

ANNUAL REPORT OF THE ENGINEERING AND PUBLIC WORKS DEPARTMENT

1944



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January 24, 1945.

TO HIS WORSHIP THE MAYOR AND ALDERMEN
OF THE CITY OF FREDERICTON

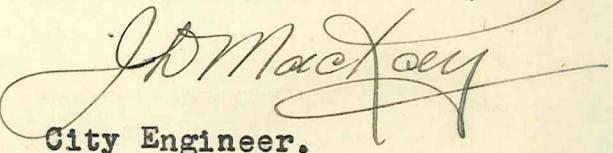
Gentlemen:

I submit herewith this report which is a statement of the work done in the different City Departments under the direct supervision of the City Engineer, and covers the period of time from the first of December 1943 to the first of December 1944.

This report is written with the purpose of reporting to the Council on the costs of the various Departments for the year. It is also written with the idea of having on file an accurate record of the different activities and costs under these Departments.

Following in the body of this report is a detailed statement of work done, comparative expenditures and unit costs under these different Departments. The detailed report of any particular Department can readily be found by referring to the Index on the preceding page.

Respectfully submitted,


J.D. MacDooley
City Engineer.

Public Works Playgrounds

II - Labour	=	645.10
Electric Co.	=	83.24
nd Mat 37.79 light		14.20 41 28.80
hill Ltd	=	71.08
aterial		45.45
erry Ltd.	=	44.25
rent material		
staples	=	14.62
	=	9.60
Cleaner Ltd	=	8.25
ng. Ltd	=	3.00.
Saving Society	=	1.50
Total	880.64	

1945 To March 31, 1946.

TOTAL YEARLY EXPENDITURE

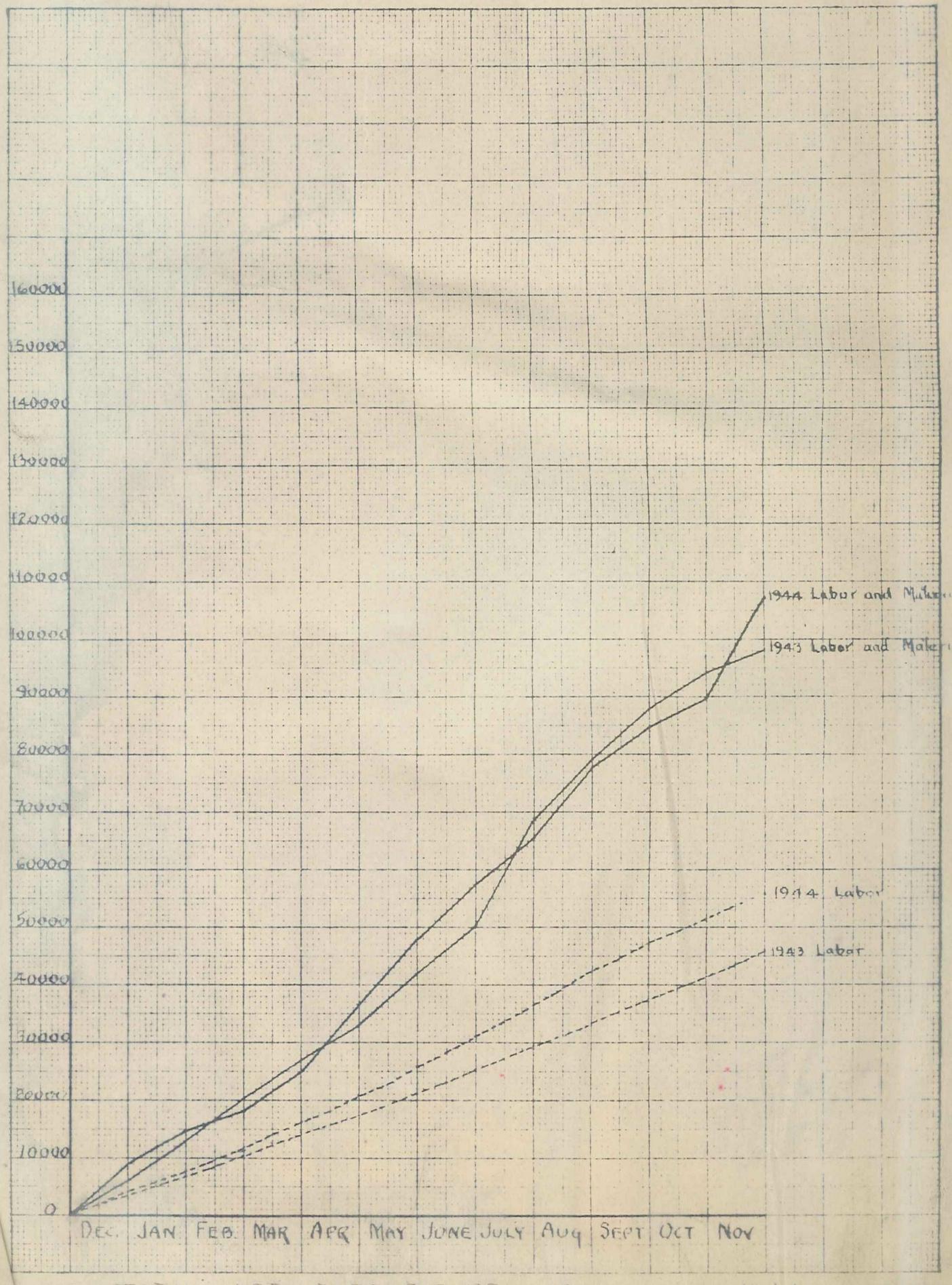
The Total Yearly Net Expenditure under the direct supervision of the City Engineer this year amounted to \$107,405.99. This expenditure will be taken up in detail under the different headings in this report.

It may be noted that the Total Gross Expenditure for this year amounted to \$162,326.30. The cause for the Gross Expenditure being some \$55,000.00 in excess of the Net is principally due to our Public Works wood account where we purchased fuel wood from the Federal Government and resold it at the same price to the City dealers for distribution. This \$55,000.00 is also partly accounted for by the credit of one-half the expenditure for the University of New Brunswick water extension which was refunded by the University to the City.

A graphic comparison of expenditure for labour and material for the year 1944 and a chart showing the distribution of the 1944 Fredericton Tax Dollar are shown here:-

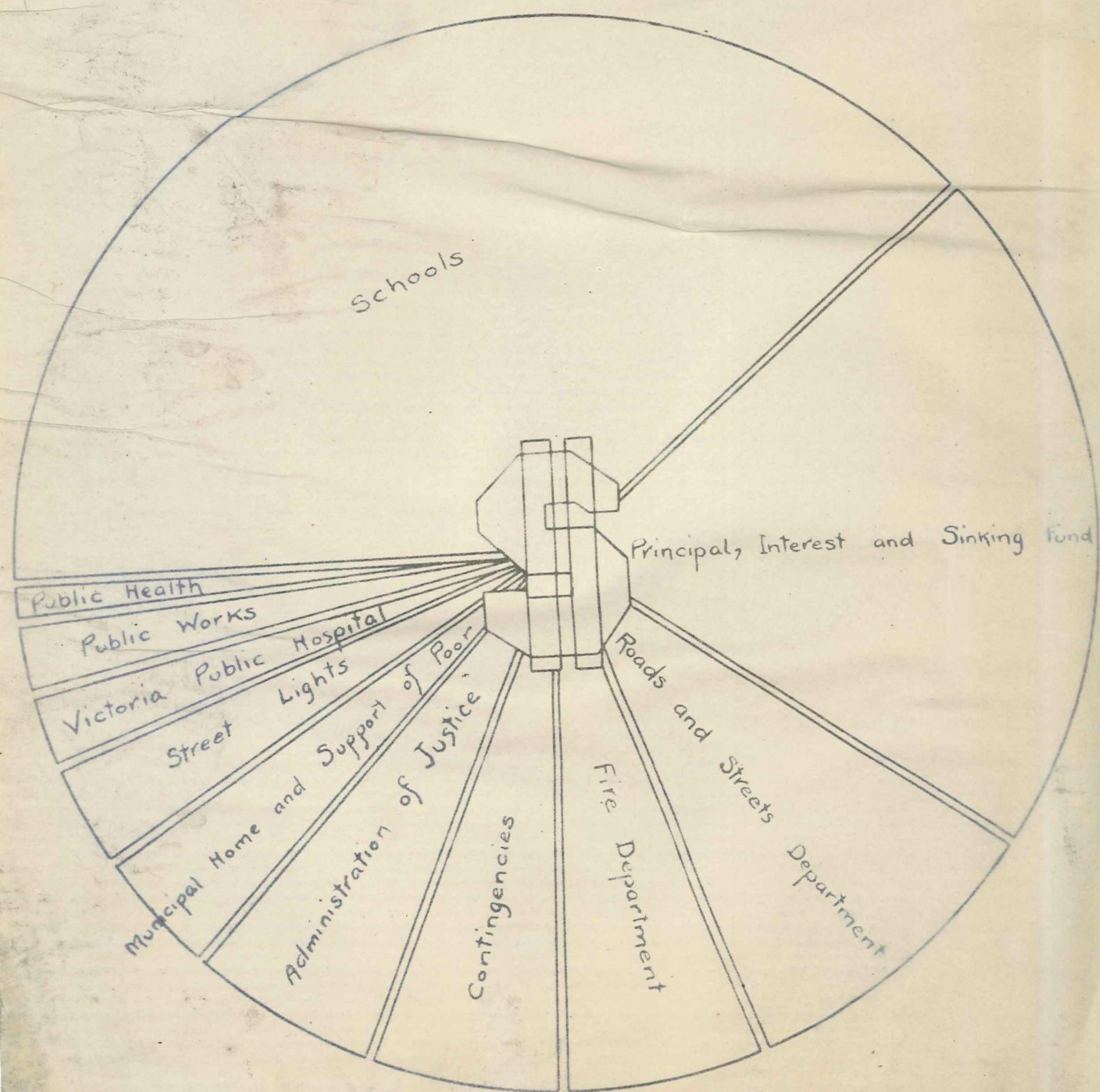
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TOTAL NET EXPENDITURE 1943 AND 1944.

DIVISION
OF
FREDERICTON TAX DOLLAR
1944
SHOWN GRAPHICALLY



ROADS AND STREETS

This year we had an appropriation for Roads and Streets of \$30,000.00. We over-expended this appropriation by \$12,968.86.

The City of Fredericton Roads and Streets System is for convenience divided into two parts, namely, the Urban District and the Outlying or Rural District.

The Urban District is roughly bounded as follows: On the North and East by the St. John River, and on the South and West by the line of Albert and Dundonald Streets.

The Outlying or Rural District would be the district within the city limits outside the above mentioned boundaries.

We have in Fredericton altogether some $44 \frac{1}{3}$ miles of roads and streets and about 32 miles of sidewalk. This sidewalk is all within the Urban District and is pretty well covered by cement sidewalks.

Our paved and unpaved streets are divided between the Rural and Urban Districts as follows:-

Roads and Streets

	<u>Urban</u>	<u>Outlying</u>	<u>Total</u>
Paved	11.85	3.46	15.31
Gravel	<u>5.83</u>	<u>23.21</u>	<u>29.04</u>
Total	17.68	26.67	44.35

Roads and Streets Expenditure 1944:-

Gross Expenditure.....	\$ 47,285.36
Credits.....	<u>4,316.50</u>
Net Expenditure.....	<u>42,968.86</u>
1944 Appropriation.....	<u>30,000.00</u>
Dr. Balance.....	\$ 12,968.86

The above Credits are made up as follows:-

Item 1.	Received from other City Departments for work done and material sold by Roads and Streets Department.....	\$ 296.43
Item 2.	Work done for and material sold to private parties by Roads and Streets Department.....	528.42
Item 3.	Wood sold from City Forest (Odell Property)	<u>3,491.65</u>
	Total.....	\$ 4,316.50

The Gross Expenditure is divided as follows:-

Labour.....	\$ 25,299.20
Material Charges and Workmen's Compensation Board...	<u>21,986.16</u>
	\$ 47,285.36

I have divided the Labour Charges of \$25,299.20 into the following items. Although these items are made up entirely of labour costs, they give a good idea of the amount and kind of work done by the Roads and Streets Department during the year.

<u>Snowploughing sidewalks.....</u>	\$ 64.70
<u>Snow Control:- Shovelling and hauling snow, ploughing or scraping roads, cleaning gutters of ice and snow, and any other means of snow control.....</u>	1,696.51
<u>Streets:- General work of maintenance of streets and sidewalks and any other items such as building culverts, curbs and gutters or pavements which are not mentioned under some particular heading.....</u>	4,595.09
<u>Surface Sewers:- Cleaning, flushing and repairing surface sewers and building new surface sewers within street limits.....</u>	466.07
<u>Sanding Walks:- Storing sand in winter storage piles and spreading same on slippery walks.....</u>	530.74
<u>Yard:- Men working in blacksmith shop and repair work in City Yard, taking summer equipment out and storing winter equipment, etc.....</u>	836.62
<u>Street Sprinkling:- Water cart.....</u>	33.81
<u>Stone Crushing:- Repairs to crusher and crushing stone...</u>	nil
<u>St. John Road:- All work done on the River Road from Alexandra Street to eastern city line other than work done by power maintainer and pavement maintenance.....</u>	352.01
<u>Doak and Wilsey Roads:- All work done on these roads other than work done by power maintainer.....</u>	106.84
<u>New Maryland Road:- From C. P. R. Crossing to southern city line. All work done on this road other than that done by power maintainer.....</u>	479.46
<u>Outlying Roads:- Hanwell Road, Cross Road lying between Brick Hill and College Hill Road and Forest Hill Road. All work done on these roads other than work done by power maintainer.....</u>	852.65
<u>Street Cleaning:- All cleaning and removal of dirt, leaves, etc. from streets.....</u>	7,773.64
<u>Tarvia Repairs:- Patching and repairing asphalt and tar pavements and sidewalks and applying seal coat of light tar or asphalt to pavements.....</u>	2,482.69
<u>City Road Patrol</u>	558.67
<u>City Forest</u>	<u>4,469.70</u>
Total.....	\$ 25,299.20

Following is a table comparing Labour Expenditure
in these items from 1939 to 1944.

TABLE COMPARING YEARLY COSTS IN ROADS AND STREETS
LABOUR ITEMS

	<u>1939</u>	<u>1940</u>	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>
Snowploughing						
sidewalks	218.74	195.30	291.24	136.19	187.47	64.70
Snow Control	3,659.33	2,760.65	5,348.52	2,850.87	2,686.00	1,696.51
Streets	818.07	1,703.53	762.84	2,142.61	1,871.84	4,595.09
Surface Sewers	240.64	526.81	263.66	274.60	307.69	466.07
Sanding Walks	484.82	324.06	325.52	365.63	321.93	530.74
Yard	2,067.65	1,689.70	1,481.46	1,158.84	1,194.21	836.62
Gravel						
Street Sprinkling	502.15	554.36	597.70	157.86	12.39	33.81
Stone Crushing	245.19	152.28				
St. John Road	23.05	1.20	130.71	93.22	47.68	352.01
Doak & Wilsey Rds.	126.78	30.02	93.95	514.04	95.47	106.84
New Maryland Road	195.40	127.86	500.29	7.04	23.74	479.46
Outlying Roads	491.20	932.81	939.09	695.10	717.85	852.65
Street Cleaning	5,024.94	6,293.55	5,567.61	6,180.69	7,291.88	7,773.64
Tarvia Repairs	2,059.88	940.05	910.09	1,470.40	1,876.67	2,482.69
City Road Patrol	486.73	634.88	535.19	545.41	474.28	558.67
Quarry	37.31	90.30				
Wood lot at quarry		999.00	459.50			
City Forest			4,609.32	5,953.12	5,770.34	4,469.70
Total	16,681.88	17,956.36	22,816.69	22,545.62	22,879.44	25,299.20

Some of these above labour items may be better understood by the following explanations:

Snow Control:-

Snowploughing roads and streets.....	\$ 150.74
Shovelling and hauling snow.....	573.62
Catch basins.....	553.61
Snow fences.....	337.75
General Expenses.....	80.79
Total.....	\$ 1,696.51

Snow Fences:-

In our snow fencing this year we used 5800 feet of lathmade snow fence.

Streets:-

Repairs to plant	\$ 292.72
Curb and gutter.....	2,220.67
Repairs to streets.....	473.83
Painting traffic lines and street signs.....	278.94
Weather Account.....	960.35
Repairs to bridges.....	34.98
Surveying.....	31.05
Unloading and spreading calcium chloride.....	83.74
General Expenses.....	<u>218.81</u>
Total.....	\$ 4,595.09

This season we laid some 6797 lineal feet of concrete curb and gutter at the following locations:-

Shore Street	1381	lineal feet
Grey Street	1382	" "
Alexandra Street	2640	" "
Union Street	1394	" "

The cost of this above construction was Labour 33¢ a foot and Material Charges 58¢ a foot, making a total cost per foot of 91¢ and a total expenditure for curb and gutter of \$6,182.57.

The Weather Account of \$960.35 is made up chiefly of wages paid to workmen when they were on their holidays.

Outlying Roads:-

The labour expenditure of \$852.65 is made up as follows:-

Brick Kiln Road.....	\$ 77.60
York Street Hill.....	82.27
Hanwell Road.....	5.21
Cross Roads.....	268.97
Forest Hill.....	146.12
College Hill.....	231.88
General Expenses.....	<u>40.60</u>

Total.....\$ 852.65

The actual road machining was done by the City Road Patrol and charged under this item. The expenditures shown above were made up of fixing ditches and culverts and graveling.

The City entered into an agreement with Mr. E. C. McFarlane to gravel some of our outlying roads. Mr. McFarlane loaded and delivered this gravel where required at a price of 50¢ a mile per cubic yard for the first mile of haul and 10¢ additional for each additional mile. Thus a yard of gravel loaded and hauled five miles cost the City 90¢ and the ^{stumpage} paid to the gravel pit owner.

Mr. M'Farlane Bill was 5042 on July - 5/12.90

4277 cubic yards of gravel were taken from a government owned pit at Barkers Point for 7¢ a cubic yard, and 765 cubic yards were taken from Flower's pit at Barkers Point at 15¢ a cubic yard. This gravel was used at the following locations:-

First Cross Road.....	615 cu. yds.
Maryland Road.....	1592 "
Doak & Wilsey Roads.....	2235 "
Forest Hill Road.....	444 "
City Yard (storage pile).....	<u>156</u> "
Total.....	5042 cu. yds.

Cleaning Streets:-

The labour cost of \$7,773.64 shows an increase of \$481.76 over last year's labour expenditure.

Tarvia Repairs:-

The labour expenditure of \$2,482.69 is divided as follows:-

Patching and sealing streets.....	\$ 1,680.81
Paving between curb and gutter.....	554.65
Patching in Town of Devon.....	62.27
Patching in Town of Marysville.....	36.83
Hauling sand.....	29.91
General Expenses.....	<u>118.22</u>
Total.....	\$ 2,482.69

In patching and sealing streets this year we used two tanks or 16,225 gals. R.C.4 Asphalt and one tank or 6,207 gals. of R.C.3.

Of this asphalt only about 19,000 gals. were used in sealing as we barreled about 3400 gals. to be used in patching.

The following table shows the Bituminous Material used in 1944.

	R.C.4	R.C.3
Gals. in stock spring 1944	0	3040
Gals. purchased 1944	16225	6207
Available 1944	16225	9247
Stock on hand fall 1944	1000	1200
Used season 1944	15225	8047

All streets sealed this year are shown in cross-hatching on the following map which also shows the location of all paved streets in the City.

ROADS SEALED 1943

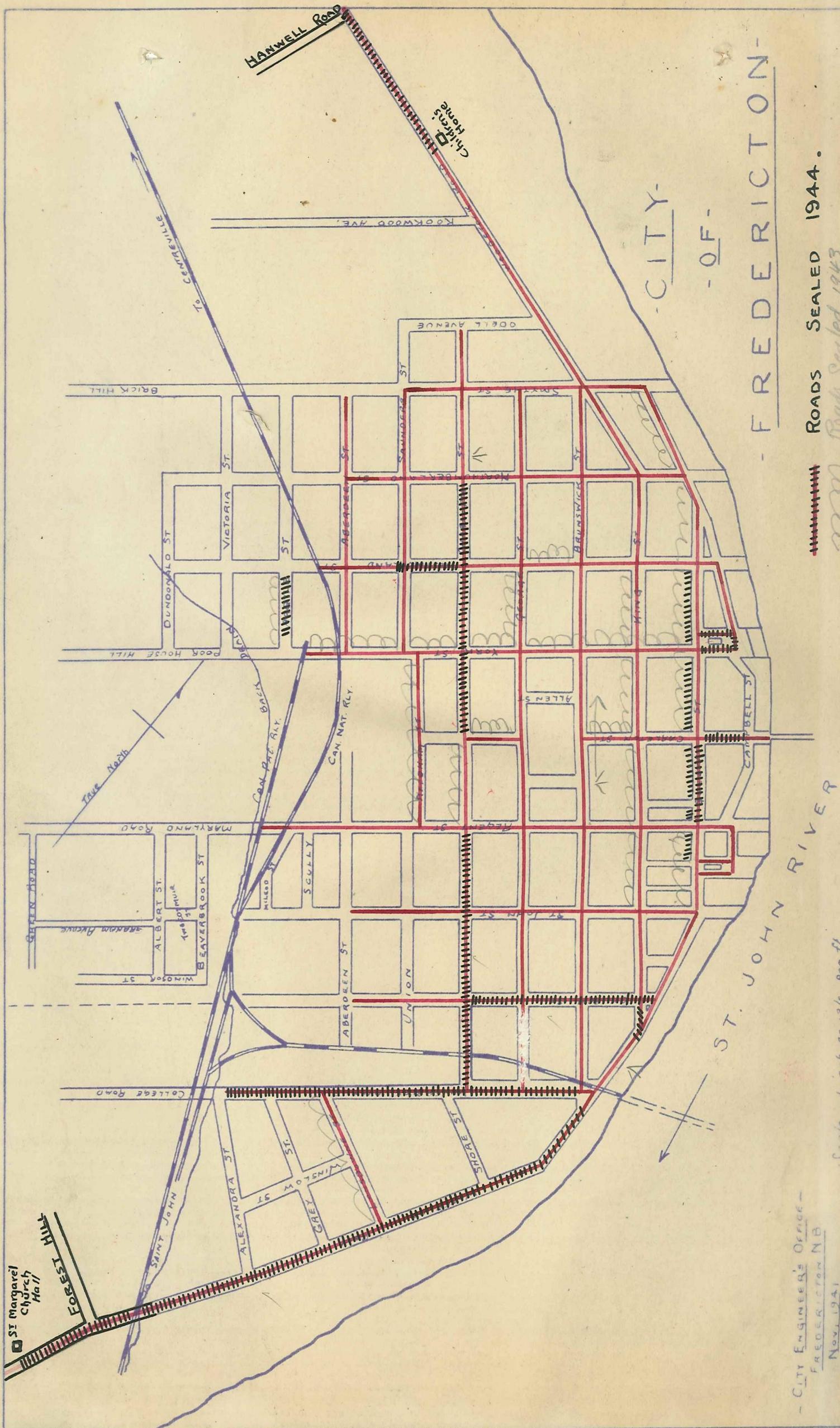
MAP Roads Sealed 1943

- FREDERICKTON -

- OF -

CITY ENGINEER'S OFFICE
FREDERICKTON NB
Nov. 1941

Scale - 1 inch equals 800 ft



Surface Sewers:-

All surface sewers in the City were flushed and all catch basins were cleaned and repaired during the summer season.

A new surface sewer was constructed on Union Street, commencing at the corner of St. John and Union Streets and running up Union Street a distance of 229 feet. This sewer was made necessary by the curb and gutter laid on this block of Union Street this year, the block being too flat to enable the curbs to be graded to the corners as is usual.

The labour expense on surface sewers is divided as follows:-

Building catch basin Alexandra and Grey Streets..	\$ 105.16
Minor repairs to sewers.....	37.07
Building surface sewer Union Street.....	91.75
Cleaning surface sewers.....	209.90
General Expenses.....	<u>22.19</u>
Total.....	\$ 466.07

City Forest:-

Included in our regular Roads and Streets costs is a labour expenditure for City Forest of \$4,469.70.

This labour item is subdivided into the following items:-

Cutting fuel wood in woods.....	\$ 2,154.72
Hauling wood to wood yards.....	696.40
Sawing wood with cut-up saw.....	450.40
Delivering wood to City workmen.....	243.70
Cutting lumber and hauling to mill.....	54.78
Haying.....	46.10
Caretaker's wages and miscellaneous expenses including starting Tree Nursery.....	<u>823.60</u>

Total.....\$ 4,469.70

Besides this labour cost the City Forest shows an expenditure for material of \$952.69, making a total cost for the year of \$5,422.39.

The above expenditure gave us the following merchantable material:-

67 cords fuel wood hauled to City Yard for Municipal Home Department @ \$10.00.....	\$ 670.00
225 cords hauled from woods and piled in wood yard at City Forest, about 1/2 sawn and split @ \$11.00.....	2,475.00
240 cords cut into 4 in. lengths and piled in woods in City Forest @ \$7.00.....	1,680.00
7000 bd. ft. hemlock lumber cut in City Forest and hauled to mill @\$30.00.....	210.00
6 tons hay @ \$12.00.....	<u>72.00</u>

Total.....\$ 5,107.00

Besides the merchantable material produced from the City Forest, a field was ploughed up and a forest nursery started by plantings of young elm, spruce, pine, and cedar obtained from the Acadia Federal Government Nursery.

The ground was kept clean and a number of paths and trails were improved.

A miniature shooting range was built in the City Forest by the Military Authorities just south of the caretaker's residence on a piece of land which the City agreed to lease to the Military at \$1.00 a year for the duration of the war. The northern half of this City Forest has been used extensively this year by #70 Training Centre for manoeuvres and training their men.

The woods work on the property this year was again planned with the help of Prof. B. H. Fleiger of the University of New Brunswick Forestry Department.

Following is shown a map of the City Forest with locations showing 1941 cuts marked in red, 1942 cuts marked in green, 1943 cuts marked in blue, and 1944 cuts marked in brown. For a full description of this property see City Engineer's Report for the year 1941. In this 1941 Report will also be found recommendations made by the Society of Forest Engineers re this property.



TABLE SHOWING COMPARATIVE COSTS OF ROADS AND STREETS

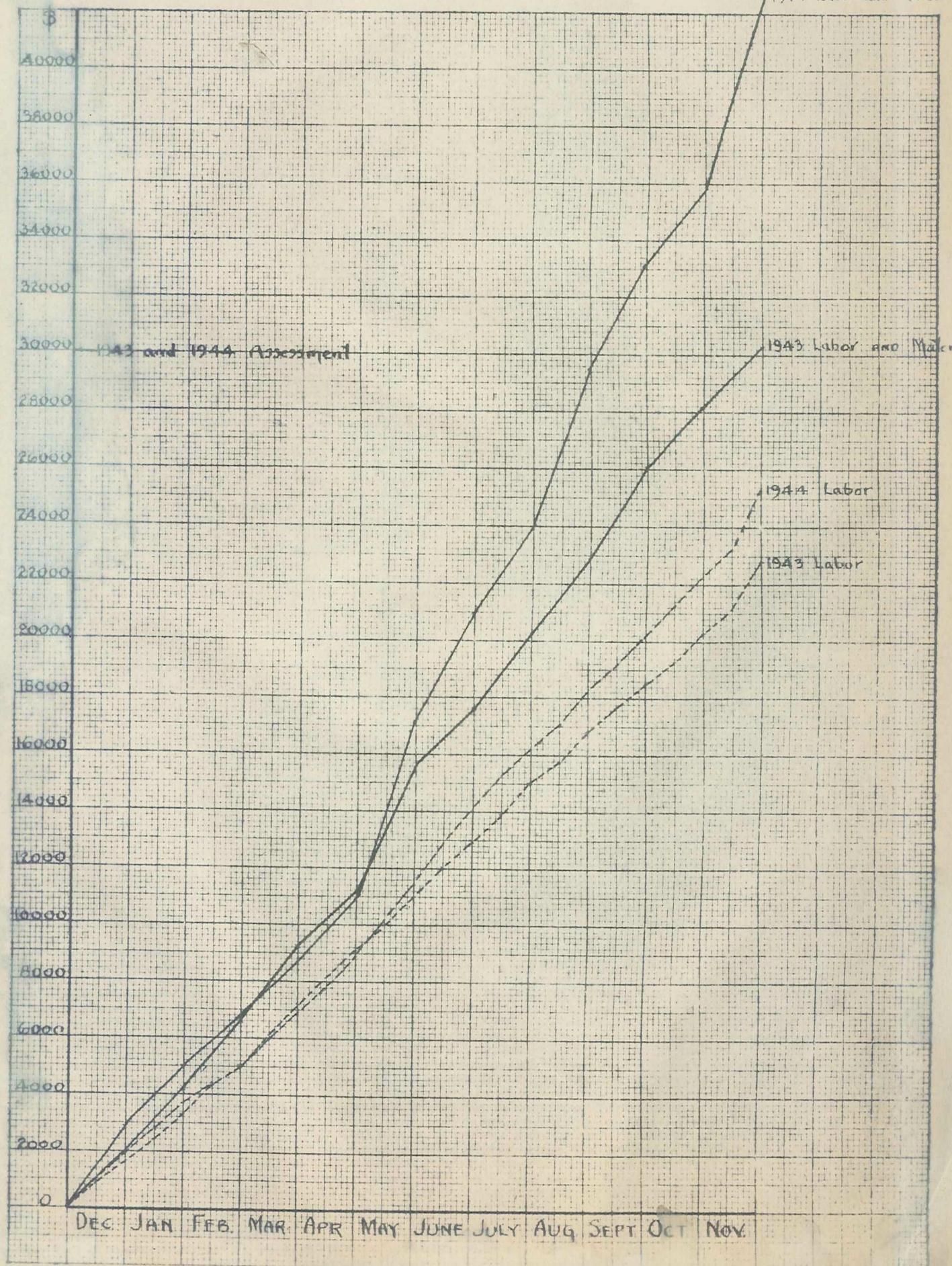
Years 1928 to 1944

Year	Expenditure for Labour	Gross Expend- iture Labour and Material	Credits	Net Costs Labour and Materials	Appropriation
1928	17,122.45			26,058.70	26,000.00
1929	14,490.47			26,682.98	31,000.00
1930	16,553.53			34,556.33	32,000.00
1931	26,024.54	50,849.60	15,511.97	35,337.63	31,000.00
1932	25,430.96	39,101.62	4,822.19	34,279.43	25,000.00
1933	10,607.99	19,161.38	333.28	18,829.10	19,000.00
1934	13,332.51	23,665.94	2,311.50	21,354.36	20,000.00
1935	25,264.14	46,588.85	21,502.31	25,086.54	23,000.00
1936	18,357.05	33,238.01	11,059.77	22,178.24	23,000.00
1937	18,060.48	34,931.68	12,641.95	22,289.73	20,000.00
1938	15,601.78	24,273.83	781.88	23,491.95	22,000.00
1939	16,681.88	32,509.93	1,762.67	30,747.26	28,000.00
1940	17,959.36	33,058.59	2,190.50	30,868.09	28,000.00
1941	22,816.69	40,283.46	3,050.12	37,233.34	28,000.00
1942	22,545.62	39,215.84	3,416.91	35,798.93	30,000.00
1943	22,879.44	36,970.80	6,597.85	30,372.95	30,000.00
1944	25,299.20	47,285.36	4,316.50	42,968.86	30,000.00

The debit of \$12,968.86 which appears on this year's Roads and Streets Costs was caused by work done this summer such as concrete curbs and gutters, surface sewer extensions, and additional surface sealing of our paved roads. This work was not contemplated when the Roads and Streets Appropriation was made up but was later found to be desirable and the over-expenditure was made with the knowledge and approval of the City Council.

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ROADS AND STREETS COSTS 1943 AND 1944

PUBLIC WORKS

Gross Expenditure.....	\$ 8,852.68
Credits.....	1,424.37
Net Expenditure.....	7,428.31
1944 Appropriation.....	6,500.00
Dr. Balance.....	<u>928.31</u>

The Credits are made up as follows:-

Work done for private parties (trees)...	79.66
Town of Devon (one-half cost of survey)	698.24
Payments made to City by Old Graveyard Committee.....	144.49
Bond interest from Old Burying Ground Fund.....	201.98
Bond interest from Playground Fund.....	<u>300.00</u>
Total.....	\$1,424.37

The Gross Expenditure of \$8,852.68 is made up as follows:-

Labour.....	\$5,546.15
Material Charges.....	<u>3,306.53</u>
	\$8,852.68

This above labour item is divided as follows:-

Dump.....	\$ 2,060.02
Back Drain.....	11.80
Trees.....	458.87
Unforeseen Account.....	<u>3,015.46</u>
	\$ 5,546.15

Trees:-

The labour expenditure of \$458.87 on trees was made up of \$301.35 spent on cutting and trimming City trees and \$157.52 spent in spraying. This spring we sprayed considerable areas of the City where the elm trees were being attacked by the Fall Canker Worm. This larvae seems to be again on the increase in Fredericton and district, and I believe it will be necessary to do considerable spraying in the spring of 1945.

Survey Town of Devon:-

Survey of Devon was made this summer by Prof. Harry Moore of the University of New Brunswick. The City paid Prof. Moore's account of \$1200.00. This account did not appear on City Payrolls but was submitted by Prof. Moore and paid by the City as an invoice. The City also paid some additional wages to an assistant amounting to \$196.47, making a total cost to the City of \$1396.47. One-half of this amount or \$698.24 was, as per agreement, billed to the Town of Devon.

Unforeseen Account:-

The labour cost is divided as follows:-

Queen's Square Rink.....	\$ 577.01
College Field Rink.....	1.10
Wilmot Park Rink.....	22.76
Roads on river from Fredericton to Devon.....	66.11
Military Training Centre # 70.....	2.30
Playgrounds.....	154.03
Snowploughing cemeteries.....	16.66
City Engineer's Report (typing).....	17.05
Salvage collection.....	20.17
Children's Home.....	3.96
Installing War Loan signs.....	2.64
Repairing and painting benches.....	74.85
College Field (track).....	9.07
A & B Club House.....	25.52
Greens - cutting, raking, etc.....	1,033.12
Old Burial Ground.....	576.25
Surveying Town of Devon.....	195.78
Cleaning Burns Monument.....	8.36
Fredericton School Board.....	28.30
Miscellaneous charges.....	21.30
General Expense.....	<u>159.12</u>
Total.....	\$ 3,015.46

City Playgrounds:-

The playgrounds show a labour item for wages paid to men on the City Payroll of \$154.03. Altogether the expenditure made by the City on this playgrounds, and not including the expenditure made on the skating rinks, is as follows:-

Wages on City Payroll.....	\$ 154.03
J. S. DeLong.....	2.88
J. C. Risteen Co.....	27.60
David Rice (boat and oars).....	52.40
James S. Neill & Sons.....	87.91
Colwell & Jennings.....	11.67
Fredericton Welding & Machine Shop.	4.50
T. Amos Wilson.....	29.43
H. Ryan.....	1.46
Dr. A.W.G. Good (boat).....	50.00
Ross Drug.....	13.28
Devon Lumber Co.....	3.62
H. S. Gill.....	6.38
Shute & Co. Ltd.....	3.00
Salaries for supervisors.....	<u>1,095.33</u>

Total.....\$1,543.49

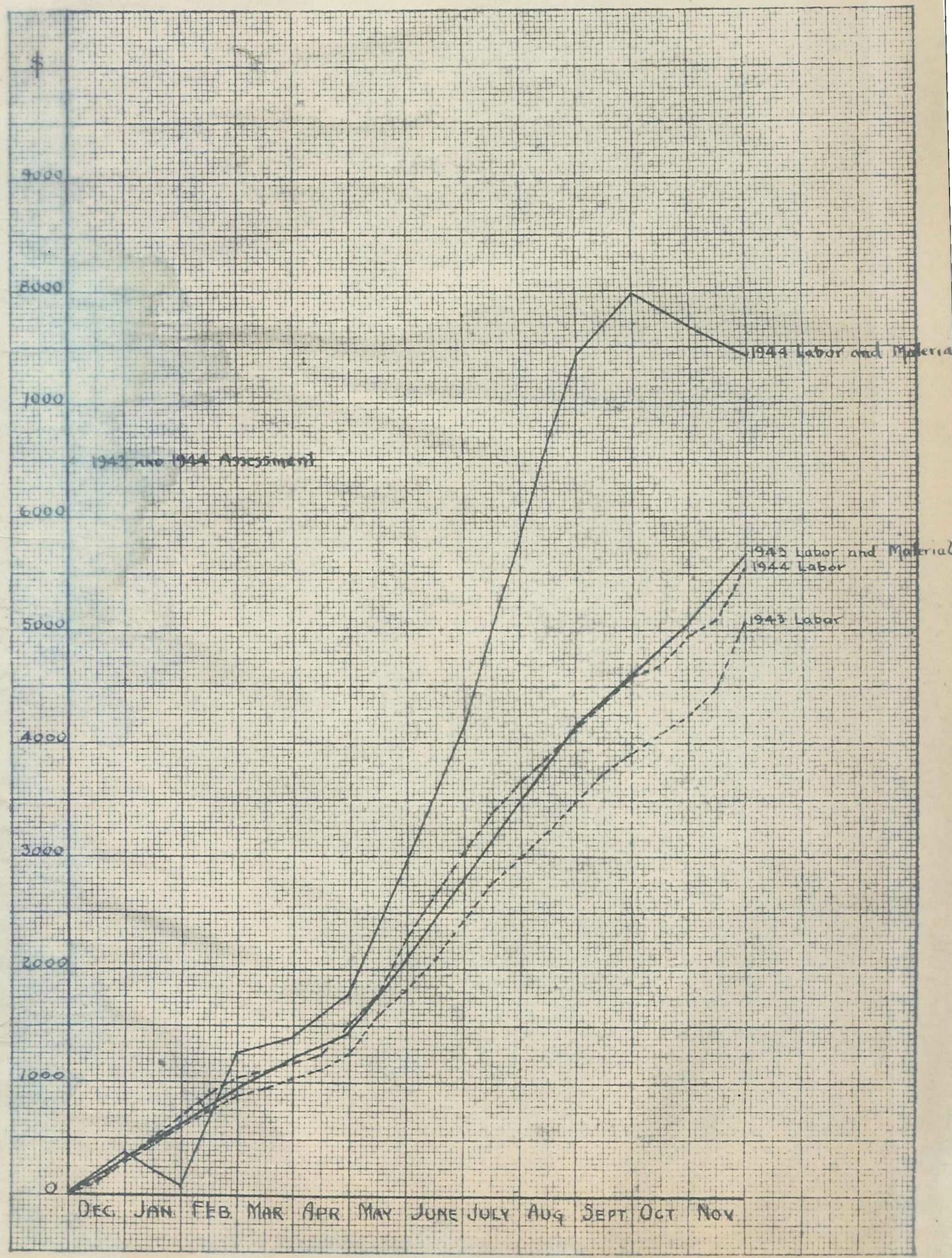
Against this expenditure there is a revenue of \$300.00 from Trust Fund interest. This \$300.00 has been included in the Public Works credits as shown before under the Public Works heading.

TABLE SHOWING COMPARATIVE YEARLY COSTS OF
PUBLIC WORKS, Years 1929 - 1944

Year	Expenditure for Labour	Gross Expend- iture Labour and Material	Credits	Net Costs Labour and Materials	Appro- priation
1929	1,685.59	2,606.00		2,606.00	5,000.00
1930	2,729.82	3,379.09	237.90	3,159.19	5,000.00
1931	1,574.17	1,982.91	61.95	1,920.96	2,500.00
1932	3,797.65	4,992.98	322.35	4,670.63	2,500.00
1933	3,948.39	5,394.06	474.89	4,919.17	4,500.00
1934	3,734.85	4,929.00	1,302.36	3,626.64	4,000.00
1935	2,906.24	4,425.84	2,776.96	1,648.88	3,000.00
1936	2,867.38	4,211.33	2.73	4,160.07	3,000.00
1937	3,673.48	4,283.52	123.45	4,208.60	5,000.00
1938	5,135.07	8,531.67	664.00	7,967.67	4,000.00
1939	3,937.07	4,606.53	255.10	4,361.43	4,000.00
1940	5,610.71	6,826.22	1,204.89	5,621.33	4,000.00
1941	4,751.76	7,204.65	204.95	6,999.70	4,000.00
1942	6,089.55	8,380.32	455.85	7,724.47	4,000.00
1943	5,063.23	5,890.39	280.43	5,609.96	6,500.00
1944	5,546.15	8,852.68	1,424.37	7,428.31	6,500.00

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WOOD ACCOUNT

During 1944 the City purchased from the Dominion Government through the Office of the Timber Controller for the Maritimes the following amounts of fuel wood:-

727 cords 4 ft. old growth hardwood brought in by rail from Maple Grove and Eel River, N. B.
2282 cords 4 ft. round white birch brought in by rail from Province of Quebec.
563 cords 3 ft. and 4 ft. split white birch brought in by rail from Province of Quebec.
698 cords 2 ft. furnace wood brought in by rail from northern part of New Brunswick.
119 cords 16 in. furnace wood brought in by rail from northern part of New Brunswick.
1404 cords four ft. second growth hardwood brought in by trucks from the surrounding country.

5793 cords Total.

Of this 5793 cords, 5329 cords were resold by the City to city wood dealers and 464 cords were kept by the City and resold directly to individual citizens.

The City sold the wood to the dealers at the same price as the City paid the Timber Controller thus making no profit on the transaction. This arrangement was made necessary as the Timber Controller would not deal with the local wood dealers but only with the City directly. The price paid the Timber Controller and charged the dealer was low enough to enable the dealer to handle and sell this wood for a profit at the ceiling price.

As stated before, the City themselves handled 464 cords of this wood and sold it directly to individual citizens. The City had to handle this wood themselves partly to avoid demurrage on cars and partly to have a storage pile of wood to fill in gaps when the dealers had no fuel wood available for their customers.

MUNICIPAL HOME

On my accounts, the following expenditure appears charged against Municipal Home.

76 tons coal delivered to Municipal Home.....	\$ 464.38
City water supplied to Municipal Home.....	25.00
Material purchased from W.A. Staples and E.M. Young for Municipal Home building.....	13.46
Labour, sawing, splitting and delivering wood to needy families in City along with some minor repairs to Municipal Home building....	1,479.66
Cost of 285 cords of wood supplied, made up of 322 loads to needy families and 27 cords to Municipal Home.....	<u>1,825.66</u>
Total.....	\$3,808.16

BATHING BEACH

The bathing beaches were carried on this year. They were under the supervision of the Playgrounds Supervisors and the expenses appear under the item for Playgrounds.

CITY HALL

Under items of expenditure handled by the City Engineer's Department appears an expenditure of \$6,374.47 charged to City Hall.

This year some changes were made in the City Hall offices. Two new offices were made for the Assessor's Department by taking out one stairway at front of building and taking part of the former Mayor's Office. The removal of the front stairway also permitted an office for the Poor Commissioner to be built on the second floor. The remaining part of the former office of the Mayor was, along with the former office of the Assessor, made into two offices for the Police Magistrate, and the office formerly occupied by the Police Magistrate was redecorated and used for the Mayor's Office.

This office construction cost \$2,163.11, made up of a labour cost of \$861.11 and a cost for material of \$1,302.00. These costs do not include cost of floor covering or of furniture.

The brick fire escape on the upper side of the City Hall building was removed at a cost of \$252.46.

The Council Chamber was redecorated and the City Treasurer's office was repainted.

The above total cost includes winding and repairs to clock, cost of night fireman and extra janitor service, also the cost of coal for City Hall which amounted to 183 tons at from \$5.52 to \$6.47 a ton making the cost of coal \$1,098.00.

STREET LIGHTS

The City street lighting system at the present time consists of:-

1. A series lighting system which lights most of the City.
2. A multiple lighting system on Queen Street.
3. A multiple lighting system in C.N.R. Subway.

System No. 1, the series lighting system, consists of some 17.9 miles of line and 374 lamps. This system is divided into four circuits two of which are controlled each by a 25 K.W. Constant Current Transformer, the other two of which are each controlled by a 15 K.W. Constant Current Transformer. These transformers, along with the main switchboard, are housed in a transformer room in the old street lighting building on Carleton Street.

The four circuits are made up as follows:-

Lower Front Circuit:-

	Transformer Size
24-600 C.P. Lamps at .372 K.W. demand.... 8.928	
34-250 C.P. Lamps at .155 K.W. demand.... 5.270	
9-100 C.P. Lamps at .0716 K.W. demand... .644	
	<u>14.842</u> K.W.
	15 K.V.

Lower Rear Circuit:-

7-600 C.P. Lamps at .372 K.W. Demand.... 2.604	
136-250 C.P. Lamps at .155 K.W. demand.... 21.080	
	<u>23.684</u> K.W.
	25 K.V.

Upper Front Circuit:-

19-600 C.P. Lamps at .372 K.W. demand.... 7.068	
35-250 C.P. Lamps at .155 K.W. demand.... 5.425	
	<u>12.493</u> K.W.
	15 K.V.

Upper Rear Circuit:-

4-600 C.P. Lamps at .372 K.W. demand.... 1.488	
106-250 C.P. Lamps at .155 K.W. demand.... 16.430	
	<u>17.918</u> K.W.
	25 K.V.

Total demand..... 68.937 K.W.

System No. 2, the multiple lighting system on Queen Street, consists of 22 units located on Queen Street between Westmorland and St. John Streets. Each unit consists of a 500 W. 115 Volt lamp set in a novalex luminar fixture and hung on a bracket attached to the pole, these units being controlled by a control switch which is energized by our series lighting system. This system was installed and is owned, maintained, and energized by the Maritime Electric Company, the City paying the Company \$75.00 per year for each unit.

System No. 3 consists of six multiple lights, each of 250 W. strength, located in the C. N. R. Subway. This system is also controlled by a control switch which is energized by the series street lighting system.

The power for Systems 1 and 3 is purchased from the Maritime Electric Company at a contract price as agreed upon in the contract between the Maritime Electric Company and the City made in 1927. This contract also covers the maintenance cost of \$20.00 a year per mile of pole line which is paid by the City to the Company.

All material such as wire, poles, pole fixtures, lamps, lamp fixtures, transformers, etc. is paid for by the City but installed by the Company under their contract price for maintenance. Any new installations which require an enlargement of circuits must be paid for by the City both labour and material.

The street lighting costs for the year 1944 are as follows:-

Expenditure.....	\$10,673.80
1944 Appropriation.....	<u>10,000.00</u>
Dr. Balance.....	\$ 673.80

This Expenditure is made up as follows:-

168-600 C.P. Lamps @ \$1,68 $\frac{3}{4}$	\$ 283.50
312-250 C.P. Lamps @ 97 $\frac{1}{2}$ ¢.....	304.20
18-150 C.P. Lamps @ 30¢.....	5.40
Current on Subway Lighting and series fixtures from Nov. 28/43 to Nov. 29/44 (282349 K.W. hrs)	7,630.89
Charges on multiple fixtures installed on Queen St. at the contract price of \$75.00 per light per year.....	1,650.00
Maintenance, labour as per contract price.....	330.96
Material purchased for new installations and maintenance of lamp fixtures (including only such articles as lamp standards, lamp brackets, heads, sockets, shades, etc.).....	185.00
Material used and extra labour supplied by Maritime Electric Co. in line maintenance extension.....	93.99
Miscellaneous charges (part of City Engineer's car expenses).....	179.90
Telephone in transformer room.....	9.96
Total.....	\$ 10,673.80

The total per capita charge for street lighting 1944,
population of 10,862 persons $\frac{10673.80}{10862} = 98\text{¢}$

TABLE SHOWING CURRENT CHARGES FOR 1944
on SERIES LIGHTING

Date of Bill	K. W. H.	Demand in K.W.	Average No. of Burning Hrs. per Night	Bill per Month
Nov. 28/43				
to Dec. 29/43	28,840	74.9	14 $\frac{1}{4}$	\$ 742.58
Dec. 29/43				
to Jan. 28/44	31,800	74.9	14 $\frac{1}{2}$	801.71
Jan. 28/44				
to Feb. 29/44	29,804	74.9	13	761.42
Feb. 29/44				
to March 29/44	23,109	74.9	11 $\frac{1}{4}$	627.17
March 29/44				
to April 28/44	22,244	63.6	9 $\frac{1}{2}$	586.12
April 28/44				
to May 30/44	19,610	74.9	8 $\frac{1}{2}$	557.14
May 30/44				
to June 28/44	15,393	75.2	7 $\frac{3}{4}$	473.11
June 28/44				
to July 28/44	15,974	74.9	7 $\frac{1}{2}$	484.47
July 28/44				
to August 30/44	18,059	74.9	8 $\frac{3}{4}$	526.42
August 30/44				
to Sept. 29/44	22,496	78.9	10 $\frac{1}{2}$	624.17
Sept. 29/44				
October 30/44	24,653	80.2	12	670.25
Oct. 30/44				
to Nov. 29/44	30,367	76.2	13 $\frac{1}{2}$	776.33
	282,349			\$7,630.89

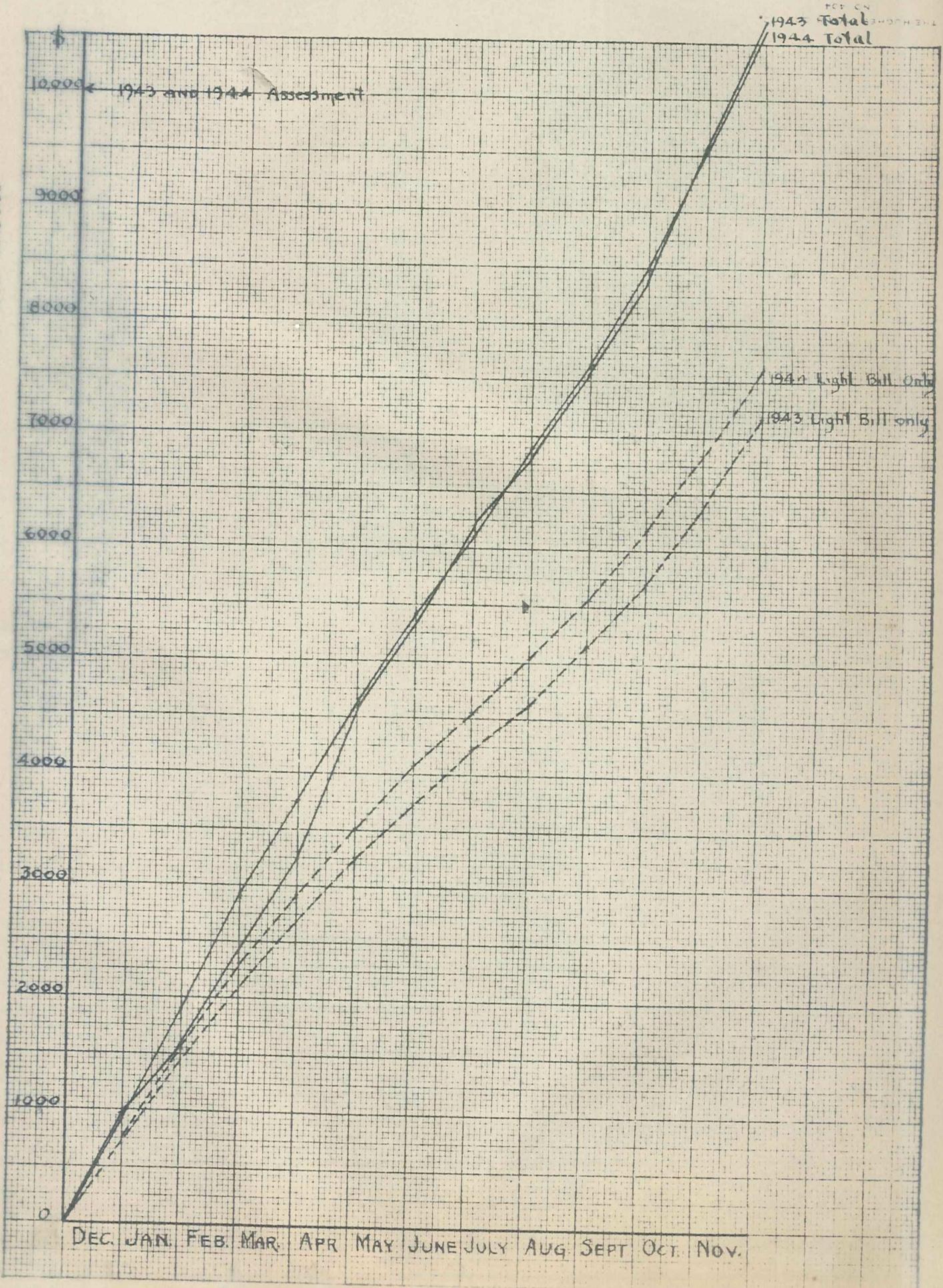
TABLE SHOWING COMPARATIVE YEARLY COSTS IN STREET LIGHTING

Year	Total Yearly Cost	Yearly Appropriation
1928	\$ 7,323.41	\$ 7,000.00
1929	7,434.72	7,000.00
1930	7,115.40	7,000.00
1931	6,672.23	10,000.00
1932	6,532.51	6,000.00
1933	6,425.87	6,000.00
1934	6,165.28	6,000.00
1935	6,632.33	6,000.00
1936	6,957.72	7,000.00
1937	9,688.62	7,000.00
1938	8,314.06	9,000.00
1939	8,645.97	7,500.00
1940	8,173.25	7,500.00
1941	9,888.78	8,500.00
1942	9,803.27	10,000.00
1943	11,033.89	10,000.00
1944	10,673.80	10,000.00

A graphic comparison of 1943 and 1944 street light expenditure and power cost is shown on the ~~other~~ plate: The curve for power cost includes the bill for the series lighting and the lighting of the Subway only, and does not include the bill for the multiple fixtures installed on Queen Street and owned by the Maritime Electric Company.

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STREET LIGHT COSTS 1943 AND 1944

SEWERAGE DOMESTIC

Gross Expenditure.....	\$ 3,655.79
Credits.....	568.19
Net Expenditure.....	\$ 3,087.60

The credit of \$568.19 is made up of work done on the domestic sewerage for private parties. This work consists of all sewerage installation and sewerage maintenance other than that done on the principal sewerage main which serves the street.

Three extensions were made this year:-

- (1) Winslow St. from Grey to Alexandra extended 83 ft.
- (2) Dundonald St. from Westmorland to Northumberland new sewer laid up Dundonald St. 135 ft.
- (3) Northumberland St. from Victoria to Dundonald extended 111 ft.

The entire domestic sewerage system was flushed out once during the summer between June 20th and June 26th at a labour cost of \$100.00.

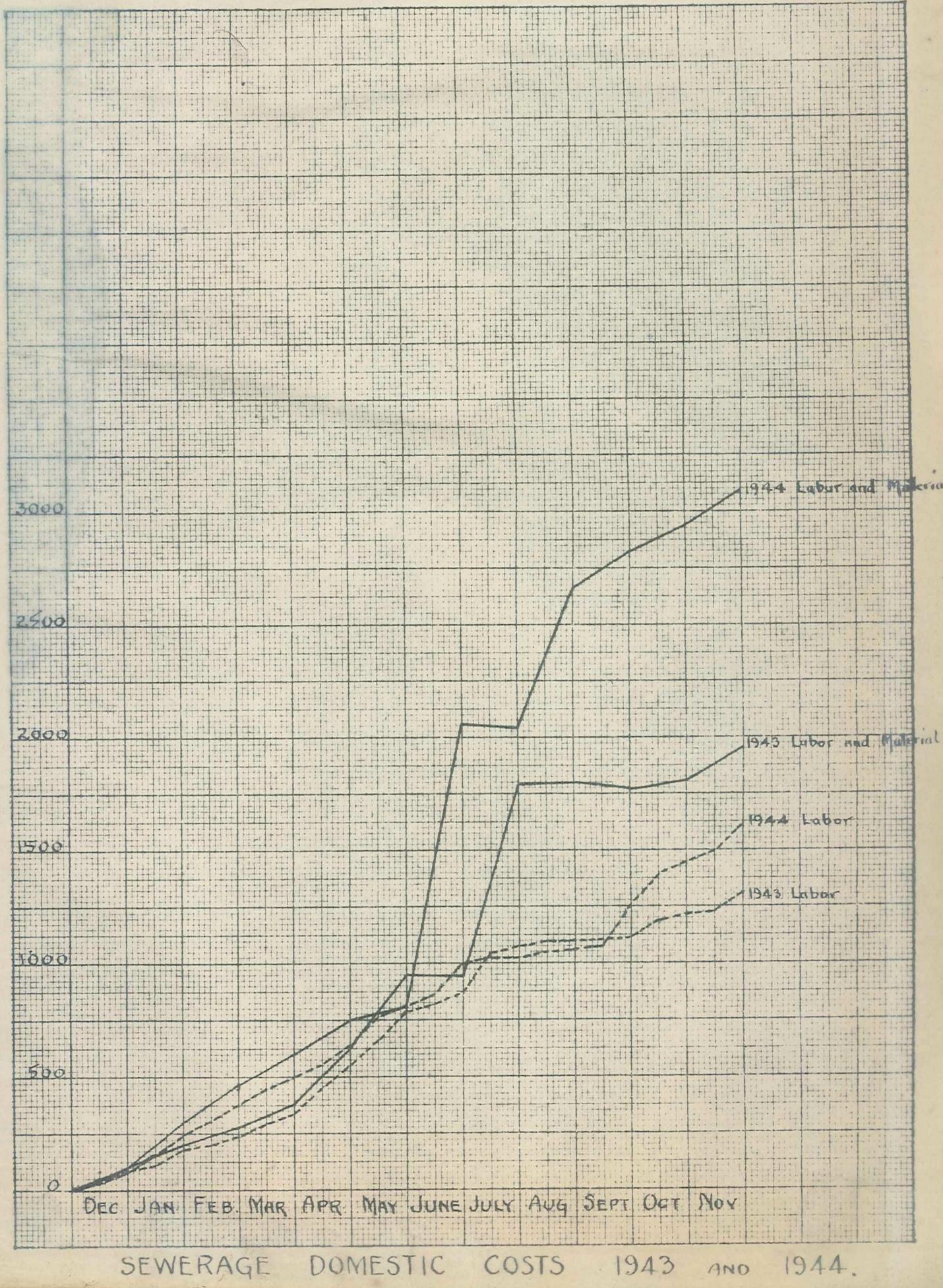
The number of new customers connected with the City Sewerage System this year..... 10
Old sewerage connections dug out and relaid. 9

A graphic comparison for domestic sewerage costs for 1943 and 1944 is shown on the ~~the~~ plate:-

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TOP ON
THE MARGIN RESERVED FOR
THE OTHER SIDE



WATER

The expenditure in this department is divided into two headings, namely, Water Ordinary and Water Pumping Station.

Water Ordinary:-

This account takes in all expenditure for water outside the pumping station and pumping station grounds. The expenditure under this heading is made up as follows:-

Gross Expenditure.....	\$13,486.12
Credits.....	<u>3,501.14</u>
Net Expenditure.....	\$ 9,984.98

The credits are made up of work done for and material sold to private parties when installing a water service over ground other than City property or when the material is to be used on parts of systems which do not belong to the City.

They also include the sum of \$2,031.04 which was a refund paid by the University of New Brunswick to the City to equalize expenditures made jointly by the University and the City in the construction of a reservoir and water extension on college property to serve college buildings.

The Gross Expenditure is made up as follows:-

City Payroll for hydrants.....	\$ 536.68
City Payroll for meters.....	1,535.87
City Payroll for Water Ordinary.....	2,500.97
City Payroll for U.N.B. Water Extension.....	<u>3,139.75</u>
Total Payrolls.....	7,713.27
Material and other charges.....	<u>5,772.85</u>
Gross Expenditure.....	\$13,486.12

U. N. B. Water Extension:-

This year the U.N.B. water extension was completed by the laying of some 2000 lineal feet of 6-inch water main and the partial covering of the concrete reservoir. The reservoir was put into service in the latter part of August, 1944.

The expenditure made this year by the City on the project was \$4,621.22. The University expended this year \$559.14, leaving some \$4,062.08 which the City expended in excess of the amount expended by the University. The University, to conform with the agreement, reimbursed the City for one-half of the excess expenditure by sending a cheque for \$2,031.04.

Hydrants:-

We have in the City 154 hydrants:- 141 in the City proper, 6 on U.N.B. Grounds, and 7 in military areas.

The labour costs show an average yearly cost per hydrant of \$3.48.

Meters:-

Of all our water services in the City 584 are charged under flat rate and 1181 are on meter, giving us altogether 1765 services.

The labour cost this year per meter for installing, reading, repairing, etc. is \$1.30.

Sixty-six meters were stopped this year and had to be repaired.

All meters are read twice a year and bills are sent out twice a year. We have 74 customers whose meters are read once a month although they also are billed only twice a year. These are such customers who ordinarily have large consumptions and where a stopped meter or a meter turned over without being noticed would mean considerable loss of revenue to the City. All meters on military buildings are included in this group of monthly read meters.

Meters in store room January 1st, 1945:-

5/8 meters repaired and fit for service.....	7
New 5/8 meters.....	9
3/4 meters fit for service.....	2
1-in. meters that can be repaired.....	9
New 1-in. meters.....	0
New 1-in. meters with 1 $\frac{1}{4}$ " connections.....	0
Compound meters fit for service.....	0
Compound meters not fit but which can be repaired.....	2
1 $\frac{1}{2}$ Crest meters.....	1
1/2 meters that can be repaired and made fit for service	7

DISTRIBUTION SYSTEM

New services installed this year.....	11
Old services relaid this year.....	30
Frozen services which had to be thawed.....	42
Services discontinued.....	0
Water breaks repaired.....	21

We had in the City on the 30th day of November 1944
1765 water services.

The Fredericton Distribution System consists of 17.09 miles of water main made up of the following sizes:-

10 inch main.....	1.53 miles
8 inch main.....	4.21 miles
6 inch main.....	9.47 miles
4 inch main.....	1.60 miles
3 inch main.....	.28 miles

This does not include the water mains installed by the Department of National Defence at Military Training Centre No. 70, Military Depot No. 7, or the Military Hospital.

Two small extensions were made this year when 83 ft. of 1-inch water main was laid on Winslow Street and 529 ft. of $1\frac{1}{4}$ in. water main was laid east along the Saint John Road from the end of the 6-inch main near Ketchem Bridge.

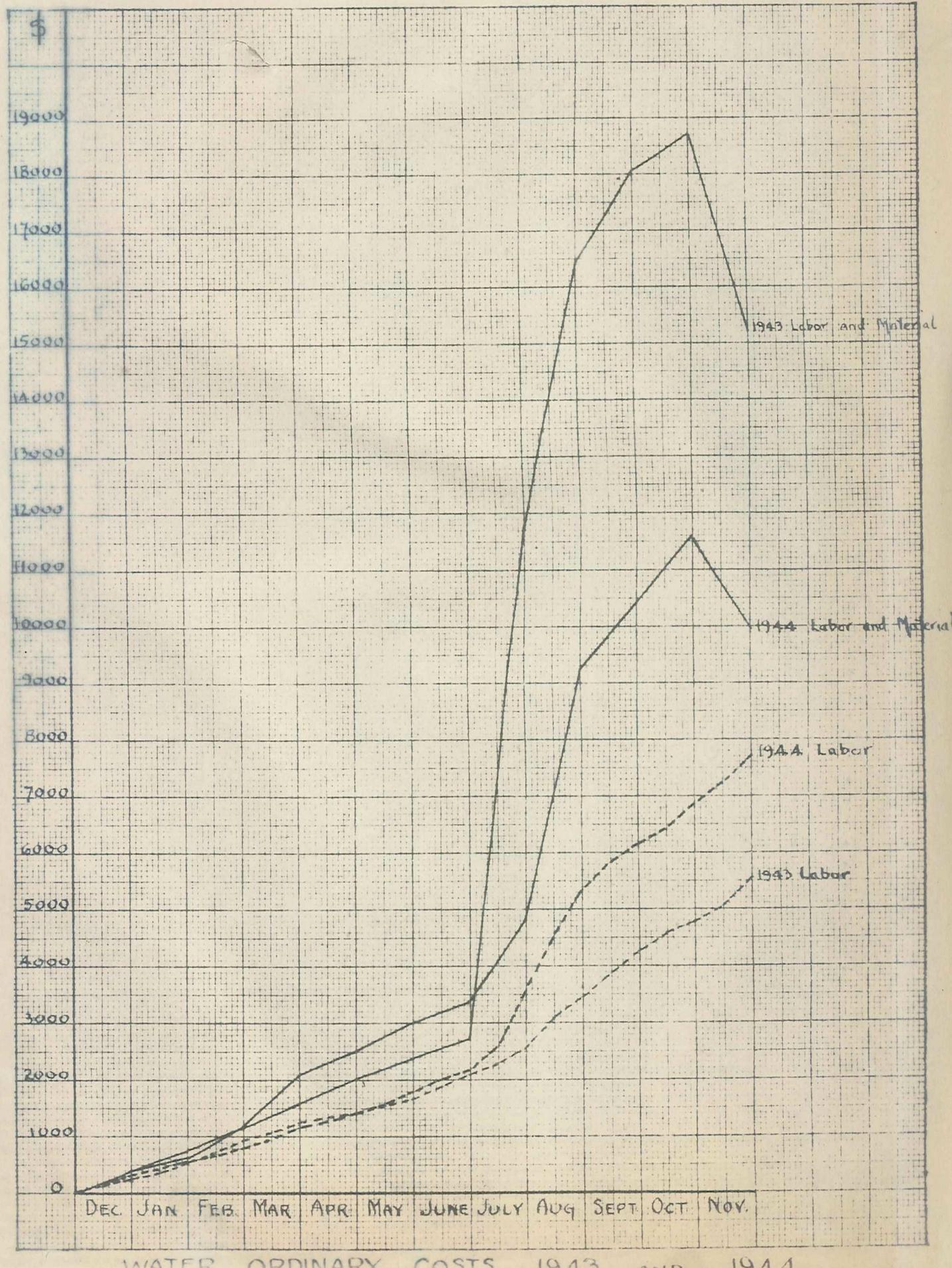
**TABLE SHOWING COMPARATIVE YEARLY COSTS
WATER ORDINARY**

Year	Labour	Material	Gross Expenditure	Credits	Net Expenditure
1930	3,647.97	2,313.18	5,961.15		5,961.15
1931	3,836.33	4,376.87	8,213.20	279.65	7,933.55
1932	2,666.30	1,854.06	4,520.36	122.47	4,397.89
1933	2,333.25	1,604.17	3,937.42	30.27	3,907.15
1934	3,247.51	4,112.34	7,359.85	891.23	6,468.62
1935	5,372.83	5,897.23	11,270.06	398.42	10,871.64
1936	4,303.14	3,725.91	8,029.05	392.35	7,636.70
1937	3,718.86	3,938.81	7,657.67	265.46	7,401.21
1938	4,797.47	2,254.68	7,052.15	153.11	6,899.04
1939	4,201.24	3,248.61	7,449.85	570.44	6,879.41
1940	4,231.75	2,708.22	6,939.97	808.48	6,131.49
1941	2,908.37	2,446.27	6,354.64	459.08	4,895.56
1942	3,407.91	1,989.02	5,396.93	411.44	4,985.49
1943	5,559.39	14,670.96	20,230.35	5,020.06	15,210.29
1944	7,713.27	5,772.85	13,486.12	3,501.14	9,984.98

A graphic comparison of expenditure on water ordinary for years 1943 and 1944 is shown on the ~~above~~ page:-
following

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WATER PUMPING STATION

Report of Mr. E. W. Hagerman, City Analyst:-

The bacteriological quality Fredericton's water supply has been generally good for 1944. It satisfies the requirements of the Public Health Service Drinking Water Standards as laid down by American Public Health Association and The American Water Works Association.

The new pipe line and reservoir at the University of New Brunswick required some local sterilization but is now satisfactory.

The Physical qualities, that is the taste and appearance, have not always been satisfactory.

Due to the heavy demand brought on by war conditions, filtration must be carried on at such a rate that very little sedimentation is possible. The heavy demand also raises the velocity in the pipes leading to the filters so that the floc is broken up into minute particles. Some of these fine particles work their way through the filter sand and give a blueish tinge to the water and also form the sludge in the pipes that must be removed by flushing.

There are two remedies for this condition, one is to reduce the amount of water consumed and the other is to enlarge the coagulating basin.

The aqua electric installation has made it possible for us to get fairly good water at our present high demand.

Under present conditions it is impossible to filter at a constant rate. This makes it very difficult to add the proper amount of Chlorine. To be sure, it is necessary to add so as to treat the maximum amount of water handled. This may result in a slight overdose at times and may cause some complaints as to tastes. It is desirable to carry a slight residual of Chlorine (.05 to .10) in the extreme parts of the distribution system. This is to meet possible infection introduced through cross connections. Old fashioned plumbing, sinks, and bathtubs, if full may on failure of pressure syphon some of their contents back into the water system.

The Bacteriological Tests as carried out last year were in accordance with the standards set out in the Standard Methods prepared by American Public Health and American Water Works Associations for demonstration of the presence of bacteria of the Coliform Group (B. Coli.). They are briefly as follows:-

The Standard Portion is 10 c.c.

The Standard Sample consists of five (5) Standard Portions.

A POSITIVE result means Coliform Group is present.

A NEGATIVE result means Coliform Group is absent.

- (1) In no month shall the number of Positives come to more than 10% of the total number of Portions examined in that month.
- (2) When less than 20 Samples per month are examined, one Sample may show 3 Positives out of the 5 portions comprising the sample.

The process just outlined, using a Standard Sample composed of 5 Portions, provides for an estimation of the most probable number of Coliform bacteria present in the Sample as set forth in the following tabulation:-

Number of Portions			Most Probable Number of Coliform Bacteria per 100 c.c.
	Positive	Negative	When 5-10c.c. Portions are Examined
0	5		Less than 2.2
1	4		2.2
2	3		5.1
3	2		9.2
4	1		16.0
5	0		More than 16

Other combinations may be taken according to the degree of precision one wishes.

It will be noticed that 2-10c.c. 2-1c.c. 2-1/10 c.c. portions were taken for the raw water.

Following is a tabulated statement of Samples taken showing where taken, when, and the results.

Plus----Coliform Bacteria Present

Minus----Coliform Bacteria Absent

M.P.N.---Most Probable Number of Coliforms present per 100c.c. of Sample

Primary Planting -- Lactose Broth. Confirmatory Media -- 2% Bril. Green Bile.

Date of Sample	Origin of Sample	Out of 5-10c.c. Portions		M.P.N. Organisms Per 100c.c.
		PLUS	MINUS	
1944				
Jan. 5	Service Pump, Pumping Station	1	4	Equal to 2.2
" 7	" " "	0	5	Less than 2.2
" 14	U.N.R. Engineering Building	0	5	" "
" 20	Service Pump	0	5	" "
" 24	202 Saunders Street	0	5	" "
" 27	123 Charlotte Street	0	5	" "
" 30	Service Pump	0	5	Less than 2.2

Average M.P.N. for Jan. is Less than 2.2
Of the 35-10c.c. Portions tested in Jan. One was Positive or 2.9%

Plus----Coliform Bacteria Present

Minus----Coliform Bacteria Absent

M.P.N.---Most Probable Number of Coliforms present per 100c.c.
of Sample

Date of Sample	Origin of Sample	Out of 5-10c.c. Portions		M. P. N.	
		PLUS	MINUS	Organisms Per 100c.c.	
<u>1944</u>					
Feb. 5	Fashion Plate Cleaners	0	5	Less than	2.2
" 8	Engineering Bldg. U.N.B.	0	5	" "	2.2
" 16	Service Pump, Pumping Station	0	5	" "	2.2
" 22	Engineering Bldg. U.N.B.	0	5	" "	2.2
" 29	Service Pump	0	5	" "	2.2
" 29	123 Charlotte Street	0	5	" "	2.2
Average M. P.N. Feb. is Less than 2.2					
Of the 30-10c.c. Portions tested in Feb. NONE were Positive.					
March 4	Service Pumps	0	5	Less than	2.2
" 9	Service Pumps	0	5	" "	2.2
" 13	202 Saunders Street	0	5	" "	2.2
" 18	202 Saunders Street	0	5	" "	2.2
" 25	U.N.B. Engineering Bldg.	0	5	" "	2.2
" 29	Service Pump	1	4	Equal to	2.2
Average M.P.N. March is Less than 2.2					
Of the 30-10c.c. Portions tested in Mar. ONE was Positive or 3.3%					
April 1	Service Pumps	0	5	Less than	2.2
" 3	Service Pumps	0	5	" "	2.2
" 10	U.N.B. Engineering Bldg.	0	5	" "	2.2
" 17	Service Pumps	0	5	" "	2.2
" 22	Service Pumps	0	5	" "	2.2
" 26	202 Saunders Street	0	5	" "	2.2
" 30	123 Charlotte Street	1	4	Equal to	2.2
Average M.P.N. April is Less than 2.2					
Of the 35-10c.c. Portions tested in April ONE was Positive or 3.1%					
May 3	123 Charlotte Street	0	5	Less than	2.2
" 8	U.N.B. Engineering Bldg.	0	5	" "	2.2
" 13	123 Charlotte Street	0	5	" "	2.2
" 17	202 Saunders Street	0	5	" "	2.2
" 23	Service Pumps	0	5	" "	2.2
" 29	Service Pumps	0	5	" "	2.2
Average M.P.N. May is Less than 2.2					
NO POSITIVES in the 30 tested in May.					
June 3	202 Saunders Street	0	5	Less than	2.2
" 9	Service Pumps	0	5	" "	2.2
" 14	Grave Yard Extension	1	4	Equal to	2.2
" 17	" " "	0	5	Less than	2.2
" 20	123 Charlotte Street	0	5	" "	2.2
" 24	City Hall	0	5	" "	2.2
" 26	202 Saunders Street	1	4	Equal to	2.2
Average M.P.N. for June is Less than 2.2					
Of the 35 Portions tested in June TWO were Positive or 5.7%					
July 13	Res. B.H. Hagerman, Alex. St.	0	5	Less than	2.2
" 18	202 Saunders Street	0	5	" "	2.2
" 24	Service Pumps	0	5	" "	2.2
" 28	Service Pumps after washing Coagulating Basin	0	5	" "	2.2
" 31	123 Charlotte Street	0	5	" "	2.2
Average M.P.N. for July is Less than 2.2					
No POSITIVES in the 25 Portions tested in July					

Plus-----Coliform Group Present

Minus-----Coliform Group Absent

M.P.N.----Most Probable Number of Coliforms present per 100c.c.
of Sample

Date of Sample	Origin of Sample	Out of 5-10c.c. Portions		M. P. N.	
		PLUS	MINUS	Organisms Per 100c.c.	
August 1	Raw Water	5	0	Over	16
" 3	Service Pump	0	5	Less than	2.2
" 10	U.N.B. Engineering Bldg.	0	5	" "	2.2
" 10	Raw Water (2-10c.c.) (2-1c.c.) (2-1/10)				
	1 - 1 - 0 - 2 - 0 - 2 -				4.5
" 16	Service Pumps	0	5	Less than	2.2
" 22	Service Pumps	1	4	Equal to	2.2
" 22	Raw Water (2-10) (2-1) (2-1/10c.c.)				
	2-0- 1-1- 0-2-				14
" 23	Engineering Bldg. using water from new Reservoir	3	2	Equal to	9.2
	CHLORINE added to Reservoir to give Residual of 10 p.p.m.				
" 26	Engineering Bldg. on Reservoir	0	5	Less than	2.2
" 31	Forestry Bldg. on Reservoir	0	5	Less than	2.2
	Average M.P.N. RAW for August is.....				11.4
	Average M.P.N. Filtered Aug. is Less than				2.2
	(The 9.2 of 23rd omitted as explained below)				

The high Most Probable Number 9.2 which occurred on the 23rd. was due to aftergrowths. Some bacteria escaped the first attempt to sterilize the new pipes and reservoir. After the concentration of Chlorine disappeared a few surviving bacteria began to multiply. Another does of Chloride of Lime was added the day above mentioned sample was taken. It will be noted that the test for the 26th was down.

Some members of the Coliform Group are usually present on the hands and skin. From persons laying pipe, etc. these bacteria could easily find their way into the reservoir.

Presence of the Coliform Group (B. Coli.) is generally accepted as the best indicator of sewerage pollution.

They are harmless, in themselves, in the above case their presence is not an indicator of pollution because we know their source. The test of the 23rd has no significance and so has been omitted from the average for August.

The sterilization of a reservoir and a long line of pipe is not as simple a matter as one would expect and cannot be accomplished in one operation. Because of the minute size of these organisms and the millions of microscopic cracks in which they can hide, treatment extended over considerable time seems necessary. It will be noted that it was the end of September before we got the better of them. It is quite possible that we may get further growths.

Date of Sample	Origin of Sample	Out of 5-10c.c. Portions Plus	Minus	M.P.N. Organisms Per 100 c.c.
Sept. 1944				
Sept. 6	Service Pumps	0	5	Less than 2.2
" 12	U.N.B. Engineering Bldg.	2	3	5.1
" 13	Chlorinated Reservoir			
" 14	U.N.B. Engineering Bldg.	0	5	Less than 2.2
" 17	Service Pumps	0	5	" " 2.2
" 25	U.N.B. Engineering Bldg.	5	0	Over 16
" 27	Chlorinated Reservoir			
" 28	U.N.B. Engineering Bldg.	0	5	Less than 2.2
" 30	Service Pumps	0	5	" " 2.2
Omitting tests of 12th and 25th as explained before				
Average M.P.N. for Sept. is Less Than 2.2				
Oct. 5	202 Saunders Street	0	5	Less than 2.2
" 16	Service Pumps	1	4	Equals 2.2
" 11	U.N.B. Engineering Bldg.	1	4	Equals 2.2
" 21	Service Pumps	0	5	Less than 2.2
" 27	U.N.B. Engineering Bldg.	0	5	Less than 2.2
Average M.P.N. for October is Less Than 2.2				
Of the 25 Portions tested in Oct. TWO were Positive or 8%				
Nov. 1	Service Pumps	0	5	Less than 2.2
" 11	Service Pumps	0	5	" " 2.2
" 12	U.N.B. Engineering Bldg.	0	5	" " 2.2
" 18	123 Charlotte Street	0	5	" " 2.2
" 25	U.N.B. Forestry Building	0	5	" " 2.2
Average M.P.N. for November is Less than 2.2				
No POSITIVES				
Dec. 2	Service Pump	0	5	Less than 2.2
" 10	202 Saunders Street	0	5	" " 2.2
" 16	Service Pump	0	5	" " 2.2
" 22	Service Pump	0	5	" " 2.2
" 26	Service Pump	1	4	Equal to 2.2
Average M. P. N. was Less Than 2.2 and number of Positives 4%				

Fredericton, N. B.

THE CLIPPERMAN

CITY OF FREDERICTON

Order for the Purchase of Goods

Date.....

To.....

No.

Please Ship to the following

Goods and charge to the City of Fredericton..... Department

This order must be returned with invoice.

Signature.....

Date of Sample	Origin of Sample	Out of 5-10 c.c. Portions		M.P.N. Organisms Per 100 c.c.	
		Plus	Minus		
1944					
Sept. 6	Service Pumps	0	5	Less than	2.2
" 12	U.N.B. Engineering Bldg.	2	3		5.1
" 13	Chlorinated Reservoir				
" 14	U.N.B. Engineering Bldg.	0	5	Less than	2.2
" 17	Service Pumps	0	5	" "	2.2
" 25	U.N.B. Engineering Bldg.	5	0	Over	16
" 27	Chlorinated Reservoir				
" 28	U.N.B. Engineering Bldg.	0	5	Less than	2.2
" 30	Service Pumps	0	5	" "	2.2
Omitting tests of 12th and 25th as explained before					
Average M.P.N. for Sept. is Less Than 2.2					
Oct.	202 Saunders Street	0	5	Less than	2.2
	Service Pumps	1	4	Equals	2.2
	U.N.B. Engineering Bldg.	1	4	Equals	2.2
	Service Pumps	0	5	Less than	2.2
	U.N.B. Engineering Bldg.	0	5	Less than	2.2
Average M.P.N. for October is Less Than 2.2					
Of the 25 Portions tested in Oct. TWO were Positive or 8%					
Nov.	Service Pumps	0	5	Less than	2.2
	Service Pumps	0	5	" "	2.2
	U.N.B. Engineering Bldg.	0	5	" "	2.2
	123 Charlotte Street	0	5	" "	2.2
	U.N.B. Forestry Building	0	5	" "	2.2
Average M.P.N. for November is Less than 2.2					
No POSITIVES					
Dec.	Service Pump	0	5	Less than	2.2
	202 Saunders Street	0	5	" "	2.2
	Service Pump	0	5	" "	2.2
	Service Pump	0	5	" "	2.2
	Service Pump	1	4	Equal to	2.2
Average M. P. N. was Less Than 2.2 and number of Positives 4%					

Fredericton, N. B.
January 26, 1945.

E. W. HAGERMAN

The water pumping station was as usual under the supervision of the plant superintendent and chief engineer, John Malloy.

The deep water pump well was drained and cleaned out once during the year.

The coagulating basin was cleaned out three times during the year.

Our water pumpage for the year has increased by some 15,000,000 gals. or about 5% over last year.

This increased consumption is readily seen by glancing at the table headed "Comparison of Water Pumped and Costs for Last Sixteen Years." on page 30.

Water Pumping Station Cost 1944:-

Gross Expenditure.....	\$ 22,926.61
Credits.....	<u>3,553.08</u>
Net Expenditure.....	\$ 19,373.53

This Credit of \$3,553.08 is made up as follows:-

49.36 tons of coal charged to Pumping Station and sold to other City Departments.....	\$ 313.08
Water charged to Sewerage Domestic for flushing domestic sewers.....	70.00
Water used in City Hall Building.....	50.00
Water used in Old Street Lighting Building on Carleton Street.....	25.00
Water used in City Yard.....	20.00
Water used in City Alms House.....	25.00
Water used in City Parks.....	50.00
To yearly rental of 150 hydrants at \$20.00.....	<u>3,000.00</u>
	\$3,553.08

The Gross Expenditure is divided as follows:-

City Payroll for salaries of engineer at Pumping Station.....	\$ 6,049.84
Work done by other City employees in and around Pumping Station.....	1,291.96
Total City Payrolls.....	<u>7,341.80</u>
Material and Workmen's Compensation Charge.....	15,584.81
Gross Expenditure.....	\$22,926.61

The material cost of \$15,584.81 is itemized as follows:-

Item # 1	Light supplied and power supplied by the Maritime Electric Co.--401,400 K.W.H	\$ 9,450.33
Item # 2	Transformer charges.....	151.92
Item # 3	Lime, 15,156 lbs.....	660.56
Item # 4	Alum, 64,840 lbs.....	1,252.21
Item # 5	Coal, 239 tons.....	1,478.59
Item # 6	Fuel oil, 180 gallons.....	53.15
Item # 7	Engine oil, 172 gals. D.B. Oil.....	100.40
Item # 8	Motor oil, 45 gals. Polarine.....	30.05
Item # 9	Gasoline, 300 gals.....	64.50
Item # 10	Maintenance and repairs of the building and machinery.....	236.48
Item # 11	New installations.....	683.85
Item # 12	Supplies, packing, rags, etc.....	38.27
Item # 13	Stationery, forms, charts, etc.....	28.35
Item # 14	Workmen's Compensation Board.....	259.05
Item # 15	Mr. E. W. Hagerman's salary.....	900.00
Item # 16	Hoisting chemicals.....	120.00
Item # 17	Miscellaneous, telephone, etc.....	77.10
	Total.....	\$15,584.81

COMPARISON OF WATER PUMPED AND COSTS
FOR LAST SIXTEEN YEARS

Year	I.G. Water Pumped	Yearly Gross Expenditure at Pumping Station	Pumping Station	Total Yearly Water Costs (Net Expendi- ture of Water Ordinary and Gross Expendi- ture of Water)	Total Yearly Cost Per 1000 Gallons
			Cost per 1000 gals. (using Gross Expenditure)	Pumping Station	
1929	195,590,000	\$ 17,722.44	9.00 cents	\$ 32,142.34	16.4 cts.
1930	204,405,000	16,791.22	8.21 cents	22,752.37	11.1 cts.
1931	187,164,000	16,425.55	8.8 cents	24,559.10	13.0 cts.
1932	171,032,000	16,915.58	9.9 cents	21,313.47	12.5 cts.
1933	175,050,000	16,483.67	9.5 cents	20,390.82	11.6 cts.
1934	202,720,000	15,999.50	7.9 cents	22,468.12	11.1 cts.
1935	197,641,000	16,251.61	8.1 cents	27,123.25	13.6 cts.
1936	193,450,000	17,189.21	8.8 cents	24,825.91	12.6 cts.
1937	187,008,000	19,678.21	10.5 cents	27,079.42	14.5 cts.
1938	181,558,000	19,239.49	10.6 cents	26,138.53	14.4 cts.
1939	199,662,000	18,144.43	9.1 cents	25,023.84	12.5 cts.
1940	203,975,000	22,503.35	11.3 cents	28,634.84	14.0 cts.
1941	222,255,000	19,474.56	8.8 cents	24,370.12	11.0 cts.
1942	257,205,000	23,400.09	9.1 cents	28,385.58	11.0 cts.
1943	280,115,000	26,338.50	9.4 cents	41,548.79	14.0 cts.
1944	295,945,000	22,926.61	7.7 cents	32,911.59	11.1 cts.

All these preceding costs shown under water pumping station and water ordinary do not include the costs of billing and collecting of water bills or any other overhead charges included in the City Government cost, nor do they include bond payments or Sinking Fund Charges.

The ~~a~~ chart gives a graphic comparison of water pumping station costs for the years 1943 and 1944.

THIS MARGIN RESERVED FOR BINDING.

IF SHEET IS READ THIS WAY HORIZONTALS MUST BE TOP,
IF SHEET IS READ THE OTHER WAY VERTICALLY THIS MUST BE LEFT HAND SIDE

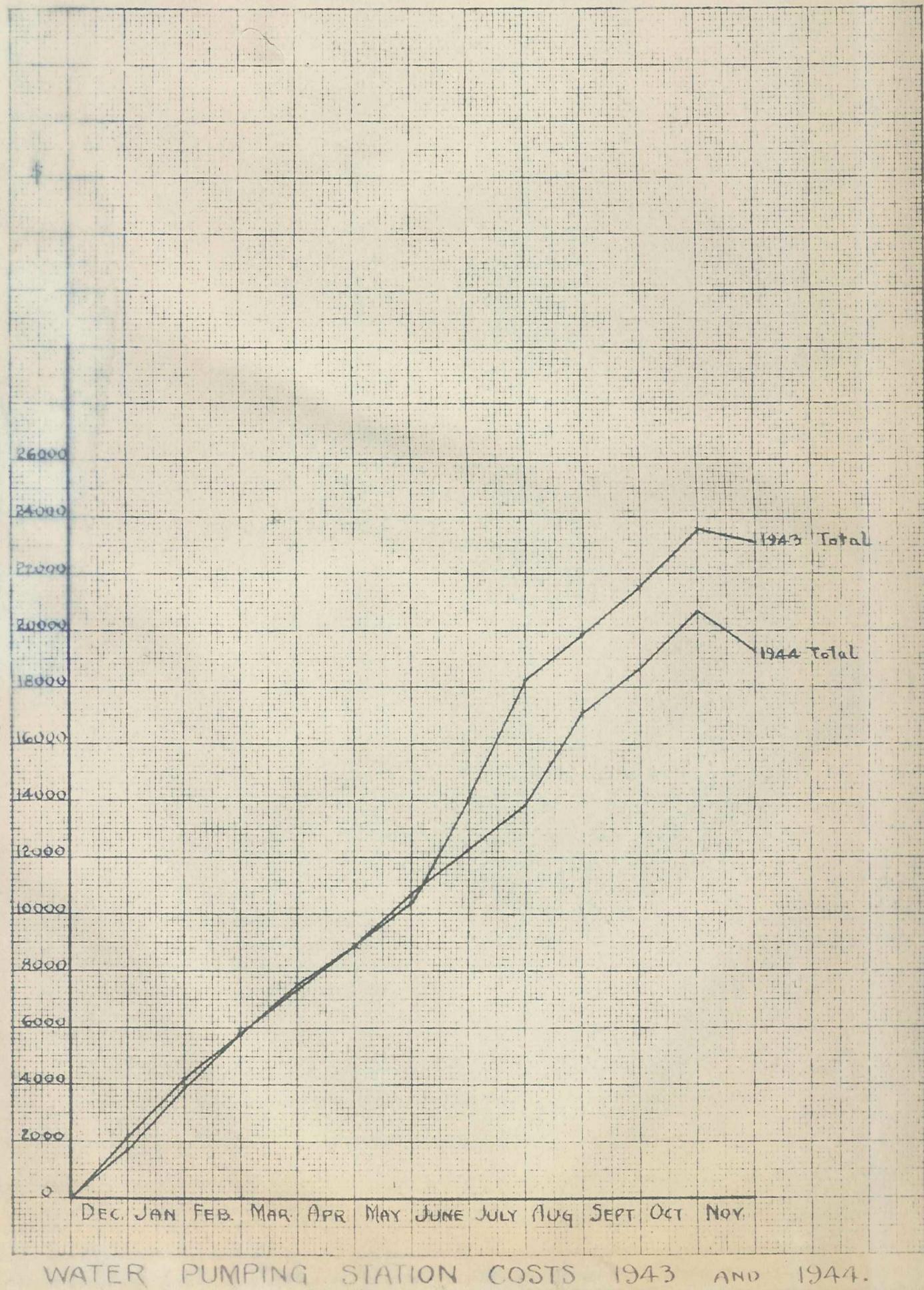


Table Compiled from Daily Pumping Station Charts
Year 1944, showing water pumped and material
and machinery used in pumping

Total Hours Month	Month of	Gallons Water Pumped	Coal Lbs.	K. W. H.	Low Lift Pump		Service Pump	
					Hrs. Supplied by Maritime	No. 1 Motor	No. 2 Motor	No. 1 Motor
744	December /43	23,590,000	29,200	744	685 $\frac{1}{2}$	1 hr. 15 min.	744	743 $\frac{1}{2}$
744	January /44	25,080,000	54,300	743 $\frac{1}{2}$	706		743 $\frac{1}{2}$	696
696	February	24,830,000	65,100	743 $\frac{1}{2}$	661 $\frac{1}{4}$		744	
744	March	25,865,000	61,200	744	562 $\frac{1}{4}$		744	
			60,300	744	674 $\frac{3}{4}$		720	
			29,700	744	731 $\frac{1}{4}$	1 hr. 15 min.	744	
720	April	22,915,000	43,800	744	712 $\frac{1}{2}$		720	
744	May	25,010,000	33,100	744	723 $\frac{1}{4}$		744	
720	June	24,830,000	5,800	744	700 $\frac{1}{4}$		720	
744	July	25,385,000	31,100	744	645 $\frac{3}{4}$		743 $\frac{1}{4}$	
			34,100	744	113 hrs.		743 $\frac{1}{4}$	
744	August	25,760,000	37,800	744	663		720	
720	September	23,420,000	35,300	744	642		744	
744	October	25,030,000	34,200	720			720	
720	November	24,230,000	23,700					
8784		295,945,000	355,900	401,400	8717 $\frac{1}{2}$	167	8107 hrs. 55 min.	289 hrs. 30 min.
								8781 $\frac{3}{4}$

At the conclusion of this Report I am inserting the following table:-

TABLE SHOWING PRINCIPAL PURCHASES OF
MATERIAL USED BY DEPARTMENTS
HERE BEFORE MENTIONED

Material	1944 Amt. Purchased	Average Price f.o.b. F'ton	Amt. in Stock Dec. 1, 1944
4" Soil pipe	55 ft.	55¢ per ft.	
4" Terra Cotta pipe	0		
5" Terra Cotta pipe	824 ft.	32¢ per ft.	166 ft.
6" Terra Cotta pipe	0		
8" Terra Cotta pipe	900 ft.	45¢ per ft.	748 ft.
10" Terra Cotta pipe	300 ft.	61¢ per ft.	36 ft.
12" Terra Cotta pipe	375 ft.	80¢ per ft.	244 ft.
15" Terra Cotta pipe	0		
18" Terra Cotta pipe	0		
20" Terra Cotta pipe	0		
24" Terra Cotta pipe	0		
4" Tile	0		
Portland Cement	2664 bags	67½¢ - 75¢ per bag	
Brick	0		
Crushed trap rock $\frac{3}{4}$ size	0		50 cu.yds.
Stone dust	0		
Gravel (pit)	340 yds. 4277 cu. yds.	\$1.35 Cu.Yd. Delivered 7¢ per cu.yd. at pit	
Calcium Chloride	51 tons	\$32.08 - \$37.42 ton	73 bags (3 13/20 ton)
Road Machine Blades	26 blades	\$5.80 - \$7.55 blade	
Lime	15156 lbs.	\$4.36 per 100 lbs.	
Alum	64840 lbs.	\$1.93-\$1.95 per 100 lbs.	7 tons
Coal (run of mine Minto)	8 cars - 388.50 tons	\$6.47 - \$5.52 per ton	
Springhill coal	8.06 tons	\$12.17 - \$12.50 per ton	
Minto coal	8.455 tons	\$8.50 per ton	
Colas	0		
Primer M.C. 1	0		
Asphalt (premixed pavement)	0		
Tarvia	0		
R. C. 3	6207 gals.	13.24¢ per gal.	1200 gals.
R. C. 4	16225 gals.	13.25¢ per gal.	1000 gals.
5/8 Copper Tubing	0		
3/4 Copper Tubing	0		
1" Copper Tubing	0		
5/8 Lead Pipe	350 ft.	\$11.70 per 100 lbs.	
3/4 Lead Pipe	0		
10" Cast Iron pipe	0		
8" Cast Iron pipe	0		
6" Cast Iron pipe	1356 ft.	\$1.60 per ft.	
4" Cast Iron pipe	0		
6" Cast Iron Tees	3	\$26.76 - \$27.08 each	
Lumber	5351 ft. 700 sq. ft.	\$50 - \$67 per 1000	
Lead	hardwood flooring 0	\$99.00 per 1000	

Material	Amt. Purchased in 1944	Average Price f.o.b. F'ton	Amt. in Stock Dec. 1, 1944
1" x 1 $\frac{1}{4}$ " Trident Cold Water Meters	0		
5/8" x 3/4" Trident Cold Water Meters	0		
1 $\frac{1}{4}$ " Galvanized pipe	918 ft. 10 in.	19.89¢ per ft.	
1" Galvanized pipe	344 ft. 9 in.	14.70¢ per ft.	
3/4" Galvanized pipe	127 ft. 4 in.	10.23¢ per ft.	
Catch Basin (frame & cover)	6	\$30.76	
Manhole (frame and cover)	4	\$28.12	
4" McAvity - Millwood Iron Body Bronze mounted Hub end Water Gate Valve	3	\$18.16-\$18.58 each	
6" McAvity - Millwood Iron Body Bronze mounted Hub end Water Gate Valve	1	\$31.69	
20 T 1 $\frac{1}{4}$ " Iron Spring Tooth Harrow	1	\$27.50	
McAvity World Compression Type Fire Hydrant 6' Bury 4" Hub Connection with 2-2 $\frac{1}{2}$ " hose and 1 steamer nozzle 1 $\frac{3}{4}$ "	1	\$108.29	
6" Cast Iron Split Sleeves Complete with Bolts and Nuts	2	\$18.50 each	
Snow fence	1000 ft.	9 $\frac{1}{2}$ ¢ per ft.	
1 Only Complete City Set Flexible Sewer Cleaning Equipment	1	\$598.00	
For Road Power Grader:-			
1 - 4B 3805 Circle	1	\$181.30	
1 - 9B 4112 Block Assembly	1	\$240.25	
1 - 2F 171 Bearing Assembly	1	\$ 52.35	
1 - 60 H.P. Type H-S Motor Form C.L. 50 degree C.rise 2200 Volt 3 phase 60 cycle 1760 R.P.M. from H504-S Serial No. 338404, Complete with couplings and shaft	1	\$683.85	

Installation of New Domestic Sewers
and
Maintenance of old Domestic Sewers
1944

Date

Jan 14-19/44	Repairing Sewer Victoria Public Hospital
May 4/44	Repairing Sewer Joseph McLaughlin 543-545 York St.
May 10/44	New Domestic Sewer A J Folkins 671 Aberdeen St.
May 12/44	New Domestic Sewer Mrs Park 643 McLeod Avenue
May 15/44	Repairing Sewer W G Clark 386-388 King St.
May 27/44	New Domestic Sewer Harding Smith 186 Victoria St.
May 30/44	New Domestic Sewer Rev. Dr. Baird Winslow St.
May 30/44	Extended Main Domestic Sewer Winslow St.
June 28/44	New Domestic Sewer Harry Hebblewhite 598 Windsor St.
Sept 23/44	Extended Main Domestic Sewer on Dundonald St
Sept 25/44	New Domestic Sewer C.J. Martin 285 Dundonald St.
Sept 28/44	New Domestic Sewer Mrs C Kitchen 156 Victoria St.
Oct. 2/44	Extended Main Sewer Northumberland St.
Oct 4/44	New Domestic Sewer Mrs George Davidson 472 Northumberland St
Oct 7/44	Repairing Sewer Walter King 351 Charlotte St.
Oct 7/44	Repairing Sewer Mrs T W Currie 163 St. John St.
Oct 10/44	Repairing Sewer York Street School York St.
Oct 11/44	Repairing Sewer George C McKenzie 500 Regent St.
Oct 11/44	Repairing Sewer Fenton Wood 722 Brunswick St.
Oct 12/44	New Domestic Sewer Mrs William Ross Smythe St.
Nov 9/44	New Domestic Sewer Mr Curtin Beaverbrook St.
Nov 21/44	Repairing Sewer Ben Gullison 336 York St.

Stopped Meters April 1944

Canadian Pacific Roundhouse York Street
Military Depot #7 Hut #9
J.H.Calder Estate 445 George Street
Mrs J.Ladds 75 Charlotte Street
Mrs H.Lawson 880 Charlotte Street
Harry Ryan 607 Queen Street
Gesippi Corsetti 381 King Street
G.L.Delong 658 King Street
Mrs W.R.Tait 195 Aberdeen Street
A.M.Gibson 58 Waterloo Row
Childrens Home Woodstock Road
Purdy Estate 2-Meters Regent Street
Stella M.White 352 Regent Street
Merville Fletcher 81 York Street
Dr.McIntyre 297 St.John Street
Palmer Co. #4
Phillips and Pringle 3999 Campbell Street
Cameron 242 York Street

Pacific Dairies Limited Campbell Street

Stopped Meters October 1944

J.H.Barker.....	127	Brunswick Street
Mrs Bessie Levine.....	161	Brunswick Street
J.B.Gregory Estate.....	768	Brunswick Street
Mrs C.Tait.....	327	George Street
J.H.Calder Estate.....	423	George Street
Mary Louise Watson.....	668	George Street
Hon.O.S.Crockett.....	830	George Street
Clara Smallwood.....	172	Saunders Street
Harvey Welton Estate.....	379	Saunders Street
Dr. G.E.Chalmers	63	Grey Street
J.B.McFarlane.....	720	Union Street
Bliss Wood.....	301	University Avenue
Justin Underhill.....	357	University Avenue
Mrs E.E.Cameron.....	294	Aberdeen Street
Mrs H.G.Winters.....	555	Aberdeen Street
Præsbyterian Ch'rch.....	512	Charlotte Street
John P.Robinson	725	George Street
Herbert Leslie	279	Brunswick Street
Central Trust(Kenneth Staples),.....	98	York Street
J.Clark and Son.....	117	York Street
Chestnut Canoe Co.....	458	York Street
Herbert Leslie.....	457	York Street
Central Trust(T.Eatom Co.....	94	York Street
G.L.Delong.....	256	Saunders Street
H.G.Kitchen.....	216	Saunders Street
Charles E.Neill	255	Church Street
R.Chestnut and Son.....		Phoenix Square
Childrens Home.....	199	Woodstock Road
Custom House (Downstairs).....		Queen Street
Harry Ryan.....	607	Queen Street
Miss Kathelæn Gorman.....	160	King Street
Valley Motor Co.....	293	King Street
Annie Bishop.....	330	King Street
Simon Levine,.....	340	King Street
Guesippi Corsetti.....	381	King Street
Estey and Curtiss.....	404	King Street
Purdy Estate (Upstairs).....	100	Regent Street
Purdy Estate(Downstairs).....	100	Regent Street
Mrs.Gregory.....	161	Regent Street
A.A.Bailey	352	Regent Street
Capital Transit.....		Queen Street
A.M.Gibson	58	Waterloo Row
City Dairy East.....	373	King Street
G.W.Kitchen.....	150	Saunders Street
Charles McCutcheon.....	248	Saunders Street
Chippin ,Velinski and Lang.....	258	King Street
Murray Ashfield.....	277	Northumberland Street

28

Installation of New Water Services
and
Maintenance and Repaires to old Services
1944

Dec.6/43	Hydrant Alexandra and Waterloo Row	Repaired
Dec.9/43	F.A.Good Estate 732-736 Brunswick Street	Relaided
Dec.10/43	Ethel Gorman 206-208 King Street	Relaided
Feb.11/44	Mary Dever 236 York Street	Relaided
Mar.20/44	Hydrant King St Carleton to Regent Sts.	Repaired
Mar.29/44	St.Dunstant Hall Regent Street	Repaired
April 19/44	Water Main George St Regent to St.John Sts.	Repaired
April 29/44	Hydrant Campbell and Phoenix Square	Repaired
May 4/44	Wilmot Alley water service	Repaired
May 5/44	Grand Hotel Barn Campbell St.	Repaired
May 8/44	Wilmot Park water Service	Repaired
May 10/44	A.J. Folkins 671 Aberdeen Street	New Service
May 11/44	M.L.Block 225 York Street	Relaided
May 12/44	Mrs Park 643 McLeod Street	New Service
May 15/44	Mrs J.G.R.Armstrong 498 Charlotte Street	Relaid
May 18/44	A.W.Coles 473 Brunswick Street	Relaided
May 19/44	Mrs Thomas Allen 343 University Avenue	Relaided
May 22/44	Miss Annie Boyle 578 King Street	Relaided
May 23/44	Dr Wainwright 697 Queen Street	Relaided
May 24/44	D Clayton 375 Queen Street	Relaided
May 25/44	Mrs E E Cameron 118-120 Saunders Street	Relaid
May 27/44	Mr Harding Smith 186 Victoria Street	New Service
May 30/44	Rev D. Baird Winslow Street	New Service
May 30/44	Extension water main Winslow Street	
June 8/44	Donald Millican 50 Brunswick Street	Relaid
June 9.44	Mrs Tabor Saunders 367 Aberdeen Street	Relaid
June 12/44	David Olts 222 Waterloo Row	Repaired
June 13/44	Mrs F Creighton 221 Regent Street	Relaid
June 15/44	Mrs Doris McGinnis 258 George Street	Relaid
June 17/44	Charles Duke 351 Regent Street	Relaid
June 16/44	Professor Harrison #10 Waterloo Row	Relaid

Installation of New Water Services
and
Maintenance and Repairs to old Services
1944

June 26-27/44	Hydrant Westmorland and Aberdeen Streets	Repaired
June 28/44	Harry Hebblewhite 598 Windsor Street	New Service
June 29- Sept 9	U.N.B. water Extension Reservoir	
Sept 9-22	Water Extension Waterloo Row Howard Timms Waterloo Row Carl Bilenski Waterloo Row	New Service New Service
Sept 25/44	Gordon Saunders 331 Victoria Street	Relaid
Sept 29-30/44	Mrs Clifford Kitchen 156 Victoria Street	New Service
Oct. 2/44	Walter J Fisher 735 Aberdeen Street	Repaired
Oct 3/44	James McGinnis 630 Charlotte Street	Relaid
Oct 3/44	Albert Haining 243 Smythe Street	Relaid
Oct 5/44	Professor Harrison 14 Waterloo Row	Relaid
Oct 5/44	Rev. Earl Jacques 697 Brunswick Street	Relaid
Oct 6-7/44	George Brown 123 Lansdowne Street	Relaid
Oct 13/44	Frank Shute 93 Lansdowne Street	Relaid
Oct 18/44	H Leslie 491 York Street	Relaid
Oct 16/44	Hydrant King <u>land</u> -- St. Carleton to Regent St	Repaired
Oct 17/44	A M Belyea 67 Charlotte Street	Relaid
Oct 19/44	Mrs James Lemont 758 George Street	Relaid
Oct 18/44	Hydrant Alexandra St University Av to Winslow	Repaired
Oct 28/44	Hydrant Brunswick and Westmorland Street	Repaired
Oct 23/44	Br.C.H.Turner 230 York Street	Relaid
Oct 24/44	U.N.B. Water Service to Veterinary Lab	New Service
Nov. 9/44	Mr Curtin Beaverbrook Street	New Service
Nov. 9/44	George Delong 327 York Street	Relaid
Nov. 13/44	Thomas Hughes Jr. Hanwell Road	New Service
Nov. 17/44	Mrs Jean Y Nichols 488 Charlotte St	Repaired
Nov 17/44	Central Trust 91 York Street	Repaired
Nov 23/44	Johh Jewett 480 George Street	Relaid
Nov. 24/44	City Yard water Service	Repaired
Nov. 21/44	Hydrant Aberdeen st City Yard and Regent St	Repaired
Nov. 25/44	Queen Square Rink	Repaired
Nov 27-28	Hydrant Brunswick and Westmorland St	Repaired
Nov 30/44	Dr.Wright 492 George St.	Repaired

1945 ASSESSMENT

Schools.....	129,200.00	+ A
Principal, Interest and Sinking Fund..	47,400.85	
Victoria Public Hospital.....	8,000.00	+ 1
Public Health.....	3,000.00	
Municipal Home.....	12,000.00	
Street Lighting.....	10,000.00	
Fire Department.....	20,000.00	
Roads and Streets.....	23,000.00	
Public Works.....	6,500.00	
Administration of Justice.....	18,000.00	
City Government and Contingencies.....	<u>22,899.15</u>	
	\$ 310,000.00	
	<u>=====</u>	

CITY GOVERNMENT AND CONTINGENCIES

City Hall.....	4,500.00
Contingencies.....	10,000.00
General Interest.....	1,500.00
Assessing and Collecting.....	6,000.00
City Government.....	9,000.00
Wilmot Park.....	400.00
Children's Aid.....	2,500.00
Victorian Order Nurse.....	1,000.00
Insurance.....	<u>2,610.96</u>
	37,510.96
Less Estimated Revenue.....	<u>14,611.81</u>
	\$ 22,899.15
	<u>=====</u>

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January 24, 1945.

TO HIS WORSHIP THE MAYOR AND ALDERMEN
OF THE CITY OF FREDERICTON

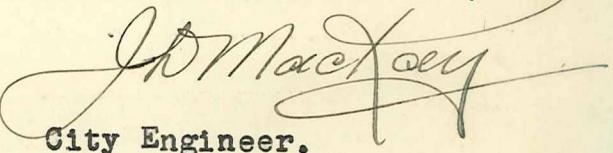
Gentlemen:

I submit herewith this report which is a statement of the work done in the different City Departments under the direct supervision of the City Engineer, and covers the period of time from the first of December 1943 to the first of December 1944.

This report is written with the purpose of reporting to the Council on the costs of the various Departments for the year. It is also written with the idea of having on file an accurate record of the different activities and costs under these Departments.

Following in the body of this report is a detailed statement of work done, comparative expenditures and unit costs under these different Departments. The detailed report of any particular Department can readily be found by referring to the Index on the preceding page.

Respectfully submitted,


J.D. MacDooley
City Engineer.

Public Works Playgrounds

II - Labour	=	645.10
Electric Co.	=	83.24
nd Mat 37.79 light		14.20 41 28.80
hill Ltd	=	71.08
aterial		45.45
erry Ltd.	=	44.25
rent material		
staples	=	14.62
	=	9.60
Cleaner Ltd	=	8.25
ng. Ltd	=	3.00.
Saving Society	=	1.50
Total	880.64	

1945 To March 31, 1946.

TOTAL YEARLY EXPENDITURE

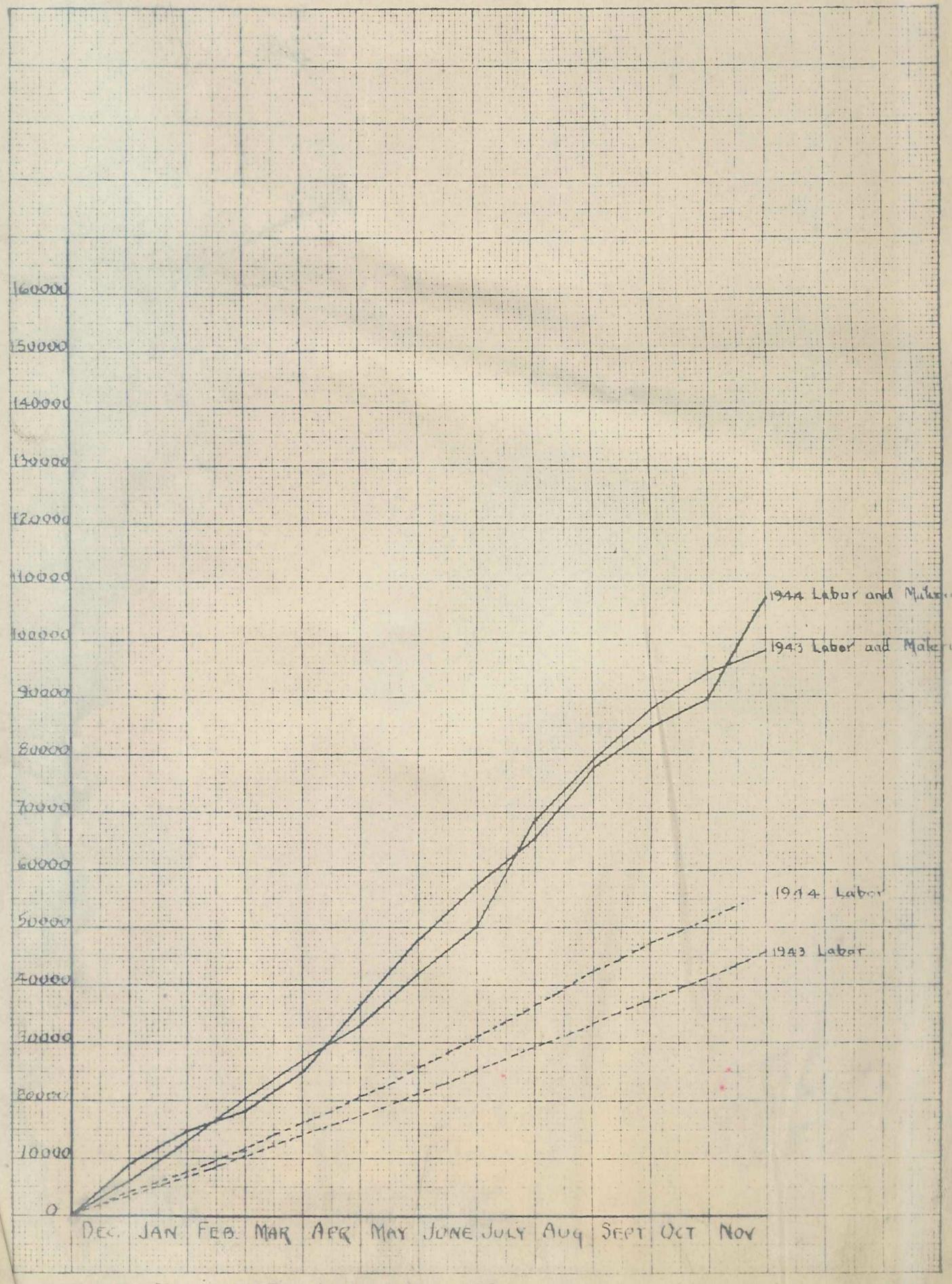
The Total Yearly Net Expenditure under the direct supervision of the City Engineer this year amounted to \$107,405.99. This expenditure will be taken up in detail under the different headings in this report.

It may be noted that the Total Gross Expenditure for this year amounted to \$162,326.30. The cause for the Gross Expenditure being some \$55,000.00 in excess of the Net is principally due to our Public Works wood account where we purchased fuel wood from the Federal Government and resold it at the same price to the City dealers for distribution. This \$55,000.00 is also partly accounted for by the credit of one-half the expenditure for the University of New Brunswick water extension which was refunded by the University to the City.

A graphic comparison of expenditure for labour and material for the year 1944 and a chart showing the distribution of the 1944 Fredericton Tax Dollar are shown here:-

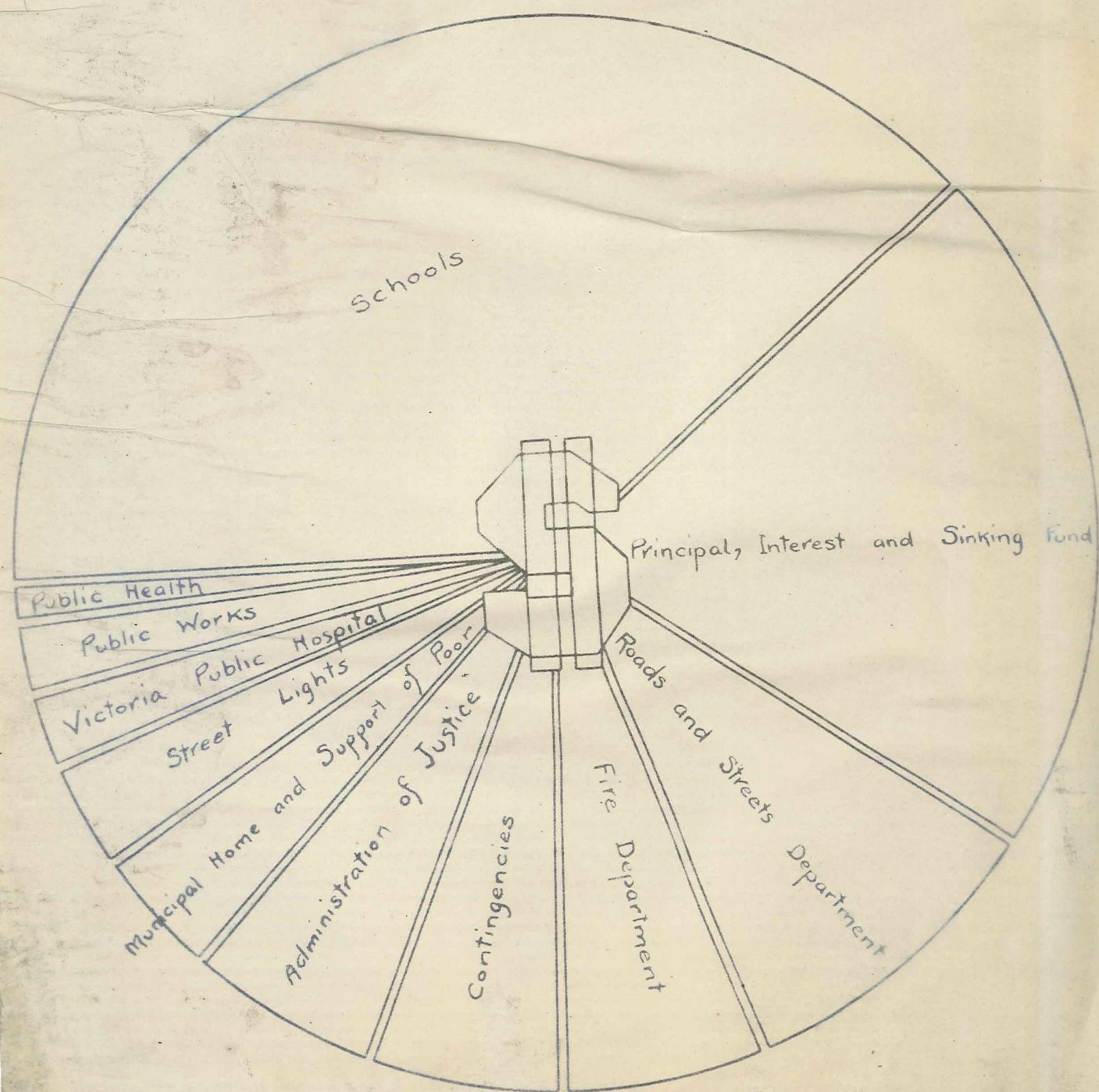
THIS MARGIN RESERVED FOR BINDING.

IF SHEET IS SPREAD THIS WAY HORIZONTAL, THE TOP
IS SAFER AS LONG AS THE OTHER WAY VERTICALLY THIS MUST BE LEFT HAND SIDE



TOTAL NET EXPENDITURE 1943 AND 1944.

DIVISION
OF
FREDERICTON TAX DOLLAR
1944
SHOWN GRAPHICALLY



ROADS AND STREETS

This year we had an appropriation for Roads and Streets of \$30,000.00. We over-expended this appropriation by \$12,968.86.

The City of Fredericton Roads and Streets System is for convenience divided into two parts, namely, the Urban District and the Outlying or Rural District.

The Urban District is roughly bounded as follows: On the North and East by the St. John River, and on the South and West by the line of Albert and Dundonald Streets.

The Outlying or Rural District would be the district within the city limits outside the above mentioned boundaries.

We have in Fredericton altogether some $44 \frac{1}{3}$ miles of roads and streets and about 32 miles of sidewalk. This sidewalk is all within the Urban District and is pretty well covered by cement sidewalks.

Our paved and unpaved streets are divided between the Rural and Urban Districts as follows:-

Roads and Streets

	<u>Urban</u>	<u>Outlying</u>	<u>Total</u>
Paved	11.85	3.46	15.31
Gravel	<u>5.83</u>	<u>23.21</u>	<u>29.04</u>
Total	17.68	26.67	44.35

Roads and Streets Expenditure 1944:-

Gross Expenditure.....	\$ 47,285.36
Credits.....	<u>4,316.50</u>
Net Expenditure.....	<u>42,968.86</u>
1944 Appropriation.....	<u>30,000.00</u>
Dr. Balance.....	\$ 12,968.86

The above Credits are made up as follows:-

Item 1.	Received from other City Departments for work done and material sold by Roads and Streets Department.....	\$ 296.43
Item 2.	Work done for and material sold to private parties by Roads and Streets Department.....	528.42
Item 3.	Wood sold from City Forest (Odell Property)	<u>3,491.65</u>
	Total.....	\$ 4,316.50

The Gross Expenditure is divided as follows:-

Labour.....	\$ 25,299.20
Material Charges and Workmen's Compensation Board...	<u>21,986.16</u>
	\$ 47,285.36