09			.15
27.....	.16	.15					.73	.08	.17			
28.....		.59			.91	.03		.06				
29.....	.05		1.40		.02	.52				.03	.07	1.35
30.....			.04		.03	.02	.12		.80	.07		
31.....	.05						.13			.15		
Totals.....	5.53	4.85	8.27	4.12	4.28	4.12	5.83	1.73	3.04	7.63	4.49	4.89

Total precipitation for the year 1899—58.78 inches.

## TOTAL PRECIPITATION FOR THE YEAR 1899.

1899.	CHAIN LAKES.					SPRUCE HILL LAKE.					CITY OF HALIFAX.		
	Snow.	Melted Snow.	Rain.	Total.	Snow.	Melted Snow.	Rain.	Total.	Melted Snow.	Rain.	Total.		
January ...	7 75	1·45	4·08	5·53	6·00	0·71	4·35	5·06	1·140	3 943	5 083		
February ..	22·00	3·75	1·10	4·85	26·75	3·93	1·08	5·01	2 280	1 333	3·613		
March ....	17·75	3·20	5·07	8·27	20·50	3·21	5·17	8·38	1 733	5 445	7·178		
April .....	7·00	1·60	2·52	4·12	5·75	0·92	2·72	3·64	0 370	2 908	3·278		
May .....	.....	.....	4·28	4·28	.....	.....	4·01	4·01	0·020	3 657	3·677		
June .....	.....	.....	4·12	4·12	.....	.....	4·58	4·58	.....	3 875	3·875		
July .....	.....	.....	5·83	5·83	.....	.....	6·19	6·19	.....	5 747	5·747		
August ....	.....	.....	1 73	1·73	.....	.....	1 75	1·75	.....	1 542	1·542		
September .	.....	.....	3·04	3·04	.....	.....	3·32	3·32	.....	3·201	3·201		
October ....	.....	.....	7·63	7·63	.....	.....	7·55	7·55	.....	6·191	6 191		
November .	2·25	0·36	4·13	4·49	2 00	0 36	4·77	5·13	0 130	4·460	4·590		
December..	18·36	1·81	3·08	4·89	21·00	2·32	3·30	5·62	1 872	3·166	5·038		
Totals.....	75·11	12·17	46 61	58·78	82·00	11·45	48·79	60·24	75·45	45·463	53·013		

Gallons of Water discharged over Long Lake Waste Weir during 1899.

Day.	Jan.	Feb.	March.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1	5,807,185			26,482,975	3,771,748	2,053,123						
2	10,665,474			22,953,449	2,053,123	725,898						
3	5,807,185			16,424,984	1,323,376							
4	3,771,748			10,665,474	256,678							5,807,185
5	8,112,524			8,112,524								19,600,783
6	8,112,524			5,807,185								16,424,984
7	16,424,984			3,771,748								16,424,984
8	19,600,783			3,771,748								5,807,185
9	22,953,449			64,923,283								3,771,748
10	13,441,414			74,904,379								2,053,123
11	5,807,185			46,452,871								2,053,123
12				38,025,069								2,053,123
13	725,898			30,173,996								3,771,748
14			16,424,984	19,600,783								3,771,748
15	2,053,123		13,441,414	19,600,783								1,333,376
16	1,333,376		10,665,474	19,600,783								3,771,748
17			10,665,474	19,600,783								8,112,524
18	10,665,474		10,665,474	38,025,069		2,053,123						3,771,748
19	5,807,185		16,424,984	46,452,871		6,929,096						2,053,123
20	3,771,748		38,025,069	38,025,069		8,112,524				2,053,123		2,053,123
21	2,053,123		42,169,750	30,173,996		3,771,748				5,807,185		725,898
22	3,771,748		30,173,996	22,953,449	10,665,474	2,053,123				8,112,524		
23	5,807,185		22,953,449	19,600,783	16,424,984					8,112,524		
24	3,771,748		16,424,984	16,424,984	13,441,414					8,112,524		
25	10,665,474		10,665,474	10,665,474	10,665,474					5,807,185		
26	34,026,476		5,807,185	8,112,524	5,807,185					3,771,748		
27	26,482,975		3,771,748	5,807,185	5,807,185					2,053,123		
28	16,424,984		2,053,123	5,807,185	5,807,185					725,898		
29	10,665,474		2,053,123	5,807,185	10,665,474							
30	3,771,748		22,953,449	3,771,748	8,112,524							
31	2,053,123		30,173,996		3,771,748							
Total.	264,355,317		305,513,150	682,500,339	98,583,672	25,698,635					44,555,834	103,361,274

Total for the year.... 1,524,568,121

### Highest and Lowest Points Reached at Long Lake and Spruce Hill Lake, 1899.

LONG LAKE.					SPRUCE HILL LAKE.				
1899.	Lowest point reached during the month.	Highest point reached during the month.	Monthly precipitation in inches at gauge at Chain Lake.	Monthly precipitation in inches at City of Halifax.	1899.	Lowest point reached during the month.	Highest point reached during the month.	Monthly precipitation in inches at gauge at Sp. Hill Lake.	
Jan. 12..	205.87	.....	5.53	5.083	Jan. 8..	.....	364.20	5.06	
" 26..	.....	206.53	.....	.....	" 14..	364.00	.....	.....	
Feb. 1..	.....	205.99	4.85	3.613	Feb. 1..	.....	364.00	5.01	
" 27..	204.37	.....	.....	.....	" 27..	363.05	.....	.....	
Mar. 1..	204.49	.....	8.27	7.178	Mar. 5..	363.05	.....	8.38	
" 20..	.....	206.65	.....	.....	" 31..	.....	364.26	.....	
April 7..	206.11	.....	4.12	3.278	April 7..	364.13	.....	3.64	
" 10..	.....	206.91	.....	.....	" 10..	.....	364.54	.....	
May 20..	205.33	.....	4.28	3.677	May 1..	.....	364.11	4.01	
" 23..	.....	206.32	.....	.....	" 20..	363.54	.....	.....	
June 15..	205.62	.....	4.12	3.875	June 15..	363.42	.....	4.58	
" 20..	.....	206.19	.....	.....	" 18..	.....	363.88	.....	
July 8..	205.11	.....	5.83	5.747	July 7..	363.30	.....	6.19	
" 1..	.....	205.83	.....	.....	" 11..	.....	363.63	.....	
Aug 1..	.....	205.74	1.73	1.542	Aug 1..	.....	363.46	1.75	
" 31..	203.99	.....	.....	.....	" 31..	362.34	.....	.....	
Sept. 1..	.....	203.91	3.04	3.231	Sept. 1..	.....	362.30	3.32	
" 29..	202.29	.....	.....	.....	" 29..	361.30	.....	.....	
Oct. 3..	202.24	.....	7.63	6.191	Oct. 2..	361.32	.....	7.55	
" 21..	.....	205.57	.....	.....	" 9..	.....	362.34	.....	
Nov. 1..	205.24	.....	4.49	4.590	Nov. 1..	362.04	.....	5.13	
" 22..	.....	206.19	.....	.....	" 22..	.....	362.34	.....	
Dec. 2..	205.79	.....	4.89	5.038	Dec. 6..	.....	362.40	5.62	
" 5..	.....	206.36	.....	.....	" 28..	362.09	.....	.....	
Totals,.....	.....	.....	58.78	53.013	.....	.....	.....	60.24	

Level of waste weir at Spruce Hill Lake....363.34 above mean low tide.

" " " " " Long Lake.... 205.99 " " " "



## RECORDS COMPARED 1879-99.

Year.	Total precipitation at Chat 1 Lake	Lowest Level of Long Lake below Waste Weir.		Total precipitation at Spruce Hill Lake.	Lowest Level of Spruce Hill Lake below Waste Weir.		Total precipita- tion in the City of Halifax.
	Inches.	Feet.	Inches.	Inches,	Feet.	Inches.	Inches
1879....	40.76	4	6½	.....			47.76
1880....	51.45	3	10½	.....			52.752
1881....	46.65	3	0½	.....	2	3	51.755
1882....	56.089	2	6¼	..	2	0	62.022
1883....	46.201	4	5½	.....	3	3	58.112
1884....	59.252	3	9¾	.....	2	0½	63.278
1885....	47.995	4	5	.....	3	0½	56.629
1886....	46.60	2	3	.....	2	0	57.290
1887....	59.82	3	10	.....	3	8¼	57.253
1888....	68.525	1	5	67.21	2	2	66.294
1889....	46.81	5	11	49.10	4	4	48.659
1890....	59.38	4	2	60.78	3	11¾	60.103
1891....	57.015	3	6½	58.99	2	9¼	58.669
1892....	58.97	2	11½	60.19	2	5¾	53.690
1893....	57.26	3	11½	57.98	2	9½	58.748
1894....	47.59	6	4	46.40	4	11	45.808
1895....	56.98	6	7	57.94	4	11½	62.152
1896....	70.87	3	1	70.72	3	8	69.862
1897....	55.40	6	3	58.01	2	6½	51.522
1898....	74.93	4	5½	74.48	2	2	60.480
1899....	58.78	3	9	60.24	2	0½	53.013

Rainfall only.

## FIRE HYDRANTS 1899-1900.

Diameter of supply main in inches.	LOCATION.		Distance valve from Hydrant.	No. of Nozzles.	Frostjacket or Old Hydrant.	Elevation above datum in feet.	Head of Water in feet.	Pressure in lbs. March, 1900	Remarks.
	Street or premises.	At							
6 ..	Admiralty House	.....	Ft. in.	..	.....	.....	.....	.....	Sec Naval.
12 L	Academy of Music	.....	.....	2	Old ..	.....	.....	.....	Private.
12 H	Agricola	between Cunard and Sarah st. ....	.....	2	"	.....	.....	.....	16
12 H	"	William st. ....	.....	2	"	.....	.....	.....	10
12 H	"	Charles st. ....	.....	2	"	189.23	175.77	.....	6
12 H	"	North st. ....	.....	2	"	201.19	163.81	.....	1
12 H	"	Near May st. ....	.....	2	Frost.	.....	.....	.....	0
12 H	"	Blomfield st. ....	.....	2	Old ..	198.90	166.10	.....	2
12 H	"	Almon .....	.....	2	"	190.81	175.19	.....	6
6 L	Albemarle	Blowers. ....	.....	2	"	123.00	83.00	.....	13
6 L	"	Buckingham. ....	.....	2	"	87.40	118.60	.....	20
6 H	Allen	350 W. of Windsor. ....	.....	2	Frost..	.....	.....	.....	21
6 H	Almon	Young (Isleville). ....	.....	2	Old ..	.....	.....	.....	7
6 H	"	Kempt road .....	.....	2	"	.....	.....	.....	4
6 H	Annandale	West end .....	.....	2	Frost..	.....	.....	.....	32
	Artillery Park	.....	.....	..	.....	.....	.....	.....	See Military.
9 L	Artz Lane	Lockman .....	.....	3	Frost ..	68.61	137.39	.....	38
6 L	Atlantic	Brussels .....	5.11	3	"	.....	.....	.....	32
6 L	Barrington	Buckingham. ....	.....	2	"	38.28	167.72	.....	37
6 L	"	Bell's Lane .....	.....	3	"	28.87	177.13	.....	42
6 L	"	between.. Jacob st. and Hurd's Lane. ....	.....	2	"	38.50	167.50	.....	40
6 L	"	Hurd's Lane .....	.....	2	Old ..	38.59	167.41	.....	50
6 L	"	between.. Proc. Lane & Cornwallis st. ....	.....	2	Frost..	43.61	162.39	.....	46

Fire Hydrants 1899-1900—(Continued.)

Diameter of supply Main in inches.	Service.	LOCATION.		Distance Valve from Hydrant.	No. of Nozzles.	Frost-jacket or Old Hydrant.	Elevation above datum in feet.	Head of Water in feet.	Pressure in lbs. March, 1900.	Remarks.
		Street or premises.	At							
				Ft. in.						
6 H	Bauer .....	Head Falkland st .....		.....	2	Old.	156.60	208.40	21	
6 H	Beech .....	Quinpool road. ....		10 8	3	Frost.	.....	.....	33	
6 H	" .....	450 ft. N. of " .....		6 7	3	"	.....	.....	25	
6 H	" .....	Oak st .....		5.5	3	"	.....	.....	20	
6 H	Belle Air .....	400 N. of North st. ....		.....	2	"	.....	.....	2	
12 H	Bilby .....	Agricola st .....		.....	2	Old.	190.79	174 21	6	
12 H	" .....	Young st .....		.....	2	"	190.65	174.35	16	
12 H	" .....	Gottingen st .....		.....	2	"	.....	.....	12	
6 L	Bishop .....	Hollis st .....		.....	2	Old.	52.99	153 01	16	
6 L	" .....	Water st .....		.....	3	Frost.	16.85	189.15	29	
6 H	Black .....	Creighton st .....		.....	3	"	.....	.....	5	
6 L	Bland .....	Atlantic st .....		4 8	3	"	.....	.....	32	
6 H	Bloomfield .....	360 ft E. of Agricola st. ....		.....	2	"	.....	.....	4	
15 L	Blowers .....	Argyle st .....		.....	3	"	94.51	111.49	10	
9 L	" .....	Barrington st .....		.....	3	"	78.60	127 40	17	
12 L	" .....	Granville st .....		.....	3	"	63.28	202.72	23	
6 L	Brenton Place .....	Brenton st .....		.....	2	Old.	105.01	100.99	21	
9 L	Brunswick .....	Prince st .....		.....	2	"	141.51	64 49	8	
9 L	" .....	George st .....		.....	2	"	131.74	74 26	13	
9 L	" .....	Duke st .....		.....	2	"	120.27	85.73	18	
9 L	" .....	Buckingham st .....		.....	2	"	105.23	99.77	23	
15 L	" .....	Jacob st .....		4.0	3	Frost	90 53	116 47	23	
12 L	" .....	Hurd's Lane .....		18.0	2	Old.	84.46	121.54	30	

12 L	Brunswick st	Proctor's Lane	2	Old	79.21	126.79	31
12 L	"	Methodist Church	3	Frost			33
12 L	"	Near St. Patrick's	3	"			30
12 L	"	338 ft S. of Gerrish st	3	"			29
12 L	"	between Artz Lane and Gerrish st	2	Old	102.17	103.83	25
12 L	"	Artz Lane	2	"	108.82	97.18	24
12 L	"	between " and North st	2	"			22
6 H	"	North st	2	Frost	124.07	240.93	23
6 L	"	Lane	2	"	103.58	102.42	31
15 L	Buckingham st	Argyle st	2	Old			29
9 L	"	Granville st	2	"	22.98	183.02	45
9 L	Campbell road	Railway bridge	2	"			17
9 L	"	Russell st	2	Frost			18
9 L	"	Young st	2	"			20
9 L	"	355 ft N. of Young st	2	Old			20
9 L	"	121 ft S. of Hanover st	2	"			21
9 L	"	161 ft N. of Hanover st	2	"			22
9 L	"	Richmond st	2	"			22
9 L	"	Ke ny st	2	Frost			25
9 L	"	Duffus st	9 4	3	"		25
9 L	"	Opposite No. 285	9 0	3	"		27
9 L	"	Opposite No. 351	5 0	3	"		25
6 H	Cedar st	Walnut st	2	"			20
6 H	"	Preston st	2	"			22
6 H	Charles st	John st	2	Old	89.15	175.85	7
6 H	"	Robie st	2	"	183.44	181.56	9
6 H	"	Clifton st	5.6	3	Frost		10
6 H	Chestnut st	250 ft S. of Shirley st	2	"			20
6 H	Clifton st	387 ft N. of North st	5.3	3	"		3
9 H	Coburg road	Edward st	2	"			26
9 H	"	LeMarchant st	2	"			18
9 H	"	Walnut st	2	"			19
12 L	Cogswell st	Hospital gate	3	"	118.30	87.70	15
6 L	College st	Tower road	2	"			20
6 L	"	251 ft W. of Tower road	2	"			17
6 L	"	Carlton st	2	Old			36